UNIVERZA V LJUBLJANI

FAKULTETA ZA DRUŽBENE VEDE

mag. Marijana Car

Načela umetniškega ustvarjanja v poslovnih organizacijah: primer slovenske oblikovalske industrije

Principles of Artful Making in Business Organisations: A Case Study of the Slovenian Design Industry

Doktorska disertacija

Ljubljana, 2017

UNIVERZA V LJUBLJANI

FAKULTETA ZA DRUŽBENE VEDE

mag. Marijana Car

Mentorica: red. prof. dr. Aleksandra Kanjuo Mrčela

Somentor: prof. dr. Robert D. Austin

Načela umetniškega ustvarjanja v poslovnih organizacijah: primer slovenske oblikovalske industrije

Principles of Artful Making in Business Organisations: A Case Study of the Slovenian Design Industry

Doktorska disertacija

Ljubljana, 2017

The rhythm of loss of integration with environment and recovery of union not only persists in man, but becomes conscious with him; its conditions are material out of which he forms purposes. Emotion is the conscious sign of a break, actual or impending. The discord is the occasion that induces reflection. Desire for restoration of the union converts mere emotion into interest in objects as conditions of realization of harmony.

With the realization, material of reflection is incorporated into objects as their meaning. Since the artist cares in a peculiar way for the phase of experience in which union is achieved, he does not shun moments of resistance and tension. He rather cultivates them, not for their own sake but because of their potentialities, bringing to living consciousness an experience that is unified and total. In contrast with the person whose purpose is esthetic, the scientific man is interested in problems, in situations wherein tension between the matter of observation and of thought is marked. Of course, he cares for their resolution. But he does not rest in it; he passes on to another problem using an attained solution only as a stepping stone on which to set on foot further inquires.

(John Dewey 1934, 15-16)

V ljubeč spomin očetu Ivanu, ki je v meni spodbujal
ljubezen do umetnosti, lepote in znanosti.

ZAHVALA - ACKNOWLEDGMENTS

Pričujoča disertacija je nastala zahvaljujoč mnogim ljudem, ki so spodbujali mojo kreativnost in verjeli vame. Hvala Bogu za vse te čudovite ljudi, ki mi jih pošilja na pot, za talente in za življenje.

Največja zahvala gre moji dragi družini. Ste Carji v pravem pomenu besede. S svojo brezpogojno ljubeznijo ste mi nenehna podpora in pomoč. Hvala draga mami, da si vedno začutila, ko sem te potrebovala in mi stala ob strani. S svojim zgledom in modrostjo me učiš ustvarjalnosti, tudi ko prihajajo na pot ovire. Dragi brat Josip, s svojo akademsko potjo in bratsko ljubeznijo si mnogokrat prevzel vlogo inovativnega vodje, ki je verjel v moje talente in me spodbujal na zahtevni poti do cilja. Hvala ti. Dragi brat Mate, hvala ti za podporo v neprespanih nočeh, ko sem ustvarjala. Tvoji nasveti so neprecenljivi.

Imam izjemen privilegij, da mi je mentorica profesorica Aleksandra Kanjuo Mrčela. Vsako srečanje in pogovor z Vami je bil tako vir novih strokovnih znanj kot tudi navdiha in navdušenja nad povezovanjem umetnosti z menedžmentom. Zahvaljujoč Vam je bila disertacija ambiciozno zastavljena, in zahvaljujoč Vašim dragocenim strokovnim nasvetom in podpori tudi uspešno realizirana.

Dear professor Robert Austin, it is an immense privilege and honour to have you as my co-supervisor. Cooperating with you and drawing from your knowledge and wisdom made me rediscover the beauty and abundance of art, and learn enormously about business. Your advice, questions and wisdom made me see further and feel different about management and science. Your mentorship was more than contribution to me, it was a life changing and enriching experience. I sincerely hope we can continue to cooperate in the future.

Hvala profesorica Dana Mesner Andolšek, za vse koristne nasvete in odlične strokovne predloge za izboljšave. Hvala docentu Mihi Klinarju za dragocen prispevek k boljšemu razumevanju oblikovalske industrije. Draga Nika, zahvaljujem se Ti, da sem imela možnost sodelovati s Tabo v raziskavi.

Dragi Peter, Robert, Janja, Živa in ostale prijateljice in prijatelji, vam se imam za zahvaliti za vso podporo, odlično družbo, ter sproščujoče klepete in kavice med napornim delom.

PRINCIPLES OF ARTFUL MAKING IN BUSINESS ORGANISATIONS: A CASE STUDY OF THE SLOVENIAN DESIGN INDUSTRY

This dissertation systematically studies and analyses what business can learn from arts with the intention to gain a deeper insight into creativity, and contribute to management of innovation processes. Our attempt was to find similarities between the two spheres and to find shared concepts, principles and approaches in two very different theories and in their different functioning. The study of artists' work resulted in numerous findings that contribute to the understanding of the management of innovative processes and development of management theory.

Scherdin and Zander highlight that creation of successful artists based on new ideas surrounded by risk and genuine uncertainty (2011, 3), offers a fertile ground for learning for innovation scholars. Artists are increasingly seen as those who have knowledge and skills relevant to companies' innovation activity. Through analyses of the work of various artists, they are discovering large untapped potential that can be released in business companies by learning from artists.

We conducted a comprehensive analysis of a postmodern organisation and its management styles, with a focus on the innovative organisations, knowledge workers, and the management of innovative processes. The topic is highly relevant in the unpredictable and ever-changing business environment of the 21st century, where companies face the need to be creative and leaders to steer them towards constant innovation.

The driver of success for the most successful business organisations has always been creativity. In today's world its importance is greater than ever. Consequently, organisations face transformations in various areas like the nature of work, working processes and management style. Highly educated knowledge workers are creators of innovative outcomes; therefore it is extremely important for companies catering to the creativity driven market to create the culture, which nurtures innovation within their organisations. This often requires the whole company transformation, upgrading everyone's innovation skills, strengthening innovation processes and retooling management so they foster innovation (Hamel and Tennant 2015).

In this dissertation, we study functioning of creativity with intention to gain better understanding of the nature of creative work and the leadership of delicate innovation processes. Creative proceses are recognised as highly complex. They cannot be easily defined nor described because of their crossing of disciplinary boundaries, and therefore call for different approaches and intertwining of the scientifically-rational and creative-experimental-artistic component. Studying the creative processes of successful artists, knowledge has been derived that can help leaders of innovation processes foster innovation in business organisations. We focus on Artful Making, a rigorous theory of artful management with a high respect for the creative process. Artful Making unveils the mysterious view on creativity of both – artistic and business sphere, and enriches the rationalistic management styles, and provides enormous insight into creative process. Artful Making teaches the skills how to draw the most out of the present knowledge, capacity, and unleash potential of the creativity of highly educated workers (Austin and Devin 2003; Cornelissen 2004; Meisiek and Barry 2014).

Artful Making promotes specific principles, like: search for the final outcome all through the process, using iterations, welcoming uncertainty, ambiguity, and mistakes. Managers'

role changes accordingly, and is based on trust and support in knowledge workers through the process, encouraging collaboration and teamwork, controlling through "releasing", and thus creating something that cannot be planned in advance. Artful Making presents a new trans-theoretical model of leadership and offers the opportunity to learn directly from artists, their logic in dealing with uncertainties in the creative process (Monthoux and Statler 2008).

We conducted the first study of Artful Making as a theory of artistic innovation in design industry. Being a part of the first all-national survey of Slovenian design industry provided us with valuable insights.

We studied the present situation in the Slovenian design industry - the importance of innovativeness, successfulness, and the attitudes regarding the use of individual Artful Making principles in creative processes, as principles characteristic for management of creative processes. This way the dissertation contributes also to organisational practice.

The results of our empirical research offer insight into attitudes towards innovativeness in Slovenian design industry. We found individual Artful Making principles are being used, and are associated with the level of importance of innovativeness in the company. Our research confirmed the existence of positive correlations between the Artful Making principles, and the number of new products, as also with the share of income invested in development or improvements of products/services. However, there was no significant correlation with profitability and with the growth of the market share.

We found that the directors' high regards for the importance of innovativeness is not reflected in the same high regard to the encouragement and reward of innovativeness. This indicates to the lack of consistency and systematic management in applying artistic skills in innovative process. This subject needs further investigation and qualitative study.

Some of our findings suggest that a part of Slovenian design industry is still relying on adopting innovations initiated by others, rather than seeing innovation within their own organisation as the engine of progress. This is supported by identified discrepancies in leadership in development processes, and the presence of copying innovative products from other companies.

In our study we could not verify whether directors in the Slovenian design industry are aware of the need for a different leadership of creativity of knowledge workers throughout the creative process. Therefore, we conclude that additional qualitative and mixed methods research needs to be conducted. The estimations of present situation in Slovenian design industry suggest there are possibilities for improvements. Therefore, we suggest a more systematic and holistic approach to innovativeness.

Based on the findings of our empirical research, relevant theoretical background from the literature and Artful Making we developed a conceptual model for introducing and fostering innovativeness in Slovenian companies. Our model offers a platform for exploration of key dimensions that need to be taken into consideration for improvement of the innovativeness and long-term successfulness of Slovenian design industry. There is a further need to continue research into how we can support a greater adoption of Artful Making principles. Next, future research needs to explore apparent discrepancies in value that are given to innovation and yet less strong support of processes that lead to it.

Our studies' insights could help Slovenia reach even more superior innovation rates. The focus needs to be on dimensions such as leadership of creativity, performance of creative workers, high tolerance of uncertainty, and eliminating adversaries of creative process like fear of failure, reluctance to stepping into unknown, wish to control everything, embracing experimenting and reduction of hierarchy.

The dissertation contributes to further evaluating and refining Artful Making theory, and to the innovation leadership. It helps inform leaders how they can with confidence strongly support creativity and innovativeness. We contributed to Artful Making theory with additional principles, like collecting customer's opinion and novelties on the market, differentiation (pointing to the role of designers who play a crucial role here), and measurement of a quality product, and experience with artists for better internalising artistic principles. Further we recommend changes in management educational system by enriching it with artistic knowledge, which will help managers better understand and systematically support creative process.

Truly innovative company has certain requirements, among which are also accountable and capable innovation leaders, and innovation-friendly management processes (Hamel and Tennant 2015). Based on our research we conclude that artful leadership and Artful Making theory help companies fulfil these requirements and improve Slovenian design companies' innovation performance.

Keywords: management, art, creativity, knowledge workers, innovation, leadership, innovation process

NAČELA UMETNIŠKEGA USTVARJANJA V POSLOVNIH ORGANIZACIJAH: PRIMER SLOVENSKE OBLIKOVALSKE INDUSTRIJE

Doktorska disertacija sistematično proučuje in analizira, kaj se podjetja lahko naučijo od umetnosti, z namenom pridobivanja globljega vpogleda v procese kreativnosti in boljšega upravljanja inovacijskih procesov. V delu smo skušali najti podobnosti med obema sferama, iskali smo skupne koncepte, načela in pristope dveh teorij, ki se po vsebini in delovanju močno razlikujeta. S proučevanjem dela umetnikov smo prišli do ugotovitev, ki lahko prispevajo k razumevanju upravljanja inovativnih procesov in razvoju teorije upravljanja (menedžmenta).

Sherdin in Zander (2011, 3) ugotavljata, da kreativni procesi uspešnih umetnikov, ki temeljijo na svežih idejah in jih spremlja tveganje ter pristna negotovost, ponujajo strokovnjakom za inovacije dobro podlago za učenje. Na umetnike se vedno bolj gleda kot na tiste, ki imajo znanja in veščine, potrebne pri inovacijskih dejavnostih podjetij. S pomočjo analize dela različnih umetnikov lahko odkrivajo nove, še neslutene potenciale, ki se z učenjem od umetnikov lahko udejanjijo v podjetjih.

Izvedli smo obsežno analizo postmoderne organizacije in njenih stilov upravljanja, pri čemer smo se osredotočili na inovativne organizacije, delavce znanja in upravljanje kreativnih procesov. Ta tema postaja vedno bolj aktualna v nepredvidljivem in hitro spreminjajočem se poslovnem okolju 21. stoletja, v katerem morajo podjetja biti vedno bolj kreativna oziroma potrebujejo vodje, ki jih lahko usmerijo na pot neprestanih inovacij.

Kreativnost je bila vedno glavno gonilo najbolj uspešnih poslovnih organizacij. V današnjem svetu je njen pomen večji kot kadarkoli prej. Posledično v podjetjih prihaja do številnih sprememb na različnih področjih, spreminjajo se narava dela, delovni procesi in stili upravljanja. Visoko izobraženi delavci znanja so kreatorji inovacij; zato morajo podjetja, ki so dejavna na kreativnih trgih, ustvariti okolje, ki bo spodbujalo inovacije znotraj organizacij. Za to pa je pogosto potrebna transformacija celotnega podjetja, treba je nadgraditi veščine zaposlenih, okrepiti inovacijske procese in opremiti vodstvo podjetja z orodji, ki bodo spodbujala inovacije (Hamel and Tennant 2015).

V disertaciji proučujemo delovanje kreativnih procesov, da bi bolje razumeli značilnosti kreativnega dela in upravljanja občutljivih inovacijskih procesov. Kreativni procesi so izredno kompleksni. Ni jih mogoče zlahka definirati ali opisati, saj pogosto prehajajo meje različnih disciplin, zato zahtevajo drugačne pristope in prepletanje znanstvene racionalne in kreativne eksperimentalno-umetniške komponente. S proučevanjem kreativnih procesov uspešnih umetnikov smo prišli do znanj, ki lahko vodjem inovativnih procesov pomagajo pri spodbujanju inovacij v podjetjih.

Osredotočili smo se na teorijo *Artful Making*[1], na teorijo umetniškega upravljanja, ki dosledno upošteva kreativne procese. Umetniško upravljanje razkriva skrivnostni vidik kreativnosti tako v umetniški kakor tudi v poslovni sferi, bogati racionalistične stile upravljanja ter ponuja neprecenljive vpoglede v kreativne procese. Teorija umetniškega upravljanja nas uči, kako kar najbolje izkoristiti trenutno znanje, zmogljivosti ter kako

[1] Artful Making v slovenskem jeziku še ni ustrezno poimenovan, zato mi ponujamo strokovni javnosti termin »umetniško upravljanje«, ki ga bomo v nadaljnjem tekstu tudi uporabljali.

sprostiti potencial kreativnosti visoko izobraženih delavcev (Austin and Devin 2003; Cornelissen 2004; Meisiek and Barry 2014).

Teorija umetniškega upravljanja zagovarja specifična načela, kot so imeti med celotnim procesom pred očmi končni rezultat, ponovitve, pozitivno sprejemanje negotovosti, dvoumnosti in napak. Vzporedno se spreminja vloga vodij; temelji na zaupanju in podpori delavcev znanja med procesom, spodbuja sodelovanje in timsko delo, nadzoruje s pomočjo 'prepuščanja' in tako nastaja nekaj, česar ni mogoče vnaprej načrtovati. Umetniško upravljanje predstavlja nov transteoretični model vodenja in ponuja možnost neposrednega učenja od umetnikov ter njihove logike pri soočanju z negotovostmi kreativnega procesa (Monthoux and Statler 2008).

Izvedli smo prvo raziskavo umetniškega upravljanja kot teorije umetniškega upravljanja inovacijskega procesa v oblikovalski industriji. Prva tovrstna raziskava na nacionalni ravni v Sloveniji nas je privedla do številnih dragocenih ugotovitev.

Proučili smo trenutne razmere v slovenski oblikovalski industriji – pomen inovativnosti, uspeha in odnos do uporabe posamičnih načel umetniškega upravljanja v kreativnih procesih, predvsem ko gre za načela upravljanja kreativnih procesov. Na ta način disertacija prispeva k organizacijski praksi.

Rezultati naših empiričnih raziskav ponujajo vpogled v odnos do inovativnosti v slovenski oblikovalski industriji. Ugotovili smo, da se v industriji uporabljajo načela umetniškega upravljanja in da so ta povezana s pomenom, ki ga v podjetju pripisujejo inovativnosti. Naše raziskave so potrdile obstoj pozitivne korelacije med načeli umetniškega upravljanja in številom novih proizvodov, pa tudi deležem dohodka, ki ga podjetje investira v razvoj in izboljšave proizvodov ali storitev. Ni pa bilo bistvene korelacije med uporabo načel umetniškega upravljanja in dobičkonosnostjo ter rastjo tržnega deleža podjetja.

Ugotovili smo, da direktorji inovativnosti kljub prepoznavanju njenega pomena, spodbujanja in nagrajevanja ne cenijo enako visoko. To nakazuje na pomanjkanje konsistentnosti in sistematičnega upravljanja rabe umetniških veščin in inovacijskega procesa. Na to temo so potrebne nadaljnje raziskave in kvalitativne študije. Nekatere naših ugotovitev nakazujejo, da se del slovenske oblikovalske industrije še vedno zanaša na uvedbo inovacij, ki so jih razvili drugi, namesto da bi inovacije videli kot gonilo napredka znotraj lastne organizacije. To podpirajo tudi identificirana odstopanja v vodenju razvojnih procesov in prisotnost kopiranja inovativnih izdelkov drugih podjetij. Med našo raziskavo nismo mogli preveriti, ali se direktorji v slovenski oblikovalski industriji zavedajo potrebe po drugačnem vodenju kreativnosti delavcev znanja skozi celoten kreativni proces. Zato zaključujemo, da je treba opraviti dodatne kvalitativne in mešane raziskave. Ocene trenutnega stanja v slovenski oblikovalski industriji nakazujejo možnosti izboljšanja. Zato predlagamo bolj sistematičen in celovit pristop k inovativnosti.

Na podlagi rezultatov naših empiričnih raziskav, ustrezne teoretične podlage iz literature in teorije umetniškega upravljanja smo razvili konceptualni model za uvajanje in spodbujanje inovativnosti v slovenskih podjetjih. Naš model ponuja platformo za raziskovanje ključnih dimenzij, ki jih je treba upoštevati za izboljšanje inovativnosti in dolgoročnega uspeha slovenske oblikovalske industrije. Treba je nadaljevati z raziskovanjem, kako lahko podpremo širšo uvedbo principov umetniškega upravljanja. V nadaljevanju morajo prihodnje raziskave proučiti opazna razhajanja med vrednostjo, ki je dodeljena inovaciji, in manjšo podporo procesom, ki vodijo k inovaciji.

Uvidi naših študij lahko v Sloveniji pripomorejo k doseganju še višjih inovacijskih stopenj. Pozornost je treba posvetiti dimenzijam, kot so vodenje kreativnosti, učinkovitost kreativnih delavcev, visoka toleranca negotovosti, in odpraviti zaviralce kreativnih procesov, kot so strah pred neuspehom, oklevanje pred vstopom v neznano, želja po popolnem nadzoru, in namesto tega sprejeti eksperimentiranje in zmanjšanje hierarhij.

Disertacija je prispevek k ocenjevanju in dodelavi teorije umetniškega upravljanja ter k inovacijskemu vodenju. Vodjem ponuja informacije o načinih samozavestnega in intenzivnega podpiranja kreativnosti in inovativnosti. Teorijo umetniškega upravljanja smo obogatili z dodatnimi principi, kot je zbiranje mnenj strank in novosti na tržišču, diferenciacija (z izpostavitvijo vloge oblikovalcev, ki so tukaj ključnega pomena), ter merjenje kakovosti izdelka in upoštevanje izkušenj z umetniki za učinkovitejše ponotranjenje umetniških principov. V nadaljevanju priporočamo spremembe v izobraževalnih sistemih za menedžerje, z njihovo obogatitvijo z umetniškim znanjem, kar bo menedžerjem pomagalo kreativne procese bolje razumeti in sistematično podpreti.

Za zares inovativno podjetje obstajajo določeni pogoji, med drugim tudi odgovorni in sposobni inovacijski vodje ter inovativnosti prijazni upravljalski procesi (Hamel in Tennant 2015). Na podlagi naših raziskav sklepamo, da lahko umetniško vodenje in teorija umetniškega upravljanja podjetjem pomagata izpolniti te pogoje in izboljšati inovacijsko učinkovitost slovenskih oblikovalskih podjetij.

Ključne besede: menedžment, umetnost, kreativnost, delavci znanja, inovativnost, upravljanje, inovacijski proces

Table of Contents

Tables

Figures

Charts

1 INTRODUCTION

1.1 Research Subject and Relevance Justification

This dissertation contributes to a comprehensive analysis of postmodern organisation and contemporary management styles, with a focus on the management of creativity, knowledge workers, and the leadership of innovation processes. With intention to understand production of new knowledge and organisation of work we examine two different spheres and investigate the similarities in the approach of the postmodern organisational theory at one hand, and principles applied by successful artists on the other.

With our research, we aim to contribute to management of work of creative workers who produce valuable outcomes and create innovations. This has a special relevance for recognition of possible approaches for encouragement of innovativeness in the design industry in Slovenia. The core concept used in the dissertation is Artful Making - management of innovation processes, first presented and developed by Robert Austin and Lee Devin upon studying creation processes of successful artists.

The topic of the dissertation is valuable for the business sphere from different important perspectives. The theory on innovativeness and creativity is becoming one of the core themes in postmodern organisations of the 21st century in the fast and constantly changing global market. Consequently, the significance and role of human capital, especially specialised human capital, have surpassed the significance of physical and financial capital. By practicing creativity and using the knowledge and expertise they produce valuable novelties and create value. Therefore, it is of utmost importance to remove hindrances to organisational innovativeness, support creativity, and encourage the willingness and need to constantly improve and modify the management system (Kanjuo Mrčela 1999, 104–5).

The topic of this dissertation is highly relevant in the unpredictable and ever-changing business environment, especially for companies stuck in multi-annual planning models, rigid decision-making hierarchies, and fixed market approach. The presence and need for innovative products, processes and services with added value are growing rapidly, and competitiveness is becoming crucial for the success of companies. The organisational change and fostering of creativity have a strategic role for growth and are becoming crucial factors for development of the economy.

Organisations need to adapt to changes on the market and create the conditions needed in order to support innovativeness. This change includes a proper organisational strategy, a focused vision, highly educated employees, the right leadership style, the innovative culture, and knowing the market (Von Stamm 2008, XII). The dissertation discusses the conditions that need to be met in the organisation to make it a stimulating environment for creative workers (Amabile in Dubrin 2007).

Postmodern organisations have new ways of seeking the perfect model for reaching success and innovativeness. While modern organisation theory tried to find the best model of effectiveness based in science, "postmodern organisation theory seeks a practical and ecologically viable set of images of effectiveness that incorporate a range of views and concerns of different groups" (Boje et al. 1996, 362–3). A literature review tells us that postmodern organisations that developed according to changes in their environment are using flexible, adjustable and network organisation forms (Clegg in Kanjuo Mrčela 1999, 259–61). They are based on post-bureaucratic principles of decentralisation, communication, trust, and mutual dependency, where the collective process of problem solving and attaining organisational goals becomes the organisation's essence; those involved realise the importance of organisational learning, team work, and the balance between flexibility and efficiency, cooperation and autonomy, and consensus and risk (Parker in Kanjuo Mrčela 1999, 259–61).

There is a growing amount of literature presenting and proposing the best management styles in line with this new vision and needs of postmodern knowledge based organisations. Still, literature doesn't tell us much about the specifics of managing postmodern organisations, knowledge workers in the innovation process and fostering creativity. Nor does it tell much about the creativity of knowledge workers, the ways managers should approach failures, their need to be more spontaneous, and the way to create innovation culture that fosters creativity and innovativeness (Austin and Devin 2003, 173; Adler 2006; Von Stamm 2008). We recognise there are still gaps to be bridged, ones that call for new propositions in order to make optimal conditions of work of highly educated workers (Austin and Devin 2003; Cornelissen 2004; Meisiek and Barry 2014).

This doctoral dissertation systematically studies the similarities and common points between the operations of arts and business, and also how a successful approach commonly

used by artists can help the business sphere. Modern literature, mostly in English (Scheff and Kotler 1996, Klamer 1997, Austin 2003, VanGundy and Naiman 2003, Austin and Devin 2004, Davis and McIntosh 2005, Bartelme 2005, Denning 2005, Adler 2006, Lagace and Austin 2007, Lynch 2008, Austin 2010; Bozic and Olsson 2013) employs the concept of operation of the arts in the business sphere and shows that the cooperation of business organisations with individual artists has been developed and already exists in various ways. We further analyse the nature of creative work and different management skills that can be learned from cooperation with successful artists and can help managers support creative workers in the delicate innovation process.

Concept of Artful Making, a theory of managing the innovation processes is built upon the study of the principles of work of successful artists and have been "translated" into principles to be used in creation of a management theory suitable for postmodern knowledge based organisations. As such, Artful Making offers a management style developed by creative people (artists) that has been successfully used for centuries. We built upon Austin' s work (Austin and Devin 2003), and test its applicability in postmodern organisations, with a focus on the design industry - where there has been no research conducted yet.

The business world increasingly recognises the need to encourage innovativeness. A promising option is to learn from successful artists, who are constantly creative and have unique characteristics, skills, and principles. According to Crawford and Benedetto (2006, 17) managing innovativeness and its specific characteristics suggests it is closer than ever to artistic work. Does it mean that art can enrich business with its knowledge? There are numerous indicators that this is very possible. There are directors who act accordingly and cooperate with artists, with amazing results. The business world is recognising the important contribution of arts, so today artistic skill is becoming the most sought-after qualification in the business world (Pink in Adler 2006, 486–490), regarding the facts of an extremely competitive global economy, where success and positive solutions to the challenges of globalisation are equally important. In this economy, it is "about creating value and appropriate forms, and no one knows more about the processes for doing that than artists" (Austin in Adler 2006).

The main research results presented in the dissertation were obtained by the work conducted in the design industry in Slovenia. We participated in the first all-national survey of the

design industry in Slovenia that verified the importance of innovativeness in design industry in Slovenia (Murovec et al. 2012). We tested the presence and use of artistic principles in the work of managers leading creative processes in this industry.

We investigated understanding of the importance of innovativeness and capability of its implementation in the organisations and the use of artful principles in supporting creativity and innovations process. Further, we verified the relationship between the use of artful principles and the number of innovations and the awareness of directors participating in the survey of the need for a different approach in leading the creativity of knowledge workers throughout the creative process. In verifying the hypotheses, we used results of the mentioned survey, the interviews and other relevant data obtained in the large research project in the design industry in Slovenia. Based on the results and conclusions of this research work we prepared guidelines, suggested possible improvements, and constructed a model for introducing and fostering innovativeness in the Slovenian design industry, with the intention of supporting the recognisability and success of Slovenian design industry on national, as well as on the global market.

This comparative analytical work and empirical analysis attempt to complement existing organisational and management theory. Besides the theoretical contribution of the results of our research to organisational and management theory and particularly to the Artful Making theory, this dissertation also contributes to the organisational practice. The applicative purpose of the present work is based on understanding of the principles used by successful artists, and investigation of the possibilities and significance of introducing the approach originating in the arts to the business sphere in the Slovenian environment – particularly the Slovenian design industry. We propose it as a way of generating ideas and fostering innovativeness.

To conclude - the design industry as a part of the creative industries is evolving rapidly, and creativity and innovativeness are the drivers of the constant change and improvements. In our study, we showed the Slovenian design industry is aware of the importance of innovativeness. We found that individual artistic principles are already being used in their creative processes, but not in a systematic manner. We confirmed the correlation between the level of importance of innovativeness in the company, and the use of individual Artful Making principles, and the existence of correlations between economic and performance

indicators and the use of individual principles of Artful Making. Nevertheless, we identify discrepancies in consistent implementation of artful management in innovation processes.

This research gave us an overview of the present situation regarding management principles and methods applied in the Slovenian design industry, and the potential for improvements. We recognise a high potential for introducing and applying Artful Making in innovative processes of analysed organisations. Based on the insights of present situation in Slovenian design industry, we create a conceptual model which can help Slovenian design companies to introduce and foster innovativeness and apply Artful Making.

1.2 Research design and hypotheses

The empirical analysis will be focused on the design industry in Slovenia, more specifically its ways to be innovative in today's changing, unpredictable, and highly competitive environment. The design industry possesses activities with a high degree of risk, what means consequentially the "success or failure of a creative product is difficult to predict" (UNCTAD 2010, 263), so know-how of leading the creative processes and supporting creative workers in their creativity will be verified and discussed, with the goal to defy greater success.

With our research, we will analyse how much importance is paid to innovativeness, as well as the management style and which principles, characteristic for Artful Making, are already being used to stimulate innovativeness. Next to analysing the relevant literature we participated in a larger group of researchers conducting an all-national survey with our own battery of questions. The survey was given to directors in the Slovenian design industry. It intends to verify the present situation in the Slovenian creative industries and the use of design in Slovenia. This all-Slovenian survey was a part of a large research project on the design industry in Slovenia, conducted by Nika Murovec, Damjan Kavaš, Igor Prodan, and Mateja Drnovšek, from the Inštitut za ekonomska raziskovanja - IER (Institute for Economic Research) in Slovenia, with the title "The condition of design, with an emphasis on industrial design, as a part of the creative industries and examples of good practices in the world as a basis for strengthening design in Slovenia". Our participation in the survey provided us with a large representable sample. Here we would like to express our gratitude to Nika Murovec, who kindly allowed us to participate in the survey with our own battery

of questions about the importance of innovativeness and present existence of principles and methods of Artful Making in the Slovenian design industry, and which allowed us to obtain valuable and highly relevant data with a high response level from directors in various Slovenian design companies.

Prior to the survey of directors of Slovenian design companies, interviews with managers from Slovenian design companies were conducted to obtain information and insight about the present situation of the Slovenian design industry. Then, a survey including a battery of questions about management styles and the use of individual and relevant principles, and methods of Artful Making was conducted.

The results of the nationwide survey, together with other surveys, interviews, and combined with an analysis of the relevant literature, give us an exhaustive overview of management practices, the importance of innovativeness, and the use of artful principles in the Slovenian design industry. It shows how informed managers are, how much they practically apply artistic and creative principles in their companies, and encourage their knowledge workers to be innovative. With this analysis, we intend to complement existing research about Artful Making principles, and explore the possibility of also applying them in the design industry in Slovenia.

Limitations of our research: We want to point out this is the first research conducted in the history of Slovenian design industry. This way, we were facing a lot of issues, like unclear classification of design industry which puts design industry together with decorating and arranging, therefore the sample includes also other activities next to design. Since I was a part of a larger research group, in the end I didn't have access to all the data and information from the research. Also, since Artful Making is not yet known in the Slovenian business sphere, we have chosen the set of principles of Artful Making which we have recognised as its core principles. Although participation in the all-national survey provided us with valuable results, the research still need further verification with qualitative and mixed methods, to gain a better insight over the situation.

We used survey questions to test how much managers are using them, and to get to know their attitude towards leading innovativeness. To do this, we use the concept of Artful Making and the analyses conducted and research findings presented by Austin and Devin (2003). Our aim is to continue efforts to further Austin's research by investigating the value

of the principles of Artful Making in the innovativeness of the Slovenian design industry, thereby verifying and further developing his work (Austin and Devin 2006, 18). By collecting more data in support of empirical research of Artful Making principles and methods, we join their effort for further understanding and following through the rigorous demands needed to contribute to the theory of management (Meisiek and Barry 2014b, 135), in our case to the theory of Artful Making. We apply a mixed, mostly quantitative methodology in combination with other surveys and interviews. Our questionnaire was sent to directors of 4,000 Slovenian companies from various branches who use design or represent potential users of design (do not use it in the present). The research also calls for further verification of results with qualitative analysis.

The research questions of our dissertation are about recognising the importance of innovativeness in the design industry in Slovenia, and the management principles and methods used in development processes. Furthermore, we want to verify the connection between the application of artistic principles and methods with the number of innovations. Since not all design companies in Slovenia are innovative, we assume directors would appreciate additional knowledge about leading innovative processes and managing creative workers. Therefore, we posit the following research hypotheses:

> H1: In the Slovenian design industry the meaning of innovativeness is understood and encouraged.
>
> H2: The level of importance of innovativeness in the company is associated with the use of Artful Making principles.
>
> H3: Managers in the Slovenian design industry use the Artful Making principles and methods in supporting creativity and the innovation process.
>
> H4: The use of the principles and methods of Artful Making in the Slovenian design industry is positively related to the number of innovations.
>
> H5: Directors in the Slovenian design industry are aware of the need for a different approach in leading the creativity of knowledge workers throughout the creative process.

If necessary, we will recommend possible improvements in management processes in the Slovenian design industry (concerning work process, creating the optimal environment, and support for knowledge workers). Recommendations aim to build on the concept of Artful Making and relevant literature.

1.3 Structure of the doctoral dissertation

The introduction will be followed by the chapters that present the description, literature, and secondary analyses of the relevant themes, and then construct the frame of our analysis.

In the second chapter we present the business sphere and frame of the theoretical concepts of the postmodern organisational theory, based on the review of relevant contemporary literature in the field of organisation theory, organisation sociology, and organisational development (Boje et al. 1996, Austin 1996, Kanjuo Mrčela 1999, Belak and Kajzer 1993, Čurin 1998, Dimovski 2006, Drucker 1990, Drucker 2001, Drucker 2004, Goodman 1982, Herman 1994, Hersey and Blanchard 1988, Kotter 1995, Rižnar 2004, Schein 1992, Tavčar 1999, Tavčar 2005, Bahtijarević-Šiber et al. 1991, and Clegg et al. 1996). Due to constant and rapid changes in the global market, the postmodern organisational theory recognises the need to adapt and change. Stable, successful, and big companies are changing slowly, and small, innovative companies are becoming serious competitors that can dictate the change of the future market and development of future products, processes, and services. This also calls for a change in the functioning of business organisations, organisational culture, and the relationships between the people working in the company.

In the third chapter, the objects of our research are employees of the 21st century in general, and also those in design companies who are at the centre of the company, its productivity, culture, success, and the significance of their creativity for companies' success. In today's businesses employees are very often highly educated, competent experts, enthusiastic about work, new knowledge, and are motivated to create truly innovative results, and so also called 'knowledge workers', as the workers who contribute mostly by their knowledge, experience, and creativity. The literature referring to knowledge workers also commonly uses the term 'creative workers'[2], stressing the creative skill they often need and use in the innovative part of their work. Due to these changes, the literature and practitioners stress the importance of management styles, leadership supporting the creative workers, and an understanding of the different approaches when leading the iterative and sequential processes. The gap calls for new theories and additional knowledge about leadership of

[2] We will commonly use both terms (knowledge and creative workers), since both of them are used on a regular basis. They are often needed and sought-after, especially in the design industry, choosing among them regarding the context and the term use in the cited literature.

creative workers, of creative processes and constant innovativeness (Gephard, Thatchenkery and Boje 1996; Mumford and Licuanan 2004; Dubrin 2007; Andriopoulos and Dawson 2009; Kramer 2011; Parush and Koivunen 2014).

The fourth chapter presents the art and artistic sphere, which has been unanimously recognised by scholars, theory, and practitioners as a sphere most competent for producing constant creativity and effective functioning in the process of creating the unknown. A number of case studies and examples prove the efficiency of cooperation of the business and artistic sphere on the practical level, with some amazing results and feedback. The new scientific field called 'Arts-and-management' was born out of that cooperation with the intention to contribute to Management and Postmodern Organisational Theory (Kanter 1994; Scheff and Kotler 1996; Hughes and Weiss 2007; Austin and Devin 2004; Drucker 2001; Evans and Wolf 2005; Schiuma 2009; Banaji et al. 2010; Bozic and Olsson 2013; Meisiek and Barry 2014; and Parush and Koivunen 2014).

The fifth chapter constitutes the core of our thesis and presents the concept of Artful Making. Artists have been always creative, and they are comfortable in creative processes and manage them successfully. As an artist myself, I am profoundly interested in studying the principles and methods successful artists use in their work, as well as the possible benefits of their use in business organisations, and the possibilities and benefits of applying them in the innovative processes of innovative organisations. The concept of Artful Making has made it into organisational theory and describes the qualities, principles, and methods successful artists use in their work that can also be successfully applied also in innovative processes in business organisations (Austin and Devin 2003; Meisiek and Barry 2014; Meisiek et al. 2016).

The sixth chapter examines design management[3]. Since our empirical research is focused on the design industry, we also analyse design management, a concept widely promoted by successful designers. It stresses the importance of effective leadership in creative processes. Design does play an important role in the design industry and the mission of design management. Furthermore, design thinking offers additional interesting and valuable insights in management of creative processes (Gorb 1990; Boland and Collopy 2004;

[3] Hereafter use of 'design management' refers to the set of concepts relating to theory originated in the professional practice of designers.

Lockwood 2010; Neumeier 2009; Dorst 2011; DMI 2011), and useful approaches management should apply to stimulate creativity in their companies.

The seventh chapter presents the results of our empirical study of the Slovenian design industry and its management styles. We also participated with our battery of questions in the all-Slovenian research of the design industry. Participation in the project "The Condition of Design with an Emphasis on Industrial Design, as a Part of the Creative Industry and Examples of Good Practices in the World as a Basis for Strengthening Design in Slovenia" provided us with the valuable results of this survey, other surveys (with designers), interviews, and available data we will verify, i.e. the present situation in the Slovenian design industry, the importance of innovativeness, current management styles, and the principles used in the innovative processes.

In the last chapter we present the results, findings, and test the initial hypotheses. Furthermore, we discuss the results and construct the model for successful introduction of innovation in the companies thriving for creativity and innovativeness.

2 THE BUSINESS SPHERE AND THEORETICAL CONCEPTS OF POSTMODERN ORGANISATIONAL THEORY

Our research is placed in the field of postmodern organisational theory. Postmodern organisations face changes on the market and in the world one way or another – whether they lead the change and are the true innovators and dictate the future direction of development in their speciality, or they follow other successful companies, copy them, or try to find some other way to survive. In the global competitiveness of our time, only one thing is sure, and that is constant change. Innovativeness and specification of the products and services drives the change and development in the business sphere, and creativity as a process of creating innovative, valuable outcomes is becoming one of the key components of success for companies in the 21st century. Constant innovations need an innovative culture and support from entire company. In this chapter we discuss the holistic approach and all the steps a company needs to make in order to become and stay highly competitive and successful.

2.1 Theoretical conceptualisation of postmodern organisation

Max Weber was one of the main writers about organisations in the 20th century. Already in 1922 he was writing in Wirtschaft und Gesellschaft about the bureaucratic, mechanistic organisation, formed by the organised division of work, where every worker has a strict nature and specifics of his work that are unchangeable and constant. The manager's role was to control, command, give orders to workers, prevent mistakes by strict control of their work and accuracy, and delegate new tasks. The hierarchy was strict and clear. Similarly, also Frederick Taylor wrote about contemporary organisations and suggested, as a model to improve working processes, the systemisation of work and working process by making them synchronised with machines, making the process completely linear by producing mechanical work (Clegg 1992, 30-40). When the nature of work changed and products were no longer just the same copies, also the nature of the work of employees changed. Their work became more complex and it wasn't just to produce and repeat same endeavour again and again. They became a part of research and development, of change, and thus the creative force of an organisation.

The main difference between contemporary and postmodern organisations is in a way of seeking the perfect model for reaching success. The postmodern organisation has discovered new ways of seeking the perfect model for reaching success and innovativeness as one of the key components of reaching it, and while contemporary organisation theory tries to find the best model of effectiveness based in science, "postmodernism organisation theory seeks a practical and ecologically viable set of images of effectiveness that incorporate a range of views and concerns of different groups" (Boje et al. 1996, 362–3). A review of the literature tells us that postmodern organisations that developed according to changes in the environment in which they are located, are represented as flexible, adjustable, network organisation forms (Clegg in Kanjuo Mrčela 1999, 259–61). They are based on post-bureaucratic principles of decentralisation, communication, trust, and mutual dependency, where the collective process of problem solving and attaining organisational goals becomes the organisation's essence; those involved realise the importance of organisational learning, common vision, team work, and the balance between flexibility and efficiency, cooperation and autonomy, and consensus and risk (Parker in Kanjuo Mrčela 1999, 259–61).

The analysis of companies and organisations is the subject of several scientific disciplines: economics (i.e. company economics), organisation theory, and organisation sociology. Company economics study the different forms of companies, conditions for operation, business processes, and company functions. Company theory and organisation sociology study abstract companies – their structure, goals, and the roles of important stakeholders inside a company, as well as outside of it (Kanjuo Mrčela 1999, 95–6).

Along with the change from contemporary to postmodern management, we can also read about the prevalence and development of "heroic" to 'post-heroic' discourses of management (Fletcher, 2004). It presents management as an interactive process of "influence and collaboration, in which power is shared and distributed among participants". In post-heroic management the manager should possess next to classical skills and knowledge, also 'relational skills and emotional intelligence such as self-awareness, empathy, vulnerability, an openness to learning from others regardless of their positional authority, and the ability to operate within more fluid power dynamics, re-envisioning the very notion of power from 'power over' to 'power within'. It doesn't mean it changes the role of the manager; it only enriches it with these special characteristics and equips him with

additional skills, which can serve as a great asset in specific situations when reaching the organisational goals (Fletcher in Parush and Koivunen 2014).

Gephart, Boje, and Thatchenkery (Boje et al. 1996, 2) by studying postmodernism, identified it mostly in three different ways: first, they see it as a social environment and social culture, succeeded by modernism (Roseau in Boje et al. 1996, 2) that presents a new and different social order; the second way of seeing postmodernism is as a cultural movement or a world view, presenting the view of the conception in a different and new way, "how we experience and explain our world" (Roseau in Boje et al. 1996, 2); and the third way is seeing postmodernism as cultural, or even a cult style that offers the aesthetic reflection of the nature of postmodernism (Giddens and Lyotard in Boje et al. 1996, 2).

In postmodern organisations, along with the profile of workers and the nature of their work, the working process also changed. That change also affected the factors of success as much as the evaluation of the final product and role of the manager, along with the hierarchy in the organisation. The bureaucratic form wasn't the most favoured anymore, and it had to adapt to the new situation, the nature of work, and become less differentiated. The main factors needed in order to reach success became the speed, integration, innovation, flexibility, diminution, and the slow disappearance of strict hierarchy (Vila 1999; Clegg 1996). One of the main principles in postmodern organisations is also the principle of subsidiarity, where the responsibility is no longer only on the manager, but is also transmitted to the workers who are now highly educated and well informed, with much greater responsibility. Every individual is also involved on lower levels of the hierarchy, and they all carry responsibility and actively participate in creating the culture that should be very supportive to knowledge workers in their endeavours to make the company's vision and goals turn into reality (Merkač Skok in Podjed 2006).

In postmodern organisations the meaning of flexibility, teamwork, process organisation, competition (i.e., comparison with the best), and being entirely customer-oriented must be of major importance if a company wants to adapt and follow a constantly changing environment. By inference, the importance of hierarchy has changed and has become more open to changes and exchanges of ideas and intellectual communication. Postmodern organisations have fewer limits, are more supportive to knowledge workers' creativity, and in the unpredictability of uncertain moments, provide greater support to the team and their

innovative process, and fully support cooperation and communication in order to get the most out of them (Vila in Kavčič and Kovač 1999, 328–370). Postmodern organisations can also be described as nonlinear systems with numerous different interactions, where various coincident interferences affect the organisational models. Interferences can be systematic or chaotic, but in both cases they lead to unpredictable events, with which they create new organisational models (Morgan 2003).

Initiation, innovativeness, creativity, and development orientation are characteristics that J. Schumpeter stressed as the most important for entrepreneurs (Kanjuo Mrčela 1999, 117). Drucker (1992) highlighted that an entrepreneur discovers new business potentials and enables the future of the business. Analysts notice that some earlier separate roles in business are now connecting, namely ownership, management, and entrepreneurship; many of them realise the importance and need for teamwork and common responsibility for business results; they encourage the collective spirit and the sense of affiliation (Kanjuo Mrčela 1999, 117). A new kind of business people are not in favour of existing solutions and have their own visions, a vision of how their masterpiece can be meaningful and change the world. So according to Kos (2009), business organisations should also be infused with openness, change, creativity, and being different. They are changing, and in that changing process they are also becoming more creative, which makes them also more and more similar to artists.

In the 20th century there were various improvements and additional updates to managerial styles and one of them was also the Six Sigma, that played an important role in management – the total quality movement, founded by Dr. Edwards Deming. As a result, the final products increased in quality. In the 21st century, the situation on the market, in the industries, in the education and function of the workers, globalisation, the fast delivery of innovative products, and taking the global financial crisis into account, has changed everything and definitely also called for adjustments and a new approach in management processes. New organisations are based on post-bureaucratic principles of decentralisation, communication, trust, and co-dependence. Solutions to the problems are searched for and found in the perpetual collective process, and also for reaching organisational goals. Actually, that becomes more and more the core of an organisation, and so organisations are becoming alive, incessantly in movement, adapting, and changing (Calton and Kurland in Kanjuo Mrčela 1997, 5).

With a significant change of postmodern organisational culture managers must adapt to a new situation. The management of new product development means working with knowledge workers who have the potential to make new, valuable outcomes. Still, it is a manager's duty to lead them the best way possible. Literature doesn't tell us much about the specifics of managing postmodern organisations and knowledge workers, in order to make optimal conditions and work space to build the environment and culture in which their creativity will be fully expressed. Creativity and cooperation can't thrive or function properly in a rigid structure and culture. Companies should be places of mutual dependency, flexibility, process organisation, and where they celebrate "mistakes"; and also of the ways managers support innovation of knowledge workers so they can "make things never before seen, predicted, or even dreamed" (Austin and Devin 2003, 173).

2.2 Increasing importance of creativity and innovativeness in business organisations in the 21st century

In last years, everybody is talking about innovation, and almost all companies stress the importance of creativity, which is seen as a promise to long-term success and profitability, at least looking from the point of view of today's globally most successful and profitable companies. Managers understand the meaning of innovativeness for the success of their companies and encourage it among their employees. But it is not so simple to become truly innovative, it is not a simple additional activity or skill of a team that can transform an organisation into an innovative one. The whole concept of organisations should be transformed and changed, having it in the heart of their message, vision, strategy, and mission, where the culture adapts to support its functioning. Von Stamm (2008, XI-XIII) argues that all of this is still just framing and changing paradigms, while it is of utmost importance to execute change in people's perception, attitude, and the ways of perceiving things, processes, relationships in the organisation, strong intrinsic motivation to create novel outcomes and "the desire to continuously improve things". That requires the applying the appropriate management style so their highly educated knowledge workers feel constant desire for experimenting, as also "developing an environment that encourages experimentation, exploration, and collaboration", so innovation and the creativity of knowledge workers can survive and produce the results and patents. In our thesis we will follow the suggestion of Von Stamm to present a holistic approach to innovation, in order

to present and prepare the conditions needed to apply Artful Making in the innovative organisation to produce constant innovations.

Figure 2.1: The BvS Innovation framework

Source: Von Stamm (2008, XII).

The figure above (Von Stamm 2008) presents the innovation framework and suggests five key areas in the organisation that need to be supportive to meet the conditions needed for innovation:

1. Strategy and vision. A clear idea, vision, or an ambitious goal is needed so the company has a clear direction and strives to reach it.
2. A leadership style that is trustful, supportive, and encourages collaboration, the exchange of opinions, experiments, improvements, and when possible, iterations.
3. Balance in processes. The processes involved in innovation need to be optimised and encouraged, while still staying within the reasonable limits of the capabilities of the company.
4. Company culture. It should be innovative and supportive, where the main actors in creating it are the leaders. Their attitude fosters change, experimentation, "learning from failure", and support of employees' creativeness.

5. Paying close attention to changes on the market. The environment around the company, competitors, customers, and the global market affect the working of the company, so being and staying connected and informed is essential.

In the following pages we will have a more profound study in the individual areas listed above, to learn the conditions that need to be met so a company can successfully implement innovative processes, and properly support the creativity of knowledge workers in their attempts to implement the great ideas and their final goal – to delight customers with their innovation.

2.2.1 The definition of creativity and innovativeness

Research on creativity was started already by Patrick (1935, 1937), where he examined the creativity of artists; while Barron (1972) chose to study the creativity of architects. The growing interest in creativity was conducted in 1950 when psychologist Guilford (1950) pointed out the importance of intensifying research in creativity. Later, with advanced interest in studying creativity and in teaching people to be creative, in 1967 *The Journal of Creative Behaviour* was created, still with mainly non-empirical articles. Only in 1988 serious research appears, and articles could be found that made a contribution to psychology studies. The definition of creativity is hard to be clearly stated or found, but often it is described as mysterious, magical, inspirational, the result of a great mind and talent, and a combination of unexpected events, thoughts, ideas, materials, and matters (Sternberg 1999, 3–17).

Gardner (in Runco 2004, 678) was writing about the difference between these two, and other domains and presented seven of them, each one of them having its significance and characteristics. He was mentioning "musical, mathematical, verbal-symbolic, bodily kinaesthetic, spatial, interpersonal, and intrapersonal", while surely today we can discover even more of them, where creativity plays the crucial role. In the time of rapid innovations creativity plays even bigger importance and UNCTAD (2010, 9), following the empirical research and development of the creative economy, defines creativity and knowledge as a part of "scientific creations in the same way as in artistic creations". It is the same activity used in arts and business.

Heinzen describes creativity as a driving force of innovation. It provides original ideas and options and researches changes and improvements to the present situation, to a certain product, or to a present process. It can be also seen as a specific reaction to the challenges of life, of present reality, and urgent needs or demands. Creativity is helpful when facing and solving problems. By taking into account the trends and changes around us, using creativity can help us avoid problems, or in some other situation prevent them from happening. So creativity is always active and reactive and its characteristic is also proactive (Heinzen in Runco 2004, 679).

Florida describes creativity as the ability to synthesise and wisely mix and connect all the knowledge, information, ideas, perceptions, sketches, visions, desires, and putting all that together they produce something new, useful, and with value (UNCTAD 2010, 10–11).

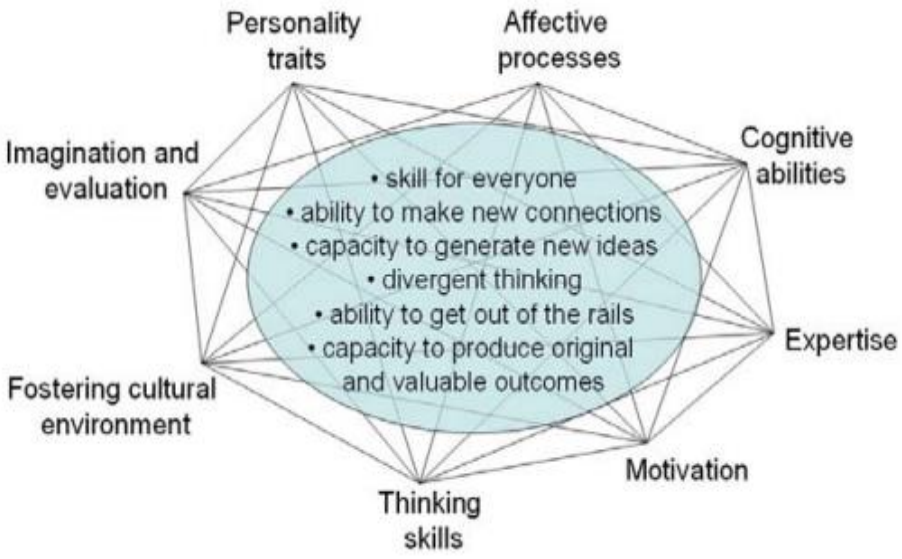
Csikszentmihalyi (2013, 3-317) sees creativity as a process in which the creator must first learn and pay attention to a certain field and domain. By learning and gaining information, a creative person can envision and start to mix and dwell on the information, knowledge, and experience. Putting extra attention and effort into it, then taking that specialised knowledge and combining it with emotions, exploration drives, a need for competition, and imagination, allows new things to occur and are created in a field that understands the domain and recognises the outcome as a valuable novelty. Today studies of creativity have a wide disciplinary perspective – from psychological, personal, sociological, artistic, cultural, biological, cognitive, developmental, (only lately) organisational and innovative, educational, and environmental. With the growing knowledge and awareness of people, also creativity blossoms and we can say in a certain way it is linked to all domains of human activities. In our research we focus on the creativity of artists, and will try to find similarities with the creativity of knowledge workers and designers in business organisations, where creativity is the activity and trait needed to produce valuable novelties. These novelties result in success and economic benefits for companies and businesses (Fulton and McIntyre 2013, 269–280).

In the business sphere, “business creativity is linked with innovativeness that influences technological changes and thus economic growth” (Kovač 2004). In a quest for business opportunities and novelties, the development of good ideas can give companies an edge over their competitors, and is valuable in individuals as well. John Adair underlines the

significance of understanding the creative process, of overcoming obstacles for the development of new ideas, expanding one's vision, shaping new ideas, developing a creative relation for a company's success, and the results of valuable innovations (Adair 2007, 20–49).

In the study conducted for a European Commission Joint Research Centre, Ferrari et al. (2009, 14) describe the creative process or creative product as the one that is original and appropriate (or which has value), and mention transdisciplinary research, which has shown that there are various points of view over creativity, which also results in a variety of different approaches. Their research points to various characteristics of creativity required, and define creativity as a skill for everyone, the ability to make new connections, the capacity to generate new ideas, divergent thinking, ability to get out of the rails, and the capacity to produce original and valuable outcomes. As we can see creativity is very complex and requires appropriate personality traits, imagination and evaluation in the process, the proper and fostering cultural environment, good thinking skills, motivation as a driving force, expertise to execute the work, cognitive abilities, and affective processes. The company's culture plays a significant role and should be of indispensable support to creative workers. which enables them to express and practice their creativity. The figure below (Figure 2.2) shows the characteristics and requirements of creativity.

Figure 2.2: What creativity is and what it requires – in the outer circle what creativity requires, in the inner shape what creativity is



Source: Ferrari et al. (2009, 14).

There is no perfect management of creativity, and there isn't even a perfect set of principles, attitude and culture, because they are unique for every organisation. Good information about the events on the market and changes in competition should design the best personal management style and the culture, where all employees united can create their maximum and be most functional and successful (Burns and Stalker 2003, 45).

The United Nations offers another description of creativity, and defining it as a powerful engine and "a key strategic asset driving economic growth, as well as determining successful integration into a rapidly changing global economy". They especially stress that in creative industries – the focus of our empirical research – creativity is "used intensively and with a particularly high degree of professional specificity", pointing to the importance of knowledge workers, their competitiveness, and the special nature of management principles used in the specific industry (UNCTAD 2004, 3).

Creativity is a construction of novel and useful ideas, opportunities, or solutions and is the first step in innovation. An idea is considered creative only when meeting certain standards, as having a clear purpose and being appropriate (Gundry 2008, 450–1). Innovative work is very important, especially in developed economies where the product itself has to have

added value. Usually, that added value is about the design of product, its likeability to customers, and aesthetic appeal. So, to be competitive and recognisable on the market companies use different strategies like including designers in the working process and cooperating with artists. Artists are creative all the time and produce little or very different works of art each time, using their specific approaches (Devin and Austin 2008, 491).

Definitions of innovation are numerous and varied. Schumpeter (1939, 84–90) defines it as "the setting up of a new production function", which can be in various forms, like for example new commodity or new form of organisation. He sees it as new combination of factors – existing as also new ones – where in later phases there are also included additional adaptations "of the coefficients of production", which is also related to money cost. The term of a new product function is quite wide and includes many factors, like product innovation, technological innovations, and also organisational process innovations, that all affect economics changes. Schumpeter (1939) described five types of innovation, among which are: the introduction of a new product, creating and opening a new market, changes and innovations in industrial organisation, development of innovative process, and new knowledge (in various forms). A Schumpeterian innovator is considered the company that presents a new product on the market (Edquist 2005).

Definition from official research and an experimental development manual (Frascati Manual (OECD 2002, 18) is: "Technological innovation activities are all of the scientific, technological, organisational, financial, and commercial steps, including investments in new knowledge, which actually, or are intended to, lead to the implementation of technologically new or improved products and processes. R&D is only one of these activities, and may be carried out at different phases of the innovation process".

The US Advisory Committee defines innovation in the following way: "The design, invention, development, and/or implementation of new or altered products, services, processes, systems, organisational structures, or business models for the purpose of creating new value for customers and financial returns for the firm". Haskel et al. (2010, 9) prefers to define innovation as "all additions to knowledge are innovation, provided they are commercialised". Innovations are more and more there to serve and facilitate life to customers, and therefore should take into account all human aspects and values as well. In

contrast, Lockwood (2010) stresses the power and importance of innovation that connects with peoples' emotions.

Creativity and innovativeness are the most sought-after qualities. A great number of companies search for creativity (next to other competencies), when looking for a new worker. A quality hard to measure and not easy to prove, yet the process of creative people working together is the one that produces valuable novelties and is recognised as innovation. Drucker (1998) described the innovative process as sometimes being considered a "creative" activity, where it is impossible to plan in advance and in detail the final product, before starting the process. In spite of its creative nature and the difficulty of controlling it completely, he knew the process can be guided and led from the beginning to its final results. Leaving creativity and innovativeness to chance and to the happenstance of accidental innovative products would also mean to indulge fate, and the success of the company at stake. So, creating a disciplined, scientific, and well-planned innovative process that will constantly produce and create valuable novelties is desired, where there are ways of managing it and supporting the creativity of the people participating in it. "A disciplined approach to generating better ideas to drive business growth does exist, and it is not simply increasing the budget of research and development" (Drucker 1998). In the following paragraphs we further describe the innovation process.

2.3 The Innovation process

To understand the phenomenon of innovation comprehensively, we present the process of leading new ideas through their implementation all the way to the final product which has an added value. The process itself consists of exploration of originality and the value of various options, and at the same time also the synthesis of the findings so far and creating new knowledge where the results are new creative discoveries. The results of innovation are individual innovations – products or services that are novel and have a certain value. "Innovation is the means by which the entrepreneur either creates new wealth-producing resources or endows existing resources with enhanced potential for creating wealth" (Drucker, 1985).

Nonaka and Takeuchi argue that the two traditional Western management styles, "top-down" and "bottom-up," fail to foster the dynamic interaction necessary to create organisational knowledge. Successful Japanese companies acknowledge the vital role

played by middle managers in taking the top management vision of "what should be" and the frontline employees' realistic sense of "what is," and develop midrange concepts. They see middle managers as the real 'knowledge engineers' of the knowledge-creating company, serving as facilitators between the top and bottom, as well as between theory and reality, and playing a key role in innovation" (Nonaka and Takeuchi 1995).

Innovation process has four main steps that make a part of the process that is often fragile and unpredictable. At the beginning, there is a new idea as a potential for innovativeness. In the first stage, there is planning and approval of future development of the new idea. The second stage presents development of a new product – invention – is a result of research and development. In the third stage, there is a potential innovation because of a development in a form of prototype or successful experimental production. The fourth stage of innovation represents the novelty on the market with added value as something that is recognised as new and useful in one sense or another (Burgar and Likar 2011).

Andriopoulos and Dawson (2009, 31) argue there are three different levels of innovation with numerous gradations in between. They rank them from small-scale changes to larger and more important and valuable ones, and the third level are radical, ground-breaking innovations:

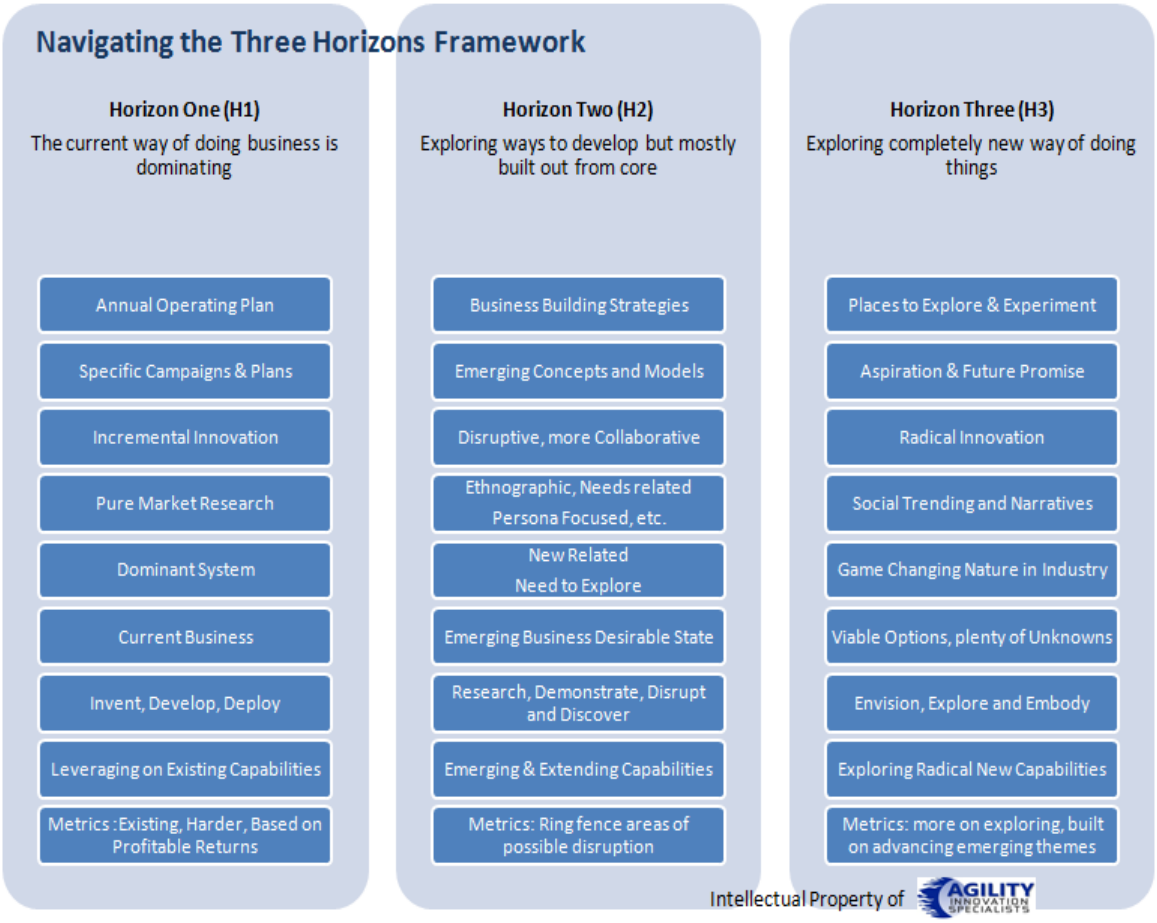
- Incremental innovations include the small changes, refinements, and modifications to already existing products. Usually, they are based on the knowledge of the organisation and existing organisational capabilities, which don't affect the basic conception of the product much. Incremental innovations are, for example, improvement to a mobile picture and sound quality, or the comfortableness of a bed.
- Modular innovations include middle-range innovations with more significant product improvements. An example would be the transition from black-and-white television to colour television, where the already developed product is taken through the modular innovation.
- Radical innovation that happens typically when current knowledge and products become old-fashioned, so new knowledge is required to create new possibilities and options. When they happen they usually change the future of the organisation, of other competitive companies, and also customers' expectations. Radical innovation

is, for example, developments in electricity, aeroplanes, or AOL's Instant Messenger.

The table below (2.1) provides clarity in how to structure, frame, and think in these different horizons:

1. The current way of doing business is dominant/to dominate – a dominant system with an annual operation plan, leveraging existing capabilities, it results with only incremental innovation.
2. Exploring ways to develop, but mostly built out from the core – more collaborative, explores new options, research, there are fence areas of possible disruption.
3. Exploring completely new ways of doing things – steps into th unknown, explores radically new capabilites, and results with radical innovations.

Table 2.1: Three horizons of framework



Source: Hobcraft (2016).

According to Andriopoulos and Dawson (2009, 31–32) there are various forms of innovation regarding the field in which they are created. For example, this can be product innovations, service innovations, process innovations, innovations in management, and market and position innovations. Radical innovation clearly calls for a radically different approach.

2.3.1 Managing Creativity and Innovativeness

As already mentioned, the way we view management, its theories and principles, invariably changes due to constant and enormous changes taking place in an organisation, as well as its character of how products/processes or services have been produced lately. In times of industrial production, companies just needed to invent and develop a product, and then reproduce it with machines. Employees only had to follow strict repetitive activities and rules in order to be successful in the market. In the global market space, and in times of constant change, innovativeness, and also recession and insecurity, the way companies produce and develop has changed greatly in order to remain competitive. Especially in innovative companies, they need employees who constantly learn new skills, are creative, think innovatively, and implement changes in the organisation and its relationship with customers. They must change with flexibility and be in a state of a constant readiness to change rapidly in bringing a new product to the market, and flexible and willing to change in the development process. Innovation and creativity as two of the crucial components of achieving success play a prominent role in discussions about creating novelties. It has been found that managerial approaches used in industrial time, are inappropriate and have to adapt to new circumstances in leading the workers who are meant to constantly create innovations. So in these new conditions management requires additional knowledge next to its classical characteristics. The principles previously described and suggested by scholars are changing and facing challenges, and call for updates followed by new approaches. In literature in the last decade we have read a lot from leading experts and managers, saying that they see the path from recession in innovativeness and creativity, which are today the key components required for success and a competitive company (De Bono 1999, Drucker 2004, Schiuma 2009, Austin and Devin 2003, Wankel 2008).

Jemielniak (2008) explores postmodern organisations and their leadership of knowledge workers. He concludes that many contemporary organisations still neglect: a personal approach, the creativity their employees practice, and the results they achieve because of being creative at work. At the same time, the research with the software developers he interviewed showed the identity of "engineers" meets the specific assumptions about IT projects. The programmers themselves when talking about the nature of their work and working process, describing it as different from traditional work and associating it with being creative.

So today it is of significant importance that managers have, in addition to managerial skills, also the ability to manage creative people, creative processes, highly educated knowledge workers, designers, artists, and other different profiles of people with different competences. According to Martin (Gorb 1990, 39), managers in the 21st century must also have artistic skills to have the know-how to manage also with the "heuristic"[4] tasks, and the ability to be comfortable in a constantly changing environment. They need to have the ability to be "ambidextrous, so to speak, and to think from both sides. All too often, it seems, businesses either excel on the creative side, in which case innovations usually fail, or excel on the analysis side, which generally leads to only incremental innovation or, more likely, stagnation. But the challenges of today's economy require much broader view and broader perspective and flexibility (Lockwood 2010, IX).

True leaders give the autonomy to the people, and also give them a lot of freedom and support, checking them out only when their work is finished, for approval. Participating in a group of innovators that make true innovations, and with their contribution changes history, is a matter of honour. Such a group motivates people intrinsically and fills them with the sense of responsibility to do meaningful work, and at the same time the pride to contribute to something big with their knowledge and effort. These kinds of groups don't need a manager, but a leader who is creative in their leadership style and supports the innovation process by the encouragement, trust, and support, inspiring the group to move forward towards the realisation of the vision (Bennis and Biederman 2007, 50).

[4] Definition of 'heuristic' (*Merriam Webster Dictionary 2016*): involving or serving as an aid to learning, discovery, or problem-solving by experimental and especially trial-and-error methods <heuristic techniques>.

Hamel and Tennant (2015) also stress the importance of accountability and individual responsibility of managers in the innovation process.

> *"To manage innovation in a systematic way, you have to have a widely understood definition of innovation. Without this, it's impossible to know how much "real" innovation is going on and whether it's paying off. Just as critically, you can't hold leaders responsible for innovation if no one can agree on what's innovative and what's not. Accountable and capable innovation leaders – what percentage of the leaders in your company, from project managers to executive vice presidents, are formally accountable for innovation? What percentage have innovation-related targets that affect their compensation? If it's anything less than 100%, innovation will be marginalised. Too often innovation is seen as the province of specialised units like R&D or corporate business development, rather than being the responsibility of every leader at every level. Obviously, it makes little sense to hold leaders accountable for innovation if they haven't been trained and coached to encourage innovation within their own teams. For a leader, this means:*
>
> *•Being adept at using innovation tools*
> *•Creating frequent opportunities for blue-sky thinking*
> *•Avoiding premature judgments when evaluating new options*
> *•Demonstrating an appetite for unconventional ideas*
> *•Recognising innovators and celebrating "smart failures"*
> *•Personally mentoring innovation teams*
> *•Freeing up time and money for innovation*
> *•Understanding and applying the principles of rapid prototyping and low-cost experimentation*
>
> *In our experience, most leadership development programs give scant attention to these innovation-enabling attitudes and behaviours. Through selection, training, and feedback, companies must work hard to create a cadre of leaders who are as adept at fostering innovation as they are at running the business" (Hamel and Tennant 2015).*

"In today's business world, competence, information, and state-of-the-art technology are all becoming commodities available to everyone. What now matters is the ability to design and

deliver value. It is for these reasons that a change in thinking may now be necessary. This change does not involve giving up the traditional thinking, which was, and continues to be, excellent. It is a matter of adding the thinking that is concerned with creativity and the design of value" (De Bono 2006).

2.4 Organisational culture supporting creativity, innovativeness, and change

Tushman and O'Reilly (2002) believe every creative and innovation-oriented organisation should be aware of the huge importance and influence of an organisational culture. Postmodern organisations need to create a supportive place where all employees interact, an organisational culture that truly understands how knowledge workers function, which can leverage creative and innovation processes. Companies striving for innovations and expecting their workers to be constantly and radically creative need an innovative company culture, excellent relationships between people working in teams, support, and trust in the company. In this kind of culture and environment creative people will have the courage to take risks, the daring to take new steps, and consequently will create new options for a change and improvement in their company, which is necessary to follow the changes on the global market (Neumeier 2010, 19).

Bozic and Olsson (2013, 63) define organisational culture as the dynamic interactions of its members, formed by the ways of thinking, acting, collaborating, and functioning of its members. These actions give the opportunity to create and influence culture, and at the same time they are influenced by it. Andriopoulos and Dawson describe culture as a shared phenomenon made by divergent elements, like: shared values, vision, and mission; the interactions of its members; their socialisation, cooperation and reactions to specific events, unexpected occurrences; and other artefacts. It is a form of the "social control" set of norms that shape creative and innovative processes (Andriopoulos and Dawson 2009, 267).

2.4.1 Building an innovative culture

Innovation has become one of key economic drivers of success and growth. Being well-informed with the innovations of competitors, and trying to be a step ahead of them means constant change and adaptation with the intention to create differentiation, to be recognised, noticed, and well-positioned on the market (Gorb 1990, 145). Organisational culture is made

by different elements, and among them is reaching organisational goals, effective communication systems, and the fluent exchange of information and ideas. Management should support creativity and taking risks like making mistakes in the creative process, as well as motivating and supporting creative people and their specific nature of work and stepping into the unknown. Motivation and trust play an important role, as do decentralisation. It is the director's and managers' responsibility and role to manage the organisation. Bringing and approving decisions, and setting an inspirational vision, mission, and goals of the organisation, one that approves investments and supports teams when creating novelties (Kanjuo Mrčela 1999, 13) is the way to become and remain competitive on the market.

An organisation should build a culture of creativity and innovation which are both interrelated. This kind of culture needs open information channels and a constant flow of new ideas and suggestions. The culture also needs to be flexible and ready to adapt to new, unpredicted situations and needs, to create more linear communication, to respect design, appreciate experimentation and stepping out of safe zones that rewards innovators, risk-takers, and creative workers for their efforts. They must understand the nature of their work, where failure is a part of the process and can't be seen as a problem or mistake. The organisation that wants to welcome innovativeness and has the goal to successfully implement innovation in its business, must most seriously fight an organisational culture of fear, which is innovation assassination, and build enabling culture that facilitates innovativeness. All paradigms, attitudes, management support, and passion of the leaders' influence creativity and encourages certain reactions, responses and imagination (Goodman and Dingli in Connell 2015, 119–121; Neumeier 2009, 170).

More and more business organisations are defined by creativity and innovativeness, and rely on making it a main characteristic in the plan of reaching success, of being different and recognised on the market, and sought-after by customers. Still, there is a huge difference between organisations trying to change and create an innovative culture (making it ready for creating innovations), and the one that is built on a high-performing work culture, where creativity and innovativeness makes its core nature. It is important that the mentality of all employees is constantly in a state of passionate unleashing of talent and to produce novelties (Neumeier 2009, 158).

In a company that has built an innovative culture, all employees are a part of the team of an innovative company. Sharing ideas can potentially give birth to new ideas. This means that leaders are not happy and satisfied with one unique and potentially profitable idea (and consequently one product), but should be in a constant pursuit of innovativeness and enhance innovative possibilities. The statement "No risk, no reward" is very true when talking about leadership of innovativeness, meaning the urgency for an awareness that risks, mistakes, numerous tries, and experimentation should become an indispensable attitude in an innovative organisation (Dubrin 2007, 344–6; Neumeier 2009, 170). Encouraging workers' creativity must include teaching them to see failure as a learning experience, and an absolutely normal thing in the creative process. This allows people to feel safe in making mistakes and to fail, and with the welcoming of risk-taking with the intention of creating something new they open possibilities for valuable novelties to take place. If a company truly wants to build an innovative culture, it should create and be led by a perpetual state of reinvention, and in a constant search of new, innovative ideas and suggestions that should be constantly flowing and be seen as a standard nature of the company (Gorb 1990, 58).

It is of the highest importance to build a collaborative culture of innovation for organisations that support creation and the implementation of great ideas. There must be the right culture and attitude to thrive by unleashing the talents and potential of knowledge workers, and groups that work together to anticipate opportunities. Sustainable innovation comes from vision, company culture, strategy, marketing, and positive customer experiences. A well-known example of creating an innovative culture is Apple, who has enjoyed huge success and launched numerous innovations on the market (Neumeier 2009, 54–58).

"The 2015 Global Innovation 1000" survey (Jaruzelski et al. 2015) shows executives still see creating innovative culture as a challenge stating they want "to tap into the more innovative culture of the U.S., as well as its more flexible operating environment". So innovativeness and innovative cultures are also a challenge for the greatest, biggest, and most successful companies. As the global market is constantly changing, also the culture has to adapt and follow the change by supporting the core competencies of innovators. The survey (Jaruzelski et al. 2015) recognised that management and companies have different ways of coping with innovativeness, and how they create new ideas and possibilities to foster it, with regard to their specifics. In 2015, global companies used three different innovation models:

1. The first group is comprised of ‘need seekers’. They focus on cooperation and communication with customers, and engage them directly when generating and looking for new ideas. They learn about customers’ needs, ideas, remarks, and wishes, and then together with them develop “original products and services addressing unarticulated needs and get them to market first”.
2. The second group is comprised of ‘market readers’. They don’t cooperate directly with the customers and the market, but still they are closely connected to it by closely monitoring their markets, customers, and competitors. Focusing on this information they generate new ideas and create value through incremental innovations to current products. These companies are effective in following events, changes, and needs arising, and react to them affectively.
3. The third group are ‘technology drivers’. These companies’ strength is in technological expertise, so they depend on it. They produce novelties with their own breakthrough innovations and incremental change. They develop new services and products and thus meet the needs of their customers by offering them radical innovation and new technology (Jaruzelski et al. 2015, 11).

Especially big companies have difficulties changing and adapting their culture and management styles to be more flexible and agile, which is necessary for welcoming innovativeness. They are used to have security in business, and in their norms and principles of work. But with constant change and aggressive competition, it is not possible to keep and have certainty and security in business if companies want to adapt to competition and move on. So, the biggest hurdle to innovation is often a wish to continue doing business in the old, familiar, and well known way. Change, novelties, and innovations always mean stepping into the unknown and presents uncertainty. However, it is also a possibility to create even greater business, success, and profit. The most successful companies know it and see failure as their number one strength (Gorb 1990, 127).

Another survey on culture and change management conducted in 2013 sheds light on perceptions and awareness of importance of the organisational culture. In a very innovative market, with a lot of literature on the subject, numerous consultancies and companies put efforts into producing novelties and products with added value, and culture is still seen as “critically important to business success, according to 84% of the more than 2,200 global

participants" (Aguirre et al. 2013). Despite intensive efforts and the initiatives of companies to change, the success rate is decidedly mixed, with approximately half of companies managing to reach success by sustaining their goals linked to change and transformation. Participants in the survey believe that less than 50% of companies are good at managing culture. The ones who are critical about their companies change program and initiatives, believe that during change initiatives their companies don't pay enough attention and importance to culture. Another complaint is about insufficiently involving lower level employees, which effects understating and intrinsic dedication to working on the change. Also various means, inspiration, motivation, and incentives are needed in order to prevent fatigue, and losing focus to communicate the life vision and goals of the company. Seventy percent of participants say when leveraging employees' pride in organisation and their emotional commitment, the change efforts were adopted. They point out the rapid growth of importance and influence of all employees, and a need to find levers to make them feel a part of the organisation. One of the ways to accomplish this is through a clear and inspiring vision and mission that all employees can identify with, and are proud of (Aguirre et al. 2013).

2.4.2 Managing transformation and change in organisational culture

Today, organisations constantly face changes, and as a result have to be ceaselessly prepared for them, and flexible enough to quickly adapt. Change is most usually connected with crisis, and according to Drucker (1990) it can be predicted. The organisation, wanting to become innovative and wanting to successfully apply innovative managements, usually faces recurrent challenges, such as integrating organisationally, technologically, and commercially, "building advantage in intangible assets and activities; and encouraging creativity and playfulness" (Dodgson et al. 2014, 13). The change is the constant in the innovative organisations, and the truly innovative organisations are in constant adaptation, while others need to start to make a change and create the supportive organisational culture first, and then try to keep it.

Managers present the most important factor in times of crisis, because they have to predict its coming, and must be ready to face and deal with it. Just waiting for crisis to come is a sure way for it to come, and equals giving up, because it's too late to react. True change is not easy to adopt, in order to reach the vision and make it intrinsic. It demands effort and

work. Management should lead organisations with a clear vision, and also anticipate problems and changes by degrading it and by being a step ahead of it. Drucker calls it ‘innovation and constant improvements’. When a company faces problems by being prepared for them, it is ready and knows how to change, adapt, and improve while having high morals, trust in its workers, and where everybody trusts each other (Drucker in Car 2009).

Changing and learning is already difficult for individuals and even more for an organisation. Yet every manager today knows that change, and consequently learning and adapting, are the main characteristics of doing business today. So, building an innovative culture and craving of constant change and learning can help everyone in the company to be willing to embrace new experiences, new ways of thinking, and be trained and taught to use the skills and principles business innovators use. When a manager is aware of the advantage of involving all levels of organisation into an innovative spirit, it is easier for a single worker to take risks, to dare to follow his innovative ideas, and have the courage to bring them to life (James and Biesta 2007; Hamel and Tennant 2015).

Kanter (in Car 2009) concludes that changes in the organisation should be based on a vision, and according to practical experiences. The most successful changes are the ones that start with a careful analysis of the strengths and weaknesses of the organisation, and the situation on the market and competitors. Knowing the strengths and weaknesses can help the organisation avoid losses of energy, skills, time, and resources.

Organisational design plays an important role especially effecting relationships among employees, as also relationships among employees and their managers and leaders. The formation of the relationships and roles also forms the expectations, perceptions, attitudes and involvement of employees, which is closely related to the involvement and dedication of employees, as also the passion to be involved in solving problems and support for taking risks (Weick 2004, 40).

One of the key management roles and opportunities is leading change and looking for constructive changes, which are always associated with planning (Northouse 2004, 8). Preparations and adaptions present a constituent part of strategic planning, as a disciplined effort to create clear parameters of what the organisation is working for, and why it is doing that. Planning and managing change is an important part of leadership, where no one knows

the exact future. The only sure thing is that it is going to be different from the present situation, will follow the innovations of competitors, and prevent losing clients (Bryson in Herman 1994, 154). Management should have clear goals and a vision about the future of the organisation. This involves investing in setting priorities, building an environment that fosters constant creativity, and encourages employees to new behavioural change goals that lead to cost-effective and convenient innovative products and services. The method of choosing a strong individual – a peer – with the intention of informally leveraging networks to help co-workers understand the bigger picture and deeper meaning of organisational vision and goals by using creative tactics (Gundry 2008, 459-60; Aguirre et al. 2013) is suggested.

Change as the most certain trait of the organisation still seems to be very difficult to lead. Its transformation efforts are difficult to be performed, whether it is to lead on a project level, or programs in the entire organisation (Kotter 1995, 59; Aguirre et al. 2013). As much as it is easy to write about change, in reality people quickly get used to certain kinds of behaviour and principles of their working process, and familiar with the realm of the nature of their work. It is always difficult to enter something unfamiliar, unknown, and new. In order to make true change happen, according to Kotter, it should be executed in eight phases. These should also be affected by peoples' experience and not only logic, by making them see the truth that influences their feelings. Still today most business transformations are at least partly based and executed on an eight-step process created by Kotter. The eight steps of leading change should be carried out in the following order (Kotter and Cohen 2003, 1–88; Kotter 2012):

1. At the beginning, an increased sense of true urgency and the need to start the change right at this moment must be created. The best leaders will connect with the deepest values of their employees and thus inspire them to follow.

2. Building a guiding team and a kind of coalition requires it to be strong, powerful, and capable of leading the other employees toward and through change.

3. Develop the change vision, created by the guiding team, and also the strategy for the process of change. The difference of the future and the past must be clearly set.

4. Communicate that vision for buy-in, and get the employees to clearly understand what will make it easier for them to accept the change. It should be seen in their behaviour.

5. Empower broad and clearly set actions so more and more employees feel they are able to change and act according the vision. It includes removing barriers and unleashing employees' creativity.

6. Generate short-term wins by allowing and recognising employee efforts for short-term performance. Creating success by acting upon the vision, more and more of them change, fewer of them resist.

7. Don't let up before the job is fully done by being carried upon the small wins of changes in acting upon the vision. Gains and short-term successes must be consolidated and move on to produce more changes until the vision is fulfilled.

8. Make change firmly based and anchored in the organisation. New approaches and behaviour must become the core nature of organisational behaviour and culture for sustained change and adaptation.

There is a lot of literature, advice, and suggestions about leading change. Every company has to adapt and see what option is best for it by making it very personal, understandable, and making people in the organisation truly a part of it. As Lou Gerstner, CEO at IBM expressed: "An organisation is nothing more than the collective capacity of its people to create value. Vision, strategy, marketing, financial management – any management system, in fact – can set you on the right path and carry you for a while. But no enterprise – whether in business, government, education, healthcare, or any area of human endeavour – will succeed over the long haul if those elements aren't part of its DNA", meaning besides being written on paper, also being put into action and interaction among the employees on a daily basis (Hoque 2014), and becoming truly intrinsic and highly motivating to all employees.

2.5 Main components of organisational culture - shared values, common vision, and mission as a way of intrinsic motivation

Postmodern organisations change on various levels, and the primary goal of this change is to create and keep success. In today's contentious environment much adaptation and transformation is constantly needed for a company to stay on top, and to produce products customers find valuable, desirable, and affordable compared to other products on the market. Another transformation taking place in the world is the intention to create an organisational culture based on values, common vision, and clear goals. Many organisations still lack the ability to strategically define goals, to truly motivate their people, and build solutions all the way without major compromises or extractions along the way. In capitalism the centre of organisation is creating desirable outcomes, but in postmodern organisations, along with other changes in culture and awareness of organisation and its employees, there is also an increased awareness of responsibility "for the whole". Barrett defined the core of change and transformation very straight-forwardly, and based it on the foundation of vision, purpose, integrity, and being value-driven and sustainably organised, with the focus on their employees. He explained it by the famous sentence "Organisations don't transform. People do!" (Barrett 2006, ix–xxi).

2.5.1 Values of the organisation

Musek Lešnik exposes values as one of the basic priorities of a culture of an organisation, and states the beliefs about what organisations and the individuals working in it truly value, and see their pursuit as positive, important, and worthy. Experts have seen that honestly expressed and recognised values play a very important role in the organisation. When employees have the possibility to carry out their own values at the same time, they are more dedicated and more pleased with their work, as also with their life in general. Values clearly stated in the organisation present a great basis for clearing up missions and the vision, as much as future operations. This influences effective working. Values are the driving force that help people achieve the greatest results. The best statements about values are those which give a general and wide perspective, and that strengthen the feeling of belonging to the organisation. They include realistic frameworks for a strategic plan, and set concrete goals in which all of the employees recognise their own role in making the plan come true (Musek Lešnik 2003, 85–135).

Top management has to start working first on personal transformation and mastery, and then transmit it to all other levels of organisation. On the subject of cultural transformation also Barrett (2006, 7–88) identifies values as one of the main tools of change. In organisations, they exist on three levels:

- First, there are the personal values of people working in the organisation.
- Then, there are the values of the organisation people work in, from their point of view.
- The third level are values of a desired organisational culture, as people working in it would like it to become.

By bringing them to a conscious level and discussing them, they are also able to transform and work on them. When leaders have clearly defined their personal and also organisational values, they transmit them onto all levels of organisation by clearly defining values which they find important and valuable for them personally, for the organisation, and belief in them stressing the conviction that through them success can be achieved. They build them by starting to transform the culture, and by incorporating them. They become the important tenets the organisation is driven by. They affect the values and make them even more pervasive in their management style, communication, and structures, which bring all decisions and working processes (Barrett 2006, 7–88).

2.5.2 The vision of the organisation

The vision describes an attractive, realistic image of the future and describes clearly where the organisation is aiming with its performance. People with clear visions of the future are called "visionaries", like for example Nikola Tesla, Steve Jobs, and many more. It is a mental perception that leads to real future success, and answers the question of what it will look like. The organisation can make it come true by eager and energetic following of its wishes, values, and mission, all led by a highly motivated and passionate leader (Musek Lešnik 2003, 247–50). Trott et al. (2015) define a vision as a statement, describing and clearly visualising a company's desirable future and pictures the goal a company wants to accomplish in its future.

The vision of the organisation should be formed together with all the employees, not only by management. It is important and will have much greater results if managers take time

and form an inspiring vision together. As a starting point, the management itself should possess certain characteristics, they should have a clear vision themselves, and be focused on the future when taking decisions and thinking about the future. It is also important they have great entrepreneurship skills, and when taking decisions, they have their mind on the fact that they exist in a rapidly changing environment. They must be willing to takes risks, and at the same time clearly take responsibility for their decisions. Another important skill they need is great communication with all the levels in the organisation, and showing with their actions, decisions, and behaviour that the vision is of high importance for them. They are good systematic thinkers and creatively look for ways to connect with their clients and the rest of the world. Last but not least, they support and accelerate creativity in the organisation, innovativeness, organisation learning, and flexibility (Musek Lešnik 2003, 281).

The power of a meaningful, inspiring vision can be really great when employees can identify with it, and recognise the true value and meaning in it. This is especially so if it is in synchronisation with their own values, or they find it in opposition with their personal growth. It will deeply affect their engagement and encourage them to be willing to contribute new ideas the goals of the team. This way they become personally engaged in changing and creating the innovative culture. To many employees, meaningful goals and work are important, especially to highly educated knowledge workers. So experts stress the importance, the power, and effect of an inspiring vision with positive results in development and revenues of organisations (Preus and Frey 2009, 269).

The organisation, in order to function successfully, needs a clear vision which stresses the importance of hiring the right, highly educated people. Management must be led by the company's goals and manager's personal goals, self-control, responsibility, and leadership style leading towards success (Drucker 2004, 153). The vision is an encouragement for conducting a work with responsibility, and also for innovativeness in their work by looking for innovative solutions and novelties when performing their tasks. The vision inspires in the facing of the difficulties and obstacles in the environment and organisation itself. A powerful vision motivates people to put effort into their realisation what creates tension, that leads the organisation to making the vision come true (Fritz in Musek Lešnik 2003, 253).

Many great achievements, changes in the world, and innovations began with a personal vision. A nice example is the one of Vannevar Bush, coordinator for United States-funded scientific research during World War II., writing about his vision of the computer, which today has become indispensable for almost everyone (Bennis and Biederman 2007, 64–100).

2.5.3 Mission of the organisation

Attainment of a common mission statement provides great value and facilitates and motivates employees. A mission statement describes the meaning for the existence of the organisation, and is formed according the values and vision of the organisation. Literally, it talks about the core, the heart of the organisation, and about its behaviour. A written mission explains and describes organisational concepts of the organisation, its characteristics, services, core philosophy, and goals. When people working in the organisation can identify their personal goals and beliefs with the organisational mission, it creates a strong identity and influences the company's performance results.

The mission statement describes an envisioned future and explains what the core values are, and as well the purpose of the organisation in describing the fundamental reason the company exists. It must be simple, with a clear goal and determination toward achieving that goal. It stimulates progress and inspires people to dedicate all their effort toward achieving it. Collins and Porras (1996) argue that the biggest problem is aligning the mission with the reality of the organisation and bringing it truly to life, to organisational culture, communication, activities, and to all its employees on all levels (Collins and Porras 1996, 66–76).

In order for the mission statement to be successful, it should fulfil three conditions:

1. Recognise the advantages and opportunities of the organisation.
2. See, what can make the organisation special, different from competitors, attractive, and set new standards, despite its limitations. By placing new standards, new competences, and dimensions better and goal-oriented performance is created.
3. Recognise new opportunities and needs in the environment. Dedication to the mission presents the key factor for its success (Drucker 1990, 3).

Mission statements should take into account shared values, which also provide direction for the working teams when creating something new, and present a direction. According to Hey, clear mission statements facilitate working processes and "served as guiding visions for the teams, and required less iteration throughout the project" (Hey 2008, 108).

2.5.4 Motivating employees

It is important to hire motivated people, and at the same time to have the know-how to motivate and choose them by their competencies and expertise, and also by their personal values so they can create and dwell upon intrinsic motivation in working for an important purpose. It is of huge importance to the organisation, and for expressing and creating a motivating vision and culture of the organisation. Neumeier sees it as a way to "drive your stock price higher – and sustain it". Motivation is of vital importance in the working process of an employer when using his/her skills and working in teams. In this context it can be defined as an individual's wish and intention to accomplish the tasks given. Knowledge, experience, and motivation present the abilities we need to get to know and then try to influence them by motivation, every great idea, every small progress, every step forward (Neumeier 2009, 161).

The vision must also be set very clearly with setting the ambitious goal for what they want to accomplish, always connected to helping and easing people's lives and lifestyles. The creative teams highly appreciate constant support in critical times, times of insecurity, and in times of self-doubt, and at these moments what they need is motivation, trust, support, and encouragement. To innovate inside the set boundaries is often a difficult task accompanied by many constraints, failures, and crossing the known line and motivating management and the supporting culture is of huge value at the moment like this to the creative knowledge worker (Prahalad and Mashelkar 2010, 141).

Employees are much more dedicated to their job if it has meaning. Actually, for a lot of people it is more important to have a meaningful job than their status level. So, the result of having an inspiring vision is the improvement in a company's functioning, results, and success (Preus and Frey 2009, 269). So another strong motivation is giving workers the opportunity to grow and have freedom to incorporate all their talents and knowledge in the work. In the 21st century, in innovative companies, knowledge workers have a lot of knowledge. They are also very enthusiastic about growing and constantly learning more.

They are passionate about having new experiences and different views. By putting them on a great team where all the members are great minds and experts, this gives them additional motivation to do their best. It presents an opportunity to grow individually, and also as a team and a group together, what become two complementary goals (Bennis and Biederman 2007, 155).

3 BUSINESS SPHERE AND KNOWLEDGE WORKERS – MANAGING EFFECTIVE COLLABORATION AND LEADING HIGHLY PRODUCTIVE INNOVATION TEAMS

Now that we have discussed postmodern organisations, their main priorities, and the culture they need to create, we turn our focus to the employees in the organisation. With their high education, experience, skill, and abilities, they present the greatest value of the organisation. The success of an innovative and creative organisation depends on their abilities to deliver functional and sustainable outcomes. The nature of their work has changed dramatically, compared to work in industrial times, and consequently also the management style calls for adoption to their credibility, knowledge, and especially the nature of work. So, in this chapter we examine the existing literature and suggestions from scholars on managing employees, the creative process, collaboration, and the characteristics of a leadership style that understands and supports the process of creative workers, and whose task is to generate good ideas and lead them through the process toward valuable innovation.

3.1 Significance of knowledge workers and their creativity in postmodern organisations

In a postmodern company, the significance and role of human capital, especially specialised and highly educated human capital, also called *knowledge workers*, have surpassed the significance of physical capital. Knowledge workers are of the highest importance to organisations. The value of their work is highly respected, so organisations put much greater emphasis on them and on the management of human capital. Effective human capital management is a formidable challenge for the business world. Managers have to know how to best stimulate teamwork, changes, creativity, innovativeness, competitive spirit, how to preserve and motivate people, and make them do their best. Development, quality, innovation, and success are based on the success of human resources, and so human resource management presents a formidable challenge in the business sphere. As a result, it is of extreme importance to remove hindrances to organisational innovativeness. Moreover, it is important to encourage new and innovative ways of financing and experimenting regarding the division of risks and rewards, and the willingness to constantly improve and modify the management system (Kanjuo Mrčela 1999, 104–5).

Davenport and Cantrell examine the similarity between high-end knowledge workers and creative workers in the perspective of the creative nature of work and of the importance of having autonomy, resisign to routine, and embracing of risk in their work (Davenport and Cantrell 2002, 1). Developing the skill to create in company and empowering innovation teams can give companies an edge over their competitors. John Adair (2007, 20–49) underlines the significance of understanding the creative process, of overcoming obstacles for the development of new ideas, expanding one's vision, shaping new ideas, and developing a creative relation for a company's success. The manager that deeply understands the innovation process will also have the know-how to support, encourage, and give awards and meaning for creativity. "Fostering and sustaining high levels of creativity leading to meaningful and purposeful innovation has become one of the most significant roles of managers in the 21st century" (Gundry 2008, 459–60).

If we truly want to change our company culture and make it innovative, we must go deeper and change not only our vision and values and set the new standards, but as a starting point, managers and leaders should change their behaviour and relationship with their employees. It's a precondition of change to be willing to cooperate with other fields, and thus take advantage of the opportunity to learn from them, exchange experiences, and approaches, and see things in different ways from a completely new perspective. "Isn't it logical that new fields can be created by bringing to collaboration fields that had previously not seen the meaning in working together" (Abele 2011, 92).

The concept and functioning of an organisation often undergoes radical changes and faces many challenges, as much as the constantly changing environment. All this calls for adaptation and flexibility for the role of manager. It seems to be more and more complex, and classical forms and rules are not good enough anymore. This constant need for creativity requires a manager to master creative skills in order to truly support the workers in their creativity. Furthermore, it seems like today's managerial role is, more than ever, to lead in the sense that the ones he is responsible for, and in charge of, follow and respect him. At the same time, he understands, respects, and supports them in their working process. "The 21st century society craves a leadership of possibilities, a leadership based more on hope, aspiration, and innovation, and less on replicating and repeating historical patterns of a limited pragmatism" (Cameron, Dutton, and Quinn in Adler 2006, 487). The urgent purpose of innovation and creativity in todays' business is to bring innovation to management style

and leadership, with the intention of optimising working conditions and finding creative ways in bringing the best and most out of workers who are producing new, innovative outcomes. Leading companies realise success, and positive solutions to the challenges of globalisation are equally important – and that creative skill is the most sought after qualification in the business world (Pink in Adler 2006, 486–490).

3.1.1 Knowledge workers

The postmodernists who believe in the new concept of organisations based on humanistic principles, are sure some fundamental changes should occur. Organisational praxis should have as their basis postmodern management more humanistic organisations, based on principles of harmony and balance on all levels – in humanity, in our institutions, and also in our theories. They should be there not for the reason of profit or stakeholders' interests', but because of people and for the people, respecting their talent, efforts, values, and having a meaningful core-driving mission (Gephard, Thatchenkery and Boje 1996, 364). When people come to the centre of an organisation which is based on humanistic principles, it should also be based on values and cooperation, less hierarchical, and built to trust (Kanjuo Mrčela 1999).

In organisations like those previously mentioned, managerial and organisational success and results stem from the workers who need to be creative in their work. Leading must be adapted to their level of work, and thinking can't be the same as it is in the leadership of industrial workers, who perform manual work and repeat the same form of work. A true leader's duty is complex and asks for more additional skills accompanied by a psychological and holistic approach with a need to understand his workers and employees (Bennis and Biederman 2007, 40–70).

The creativity of knowledge workers is studied by phychologists, scientists, sociologists, managers, artists, and many other fields, and they all have one claim in common: creative people should be supported, trusted, and rewarded for small wins and progress. The characteristics of their nature of work and effort to meet the desired results, they need a sense of autonomy and freedom. Therefore, managers should not limit them with constraints, criticism, and perfectionism, but rather should allow them to repeat and improve the product until they meet previously set standards of the group, and reward them for the progress they make (Bennis and Biederman 1997, 50; Amabile and Kramer 2011).

Therefore, recruiting people should take into account not just a person's credentials, but also look at their expertise, knowledge, ability, skills, and creativity. When looking for new workers, an organisation should look for certain traits in a person, and among the most important is to seek out excellence and to hire the best people available. This is frequently not the case because of the fear of hiring someone better than they are themselves. The team, as a multidisciplinary potential of creativity, will create something extraordinary when its members are experts who think out of the box, who see things differently, are thrilled to explore new things, and are creative in the search for a solution. They are flexible and in constant need for discovering better and yet undiscovered ways of creating things. They should be skilled at connecting their broad knowledge and expertise with other people on the team, and great at communicating with others in working towards the realisation of their common vision. These most talented and intelligent people will be eager to do special things. If a knowledge worker has great interest in taking on a given job and responsibility, then such an employee will enjoy the work he does and invest all his expertise and energy, because he will be intrinsically motivated for it (Bennis and Biederman 2007, 69; Andriopoulos and Dawson 2009, 339). Intrinsic motivation and dedication to achieve not just one goal, but to strive toward realisation of the company vision, makes them highly committed in their endeavour, to pursue excellence in their work, being unwilling to settle for compromises. So, it would be worthy for a manager to pay attention to their ideas and suggestions which can lead to the success of the company (Austin and Nolan 2007).

Florida (2002) created a term 'creative class' in society. This refers to a group of all creative knowledge workers, where he includes all professional and highly educated workers in "science and engineering, architecture and design, education, arts, music, and entertainment". The economic function and their work potentially "generates economic, social, and cultural dynamism". Those creative abilities and assets result in economic growth, and development can be generated. Economic and innovativeness aspects of the business sphere can be fostered if using and managing creativity properly (UNCTAD 2010, 10).

According to Florida, all creative people share specific characteristics – "individuality, meritocracy, diversity, and openness," combining it with the others on the team and company (UNCTAD 2010, 10–11). Nevertheless, creativity itself is not enough to enrich businesses. It demands that creative people use their knowledge and combine it with

creativity. Only altogether and in cooperation they have the capacity to create novelties with added value, and thus add “economic value through creativity”.

The Annual Global CEO Survey (PWC 2016) found that still today it is difficult to hire highly compatible employees, so 72% of CEOs are concerned about the availability of key skills. Experts in a specific field with specific skills, it would seem, are still not easy to be found and hired. It poses a particularly great issue because 48% of them plan to increase their headcount in the coming year. Consequently, most CEOs (75%) see that creating or obtaining a skilled, educated, and adaptable workforce is a top priority in both business and government (PWC 2016, 23).

3.2 Leader as a 21st Century Manager and Knowledge Worker

Lately, the nature of organisations has changed drastically, due to the changes in environment and in markets presenting innovations on a frequent basis. These events call for new managerial approaches. This affected new studies with an emphasis on fostering and managing creativity in organisations, where the leadership of creative people and creativity is recognised as a complex task (Mumford and Licuanan 2004). Here we will present successful leadership, characteristics, and approaches recognised by scholars, and relevant literature as having a positive effect on innovativeness in companies.

Adizes (in Lipičnik 1995, 70-90) recommends every manager to be in the constant state of learning and improvement, so they can keep an organisation successful, and mentions among the great qualities they should possess, also creativity and originality, next to supporting those traits in their employees. Responsiveness to the needs and changes in the organisation, and proper leading of knowledge workers is another needed quality. Another important characteristic is being able to be supportive, to have admirable knowledge so one can make great strategic plans, and coordinate and survey the work; be able to judge and when needed be strategically agile when it’s necessary to change the goals and systems for reaching success. Managers should be excellent at coordinating personal and team goals, and thus transform personal entrepreneurship into a group dynamic, which highly affects its productivity and dedication to achieving success. As a core characteristic of every good manager, it is important to know oneself very well, and be aware of personal imperfections that can be well fixed and improved with education, trainings, and complemented in other ways.

Managerial approaches and dealing with workers must properly change and adjust, just as the nature of the work has changed. They are highly intelligent and educated individuals who represent the intellectual capital of the company. The company and leaders expect them to deliver intellectual knowledge by constantly creating new things and producing new ideas. This also demands managers' trust and support. "To get the best, you have to confide in people your hopes and plans. And show you care. Caring counts more than counting, and this is especially true with creative people" (Gorb 1990, 22). Trust is the key inside the operation of an organisation, as well as trust in the society and social environment in which it operates, as underlined by Fukuyama (Kanjuo Mrčela 1999, 259–61). Moreover, economic solidarity is an important part of the social environment of an economic operation, and a prerequisite of a successful economy. The awareness of differences between industrial work and "knowledge work" is also in its economic importance, and demands new approaches where creativity can flourish. Leaders should harness their skills and inspire them with vision, what includes sometimes also allowing them to find their own way and in certain conditions allow them to make mistakes on that way by following the vision (Andriopoulos and Dawson 2009, 202–3), since discovering the penicillin and similar findings suggest sometimes it can be also a way to realise the vision (Austin et al. 2012, 1506), as the history proves. There is also a big change in the relationship with customers, and their opinion and wishes matter much more than they did before. Flexibility and constant readiness to change in order to stay on the market, change in the speed of bringing a new product to market, a change in the development process, and finally a change due to globalisation that brought intense competition to almost every single market in the world, all call for further support of creativity.

The management style is connected and dependent on the situation in an organisation, so in times of change in the organisation, it is necessary to adapt the style to the new situation. This means that there is no perfect model of management nor concrete set of principles and techniques to be used, since they are changing in conjunction with changes in the organisation. It is of high importance to recognise the true situation on the market and the rate at which conditions are changing, "and then designing the management system appropriate to the conditions, and making it work" (Burns and Stalker 2003, 45).

3.3 Leading Knowledge Workers in the Process of Creativity

In terms of a changing environment and the concept of organisation, the role of a manager seems to be more and more complex, demanding many skills and an understating of the nature of the people they are working with and managing. Austin and Devin (2003) speak of a highly important manner of thinking, how to manage the creative and artistic aspects of business and creation, because they are aware of the fact that the management of highly competent people requires additional managerial skills and knowledge. The observation of research and development of the most successful companies' points to the fact that they give considerable autonomy to the lower groups, and follow the bottom-up model of culture and authority.

In the 21st century, managers have to know how to best stimulate teamwork, changes, and to create the perfect environment to enhance creativity and innovativeness. They also have to learn how to preserve and motivate people, and inspire them to do their best. Accepting new ways of working in companies also requires stimulating employees' capacity to think outside the box, which can transform the culture of organisation and has resulted in many companies around the world making made fortunes. Today, more and more, managers realise the importance of this potential and look for solutions and help from various experts, and John Kao, Peter Drucker, and Tom Peters recommend the use of the arts model for the future of managing and leading entrepreneurship (Austin and Devin 2003; Bartelme 2005; Schiuma 2009; Meisiek and Barry 2014).

In managing knowledge workers, and communication with them in times of change and uncertainty or dealing with problems, managers should stay respectful and positive, and foster a tone of trust in the work and expertise of the knowledge worker. Communication should never have the characteristics of a vertical one, but always transmitted with respect, a consultation of sorts, and also rather in the form of an exchange of information and advice, and not as instructions and decisions. It should be supportive in knowledge workers' search for something new and contain lots of recognition, praise, and express tireless support (Gorb 1990, 22; Burns and Stalker 2003, 48–9).

Hammonds (in Dubrin 2007, 344–350) calls recognising great creative ideas and stopping brainstorming at the right time is gambling. As also dealing and leading in times of insecurity and instability, they recommend gambling intelligently, shrewdly, and

selectively. Possibly some great ideas in companies just aren't recognised and many great opportunities have been lost. Still, knowing how to recognise something unique can change a company's life and bring success and a great innovative product. It is a leader's highly important duty to recognise the right idea, the really innovative one that can potentially turn into a success story that the market and the customers will love and buy. Another thing mentioned as a must is the possibility for development and production (product developers) to work together. That would give them an opportunity to give more input and communication, and in this way further improve a final product.

Gorb (1990, 40) encourages managers not to stick to the rules and that which is familiar, but rather encourages them to dare to step into the unknown and to take risks. A tendency to be preoccupied with status and perfection will just block every attempt of the creative process. He argues that fear of failure and aversion to unpredictability present the prime assassins of innovation.

Dubrin's (2007, 34–42) research of leaders and their personality traits identified certain ones which make them more effective than others. True leaders should prefer action and work over much talking, being courageous, in every situation being ready to fight obstacles and fears, and believing and constantly envisioning the final goal. The findings of various authors suggest that each effective leader should have certain specific characteristics in order to bring results and have success with his workers. These characteristics are needed in a true leader who wants to fight for making a company's vision and innovation plans come true. The possession of these specific personality traits makes them more effective than others. Among a number of characteristics they identified, there are also some general personality traits (Hamel 2002, 205; Dubrin 2007, 34–42):

- *Self-confidence*. Healthy self-confidence also stirs self-confidence in team members. It is of great importance in times of pressure, insecurity, mistakes, when stepping into unknown, and when facing deadlines. Staying calm and self-confident also helps other participants of the group keep peace. It is crucial in difficult times of uncertainty or accidents, and makes it possible to finish the work.
- *Humility.* It is not very popular among managers and leaders of groups, yet it is of great importance at the right times and in specific situations, especially when working with creative workers in innovative processes. It is about being humble to

do everything needed to reach the goal, while at the same time showing the determination to succeed. Sometimes imperfections and accidents happen, and so it is best to admit it, or when you don't know what the best thing to do is, it is fair to be humble, trust others, and seek the solutions together.

- *Trustworthiness*. Leaders should act and talk in such a way that co-workers trust them. That means they have to be honest and consistent in their words and deeds. It is also needed from the worker side, so the leader can also be sure he can trust them and their words.
- *Extraversion*. A manager's characteristic of being outgoing and gregarious are seen as an asset to leadership effectiveness.
- *Assertiveness*. Showing it in communication and at work is welcome. Saying your demands, expectations, opinions, feelings, and attitudes out loud is a way of letting others know where you stand. It helps leaders to set high goals, standards, and expectations, and helps them achieve them. It is also a way of confronting workers about their mistakes and weaknesses.
- *Emotional stability*. It is important workers are treated and communicated in a consistent, stable way, and always appropriate to the situation. This helps the leader and workers avoid fear, anxiety, doubt, and embarrassment.
- *Enthusiasm*. It can be seen as a kind of passion for the work that has to be done. From the workers' perspective, enthusiasm is seen as a reward for their work and behaviour. Also showing compassion to every employee is important, because each individual employee has their specific role and contributes to the others – and a true leader is aware of that.
- *Sense of humour*. The right sense of humour and used at the right time can be a useful tool, especially in moments of conflict, high tension, fear, or panic.

3.4 Unleashing creativity by collaboration and teamwork

The companies that seek to be innovative know it is necessary for them to unleash creativity in their company, both among individuals, and also in their teams (Isaksen & Tidd, 2006), because creativity presents one of the basic aspects of the innovation process of forming novel and outcomes, that hopefully adds value (Crossan and Apaydin, 2010).

The characteristic of creative and innovative organisations is they often work in teams, so cooperation is of crucial importance. It is important to choose the best employees to participate in groups, because a group of great minds can functionally cooperate, make a great group, and create great things. It is important people on the team are similarly educated, experienced, and have great cooperation and communication, which facilitates the process. The great teams need to be created to lead a working process and produce novelties. Experts will be keen to join the great group, which is like a magnet for them. Great talents do want to join working in a group of other extraordinary, successful, and highly motivated people (Bennis and Biederman 2007, 191).

3.4.1 Importance of collaboration in creative organisations

The post-heroic discourses of management promote management as an "interactive process of influence and collaboration, in which power is shared and distributed among participants" (Fletcher in Parush and Koivunen 2014). It is a less dominant and controlling position and is socially regarded as more female characteristics, or more properly to put it as the characteristics, ascribed as artistic. They stress the importance of relational skills and emotional intelligence, of openness to learning from others, also if they have a lower position and preference of practicing the power from within, rather than power over somebody or something (Fletcher 2004).

In our constantly changing market and highly technological society where the transmission of information flows to every corner of the world, collaboration became a necessity. There is no single person and no hero who could solve all the big problems themselves. Throughout history we have known about the great minds, artists and inventors who were presented as individuals and who contributed amazing innovations – thus greatly contributing to the world. A nice example of how amazing things can result from the cooperation of great minds and working in teams is Michelangelo, whom we know as the famous creator of the magnificent ceiling in the Sistine Chapel, among his other great works. However, not many know that there were 13 people working with and helping Michelangelo paint the masterpiece. They had collaborators who had also great minds, and they were all together searching for solutions in a group. So, he was a great mind and an excellent leader of a kind of company that painted the famous ceiling. Also, French artists had periods when they were painting together and their works were similar, we can find collaboration also in

filmmaking and among writers (The Bloomsbury Group), as stated by Bennis and Biederman (1997, 5-6). There are more famous examples we all know as individual geniuses but don't really know they had collaborators, people like Edison, Disney, John Andrew Rice, Steve Jobs, and Oppenheimer – the leader of the Manhattan Project. So scholars (Bennis and Biederman 1997, 191-9; Baer et al. 2008) report that more and more organisations rely on teams and collaboration in the search for problem-solving and the development of novel products/services. A leader must be cognizant of the right approaches to facilitate creativity, and at the same time nurture employees' perceived autonomy without limiting it in order to foster a group's creativity. The exchange of ideas, and at the same time the willingness to work not only on one's own project, but also a wish to help others and to work together for a common goal as top talented people, results in innovations.

Bennis and Biederman (2007, 1-3) stress the importance of collaborative teamwork today with the meaningful statement "None of us is as smart as all of us". Collaboration is talked a lot about, yet we shouldn't forget to whom we are talking. Living in a world that strongly craves the 'individual' with a cult of a hero, leader, and a star, our society is still firmly rooted in the tendency to be recognised and seen. Still, creative groups and innovative organisations need the cooperation of different experts; and there, collective creativity and collaboration becomes a necessity, especially because of the importance of spreading information so expertise can be well-orchestrated. Of course, managers have to manage and be able to lead inside a team every individual personally, and at the same time also get the most out of everyone working on the team. Authors support their claim with the study of senior executives published by Korn-Ferry, stating the belief that tomorrow's organisations will be managed by teams of leaders cooperating and leading together.

Leading companies are well aware of the significance of collaboration, and they strategically invest to that end (MacCormack and Forbath 2008, 1–3). They acquire resources for collaboration outside of their budgets, earmarked for individual projects, and invest into four key areas. They know employees are their greatest value and so hold them in high regard. Consequentially, leading companies realise the importance of relationships built on respect, trust, and communication. This would give managers the opportunity to learn to motivate more successfully and coordinate team members outside the company, who come from an entirely different culture. The second area is collaborative processes, because they understand that teams from different cultures have different advantages and

work methods; nevertheless, they have to match the tasks assigned. The third area is the creation of a data exchange platform, an infrastructure of means and standards, which enables undisturbed work to dispersed teams. The final area is good program that knows the importance of leading and managing collaboration coherently, which is not just the result of a series of individual attempts. This process needs a leader and "head of collaboration", who monitors the process and employs tactics that support and motivate creative employees.

3.4.2 Collaboration in the group in the search for innovation

Over the years, scholars and experts have suggested a number of characteristics a great leader must possess in order to make the cooperation of highly effective and intelligent people work. The role of a leader plays a major role, and has powerful influence and importance. So, the leader should feel responsible for innovation in the group, since expertise in leadership, in communication with the people in the group, and in giving proper support to their work contributes greatly to the creativity of the people for whom they are responsible. Leadership of a team made of highly talented individuals is in the book, *Organizing Genius,* described as a model where the leader is "an equal among Titans". The group should be intrinsically motivated and excited about working on their subject and solving the problem presented. They are challenged and happy to work on their project, and enjoy working together and collaborating in looking for a solution together. The leader of a great group is always an extraordinary person with a strong personality and clear goals (Bennis and Biederman 2007, 11–13).

To envision new possibilities, creative teams need tools to unleash their collective imagination and explore new concepts in concrete form. Inspired by a deeper understanding of human needs, the first step in the strategic planning process should be to openly explore the broadest set of solutions to meet those needs. The team should be open to searching for new ideas and solutions beyond their company, their logic, and competencies, and try to have the broadest perspective possible. In this process the leader should encourage open-minded collaboration, and the flow of ideas and opinions that recognises opportunity gaps and unmet needs. Successfully implementing these creative ideas and opportunities also includes leading them through the process, encouraging iterations when possible, and transforming them into valuable innovations (Fraser 2010, 39).

Innovators need certain conditions to be able to perform as expected. They have to go through the creative process when creating something new and unplanned in advance. They already have a lot of information – "data, facts, and basic business intelligence". Through the creative process of dwelling on all this information and combining it together with their "experience, context, interpretation, and reflection" and exchanging with team members, new knowledge is gained and innovations occur. According to Davenport this is how competitive advantage is gained from "knowledge derived from information" (UNCTAD 2010, 11).

John Abele (2011, 92) promotes collaboration, and argues that collaborating on different levels is a great opportunity for making progress. As the founder of Boston Scientific, which is renowned for its collaborative processes, he is aware that bringing different views, experiences, and logic together is difficult, and it takes more than normal effort. However, it can also result in extraordinary achievements when performed successfully. Many managers trust their knowledge and experiences, and are willing to learn from their colleagues and peers. Still, there is a resistance to learning from people in other fields, because it takes special effort. It doesn't make sense to them, and they don't understand the potential that could result. When they succeed in breaking down barriers, and are open to stepping out of their own knowledge, logic, and paradigms, it can also result in new ideas. So, leaders of a group that truly want to produce breakthrough results should support collaboration and be collaborative with others in the organisation. They also should have the following characteristics:

- Are passionately curious; they should crave new insights from others that can enrich them and help them gain new perspectives,
- Are confident, with modesty; that way they can bounce and deal with ideas off brilliant collaborators, without turning it into a competition,
- Are mildly obsessed, meaning achieving the collective mission is more important to them than the benefits, personal fortunes, and fame it will bring to them (Abele 2011, 92).

Many great groups even have a tradition for members of signing up as a sign of their dedication and a promise they will do everything in their power to make the project succeed. They see it as an honour to have an opportunity to participate in a group of great people. To be chosen as the best among the best motivates them to give their maximum and push for the best results possible. Working together with the best experts and exchanging thoughts, ideas, and discussing suggestions gives them intrinsic motivation to dedicate themselves toward the common goal. They feel proud when they can help, share ideas, and take part in

solving other members' problems and projects. The role of the person leading such a highly motivated group is to also know how to support them properly, to have the skills to reduce stress, maybe also with entertainment, and help people to keep the concentration necessary to perform at their best, to cooperate and exchange their ideas, and keep their energy to perform (Bennis and Biederman 1997, 121–191).

The leader/manager plays a role of presenting the purpose and importance of the group and their work, and leading them through it to reach the desired and dreamed outcome. When a team succeeds in creating the desire among all the members to reach the common goal, then all the members are also willing to compromise to achieve it, together (Weick 2004, 38).

A creative team needs a strong leader who is responsible for organising the talents and abilities of others in the group. This leader has to have an original, but attainable vision and goals, and puts all of his abilities into bringing the vision to life. This leader is usually the one who recruits the others and makes the vision seductive so they are proud to sign up. The role of the leader is similar to the one of the conductor, meaning he doesn't have to make or play, but choose and lead. A conductor likewise can't play a Tchaikovsky piano concerto himself, but musicians find him trustworthy of leading the project/concert and respect him, and know he is a great and successful expert (Bennis and Biederman 1997, 199–200).

The research done by Amabile (Dubrin 2007, 342–4) studied different leadership and managerial practices. The results of research show that certain principles in managerial styles do foster creativity in working groups and recognise trust as a great motivator. Among them is also the importance of giving creative people flexibility, the freedom to experiment, and a minimum amount of structure. Strict structure and clear limits are distracting and should be avoided when creating optimal conditions for practicing creativity. Inside the rules and limits given, creative people need freedom and trust, so they can fully express creativity and be playful, so they can create something new. Trust motivates them, and at the same time trusting creative peoples' expertise will allow them to choose a concrete method and way to solve the problem. This way leader shows them great support and encouragement for being creative and for daring to push over the maximum. The manager's duty is to manage time and control the process to be finished according to deadlines.

Therefore, Amabile (Dubrin 2007, 342–4) says it's a great idea to choose a creative leader to lead and evaluate creative workers, because the leader should understand the creative

process and the logic of creative workers in order to know how to evaluate creative contribution and the work. It is not an easy task to recognise a creative idea and its potential success, and so in these moments a manager can also use his intuition, among other resources. At the same time, it is not an easy or popular task among managers to hire people more educated them himself, yet for a company who wants to be radically innovative, it is the best move of all. One expert or talent will also attract other experts in the field, and soon the company can have a group of the best and very innovative people wanting to work together, for them.

When looking for the most appropriate and convenient experts for the project, the leader mustn't refrain from also checking how the person performs and collaborates on a team, and if he is able to communicate with others in realisation of the common vision, as well as his firm dedication to it. Bennis and Biederman (1997, 204) explain a successful group is guided by the importance of their work and they are assured they are doing something very important. They believe they will create the future of the world with their contribution, and often even think they are on a "mission from God". Their clear purpose gives their work true meaning and value, and is carried by a powerful vision. The interesting example about the power of vision to highly motivate and give meaning to the work is the Manhattan Project. Once the team was told that they were creating an atomic bomb that could stop World War II, everything changed and their productivity and motivation increased dramatically. But, also in endeavours less important than literally stopping a war, the leader has to be capable of inspiring his group by giving a personal view, intrinsic motivation, and meaning to the mission.

When the right competent people and experts are assigned to work together in a working/creative team, the next step is to make them function as the group. They must feel connected and highly motivated to work for a common important goal. That can be achieved by giving them a clear focus. As they often come from different fields, and in the case where each one has a great mind and is expert, it is a leaders' duty to get them acclimated to those goals. All distractions should be removed, they must be given an appropriate space, and then be put into "an atmosphere of stress, creative stress, everyone competing to solve one problem." Bennis and Biederman (1997, 197–218) argue that specific conditions have to be met in order to make a group function and be able to create exceptional things. The leader must recognise what the true talent of a person is and dedicate to him specific tasks he is

really suited for. The leader should know the qualities, strengths, expertise, and capabilities of employees very well. At the same time, if the leader is aware of and is respecting their competences, this provides them gratification and boosts intrinsic motivation to do the job with passion and dedication. Allowing them to take decisions and supporting their ideas helps the leader become one of them in the process. The leader must be passionate about the job and mission assigned to him. Another skill they need to possess is a flexible and creative drive-force to discover new and innovative ways of creating things, and generously recognise the employees' creative work. Additional encouragement from the leader to cooperate, exchange knowledge, ideas, and information plays an important role in the process. That way they will be highly motivated to do the job they know they are good at, it will give them self-confidence and courage to complete it the best way they can (Bennis and Biederman 1997, 69–99; Andriopoulos 2001; Dubrin 2007, 342–4).

Since creative people are known for their high degree of self-motivation and strive for perfection, consequently they have very high standards and want to achieve. They are happy only with high-quality results and are not satisfied with anything less than that. Financial and other resources are needed in the creative process so the group can derive from the creative process and develop an innovative product. Providing the right amount of resources should take into account the potential of the group, the risk and insecurity they will experience, and also of opportunities that can be created during the process (Dubrin 2007, 342–4).

When the members of the group love their work and the project they work on, they become passionate about the project. They believe they can do extraordinary things and create innovations. Often members of a great groups are younger people, who still haven't learned that there are impossible things, and haven't learned about their limits and obstacles when creating new things. Positive attitudes open new opportunities, and as psychologist Martin Seligman says optimists usually accomplish more. So, especially when working on extremely difficult issues under pressure, optimism with an attitude of persistence without doubt, combined with talent, is a way to reach success. "Great things are accomplished by talented people who believe they will accomplish them" (Bennis and Biederman 2007, 209). Another empirical finding (Wegge and Schmidt 2009, 90) about age-diversity, suggest that it has more negative than positive effects.

The cooperation of great minds enriches every member, and also presents the challenge of individual growth in such a community by accomplishing complementary goals. When creating a cooperative relationship, one based on positive and homogenous attitudes among the members of the group, they also tend to connect better. This connection results in cognitive flexibility and more easily formed similar mental models. This consequently results in more creativity. In such a group, members have a sense of obligation and responsibility to give their maximum, and with this sense, meaning if they were given much and have the honour to contribute to a great group, they are obliged to do the best they can and even more (Amabile and Gryskiewicz in Andriopoulos 2001). Creative people are sensitive and emotional in their work and can feel personally involved, so giving feedback, especially negative feedback or turning down an idea should be done in a gentle way, with respect and trust (Dubrin 2007, 342–4).

The work they do and the goal they are working for must have meaning, it is a driving force. Many scholars support the thought and agree that the competition perspective is fundamental in fostering creativity. Social psychologist Teresa M. Amabile confirmed in her research that creativity in a group can be increased if they have an enemy, one who creates an additional spirit of competition. Most companies do have competitors that could be seen as "enemies," but if a concrete one doesn't exist, the group should create one. It is leaders' role to inspire his group by giving a personal view to the mission so the group doesn't complain about drudgery, doubt, and exhaustion, is rather highly motivated, and finds meaning in the hard work (Bennis and Biederman 2007, 62–4; Mumford and Gustavson 1988).

Highly focused and motivated groups also like creating their own world, with their own language and synonyms, understandable only to them. That creates greater connection and trust among the group members. They are dedicated to their work and believe their vision can be accomplished, by their collaboration, dedication to work, talent, and creativity. All the people in the group must have all the necessary information and that should be shared effectively, so brainstorming and weekly meetings should take place, and a constant opportunity to share their observations, suggestions, and ideas, not being judged or critiqued (Bennis and Biederman 1997, 197–218).

4 THE ART, ITS CHARACTERISTICS AND SIGNIFICANCE FOR THE BUSINESS

In the present chapter we describe the findings of existing practices various artists are using as a way to help managers learn and understand the organisation. Managers can benefit from artistic working processes, the flexibility of hybrid, open-minded, and dynamic approaches, and interactions with a high appreciation of dialogue, trust, and support. It is a different approach and a step away from traditional managerial power and authority, and it might give the feeling that it takes away a manager's power, but it is the way to understand how innovative organisations function and it is at the same time more challenging and can bring the desired goals of novelty and creativity, along with great results (Jeffcutt 2000, 124-127).

New cognitive frameworks offer a changed approach to the research and development processes. Understanding the relationship between art and the practice of management, and the search for effective synergies among the two, rationality meets the sphere of artistic principles, based on emotions and guided by intuition, while still respecting the process of creativity leading towards the envisioned final result. The practice proves it is possible and has positive results in diverse examples, while there is still a lack of the scientific management that the arts and management field needs. Artful Making is a great contribution to fil this gap (Car et al. 2015).

4.1 Definition and nature of Art

A powerful marketing tool for today's companies is to present themselves as artful or creative ("impression is everything"). It is seen as a characteristic that makes companies stand out from the crowd, makes them distinguishable and helps them be recognised, sought after, and successful on the market. Also we as customers often want to present ourselves as innovative and artful, which in part we do by using "innovative services". However, business often struggles with delivering consistent innovation and creativeness, which is at the core of Artists' work. Artists work according to their specific principles, which can inspire business and managerial science with new knowledge of and about artistic creative processes. They can enrich managerial science with new approaches to dealing with uncertainty, new insights into how to be open to and seek variations, with new interpretations, expressions, impressions, ways to create new perspectives on reality and

new realities themselves, and ways to look for innovative solutions or products in an entirely new 'artistic' way. We propose to conceptualise how art works in order to better understand the innovative process and find the principles that could be transferred into business. For this we first need to better understand art itself.

Art can be understood as an activity with the purpose of creating work with an aesthetic value, including music, fine arts, theatre, film, painting, sculpture, dance, literature, architecture, design, intermedia, and many other disciplines and media. Art as such is bound in society and time: it expresses the artist's relation to a society at a given time, it turns to the past and employs historical ideas, mirroring the past and turning to the future, and it reflects on society and the fate of humans yet to come. The social relevance and the positioning of art work are reasons for the frequently acknowledged statement that in a prophetic fashion art unveils the future. Through the aspiration and need to achieve perfection, and through incessant innovativeness both in the creation of new works of art and recreation of old masterpieces, such work demands a special set of skills from the artist. The purpose of the use of art is the artistic and aesthetic formation of useful objects (Osborne 1981, 3-24; Jemielniak 2008, 24).

Art is an experience and denotes the process of an action, of creation, or construction that is connected with the objects and forms of concrete experience, which makes it emotional and in its nature also spiritual. Artistic work is made by creating a piece that strives for perfection, on an emotional basis and on the basis of our feelings. In art it is about how it makes us "feel, what emotions it awakens in us, how beautiful it is and how good it 'sounds'" (Eisner 2006). Most often its final product can be seen, heard, or touched. Art theories thus start from a conception of art that arises from a connection with the objects of concrete experience and thus makes it spiritual and purely emotional (Dewey 2005, 48).

For Dewey (2005, 13-17), the theory of art placed in a human context reveals a mixture of certain factors and forces, and "favour[s the] development of common human activities into objects of artistic value". To him creating a work of art is not something mysterious and inspirational, but rather an explainable and systematic process of disparity, change, and disorder, created by ordinary experiences. An example is refining the raw materials into valuable objects that went through the functional, controlled, and perfect process that transformed them into a valuable object of art. The process should be just right for the raw

material to be cultivated and yet not to be broken or destroyed. “Life grows when a temporary falling out is a transition to a more extensive balance of the energies of the organism with those of the conditions under which it lives” (Dewey 2005, 13). In this process it is tension that creates equilibrium and where in the process there is rhythm and a need to overcome the factors of opposition and conflict and their transformation into changed, significant, and valuable forms. The form is made out of the relations of harmonious interactions between knowledge, experience, energies, or materials. Harmony and order as such are seen as valuable in a world that is constantly threatened by disorder.

Coming from that definition, the spectre we embrace is wide and it includes not only the standard artistic sphere, but also managing, leading, cooperating, innovating, developing, and programming. As Osborne says, there is no single property that is common to all works of art, so he suggests to make as a differentiation point of artistic and non-artistic work; “art factuality plus aesthetic experience as adequate criteria by which we can differentiate works of art from other things” (Dean 2003, 1).[5]

Art uses a range of ways to express itself. The language of art is different and even when it uses the same words or terms, these may have different meanings than they do in other fields. While this is not unique for art, it does pose an important barrier for the effective sharing of ideas. It is not just the terms or language or terminology that art uses, but it is in how one expresses them. Our thesis aims to contribute to building bridges between fields, and to help them understand not just each other’s language but the whole process of Artful Making and expression. The many positive experiences of those who have also attempted affirm that this is not just possible, but also important and worthwhile (Meisiek and Barry 2014b, 139).

[5] The Oxford Dictionary’s definition of art is “the expression or application of human creative skill and imagination, typically in a visual form such as painting or sculpture, producing works to be appreciated primarily for their beauty or emotional power: ‘the art of the Renaissance’... ‘great art is concerned with moral imperfections’ ... Works produced by human creative skill and imagination... Creative activity resulting in the production of paintings, drawings, or sculpture... There are various branches of creative activity, such as painting, sculpture, architecture, music, literature, and dance ... Subjects of study primarily concerned with human creativity and social life, such as languages, literature, and history (as contrasted with scientific or technical subjects) ... A skill at doing a specified thing, typically one acquired through practice: ‘the art of conversation’” (Oxford Dictionaries 2014).

4.2 Art and Creativity

Art is often recognized as a synonym for creativity and, at the same time, creativity and innovativeness are characteristics, ascribed to art itself. Creativity is found fundamental and a way art is made. Creativity as an action and an artist's modus operandi is led by the knowledge and experiences he has gained in the past. By being freed from rules and limitations and by combining all that with emotions, feelings, the use of imagination and intuition, his achievements are new and original, sometimes even so original that we call it genius. In the past creativity was a connotation ascribed to supernatural forces, exceptional people, genius, or talented and inspired artist, while only in the 18th century the term "creative" was used for a work of a human artist. That was the way to describe his work and activities (Banaji et al. 2010; Kristeller 1990, 250).

Interest in research into artistic work is also present in different institutions, and for me as a professional musician as a very interesting example we point out higher educational music institutions around Europe. It is promoted by its Association Europeene des Conservatoires, Academies de Musique et Musikhochschulen (AEC), with many European academies included. By following the European "Green paper" from 2014, which promotes and encourages the artistic research discipline, AEC defines the artistic research discipline in artistic institutions "as a means of promoting the understanding and development of the musical arts", based on the study of artistic practice. Eisner (2006) makes a point when saying that research in the arts asks for a different approach, so we support the idea that the artists themselves be involved in the research so they understand the process and "enlarge human experience and promote understanding". Arts research is to be collaborative with all relevant research disciplines that would contribute new knowledge and define new perspectives in the arts and would frame and discuss the methods used in art and working processes. It would consequently prompt "critical dialogue within the profession" and also with other professions, and the relevant professional knowledge would be shared with others. The idea is to make "research where the artist makes the difference", which would have also a wider scope and additionally cover research on artistic production (educational institutions) and should follow procedural standards similar to scientific research. Studying the arts might be conducted by a collaboration of artists, experts in specific areas, and researchers (AEC 2014). The study of artistic principles is broad and research through art is

beneficial for artists, as well as for management and other domains interested in the creative process and work.

The need for integration comes also from the Carnegie Report, responsible for significant changes in legal education in North America (Billsberry 2013), suggesting that the solutions to options of how to integrate "the fine arts into management education remains wide open for empirical as well as conceptual research".

4.2.1 The rules Successful Artists use in their Creative Process

Csikszentmihalyi sees creativity as a process in which the creator must first learn and pay attention to a certain field and domain. By learning and gaining information, a creative person can envision and start to mix and dwell on the information, knowledge, and experience. By putting extra attention and effort into it, and by combining specialized knowledge with emotions, exploration drives, the need for competition, and imagination, new things occur and are created in a field that understands the domain and recognizes the outcome as a valuable innovation. Today's studies on creativity have a broad disciplinary perspective – from psychological, personal, sociological, artistic, cultural, biological, cognitive, developmental, to the more recent organisational and innovative, educational and environmental. Creativity blossoms along with people's growing knowledge and awareness, and we can say in a certain way that creativity is linked to all domains of human activities. In our research we will focus on the creativity of artists and will try to find similarities with the creativity of knowledge workers in business organisation, where creativity is the activity and trait needed to produce valuable novelties. Novelties result with success and economic benefits for companies and businesses (Csikszentmihalyi 2013, 3-317; Fulton and McIntyre 2013, 269-280).

Art has its own way of functioning and requires true artists, space, ideas, and talent. For centuries there have been successful artists that have been doing their work with perfection, being creative all the time. Time and time again they produced either slightly or very different but often completely unique works of art and masterpieces, applying their specific principles and methods. Artists have passed on their knowledge, experience, and skills at (re)creating and improvising to future generations in the past often through practical experience and teaching and just rarely by scientific work. Despite the idea of being inspirational and mystical a lot of artistic work does have clear rules and views, and follows

certain goals. There are books about artistic working processes, techniques, advice, secrets, and technical lessons necessary to master a specific art, and still it is not easy to find many scientific explanations of the specific artistic working process. The steps artists go through from the moment the idea is born through the next steps they take vary widely from person to person, and its mastering is learned next to theory actively also through exercise and experience. The details and specifics the creating process goes through, and the critical moments, issues, and doubts artists face before the final product meets the lights of day and passers-by admire somewhere in public, on the stage, or in a gallery; is the subject and interest of our study (Rothenberg 1980, Sternberg 1995).

Artists have their own way of approaching the working process and creating an artful work. In their work they do follow certain rules and at the same time there is also a lot of space left for improvisation, creation, and imagination; they reflect on their work and have visions of the future steps. They do of course need artistic knowledge in their specific field to be able to use it then by applying their specific principles and methods in a culture that supports their creativity and understands them. They need to work in an artistic environment that understands their nature and the nature of their work and gives them support (Schiuma 2009; Bozic and Köping Olsson 2013, 50-61).

We as professional musicians, when in music school and later at music academy, have been constantly taught to respect the rules and limitations, such as the measure of the masterpiece, the rhythm, dynamics, notes, tempo, and also to adhere to all the notation from the composer and deadlines of the manager. Within these limitations we are still expected to be creative and artistic by adding our personal artistic note. Also we had to learn to be able to adapt to the instrument (pianists play in every hall on another piano), the hall, the acoustics, and the lighting. Through the aspiration and need to achieve perfection both in the creation of new works of art and in the recreation of old masterpieces, such work demands a special set of skills from the artist. The artist must have a lot of musical (and other) knowledge, understanding, and skills, and, by being creative and respecting all they have learned in the past, finally create an artistic work.

4.3 The potential of the Arts for the Business Sphere

The relationship between arts and the business sphere started as a very simple one. At first it was a short-term, project-oriented sponsorship, which alongside innovative management

of cultural organisations grew into "a form of commitment between organisations that are both intensive and durable, they create multiple gain for all of the parties involved" (Scheff and Kotler 1996). This is one of the basic forms of strategic cooperation and requires that leadership work together in order to achieve the common mission. By setting the common mission and goal, the two parties could discuss collaboration between their management, sharing knowledge, sources, space, and visitor databases, as well as all other characteristics of an individual institution, which often results in cutting costs without the need to reduce or limit the organisation's mission or its quality. There is plenty of evidence that the business sphere supports the arts in a strategic manner in order to harmonize the mission, purpose, and goals of a company.

More direct connecting management with the arts began in a form where art has been mostly used as a metaphor to help describe and try to understand organisations from another perspective. Starting from 1959, Gofmann used the arts, concretely theatre, as a metaphor for organisations. Mangham and Overington (1987) continued developing this theory, resulting in the 1989 book "Managing as a Performing Art" by Vaill (1989).

Later that cooperation grew and gained in depth and importance for business organisations in most different aspects of its functioning and managing. Cooperation between art and business organisations is becoming more and more important in the business world; it is becoming increasingly organised and planned out, and is the subject of many studies and analysis, and has even become a business unto itself. From the business and scientific aspect, the view on art has changed significantly. Today art has become, according to Harvey "the fuel of the 21st century economy; artists present an incomparable and unique source of creativity", and the view of artists as representatives of an incomparable and unique source of creativity (Bartelme 2005). It is a strong statement to read, but it makes sense to learn from creative people about creativity, the domain in recent decades so extremely desired in business world, where the product is more likely to be sold in global competition when being recognised as special, innovative, creative, and excellent. This "hidden treasure" is becoming increasingly appreciated and its positive effects have been noticed by managers and scientists working in organisational culture and management (Scheff and Kotler 1996, Austin and Devin 2003, Adler 2006).

An interesting meta-analysis, conducted on a dataset of sixty texts describing different firms' involvement with the arts in Great Britain, has shown that, up until recently, there were two reasons why companies supported the arts. The first was for marketing purposes, namely the search for profit in the marketing sense. The other was to gain "legitimacy" by exploiting art's activity in the environment, whereas the study finds that there is practically no evidence for pure artistic altruism (Moir and Taffler 2004). This is a quite basic and we could say scientifically insignificant manner of collaboration, but it has evolved over time. Today the business sphere can gain much more from this type of collaboration, since today artistic skill has been recognised as a beneficial skill in creative companies and is becoming the most sought qualification in the business world. This is due to awareness about the richness of artistic creation and the nature of their work is becoming a more and more important subject of interest to management and organisational theory and the business sphere in general. There is still much to be learned from artists – from their unique approach to the creative process, perfectionism in creating each work of art, their passionate creativity and devotion to work, and from their high standards for the final product, to a leadership based on trust, respect, and communication, the culture they work in, and motivation (Pink in Adler 2006, 486–490). Scholars and CEOs are starting to promote and gain inspiration from art, so many new institutes related to creativity and arts are consequently being founded (Lynch 2008).

With its creative experience and nature of work art represents one of the possible solutions to some of the specific challenges business organisations are facing today. With global competition, fast innovation, and quick changes on the market, organisations need to be very creative and have a know-how, in order to innovate and become successful and competitive. In the search to better understand and foster creativity, a relatively new trend in the business and managerial world, managers and also scientists are looking for additional knowledge and experts in that field. The companies that show constant creativity and are able to make innovations a constant and sure part of their working process are the most successful ones. Yet managers have difficulties managing creative workers and struggle with leading creative processes. Today creativity itself, whether that of an individual or a working group, is one of the "must have's" and a necessary factor for organisations looking for innovations, of course alongside other known qualities needed to achieve true success and valuable innovation. Innovativeness as closely related to creativity is another of the key components required for a successful and competitive company. At the same time successful artists have

always been creative and have been able to constantly create new works, often including masterpieces of great value. Bartelme (2005) says the leading business advisors, including John Tao, Tom Peters, and Charles Handy, already started encouraging the use of artistic principles in entrepreneurship and management styles long ago. Companies thereupon started cooperating with artists with the intention to see if they could benefit from that cooperation and learn something from them. The results were positive and today more and more companies want to learn from artists; to learn about artistic skills, views, imagination, attitude, logic, leadership style, and creativity (Isaksen and Tidd 2006, Schiuma 2009; Bozic and Köping Olsson 2013, 50-61). Applying artistic principles in a creative company helps managers improve the characteristics every great manager should possess, also helping them learn about a personality, character, communication, and the traits a manager of innovative people should master in order to create the right conditions and fully support innovative processes (Alvesson and Willmott 2002).

In recent decades more and more managers and scholars have started to study art and try to decode artists' successful use of creativity and their way of working that so often results in productivity and success, on the stage, in the hall, on the canvas, or in any other form of artistic creation. Dan Björkegren compares the practice and products of the art and organisation theory and claims that to both fields the practice of creating "objects of beauty for the appreciation of an elite is common". He believes that the aesthetic value of a completed work in organisational science may provide a more valuable guide to its usefulness than its supposed relation to truth (content) and sets as criteria the values of truth and beauty – the point here is just about the pure aesthetic value artists can add (Hassard and Parker 1999, 101–110). This "finding" made a significant impact on the relationship between arts and the business sphere and changed it forever.

It is interesting that already in the past decade managers and software developers have described their particular activities more as art then as business, alluding here to the unpredictability of the process and situation, not really knowing how to control and lead it, especially when dealing with knowledge workers who are assigned to be creative and develop new valuable things. In certain situations, and in some steps of the creation process they are aware they must use the knowledge they have and use also their intuition when choosing the next step in the process. They know there is no security and no clear rules and that it requires use of their creativity and artistry. Thus they themselves already see the

correlation and similarities their work shares with the work of artists (Jemielniak 2008; Wankel 2008, 490-1). Also Kos (2009) talks about businesspeople who recognise similarities between arts and business, who describe business as pure art, and who talk about amazing similarity between two different fields.

4.3.1 Potential of the Artistic logic of work for Improving Creativity in Business Organisations

Many sceptics still deal with the core question of how management and business in general can learn something from artists. These are two different fields with different core principles and starting points for acting and working. The biggest problem is posed by translating and transforming the different language, principles and standards, and making a connection that is understandable and applicable to both. In a field where we wish to unite and find a common language between arts and business, it is not so much about art itself, but rather it is about art education and artistic skills, their logic and functioning in difficult and unpredictable situations, their collaboration, the way artists and businesspeople communicate in a group and exchange information, knowledge, and ideas, their relationship to uncertainty and acceptance of making mistakes and having the wisdom of learning from them, instead of looking for a culprit. Art and art education have many new lessons and knowledge to offer to enrich bureaucratic organisations, views regarding knowledge workers, ways of communicating and cooperating in working for the common vision, management, and leadership (Baker & Baker 2012).

Creative industries are expected to innovate constantly and produce valuable products to keep the company thriving, and maybe learning the artistic approach and facing creative processes differently, i.e. with the logic of artists, might generate better results and make the company more successful on the market. The fact that many managers are facing issues and struggling with innovativeness, collaboration, risk taking, and the specifics of creativity and innovative process.

A survey conducted by McKinsey (McKinsey Quarterly 2010) from 13 to 23 July, 2010 generated responses from 2,240 executives around the world, representing the full range of industries, regions, functional specialties, and seniority. In the survey 84 percent of executives said that innovation is extremely or very important to their companies' growth strategy. Further, many of the challenges, including encouraging collaboration and risk

taking, organizing the innovation process from beginning to end, etc., are remarkably consistent. Further results of the survey, compared to other surveys over the past few years, suggest that they still face barriers to successful innovation and haven's managed to abolish. Executives also said they have the most difficulty stopping new ideas at the right time, with only 26 percent of respondents to this survey saying they do this well. The survey shows that organisational factors, including innovation-specific processes and links to support functions, still pose a challenge. As hard as it is for companies to implement organisational changes in increasingly complex environments, the results suggest that when companies make the effort, they experience more success with innovation. Another consistent pattern is that far fewer respondents say their companies are good at the specific processes and tactics frequently tied to successful innovation—such as generating breakthrough ideas, selecting the right ideas, prototyping, and developing business cases. Respondents also indicate that their companies do not make good use of many specific tactics. For example, only 27 percent say their companies are very or extremely effective at making business leaders formally accountable for innovation. Notably, even among respondents at early-growth companies, where innovation is likely to be a particularly high priority, only 34 percent say their business leaders are effectively held accountable.

Business organisations hire artists to present their ways of working, their processes and coping strategies, and to try to teach workers how to apply and mimic artistic skills with the intention of stimulating creativity (Bartelme 2005; Arts and Business; 2009). The important skills management could learn from artists include critical thinking, ambiguity, high expectations and a desire for perfection, the discipline to try and experiment, the ability to work in the unsecure and unknown, and the drive to push beyond limits and borders in the desire to attain perfection. They can only benefit from adding the creativity and imagination artists use to their analytic skills and rationalism. Landry (2006) explains to businesspeople the way to learn how to use artistic skills and creativity, and suggests that they learn from artists, seeing this as a way to reach success. The studies have shown that learning and becoming familiar with art and artistic skills can be beneficial and offer some new views on interpretation and creativity, activating the right brain hemisphere, which can result, alongside great analytical and management skills, in a continuous flow of new products and innovation, enriching innovation strategies and management science (Lester and Piore 2004).

For art schools this is nothing new, because they use these same techniques to help students become artists. So we see collaboration as a great way to learn from a base of knowledge built up over the centuries, and from people who have experience in training others in artistic skills, and surely it could be of a great benefit when applied to helping managers in the process of becoming better leaders. As regards creativity at work and a high demand for delivering results, not just in times of luck and success, and more often than just every now and then, it seems like arts have decoded the process, conditions, and assets needed to create optimal momentum, where workers are able to be creative on a regular basis. There are studies about finding and researching the connection and similarities between arts and management. For instance, Getzels and Czikszentmihalyi (1979) carried out an empirical study of art school students' approaches to problem solving. Later they compared the results of these students' success in their professional careers as artists. They found out that the artists used a specific approach to dealing with problems, ideas, and definitions by keeping them open throughout the creation process and being willing to question them and experiment on them until the end of the finished product, which was shown to be useful and helpful in making them more creative at their work. Through this study they (Getzels and Czikszentmihalyi) developed a term and concept called the "continuous process of problem finding", which today comprises a part of management canon (Meisiek and Barry 2014b, 139).

Meisiek and Barry (2014b, 136-9) wonder if artists have managed to "find ways of working with the experience and expression of the human condition that are valuable in any setting", or is it that they use specific principles, create specific environments, and offer the support needed to stimulate creativity? Taking into account that artists also have to work within rigorous rules, but still manage to be creative inside that space, it is evident that businesses could do the same. So we will make an in-depth study and research the approaches different artists use, their mental processes, logic of thinking, specific principles, methods, the support they need and the environment they use, as a core area in our thesis and research. We wish to study what concretely the business sphere, management, and leaders of innovative process can learn from artists.

4.3.2 Studies and Benefits of the Relationship between Arts and the Business Sphere

Recently the literature has been featuring the notion of similarity between the work of artists and postmodern innovative organisations, especially of creative jobs and knowledge workers. It analyses the similarities and differences between the creation of artists based on innovativeness and excellence, and the activity of entrepreneurs in the search for innovation. Certain properties are valuable for management for gaining new perspectives into performing, leading, and managing (Schein 2004; Bozic and Olsson 2013). Relevant literature (Scheff and Kotler 1996, VanGundy and Naiman 2003; Davis and McIntosh 2005; Arts & Business 2009) presents concrete results from the collaboration of artists with business organisations and reports about how the functioning and culture of companies improved, the simultaneous opening of new directions in the culture of organisation, about creation, and about innovativeness. They feature case studies in which scientists, entrepreneurs, and managers have recognized the added value with which artists can visibly influence the operation and success of an organisation, leadership, operations, and creation, linking of different cultures, and facilitating communication between them (artists can easily adapt), motivation, consequential competitiveness, and company visibility.

4.4 Examples of Cooperation of Business Sphere with Artists and Benefits from Learning about Artistic Principles

Those engaged in innovative processes in creative industries like to search for inspiration in artistic disciplines, because of their familiarity with creativity and innovation-incorporated nature, due to easiness, and continuity in bringing innovations to the world. Therefore, authors discuss and study the new relationships developed and nurtured between artists and business. There are accounts of successful collaboration between the two fields, which has resulted in companies' visible results and success. This form of collaboration can be entered into at various levels of organisational functioning, e.g. at the management level, and work to promote benefits of cross-fertilizing leadership with the passionate creativity of artists (Adler 2006).

Additional knowledge is needed on leading innovation processes and leadership styles at specific steps of the process, along with a renewed approach to facing the struggle of collaboration in teams, the confidence to lead the group with decisions, and recognition of

the right ideas. Through analysis and learning about the work of various artists, scientists are discovering a large source of unexploited potential that can help solve current challenges and can be released in entrepreneurship through mimicking the work of artist.

More and more artists cooperate with managers and business organisations and offer them their specific point of view, teach them about their skills, qualities, and logic. This includes several interrelated analogies, e.g. between work processes and artistic creation processes, between management and art, and between managers and artists or artistic directors (Parush and Koivunen 2014, 104-110).

4.4.1 Mimicking Certain Techniques

Directors have already put in place major changes in their companies through the use of art by mimicking and applying certain techniques developed by artists. Bartelme (2005) thus lists the following cooperations, proven to be successful:

- improvisation theatre teaches lawyers how to think in court
- visual artists help directors create physical models that express a vision and outline a company's future of the company
- poets help managers understand the context of the company and develop content that express the sense of the mission and orientation
- jazz groups help leaders consolidate their capacity to introduce changes

4.4.2 Theatre director helps improve leadership

Davis and McIntosh (2005) promote the artistic "view" of working, where again knowledge workers can learn specific approach, logic and set of methods artists use at their work. Also a theatre director, Ibbotson (2008), offers classes to managers where they can develop and work on skills like spontaneity, creativity, and leadership of innovation teams, using a range of practice techniques and exercises.

4.4.3 Learning about Leadership from a Conductor Example I

Slovenia choir conductor Karmina Šilec has been invited to many symposia and has given lectures to directors of the largest corporations, e.g. Coca Cola. There she explains the complexity of conducting, and through the storytelling she tries to help the audience understand the complexity of leadership. When conducting, she must be at the same time in

the present but also little bit in advance – in the future, thinking about what is going to happen next in the music and trying to anticipate it and transmit this information to the choir with her gestures and body language. Still she must also listen to what the choir is performing (singing), and react to that, too, correcting it and leading it so it can fluently continue the performance. In conducting and choir singing, the notation and everything about the performance is written in the musical score. The inspired conductor can add to those notes and musical information personal emotions, spirit, passion, and enthusiasm, and thus create something new, special, and unique. The conductor's role is to give to a piece a whole new dimension and inspire the singers to achieve much more than marked in the score; the conductor must understand that musical score and have rich and thorough knowledge and special characteristics. Karmina explains that it is a set of various traits that lead to becoming a successful conductor. These characteristics are originality, uniqueness, sincerity, humour, wit, loyalty, respect of composers' wishes, will, character, patience, communication skills, tidiness, perseverance, willingness to learn, relentlessness, tolerance, inventiveness, organisation, ambition, integrity, various skills and abilities, and a lot of musical knowledge. Conducting can be compared to the art and complexity of leadership and the conductor explains the complexity of leading creativity in art so leaders can learn new, artistic approaches that they might use in their work (Forstnerič Hajnšek 2014).

4.4.4 Learning about Leadership from a Conductor Example II

Likewise, Parush and Koivunen (2014, 104-113) describe the leadership development workshops that another choir conductor Peter Hanke gives in European business schools. He works directly with managers and gives workshops and leadership courses where managers have to conduct a professional choir. His workshops help them discover and develop certain characteristics and specifics that modern managers and management should possess. Using analogies between organisational management and musical conducting, Peter Hanke's intention is to convey specific messages about managing workers, using both the left and right hemispheres, which makes them at the same time egalitarian, sharing, empowering, and also authoritative, centralistic, and heroic. The useful outcome here is to enrich the old, post-heroic model that is more dominant, and transform it into a 'creative' managerial self. The idea of these workshops for managers is not to renounce the old model, but to learn to balance between contradictions of power and trust and support of giving space to creativity. So they are invited "to lead but also be led, be in control but also relinquish

control, be calculative but also playful, plan but also surrender to the flow of events, broadcast but also listen, see the 'big picture' but also the 'small details'". So it is about mastering both options and balancing between them in the best way.

Table below shows the set of tensions and contradictory demands managers face when conducting in these workshops (Parush and Koivunen 2014, 108). Whereas the left column represents heroic managerial subjectivity, the right column is a post-heroic one, which is more supportive and creates support and the right environment where creative workers feel safe to take risks and try to develop something new and unknown, innovation.

Table 4.1: Tensions and contradictory demands faced by conductors/managers in the studied workshops

'HEROIC' MANAGERIAL SUBJECTIVITY	'POST-HEROIC' MANAGERIAL SUBJECTIVITY
Authoritative, decisive, centralistic	Empowering, sharing, 'inviting' the ensemble, 'offering a gift' to the ensemble
Taking control, being in control	Surrendering control
Keeping distance from the ensemble, detached, protected	Standing close to the ensemble, open, vulnerable
Confident, knowledgeable	Uncomfortable, humble, acknowledging choristers'/subordinates' expertise
Focusing on expressing, broadcasting	Focusing on perceiving, sensing
Focusing on communication with the entire ensemble	Focusing on dyadic communication with individuals in the ensemble
Rational	Emotional, passionate, intuitive
Cerebral, intellectual, verbal	Embodied, non-verbal
Focusing on details, analytical	Seeing the big picture
Thinking, planning, reflecting	Doing, being 'in the moment'
Working according to the rules	Creatively improvising, playfully experimenting
Slow	Fast
Heavy, steady, muscular, laborious	Light, flowing, flexible

Source: Parush and Koivunen (2014, 108).

4.4.5 Use of Storytelling as a Catalyst

Denning presents the benefits of a use of storytelling with good results for an organisation. Storytelling can be a powerful tool and can ignite action and change in organisations, develop a powerful vision, intrinsically motivate workers and can help knowledge management (Denning 2005; Boje et al. 2015).

4.4.6 Teamwork and Creative Leadership Learned from a String Quartet

Artists' creativity, great passion for perfection, and intolerance for mistakes in the final product are well-known traits, so creative leadership can also be learned from string quartets. This type of cooperation can have benefits like a much better understanding of leadership sensitivity and nuances in equality, striving for perfection and surrendering to the common ideas and goals in the group, as well as respecting each individual and their contribution to the artistic performance of quartet, demonstrating high quality team-work and cooperation, communicating, and exchanging of ideas (Lagace 2007). Van Gundy and Naiman (2003) explain the benefits of using the arts and learning from artists in improving teamwork, and in learning from them how to cooperate, offering an insight into specific principles that can optimise their effort in reaching the final results they are looking for.

4.4.7 Cooperation with Contemporary Dancers

Another great example comes from working with contemporary dancers, their creative practice, and the principles they use, where they invite managers to dance with them and experience their creativity in dancing, and at the same time make them understand the principles dancers use. Collaboration with artists can have a positive influence on management, leadership, and teamwork. Businesspeople have the opportunity to learn new artistic skills. When people develop and become more sensitive in artistic skills through training, they can apply this knowledge, which can be very helpful in performing at their work (Bozic and Olsson 2013).

4.4.8 Theatre to help process of change

There are cases where organisational theatre[6] is helping and opening up new approaches to changing processes (Meisiek 2004), and there are agencies that serve artists and companies and try to put appropriate ones together in a common search for new exploratory projects and comparative studies of artistic interventions in companies (Antal, 2009).

4.4.9 Empowering talks by a Violinist

Slovenia has another artist with more inspirational level, with different way of affecting the principles or culture of management and business organisation. Miha Pogačnik gives emotional presentations on the subject of "connection and forging ties between the economy and the arts" by playing the violin to directors and managers of large global companies. He explains the similarities music and business share and teaches about the dimensions of art, and thus inspires his audience toward creativity and imagination (Mager 2004). He holds conferences including "Art & Business", which are attended by representatives of numerous renowned global companies, including IBM and Nokia, organizing platforms where he taps the potential of art, recognising it as a force for productivity, creativity, and change in organisations. He is invited to work with leadership of over 100 global brand companies, and is called to the Davos World Economic Forum, as well as to China and other places.

Pogačnik's interpretation of business through the violin is rather inspiring. While managers see achieving excellence as a main goal, for performing artists it is just a starting point. Learning about creativity from artists is in demand, given the high interest and the fact that Pogačnik is called to world's best management and business schools like Harvard, INSEAD, IMD, IESE Barcelona, CEIBS Shanghai, THNK Amsterdam, Berlin School of Creative Leadership and Hitotsubashi University in Tokyo. It is his unique way of finding a stimulating language for the business world that needs inspiration and is aware of the uniqueness of artistic contributions and connections, though with not really measurable results to business effectiveness in this case (Mihavision 2014).

Also business schools and MBAs open the doors for artistic creativity and offer programs with an artistic dimension of creativity and art-based leadership. Thus they inform young

[6] The term organisational theatre is commonly used to describe organisational changes and interventions, involving cooperation with theatre.

generations of managers and teach them the importance of creating an optimal environment for knowledge workers so they can perform and create as effectively and as well as is expected of them in terms of innovativeness in their work and producing innovative results. These programs teach students about the artistic methods, principles, and logic that artists use, with the purpose of improving their performance and results when managing creative processes, helping them to understand artistic approaches to work (Parush and Koivunen 2014, 105-106; Baker & Baker 2012; Taylor and Carboni 2008).

4.5 Arts-and-management – A New Scientific Field and Its Contribution to Management and Postmodern Organisational Theory

The synergetic effort of arts and management is becoming more and more welcomed in practical use by managers and business organisations because of the positive experiences businesses have had with it. As a practical result of past positive outcomes, various approaches have been further developed to bring them even closer to managers. Numerous communication channels such as business media and agencies serve artists and companies by trying to put appropriate ones together in a common search for new exploratory projects, comparative studies into artistic interventions, art-based management consulting, experiencing and practicing arts first-hand, and art-based leadership development programs (Antal, 2009; Parush and Koivunen 2014, 105).

The combined field of arts and management is still not recognized as a dominant discourse in management science and lessons, but lately has been progressively changing. There are managerial handbooks and literature about arts-and-management. Their purpose is to translate artistic logic and functioning to management and business organisations and make it applicable to them. There are also more and more scientific contributions to the relevance of this field, still much more work and research needs to be done.

In their excellent analysis, Meisiek and Barry (2014a) expose as exceptional the work and contribution of philosophy in management professor Pierre Guillet de Monthoux. The subject of his research is connection between art and creative management, the common traits successful artists and leaders in industry have. He has encouraged arts and management researchers to “leave kindergarten behind”, meaning leaving behind just personal communication, case studies, and specific examples of arts and management, and encourages researchers rather to make a concrete step forward towards more scientifically

proven examples, connections and new theories. This was kind of an emergent call to scholars for more concrete and serious and in-depth empirical research that might lead to new findings in managerial and leadership theory concerning innovations and creativity. As an answer to that there has been e.g. a development of Antal's comparative studies of artistic interventions and Koivunen and Parush's observations and interview studies. Irgens is looking for theoretical connections and differences between arts, management, and science. Taylor and Ladkin create an analogy between art (studios) and leadership, studying learning principles and practices of art schools, in search for similar principles, creating a theoretical basis for seeing and studying leadership as an art form. There have been various systematic studies made on this topic during the past decade. In spite of previous research in this field, there is still a desperate need for more concrete, deep, and "more carefully worked out theorizing that can help explain empirical findings and guide research efforts" (Meisiek and Barry 2014a, 83; Meisiek and Barry 2014a, 83—85).

It seems it "is art's attention (to) and expression of the human condition in its social context that makes it a point of access for management learning. The fact that artworks don't come with prefabricated and fixed interpretations helps enable their use for educational purposes" (Meisiek and Barry 2014b).

Trying to connect artistic science and theory with business and management science in scientific and methodological reality presents quite a complex issue. Scholars face many difficulties when trying to connect arts and business. This may also be due to their very different nature of thinking and developing, due to set priorities, and last but not least because of the predictability of the final result and the product it creates. Real science in the arts does not even exist, especially not in the terms that are used in management science. The core difference is in setting clear rules and limitations, and since artistic theories are very often followed by exceptions, constant not just openness but true need for variations, experimentation, and alternative explanations are always added to the theory, and at the bottom line they need to be followed but at the same time artistic theories serve to enrich interpretations of associated art works and allow exceptions all the time, if well argued. Artists do use these theories and at the same time they are used more in the sense of being an inspiration to artists. In their work artists use imagination and personal interpretation, meaning additional unpredictability and reactions in certain situations. Their knowledge, skills, and experiences also influence further decisions. All this makes it difficult for

scholars to test and verify their work. Actually their effectiveness can be tested only when observing a product made by following the rules.

The concrete way to create a new theory is to study practise and analyse the whole process from artistic inquiry to the final work of art and see how and what the artists are doing and in what concrete ways they are creative in their work. It is enriching to learn about creativity from those who are most familiar with it and use it constantly (Antal 2014; Sullivan 2010). Certain artistic techniques and principles are different from the terms managers and management theory and science use for the principles and techniques. Their evaluation is needed and by explaining them in terms of managerial theories and the detailed process of their applications, they can be applied in the business world. For if an artistic exercise is to help managers become leaders, we would have to be able to explain why this is so in terms of relevant leadership theory, inter alia. Many years ago already the principles, methods, techniques, and skills were evaluated and scientifically studied, and many of them connected with art were evaluated as well. The intention and goal of evaluation is to verify and bring evidence that a specific approach used by artists does in fact produce measurable results (Antal 2009, Styhre and Eriksson 2008).

Evaluation is necessary to find a correlation between the principles, skills, methods, and techniques artists use and the ones used in business. Evaluative studies are a way to integrate artistic approaches to management and management theory because they must all be well explained and translated to managerial science; a correlation between art and management principles must be found if we want to make it a part of the teaching and supporting creativity in organisations (Meisiek and Barry 2014b). Already the language the two fields use is very different and with a different meaning. In certain situations, reactions to situations are different or even diametrically opposed, making them hard to understand for another field. Their value in terms of theories from the respective fields of application in management must be strictly described and explained. Artistic theory, knowledge and the creation process must be translated into the language accepted and understood by management theory and science, and scholars must make it evaluable in order to make it a part of management theory and be able to put it into practice (Antal, 2009; Styhre and Eriksson 2008).

The intention and strive to build new knowledge about "artistic" management demands clear alignment of concepts and theories of both spheres – artistic and business, which is a very difficult task. The concept and theory of Artful Making makes up a part of it and offers a "description of this relationship by forming new theoretical constructs" (Meisiek and Barry 2014b, 135).

4.6 Potential of the synthesis of the principles of rationalism and management with the principles of artistic creation

In 2015, together with Dana Mesner Andolšek and Aleksandra Kanjuo Mrčela, we have published an article with the title Artful Making: use of principles of artistic creation in management.[7] The article discusses the epistemological views on situating the theory of Artful Making in the theory of innovation management and innovation process. In the article, Dana Mesner Andolšek presents in-depth analysis of the history and development of management theory, and discusses the complexity of dilemmas faced in an attempt to combine two different domains - arts and business. As primarily epistemological dilemma she mentions the relationship of science, which is based on principles of rationalism, while arts "and art practices include a wide variety of activities that would be difficult to explain by means of a scientific method". Artistic activities are indeed not easy to be explained by words, still "recipients of art" can clearly and successfully perceive it. Artistic activities are indeed often unspeakable and hard to explain, especially when needed to be explained, interpreted, studied and analysed. Still, we believe that with an in-depth study and research, there are ways and means to explain and translate those "unspeakable" artistic principles into principles well understood by science, and as we will prove it in detail in the next chapter (see chapter 5). According to Mesner Andolšek, organisational and managerial practices are influenced by the Western science (and philosophy), questioning what is knowledge. It is based on a rational approach to knowledge (knowledge exists and needs no deductive method), and opposing English empiricism (where the source of knowledge is in sensory experience) (Car et al. 2015, 513).

Mesner Andolšek points to 20th century philosophers and pragmatics James and Dewey, who define ideas as worthy only when "they become the basis of our activities that will change the world in which we live"; to Asian approach, which builds its approach to

[7] The article was published in *Teorija in praksa*.

knowledge on the logic of "unity of body and mind (knowledge is wisdom derived from a person as a whole, not just from the mind)", and to implicit knowledge/tacit, as presented by Polanyi, that is personal and subjective, therefore, there exists a difficulty to be fully and clearly converted into explicit knowledge, as it "defies capture", while in 1944 Cassier defined the role of art as teaching "us how to visualize, not only how to conceptualize or to use things", and in this way enrich the view and contribute to "a more realistic view of our world". Mesner Andolšek continues with explanation, that Western (their logic is direction from tacit to explicit knowledge), compared to Asian (they focus more on tacit knowledge and socialisation) organisations have different characteristics, provides additional support to understanding creation of new knowledge (Car et al. 2015, 513-6).

The difference between arts and management educational system and experience is enormous, which Mesner Andolšek well expressed in following paragraph:

> *Art and artistic practices presuppose and require the integrity of the human experience through sensory experience that combines knowledge and the subject receiving knowledge, mind and body, cognition and emotions of the individual, collective and community (Gagliardi, 1996). One could say that there is a basic contradiction between the world of art and managerial and organizational practices, where management fragments and divides human experience, while artistic practices presuppose holism, integrity (emotions, feelings, mind and body) (Car et al. 2015, 520).*

Also Neumeier (2013) argues about the importance of combining innovativeness and creativity with emotions. Creating connections and combining business creativity and innovativeness can enrich business. I the past, business was excluding emotions and was praising ratio and knowledge, while being emotional was perceived as weakness. Artists have been always closely connected with their emotions, listen to them, experience them, and respond with them. They are often led by their emotions in their creativity and in creative process. And this artistic-emotional component can enrich business, because accepting emotions in creative process is a potential with a tremendous added value and a way to creating value and innovations.

Management education equips managers with different skills and knowledge, so additional information and expertise in artistic knowledge would also mean better understanding and

leading creative people in their working process. The differences of arts and management education are listed below in Table 4.2.

Table 4.2: Comparison of arts education and management education

ARTS EDUCATION	MANAGEMENT EDUCATION
AESTHETIC	SCIENTIFIC
DEMO-PRACTICE-PRODUCTION-CRITIQUE	TEXT DRIVEN
RECURSIVE	DISCURSIVE
THEORY AND PRACTICE	THEORY
SHOWING	TELLING
EXPRESSION	IMPRESSION
INDIVIDUALIZED	BATCHED
DIVERSE FACULTY	ABSTRACT FACULTY

Source: Eickmann et al. (2004, 243).

The table shows that arts education differs in numerous ways from management education. We believe that artistic skills managers need to be equipped with, to become experts also in leading creative processes, would call for evaluating the aesthetics, demo-practice-production-critique experience, recursiveness, showing and practicing of artistic skills, and more individual approach, just like arts education offers. That would make possible also managers experience and understand creative workers, and would make them excellent leaders of creative people (Eickmann et al. 2004, 243). Already in the table 4.1 we have presented tensions and contradictory demands faced by conductors/managers in the workshops with artists, which we find extremely valuable.

Every research and development process, especially innovation process, that is expected to produce innovations, needs a team of creative people, and they are led by a manager. In this process there is very often present the conflict and different opinions between managers and creative workers, because of different focus and expectations. They say that the conflict comes from very different roles managers and creative workers have, so better understanding of them might make the relationship easier. Example of technological innovation process shows differences between the two in governing impulses, attitude on

point of diminishing return, attitude on compromise, the current questions, and orientation in producing economic value (see table 4.3).

Table 4.3: Stewards - managers versus creators - creative workers

Stewards vs. Creators

The process of technological innovation within a company often includes clashes between stewards, who are often managers, and creators, who are generally highly skilled technical employees.

	Stewards	Creators
Governing Impulse	Allocate investor resources responsibly	Realize the grand vision at all costs
Attitude on Point of Diminishing Return	Going beyond it would be bad business	Don't know where it is, don't care where it is
Attitude on Compromise	An inevitable part of many practical business solutions	Not to be considered when trying to achieve a vision
Question Always in Mind	What's the business model?	Is it "cool," fun, exciting or potentially important to humankind?
Orientation in Producing Economic Value	Value capture	Value creation

Source: Austin and Nolan (2007).

In the chapter 5 we will present and study in detail rigorous researches and studies of artistic management and present results of alignment of concept of artistic management with the one of business management, since Artful Making makes for a kind of translation of artistic claims, rules, suggestions, and propositions, with the intention of translating their claims into scientifically grounded theories and changing the paradigms of management theories, thereby inspiring a change in dealing with the unknown and with creativity, thus encouraging openness to varied interpretation. We believe Artful Making is a contribution to resolving conflicts and issues we discussed in this chapter (Meisiek and Barry 2014b, 138-140).

5 THE CONCEPT OF ARTFUL MAKING

This chapter introduces the core of this dissertation, presenting Artful Making as a new management style that has a high respect for creative process. While we established the importance of creating a theoretical framework between art and business, this cannot be done purely on a theoretical level, but empirical studies are needed to complement and verify theoretical and conceptual explorations, bringing insights into how bridges can be built between fields and helping create a new theory of Artful Making. We present the origins and findings of Artful Making and its principles, methods, and qualities. These are a valuable application of cognitive processes, enriching the rationalistic management styles with artistic knowledge and approach to creative processes (Car et al. 2015). Artful Making is based on the inductive study of working processes of artists and unveils the mysterious view on creativity of both – artistic and business sphere, by studying the working processes of artists and their nature of work, and afterwards comparing them to business practices. The study resulted with "building a rigorous theory of artful innovation" (Austin and Devin 2006, 27).

5.1 The need and value of the artistic contribution in the business sphere

Artful Making is a concrete step forward in creating a relationship between creativeness in the artistic and business worlds. It converts the centuries of developed art into something that can be accessed by business, as a reference point for creativity, as a metaphor or story to be learned from, and as art becoming the source of information to innovation management. To achieve this, it aims to develop deep and intimate communication between both fields. This communication searches for meaning and compares the principles and logics of both, with the objective of creating mutual understanding of different fields of discovery that goes beyond the surface to the heart of concepts, constructs, terminology, expressions, and the dynamic of these two domains in their professional communication. For example, for an artist the ultimate objective of Artful Making may be a search for aesthetics, for something that is beautiful, striking, or something that cannot leave one indifferent.

Managers are taught to approach problem solving mostly by decision attitude, choosing and searching for the solution among present alternatives. That way they are not needed to step

into uncertainty and unknown. Yet this approach to problem solving or managing certain processes is limiting the solutions and excludes the novel, different, and more optimal options. Boland and Collopy (2004, 4-9) value the decision attitude managers are taught in educational programs. At the same time, they point out that teaching them also about the creative attitude and encouraging them to search and create new ideas themselves or encourage the team and employees involved, would mean teaching them to create the right solutions. Encouraging searching and creating the right solutions calls for additional, new possibilities in facing the problems, projects, or developing new products, processes or services, that can be much better than existing ones. Teaching managers the art of creating curious, questioning attitude of present situation and future possibilities, especially in managing creative processes, would support also the creativity and curiosity of knowledge workers who are expected to produce innovations.

Meisiek and Barry, who study the new field of the intersection and overlap between arts and management, see the amazing value of learning from arts for the business organisations, but also stress that combining arts and business is a new field that as yet does not have strong empirical support. They call for a rigorous approach to studying and theorizing about the arts (Meisiek and Barry 2014a, 83-85). They identify a challenge in dialogue between these two different fields. As an example they present how alternative explanations in artistic theories are desired. "Artistic theories serve to enrich the interpretations of the associated art works", and thus never leave the artistic domain; this is what makes them interesting for business. This requires a twofold movement: art needs to express itself more clearly, while business needs to rely more on less strictly defined concepts and process, a fuzzy logic in a sense. In the search for a common platform for a dialogue through parallels, synonyms, counterparts, matches, equivalents, likenesses, similarities, and common points they (and building on their work in our thesis we) aimed to contribute to further development of a new theory on artistic principles and methods that can be used in management. Researchers searched for insights into artists' way of working in order to identify similarities and explain them legitimately to management as 'key ingredients' or characteristics of artists' way of working that could be used and applied in management theory:

> *"The difficulty with drawing on artistic theories to explain arts and management is that these have a different sense and use than scientific theories. It is impossible to*

directly build a legitimate system of explanations from these theories, as much as it is impossible to test these theories" (Meisiek and Barry, 2014b, 139).

5.2 Benefits of a Theatre Study and Work of Artists

Meisiek and Barry further argue (Meisiek and Barry 2014b, 136-137) that studying theatre can help achieve set objectives. Theatre play was the first artistic domain studied with the purpose of fostering organisational change. It was taken as an example to present problematic situations in organisations, and scholars afterwards discussed these problematic situations in workshops in search for a solution. Others have also suggested that, due to many arts-based correlations and metaphors, and its closeness and relativeness in numerous dimensions, theatre is the most useful artistic domain for studying organisational dynamics (Cornelissen, 2004, 713; Taylor & Hansen, 2005, 1218). Many studies were conducted to find connections and links between the theatre and managers, contributing to and enriching management theories where creativity is expected. For example, the organisational arrangement of directors, workers, consultants, and other people, making organisational change, and fostering innovative approaches while sitting together around the same table were adapted to the world of management from how theatres function. The dynamics of the relationships and how the goals of artistic expression – building a piece of art such as a performance – are translated into principles and methods, which are useful for other organisations. The close studies offer personal experience and description, which potentially is a source of a valuable source of building new theoretical frames (Austin and Devin 2004, Clark & Mangham, 2004; Zandee and Broekhuijsen 2009, 9-19).

> *"This is noteworthy, since it means that some of the openness and interpretative flexibility of art are shed in order to create a service. We also conjecture that it is this movement away from the art world while maintaining the art form that has made organisational theatre the best-researched area in art and management. From knowledge sharing to polyphony, power and politics, liminality, face work, and sense making, organisational theatre has been studied relative to a number of mainstream management theories" (Meisiek and Barry 2014b, 137).*

Austin and Devin (2003) argue that the importance of managing highly competent people requires an artistic approach. They thus present an innovative way of thinking about and

managing artistic aspects of business and creation, which we will present in the next paragraphs. A study on the research and development (R&D) of the most successful companies reveals that they follow the bottom-up model of culture and authority and give considerable autonomy to employees of all grades. Innovators (Austin and Devin call them also artists), just as true artists, must be allowed to create the next big thing. Their managers must line-manage them by allowing them artistic freedom, in the way that they create for them an environment that supports their creativity and encourages them to create something new – they themselves not knowing what exactly it will be. They believe in their talents and need to help them use their knowledge, skills, and creativity to follow the innovation (i.e. art) process so valuable innovations can be created (Austin and Devin 2003, 15–16).

5.3 The Origin of Artful Making – Theatre Play

Austin and Devin present the concept of Artful Making in the book Artful Making (Austin and Devin 2003), in the 21st Century Management Handbook (Wankel 2008, 492–4), and many other articles. Robert Austin (a professor of management creativity and innovation at Copenhagen Business School and Harvard Business School) and Lee Devin (professor of Theatre and Senior Research Scholar at Swarthmore College), the authors of Artful Making, conducted detailed studies of the work and creation of many recognized and successful artists, primarily based on the working processes of a theatre company. Based on their book they conceived a course named "Managing in the Creative Economy" at Harvard Business School. The classes also include exercises with some of the artists we mentioned in the chapter *Arts and artistic creation*. After a few years they started to prototype and transform the teaching approach itself at the Harvard, CBS, and the University of Washington (Meisiek et al. 2016, 330-40). The intention of the research behind the book Artful Making was to gain deeper understanding of the complex processes and principles used in theatrical artistic expression and compare them to management theories, practises, and processes.

They present a detailed analysis of how theatre artists work when preparing for a new play. Analyses of their work revealed that the manner of artists' work and the paths that lead towards an excellent performance, an artistic masterpiece on the stage that makes an audience ecstatic, are in many respects similar to how postmodern organisations work, or manifest the aspirations that they as well strive for.

Artful Making is described as “creating form out of disorganized materials and it can be applied to anything that exhibits interdependency among its parts”. The word *Artful* is used to stress a need for similarity with the working attitude of artists. The word *Making* points to the need for conceiving the work as altering or combining materials into a form with a specific purpose, which is similar to business and also to making and creating new things (Austin and Devin 2003; Barry and Hansen, 2008; Wankel 2008, 492-4; Austin 2010).

5.3.1 Research Methodology Used in Artful Making

In the process of developing the Artful Making theory about creative processes of artistic working processes that result in reliable innovation, an inductive study was conducted. Austin and Devin (2006, 27) report that various methodological approaches were explored in the study (such as Glaser and Strauss 1967; Yin 1981, 1984; Miles and Hubermann 1984; Leonard-Barton 1988; Edmondson and McManus 2005). Through studying the practices of successful artists and comparing those to business practices through an original “coding template”, which they translated and looked for synonyms in two different fields which almost always use very different terminology. The aim was to better understand the successful innovation both in arts and in business. Coding, measurements in interviews, and cross-comparing the cases were used in the study, which resulted in theoretical generalisations. This is further studied, verified, improved upon, developed, and tested with new in-depth studies via interviews with other successful artists and businesspeople, thus creating relevance of the theory for innovative processes in both arts and businesses. For further studies on the subject it would be interesting to study the thinking processes of artists during their creative process that lead them to make certain small steps and decisions and not others. Could this be an important trait that distinguishes them from unsuccessful artists and businesspeople? This subject would be interesting to study in the future, but in this thesis we will focus on the specific principles and methods successful artists use in their working process.

5.4 Principles and Methods of Artful Making that can be used in Management

In the study of theatre actors preparing a play it was revealed that artistic and industrial creation are no different; it would be erroneous to think that artists create their masterpieces in complete freedom without following and respecting any rules. Artful Making recognised that successful artists use a common set of specific principles, methods and certain rules, and in the study they compared these to evolving business principles, practices, and theories, with the objective of gaining a deeper insight into the work of a reliable innovation. Both frequently work in an environment and circumstances where there are many restrictions placed upon them, constraints, demands, tight deadlines, and financial limitations, and a state of flux and instability while they are developing and creating the final masterpiece. In all these dimensions, art and business complement each other and can often be applied together (Austin and Devin 2003).

These principles have been identified through a systematic review and analysis of various artists' working process. The set of specific findings artists use when creating tangible innovations is presented in Artful Making. These new findings were enriched with experience and theoretical knowledge with the intention of finding brand new approaches in moments of uncertainty and creative management. Artful Making is different from programed work and has a different approach to business from traditional industrial methods. The study of artists' approach to innovation has shown that successful artists use specific attitudes to working process, which can also be applied in business organisations, though they don't exclude completely in certain phases of the process applying also industrial making principles and methods, they can be easily combined, especially when making physical things that take time, planning and construction, next to bigger financial costs. Artful Making is defined by a specific set of approaches, attitudes, and management ideas, leading the creative process and producing valuable new results. The principles and methods necessary for a successful Artful Making are listed below (Austin and Devin 2006, 8-25; Austin and Devin 2003, 15–40; Austin and Devin 2003, 84–116; Austin and Devin 2009, 496–8).

5.4.1 Thorough Preparations

Space for creativity requires good and detailed preparations, which form a firm ground for developing and delivering variations and when possible also numerous iterations in the creative process. This opens to the artist more room for freedom, creativity, and change within the process itself, because it gives them the certainty that through preparation they have set firm foundations for understanding. That gives them a chance to discover something they didn't and couldn't plan in advance, but is made through the process and in this way it may lead to creating something valuable and new – to innovative products. The team members are well acquainted with all the limitations, options, possibilities, frameworks, and deadlines, as well as the options that can be implemented within the repetitions and experiments. The process is similar to the ones many painters were using, as for example also Picasso. In the creation stage he was drawing numerous sketches, which were merely attempts and relapses, but with trying and experimenting, he was at the same time improving them until the final famous version was formed. It is just the same also with Artful Making – the process must be executed in this way without looking for shortcuts or some other ways; this (simple) process is the way to create. Detailed preparations, such as studying in detail the preparation of a theatre play that will be presented, the feelings of each individual character, their histories, etc., opens up the possibility to be creative and have freedom to change artefacts during the process. With detailed preparations, the final product can be created throughout the process and is not planned in detail in advance. These preparations are different from the principles industrial processes use in the sense that often there is less all around thorough preparation (Austin and Devin 2006, 8-25; Austin and Devin 2003, 15–40; Austin and Devin 2003, 84–116; Austin and Devin 2009, 496–8). The part of preparation is also being aware of constraints of the process and project, yet they are seen as "the elements of challenge in the problem situation" (Boland and Collopy 2004, 269). Being aware of them, they can be a source of creating new, creative approaches, that can lead to different solutions.

5.4.2 Search for the Final Result all through the Process

Setting a goal and outcome in advance is not how artists usually work. They do not regard it as the best way, and surely not as very creative. They see detailed preparation and the process of searching for artistic expression as the main grounds for their search for the final

result. In that sense the process is the journey to the desired results and to the delight of customers and the market. This is one of the main reasons it is called Artful, as it is an artistic skill, which is different from planned work. The innovation process involves both creating high quality artefacts and improving their quality through numerous iterations, as well as through discussion of variations and improvements in the process. According to Aisha Hobbes (Austin and Devin 2003, 172), the uncertainty of not knowing exactly what our final result will be is something we shouldn't be afraid of, but rather we should learn the steps of innovating and embrace them, thus opening up new unpredictable possibilities. Indeed, the moments of unclear direction, the valuable innovations can be created. In an interview, the actress Aisha Hobbes described these moments as extremely precious by explaining: "The things you are able to plan are those things you see as being possible. Impossibilities never make it to the planning stage. Demand the great results before the deadline is a guideline, and trust and nourish emergence through the process" (Austin and Devin 2006, 8-25; Austin and Devin 2003, 15–40; Austin and Devin 2003, 84–116; Austin and Devin 2009, 496–8). Artists find it challenging and exiting to search for the final result all through the process, and knowing the result in advance would be a challenge for them and they wouldn't find in interesting, just as the famous architect Franck Gehry said "If I knew how a project was going to turn out, I wouldn't do it" (Boland and Collopy 2004, 9). It stands for stepping out of the default alternatives and encourages the search for new, better, improved and refreshed solutions.

5.4.3 Search for the Final Outcome using Iterations

In Artful Making the final expectations about the product evolve during the process, just as in a highly technological industry and in knowledge-based service innovativeness, the final goal of research is not visible all at once, but is explored, achieved and discovered through the process of research. The process is not directed towards a pre-specified set of expectations but is rather free to improvements upon the final product through the constant search for new opportunities within the whole process and several incomplete attempts that comprise a vital part of the creation of something new, where its evolving and pursuing innovativeness until the aesthetic expectations of the makers are satisfied (Austin and Devin 2006, 26). By enabling workers' numerous experiments and numerous affordable repetitions, they are given the necessary conditions to test different approaches, exchange options, and methods, and by this they are given the opportunity of learning, exchanging

knowledge, ideas and suggestions, and additional testing and improving. Every repetition in iteration is an attempt at recreation, so that it includes the newly discovered in the last repetition and then tries again to create something in the new one. The numerous, fast, and cheap repetitions are a way of innovating in Artful Making.

The logic Artful Making promotes is similar to artistic creation – "Make it great before the deadline" – meaning work on the product and do all you can to improve it. Artful Making sees numerous trials and corrections/improvements a way to make a product superior and developed into different and valuable. In such a process, each member of the team can provide his/her maximum and by constantly reshaping and providing their specific input, the group constantly creates variations of the product through play and with the exchange of views they create innovation. This is something that they were unable to plan in advance, because the joint product is a result of a common input, shared suggestions and opinions, and a multitude of repetitions and changes. Various artists; actors in theatres, painters, poets, designers, architects, and composers use this method successfully in their creative processes (Thomke 2003, 160–180; Austin and Devin 2003, 23–26).

It allows design developers to research all the variations of development of the project, and easier convergence from different experts involved, but can be used also in organisations when developing the strategies to explore all the options to get to the desired solutions and can also "give clarity to the problem statement". By opening the possibilities to explore additional options, the organisation opens new ways to not just be viable organisation, but also likeable and desirable for its employees (Coughlan and Prokopoff 2004, 189-192). So Austin et al. (2012) list examples of authors that recommend iterations in product development, like Bhattacharya et al. (1998), Tomke (2003), Boland and Collopy (2004) who promote the role of designers and their approach of searching for the best course of action, Avital and Te'eni (2009) and their the theory of generative capacity, Schrage (2000), and Star (1989) explaining how three dimensional digital representations resulted with "innovation in technologies, practices, structures and strategies".

5.4.4 Controlling through "releasing"

In Artful Making, managing control is different from industrial controlling. The latter is formulated and implemented through restraint, whereas in managing creative knowledge workers the theory advocates greater freedom. It requires more confidence, encouragement,

and targeted action. This method is a way of managing that allows numerous deviations within the set of parameters and thus opens the path toward generating new and fresh possibilities and different ideas that are not specified at the beginning of the process. At the same time, we can change some pre-determined guidelines if through the process we discover that it is better to do so. Therefore, it provides more flexibility and expands approach options of management, and at the same time requires more confidence and encouragement. Various disturbances and obstacles restrict Artful Making. Creative workers need trust and support from management. It is crucial for them to get accustomed to these disturbances, so that they learn to control and maintain their focus on the given tasks and to not allow these disruptive factors, including the tension derived from expecting results, to impede their creativity. These kinds of creators who have knowledge and ideas and who are expected to experiment in the process are more productive if given the space and support to experiment and create, also in the form of trust. They must be completely dedicated to their work and use all their knowledge. It is considered as a way of giving space for "release", and thus allowing for unexpected and unplanned outcomes to be created. Usually the personality of a creative worker needs this space and understanding from organisation and management, since their knowledge and creativity is the reason they are hired (Austin and Devin 2003). We will talk more about this in following section.

5.4.5 Uncertainty and ambiguity in innovation process

Consequently, Artful Making welcomes ambiguity and uncertainty in the process and about specifications of the final product (how the final product will turn out). In the industrial process everything is planned in advance in detail and it does not tolerate uncertainty, unclear steps, ambiguity or vagueness. Everything must be under control and is focused on a final product. Deviations from the standard process are seen as undesirable and to be prevented. This approach is advantageous when quality and the "sameness" of the product are essential. Artful Making and the creative process are different; the study has shown that successful artists work constantly in uncertainty and feel relaxed and creative in it, meaning they welcome ambiguity and uncertainty in the sense of focus on the process and its iterations and see it as something positive and acceptable. Since we are focusing on the process itself and not on the final product, this means that the entire process is very important, because the process itself becomes an open possibility for creativity, as well as for a change during the process, when at a certain point we do not know where decisions

are taking us, but at the same time we tolerate and accept their lead into the unknown, thus opening up the possibility of creating something new. The main ideas of artistic creation process is that we don't have clear specifications and concrete idea about the final outcome of the process, but we create nit through the process, but because of these specific characteristics, it need also appropriate management stlye and support. Artful managing urges managers to trust knowledge workers and their knowledge, skills, creativity, and their managing of a process in the sense of having unswerving faith in them. With this approach, the team, as well as every individual creator, is not only allowed, but welcomed and invited to research, test, use their imagination, and create (Austin and Devin 2006, 8-25; Austin and Devin 2003, 15–40; Austin and Devin 2003, 84–116; Austin and Devin 2009, 496–8).

Therefore, Lester and Piore (2004) claim that "ambiguity is the critical resource out of which new ideas emerge" and can be of a great help in the steps of efficient development of innovations which construct value.

5.4.6 Positive Attitudes towards Mistakes and Accidents

Not just tolerance and acceptance, but a celebration of mistakes in the process of discovering something new, in the process of inventing – is one of the crucial principles and attitudes in this process. This means that external variations and so-called accidents in the process, when we do not know exactly what our goal is, are not seen as a failure or something negative, but rather they are to be accepted as the most normal part of the process of creation. Therefore, without a bad feeling or any - especially negative – criticism, they and other forms of unpredictability are integrated into their work. Knowing this can be an opportunity and a source of useful information through which something new can be created. Artful makers respect and highly appreciate their "mistakes". They manage to successfully merge development and production, inclusion of different ideas, suggestions, the ongoing removal of inappropriate options, and a simultaneous creation of the final version of the play that has never before been enacted in that way and is thus original and innovative (Austin and Devin 2003, 18–30). They discuss "mistakes" and try to learn from them by expressing why that particular artful expression did not achieve the intended objectives. Sometimes through a "mistake" we can stumble upon great outcomes and options that we would have never thought of by ourselves. That important interrelated management principle – being open to accidental, unpredictable outcomes – leads to discussion where the members recognise

value in accidents, and try to find out what new possibilities they can potentially create. Then they use them as something unplanned and build upon them. Thus, the process can go some other way than planned or expected and in this way it can lead to something truly innovative (Austin and Devin 2003).

According to Austin et al. (2012), openness to accidents is especially applicable in "particular early stages" of a development of a product process, when costs of unusable mistakes are not expensive and can be easily controlled, as also in life cycles where there is a need for breakthrough and novelty and it would be especially valuable, so there is no place for fear of high costs and a potential of benefit that might result from creating original outcome.

For many managers, allowing accidents can cause resentment and doubt. Creative workers also know that certain conditions need to be met for allowing accidents to happen in innovation process. Austin et al. (2012, 1509-17) emphasize importance of five main conditions defining the openness to accidents to happen and conduciveness to innovation:

1. Creative workers remain open to accident when they sense that the conditions are conductive to innovation, varying from "originality is likely to be beneficial", and "originality is inexpensive to produce", towards becoming negative when "originality is not costly to produce" or "is costly to produce". These affect the degrees of "openness to accident". These degrees vary from being against unplanned iterations and changes, which are seen as negative, to being open to variations and allowing them to happen, yet not looking for it intentionally. The third degree is building the king of process, where unintended variations and injecting randomness make a crucial part of it.
2. Cost matters more than benefit, meaning the need for discussion of the costs of unproductive accidents (they are to be low), which control the degree of openness to accidents, while the potential benefit presents only motivation to search for mistakes.
3. Numerous specific factors influence makers' openness to accident, where especially expertise (designers, artists), knowledge, techniques, additional skills, specific knowledge and use of digital technologies, can make conditions more conducive to innovation by making iterations and mistakes cheaper.

4. Collection, not reuse, supports valuable unpredictability. For work of these kind of makers it is characteristic that they collect numerous ideas and knowledge, believing they can reuse it ones in the future, as inspiration, analogy, association, or in some other way.
5. Innovators want to control the rate of convergence, and influence its rate on performance, paying attention to the time of closure, still wanting to produce as many valuable outcomes as possible.

5.4.7 It Suggests More Freedom

Artists and very often also creative workers deal with the sensitive and risky mission of creating new things and being innovative. That includes also experimenting, taking risks, pushing beyond the edge of the known, and consequentially making mistakes in the process. For that they need trust and freedom from management, and support in their work in order to perform well. Artistic management asks for more confidence, encouraging, and aiming. It calls for a manager's deeper trust in their knowledge workers. The characteristics of controlling the process are wise balancing when facing and resolving discussions and conflict situations. In moments of decision making and new steps that even they themselves do not understand, managers confide in the expertise of their employees and allow them to make and create next steps. Often, creative workers are experts in a specific field and therefore have more knowledge and skills about the specific domain than managers, and stepping into the unknown opens the door for innovation. Allowing employees more freedom is perceived as a very important principle, which gives them space to make iterations, repetitions and estimate what to change, reuse, or ignore in the process, thus leading the creative process and giving them the chance to constantly discover and discuss the new and the unplanned. For a reliable innovation we need a type of control that would allow freedom in trying experimenting and on-going adaptation and further improvements. Of course the freedom we want exists within set rules and only with such freedom is the creation of something new enabled. Supporting steps that initially do not seem very understandable or reasonable, yet by avoiding the expectable and predictable outcomes lead to creating new logics and new outcomes (Austin and Devin 2003; Austin and Devin 2003, 84–116; Austin et al. 2012, 1517).

5.4.8 Managers Also Need Artistic Skills

In the theatre, the director's role and responsibility is to stage the play and oversee its realisation, production, and success. The director includes all of the actors in this creative process and pays attention to their suggestions, ideas, experimentation, trials, and failures. In short, variation and creation in the realisation of a scenario is permitted and everyone present is actively involved in its co-creation and 'bringing it to life'. The given facts and preconditions like scripts, excellent actors, stage, and environment represent the necessary means that are to be directed and managed through a creation process with wisdom, trust, and respect for highly educated and motivated experts so the expected final result may be reached; and presents a foundation of a high-quality co-creation. The scenario does have a clear text, control statements, and list of instructions and as much as it may be seen as rigid, it still allows a lot of space for freedom and creativity within it that allows for variation and creation in the scenario's realisation. This undetermined empty space should be (ful)filled with the imagination, artistic genius, and creativity of individuals involved in the play. It shows that preparing a play for an excellent performance on the stage does follow certain principles just as it does in management. The manager has to manage all the new ideas, suggestions and possible options and converge them all towards more common ideas and narrower direction. In management it would be called responsiveness, workability, unsettledness, and embodiment (Austin and Devin 2003, 30; Broekhuijsen and Ibbotson, 2007, 60; Ibbotson, 2008, 82; Zandee and Broekhuijsen 2009; Meisiek and Barry 2014b).

The scenario in the theatre can be compared to management in the sense of imprecise specifications and lacks detailed instructions and information according to which the rehearsal should be conducted, exactly as the actors still have freedom of interpretation in their prescribed text. They can be creative and have freedom since the same text can have wildly different interpretations and one isn't necessarily better than another, rather new. So when setting the myriad designs and colours of tones, actors and director with their unique specifications have the power to affect the character of the play. They constantly express their suggestions and changes, and through this they create and coordinate. They create the final version of the play in a way that has never been staged before. It becomes truly innovative and unique. Also in confusion, chaos, and the occasional conflict during rehearsals (adapting to the theatre space, its size and layout, costume design, and scenography), well-coordinated directing and constant management adapting can result in

proper forms and performances. It leads to a coherent and united form. This process of creating may seem poorly managed, leaving the impression of non-coordination, seemingly a set of individual actions, created through tiresome mergers into a whole. Nevertheless, Austin and Devin (2003, 37) see this form of working and managing as professional, because each rehearsal is conducted differently and more innovatively, compared to rehearsals based on pre-planned methods. In this way creative workers are managed in a way their creativity is respected and supported.

The reliable innovation needs a different kind of control with more respect and support. Managing people who create is about helping them achieve freedom from tension and to achieve this freedom a safety net is needed. In a way managers have to act more like safety nets than overseers. It is the managers' duty is to coordinate within certain limits and clearly plan in advance while allowing for freedom and releasing workers from strict control. It is about fostering the environment workers are most creative in. Managers must encourage employees to push for changes and take risks in the process of creation, or if they are too eager to go after too risky experiments or too much out of control with the project not interesting for the market, to restrain their tendency. In this kind of creative environment with constantly changing conditions, trust and support in their process of iterating and innovating are crucial (Austin and Devin 2003b), and "maintaining a healthy balance between stewards and creators provides the best path to business innovation" (Austin and Nolan 2007), where managers are being called stewards.

5.4.9 Motivating creative workers

Research and interviews suggest that artful makers and artists in general resist extrinsic motivation, even though they work under certain extrinsic schemes, such as a salary, benefits, performance bonuses, and awards, and do find them important to a certain degree. Still, it is intrinsic motivation that drives them when creating something new and putting all their effort and dedication into constant changing, improving, and creating outputs and continually improving them. It is being willing to do their best when putting to realisation the vision and the goal they set. It is making and learning new things and new opportunities that makes them satisfied and happy, enjoying surprise, experimentation, and constant variations. It is a kind of excitement for them that drives them. They resist repetitiveness that is mere iteration without progress and that does not result novel experiences and

outcomes. Employees and team members are in the creative process faced with working on the edge, are expected to take risks, and have a difficult and risky job. Managers thus must make it safe for them and support them at their struggle and find ways to motivate them to move forward and abolish restraint from them (Austin and Devin 2003; Rotman 2010).

According to Hennessey and Amabile (2010), it was first thought that intrinsic and extrinsic motivation are in a hydraulic relationship, meaning that an increase in extrinsic motivation would decrease extrinsic motivation. However, they further elaborate that after many years of studies the consensus among scientists has changed and they now believe that there are specific conditions under which the „hydraulic principle“ does not apply and it is therefore possible to increase the extrinsic motivation without diminishing the intrinsic motivation (Hennessey and Amabile 2010).

5.4.10 Creating Optimal Environments and a Secure Working Space for a Team

Special skills, knowledge, experience in the field of art, and the (re)creation and improvisation of art work can stimulate the creation of a specific organisational environment and culture, encourage and improve creative processes, teamwork, innovativeness, and a sense of affiliation, and can create companies that are open to change. All listed above would provide them with an advantage and would boost them above the average in the measurement of human indicators, creativity, and valuable products. When a group of artists has to work together usually everyone involved has great knowledge and their own opinion about the art piece they are to produce together. Each member has a clear idea about the characteristics and specifics of the creation process, but still when working in a team, because of their deep respect for art and the strong intention to create the best version possible, they are willing to subordinate their own ideas and opinions to a common goal. So they rather choose exchanging opinions, taking different options into account, respecting the numerous attempts and experimenting they have to do together. They are highly motivated to create a work of art together and what unites them is a common vision to create the best possible version of the artistic piece. Artists are known as very (self) critical and are never satisfied with anything less than the perfection for which they strive (Božič 2008, Austin and Devin 2009). It is also possible to create this kind of attitude in companies. Investing trust in workers’ expertise means not micromanaging the creating process and

their participation, it requires promoting good habits, flexibility, and balancing, with a willingness to change habits when conditions change.

A flexible and supportive approach in managing the artistic aspects of extremely capable workers and understanding the dynamics of their operation creates the necessary conditions for creativity and innovation. It forms a safe, supportive, and trustful environment. All this is crucial so a company can quickly and reliably innovate and stay successful in a rapidly and constantly changing global market. When an optimal supportive and trusting environment is given to a creative team, workers can release their desire for creativity by experimenting and exploring new, undiscovered things and are able to create things beyond imagination (Austin and Devin 2003, 14–160; Barry and Hansen 2008).

5.4.11 Cooperation of the Team

There are many levels of cooperation. One of them is the cooperation in the team involved in the creative process. Another is the cooperation of the members of the team with a manager, which is realised through conversation and an exchange of ideas and thoughts. It is also practised through participative behaviours and attitudes focused on co-creating new and unpredictable ideas. The detailed analysis and research of the complex creation of a theatre play and all the people involved showed that the final version of the play is co-created by everyone involved, and is not dependent only on the scenario and director. Scenario describes the story, basic ideas and the play, and then every director and the players involved create the final play together and is inspired by their personal perception and view. Each play is accordingly a little different and has its uniqueness. Already in the performance's preparation phase the members have their say and influence, with the participation of all actors/actresses and the director. Austin and Devin realised that they all can influence the proportion of lights and shadows and the profile of the stage. Also during the play, the audience, the scene, and other factors are constantly variable. The cooperation of the team members and the director are essential as all are actively involved and play an equal role in the creation. They constantly contribute to the play by freely expressing their professional opinions and giving suggestions. At the same time, everyone involved in the play is trying to stay out of the already known and established frameworks and automatisms and observe it from a distance. They try to think and look at the development of the play without the limitations of their previous findings, although these still affect their perception.

Here, it is crucial that the director is not dominant and must manage and practice the directorial role very delicately. The director's role is to encourage everyone to participate, to encourage the exchanging of opinions and suggestions, and to form the final decisions together. Everyone involved should be well synchronised and coordinated like an orchestra, where each professional musician knows that in any given moment the most important thing is to achieve the best possible common result and create something new and important (Austin and Devin 2003).

5.4.12 Disregard of Customer Feedback

The research shows paying too much attention to customers' feedback and their wishes is not always the best option and can be a hazard. Customers generally do not look too far into the future and thus a company can sometimes make the wrong decisions about where and in what to invest, which in the future could lead to them falling behind the competition. According to the interviews, artists often do not pay too much attention to the opinion and feedback of customers, because it can impede innovation and usually limits the degree of their innovativeness. Since customers are not professionals and are not qualified, they have limited knowledge and thus creating upon their suggestions would result in poor innovations that they themselves can imagine and conceive, while in the research artists were talking about creating things they had never imagined, about giving customers things they never asked for, about producing innovations that no one has ever dreamed of. Instead, artists talk about informing and educating customers about the new possibilities innovations will offer them and about customers being excited about such innovations. Thus Artful Making is not user-centred innovation theory and stands more for systematically disregarding customer feedback and creating something new, that customers with start to like and love once they experience it (Austin and Devin 2006). A big proponent of giving disregard of customers' feedback and in general opinion and wishes of market is also Verganti (2009), by stating that Italian successful companies are design-driven by changing the meanings in their industry and in this way do not study the market, but rather change the meanings of their products and thus offer something new to customers, and create their own, new markets. He calls it "radical innovation of meanings". It is similar to the strategy Steve Jobs was applying, coming from bringing conclusions and decisions based on his own logic and assumptions and stating that when he offers customers something better in any way – practical, esthetical, innovative, creative, etc, they will "fall in love" with that innovation

and won't miss something not as good or useful. Or, as Verganti and Dell'Era (2014, 145) explain it, "customers rarely help in anticipating possible radical changes in product meanings", so it is a role of creative people to broaden the perspective of a product and inspire it with a deeper, more purposeful and "beautiful" meaning by broadening its perspective, and it is often related to peoples' emotions and values.

5.4.13 Criteria for Closure

The criteria for a closure in the creation process is complex, with the need to recognize the value of the process' outcomes and see when we have them in the form of novel products that can have value or in the subsequent procedure create value. With this kind of approach and numerous iterations, the final product can be improved upon continuously with new iterations, and participants are excited about the constant development and improvement of the product, so it is kind of a never-truly-finished process. The wise manager will not push knowledge workers to finish the innovation process too soon, because this could prevent them from creating innovation with an added value. Still it is not correct to give them too much time, for they could be too late with results, so here a lot of balancing is needed between innovators' enthusiasm for constantly creating something new, and managers, who want to control the process and minimise lost opportunities and time. Here definitely checking artefacts during the innovation process and seeing tangible results and discussing them and future possibilities can resolve conflicts and can help balance criteria for closure (Austin and Nolan 2007). It has been noticed that the way an individual artist applies the philosophy differs from how a collaborative ensemble applies it, so again cooperation, common agreement, and a set of standards is needed. Artful Making principles can be considered as a coherent philosophy for successfully managing certain categories of creative business activities. How this management philosophy is implemented varies with the scale and complexity of the process.

These are the principles and methods, recognised as specific ones for Artful Making. They are functional in artistic creation and properly applied, they can bring same success also in managing innovative processes. It is important to find the right balance between preparations and planning, a distinction between problems and difficulties, openness to serendipity and accident, valuing form and process over content and outcome, managing closure in time, and having a sophisticated idea about relationships with clients. Using them

correctly can help reorganise management rules and structures so we can access more talent and just maximise the potential of knowledge workers in organisations (Austin and Devin 2003b).

5.5 Four crucial Qualities of Artful Making

The aspects of knowledge workers' innovative work need a certain framework and logic as a way of creating and approaching the process. The researchers have recognised four specific artistic qualities that are incorporated into the idea of the process of Artful Making. These are release, collaboration, ensemble, and play, and they are introduced as the soul of Artful Making. All of them are equally important; they are interdependent, intertwined, and they are the qualities of work that artists know and use. Only by applying them, next to practicing the principles and methods described in the chapter 5, the full power of the artistic process can be captured and create the deeper level and full potential of Artful Making. They are necessary, but still they are presented only as ways of looking at things. It is artists point of view as regards fostering a supportive environment for artful working. In the effort to provide material to contribute to the management theory there is a danger in missing the true specifics of artistic creation. It is not easy to translate artists' logic and qualities into the specific logic and qualities understandable to the business world. So the best way to stay on track and offer the best version is by getting into the minds of artists and understanding their way of thinking and perceiving. The study of artists' work, their logic and way of thinking and their looking at things during the development process has shown that in many ways it differs from management theory logic and understanding. So only simple translation of their concepts into management theory concepts would be enough, nor would it manage to explain and properly present a deeper personality of artists in their working form. Their focus, strong intrinsic motivation and urgent need is on the high quality, perfection, uniqueness and artistic value of the final product they are to create before a given deadline. All the other principles, methods and approaches are inferior and only serve this high mission they are on. In this creative process they apply the following four crucial qualities artists are led by and that are constantly manifested in the creation process (Austin & Devin, 2003a).

5.5.1 Release

Control by release is a fundamental condition so the other three qualities can be implemented. This kind of control allows artistic workers to free themselves from fears, tensions, rules, and obstacles on the way to creation. They feel safe also to seek advice and help. It comes from their mastery and expertise in their work and it allows them to experiment and research the unknown, what makes them thrilled and excited, and encourages their creativity.

We discussed about the meaning of release already when talking about the principles of Artful Making (controlling through releasing, section 5.4.4.). The study has shown that there is a wide variety between control and release. In sequential processes control plays an important role and is the way to follow compliance with process specification, strategies, restrictions, surveillance and containment, plans, and intentions, which is normally used in industrial control. It sets external standards and by them the performance is measured. In iterative processes where innovative outcomes are to be produced it is impossible to set clear specifications, because we do not really know in advance what exact specifications to measure, as iterative processes lack a separate planning phase and therefore preconceived specifications, so iterative processes affect and change specifications and adapt them in each new iteration. Creators rather experiment and welcome unexpected variations, and while exercising a high degree of control by mastery; by rehearsing actions and intentionally changing variations with the goal of improving them, and trying them to see if they are better. For example, dancers, musicians and painter have this kind of control in technique in their working/creating process, which gives them freedom to improvise and test, and actually they achieve a high degree of control, but by following completely different standards and approaches. They control the process by rehearsing actions, with the intention to improvise, finding and creating the best version in improvising and putting their personal artistic note on it. So co-creation and the shaping of the final play are in everybody's hands and each is personally involved all through the process until the final version is fixed. Here, improvisation is required, contrary to the sequential process, where it is seen as a mistake. Artists express this kind of control as "*freedom that arises from mastery"*. Control by release is a step where workers step out of a safe and well-known space and

intentionally welcome deviation and experimentation with the purpose of discovering new opportunities. So by numerous trials and doing errors, they accumulate experience, gain new knowledge, and step into the unknown (Thomke 2003 160–180; Austin and Devin 2003, 23–26).

5.5.2 Collaboration

Collaboration is a natural result of working by releasing. When not being led by external specifications and having free hands to express their creativity, workers are highly motivated by working while constantly innovating. When working in team, they are driven to cooperate and collaborate in various manners, such as through discussion, conversation, and also through their behaviour itself. Everyone present participates throughout the entire process of creation and they all exchange opinions, ideas, and knowledge, and thus help in the creation of fresh and unpredictable concepts and ideas. Teamwork is the most necessary element when the group creates new things, and it requires a different level of cooperation so it can reach its full potential. The entire innovation team is included and present during the iteration process and all the repetitions, and the expert opinions and the personal views of proposals and assumptions of each actor are very important and affect future development and the direction of future iterations. These are a kind of professional consultations, an exchange of knowledge and ideas where the whole team, composed of experts from various fields, observes changes, gives opinions, and develops something new with every new iteration (Thomke 2003, 160–180; Austin and Devin 2003, 23–26).

5.5.3 "Ensemble"

Ensemble is an artistic term and it is used in this way as one of Artful Making qualities on purpose, from the desire to allude to consistency as in an orchestra and wanting to send the clear message that it is much more than just a team as known in business. The ensemble, just like the orchestra, is a group of individuals who are united with a higher purpose and a clear vision, to achieve and serve a common goal and vision. They are committed to cooperation, and for that reason the individual workers renounce autonomy over their work in order to create something new together, each contributing their own specific knowledge and experience. Together

they can do something no one would have ever created alone; to create something bigger and special. It is like that in an orchestra, where every individual exceptional musician subjugates their own interpretation of the music to the spectacular performance of the orchestra. This quality of Artful Making aligns and unites the individual experts and gives them a common focus to create something unique that no one would create individually. They unite for a specific cause and project to solve problems together and while doing so they are united as one; when their work is done, the team no longer exists (Austin and Devin 2003). Especially in music, this term is used and expresses the capability of musicians working together and staying in tune, and they manage that by listening each other and accommodating to the music they are performing together. They clearly show that people dedicated to the common goal are capable of working together within framework and limitations, and "ensemble" call for kind of managing that follows organisational goals and at the same time respects and nurtures individual freedom of the people involved. It is a nice example of performing successfully, by "finding ways to prompt their performance in real time. In this way, you invoke people's tacit knowledge" and encouraging them to exchange ideas and cooperate, and this way giving them a clear direction and meaning for their work (Cook 2004, 87-9).

5.5.4 Play

Play represents the product created by the "ensemble", just as a theatre performance in front of an audience or interactions between members of the group or musicians playing on the concert. For example, during a performance on stage, actors can generate new ideas; during a play new ideas can arise and actors can also come up with new ideas based on responses from the audience, teammates, or even the director. In such a state of creation, one can have critical insight into the development of actions, have a critical opinion of specific actions and simply have the freedom to experiment and test other possibilities that can give birth to new ideas, which can in turn develop innovative ideas. Similarly, this occurs during the innovation team speaks, exchanges expertise, or discusses opinions about accepting or rejecting variations that occurred in the process within innovation groups. Play is a process of trying different things and ideas in order to see what suits us best and is most appropriate, and can bring the best results and outcomes. This quality encourages

creative thinking and urges actors/workers involved to express their opinion, thoughts, and views, and opens new perspectives (Austin and Devin 2003). Also other scholars in their studies about creativity mention play as a needed quality, so Styhre and Eriksson (2008, 50) describe play as a valuable "concept brought into the analysis of creativity and innovation", which is "conceived of as a domain where alternatives modes of thinking are permitted and actively promoted", with the intention to broaden the perspective. Boland and Collopy (2004, 274) talk also about playing with "meanings, implications, and purposes" in a design project, where also new and unexpected ideas and insights can be born.

5.6 The Artful Making Process

5.6.1 The Shift from Industrial-Sequential to Iterative-Artful Processes

The characteristic of the industrial-sequential process is that before any action is taken and before we make anything, we make a clear and detailed plan in order to maximise the value of outputs. Because of the high cost of making many different prototypes, trying out as we go along is not an option. So here the goal is to make the best possible version of a product already on the first try. The rule here is to do it right and avoid making any mistakes or variations, so the process does not provide space for experimentation or multiple tries. Here we produce well-understood and a priori planned outcomes. Planning-based structure is characteristic in mass production, where experimentation is simply too expensive and therefore not an option, so we try to make a plan of the final product in details in advance not leaving room for changes, failure or surprises. In that phase the specifications are defined and the processes are designed. After all this is ready, production, or so-called 'making', is launched. This way there is no option left for unpredictability, failures or a need for repetition and correction of the outcomes. Mistakes are seen as a problem, trouble, and waste of material and money. The process is structured sequentially. Grounded theory project (Austin et al. 2012, 1505-11) studied the conditions innovators need in order to welcome accidents to their work. In looking for theoretical explanations and factors that affect the decision of choosing between iterative process and planning based process, they discovered two relevant factors: They are:

1. The benefit, and

2. The cost.

Iterative process is used only when they want to produce different, novel, improved, more valuable outcome from previous one. In that sense, the same process can also generate benefit new outcome can result with, as also the cost, related to the creation novel, original outcomes. These costs vary from one company and process to another. So for a creative company with competitors having novel products, novelties will be potentially beneficial and urgent. At the same time manufacturing process doesn't see benefit in producing novelties and would just present quality-control problems.

Studying an artist's work and comparing it to industrial making has shown many differences in the process itself. The designers' role and possibility to create in the industrial process is only before the making process and before production starts, while the working process of artists is different and has different logic and intentions from just finishing the primary idea as set at the beginning of the process. It is not even close to the traditional industrial-sequential process, where the final product is planned before and is just produced in the sequential process. However artful processes, also called iterative processes, have many iterations with the intention of improving and working on the product so as to make it better all through the process (Austin and Devin 2003; 2006).

Regarding these conditions, we have two kinds of process structures used in a new product's development process. The first one is called iteration, where we start to construct artefacts as soon as possible, meaning right from the beginning of the development process. These artefacts, which are like the idea of a new product (how it should look and what could be useful and most appropriate), are soon used to build the prototype. After having a concrete prototype, the development team tries it out, sees what works and what does not work, discusses and exchanges opinions about what could be further developed, and then as a result of all that constructs a new prototype, an improvised variation of the first one. When they create this new version of prototype, it goes through the same process the first one did. It is already improved but after testing it and discussing with everyone in the team, fresh new ideas and options for improvement rise again, and as a result they make another prototype, the variation of a second one. This version again goes through the same process, and the costs are similar to what have sometimes been called "setup" and "variable" costs in operations management. All through the process and through the testing of different

prototypes it is developed, and step by step we reconsider various options and collect new information on impact and strategy, and, taking all these into consideration, we make further steps and create the direction the final product will go in and what the final version will be like (Austin and Devin 2006, 15-7).

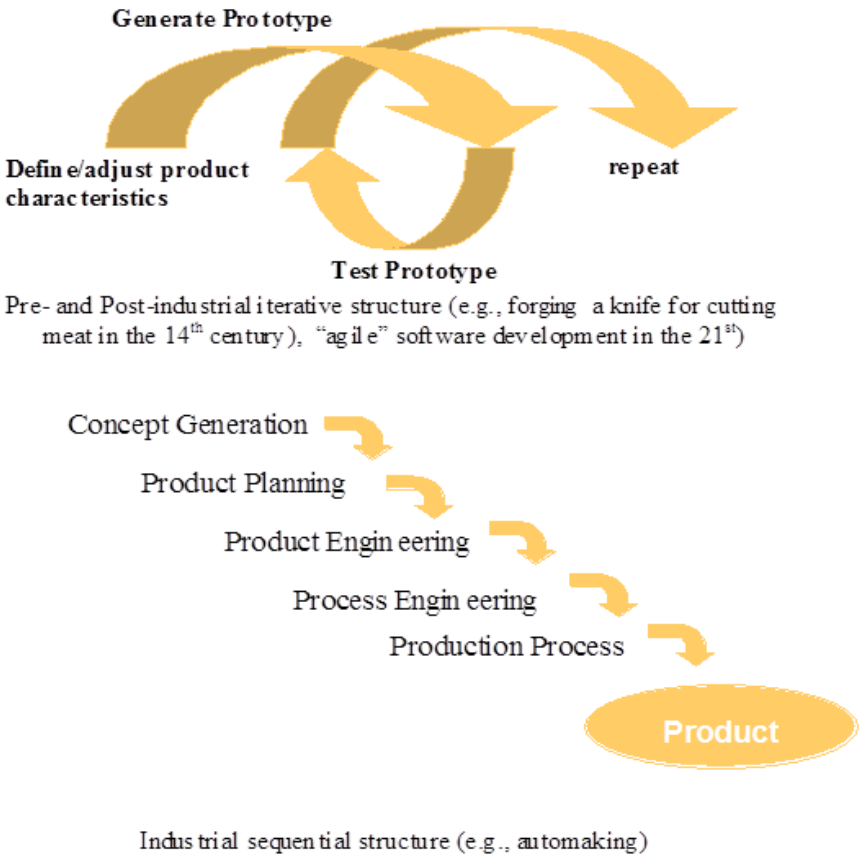
The comparison of sequential and iterative processes (figure 5.1) points us to the crucial difference in the attitude towards the development process in search for an innovative outcome, especially during the process of iterations and quick repetitions, where the stages of creation can be seen within sequential process as failure and disorder. So one of the main and concrete differences between sequential and iterative processes is the approach to control (Austin and Devin 2006, 19-25; Wankel 2008, 495-8).

Control is in industrial-sequential processes implemented as compliance with a product or process specification. Control in general is well-versed in production and non-production processes through administrative strategies, where preconceived plans are to be put into reality and produced. Workers are expected to follow the strategy and the plan set by external standards with no variations or mistakes. By going through the process by those standards and making no mistakes, performance is measure and defined. In research into artistic process this kind of control is called "*Control through Restraint*". Artistic processes should not work within these rules if their practitioners strive to innovate. The approach is different and since artists create through the process, the final product cannot be defined and clearly set in advance, so standards, detailed specification, the traditional form of control, and a clear, detailed plan does not work here. The leading idea in artful process is to make numerous iterations, allowing for variations in them and learning from each one of them by seeking the best results and gathering and learning new information, then inserting them into a new iteration and forming a new standard by constantly creating something new. So the work proceeds and, in the process of being actively involved in it, the new product is constantly improving (Austin and Devin 2006, 19-33).

For example, pianists have exact kind of control when performing a piece from a famous composer – we see technique and musicality as our freedom, where we add our personal character to the composition, still strictly and correctly following the script and all the remarks the composer wrote. Thus through excellent technique and understanding of a composition's character, a musician is given complete control and at the same time freedom

to improvise. As a student I attended a masterclass by the famous German pianist Karl Heinz Kammerling and he always stressed that, "freedom is in obeying the rules," explaining that this is the basic condition that must be followed and obeyed. By obeying this rule, we still have a lot of space for personal interpretation, our personal ideas, feelings, views and emotions, and that makes our interpretation unique and special. This kind of control, often mentioned in the interviews with artful makers, is in the Artful Making concept called "*Control through Release*" (Austin and Devin 2006).

Figure 5.1: Iterative structure of the process versus the industrial-sequential process - Comparing the separate steps and the form of artful and industrial making processes



Source: Austin and Devin (2006, 30).

Austin and Devin argue that the iterative process does have a potential weakness, namely that attempting to arrive at the valuable outcome through the iterative process might be too expensive and time consuming, and in such cases it is not recommended to be used (Austin and Devin 2006, 16).

5.6.2 Specifics of the Artful Making Process and Artistic Leadership

The benefit of the use of the concept of Artful Making, where the creation process, constituted of numerous changes and constant surprises and variations, is the environment, where workers are comfortable working and therefore develop a higher degree of adaptability. They also learn, just like actors in the theatre, to improvise and are much more flexible, so they are in a state where their creativity is more than welcomed and they are supported and encouraged to express themselves; they are favoured on the basis of constant creative remarks, moves, acts, and thoughts. In this environment they are not judged, criticised, or scolded for producing different results from the ones managers or colleagues had in mind. In the industrial process mistakes are not welcomed, but here variations and unexpected results that constantly infuse the process with personal touch, ideas, and creative imagination are welcomed and considered as a basis for creating something new (Austin and Devin 2003, 18–30).

In using the concept of Artful Making and complying with all the methods, balancing between the different methodologies and discerning when to move on is of crucial importance. Thus professionalism, knowledge, and excellence are needed to scale the variations in preparation and planning and in recognising what amount of each is needed to make the artful process produce optimal results. Also the ability of evaluating each intermediate step in the creation process is important; this means making sensitive decisions about which output is going to be bounced and removed from subsequent steps, and output is going to be useful in future steps and recognised as an opportunity for innovation. It is a delicate responsibility and calls for knowledge and creative expertise. This expert is to be open to the right extent to give space to discover and create new things, to not be afraid to make errors in this process, and still to know how to recognise the opportunities that can be developed out of so-called unexpected “errors” and be used as novel approaches, and with them add value to the final product. It is more important to be focused on the process itself, its form, interim steps, and on the small and unexpected changes that occur during the steps. It is about focusing on the substance and the final product.

It is crucial that people involved in this process understand its importance and develop a sense and deep understanding of this kind of control. This will also help them make the decision of when to stop the process and bring it to end; to know when is the right moment. This kind of working process requires a deeper relationship among the team members and

constant communication and discussion about interim results and future steps. Partly it also takes into account the opinion of customers. Such managers know that removing coincidence, disorder, and chaos would bring security, but would take away space for creativity and innovativeness, so they embrace it and work with it. The final product is in the process of creation and thus cannot be set in advance, since it would obstruct creativity and disable its improvement through the process (Devin and Austin 2008, 491–3; Austin and Devin 2009). We find that following, implementing and managing by the logic, qualities and principles of Artful Making is very similar to artists' creation process – they feel safe being creative and innovative all through the process and feel comfortable creating in uncertainty, unclear specifications, and dealing in the unknown, using expertise and their team in experimenting with the desire to innovate, just as artists are when creating artistic creation together in a team, orchestra, dancing group, choir or some other (Car et al. 2015).

5.7 When is Artful Making applicable?

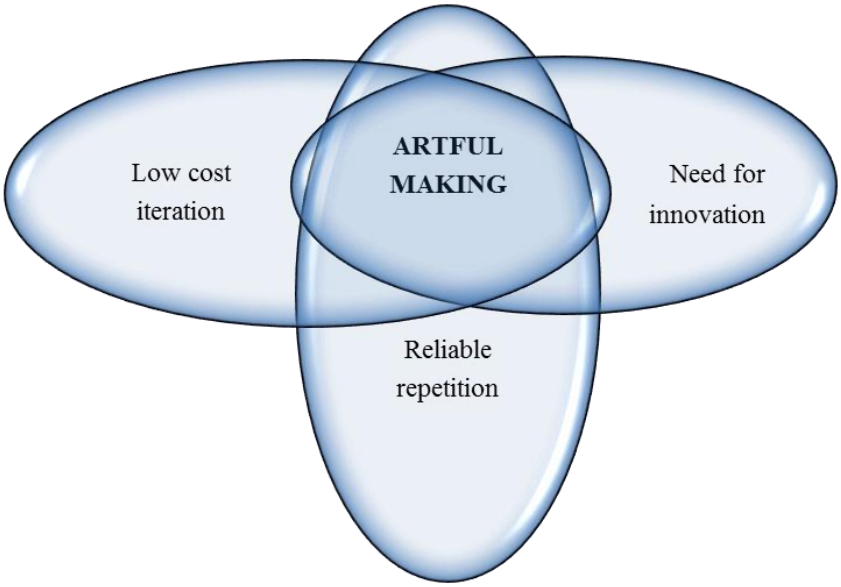
The functioning of an organisation depends on the costs of interactions. In organisations where innovation and the iteration process prove to be too expensive, they strive for more detailed planning before deciding on change. They simply wish to be successful on the first attempt. However, iterative processes are useful where making new prototypes is cheap.

It is important to stress that Artful Making is not always applicable. Three specific conditions must be met: it is appropriate only in the business world, which is looking for innovation and wants to constantly create new and innovative products and services, so demand for novelty must be high. That are especially businesses frequently influenced by advances in technology with fast and repeated trials – prototyping. Another condition is that it must have a possibility for fast and repeated trials and repetitions, and not expensive iteration process - virtual exploration, experimentation, and production - compared to the profit yielded by experience, meaning that the costs that underlie the supply of novelty are low.

Therefore, the use of Artful Making is only appropriate when creation and the process are more like a play rehearsal and less like a car production, which is highly expensive, making any trial and testing costly (Austin in Devin 2003, 45–47; Thomke 2003; Austin and Devin 2006).

The design of some software development processes is like this, as they allow for affordable and fast reconfiguration, enabling experts to create new versions. It is also commonly used in areas such as printmaking, rapid prototyping and in product development. Low costs enable multiple attempts, learning through trial and error, transformation, and repeated trial; in this case, planning may be substituted by experience. The necessity of success in the first trial changes into a logic of creating something grand before the deadline (Austin in Devin 2003, 23–26).

Figure 5.2: When and where Artful Making should be applied



Source: Austin in Devin (2003, 47).

By low cost iteration it is meant the costs of reconfiguration and rearrangement of equipment and material costs together. Certain rearrangements must be made in production to produce an innovative result. There are also costs of testing the product through the development process that were not used because they were not good enough or did not work out so they needed to be further developed (Austin and Devin 2006, 10).

As the authors of the project (Austin et al. 2012, 1507) argue that magnitude between the benefit of iterations and its costs influence the decision to choose iterations over planning-based process. Only when they have the conditions »conducive to innovation«, meaning only when »original outcomes would be likely to generate ample benefits and likely to incur low costs«, the iteration process is applicable.

Artful Making and industrial making are not exclusive; they can be combined and in practise they actually are often are combined. Many companies work according the specifications, but when unexpected things occur, the process is geared for the case that something goes wrong. They do not see it as a problem but rather the team is obliged to improvise and find a new solution. Toyota is known for this and they find this kind of approach valuable and cost-effective (Austin, 2010).

5.8 Artful Management and the Role of a Manager

Artful management stands for the mutual and understanding relationship between qualified creative workers who are experts on their field, and are developing valuable outcomes and innovations, and their managers, who are responsible for the research and development process. In their nature, these two are different and it is normal that when together in the creative process, they have different focus, goals, ideas and approach.

Yet managers need creative people to create novelties, so supporting their nature, passion, emotions, desire, higher purpose, experimenting, and searching for perfection in unpredictable development process will be beneficial also to the manager. Supporting the freedom creative people need for developing something new, is naturally colliding with the nature and role of managers, who want to know and make sure the process is going it the right way and control its development and costs. Yet if managers are willing to practice innovation-enabling attitudes, it will give impetus to creative workers and both will be satisfied with the final outcome (Austin and Nolan 2007).

What managers must learn is that artful makers and similarly also creative workers have a tendency to resist, often vehemently, labelling unproductive actions as “failures”, since they present to them a *necessary step in the process of creating a valuable outcome.* I as a musician practise similar learning and creation process in music, where learning and improving performance requires practicing with changes in tempo, and varying technically difficult parts and making them even more difficult with the intention of reaching perfection when performing them correctly. It is a way of getting perfectly ready to perform the concert programme excellently, respecting the musical composition and conceiving a piece of music, with each musician performing it in a unique, personal way, while respecting the rhythm, melody, harmony, and notation like the dynamics and tempo set by the composer. Trying and testing different options is a part of artistic creation, improving them by trying

and searching for the better ones and then picking the best one. Mistakes and trying are thus a necessary step on the path to creating something better, and it would therefore be completely inappropriate to call them mistakes in the first place (Thomke and Nimgade 2000; Austin 2006).

The business world would profit by using artistic competences, like skills of critical thinking, sensitivity, and emotional intelligence, in order to help them understand the functioning of knowledge workers when creating something new and valuable, and at the same time meeting the expectations and needs of the market. Artists are intrinsically moved toward experimentation and perfection and that makes them more familiar and calm in radically ambiguous and uncertain situations and in moments where they cross the boundaries and enter the world of the unknown. These are of high importance in the innovation process.

With presenting the principles, methods, specific approach, qualities and logic of Artful Making, we try to bring the artistic creation process closer to the business sphere. These principles can no longer be called art or artistic working, for we suggest only its principles and the technique to be used; so it is more correct to say that we use artistic techniques and principles more than art itself, and these definitely can improve management practice. In recent years, not only was Artful Making presented as a new management theory, but we can also read about others making an effort to move beyond metaphor and learn more directly from the arts. As for Artful Making, its principles have been identified through a systematic review and analysis of various artists' working processes. Bringing together the results of this detailed and complex research and uniting it with an experience resulted with creating new theoretical knowledge. We know that the gap is widening, so Artful Making helps in searching for new approaches, adapted to uncertainty and the creative management and organisational systems that are ever more present these days, and offers concrete solutions to it. It offers us the possibility of learning directly from artists, their logic in dealing with uncertainties, and from their working process, thus enriching profoundly the understanding of innovation process and suite to creative organisations (Barry and Hansen 2008).

Another kind of artistic management and leadership, that is also radical and innovative, is presented by Verganti (2009). He says successful Italian manufacturers developed a

different king of strategy to win market and costumers, or to be more exact – they don't go after winning the market, they prefer creating their own, new market, where they offer their products and sell them by giving them new, emotional, and valuable meaning. That is the way they are inviting new costumers – they offer their new, inspired product, and say that they hope people will like it. This kind of approach is called design-driven innovations, and they are known for that that they create their own, new markets where they present their products as desirable and inspiring, so they win over the customers and make them not just like, but love and buy their products.

To overcome different opinions between managers and creative workers, because of different focus and expectations, and avoiding the conflicts and the gap in nature of work and expectations of development process, described in the section 4.6 (and table 4.3), Austin and Nolan (2007, 29-36) offer guidelines to minimise the conflict and lapse of cooperation:

1. Keep creators around, meaning keep them active in the development process, even when sometimes they may be difficult to manage and create tensions in the process, which can happen with great talented experts, still it is worth to make effort to stay flexible, because their benefit is valuable to the company.
2. Keep the right balance between managers and creative workers, meaning paying attention to ideas and visions creative people have, and if they are very passionate and feel strong about it, at least give these ideas a chance to be explored and examined more, and thus showing support and trust. That keeps creative enthusiasm and passion alive, and sometimes they might be right and in the end, develop a valuable outcome. This doesn't mean that creative people are always right nor that all their ideas are to be supported. The guideline just stands for the right balance and wisdom.
3. Cultivate bridging personalities - that are managers who also have some creative characteristics and better understand their work. In the development process, bridging personality "see the emerging form sooner and can begin to evaluate its potential", where manager wouldn't understand the excitement of creative people. They are extremely valuable and can resolve numerous potential conflicts or disregards for certain ideas, with understanding and supporting the issue.
4. Use peer review to provide more accurate evaluation, since knowledge workers are highly qualified and manager can't review all their expertise. The solution to this is

asking colleagues – peers to review each other's work, which relieve the obligation and responsibility of manager.

5. Structure the innovation process to regularly produce tangible artefacts. That helps manager to have certain control over the process and to control it at regular intervals and provide detailed description of prototypes in numerous iterations. In this way, also the success of the final outcome is less unsecure by checking on artefacts can "evoke a clear view of future possibilities and facilitate a detailed, realistic conversation".
6. Realize that there will always be some conflict, and it is a normal part of the development process where different experts work together, exchange their opinions and ideas, and try to make something new. Still, it is important to keep it constructive, trustworthy and creative, so it results with positive solutions, and avoids negative effects.
7. Avoid overly prescriptive control mechanisms, which would prevent the flexibility and freedom creative workers need to practice creativity and stay motivated to follow through the research.
8. Manage the rate of convergence on closure, so it gives enough time to creative workers to develop the product and bring it to desired and valuable form. At the same time, don't give them too much time, because the final outcome has to be finished by the timeline set in advance (Austin and Nolan 2007).

6 DESIGN MANAGEMENT

Since our research focuses on the design industry, we will present design management as a long standing concept promoted by designers. In this chapter we will explain the definition of design, the fields it covers, its intention, and mission. Design has the role to inspire economic growth, so we would like to inform managers in Slovenia and abroad about design's functioning and the role it can play in organisations. When researching Artful Making, we wanted to understand the similarities between the two concepts and their existing work practices already in use. Design management has a narrower perspective than Artful Making, with focusing more on design, and the role of designers in the innovative processes, and including the design principles in the management. However, it offers additional, interesting and valuable insights for management. Its intention is to highlight the need for change, as well as for new approaches by management, which they otherwise would have been unaware of were it not for the input of the designers.

6.1 The development of design management

We will explore design management with respect to its importance in business, as well as its importance in the development of new products. The theory of design management therefore explores the connections and relationship between design and business. Design management theory originated in the professional practice of designers. It was developed and promoted by designers who came to realise managers and project leaders failed to grasp the role, importance, and purpose of the role of design as part of the innovation and development processes.

The idea for design management started with the intention to provide support, as well as to make managers aware of the services design management can offer a business. As of today, a designer is part of many manager's teams. In the 1960's, a methodology was developed to plan the design process. This took place primarily in the USA and the UK. The term 'design thinking' was coined by Rowe in the title of his book published in 1987.

The design management Institute (DMI) was founded in Boston with the intention of carrying out research into product development (Brown 2009, Sustersic-Dimic 2010). In 1966 the Design Research Society (DRS) was founded in the UK. The DRS continues to play an integral role in promoting design, as well as in the research of design in its many

fields. Its objective is to enable design to be recognized as a creative act common to many disciplines, as well as to understand research and development of new products and services. Another objective is to advance design theory practices for industrial and educational purposes. The DRS is committed to developing design research and acts as the "multi-disciplinary worldwide society for the design research community" (DRS 2016). The DMI is currently the leading representative of the design management movement.

As of today, design management continues to be primarily promoted by designers and is considered a highly skilled discipline. It is becoming more mentioned in the print media at both the national and EU levels. The European Commission has stressed its importance via initiatives carried out in recent years. In March 2014, the EU launched a European Design Innovation Platform (EDIP) in Brussels – a project to proliferate the use of design in Europe. Its aim is to raise awareness of the benefits of design management and to offer support to design-driven innovations in order to stimulate business growth in Europe (EC 2016). In the 1990's many consultancy practices opened. Today there are many throughout the world offering their expertise to businesses with respect to design processes and innovation and to businesses who need a change in their culture (Lockwood 2010, 66).

6.2 The term design and its definition

We mentioned 'design' already before, and now we will expand the term in greater detail as also its connection with the design management. We will also undertake a more in-depth study of this subject and explain the meaning of design.

The term is internationally used and dates from the 1540's. It has its origins in the Latin word *'designare,'* which means to mark out, choose, or appoint. The word design was first used in 1849 in the title of the *Journal of Design*. It was introduced by Henry Cole, the founder of the prestigious London School of Design and the Royal College of Art (Sustersic-Dimic 2010).

According to Boland and Collopy (2004, 265), design is "the giving of form to ideas and the shaping of alternative courses of action in a problem space". Verganti (2009) defines it similarly, as a way of making sense and giving meaning to things.

Design has a very wide scope of interpretation as does the word 'designer.' To many it simply means creating something of aesthetically pleasing nature or simply creating

something new. However, for others it means completely something else. This non-exhaustive group includes: industrial, environmental, and graphic designers; architects; illustrators; textile designers; automobile designers; and furniture designers.

The interpretation of the word ‘design’ may also incorporate the planning of a work process. Design, therefore, extends to product development, production, advertising, marketing and sales. It also incorporates the planning of a business itself, including setting out business objectives, the company’s values, and the vision all its stakeholders can identify with. Therefore, the true meaning of the verb ‘to design’ has a very wide scope. We should emphasize it includes not only those involved directly in design itself, but also those engaged in activities which support designers. While certain tasks undertaken are exclusive to design and designers themselves, other tasks have a more encompassing scope but nevertheless may be considered as part of the design process (Gorb 1990, 69–80).

Research conducted by the London Business School (LBS) design management Unit defined design as “a course of action for the development of an artefact or a system of artefacts.” This definition suggests design encompasses both the aesthetic and the technical aspects of artefact development. It encompasses activities popularly associated with both designers and design engineers. A well-designed business ensures its policies, strategies, tactics, vision, mission statement, and management structures are clearly defined. It has the ability to adapt to market changes and competitive challenges. Taking the manufacturing industry as an example, an artefact can be a product, a part of the business environment itself, or even the information systems used by a business. In this sense, design could be considered “management’s product plans incorporating the planning process for artefacts” (Gorb 1990, 25–80; and 175). Buchanan (2004, 54) argues that many leading designers see design as “deeply humanistic and intellectual activity” that tries to create practical and effective products

Design is closely associated with innovation, creativity, novelty, and problem-solving. Management and innovation literature heavily features these aspects. It stresses their importance with respect to innovation as well as adds value to a product (Neumeier 2009, 71).

Effective design combines a variety of disciplines such as analysis, imagination, practicality, sensibility, honesty, and integrity. Design is the very cornerstone in the

planning processes of a business from what it makes, sells, consumes, and with whom it communicates. It may also mean implementing change and making a creative process more efficient. By default, those involved in the creative process at all levels in effect become designers. The personality traits designers typically include a sense of empathy, intuition, imagination, and a tendency toward idealism. These are imperative qualities in order to support all creative processes, and also to be able to cooperate effectively with colleagues at all levels (Gorb 1990, 71–72; Neumeier 2009, 33).

This is another more methodological interpretation of the term 'design,' as presented by Sir Ralph Halpern (Gorb 1990, 175):

1. A plan or scheme conceived in the mind and intended for subsequent execution.
2. A project.
3. A plan in art.

6.3 The importance and role of design

In books about design, the importance of the design role is emphasized. It plays an important role in the following four management fields: innovation, quality control, the development of line managers, and the contribution of design to corporate strategy. A great design in and of itself adds value to a product, but that alone doesn't guarantee the product will be a commercial success. Beautiful appeal aside, a product has to be practically useful and well marketed in order to achieve a measure of success (Gorb 1990, 44–80). Gorb points out that while design is of crucial importance, it ought to be approached with product planning in mind, therefore company cooperation at all levels is imperative to increase the probability of product success (Gorb 1990, 98).

Neumeier offers insight into the various elements of design, one of which relates to the emotional impact design can have, and that is a part of its mission, to trigger emotions. Naturally it should trigger positive emotions. It has been empirically established how customers tend to buy and choose products as a result of visual and emotional stimuli. Manager's direct and indirect involvement in aspects of design leads to improvements in an organisation which otherwise may not have occurred, and also managers' creative way of leading the organisation toward improvement is designing (Neumeier 2009, 33).

Design can be seen as the engine of change, and impact the rate of change within an organisation. The definition of design management incorporates product planning, and is therefore an important step in the creation process. Gorb suggests the role of design is to modulate, control, and to encourage innovation, plus the creative potential of a business. We can be certain the majority of successful and innovative companies, be it consciously or otherwise, employ at least some of the principles mentioned later in this section. However, certain industrial publications provide evidence that some managers and companies have faced considerable challenges with respect to using design in an effective manner, as well as finding the optimum place for it in development processes (Gorb 1990, 72). Design also plays an important role and requires collaboration and good understanding with management in the process of developing new products, and adds value to products by differentiation of the product on the market (Buchanan 2004, 54), and it is very important to integrate design properly into organisation and especially understanding its role and supporting it in the development process.

The design of products is influenced by a variety of considerations and activities "which add value by virtue of the influence they exert on a product's design and contribute to its overall gross performance" (Gorb 1990, 4). Among the numerous factors which differentiate a product or business from its competition, design should be considered a most important one. It takes its rightful place alongside product quality, price, value for money, and brand which has become an increasingly influential factor in the modern era. People tend to become attached and develop trust in certain brands with which they become familiar. The role of celebrity in the modern world is massively influential. When a celebrity is associated with a brand, it generates loyalty to that brand (Gorb 1990, 178). This gives celebrity-endorsed brands a competitive advantage. A more detailed discussion of branding is outside the scope of this thesis, however the issues we discuss apply to the area of branding as well. Every company's ideal is to create and sustain a brand with a loyal following of its unique products. Creativity, innovation, and design play a major role on the path to achieving this objective (Neumeier 2010, 19).

To demonstrate the important role design plays, let's take a look at the story of the well-known car brands Ferrari and Bugatti. In gender terms, men are particularly enamoured by their sheer beauty. They are considered objects of admiration and desire. They excel from a functional point of view, as well as an aesthetic one. They have set the modern standard for

every company with respect to marrying functionality and design. They transmit a message which transcends mere beauty. This message conveys an almost dream-like sense of power over natural forces. Design also encompasses moral, political, and practical forces at work which emote strongly in consumers. The role of design is becoming increasingly important, so managers must learn how to use it in the most effective manner available to them. They must learn to stay one step ahead of their competitors at all times in terms of both timing and novelty. Mastering time and environment is where real competitive advantage comes from (Gorb 1990, 4–62).

6.4 Design management

Design management was started with the intention of instilling managers with the knowledge about design, bring to them design practise, and to teach designers about management and managerial skills. Unfortunately, still today many companies and managers have problem with incorporating design into strategic thinking and the whole management process, and that was a reply and solution to this issue. So design management was introduced to managers to teach them and help them understand how it works so they can incorporate it properly into management. This is one of the objectives of design management. The other intention it has is also to familiarize designers with management and teach them about it, because there is a stream in design management that encourages designers to take leading positions. Another objective of design management is to develop methods of integrating design into the company's environment, with intention to educate and win the proper place of design in the organisation and train managers to use design effectively. Still today in many development processes when the product is already finished, they bring it to a designer and ask him to design it. It is a very limited way, and ties the hands of a designer, who can't do much, entering the process only in the final step (Gorb 1990, 108–150; Borja de Mozota 2003, 70).

The roots of design management are in design practise. We can read a definition of design management, seeing it as an effort by designers to move up in the organisational hierarchy, into the ranks of managers, using the knowledge they have. By studying design management designers would acquire management skills and then be in a position to lead an organisation's product development projects (IASDR 2007). Managers in today's world have to be experts, and use managerial skills, knowledge, and intelligence, but also

emotional and visual intelligence, artistic skills, and a holistic approach when in the situations like buying and selling intellectual property and the products of intelligence, like ideas, research, know-how, and services. Knowing all this, Kevin Clark goes even further and calls for design professionals to take on leadership roles, because of their specific skills, their complex way of addressing challenges, and solving them (Gorb 1990, 85; Fraser 2010, 47).

The various definitions of design management, written by different experts, promote empowering design and its effectiveness by collaboration and synergy between design and business. They see the role of design management to link and create cooperation of design, innovation, technology, customers, market, competitors, and others involved (DMI 2011).

> *Design management is the effective deployment by line managers of the design resources available to an organisation in the pursuance of its corporate objectives. It is therefore directly concerned with the organisational place of design, with the identification of specific design disciplines which are relevant to the resolution of key management issues, and with the training of managers to use design effectively, and thus supporting and teaching managers in the deployment of design in the development process (Gorb 1990, 2).*

Design management is a type of management with the emphasis on design. It presents a kind of management with multidisciplinary creative potential by creating the added value in the field of development of new products and services. It helps to build products and services recognisable on the market and promotes effective management of financial means (Klinar 2010, 5–6).

It is important that managers are well aware of the functioning of design in the development process, and recognize it as a crucial area of differentiation on the markets by communicating a company's identity. Being aware of the huge importance of design in today's industry, all managers need to be aware of that and pay necessary attention to it. Product managers should be familiar with design, how it works, and the functions inside a development process. Once managers learn to appreciate the value of design, then deploying design resources for effective use will bring visible results (Gorb 1990, 8–150). Creativity and innovation, leading to specifications, are indeed needed in order for a product/service to stay and compete on the global market overflowing with competitive and price-value

products. For a company to be able to follow all the changes and stay successful, it is managers' task to properly manage and make a good use of workers' abilities, creativity, and innovativeness. So, managers should learn and understand more about the design process and its organisation within the industry and the role it plays, in order to be able to separate it from the common preconception of design as a 'creative' activity carried out by designers, like it has nothing to do with them. It could also affect the organisational structure of the company if the interactive nature of the design process is to be managed effectively and properly co-ordinated (Gorb 1990, 25).

Gorb presents, how and on which levels design can concretely contribute to management and the manager. There are more design contributions, the first one being the care and concern for things, and not only on achieving measurable objectives primarily measured by profit. The next one is bringing to life the skill to see, develop, and create visual analogies, to imagine things, and to also reproduce what is seen. This is very important in product planning. Actually, most managers already do use designing skills, all though they are not designers; and even quite often they are not aware that they are designing, which has also been proven by research conducted by the London Business School. So in putting together all this information we come to conclusion that designing skills have become one of the skills managers need, especially in innovative industries (Gorb 1990, 75-83).

Today design management is considered as a process that supports and fosters a company's creativity and innovativeness. Its role is to be a support cooperation between 'design' and 'business,' with the intention of improving design effectiveness" (DMI 2011). It certainly shows people how they can think in a more creative way. The practice of design management is present in various creative disciplines, like fashion, architecture, publicity, product design, and media. The design management methods are also used in business, engineering, and technology.

6.5 Design thinking

Design thinking presents an innovation process and describes specific principles it uses and applies. It explores the role of design and its functioning, and integrating the various disconnected organisational areas (Lockwood 2010). Brown describes design thinking as a "human-centred approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business

success." It is user-centred when dealing with problems (Brown 2016). It is about approaching "management problems as designers approach design problems" (Dunne and Martin 2006, 512).

Design thinking emphasises design principles, like integrative thinking, "observation, collaboration, fast learning, and visualisation of ideas, rapid concept prototyping, and concurrent business analysis", from a management perspective (Lockwood 2010, XI). By paying attention to the customers' opinion and having a deep insight into the market and competitors, and by applying these principles they enhance creativity, innovativeness, and business strategy. Design thinking is focused mostly on the innovation process, and it promises to bring creativity and support to creating concrete innovations and radical improvements. It uses the logic of designer's creative thinking and tries to bring it to the company and to integrate it into development teams and management. It helps create future innovative products, services, and experiences. The term design thinking is in design circles often referred to as applying a designer's sensibility and methods.

Phil Best relates design thinking into a five-step innovation process that includes immersion and understanding, discovery of opportunities, creating a vision, validation with key stakeholders, and finally, integration and activation. Design thinking promotes cooperation of designer with the development team throughout the whole process, already when creating the strategy. Studying the market and customers, their needs, opinions, wishes, and trends, and also imperfections and possible improvements, they want to be most informed and involved with the world, using all that information and knowledge when designing the next product and bringing the solutions. Design thinking practices adaptive, dynamic systems, and also pays attention to emotional response and the effects it creates. Its role is to legitimize and embrace the need for innovation and to create proper environment to meet the requirements needed for knowledge workers to create innovation (Lockwood 2010, XV-XVI).

6.5.1 Design thinking innovation process

Product managers are responsible for managing the development, designing, and production process, and that includes also the role of giving terms and parameters in which a designer can work in this process. Gorb sees the main role of the design manager as being responsible for the design process and effective communication in that process (Gorb 1990, 7–8).

Another important characteristic of designers is that they are action-based, using their skills by trying and testing various options, which in innovative processes does present a better alternative comparing to thinking-based management, where solutions are trying to be figured out by cognitive methods. This method is more open to creativity, one that supports finding new and truly innovative ways which can be created or happen accidentally by trying numerous options. It is the similar logic artists have when creating their works of art, being open to surprises, accidents, thus leading to great innovations. Also design management stands in favour of fast prototyping and testing steps of the creation process, suggesting it as the best way for creating new ideas that can potentially result with really innovative products (Gorb 1990, 76).

Designers are also right about focusing on the process itself, leaving them the freedom to find the ways how to get to the final result on their own, encouraging the use of their creativity, imagination, experimentation, and investigation, letting them know it is ok to take risks, make mistakes, and try truly new things, being aware it is a way to create something valuable. Designers like to compare their attitude towards work and creation process to artists' one, in the sense of having "higher standards, the spirit of trying harder, they are known for logic of looking for better way mentality, they are great thinkers and trained at combining more dimensions." Out of that similarity they also stress the importance of supportive and safe space to express all, to practice all their talents, just as artists do. Just as artists, they also need support, encouragement, managers' trust in their talent, and the ability to create valuable products. This happens all through the process and especially in the delicate moments of testing unplanned and unpredictable things, where they must step out of their comfort zone and security, and also during expressing their ideas, opinions, views, and professional advice during the process (Gorb 1990, 21–2; Neumeier 2009, 166).

Design thinking is being used by innovators in three different stages of innovation. Dorst points out design thinking as the most valuable and useful tool for helping organisation, wanting to involve framing, and investigating the themes through the deeper transformation of the organisation's practices, creating the new frame. The three different levels Dorst (2011) suggests are:

- The ‘inspiration’ stage, as the first, where creative thinking is used with the intention to confront and discuss different ideas in the team. Together, they exchange ideas, opinions, and knowledge about certain options and alternatives. It is a stage where through the discussion and integrative thinking, a decision has to be made about the further directions of the process and further steps to be taken.
- The next stage is called ‘ideation,’ the stage where chosen and good ideas, recognised in the previous stage, are used and tested, and
- The third stage is ‘implementation.’ It is the stage where the chosen and tested idea is created as the final product and is ready to be presented on the market.

The number of the steps and thoroughness of description of design thinking differs in different practices and schools. The Institute of Design in Stanford developed one, based on practical experience. Here are the steps of design thinking as they see it, like the previous ones, but more detailed:

1. First, it is important to understand and get to know the situation well and learn as much as possible about it, and also about everything concerning the situation well, from the inside out.
2. The next step is to observe, then after observing the situation, collect the ideas and try to find out what can be improved, what needs to be done, and how it can be done.
3. Concretize and define point of view, as checking what might be improved, changed, developed, and define how it will be done. This step presents a mediator between all other phases and is in constant connection with them, with the meaning to learn and get new conclusions.
4. Through integrative thinking new and fresh ideas or conceptions are to be formed and created, by using also brainstorming: It is important the team is open to various ideas and that participants are not afraid to say all ideas out loud, or being afraid of saying something wrong.
5. The next step is prototyping, afterwards the prototypes are tested and again discussed to see, what else can be improved, what works, what should be changed, and what new can be integrated.

6. Testing, with the intention to get feedback and learn, what works, and then using new insights go back to step three and make further improvements (D. School 2013).

Design thinking pays great attention to opinions and what's happening on the market, wishes, critics, and expectations of the customers and potential buyers. They collect this information and use it when forming the product, of course together with the one from the development team, from designers and managers. They set high standards and are not satisfied with alternatives to an existing problem or product, but insist on improving it and creating new and better ones (Gorb 1990, 23; Lockwood 2010, XI-XV; Brown 2008, 84–92).

Actually, in different books we can read about steps of innovation process, more or less similar to each other, with light variations. We see that often they say the steps don't necessarily have to follow by the given order, it is more important to use creativity, produce and collect various ideas, and create different options of further development of the product. But usually the innovative steps are as followed:

- ✓ Preparation as a strategic phase, where research of all kinds of interesting and curious questions, takes place.
- ✓ Incubation as a development phase, where new ideas are created, and various ideas expressed, and where new and unusual connections can be formed.
- ✓ Insight as a phase, where individual pieces are put into convenient places.
- ✓ Evaluation phase, where various ideas are evaluated, and then it is decided what insight has the greatest value and is going to be used in further steps and continued.
- ✓ And the final, production phase, where ideas and insights are put into new forms (Csikszentmihalyi 1996).

Neumeier (2013, 40-44) sees the role of emotions and intuition, developed throughout history, to turn mistakes into "learning opportunities", since every mistake is aligned with the emotional response in our brains and triggers certain emotions. The innovation process, going through learning process by making prototypes and synthetizing the new information, is the same process, which is, consequently, also aligned to emotions just as we described before. So experiences recognised as mistakes cause emotional responses and reactions, which are a kind of a new knowledge for us. One's emotions are involved; there is direct

connection to intuition. Again, the complex data, problems, and issues are easier solved if they are aligned with an emotional brain. The emotional brain, or intuition, is formed from what was learned in the past, from previous experiences, knowledge, and the process of trusting something to be right and to present valuable information.

6.5.2 Design thinking process and its steps, tools, and principles

Designers are artists indeed, and the nature of their work demands creative thinking, including here many qualities needing to be, and stay successful in a globally changing and competitive market. So they promote designers' qualities, and stress it as a valuable component in the innovative organisation, in which "intuition counts heavily, experimentation happens fast, failures along the way are embraced as learning, business strategy is integrated, and more relevant solutions are produced." These are indeed principles needed to give knowledge workers the full support in their creative work, and the conditions needed to create valuable novelties (Lockwood 2010, IX).

Design thinking and designers have different tools for promoting the development of innovative and breakthrough ideas. They are all important and foster creative thinking and faster developing of breakthrough ideas about a new product. Being aware of the importance of different factors influencing and forming the product and its success on the market, as much as also the importance of the competence that could create better products then they do, business design suggests the use of the following tools, the designers usually use (Fraser 2010, 39–40).

6.6 Strategic business design and business analysis

Strategic business design and business analysis is about creatively forming the strategies, plans, and capabilities required, by checking out what is needed to make use of the idea and create the final product. Analysis also looks for options, trying to find a way to make a new idea turn into reality. Design thinking makes use of a detailed concurrent business analysis and follows all the novelties that come to the market, and use this information in their own strategies and of course in creating and developing new products. To envision new possibilities, development teams need tools to unleash their collective imagination and explore new concepts in concrete form. They suggest, that the way to get to bigger ideas faster, is by being inspired by a deeper understanding of human needs, so the first step in

the strategic planning process should be exploring the broadest set of solutions to meet those needs. The team should explore beyond the current enterprise model and competencies, considering the broadest range of solutions – from people and products to spaces and services (Fraser 2010, 39). Business analysis and the situation on the market present core elements in future strategy, and planning for change and innovativeness is a priority on today's market, keeping step with competition and even more – being a step ahead of them, and being creative. Paying attention and responding to all these changes helps a company avoid Kodak's destiny, that wasn't willing to change despite fast changes in technology (Neumeier 2009, 21).

6.6.1 Customer's opinion and novelties on the market

Design thinking is a customer-centred design process, so their plan products often begins and ends with customers. They groom the connection with customers and encourage deep user understanding. For design thinking, it is very important to have a deep insight into customers' minds, with a deep understanding of them, their values, emotions, and desires, and consequently a constant connection with them. We could say it is user-centred and focused. They are aware of the importance to get very familiar and understand the customer and his wishes, needs, and expectations. Companies must also know their values and emotions, seeing them as a great advantage and using this knowledge when setting the specifications of the product guarantees success. Many times also good psychology can assume what the customer will like, so they suggest also putting one in the team (Fraser 2010, 39–40).

Gorb also stresses the importance of getting to know the customer really well, and then use this knowledge in specification of the final product. He believes effective design flows from knowing who you are aiming at and what it is they want, so he calls for "psychological segmentation." This means knowing the psychological characteristics of customers, and their whole nature. When knowing their emotions, needs, and wishes, he sees it is a way create a product they will be truly satisfied with. He makes a point when preferring to learn from the customers and incorporating these discoveries into forming and creating the product. He values learning from the customers and on the market much more, over learning in the laboratory (Gorb 1990, 17–23). Being aware it is the customer who decides whether to buy your product or not, judging according the visual display of the product, its

functionality and value for money, so we shouldn't underestimate their expectations and view. So the plan and the process includes the analyses of the customer research on our own and competitive products, because they say they must be "obsessive about customers," and at the same time also more than keenly aware about the plans of the competitors. Still later on he adds another point of view, being aware when creating something new and when selling innovation, the customers may be less informed and miss the value of the product. Here designer could need reconciling his/her personal (designer) judgements with customers, and being aware also that new product "must be based not on what the customer needs, but on what we think he will need in the future" (Gorb 1990, 98–100).

6.6.2 Collaboration

As another useful principle, design thinking promotes collaboration and team work, where independent-minded professionals work together, for what they suggest establishment of certain rules of engagement like "a sharp delineation of roles, an unobstructed view of the goal, and a strong commitment to quality." They are sure this approach would open new possibilities and opportunities in organisations and also teach new skills and styles of management in the time of change and fast innovations. With the clear vision and highly motivated team-members, and all the conditions to practice creativity met, would certainly create a successful team (Neumeier 2009, 110).

This important principle is practiced on various levels of collaboration; among the team, promoting interdisciplinary teams, as also collaboration with the customers and insight into their desires and expectations. They know that many people working together cumulate more knowledge, create more ideas, and find more new ways and solutions than one single person working on developing something new. True success is when great experts unite their knowledge and expertise in the search for a common goal, and for them nothing is impossible (Neumeier 2009, 164).

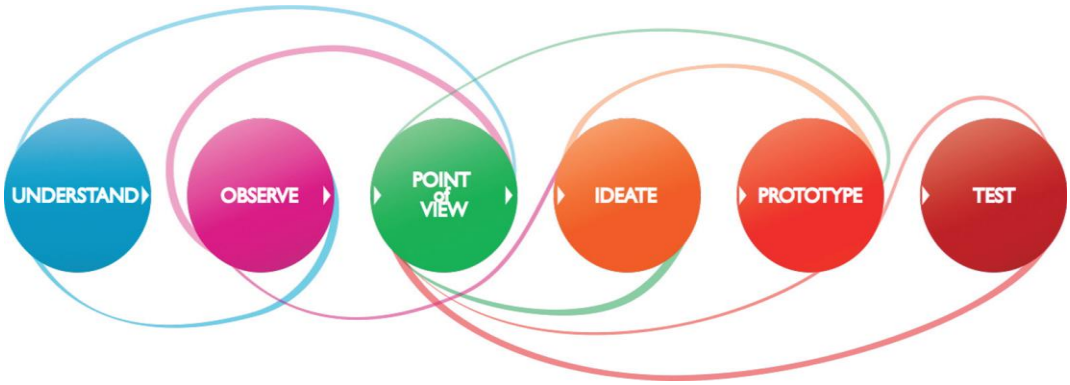
6.6.3 Visualization in creative thinking

After making a detailed research of the needs, wishes, and likes of a customer and taking into account the situation on the market, you have to create a concept visualization, in the form of using all the information and then trying to imagine and visualize the future and new product or service, which could be created. It presents in-depth exploration of

possibilities regarding the needs discovered in users. The idea is to look beyond what is to find out what could be, and try to envision that idea in the future. It is a way for finding new possibilities. It's about imagining and envisioning new possibilities. Being a practical designer, for them it is a proven tool, in the form of rapid prototyping and iteration. They see it as an effective, risk-free, and efficient thinking tool for accelerating strategic planning process. The literature says there are numerous cases that have proven the thinking tools to work effectively and are of a support to the strategic planning process (Fraser 2010, 39–40).

Since visualization is found important in creative thinking, we present the visual order and interconnection of it with other steps of design process, presented in the figure below.

Figure 6.1: The visual order and interconnection of it with other steps of design process



Source: Stanford Design Institute - Carroll et al. (2010, 7).

Designers use empathy to understand the customers' need and emotions, to use this information in the process. Observing and defining the customers' needs, and they develop insights and concrete suggestions about the changes and development of the product. Brainstorming happens from one's point of view and from creating a lot of ideas and suggestions. This is prototyping in the forms of a sketch, model, a box, and conveying ideas. Testing gives feedback and opportunity to learn and improve the prototype and then put it back to the process. So visualization helps to visualise what is in the process of the creation.

6.6.4 Differentiation

Design also has a significant role in the field, whose role is making a product different from all the others from competitors, and it is differentiation. For most of the customers, when choosing among many products from different companies, which product to choose and

buy, differentiation and specifics of appeal play a huge role. When choosing among products of more or less the same quality, the customer decides regarding the differentiation and appeal, meaning they choose the product which they find more likeable, more appealing, and certainly as most of the women would explain it – more beautiful. Design simply builds a connection to a customer and can make him like the product over all the others. From another aspect – it can also have another function, like solving problems, or causing customers to identify with it in a certain, specific way. That is another reason more and more globally successful companies cooperate not only with artists, designers, and various different profiles, but they also cooperate with psychologists, who know best how much these things affect our decisions on subconscious levels. So differentiation is recognized as a beneficiary and an influencing strategy that can greatly support the success of new product on the market, and make an advantage compared to the products of competitors (Neumeier 2010, 17; Gorb 1990, 4–6).

Also Neumeier (2009, 6) talks about the importance of differentiation, making a point that it is not enough to be better than others, you also have to be different to be recognized on the market and to gain attention of the customer. So differentiation can be the most powerful strategy in business. And design is the most important factor regarding differentiation.

6.6.5 Trust, common vision and goal

In this perception, business design supports important design factors, like: fostering multidisciplinary collaboration, preferring to look together for new options rather than just looking for improvements, in the moments and situations of limitations and constraints being able to find creative solutions and trying something new and different. They promote numerous prototyping early and then bringing the prototype back to further improvements. Designers, working together with manufacturing, with marketing, with finance and many others, creating a trustful environment, and being in the constant connection with the market and following the novelties and needs of customers, open up new possibilities through applying methods for systems thinking and creative processes. It is in cooperation of all these experts that a greater number of new ideas can be born, which is why it is important a product manager or a leader of a group knows how to create trust and make individuals share and support the realisation of the common vision (Gorb 1990, 23; Fraser 2010, 37).

6.6.6 Prototypes

Proven by experiences, designers promote rapid prototyping and integration as an effective, risk-free, and efficient thinking tool for accelerating strategic planning process. It's about imagining and envisioning new possibilities. In fast prototyping, they use materials that have easy to change forms, which allows them to simulate and test different forms. It is kind of brainstorming and trying out various forms in the early phase of development process. Fast prototypes are useful for getting feedback and create many new questions. Here, each member of the team gives his opinion, view, shares critics about problems, and gives suggestions. Each one is equally responsible for the creation of prototype (Brown 2009; Fraser 2010, 39–40).

Accepting the first idea that seems to be good is not a good solution in this process. Rather, it is highly important to generate many ideas, and improve them and develop the thoughts, at certain moments even letting the process lose control. This opens the possibilities for unplanned things to happen. It is a harder way to go, but it stimulates creativity and gives opportunity to new insights and ideas, and encourages finding unexpected solutions for the requirements about the product which could be original and extremely valuable. It is also a tool to create novelties faster. It is about fast learning, with a help of visualisation of ideas through models, stories, sketches, then bringing them into reality through the concept of rapid prototyping, and bringing it back to the development team. Tom Peters and Nancy Austin, who wrote *A Passion for Excellence*, know well the importance of quick testing, and after collecting feedback, rearranging, improving, and then doing another testing as soon as possible leads to the best results (Gorb 1990, 22–23; Neumeier 2009, 53–55).

In the early stages of development of a new product, service or business model development it is important to apply artful principles and methods. These processes urgently need managers who understand and have the know-how of artful leadership in those development stages, which presents the most demanding and complex part of the innovation process management and decision making for managers, called also the "Fuzzy front end" entrance into project development process. Managers acquainted with artful leadership, competent designers, artists, and other people with expertise in creative fields play in the early stage of project development process, which presents the hardest part of the process management and decision making for the management, a crucial role. They contribute with the skills of abstract thinking, artful leadership and comfort (in contrast to the role of management). This

delicate process of Fuzzy[8] front end phase is “an insight-driven, prototype-powered and foresight-inspired search for new ideas” and further development of innovative outcomes (Mootee 2011).

6.6.7 Creating through the process – try it. Fix it.

They say that quick prototyping and then testing it in real word with real people is the fastest way to wanted results, pointing it out with the words: “Try it. Fix it. Try it.” In this step of fast prototyping, in looking for an innovation the idea is to step out of a box and not be afraid to make mistakes. On the contrary, they know that through numerous iterations and improvements they can create something new. So, they are not seen as something that is a normal part of the process. In the past it was often exactly from accidents and mistakes that great innovations were born, and so mistakes are seen as a potential to create something new. In this process it is very important to have a supportive environment, where innovators dare to take risks and are fully creative. The idea is to generate many ideas and so open new possibilities to produce something truly innovative (Gorb 1990, 22–23; Neumeier 2009, 53–55). Iteration keeps the problem open to improving and by improving it gives chance to various approaches. Adding refinements and improving a part of the problem, can lead to “crystallize a solution”, going through the process again and fixing it (Boland and Collopy 2004, 272).

6.6.8 Mistakes are part of the learning process

As an example of the designing process, the author presents numerous cases and explains that when looking for an innovation the idea is to step out of the box and not to be afraid to make mistakes. But they know that mistakes and failures are sort of a potential for creating something new. Fear of failure, aversion to unpredictability, and preoccupation with status are seen as the prime assassins of innovation, by Neumeier. Hoping and wishing for certainty and security don’t help them, but rather they prevent innovation. If wishing to create something really new, they have to also allow these new things to happen and take

[8] **Fuzzy logic** is a form of many-valued logic in which the truth values of variables may be any real number between 0 and 1, considered to be "fuzzy". By contrast, in Boolean logic, the truth values of variables may only be 0 or 1, often called "crisp" values.

place, so error is seen as one of the necessary components of creative process (Neumeier 2009, 40–55).

In the designing mode designers never know what the outcome will be, but they find the way through the process while working. Systems thinker Donald Schon calls this kind of creative process where they create and form the final product all through the process, practitioner's "artistry," for it is very similar to artistic creativity (Neumeier 2009, 52).

Brown is absolutely right when stressing the importance of organisation to embrace "an attitude of experimentation," to be open to uncertainty, sort of chaos at the moments, risk, stepping into the unknown as a way and a precondition to create something new (Brown 2009).

6.6.9 Measurement of a quality product

Design thinking talks also about the quality of the product, which is through the process about to be designed into the product. In the development process, it has an important role in opening new possibilities, coordinating, setting directions, and promoting a product range. We can read that some managers still don't include designers into the whole process, and thus limit their function. There are different ways how the quality can be measured, and experience has shown that the most optimal way to measure it and give feedback for further improvements in the sense of prototyping and creating new options and possibilities is through the design process. Gorb presents three ways of quality measurement as mostly used, and considered as the most appropriate ones in the manufacturing industry. They are the following:

1. Measurement by inspection at the end of the process. This compares the product to the specification.
2. Another one is measurement by an attitude among the people concerned in manufacture who place quality at the forefront of their thinking during the manufacturing process, and are constantly referring to specification. This kind of measurements are quality circles and related organisation systems.
3. The third one is by ensuring that the specification itself is developed in such a way that it becomes very difficult not to meet that specification. Here, by determining the

specification, the quality is controlled just before manufacturing (Gorb 1990, 70–74).

6.6.10 Specification

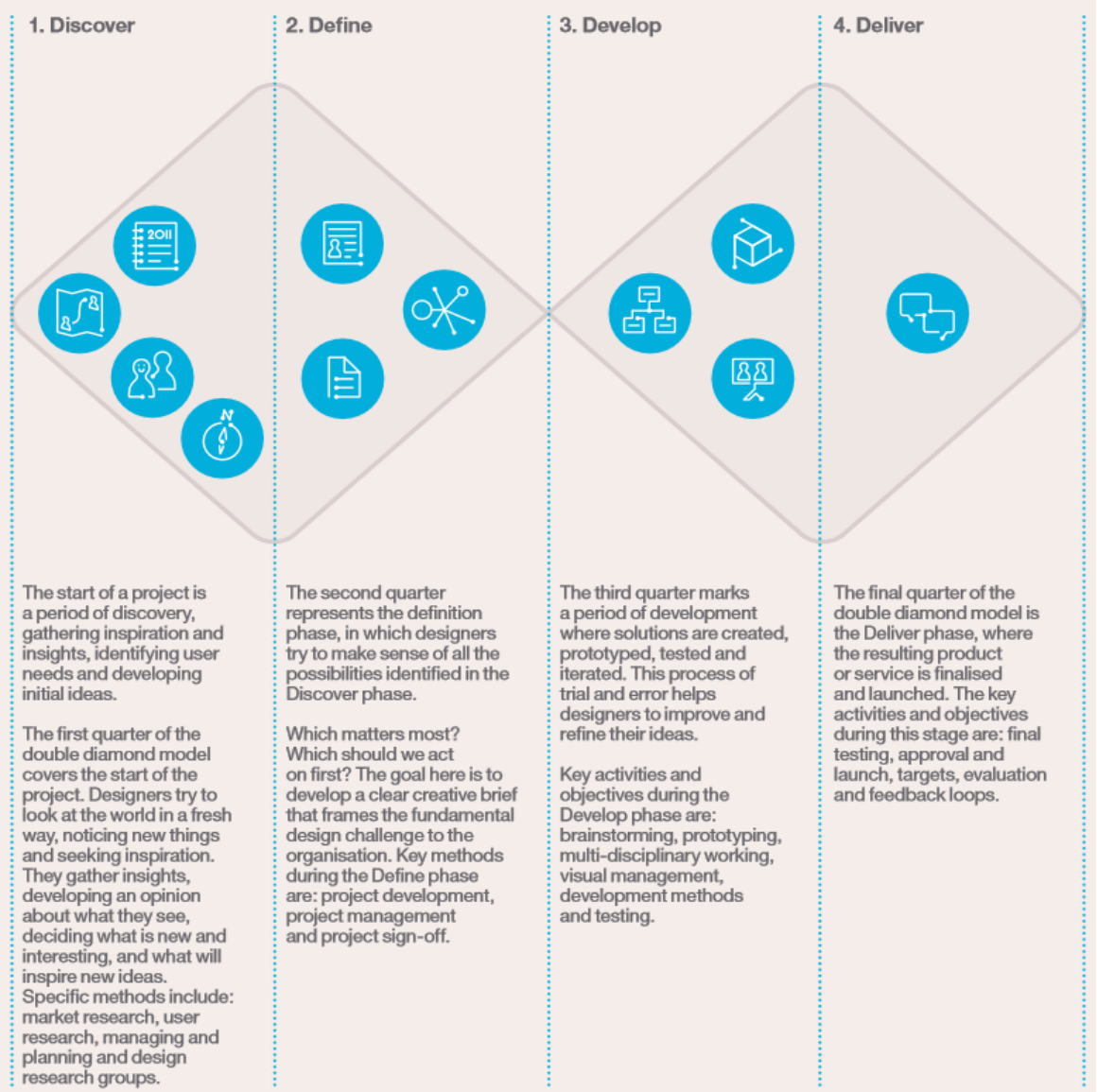
The last stage of the designing process is specification. Here, design is a support to the development process of a new product, helping it to solve the issues lacking the product to meet the certain specifications in order to be ready for its manufacture. The determination of specification is considered as the heart of all design activity, because it needs to meet agreement with needs and limitations, set by different sectors. Often, it is limited by the financial sector, which calls for cutting the extra options, but still leaves open doors for creative solutions. Also, marketing has its own demands and expectations regarding specifics and characteristics of the product. Competitors with their innovations are also setting new, higher standards on the market. In this process all aspects need to be adjusted and harmonized, taking into account all aspects and being aware of the role of every single factor in the process. This means managing it well and creating a realistic, ambitious plan. It is a difficult and complex task demanding the resolution of conflicts arising from all the management disciplines, like from marketing, which may require product characteristics which are difficult to make, or from finance which often puts limits (Gorb 1990, 74–75).

6.6.10.1 Double diamond method

We present the Double diamond design process, developed by the British Design Council researchers in 2005, as an example of wide spread and commonly used method, designers use when developing products or services. Design describes, among other, also the process of turning and developing abstract ideas and thoughts into concrete reality. The main purpose of the double diamond is to show that there are several divergent and convergent phases in each design process.

This double diamond process divides the process into two parts. Part one is focused on "doing the right thing" (exploring new potential user needs, high level of innovation and differentiation potential) and part two on "doing the thing right" (potential for technologic innovation, focus on prototyping, business model innovation and marketing). Its steps and stages are well described in the diagram below:

Figure 6.2: The four steps of double diamond process



Source: Design council UK (2015, 7).

The double diamond diagram (figure 6.2) aims to graphically show the four stages of the design process. The first stage represents *discover*, which starts with the initial idea and is broadened through market research, user research and similar activities. It continues by the *define* stage, where focus is regained to clearly define the project. The third stage of the design process - *develop*, again broadens the process, which is finally refocused through the last stage – *deliver* (Design council UK 2015). New profiles of designers (design innovators, design researchers, design leaders) are emerging, to profoundly contribute especially to the first part is process.

6.7 Latest critics on design management

Design management was created and developed by designers with the mission to train designers, partners, and managers of the companies that deal with design, and where design has a significant role. It has a two-way task, since they want to familiarize designers with management in order to prepare them to take managerial roles, and on the other hand to familiarize managers with design and teach those to use design effectively. Certain managers already use design skills in their work, just not being completely aware of it and not being really familiar with its principles (Gorb 1990, 75).

While there are more corporate design managers today than ever, there is also increased confusion about what it is that a design manager does or what design management is (Best 2006). A design manager should work in a more effective manner, than a manager without a design background, as he or she would understand the creative processes and the needs of creative talent. Sometimes, however, the role of the design manager has been closer to one of product development manager who has the roots in the field of engineering. There is a potential for design managers to instill changes in the organisation, however, more often than not, design managers are trained to control, contain, and sustain design initiatives, which closes the door to invention and creativity. So design management is by focusing on managing the design process, actually limiting the role of design. Design management actually prevents design thinking and design methods to infiltrate the organisation, and contrary from its intentions keeps design away from the organisational core. In a way it looks like design management meant to put management into design, but now organisations are seeking alternatives to their existing management models, so the trend is to put "design" into management. Its core strength is to integrate the disconnected organisational areas, but at the same time just by applying it there is danger design thinking could be limiting it because of management frames and thus limit the design itself (IASDR 2007).

The effectiveness design management has had in recent years, is undermined also by critiques about its success and about the success of design thinking, coming from the companies who welcomed it in practise. Bruce Nussbaum, former major advocate of design thinking at *Business Week*, thinks the mission of design thinking is completed – it has presented to business organisations its specific, new process, which should bring forth promising results and creativity. Nussbaum (2011) thinks that has resulted in many benefits,

and designers managed to secure a better position and greater impact for themselves in companies. But he states that in addition to many successes, unfortunately there have been also many failures in applying the process of design thinking. He thinks the problem was that design thinking consultancies hoped applying the design thinking process will consequently also affect and change cultural and organisational change and thus stimulate creativity, but it didn't always turn out that way. What happened is that in implementing design thinking process into companies, they tried to adapt it to the company and therefore removed or at least weren't comfortable with its individual principles like uncertainty, emotions, failure, and making mistakes. Consequently, also the success rate was unfortunately not promising. At the same time Nussbaum expresses the great benefits of design thinking and amazing improvement it has brought to design, giving it greater position in social engagement. Still, he thinks it is time to move on to further improve and expand the social engagement of designers and foster creativity, by introducing a new concept – creative intelligence, also called CQ, which is in short a concept of learning by doing. The question still stays whether design thinking can be learned in theory or are there better ways of learning it, for example, in practise. Martin (2007), on the other hand sees a problem of design thinking in emphasising integrative thinking without being explicit about methods, which can cause an issue when applying it concretely in the company.

Helen Walters is another critic, pointing at the lack of common consensus on a clear definition of design thinking, a clear definition, and assignment of responsibilities and executions of specific tasks and steps in the process, and the clear definition of who and implements specific tasks in scale. What has happened in practice is that consequently, companies were carrying it out by their own logic, adapting it to their own company; some with success and others not so successful at doing it. Her critiques are about confusing design thinking with design in the company, with importance of genuine cross disciplinary activity, with collaboration across departments. Turns out design thinking is, especially in large companies, not easy to be applied properly and presents a great challenge. To design organisational structure in the way experts from different fields can effectively tackle a problem is a complex work and needs many massive changes and measures to be taken carefully. In practice there were companies who entered the design thinking program, but designers weren't prepared and skilled enough for their positions. So Walters stresses that the key element when designers take more strategic positions in the company, is to be well

versed in the language of business, to have a clear understanding of what they are saying, doing, and asking, and also to have a clear and detailed measurements and metrics, reasonable and appropriate for business, thus proving they understand the business and their tasks. By all this of course also taking in the account that they can't fully guarantee that the results will be profitable. She is also critical about the principle of approaching the customer research, giving example of Apple as a company, where design plays a key and central role. Steve Jobs' logic was, that it isn't the customers' job to know what they want, and this approach gave him the confidence to enter into the unknown, try, follow intuition, and experiment, and by performing in this way he also encouraged the others to be creative at their work. The results of his logic were great as we all know. So design thinking itself doesn't guarantee success, and each company needs to be flexible in its thinking, rethinking its processes and finding out on its own, how it can best work for them (Gorb 1990, 8; Walters 2011).

Another gap in design thinking is a lack of concrete knowledge and application of design thinking to your own – personal needs, because case studies and practises in business schools don't teach specific abductive searching for a specific solution to a concrete challenge – and creating a new way yourself using the design process, but offer cases to learn from (Neumeier 2009, 41).

7 EMPIRICAL ANALYSES AND AN INTERPRETATION OF THE RESULTS OF QUANTITATIVE RESEARCH - ARTFUL MAKING AS AN INNOVATIVE COMPANY'S APPROACH TO MANAGEMENT

In the previous chapters, we presented postmodern organisational theory, with a focus on the functioning of the postmodern innovative organisation and its management. Furthermore, we narrowed our focus to the conditions that need to be fulfilled so the organisation can be innovative and introduce novel products/services/processes on the market on a regular basis. We also studied the theory of innovation processes, their characteristics, and the optimal organisational culture needed so knowledge workers can express their creativity and be productive. Still, today many companies and managers leading creative processes struggle with creative workers and creative process management, which they often call "art". The reason they use this term is because they compare it to artistry and inspiration, indicating that they see it as a kind of work where they have the feeling they are not in complete control of the process, but rather a process that requires accepting insecurities and fear in certain moments. All this makes them react in different ways – whether they don't understand the unfolding nature of creativity and unconsciously and unwillingly stanch it, or they act upon the knowledge they have about managing and so when the creative process gets to a specific momentum they take the wrong steps and stop it from reaching the expected outcome. In the recent past scholars have looked for creativity and often turned to artists for additional explanation and knowledge. Their comfort and approach to creativity has intrigued scholars, since somehow all successful artists just seem to have know-how about this creative process. Austin and Devin (2003) have chosen to make a complex and in-depth study of artistic creativity with the intention of gaining understanding and explanations of its functioning with the benefits for leadership of creative workers in innovative processes.

We have the honour of joining Robert D. Austin, a world-known pioneer and leading author in the field of analysis of the principles of Artful Making, along with Lee Devin in the phase of their endeavour of further evaluating Artful Making. This is a young and promising descriptive theory that results in a management style that produces reliable, successful innovation. They are conducting empirical research in various business areas where Artful Making activities should be present, according to the theory. Artful Making theory suggests

that it is applicable in areas where the costs of iterations are cheap, which includes all domains where technology is commonly used to virtualise the production process. Research in various areas of business has already been conducted, but there still hasn't been any research in the design industry, which also commonly uses technology and is very creative. So, with our empirical research we plan to study the presence of managerial principles and methods similar to the principles and methods used by artists that are being recognised as the principles and methods of Artful Making. This research is meant to contribute to further refining the valuable theory of Artful Making as artful innovation. We conducted the study (which was a part of a larger study of the design industry in Slovenia) in the design field, and more expansively in the creative industries, with the aim to further evaluate Artful Making.

7.1 Methodology

We participated in the first national survey about the design industry, which was a part of a first large national research study of the design industry in the history of Slovenia. It was conducted by the *Inštitut za ekonomska raziskovanja* (Institute for Economic Research) in Ljubljana. That has given us an opportunity to conduct broad research and have an overview and information about the situation, popular practices, functionality, trends, CEOs' views on management styles used, and the degree of innovativeness as a core part of companies' vision across Slovenia.

In studying and analysing the design industry as part of the larger sample, the creative industries, and also for the needs of this dissertation, we faced some challenges even in the beginning. There were also some methodological issues and challenges we had to consider while performing and interpreting the results of the survey. The design industry in Slovenia is not clearly defined and classified because of its complexity and wide scope, so we struggled to set clear boundaries and searched for its frames. We consulted with experts on the national level in Slovenia's Agencija Republike Slovenije za javnopravne evidence in storitve - AJPES (Agency of the Republic of Slovenia for Public Legal Records and Related Services), which led us to a directive by the European Union, in which the design industry makes up a part of creative industries as the industries that are in some part of their creation creative, and need creative output for their existence. They broadened our scope and put the

frame of our research on creative industries, as classified by the Commission of European Communities and the United Nations (European Commission 2009; UNCTAD 2010).

The aforementioned study was conducted in two large parts, and divided into two steps. The first step started with 12 interviews that were conducted with providers of design services who work for, and cooperate with design industries in Slovenia. They were chosen by the criteria of their success and international recognisability, or by being recommended by renowned Slovenian designers. The interviews were also conducted with other participants in the design field, such as members of the Faculty of Design and the Academy of Fine Arts and Design in Ljubljana. The interviews with designers provided valuable information about the present condition of the relationship and attitude of companies towards innovativeness, as well as the designers cooperating with companies in Slovenia. Based on this information gained from the designers, the second step – the survey *Ponudba oblikovalskih storitev* – (The Offer of Design Services) was constructed to further investigate the subject and functionality of the design industry. A survey was sent to 160 designers, chosen from the list of "Društvo oblikovalcev Slovenije" – "The Society of Slovenian Designers." The response rate to this survey was 31%, where 56 of the surveys were returned (Murovec et al. 2012, 37–8).

After this survey, the second part of the large research study was conducted. It started with interviews of managers from companies that use and buy design services. The interviews were conducted with six managers of the following Slovenian companies: Javor Pohištvo, Alples, Adria-mobil, Lpkf, Kovinoplastika Lož, and Alpina. Finally in the last step, based on the information and deeper insight gained from the interviews and survey of designers, and from the interviews of managers from Slovenian companies, and also using case studies and an overview of specialised and scientific literature, our survey "Razumevanje dizajna med njegovimi uporabniki in neuporabniki v slovenskih podjetjih" ("The Understanding of Design of its Users and Non-users in Slovenian Companies") was formed. At the end of August 2011, the survey was sent to 4,000 directors of Slovenian companies which use or potentially could use design, and have more than four employees. The survey also included companies from the processing and service industries. The companies that the survey was sent to were chosen randomly. After 10 days, the email was sent to all participants offering an option and possibility of an online survey, with the intention of improving the rate of respondents. Altogether, there were 536 questionnaires returned, among them 407 by mail

and 129 by email. Thirty-three of them were excluded from any further procedure of the survey because more than 20 percent of the data was missing in the questionnaire. This means that the final number of usable questionnaires was 503 (Murovec et al. 2012, 37–9).

The survey targeted companies using design services, and also the companies that could potentially use design services, and was sent to their directors with a request to participate in the survey. The survey has 32 major questions or statements altogether, where 14 of them have sub-questions or statements (all together 108 in total) which participants had to answer or evaluate. The survey questions focus on different aspects of the functioning of the company. This survey[9] contains, among others, our battery of questions – part number 16. It is formed by the battery of our 10 questions focusing on the subject of innovativeness and specific principles and methods of artistic innovation (Artful Making) used in the development phase of new products/services/processes in the Slovenian design industry, and which we use for the in-depth study of the present use of principles and processes of Artful Making in Slovenian design companies (Murovec et al. 2012, 37–8).

The survey and its questions were formed and designed according to the D. A. Dillman (2007) method of designing questions – The Total Design Method (TDM). Dillman's method guarantees a high rate of return rates (high level of response) and obtains high-quality information and feedback from the surveys (Murovec et al. 2012, 38–9).

That means our sample frame was 4,000, the actualised sample was 536, and our final sample was 503. The sample of our study consisted of Slovenian companies which have more than four employees and already use design, or that represent potential users. Our survey was sent to 4,000 companies, among them there were 3,542 micro (with 4 and more employees) and small companies, 418 medium companies, and 40 large companies. In general, we were pleased to get a good response rate and representative sample, one that includes various companies from the creative and cultural industries. The size distribution of our final sample (companies that participated in the survey) is roughly consistent with the fact that creative firms tend to be small, therefore among our sample we have 411 micro and small companies (with 4 - 49 employees), 71 medium-sized companies (50-249

[9] The example of the survey "Razumevanje dizajna med njegovimi uporabniki in neuporabniki v slovenskih podjetjih" – "Understanding of Design of its Users and Non-users in Slovenian Companies" can be found in Appendix A.

employees), and 16 large companies represented (with more than 250 employees), while we don't have the information about the size of 5 companies. The size distribution for the companies we sent invitation to the survey (including those that did not respond) is roughly similar to the size distribution in the participating companies. We point to the fact that survey was sent only to micro companies with 4 and more employees, and not to micro companies with less than 4 employees. The selected companies were chosen according to the Slovenian classification for the creative and cultural industries, which has no clear frame for the design industry. The size distribution of our sample, with more than 80% being micro and small companies, is roughly consistent with the fact that creative firms tend to be small. This can be seen from reports of the Design Council in the UK (77% of them are small), as also from the report of the Danish Design Centre in Copenhagen, which reported that almost 99% of design consultancies were small and had fewer than 10 employees (Austin et al. 2007, 2).[10] This is also roughly consistent with the data from AJPES, which shows that in Slovenia in 2008 (the year the survey was conducted), there were 99,4% micro and small companies (with fewer than 10 employees, including also companies with less than 4 employees), 0.2% of medium companies, and 0,3% large companies (Murovec et al. 2012, 125).

Limitations

Our sample was very large, and due to specific questions regarding Artful Making principles in the survey, individual directors may not be well acquainted with the delicate and complex attitudes and principles their managers apply in the development processes. This is also the case with the possibility of combining both sequential and iterative processes. This could mean that a certain percentage of directors' estimations regarding the working process and management style of their managers, and use of specific principles of Artful Making might face a certain level of subjectivity about the style managers use in innovation processes. After careful scrutiny and cross-referencing with secondary sources, we have been able to detect no obvious sources of systematic bias in our sample.

[10] The casual explanations of why creative firms tend to be small are: 1) that they prioritise choosing jobs they want to work on over financial growth, and 2) that there seems to be something inherent in the creative process that works best with small groups. It is beyond the scope of my thesis to purse these issues.

We were limited also by the fact that in this study we were a part of a larger group, so we had to adapt and couldn't get all the questions, as also all the answers we wanted, still the strength of this was, we had a large sample and participation in all-national survey. Further

For the evaluation and testing of our hypotheses we used mixed methodologies. To get the best and most realistic view of the present situation in the Slovenian design industry for the purposes of verification of our hypotheses, we used, in addition to our battery of questions, also other relevant questions and answers from the larger research study – from other relevant questions in the survey with directors, from the survey of designers mentioned above, and also answers from the interviews conducted with designers and managers of the Slovenian companies, that were all part of the same research study of design industry in Slovenia (Murovec et al. 2012). These interviews and surveys provided us with precious information about Slovenian design companies. We also gained information from the project managers who lead the creative and innovative processes, as well as from professional designers who closely cooperate with directors and managers, and have their own experience about the companies' development processes. Comparing the statements of designers who cooperate with managers and directors with the ones of managers and directors exposed certain topics with some opposing opinions, when comparing the results of the surveys and interviews. That provided us with the best possible overview of the situation and attitude of directors in the Slovenian design industry towards innovativeness in general, the principles used to encourage innovativeness in the working processes, which resulted in more realistic final results. We also use the results from other international studies and data, study-relevant scientific literature, data and information gained from AJPES, and the working papers and documents of the EU.

In our empirical research we want to analyse managing and functioning of the creative process in the Slovenian design industry. Our intention is to verify how the innovation processes are led, what specific characteristics they have, as well as the existing attitudes of managers towards artistic principles and creativity. The results from our battery of questions provide us a wide overview, and at the same time the issues and limitations they struggle with. We assume that the incorporation and importance of innovativeness in some Slovenian companies lead to hurdles when dealing with creative workers, creativity, and its management, and also comes from the fact that a certain percentage of our companies face financial difficulties and are not successful and competitive any more. Our intention is to

gain a deeper insight into the success of Slovenian companies, and of the present use and application of artistic innovation approaches with the intention of supporting creative processes, and offering support to the Slovenian design companies on their way to being successful.

First, we analyse the results of our own questions, comparing them to other relevant questions from the larger national research study. Next, using Pearson's correlation, we tested the correlations between our questions about innovativeness and the presence of individual principles of Artful Making in Slovenian design companies and the questions and statements about key economic and performance indicators obtained from the same survey our battery of questions originated – i.e. the one conducted with the directors from the Slovenian design industry.[11]

Further, we discuss a group comparison of innovation approaches and Artful Making variables by applying the Pearson's correlations, where we compare variables about innovativeness (group comparison), and the variables of significant principles and methods of Artful Making (group comparison) to key economic and performance indicators.

In the next section's discussion, we apply all the information and findings gained to this point of our empirical research, and test our first four hypotheses (H1-H4). In verifying the final hypothesis (H5) we use a creative approach. Using the findings of the theoretical background and all the research findings, we construct the model for fostering (introducing) innovativeness into Slovenian design companies (and potentially also in other countries), and for improving reliable innovation - by applying theoretical knowledge, the theory of Artful Making.

The structure of the battery of our questions is based on the theoretical findings of Artful Making. The first three questions are about innovativeness. Since Artful Making is only applicable in the processes where innovations are to be produced, the company has to wish (need) to be innovative and invest effort and work towards creating an innovative culture. In questions 4 and 5, we want to gain the certainty in the answers gained in the previous three questions. Do directors who present them as innovative produce big innovations, or

[11] In the same survey that included our battery of questions, directors also answered a series of questions about the economic and performance indicators of their company, which we use here (Appendix A).

do they just copy good ideas or the innovative outcomes of other successful companies by changing their design. We assume that copying ideas from others is, to a certain level, present in the design industry in general. So we want to verify if, when, and to what level that copying is present in Slovenia – whether copying the ideas or the final product of another company. The following questions (6-10), focus on individual artistic principles and methods of innovation, also recognised as the core principles and methods of Artful Making.

Our research hypotheses are the following:

> H1: In the Slovenian design industry, the meaning of innovativeness is understood and encouraged.
>
> H2: The level of importance of innovativeness in the company is associated with the use of Artful Making principles.
>
> H3: Managers in the Slovenian design industry use Artful Making principles and methods in supporting creativity and the innovation process.
>
> H4: The use of the principles and methods of Artful Making in the Slovenian design industry is positively related to the number of innovations.
>
> H5: Directors in the Slovenian design industry are aware of the need for a different approach in leading the creativity of knowledge workers throughout the creative process.

We will use all the information mentioned above: the data gained from our battery of questions, the other data from the same survey of directors, survey of designers, interviews with designers and with managers, statistical data from AJPES, reports and working papers of the European Union, European Commission, and United Nations, other relevant surveys, and relevant scientific literature presented in the first part of our dissertation. All these will help us verify the trustworthiness of the hypotheses we set in the beginning. The research and survey were actually conducted in the Slovenian creative industry. We broadened our research from design to the creative industry because of the lack of specification at the national level, and the difficulty of obtaining a concrete frame about the design industry in Slovenia. This allows us to have a clear frame in which statistical data was collected for the research.

7.2 The design industry as a part of creative and cultural industries in Slovenia

The design industry is a part of the cultural and creative industries, and is defined and its specifications are described by a European directive, according to which we will also define the Slovenian creative industry. Hesmondhalgh (2008) sees the introduction of creative industries as a result of the strategy to combine the art and cultural industries, and which also makes art and other fine activities a part of economic development, and consequently contributors to national economies.

The sector of creative industries, with its complex and wide nature, combines various activities and lies "at the crossroads between the arts, business, and technology", and science (UK Creative Industries Task Force 1997).

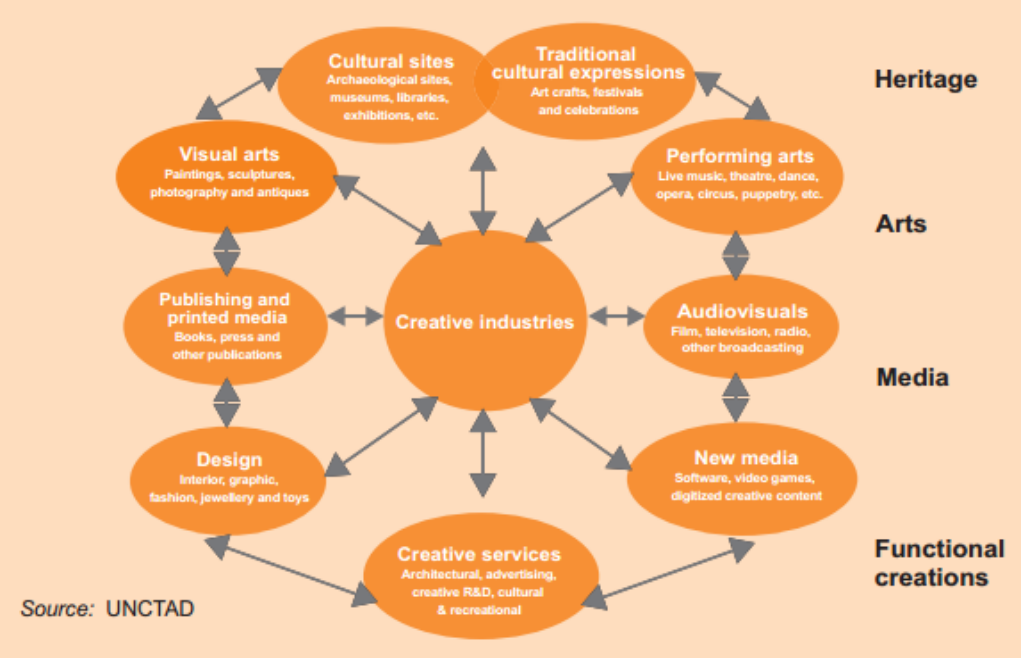
"A strong, mutually reinforcing relationship exists between and among the different artistic and economically distinct activities that make up the cluster of creative industries, ranging from upstream activities, such as the traditional arts, performing arts, literature, and visual arts, to "downstream" activities such as advertising, design, publishing, and media-related activities" (UNCTAD 2004, 4).

In recent years, the importance of knowledge workers and creativity – and consequentially of the creative industries – has grown significantly. They have important implications connecting new technologies and their development, also in the field of connecting these technologies with their users. In this way, they contribute to the innovations and economic value of new technologies. Klinar (2010, 8) argues about the importance of the creative industries – and at the same time voices the concern that the lack of planning and understanding of the role of design and creativity in Slovenia on the national level (the government) has negative connotations on the competitiveness and success of Slovenia in the global context.

UCTAD was among the first who enlarged the view and definition of 'creativity' from artistic activities to "any economic activity producing symbolic products with a heavy reliance on intellectual property, and for as wide a market as possible" (UNCTAD, 2004). According to the UNCTAD definition, design industries make up a part of the creative industry.

Because of the wide spectrum of the creative industry and involvement with various sectors, there are numerous different systems of classification of creative industries. According to UNCTAD, it includes the sector of heritage, arts, media, and functional creations, covering a broad scope of fields. Consequently, on the national level there can be difficulties to clearly distinguish the large domain and different industries they should cover, which is also the case in Slovenia.

Figure 7.1: Classification of the creative industries according to UNCTAD



Source: UNCTAD (2010, 8).

We can see in Table 7.1 that there exists various models and classification systems for the creative industries. The table shows that creative industries have a broad scope, where design-related industries make up a part of it. Nevertheless, all creative industries do welcome creativity in their working process – or at least in a part of their working processes, and also have an economic value and are being regarded in economic terms. Different countries have their specific models, according to their priorities and the importance of specific creative activities or industries. For example, in France, wine and food are a part of the creative industries. UNCTAD similarly describes the shift that occurred to the cultural industries and turned them into potential commercial activities.

> *"Usage of the term 'creative industries' varies among countries. It is of relatively recent origin, emerging in Australia in 1994 with the launching of the report,* Creative Nation. *It gained wider exposure in 1997, when policymakers at the United Kingdom's Department of Culture, Media and Sport set up the Creative Industries Task Force. It is noteworthy that the designation 'creative industries' that has developed since then has broadened the scope of cultural industries beyond the arts, and has marked a shift in approach to potential commercial activities that until recently were regarded purely or predominantly in non-economic terms."* (UNCTAD 2010, 6).

The classification by UNCTAD listed among cultural and creative industries also highly developed and profitable *information and communication technologies*, which also affected both cultural and creative segments of the industry. Of course, there is also design. All these shifts in specifications and new frames that put creative domains and culture into creative industries, also influenced the understanding of the mission of these domains with varying effects. On one hand, they started facing the conflicts with the former's purely higher mission and disregard for temporary economic evaluation of the work of art. On the other hand, it started to be seen as something precious and valuable, giving previously considered altruistic works now also concrete economic values (Hesmondhalgh 2008).

Table 7.1: Classification systems for the creative industries derived from different models, according to UNCTAD

1. UK DCMS model	2. Symbolic texts model	3. Concentric circles model	4. WIPO copyright model
Advertising	**Core cultural industries**	**Core creative arts**	**Core copyright industries**
Architecture	Advertising	Literature	Advertising
Art and antiques market	Film	Music	Collecting societies
Crafts	Internet	Performing arts	Film and video
Design	Music	Visual arts	Music
Fashion	Publishing		Performing arts
Film and video	Television and radio	**Other core cultural industries**	Publishing
Music	Video and computer games	Film	Software
Performing arts		Museums and libraries	Television and radio
Publishing	**Peripheral cultural industries**		Visual and graphic art
Software	Creative arts	**Wider cultural industries**	
Television and radio		Heritage services	**Interdependent copyright industries**
Video and computer games	**Borderline cultural industries**	Publishing	Blank recording material
	Consumer electronics	Sound recording	Consumer electronics
	Fashion	Television and radio	Musical instruments
	Software	Video and computer games	Paper
	Sport		Photocopiers, photographic equipment
		Related industries	
		Advertising	**Partial copyright industries**
		Architecture	Architecture
		Design	Clothing, footwear
		Fashion	Design
			Fashion
			Household goods
			Toys

Source: UNCTAD (2010, 7).

European nations' (UNCTAD 2010, 8–9) definition of the creative industries exposes the use of "creativity and intellectual capital as primary inputs", the importance of "a set of knowledge-based activities", and states they are positioned at the "crossroads of the artisan, services, and industrial sectors," constituting a value in world trade consisting of products and services, and having in common "creative content, economic value, and market objectives".

The definition and classification by Slovenian designer Miha Klinar is not much different, who says that among the creative industries there is industrial design and other design areas like architectural, graphic, fashion, information, and engineering design. Creative industries also include all forms of cultural goods, and transform them into products and services that represent their own production (movies, music, and theatre). They are in the service of support to marketing departments in the form of offering internet solutions and advertising. They present the basis for upgrading the high-quality market-communication concepts in winning new markets, and by asserting original brands for selling the products and services in foreign global markets (Klinar 2010, 5).

It is quite surprising that still in 2008 (according to the national recommendations), Slovenia hadn't recognised the importance and value of design in the production policy of economic development, but categorised design as a cultural and artistic industry – disregarding its important role for the development of the economy. Design policy in Slovenia still doesn't exist, and there is no national support and infrastructure of design. According to Slovenia's specification, design is classified together with decorating and arranging, while the nature of work and its importance is quite different, demands different education, and also plays a much more important role in the economy of the business. Therefore, it is difficult to get detailed information about design companies in Slovenia. However, the research on designers (Murovec et al. 2012) estimates that there were around 250 of designers in Slovenia, and points to the problem that there exists a lot of designers who are unqualified. At the same time, the designers who participated in the first national survey of the design industry (160 of them) are competitive on the international level, with more than half receiving international awards for their design accomplishments. Only in February 2017, the draft of the national strategy in the field of design was presented at the Ministry for Culture (Ministrstvo za kulturo 2017).

In Slovenia, in 2011 the Ministry of Culture published a booklet “Kulturne in kreativne industrije po Slovensko” or “Slovenian Cultural and Creative Industries”. It presents the cultural and creative industries in Slovenia, their role and importance for Slovenia, and also the measures that should be taken on the national level with the intention to prompt and support further development of cultural and creative industries in Slovenia. In this booklet, cultural and creative industries in Slovenia are classified as per the Green Paper of the European Commission (2010). The Slovenian Ministry of Culture classified the design industry as part of the creative industries, and puts it together with cultural industries, calling the domain “Cultural and Creative Industries”. Therefore, this classification was also used in the larger national research study, excluding the advertising sector and computer programming, also in the research on industrial design and the design industry (Murovec et al. 2012).

The green paper by the European Commission exposes numerous studies about the creative economy, showing that the cultural and creative industries stands for the companies with specific characteristics like being creative, innovative, dynamic, and as such represent great “economic potential” (European Commission 2010, 2). For the purpose of our research, in order to classify the cultural and creative industries, this classification was used. According to the green paper, the national standard called SKD (standard classification of the activity) was used to define different sectors of the industry that are listed in the table below (Murovec et al. 2012).

Table 7.2: The list of different cultural and creative activities according to the Slovenian standard classification of the activity 2008

ACTIVITIES	CLASSIFIED AS CULTURAL INDUSTRIES
SKD32990	Other
SKD58110	Book publishing
SKD58120	Publishing directories
SKD58130	Publishing journals
SKD58140	Publishing magazines
SKD59200	Recording and publishing sound recordings
SKD58190	Other publishing
SKD47610	Book retailers
SKD47621	Journals, magazines, and office supplies retailers
SKD47622	Journals, magazines, and office supplies retailers
SKD59110	Film, video, and TV production
SKD59120	Film, video, and TV postproduction
SKD59130	Distribution of films, videos, and TV
SKD59140	Cinematography
SKD60100	Radio
SKD60200	TV
SKD90010	Artistic performances
SKD90020	Supporting activities for artistic performances
SKD90030	Artistic creation
SKD79900	Reservation and other travel activities
SKD90040	Managing objects used for music performances
SKD93210	Theme parks
SKD85520	Education in the field of culture and art
SKD93299	Other free-time activities
SKD63910	Press conferences
SKD74200	Photography
SKD91011	Libraries and archives
SKD91012	Libraries and archives
SKD91020	Museums
SKD91030	Protection of cultural heritage
SKD91040	Botanical gardens and zoos
SKD62010	Computer programming
ACTIVITIES	CLASSIFIED AS CREATIVE INDUSTRIES
SKD71112	Architecture and urban development
SKD71111	Architecture and urban development
SKD71129	Technical design and consulting
SKD74100	Design, arrangements, decorations
SKD73100	Marketing

Source: Murovec et al. (2012, 13).

Statistics about the creative and cultural industries in Slovenia

Next, we introduce, analyse, and present statistics about the creative and cultural industries in Slovenia. Since our research is based in Slovenia, we use Slovenian sources of information. The latest data, obtained in 2016 from AJPES, shows information for the previous year (2015) about the size, activities, and number of cultural and creative industries in Slovenia. The size of a company in Slovenia is defined by *Zakon o gospodarskih družbah* - The Companies Act - in Article 55 and considers several factors:

- Average size (number of employees) of the company through the year
- Net sales
- Assets (*vrednost active*) (Zakon o gospodarskih družbah 2006).

According to these factors corporations are classified among micro, small, medium, and large corporations. According to the Article 55, micro corporations have to fulfil two of the three standards named below in Table 7.3. Small corporations don't fit in the previous classification. They have to fulfil two of the three standards, named in the same table (average number of employees, net profit from sales, assets). Medium-sized corporations are not micro, and not small corporations, as listed above, and have to fulfil at least two of the standards listed in Table 7.3 for medium-sized corporations. Large corporations are all that don't fit in the standards listed above as micro, small, and medium-sized corporations. Large corporations are always subjects of the public interest, the stock exchange, and the corporations that are, according to the law, obliged to make a consolidated year-end report (Zakon o gospodarskih družbah 2006).

Table 7.3: Standards of classification for the size of the corporation in Slovenia

	Average number of employees	Net profit from sales (in €1000)	Assets (in €1000)
Micro companies	<10	<700	<350
Small companies	<50	<8,000	<4,000
Medium companies	<250	<40,000	<20,000
Large companies	Doesn't fit in any of the categories listed above		

Source: Zakon o gospodarskih družbah (2006).

The tables below (7.4 and 7.5) show the number of corporations and the number of employees in the creative and cultural industries in Slovenia, and the total number of the creative and cultural industries in 2015.

Table 7.4: Cultural and creative industries with the number of corporations in Slovenia according to SKD (Standard classification of activities) (2015)

	Number of CORPORATIONS
Creative industry in 2015	4,035
Cultural industry in 2015	2,605
TOTAL – Creative and cultural corporations in 2015	6,640

Source: AJPES (2016).

In Slovenia there were 6,640 creative and cultural corporations in 2015, among them 4,035 creative and 2,605 cultural corporations (Table 7.3).

The size distribution is heavily skewed toward micro companies, which represent – 98.11% of all companies. The share of the small cultural and creative industries is around 1.4%, while in 2015 there were 0.2% of medium-sized corporations. The share of large corporations with more than 250 employees is only around 0.3%.

Table 7.5: The table below shows the number and share of the number of corporations of creative and cultural corporations in Slovenia in 2015according to their size

	The size of CORPORATIONS according to ZGD-1	Number of CORPORATIONS	Share
Creative and cultural corporations	Micro	6450	98.107%
	Small	134	1.365%
	Medium	26	0.218%
	Big	30	0.310%
	TOTAL	**6,640**	**100%**

Source: AJPES (2016).

In the cultural and creative industries in Slovenia, there are in addition to corporations, also sole traders. In 2015 there were 6,077 sole traders registered, and according to the standards of ZGD-1 almost all of them belong to micro companies – 99.8% (AJPES 2016, 11).

The following table (7.6) shows the number of sole traders according to their size. The great majority (99.8%) of sole traders are classified as micro-sized, similar to 98% of corporations that are micro-size. The table shows that there were no medium or large sole traders in the creative and cultural industries in Slovenia in 2015, and two small sole traders, according to the standards and the statistic of the AJPES (2016).

Table 7.6: The number of sole traders in the creative and cultural industries in Slovenia and their sum – the number of creative and cultural industries in Slovenia in 2015

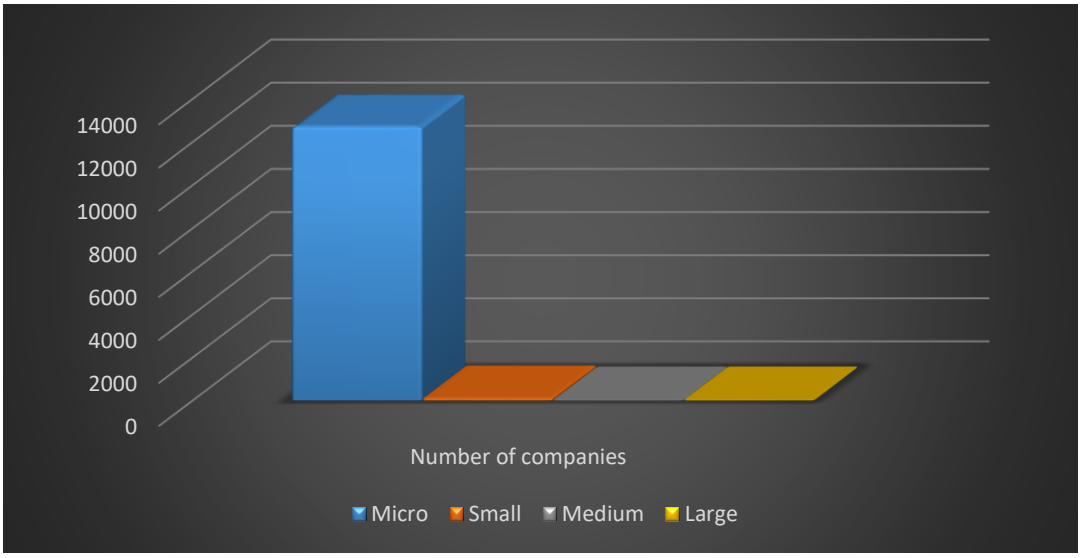
	The size of SOLE TRADERS according to ZGD-1	Number of SOLE TRADERS
Creative and cultural SOLE TRADERS	Micro	6,075
	Small	2
	Medium	0
	Big	0
	TOTAL	**6,077**

Source: AJPES (2016).

We present the situation and overall view of cultural and creative companies in Slovenia. All together in Slovenia in 2015, there were 12,717 companies, which means both corporations and sole traders in cultural and creative industry, according to AJPES (2016).

Figure 7.2 presents the number of companies (the sum of sole traders and corporations in creative and cultural industry) in Slovenia, sorted by their size. We can see that in both, a great majority is represented by micro companies with fewer than 10 employees.

Figure 7.2: Number of companies (creative and cultural) in Slovenia, sorted by size, in 2015

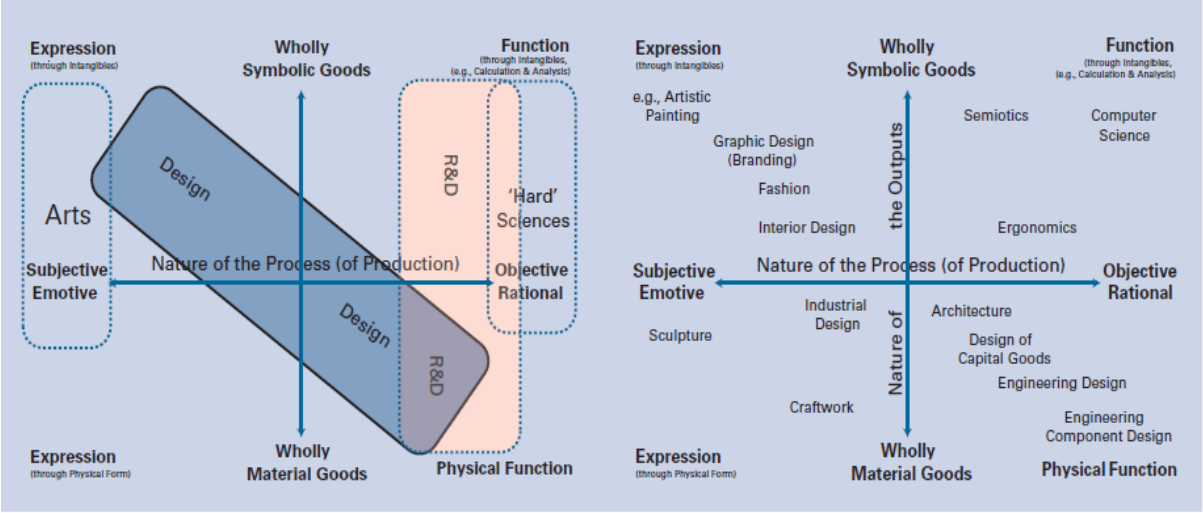


Source: AJPES (2016).

The role of design

Figure 7.3 shows the nature and applicability of design in various activities regarding to the nature of the process of production and the nature of goods produced (symbolic or material). The scope of design can be broad, and in Figure 7.3 we can see that design is close to the arts, and also to certain activities in research and development. Engineering design is closer to hard science and certain parts of research and development. At the same time, design is not involved in all R&D, meaning not all R&D includes design. The support of the government and active cooperation of science, technology, arts, and business can result in success stories, as for example the UK, where their Minister for the Creative Industries and Tourism gave examples of the valuable contribution of the creative industry – the UK design sector – and presents its comparative strengths (DTI 2005).

Figure 7.3: Embedding of creative industries, according to Creativity, Design, and Business Performance - conceptual mapping of Arts, Science, Design, and R&D



Source: Tether in DTI (2005, 8).

A Danish Design Centre report from 2003 stated that companies adopting a comprehensive approach to design had improved gross revenues by 22% and exports by 18-34%, and the countries with the most advanced economies recognise its importance, so governments invest in it. Finland, for example, executed a design development program that unites the universities, research institutions, companies, and research, with the goal of making Finland "the world's leading user of design" (see Austin et al. 2007, 3). Designers are often the ones who take the initiative in shaping corporate and national policy, as is also the case in Slovenia.

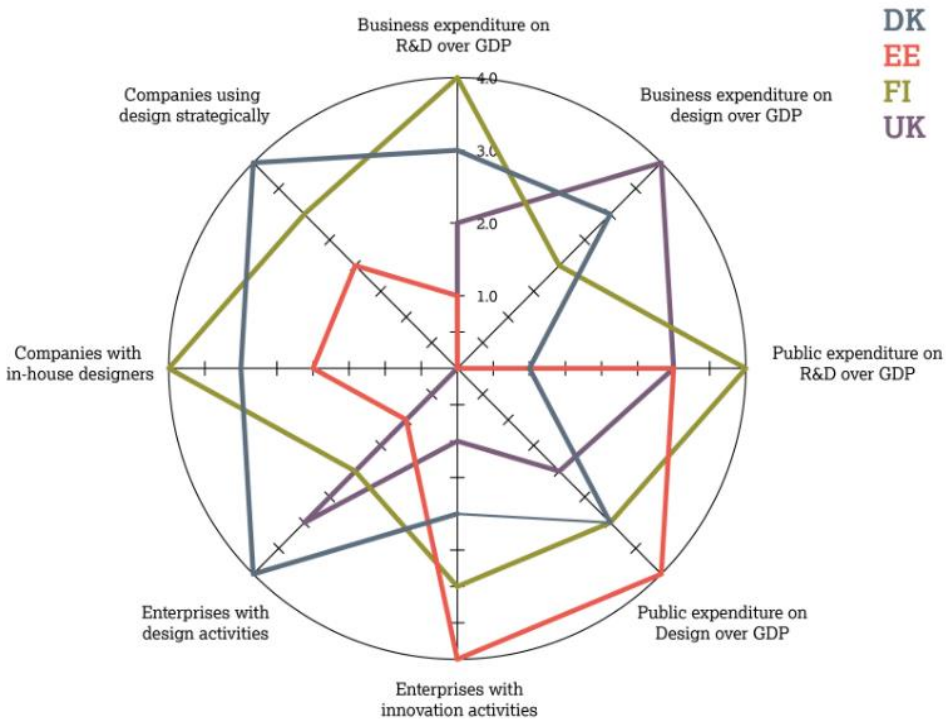
Let's compare the situation in Slovenia to the situation in some other European countries regarding design users, the role of design, and expenditure on design in creative and cultural industries. The diagram below (see Figure 7.4) shows it varies from one country to another, and as we can see, the performance of design users in Denmark, Estonia, Finland, and the UK does play an important role and is widely used in companies.

The diagram presents grades about indicators like business expenditure on R&D over GDP, business expenditure on design over GDP, public expenditure on R&D over GDP, public expenditure on design over GDP, enterprises with innovation activities, enterprises with design activities, companies with in-house activities, and companies using design strategically. The best performing country got marked at 4, the second best at 3, and so on.

The diagram shows the connections between different indicators, where Estonia has the best mark for enterprises with innovation activities, while Denmark is the best among the four countries regarding companies using design strategically.

They use design strategically, and in this way influence the success of creative industries. They differentiate their products/services/processes through design. Their products have an added value of functionality, practical application, and also esthetical appearance and beauty because they allow designers to contribute to the development processes. The diagram (Figure 7.4) shows that countries with companies that have the most innovation activities are the ones invest the most in design, and in research and development.

Figure 7.4: National Design System Performance in other European countries: Design Users in Denmark, Estonia, Finland, and the UK

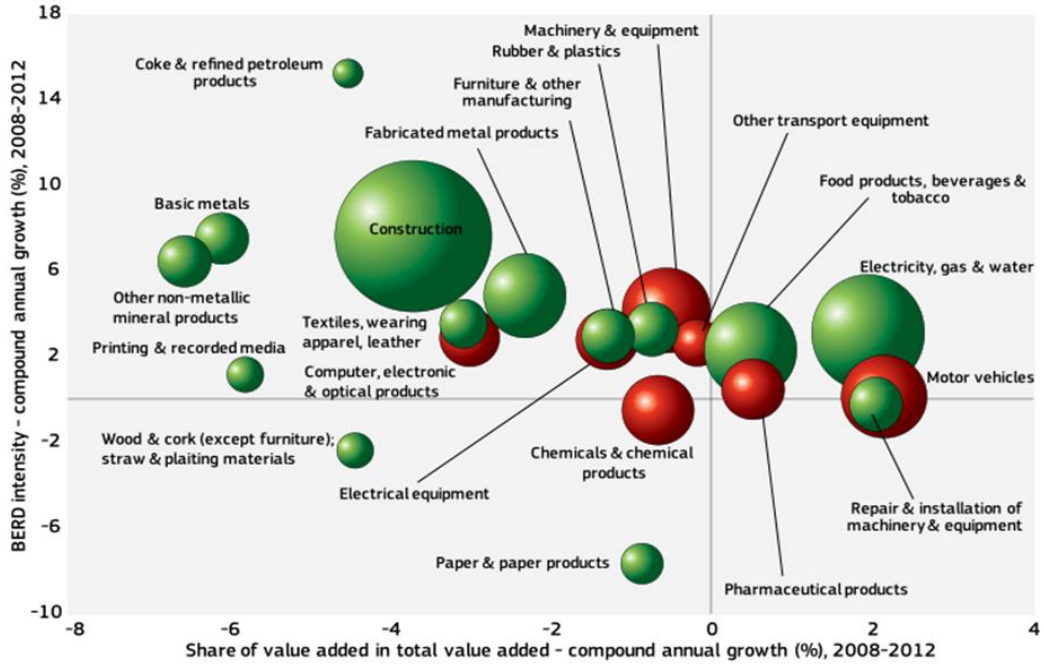


Source: Sharing Experience Across Europe (SEE, 2013).

Figure 7.5 shows that in EU countries, the period from 2008 – 2012, the share of value-added in total value-added regarding innovativeness wasn't so significant, with some exceptions. "While the reasons for the persistent lack of financing for innovation in Europe may be a combination of both supply, i.e. lack of available funding, and demand, i.e. lack of sufficiently robust innovation projects deemed worthwhile to obtain funding, the

financial and economic crisis appears to have aggravated the situation" (European Commission - DG for Research and Innovation 2016, 97). This information proves that innovativeness needs proper planning and support, both financial and intellectual, with the support of development processes which create products/services with greater added value.

Figure 7.5: Evolution of R&D intensity and industrial structure (High-tech and medium-high-tech sectors) in the EU (Croatia is not included), 2008-2012. The size of the bubble is determined by the weight of the sector in the total value added (2012) of all the sectors on the graph



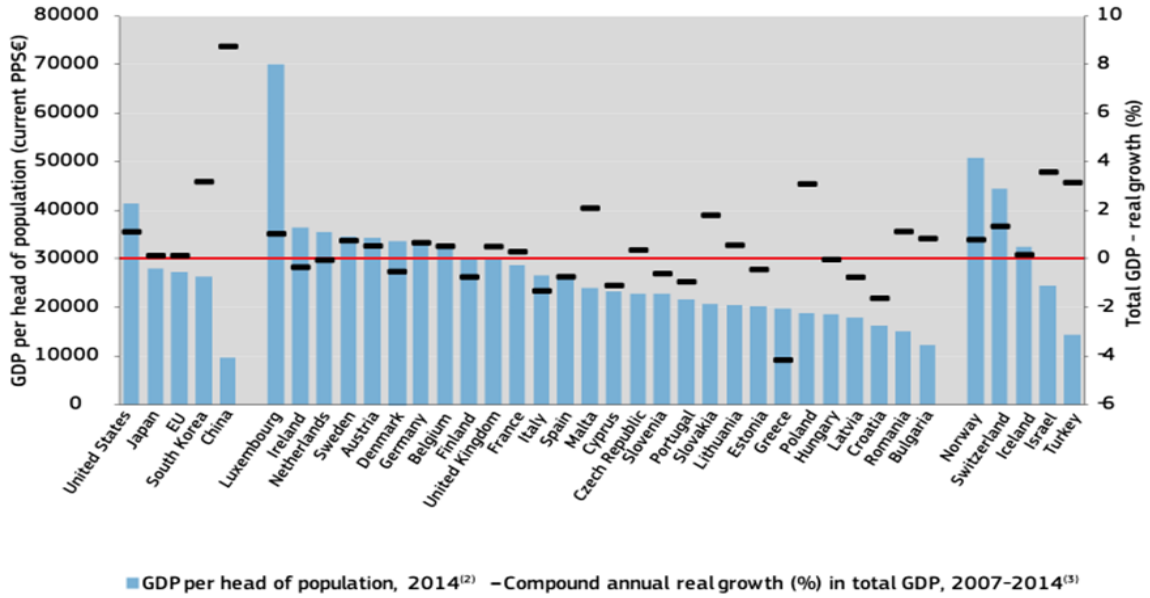
Source: European Commission - DG for Research and Innovation (2016, 107).

Investments in the research and development present one of the crucial factors, related to the innovations. Creative industries present a large part of the companies, and in Figure 7.5 we present a glimpse into the situation of different sectors in the European Union. BERD presents the abbreviation for business enterprise expenditure on R&D (BERD) as % of value-added (of Gross domestic product - GDP). Further, the figure shows the size of the sectors in the total value added, where construction, electricity, gas & water, and machinery & equipment are among the largest. The interpreters of the research say there is the possibility that some sectors managed to increase their shares in total value-added, because they turned out to be more crisis-resistant, while the other sectors were affected by the crisis

what diminished the share in total value-added (European Commission - DG for Research and Innovation 2016).

To place Slovenia's GDP on the chart compared with other European countries, we see in 2014 we were not among the countries with the highest GDP per head of population of the Member States and real growth in total GDP (see figure below).

Figure 7.6: GDP per head of population of the EU Member states, 2014 and real growth in total GDP (Compound annual growth calculated from GDP in PPS€[12] at 2005 prices and exchange rates), 2007-2014



Source: European Commission - DG Research and Innovation (2016, 18).

According to the European Commission, Slovenia stands somewhere in the middle compared to other EU countries, with a slight real growth (%) in total GDP.

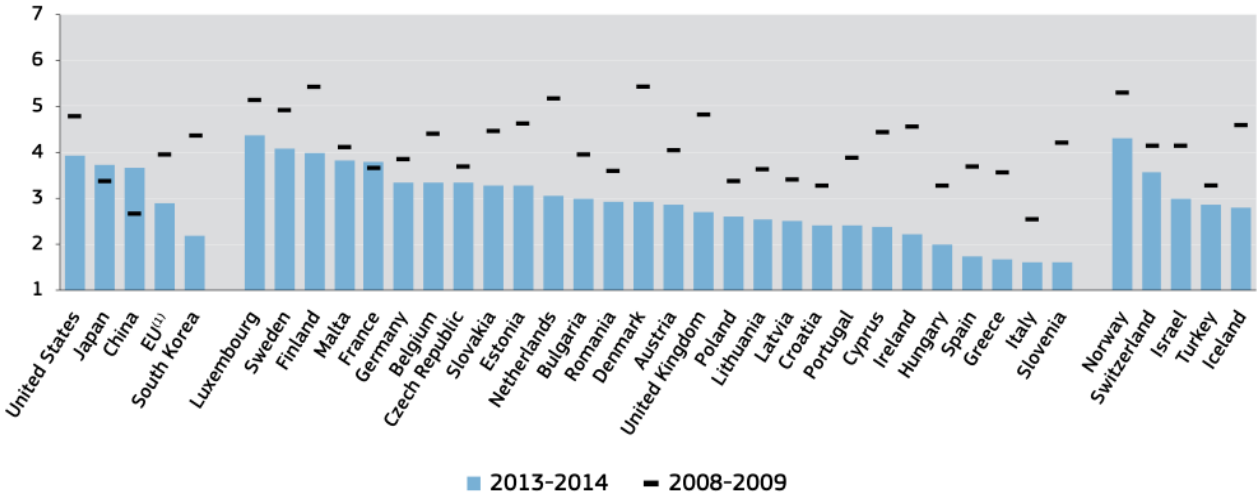
All this does affect the possibilities for innovation, and the years of economic crisis in Europe also strongly effected Slovenia, which also had consequences on investments in innovations and possibilities to properly support research and development activities, innovation processes, and furthering of productivity and innovativeness. That is also linked

[12] Purchasing Power Standards (PPS) - Financial aggregates can be expressed in Purchasing Power Standards (PPS), rather than in euro based on exchange rates. PPS are based on comparisons of the prices of representative and comparable goods or services in different countries in different currencies on a specific date. The calculations on R&D investments in real terms are based on constant 2005 PPS. Source: Eurostat

to labour productivity, and according to the report of the European Commission - DG Research and Innovation (2016, 25), "for most advanced economies, innovation, and innovation-related investments, such as R&D, ICT, or skills development, are crucial".

Slovenia is making strides forward to ease the innovators in some points. Still, the global competitiveness index places Slovenia relatively low, with further stagnation in 2013-14 (see Figure 7.7). Evidently, the economic crisis, and the difficulty to access financial resources which are needed to transform new, valuable ideas into final innovative products, processes, or services had a negative effect on accessing loans – where Slovenia was among the most effected countries, and potentially also on the competitiveness of Slovenia (European Commission - DG Research and Innovation (2016, 95).

Figure 7.7: Global Competitiveness Index - ease of access to loans on the scale 1 - 7 (best) in 2008-2009 and in 2013-2014



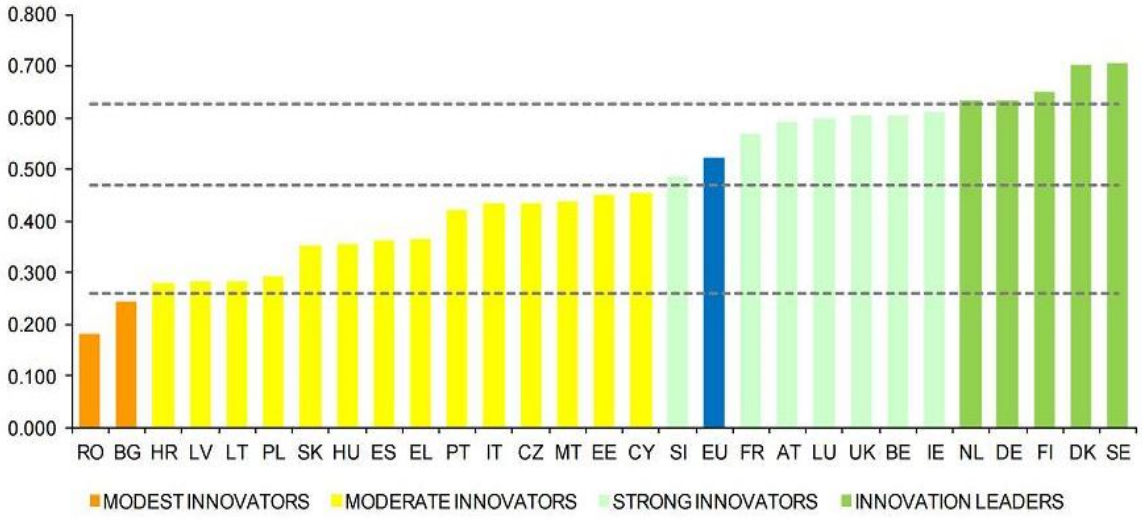
Source: European Commission - DG Research and Innovation (2016, 95).

Performing our study, we have taken these facts into account and are sure that these factors of development and economic factors do have impact on the present situation and innovativeness in Slovenian design industry and the findings and results of our survey conducted in the design industry.

Finally, since we conducted our research and placed the focus of dissertation on innovativeness, we now present the innovation performance of Slovenia compared to other

EU Member States. Figure 7.8 shows that in 2016, Slovenia had a solid place compared to other EU Member States.

Figure 7.8: EU Member States' innovation performance - Stages of innovators and the position of Slovenia compared to other European countries



Source: Hollanders et al. (2016, 6).

In 2016 Slovenia was listed a little below the average of the European Union in its innovations performance, and thus placed among the strong innovators (see Figure 7.8).

7.3 The Survey Data Collection: The questionnaire about the importance of Innovativeness and Development processes in the design industry in Slovenia

In this section, we describe and present the empirical data collected with our own battery of questions that were a part of the first national survey of design industry, which was a part of a first national research study of design industry in Slovenia. As we have seen in the previous section (7.2), the design industry is not clearly defined and is a part of larger creative industries. Also, our survey was conducted in the Slovenian creative industry, but with a focus on the design services and management processes. The main reason for choosing to do the survey in the creative industry was because all the creative industries use, or at least potentially could use design services, and also because the design industry is Slovenia still not clearly defined, as we explained in the section. Moreover, since creativity

is the characteristic to both the creative and design, therefore in further discussion we will use the term 'design industry', to avoid the confusion and mixing of the terms.[13]

7.3.1 The survey battery of questions about the importance of innovativeness and the use of principles and methods of Artful Making

Our 10 specific questions focused on the importance of innovativeness, and tested familiarity with the nature of work, and the necessary conditions to practice creativity and innovativeness. The questions tested the attitude of managers and directors towards the importance of innovativeness, the verification of the specific principles and methods managers use during the development process of the new products/processes/services in Slovenian creative industries, and the ones they use when leading the innovative process. The set of these 10 questions (in the survey the questions had number 16.1 – 16.10) represents the basis for verifying the presence and the use of Artful Making principles and methods in the Slovenian design industry.

The use of principles and methods of Artful Making (artistic creation) are applicable and present only in companies that are innovative, where there is a need for innovativeness, where there is an awareness of its importance, or in the companies that tend to become innovative. Therefore, with our questions we first verified the importance and attitude towards innovativeness in the companies included in our survey.

Among the numerous principles and methods of Artful Making, we have chosen the most characteristic, and at the same time measurable ones that indicate whether the company uses the principles and methods characteristic for Artful Making in their development process, since Artful Making as a concept is not yet known in the Slovenian business environment. Still, the research will help us see the importance level of innovativeness, present an understanding of the nature of creative workers, and the level of management support in the creative process when it is expected to result in innovative and valuable outcomes.

[13] The survey was conducted in creative industries in Slovenia, yet since the design industry makes up a part of the creative industries, classified as industries that need for their existence creative output, in further discussion we will continue to use the term 'design industry'.

The intention behind these questions was to gain insight into understanding creative knowledge workers, the relationship directors (who participated in the survey) and managers (interviews) have when leading the creative processes, creative workers, and the support they give them during the research and development process, as well as their management style. This includes the level of their support when in the process of research and development of valuable innovations, and exceptional final products/services/processes that can result in giving them an outstanding advantage over competitors, and result in differentiated, creative, and profitable outcomes on the local, national, and global markets. All these together give us the possibility of verifying the current innovative culture and the present use of the Artful Making principles and methods in the Slovenian design industry.

In our survey the directors evaluated the statements and assessed the importance of innovativeness in the company on a 7-point scale ranging from:

1. *Močno se ne strinjam* - strongly disagree,
2. *Večinoma se ne strinjam* - mostly disagree,
3. *Rahlo se ne strinjam* - slightly disagree,
4. *Niti se strinjam, niti se ne strinjam* – don't agree or disagree,
5. *Rahlo se strinjam* - slightly agree,
6. *Večinoma se strinjam* - mostly agree, and
7. *Močno se strinjam* - strongly agree.

The Table below (7.7) presents our original battery of questions from the survey of directors of Slovenian design companies in Slovene (with the translation).

Table 7.7: Our battery of questions about innovativeness and the use of Artful Making principles and methods

Innovativeness and the use of Artful Making principles and methods: *From strongly disagree (left) – to – mostly agree (right)*	Močno se **ne strinjam**	Večinoma se **ne strinjam**	Rahlo se **ne strinjam**	Niti se strinjam, niti se ne strinjam	Rahlo se **strinjam**	Večinoma se **strinjam**	Močno se **strinjam**
1. Inovativnost je najpomembnejši dejavnik uspeha našega podjetja. *In our company innovativeness is seen as a key factor for success.*	1	2	3	4	5	6	7
2. V našem podjetju se zelo spodbuja inovativnost pri vseh zaposlenih. *We strongly encourage innovativeness among all employees.*	1	2	3	4	5	6	7
3. V našem podjetju se zelo splača biti inovator. *In our company it is advantageous to be innovative.*	1	2	3	4	5	6	7
4. V našem podjetju kopiramo dobre ideje drugih podjetij. *We copy good ideas from the other companies.*	1	2	3	4	5	6	7
5. V našem podjetju kopiramo izdelke/storitve na način, da spreminjamo obliko izdelkov/storitev drugih podjetij. *We copy products/services from other companies so that we change their design/form.*	1	2	3	4	5	6	7
6. V našem podjetju razvijamo nov izdelek/storitev preko vodenega procesa. *We develop new products/services through the process led by a manager.*	1	2	3	4	5	6	7
7. Vodja projekta usmerja proces v trenutkih nejasnosti glede končnega rezultata projekta. *It is the project manager who directs the process in the moments of ambiguity and uncertainty about the next step in the development process.*	1	2	3	4	5	6	7
8. Vodja projekta sodelujočim zaposlenim daje dovolj prostora, da lahko znotraj zadanih okvirjev izrazijo svoje ideje in ustvarjalnost. *The leader of the team supports the members in freely expressing their ideas and creativity.*	1	2	3	4	5	6	7
9. Vodja projekta v timu spodbuja sodelovanje in izmenjavo mnenj (timsko delo). *The leader of the team supports cooperation and exchange of ideas, opinions, and suggestions of the team members (teamwork).*	1	2	3	4	5	6	7
10. Neuspele ideje in nepričakovani dogodki so v procesu raziskav in razvoja nujni koraki na poti k boljšemu končnemu rezultatu. *Mistakes, failures, and unexpected events/outcomes in the research and development process are a necessity and a way to improve the final product/service.*	1	2	3	4	5	6	7

Descriptive statistics and description of distribution of obtained factors

Table 7.8: Descriptive statistics and distribution of variables (questions 1-10)

Valid cases = 503; cases with missing value(s) = 29.

Variable	*N*	*Mean*	*Std Dev*	*Kurtosis*	*S.E. Kurt*	*Skewness*	*S.E. Skew*
Inovativnost je najpomembnejši dejavnik uspeha našega podjetja.	503	5.34	1.45	.57	.22	-.96	.11
V našem podjetju se zelo spodbuja inovativnost pri vseh zaposlenih.	502	5.17	1.37	.21	.22	-.71	.11
V našem podjetju se zelo splača biti inovator.	498	4.48	1.58	-.27	.22	-.46	.11
V našem podjetju kopiramo dobre ideje drugih podjetij.	491	4.17	1.68	-.60	.22	-.42	.11
V našem podjetju kopiramo izdelke/storitve na način, da spreminjamo obliko izdelkov/ storitev drugih podjetij.	499	3.21	1.79	-1.03	.22	.26	.11
V našem podjetju razvijamo nov izdelek/storitev preko vodenega procesa.	499	4.40	1.76	-.58	.22	-.49	.11
Vodja projekta usmerja proces v trenutkih nejasnosti glede končnega rezultata projekta.	499	4.84	1.70	-.01	.22	-.83	.11
Vodja projekta sodelujočim zaposlenim daje dovolj prostora, da lahko znotraj zadanih okvirjev izrazijo svoje ideje in ustvarjalnost.	501	5.31	1.49	1.02	.22	-1.10	.11
Vodja projekta v timu spodbuja sodelovanje in izmenjavo mnenj (timsko delo).	499	5.46	1.47	1.13	.22	-1.15	.11
Neuspele ideje in nepričakovani dogodki so v procesu raziskav in razvoja nujni koraki na poti k boljšemu končnemu rezultatu.	501	5.47	1.39	1.36	.22	-1.15	.11

The mean values of individual variables vary between 3.21 at the variable ‘copying the final products/services from others’ (*We copy products/services from other companies so that we change their design/form*) and 5.47 at the variable ‘accidents are a part of the research and development process’ (*Mistakes, failures, and unexpected events/outcomes in the research and development process are a necessity and a way to improvement of the final product/service*). From this we can conclude that interviewees most disagree with statements measuring the presence of copying of final products/services from other companies. In this case we can notice a partial disagreement with that statement, while in other variables are in agreement or at least in partial agreement with other statements.

Standard deviations of individual variables vary between 1.37 for the variable ‘encouraging innovativeness’ (*We strongly encourage innovativeness among all employees*), and 1.79 for variable ‘copying the final products/services from others’ (*We copy products/services from other companies so that we change their design/form*) – the same as previously in mean values. A lower standard deviation for the variable ‘encouraging the innovativeness’ points to smaller dispersion and bigger concentration of around arithmetic mean.

We identify five positive coefficients of kurtosis and five negative coefficients of kurtosis. Four coefficients of kurtosis are larger than 1, which shows that values close to the mean are more frequent. Among them one is negative (-1.03: variable copying the final products/services from other companies), and three are positive (1.02; 1.13, and 1.26: all three of them are variable of principles of Artful Making).

We notice negative skewness in almost all variables, with the exception only at the variable ‘copying the final products/services from others’ (*We copy products/services from other companies so that we change their design/form*), where it is skewed right or positively skewed (0.26). Negative skewness varies between -1.15 for supporting teamwork and for the variable ‘accidents are a part of the research and development process’ (‘*The leader of the team supports cooperation and the exchange of ideas, opinions, and suggestions of the team members (teamwork),’ and ‘Mistakes, failures, and unexpected events/outcomes in the research and development process are a necessity and a way to improve the final product/service’*), and –0.42 for the variable ‘copying good ideas from other companies’ (*We copy good ideas from the other companies*). At variables a) The leader of the team supports the members in freely expressing their ideas and creativity, b) The leader of the

team supports cooperation and exchange of ideas, opinions, and suggestions of the team members (teamwork), and c) Mistakes, failures, and unexpected events/outcomes in the research and development process are a necessity and a way to improve the final product/service, skewness is greater than 1 (-1.10 and -1,15), therefore we conclude the distribution is highly skewed.
The standard error for kurtosis is 0.22, and standard error for skewness is 0.11.

Importance of innovativeness in the Slovenian design industry

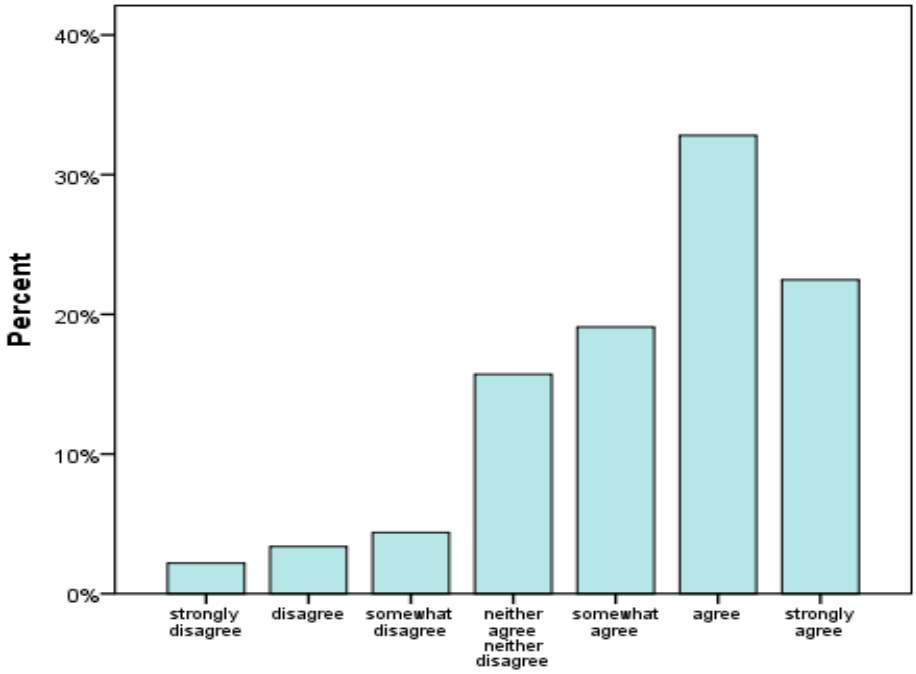
In order to evaluate the level of importance of company innovativeness according to the estimations of directors in the Slovenian design industry, and the level of importance of the innovativeness related to the success of the company, first we asked directors about the extent to which they agree or disagree with the statement that in their companies "innovativeness is seen as a key factor for success." Another question was about innovativeness and the level of their encouragement of innovativeness among their employees. We asked directors about the extent to which they agree or disagree with the statement that they "strongly encourage innovativeness among all employees." The third question was about the importance of innovativeness. We asked directors – as a key players in the role of encouraging and promoting innovativeness in the company – to assess the statement "in our company it is advantageous to be innovative".

7.3.1.1 Level of importance of innovativeness in Slovenian design industry

According to the estimations of directors in the Slovenian design industry, 74.4% of them agree to a certain extent – slightly to mostly agreeing on it – that in their company innovativeness is seen as a key factor of success. Among them, 22.5% strongly agree with the statement, another 32.8% mostly agree, while 19.1% slightly agree with the statement. Another 10% of the directors did not agree with the statement (answers from 1-3) that in their company innovativeness is seen as a key factor for success, and 15.7% of directors were indecisive.

According to these results, we estimate that a greater part of Slovenian design companies and their directors are aware of the importance of innovativeness, regarding the relatively large extent of agreement with the statement of innovativeness affecting the success of the company. Therefore, we also estimate that in these Slovenian design companies the awareness of importance, according to their directors, plays an important role.

Chart 7.1: Importance of innovativeness for companies' success in Slovenia according to their directors – evaluation of the statement Q1 "*In our company innovativeness is seen as a key factor of success*"



An innovative company relying on its innovativeness should be totally dedicated to it, meaning also adapting the company's culture to innovativeness, and also writing it in the mission statement or their vision. Artful Making presents the model of working process where valuable innovations are produced. Artful Making is applicable only in the organisations where the need for innovation is present. If there is no need for innovations, then Artful Making is appropriate. According to the statements of the directors in our survey, innovativeness does play an important role for the majority of Slovenian design companies.

The answers to another question in the survey conducted with directors – "What percentage of income do you invest in development or improvement of products/services?" – show that the level of investing in research and development in Slovenian companies is surprisingly low, as a majority (61.7% - valid percent) of companies invest less than 5% of their incomes in R&D[14]. Small investments (5-10% of income) are made by 22% of Slovenian companies, while 10.2% of the Slovenian companies invest 10-20% of their income into development or improvement of their products/services. Only 6.2% of the companies invest more than

[14] Research and development

20% of their income in R&D. We can conclude that many of Slovenian companies don't make serious investments in R&D, which indicates that they don't build their identity on innovativeness, since without serious investments in R&D they can only make minor innovations (Murovec et al. 2012, 212). The same opinion was also discovered in the interviews conducted with designers (in the same large national research study). Designers exposed the same issue regarding investing in the development of the companies' own products/services and brands, which designers marked as a crucial problem regarding innovativeness. They said that only few Slovenian companies seriously invest in developing their own products/services and brands (Murovec et al. 2012, 46–212). That also confirms the report of the European Commission - DG Research and Innovation (2016, 18) mentioned in the previous section, which is connected with the economic crisis in Slovenia and difficulties in making serious investments in research and development, compared to other European countries that invest more (see Figure 7.4).

Another question (question number 8)[15] from the same survey was: "Did you develop any new products/services or processes for the company in last three years (2008-2010)". The results show that 71% (valid percent) of directors stated that they are successful in developing innovative products/services or processes, while 29.0% had a negative response to that question. The next question of the same survey with directors (number 9) was "Did you develop any new products/services or processes for the company in the last three years (2008-2010) that included substantial innovation or design?". The positive answer to this question was 27.9% lower than on the previous one, with 57.3% directors giving a negative response, and only 42.7% giving a positive answer in which they confirmed the development of new products/services or processes that included substantial innovation or design in the last three years (Murovec et al. 2012, 207). This means that in the survey, 71% of directors claimed that in last three years they had developed some new products/services, while at the same time only 42.7% of them were substantial innovations (or design).

To further verify the importance of innovativeness for the competitiveness of Slovenian design companies, and more specifically to verify on which specifics Slovenian design companies build their competitiveness, the directors were asked to evaluate another

[15] See Appendix A

statement “What is the basis of your company’s competitiveness in the last three years (2008-2010)”.

Only 10.5% (valid percent) of the directors estimated that their companies are competitive because of their innovative products/services. Another 43.4% (valid percent) estimated that their competitiveness is based on the added-value of their product/service, while 33.3% of directors estimated that they compete with low prices. Another 12.8% believe their products/services compete with other companies because of their distribution and accessibility of their products/services. We can conclude that about 43% of Slovenian design companies see innovativeness as very important. They also work on placing innovativeness as their attribute on the market, and are competitive because of it (Murovec et al. 2012, 205).

7.3.1.2 Encouraging the innovativeness among employees

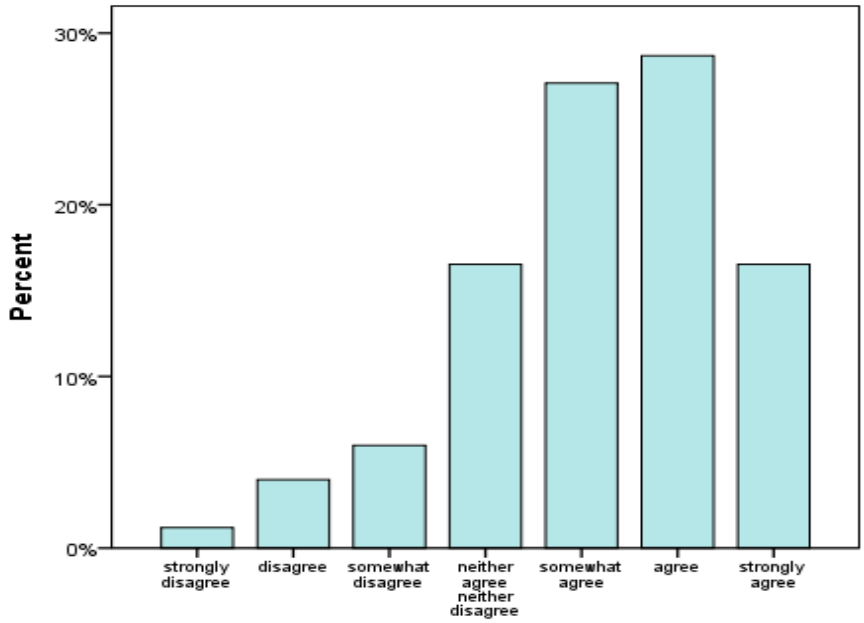
An innovative company can’t be truly successful and create constant innovations if its culture is not innovative. Every employee should take a part in the innovativeness of the company, and support the creative teams in their creative processes. We wanted to test the attitudes towards the creative, innovative, and supportive culture of Slovenian design companies. As already discussed in the theoretical part of the dissertation (Chapter 2), the creative team needs support in the professional sense, and in the sense of sharing and flow of information. They also need the trust and respect of their co-workers and leaders, and understanding and encouragement in moments of ambiguity. The theory claims that if innovativeness is a company’s main success factor, it is to be written in its mission statement, clearly declared in the vision, and everybody does everything possible to contribute to the creation of valuable innovations (Barrett 2006). This supports an atmosphere of creativity, fortifies mutual encouragement of innovativeness, and stimulates numerous creative ideas. At the same time, such an attitude encourages every single employee to think innovatively. When new ideas happen, they share them with others and interactively participate in the innovation process.

Our questions about innovativeness were intended to elicit what the attitudes are in Slovenian design companies regarding the importance of innovativeness, the importance and presence of innovativeness in the company’s culture, and to what degree the employees are involved in the company’s innovative culture and encouraged to take part in it. Already

in Chapters 2 and 7 we discussed, that managers' support of innovativeness, and the inclusion of all employees in an innovative culture are important steps toward supporting creativity and making conditions to practice the principles and methods of Artful Making.

In our survey, almost three quarters of directors (72.3% of valid percent) gave positive answers to the statement "*In our company we strongly encourage innovativeness of all employees*", with most of them mostly agreeing with the statement. Only 11.2% of directors expressed disagreement with the statement, while 16.5% of them stayed indecisive (Chart 7.2).

Chart 7.2: Encouraging the innovativeness among all employees in Slovenian design companies according to their directors - evaluation of the statement Q2 "*We strongly encourage innovativeness among employees*"



As we can see in Chart 7.2, more directors of Slovenian design companies say they do encourage innovativeness among all their employees than those who say they do not. The results indicate that 16.5% of directors strongly agree with the statement, 28.7% agree, and another 27.1% somewhat agree. That shows that large percentage (72.3%) of directors do care, make an effort, and strive to build an innovative culture in order to make their company truly innovative.

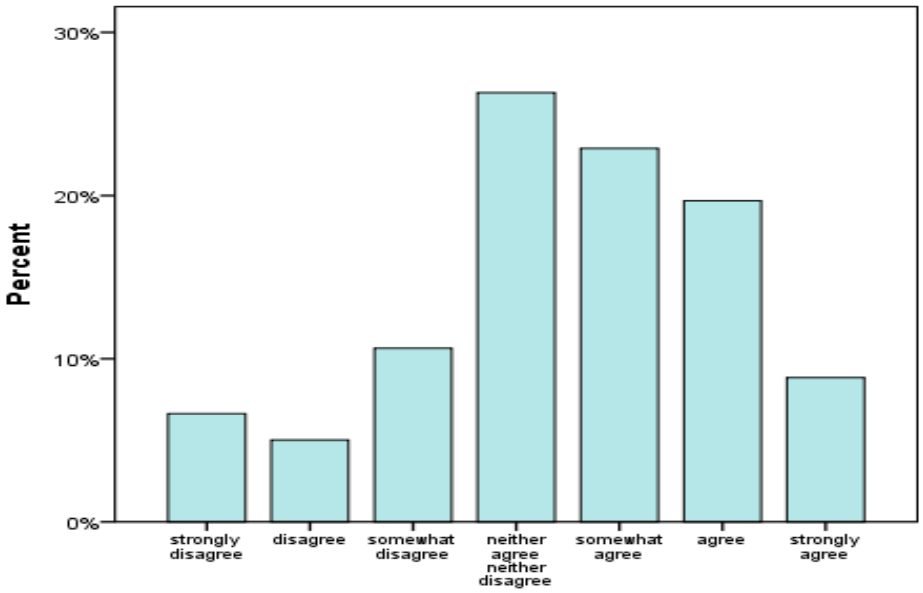
Another question from the survey with directors (question 12.2) asked for their estimations about the success of their companies compared to their competitors, measured by "*the number of new products/services the company introduced the first on the market (or was among the first companies to introduce it on the market)*". The results show that a great number of them estimate their companies are equivalent or better than their competitors (78.3% of the answers). Among them 6.4% of the directors stated that their companies are much more successful than their competitors, and 13.2% of directors estimate they are mostly better than competitors. Not so small a number said they are worse than competitors (21.6%), where 8.6% of them think they are little worse than competitors, 6.4% stated they are mostly worse than competitors, and 6.6% stated that they are much worse than their competitors. We can conclude that a majority of directors in Slovenian design companies (78.3%) perceive their companies as successful compared to their competitors, while the basis of their competitiveness varies. Still, a certain part of them also defines their competitiveness on innovativeness, by being the first on the market to introduce a new product/service on the market (Murovec et al. 2012, 210).

7.3.1.3 Is it advantageous to be innovative in Slovenian companies?

Our third question was the assertion about the pre-condition to apply and use Artful Making: "*In our company it is advantageous to be innovative*". We wanted to verify the perception of directors regarding the company's support, encouragement, and paying contribution in any form to the individual employee who innovates and is innovative. The company can do it in various ways and forms, and in this way support and encourage an employee's effort regarding innovativeness, the innovation process, and support of an innovative team. It can be expressed in a form of respect or an acknowledgement of a value added. The reward the employee receives for cooperating and contributing to the innovative culture in the company may come in various forms (e.g. verbal, financial, respect, promotion). Employees can be the biggest value of the company and contribute on all levels with creative, new, and valuable ideas, suggestions, knowledge, support, and exchange opinions on the team, including communication, personal creativity, and motivation. They can also inspire to make the vision of the company come true, and the willingness to take risks and make mistakes in order to create valuable innovations, which can potentially lead to failures and financial loss. In our survey many directors were indecisive when evaluating that assertion on the seven grade scale (26.3% of them answered with "neither agree nor disagree"). Still,

a greater part of the directors agreed to a certain degree with the statement, and estimate it is advantageous to be innovative in their companies – 51.4%, among them strongly agree 8.8%, 19.7% mostly agree, and 22.9% slightly agree with the statement. It should be noted that 22.2% of directors in Slovenian design companies share the opinion that in their company it is not worthwhile to be innovative (see Chart 7.3).

Chart 7.3: Estimations of directors regarding advantageousness of being innovative in their companies – evaluation of the statement Q3 "*In our company it is advantageous to be innovative*"



The results reflect the attitude and relationship of directors towards the innovativeness of the individual employee in the company, and consequently their view of the importance of creating an innovative culture in the company. One of the characteristics of Artful Making is to advocate that all employees can and should contribute to the innovative process. When such an attitude is adapted, a creative and innovative culture is created, and an atmosphere of encouraging, sharing, and the acceptance of new ideas is advantageous for the innovative process itself.

7.3.1.4 Copying good ideas from other companies

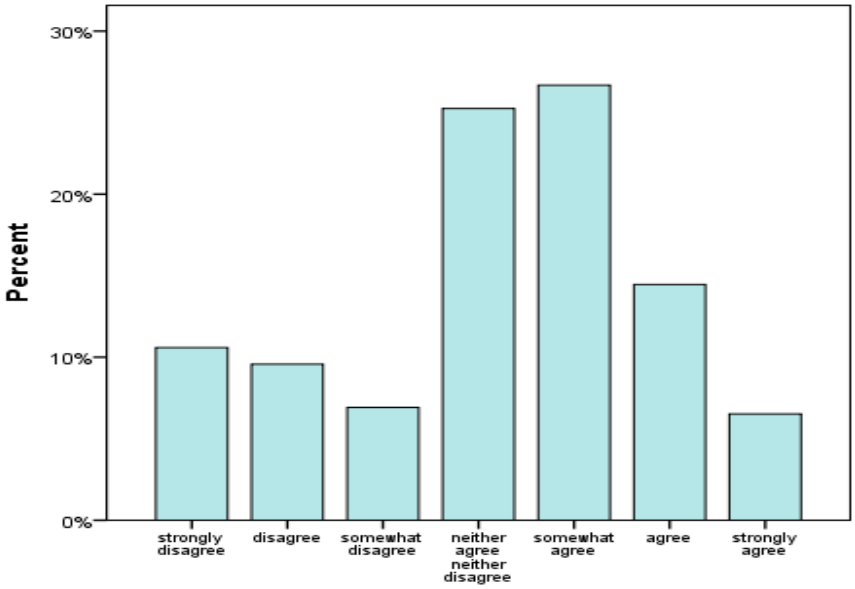
As we mentioned before, some companies are innovative and produce their own innovative products/services. In contrast, other companies in Slovenia do not develop their own innovative ideas, but rather copy good ideas from other companies and then use them in

producing their own products/services. This became apparent in interviews with designers. In the survey we wanted to further investigate that specific subject by asking directors to evaluate the following assertion "*We copy good ideas from the other companies*." The results suggest that, according the estimations of directors, a good quarter – 27.1% of Slovenian design companies don't copy good ideas from others, suggesting they produce their own good ideas. Another quarter of the directors (25.3%) didn't take the "neither positive nor negative" side about the assertion that in their company they copy good ideas from others. That leaves a little less than a half of the directors confirming the assertion that they do copy good ideas of others, and use them for producing and developing their own products/services (47.7%).

Interpreting the results of this statement, where 27.1% of directors say their companies don't copy the ideas from others, leads to the conclusion that those directors estimate their companies develop their own good ideas, and don't need to copy from others. We assume that approximately half of Slovenian design companies (47.7%) base their innovativeness, creativity, and recognisability on copying the good ideas of other companies which have been already appreciated and been found as valuable and successful on the market. These companies base their innovative products/services on being innovative in making variations of somebodies' else valuable, novel ideas. If it is only copying the ideas of other companies, the final product/service can still have innovative elements and specifications, and can be a success and have added value, thereby becoming more competitive on the market. In this case, their idea can be the same as the one from the other companies, but still the concept is different and it usually does result in different outputs.

This is how different concepts are developed. Nevertheless, because this way they are not the only ones – and most usually not the first ones to introduce some specific product/service on the market, the advantage is smaller. While other companies are also developing the same good idea at the same time, differentiation is smaller and competitors will probably soon launch on the market a similar or maybe even better product/service. Consequently, effective solutions from other companies can be introduced on the market already before the company produces their own, so the competitive products/services set the price and the standard, and in this way they might be forced to offer their outcome at a lower price. Still, copying good ideas can also lead to good and valuable innovations, and it is a part of the process of many, also successful, companies to develop new products/services.

Chart 7.4: The share of Slovenian companies that copy good ideas from other companies - evaluation of the statement Q4 "*We copy the good ideas from other companies*"



Still, this idea copying can hardly be considered as an issue, since also the best companies use great ideas and further develop them. It is a process of improving and developing a part of the innovation process.

We estimate that Artful Making's specific set of principles and methods support the creativity of a development group through the entire process, meaning also through the process of creating new, valuable ideas. It might help some Slovenian design companies to manage and lead creative workers, and support them in creating valuable ideas amid the proper conditions needed to produce not only copies, but also ensure valuable and true innovations break onto the market. That would bring a company an irreplaceable advantage and raise the prices of the products/services on the market.

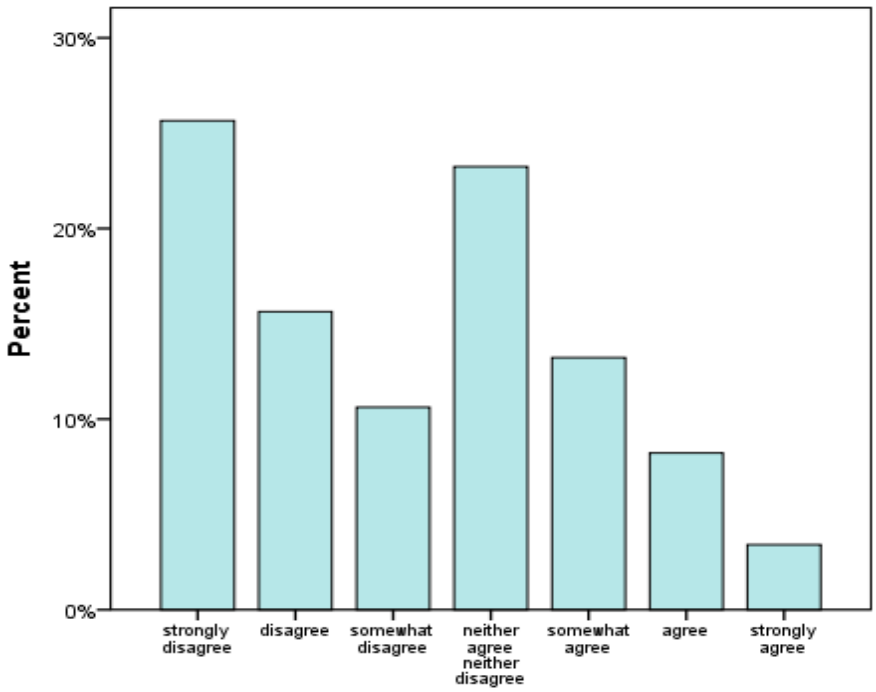
7.3.1.5 Some design companies copy final products/processes/services from other companies by only changing the design (aesthetic appearance)

In our survey of directors we wanted to further investigate the specific subject of copying from other companies (competitors), and verify the share of design companies that copy not only good ideas from other companies, but copy final products/services of other companies by only changing their design (aesthetic appearance). Already in a preliminary discussion with designers (interviews), they pointed us to this issue, so we wanted to further research

the subject. We searched for directors' estimations to test what their attitude and present situation is in their companies about this issue. So, we asked the directors about the extent to which they agree or disagree that their companies "*copy the products/services from other companies in a way that we change their design (aesthetical appearance)*". The results here are different from the previous statement, where we asked directors about copying good ideas from other companies.

A little more than a quarter (25.7%) of directors strongly disagree with the statement that their companies copy the products/services from other companies in a way that they change only their design/form. Another 26.2% of directors do not agree with that statement (mostly or slightly), which means together almost 52% (51.9%) disagree with the statement. The share of directors who do agree (slightly, mostly, or strongly) with the statement is not so small – 24.8%. The rest – 23.2% of directors – remained indecisive about this issue.

Chart 7.5: The share of Slovenian design companies copying the products/services from other companies by changing their design (aesthetical appearance) according to their directors – evaluation of the statement Q5 "*We copy products/services from other companies so that we change their design/form*"



According to these results we conclude that about one quarter (24.8%) of Slovenian design companies base their creativity and recognisability on copying another successful brands' innovative products/services by making variations in the design (aesthetical appearance). It is how they win the customers and assert themselves on the market, which we assume demands lower prices because of the competition, an absence of true originality, or an added value in their products/service.

Copying the final product/service is actually a sign of the absence of innovativeness and creativity in a company, and has as a consequence lower prices which are set by the market and not the company. Just changing the final design, colour, or some other form of aesthetic appearance occurs where the research and development processes are not adequately supported, or not functional, creativity is not profoundly understood, or where there are not enough competent knowledge workers.

Use of individual principles and methods of Artful Making in the Slovenian design industry

As directors and managers in Slovenian design companies are not yet familiar with the concept of Artful Making, we did not test whether the companies in the design and creative industries use it. Instead, we analysed specific characteristics and attitudes managers use and apply in the development process. This provided us information for how much some of the principles and methods most characteristic for Artful Making are present in Slovenian design companies. At the same time, we also tested the possibilities of applying Artful Making in Slovenian design companies in the future.

7.3.1.6 The manager is responsible for leading the development process of new products/services

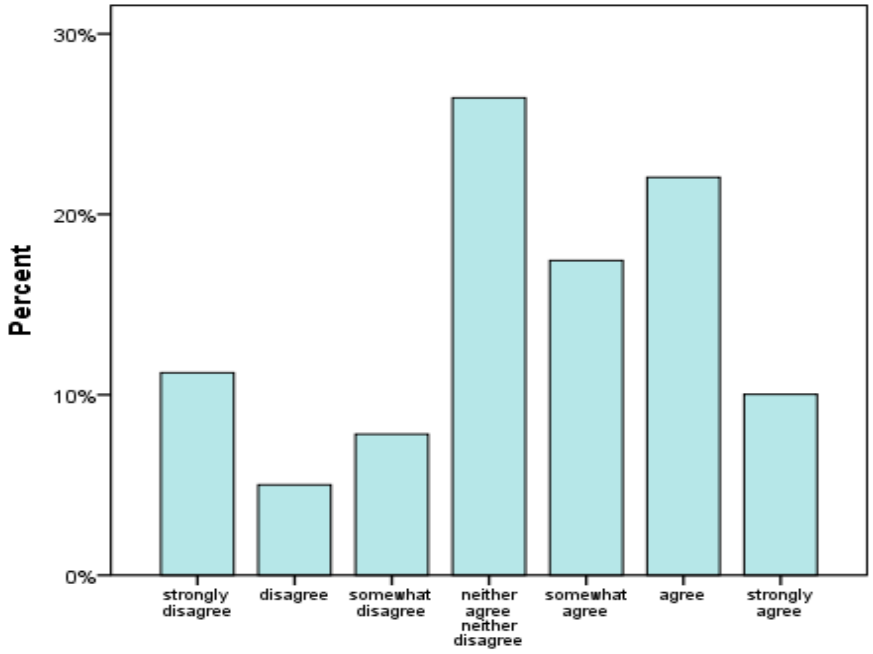
An innovative company is dedicated and focused on developing innovative products/services. In smaller companies, individual knowledge workers often work alone on developing novel outcomes, or they hire someone for a specific project. Otherwise, bigger companies have more employees, and can select the best experts from various fields and form a team which has a manager, responsible for leading the development/innovative process. This group of people (team) is chosen for a special reason – a special mission, to create innovative outcomes. The manager has the mission to lead and support them, as well as to guide the communication and exchange of professional opinions, suggestions, and

further improvements during the development process. When possible, fast iterations are used to improve the product, process, or service. The group of these people is highly dedicated to fulfilling the mission they are assigned to, which also creates strong intrinsic motivation in each one of them.

In our survey with directors, we wanted to see whether there is always a manager assigned to lead the development process, from the beginning to its final step. We asked directors to evaluate the assertion "*We develop new products/services through the process led by a manager*". A large part of the directors was indecisive about the assertion (26.5%), by choosing the option "neither agree nor disagree". Still, almost half of the directors (49.4%) agreed their companies do develop new products/services through a process led by a manager, among them 10% of them strongly agree, 22% mostly agree, and 17.4% slightly agree with the statement.

Only 24% of directors claimed that they do not develop new products/services through a process led by a manager, meaning there is no manager responsible for the development process. The role of the manager in the development process is important, and in order to make strategic changes the agreement of the manager is requested. If manager is not present in some form, we assume there is no real research and development going on in the process, and the final product has probably been specified in advance, before the working process, or with only minor changes taking place.

Chart 7.6: The percentage of the design companies in Slovenia where leading of the development process of new products/services is the manager's duty - evaluation of the statement Q6 "*We develop new products/services through a process led by a manager*"



Directors should be informed about the development process and whether there is a manager responsible for leading it. So the share of uncertainty and unwillingness to choose a positive or negative standpoint regarding the presence and responsibility of a manager could be also explained as a lack of development processes. So, if there is no development process, consequentially there is also no manager responsible for leading it. Also, the percentage of directors choosing the statement of not agreeing to have a manager responsible for the development process is possibly related to the percentage of those who are not very innovative, and those that only copy the final product/service of other companies by changing its design.

7.3.1.7 The project manager is responsible for directing the next step in the moments of ambiguity in the development process

We are interested in the development process, whether there is a project manager, and want to verify whether it is a manager who is responsible for choosing the next step and taking decisions in moments of uncertainty. When creativity and iterations are used in the development process, and the team discusses possible improvements, usually more various and different possibilities are available. In these moments there has to be someone who will

be responsible for choosing the best option, and in this way set the future direction of the development of the outcome. Here a project manager has a delicate role; to take decisions and at the same time to show trust and support to knowledge workers who are usually greater experts in a specific field than the manager himself. For creative workers in the process of their work, the moments of uncertainty and "losing control" are normal and often present because creativity also welcomes mistakes and values them as the possible source of true innovation. These are the ones they can't think of, but can surprisingly appear, when letting the process go out of control.

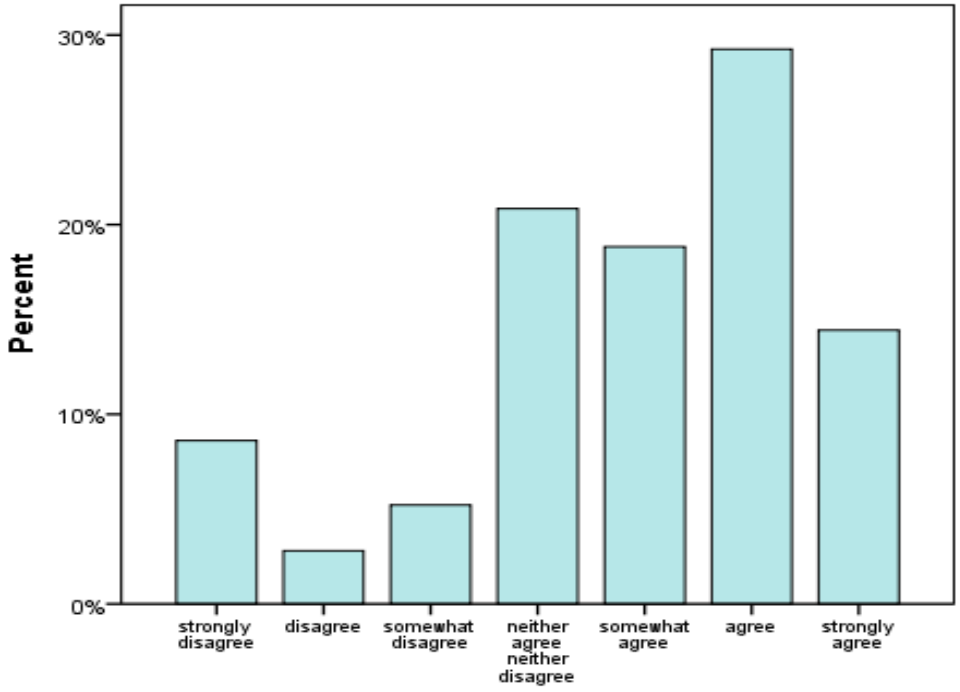
The goal is clear – to create valuable innovations – so we asked directors to evaluate the assertion "*It is the project manager who directs the process when there are moments of ambiguity and uncertainty about the next step in the development process*" to see the attitude in Slovenian design companies. The agreement of directors with the assertion that it is the project manager who directs the process in moments of ambiguity and uncertainty are strongly confirming, with 62.5% of directors agreeing, and among them almost 30% mostly agree that the manager directs the process and also takes decisions. Another 14.4% strongly agree with the statement, and 18.8% of directors slightly agree.

According to directors' estimations, in only 16.6% of design companies the project manager is not responsible, and does not direct future steps in the development process. In a survey, 16.6% of the directors disagreed with the assertion (5.2% slightly disagreed, 2.8% mostly disagreed, and 8.6% strongly disagreed). Therefore, we assume that in 16.6% of the design companies there is no real development process where ambiguity and insecurity take place, or it can be so due to the fact that there is only one person present in the development process (taking into the account the fact that in Slovenia there are mostly micro companies). The other option is if there would be a project manager present that is not involved in insecure moments, which would be rather surprising.

Another question in the director survey was whether their company has the position of project manager. The survey shows that only 20% of the Slovenian companies do have project managers. This means that other design companies that do not have that position, hire one for the development process. Comparing these findings with the interviews with designers, it is interesting that designers in large part agreed with the assertion that the organisational culture in Slovenian creative industries is not flexible enough, and not

supportive to proper leadership of the design process (grade 5.17). Designers' opinions are based on their own experiences and expectations, and also limitations they face when participating in the development process. Some designers also lead development processes themselves, because design management is known in Slovenia, and there are companies who give the role of leading the development process to designers. So, the statement can be their own experience in the design/development process (Murovec et al. 2012, 48–63).

Chart 7.7: The percentage of design companies in Slovenia where it is the project manager's duty to direct the next step in moments of ambiguity during the development process – evaluation of the statement Q7 "*In moments of ambiguity and uncertainty about the next step in the development process, it is the project manager who directs the process*"



7.3.1.8 The support of a leader encourages and enables members of the development team to freely express their ideas and creativity during the process

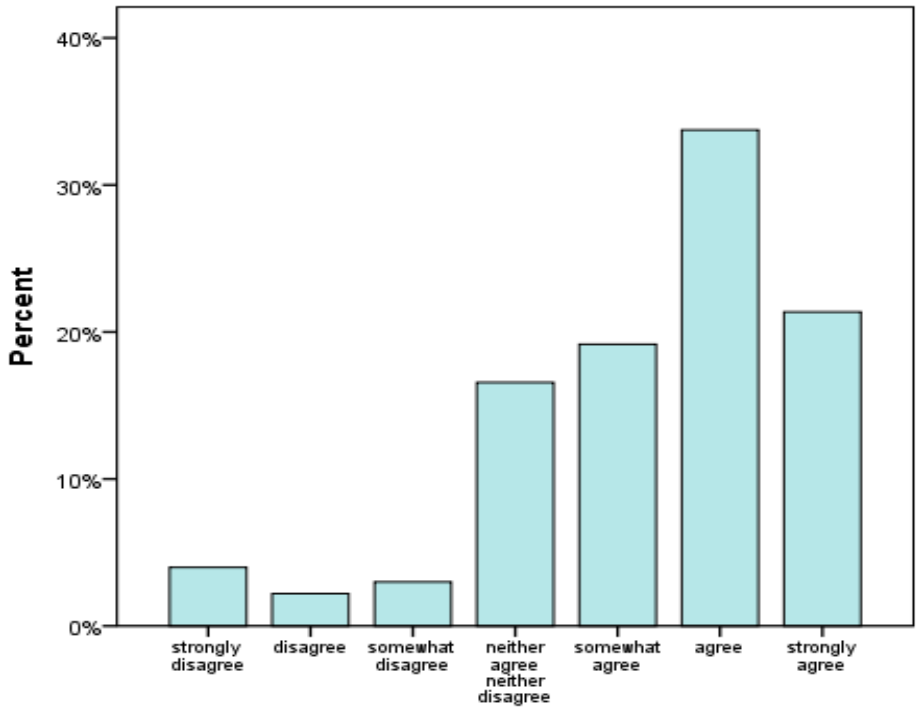
Among the crucial qualities of Artful Making are a free and open exchange of ideas, knowledge, and suggestions. This is followed by common trying and testing of new ideas and improvements of the prototype. The team needs the support and trust of a project manager so that members can freely "practice" their creativity, allow ideas to flow, and encourage each other to dare to take risks and make mistakes without fear of judgment; have

the freedom to experiment, try new prototypes, improve through new ideas, and then try it again and again, while it becomes extraordinary. The leader of the team is there to foster the exchange of ideas and advice, and the culture on the team where knowledge is freely disseminated among the team members. In order to test the support given to team members in the Slovenian creative industry, as well as the level of their freedom to express ideas and creativity, we asked directors to evaluate the statement "*The leader of the team supports members and gives them enough space to freely exchange their ideas and express creativity*". According to the results, directors estimate that around three quarters (74.3%) of design companies in Slovenia do support the members of the team in expressing their ideas and creativity, with 21.4% of the directors who strongly agree with the statement, 33.7% who mostly agree, and another 19.2% who slightly agree with the statement.

A relatively small share of directors – 9.2% assumed that their project managers do not support the team members in freely expressing their ideas and creativity (among them 3% who slightly disagree, 2.2% of directors who mostly disagree, and another 4% who mostly disagree with the statement). Among these 9.2%, we assume there is no real creativity on the team and they are probably closer to industrial production, where specifications and the final products are known in advance. Another 16.6% of directors answered that they "neither agree nor disagree" with the statement.

According to these results about 75% of the directors of Slovenia design companies assume that their companies do have creativity and freedom in their development process, which is the opposite opinion of the designers previously mentioned, where they expressed the lack of flexibility in Slovenian organisational culture.

Chart 7.8: The shares of the design companies regarding the leaders' support of members of the team in freely expressing their ideas and creativity during the process – evaluation of the statement Q8 "*The leader of the team supports the members in freely expressing their ideas and creativity*"



7.3.1.9 Importance of cooperation, teamwork, and the exchange of ideas and suggestions of each team member in the development process

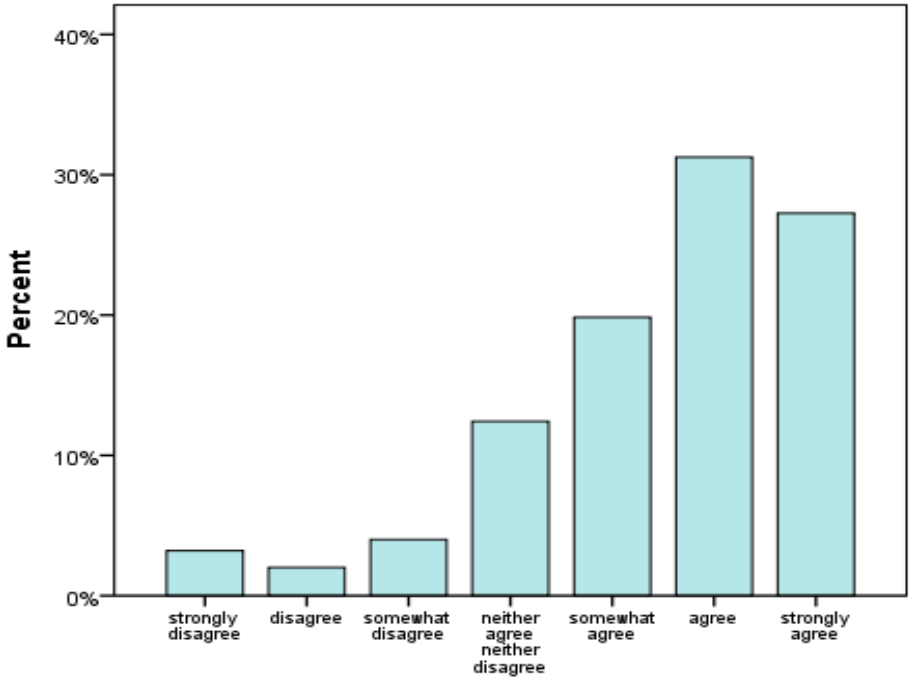
Another important principle of Artful Making is cooperation and the exchange of knowledge and ideas on a creative team. This is one of the crucial places where creativity is practiced, and where prototyping through the exchange of expert knowledge is refined. When various repairs according to suggestions from the members of the team are merged and tested in prototypes, they can be further improved and repaired to be tested again. It is a process where experts constantly exchange ideas, inspirations, novel outcomes, mistakes, and improvements; it is a way great minds can form amazing and new valuable outcomes together. The role of the manager is to lead the conversation and promote true cooperation. We wanted to get directors' estimations and see whether in their company "*The leader of the team supports cooperation and exchange of ideas, opinions, and suggestions of the team members (teamwork)*". With this assertion, we wanted to see to what extent this principle of

Artful Making is practiced in Slovenian design companies, and to what extent people are willing to subordinate for the realisation of the common vision and goal they should develop together throughout the process.

A majority of directors (78.4%) agreed with the claim that in their company the leader of the team encourages cooperation and teamwork. More than a quarter of directors (27.3%) strongly agree with the claim, and 31.3% said they mostly agree that in their company the leader of the team supports cooperation and exchange of ideas, opinions, and suggestions of the team members (teamwork), while 19.8% of them slightly agree with the statement.

Approximately 12% of directors were indecisive about the level (or existence) of support of the leader of the team toward cooperation and exchange of ideas in the team – between encouraging and not encouraging cooperation. Still, there were 9.2% of directors who claimed that in their companies the team does not practice cooperation and exchange of knowledge, with 4% of them slightly disagreeing, 2% mostly disagreeing, and 3.2% strongly disagreeing with the statement). Still, all together the estimations of directors about the attitude in their companies towards cooperation, teamwork, and exchange of knowledge are rather positive and promising.

Chart 7.9: Agreement of directors with the statement that the leader is being responsible for supporting cooperation, teamwork, exchange of ideas and suggestions of each team member in the development process – evaluation of the statement Q9 "The leader of the team supports cooperation and exchange of ideas, opinions, and suggestions of the team members (teamwork)"



In our survey, directors were also asked about the involvement of top management in the different stages of the development process (question 15-2). Only 6.9% of directors estimate that in their company top management is not involved in the process of technical improvements and testing. According to the results of the survey with directors, 8.1% believe it is rarely involved, 27.5% stated it is sometimes involved, and 31.4% estimate it is strongly involved. Even 26.1% of directors stated that top management plays a crucial role in the process of technical improvements and testing.

Their involvement means they show interest and support for testing and improvements during the process, which also allows larger changes, financial support, approval, and thus opens doors for real innovations (Murovec et al. 2012, 215).

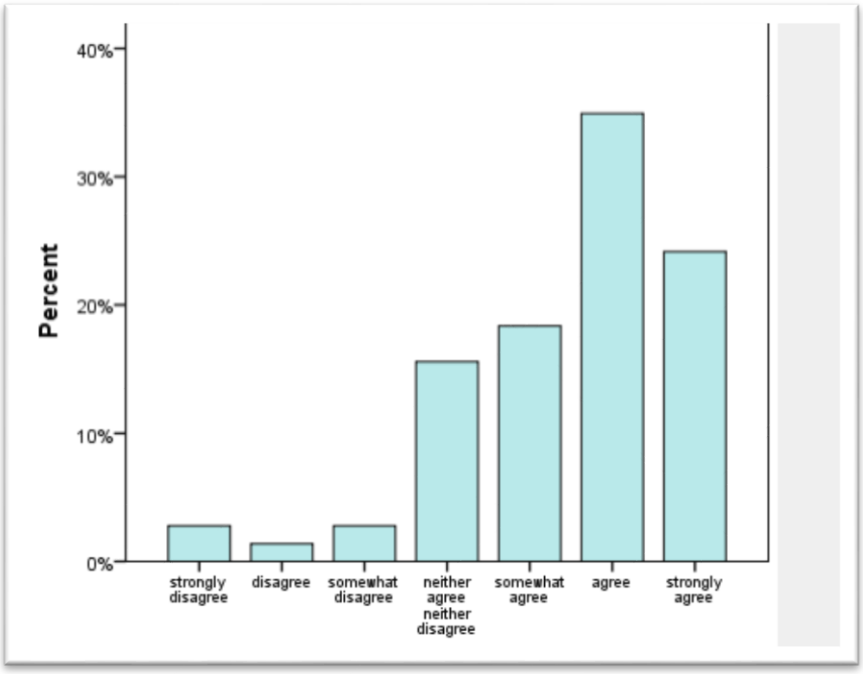
7.3.1.10 Welcoming unsuccessful ideas and unexpected events in the research and development process as a usual way toward improvement of the final outcome

For a sequential process it is known there are strict standards and specifications of the final product/process/service. Anytime the process doesn't unroll according to plan or something unplanned happens, it is taken for a mistake, it is wrong, and is perceived as negative. Consequently, some managers are still used to seeing mistakes and failures as they are called, while when working with creative workers the nature of their work is different and so-called mistakes and "accidents" – the unplanned events, results, and surprises – are seen as an occasion when something great can be formed, something unplanned, but it can be valuable and innovative. It is very important that creative workers are not criticised, or seen as incapable or incompetent, because that would inhibit their creativity.

In order to learn about the standpoint of directors in the Slovenian design industry regarding that subject we asked them about the extent to which they agree or disagree upon the assertion "*Mistakes, failures, and unexpected events/outcomes in the research and development process are a necessity and a way toward improvement of the final outcome*". According to the assessment, the majority of directors, 77.5%, welcome unsuccessful ideas and unexpected events during the research and development process – among them 24.2% strongly agree with the assertion, 34.9% of them mostly agree, and 18.4% slightly agree with the assertion. Among directors, 15.6% of them were indecisive – "neither agree nor disagree" whether in the process of research and development unsuccessful ideas and unexpected ideas are a part of the process. A small percentage, 7% of directors all together, do not agree with the statement – among them 2.8% slightly disagree, 1.4% mostly disagree, and 2.8% of them strongly disagree.

Based on that we assume that directors mostly understand the creative process, and do know that accidents and failures are a normal part of that process (see Chart 7.10). This indicates they do support innovativeness, and do make an effort by taking concrete steps that can lead towards production of innovative outcomes.

Chart 7.10: Attitude of Slovenian design companies regarding welcoming unsuccessful ideas and unexpected events in the research and development process as a usual way toward improvement of the final outcome – evaluation of the statement Q10 "Mistakes, failures, and unexpected events/outcomes in the research and development process are a necessity and a way toward improvement of the final product/service"



To additionally evaluate this statement, we will compare it to the statements from the survey with designers, where 45.5% of designers said they are already integrated in the development process at the level of preparing the suggestion for the concept proposal. While 12.7% of them claimed they are only included in the development process of new products/services in the testing phase, 14.5% of designers stated they are included in the phase of marketing. Only 12.7% of designers said they don't cooperate in the development process at all (Murovec et al. 2012, 49).

Designers and Slovenian design industry

The results of the surveys with the directors of Slovenian design companies and also with designers show one quarter of the companies have no experience with design services at all, while almost 40% of the companies in the last three years didn't use designers' services.

The same subjects were addressed first in the interviews with designers, and later in the survey with designers who cooperate with Slovenian design industries, with the intention to

further analyse the statement. The interviews conducted with designers showed quite different opinions on some subjects. The designers exposed as problematic issue the fact that "*Slovenian companies are usually in the role of subcontractor and are not developing their own final products/services*". The majority of designers – 83.3% of them – see this as some kind of problem, while 42.6% of those see it as a crucial problem. Only 1.9% of designers don't really see a problem in not developing their own final products. Another 14.8% of designers stayed indecisive when evaluating this statement. Designers also evaluated the role of subcontractors of numerous Slovenian design companies with the mean grade of 5.89, on a scale from 1 to 7 (1 – not a problem, 7 – a key problem) (Murovec et al. 2012, 51–177).

Not producing final products/services can be interpreted in different ways and doesn't necessarily present a problem because they can be also very successful in producing products/services for other companies and being competitive and innovative at the same time. Still, on a national level it is good and valuable to have design companies that produce final outcomes with their own brand because that would also represent promotion for the country, and at the same time stimulate the development and success of other Slovenian design companies.

Survey results with designers pointed to another issue, that design is not understood as an integral part of the product development process. Survey respondents (designers) evaluated that as a big problem on a scale from 1 - 7 (7 being a key problem), with the average grade being 6.11 (Murovec et al. 2012, 51), while at the same time the results of the survey with directors show that three quarters of Slovenian design companies' directors find innovativeness important to a certain degree.

Secondly, designers were also asked about the sufficiency of investment of design companies to development of their own identity, and to evaluate the statement *"Slovenian design companies do not invest sufficiently into the development of their own identity, that is recognisable on the market*". The survey results indicate that Slovenian design companies do not invest enough in the development of their own identity and brand. Designers who cooperate with Slovenian design companies see the fact that companies do not invest enough in the development of their own identity recognisable on the market, as a problem. More than half (63.3%) see it as a crucial problem, while another 25.4% see it as a problem. This

means that 89.7% of the designers see it as a problem, with a high average grade of 6.36. We didn't go deeper into this subject of building the name, brand, and identity in our dissertation, even though we are aware that it would present additional advantage on the market. We assume there are couple of reasons Slovenian design companies do not invest properly in development of a brand, or at least more than they do at the moment. Among other reasons are also insolvency due to economic crisis, lack of the political support on the national level, and potentially the optimal support of creative workers in their creative processes (Murovec et al. 2012, 178).

Another identified problem in the survey with designers is that too many companies are satisfied with being competitive on the basis of the price (33.3% - valid percent), rather than on the basis of the quality and the added value of the product/service, functionality, innovativeness, differentiation, or uniqueness (Murovec et al. 2012, 46).

Among Slovenian design companies, only 7% of the companies perceive design of strategic importance, and only 13% of the companies have a manager leading the team through the entire development process of new products/services. The survey indicates that 39% of the participants in the survey do not include designers in their process, while 41% only include designers in certain steps of the development process. At the same time the results of the research (Murovec et al. 2012, 64–70) suggest that companies that do have a manager directing and leading the development process, and include design in the process, are more successful – more profitable, have a bigger growth of market share and revenue growth than their counterparts that don't. The frequency of use of design is also related to the main activity of the industry, where it is mostly used in information and communication activities (up to 88%), around 70% in professional, scientific, and technical activities, while for example in civil engineering design was used only 37.5%, which is also related to the specifics of their activities.

Comparing the situation in Slovenia to the results of the survey conducted by the European Commission on design and its connection to innovativeness proves similarities. The European Commission's survey proves it is beneficial for companies to invest in design. The results show that companies which invest in design are more innovative, more profitable, and grow faster compared to the companies not investing in design (European Commission 2009). Already in the section 7.2 and Figure 7.4, we have shown how much

successful European countries, in order to be innovative, invest in research and development, including also cooperation with designers. This could still improve in Slovenian design companies, according to the results of our study.

On the national level, 15 of the 28 EU Member States have design included in their innovation policy: Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Greece, Ireland, Italy, Latvia, Poland, Slovakia, Slovenia, Spain, Sweden, and the UK (SEE 2015, 25). Slovenia has design included in its innovation policy, and so it does pay attention to its role in the industry. Still, the results of our survey show there is a gap between the implementation of this policy in practice. Further steps are to be taken with paying attention to the importance of the development process on the level of giving knowledge workers the trust and space to practice their creativity for implementing their knowledge. Moreover, when possible companies must allow design to play a part of the development process so specific knowledge and creative thinkers can create together by prototyping improved and developed outcomes with an added value to gain patents that can be beneficial and profitable for the company.

Miha Klinar, co-owner of one of the most successful and awarded design companies in Slovenia, cooperates with numerous Slovenian design companies. He stresses a lack of viewing the field of creative industries as an economic subject on the national political level, and the corresponding lack of support for it. Consequently, many creative industries don't deal optimally with R&D and don’t reach their full potential. Of course, there are also some respected, successful, and innovative companies with success stories in the Slovenian design industry which do invest in the development of their own identity, are recognisable on the market, and are innovative on a regular basis. To mention just a few, there is Elan, Trimo, Alpina, and Gorenje. For example, a good and successful example is Gorenje, which is one of the leading European home appliance manufacturers. Gorenje encourages research and development, and builds its name and brand. They stress the importance of developing novel products. They know that due to unique, recognisable, and user-focused design they stand out among their competitors. They are based on the strategy that promotes global growth, the development of innovative products, and premium trademarks. Their appliances have innovative functions and perfective design, which drive the growth and profitability of the

company. They are the winners of the Red Dot award[16] (German award for good design from the standpoint of high technological and consumer standards) for innovativeness in design. They see it as a result of successfully bringing their vision to life to become the best in their field in the world in innovations – which is based on design (Gorenjegroup 2016).

7.3.2 Relationships between the importance of innovativeness, use of Artful Making principles and methods, and the economic and performance indicators

In this section we further analyse our survey questions and assertions of directors of the Slovenian design companies, related to the importance of innovativeness and the use of specific principles and methods characteristic to Artful Making. These will help us to test the proposed hypotheses by applying the bivariate analysis. Using Pearson's correlation we will measure the association of our own battery of questions to see how the importance of innovativeness in the company and the use of specific Artful Making principles and methods correlate with directors' evaluations of the different variables connected with the success and profitability of their companies.

Crosstabs regarding the size of the company show that importance of innovativeness is relatively similar regarding the size of the companies (micro, small, and medium), indicating that there are no larger deviations based on the size of the company, with the exception regarding the advantageousness to be innovative in the company, where 10.57% of directors of the micro companies strongly agreed on the statement, while in small only 1.43%, and in medium companies no one strongly agreed on the statement that it is advantageous to be innovative (see Appendix F: Q1, Q2, and Q3).

[16] ***The Red Dot Award*** *"*is German and they perceive awarding good design of one of the most demanding European markets where design is involved in all commercial and institutional projects. At the same time, this is their way of promoting their international economic role. Slovenian competitiveness is based on mastering the technological processes; hence companies traditionally pay more attention to these factors. Harder to recognise and accept are the altering demands of the end-user. Also, they have difficulties responding to competition and market changes. When it comes to considering these criteria regarding the product in a more comprehensive way, design is vital. Firms whose management understand this are more successful" *(Gorenjegroup 2016).*

Based on the size of the company, we also identify similarities regarding copying. Analysing the five different principles of Artful Making compared to the size of the company, in micro companies (fewer than 10 employees), we identify slightly lower use of individual principles (yet still present) which we believe is connected with the small number of employees and possibility that a very small team doesn't always need to clearly set a team manager to lead the creative process, since all the members are deeply involved and equal during the process, even if the director of the company is personally involved (see Appendix F: Q6 – Q10). We also identify the highest percentage of use individual principles of Artful Making in medium companies (higher than in small companies).

For economic and performance indicators, we will use the data obtained in the same survey with the directors as the one we obtained from our battery of questions (statements), presenting the situation of the Slovenian design industry. Directors, were also asked to evaluate the questions and scores about the economic and financial situation, and about the performance of their company which we will use to verify the correlations (see Table 8.12). We use the following economic and performance evaluations of directors:

1. *Score the profitability in last three years (2008-2010), compared to your competitors similar age and the level of development (question number 4 in the survey)* - on a scale from 1 to 5.[17]

2. *Score the growth of the market share (2008-2010) (question number 5 in the survey)* - on a scale from 1 to 5.

3. *Score growth/decrease of your income (2008-2010) (question number 6 in the survey)* - on a scale from 1 to 5.

4. *Score the success of your company compared to your competitor companies which are similar age and the level of development*
   - regarding the number of new products/services (question number 12.1 in the survey) - on a scale from 1 to 7.

5. *Score the success of your company compared to your competitor companies which are similar age and the level of development*
   - regarding the number of new products/services that company was the first to present on the market (question number 12.2 in the survey) - on a scale from 1 to 7.

[17] See the survey questions in the Appendix A.

6. *Score the success of your company compared to your competitor companies which are similar age and the level of development*
   - regarding the number of introduced changes in business processes, the company introduced as the first on the market (question number 12.3 in the survey) - on a scale from 1 to 7.

7. *Score the success of your company compared to your competitor companies which are similar age and the level of development*
   – regarding the number of innovations introduced in the administrative system (new procedures, politics, and organisational forms) (question number 12.4 in the survey) - on a scale from 1 to 7.

8. *Score the success of your company compared to your competitor companies which are similar age and the level of development*
   - regarding the use of the newest technological innovations at new products/services (question number 12.5 in the survey) - on a scale from 1 to 7.

9. *What share of income do you invest in development or improvements of products/services? (question number 13.1 in the survey)* - on a scale from 1 to 6.

The general criteria for accepting the hypothesis is a statistically significant difference (2-tailed test) of the Pearson Correlation, and some of the following correlations we will use later to verify our hypotheses. Correlations are presented in the table below.

Table 7.9: Correlations between variables, measuring innovativeness and Artful Making, and the key economic and performance indicators in Slovenian design companies

Economic and performance indicators / Battery of questions about innovativeness and Artful Making		In our company innovativeness is seen as a key factor for success	We strongly encourage innovativeness among all employees	In our company it is advantageous to be innovative	We copy the good ideas from the other companies	We copy products/services from other companies so that we change their design/form	We develop new products/services through the process lead by a manager	When in the moments of ambiguity and uncertainty about the next step in the development process, it is the project manager who directs the process	The leader of the team supports the members in freely expressing their ideas and creativity	The leader of the team supports cooperation and exchange of ideas, opinions and suggestions of the team members (team work)	Mistakes, failures and unexpected events/outcomes in the research and development process make a part of it and a way to the improvement of the final product/service
Ocenite dobičkonosnost podjetja v zadnjih treh letih (2008–2010) v primerjavi z vašimi konkurenti približno iste starosti in stopnje razvoja. *Score the profitability in last three years (2008-2010), comparing to your competitors similar age and the level of development.*	Pearson Correlation	,116**	,173**	,157**	-,017	,002	,054	,079	,040	,044	,074
	Sig. (2-tailed)	,010	,000	,000	,711	,962	,232	,077	,369	,331	,097
	N	500	499	495	488	496	496	496	498	496	498
Ocenite rast tržnega deleža v zadnjih treh letih (2008–2010). *Score the growth of the market share (2008-2010).*	Pearson Correlation	,116**	,165**	,118**	,034	,027	,156**	,106*	,064	,053	,074
	Sig. (2-tailed)	,009	,000	,009	,450	,554	,000	,018	,152	,238	,101
	N	498	497	493	486	494	494	494	496	494	496
Ocenite zmanjšanje/povečanje vaših prihodkov v zadnjih treh letih (2008–2010). *Score growth/decrease of your income (2008-2010).*	Pearson Correlation	,089*	,150**	,092*	,043	,029	,130**	,107*	,071	,099*	,113*
	Sig. (2-tailed)	,046	,001	,041	,344	,514	,004	,017	,112	,027	,012
	N	502	501	497	490	498	498	498	500	498	500
Ocenite … števila vpeljanih novih izdelkov/storitev.	Pearson Correlation	,350**	,314**	,288**	,013	-,012	,373**	,309**	,252**	,261**	,227**

Score …the number of new products/services.	Sig. (2-tailed)	,000	,000	,000	,782	,789	,000	,000	,000	,000	,000
	N	498	497	493	486	494	494	494	496	494	496
… števila novih izdelkov/storitev, ki jih je podjetje vpeljalo kot prvo na trgu (oz. bilo med prvimi podjetji, ki so vpeljala ta izdelek/storitev). *…the number of new products/services that company was the first to present on the market.*	Pearson Correlation	,374**	,327**	,322**	,066	,023	,296**	,279**	,279**	,256**	,241**
	Sig. (2-tailed)	,000	,000	,000	,147	,615	,000	,000	,000	,000	,000
	N	499	498	494	487	495	495	495	497	495	497
… števila vpeljanih sprememb v poslovnih procesih, ki jih je podjetje vpeljalo kot prvo na trgu (oz. bilo med prvimi podjetji). *…the number of introduced changes in business processes, the company introduced as the first on the market.*	Pearson Correlation	,294**	,285**	,292**	,105*	,046	,297**	,276**	,274**	,242**	,190**
	Sig. (2-tailed)	,000	,000	,000	,020	,309	,000	,000	,000	,000	,000
	N	502	501	497	490	498	498	498	500	498	500
… števila novosti v administrativnem sistemu (novi postopki, politike, organisacijske oblike). *…the number of novelties introduced in the administrative system (new procedures, politics, organisational forms).*	Pearson Correlation	,263**	,331**	,275**	,100*	,078	,313**	,283**	,311**	,264**	,208**
	Sig. (2-tailed)	,000	,000	,000	,028	,085	,000	,000	,000	,000	,000
	N	498	497	493	486	494	494	494	496	495	496
… uporabe najnovejših tehnoloških inovacij pri novih izdelkih/storitvah. *…the use of the newest technological innovations at new products/services.*	Pearson Correlation	,344**	,399**	,365**	,101*	,054	,363**	,332**	,232**	,253**	,265**
	Sig. (2-tailed)	,000	,000	,000	,026	,228	,000	,000	,000	,000	,000
	N	500	499	495	488	496	496	496	498	496	498
Kakšen delež prihodkov vlagate v razvoj ali izboljšave izdelkov/storitev?	Pearson Correlation	,331**	,414**	,359**	,019	,050	,276**	,304**	,359**	,321**	,279**
	Sig. (2-tailed)	,000	,000	,000	,676	,267	,000	,000	,000	,000	,000

What share of income do you invest in development or improvements of products/services?	N	501	500	496	489	497	497	497	499	497	499

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

0.09 -> no correlation

0.10-0.29 -> mild correlation

0.30-0.39 -> medium strong correlation

0.40-0.69 -> strong correlation

Since here we are dealing with opinion variables, which give us information about what our research objects think, estimate, or believe about something, we can't expect large correlations. Therefore, for our interpretation we set the level of correlation as marked above for the interpreting the level of correlations.

7.3.2.1 Relationship between importance of innovativeness, compared to the key economic and performance indicators

Table 7.9 shows that the variable 'innovativeness is seen as a key factor of the company's success' statistically significantly and positively correlates with the number of new products/services (R= 0.350, p= 0.000), and there is also medium correlation with the number of new products/services that company was the first to present on the market (R= 0.374, p= 0.000). There is also a medium strong correlation of importance of innovativeness with the use of the newest technological innovations at new products/services (R= 0.344, p= 0.000), and the share of income the company invests in development or improvements of products/services (R= 0.331, p= 0.000).

A slightly smaller – mild correlation – exists with the number of introduced changes in business processes the company introduced as the first on the market (R= 0.294, p= 0.000), and with the number of innovations introduced in the administrative system (new procedures, politics, organisational forms) (R= 0.263, p= 0.000).

There is only mild correlation with innovativeness, compared to the score the profitability between 2008-2010 compared to competitors of similar age and the level of development (R= 0.116, p= 0.010), the score of the growth of the market share between 2008-2010 (R= 0.116, p= 0.009), and while there is no significant correlation with the score of growth/decrease of the company's income between 2008-2010 (R= 0.089, p= 0.046).

7.3.2.2 Relationship between encouraging the innovativeness among the employees, and the key economic and performance indicators

The correlation between the variable encouraging the innovativeness among all the employees, compared to the variables measuring different economic and performance indicators of the Slovenian design companies are very similar to the ones in the previous section 7.3.2.1 (to the importance of the innovativeness). There is one remarkable difference in the correlation between the encouraging the innovativeness among all the employees, and the share of income the company invests in development or improvements of products/services where there exists a strong positive correlation (R= 0.414, p= 0.000).

The strong positive correlation allows us to claim that a relationship between encouraging the innovativeness among all the employees, and the companies investing in the development or improvements of their products/services does exist. Encouraging and stimulating the

innovativeness in the company ask for additional investments, and this strong correlation proves it to be true. At the same time, additional investments in the research and development process, in innovativeness, and the innovative environment in the company result in better innovation outcomes.

In comparing the relationship between encouraging the innovativeness among the employees to other variables, there is a medium strong correlation in the relationship to the success of the company compared to their competitors which are similar age and the level of development – regarding the number of new products/services (R= 0.314, p= 0.000). Another medium strong relationship is in relation to the success of the company compared to their competitor companies which are similar age and the level of development – regarding the number of new products/services that company was the first to present on the market (R= 0.327, p= 0.000). There is also a medium strong relationship to the success of the company compared to their competitor companies which are similar age and the level of development regarding the number of innovations introduced in the administrative system (new procedures, politics, and organisational forms) (R= 0.331, p= 0.000), and also to the success of the company compared to their competitor companies which are similar age and the level of development – regarding the use of the newest technological innovations at new products/services (R= 0.399, p= 0.000).

Meanwhile, there is a mild correlation between encouraging the innovativeness among all the employees, and the success of the company compared to their competitor companies which are similar age and the level of development – regarding the number of introduced changes in business processes, the company introduced as the first on the market (R= 0.285, p= 0.000). There is also a mild correlation between encouraging the innovativeness among all the employees and the score of the profitability between 2008-2010 compared to the competitors of similar age and the level of development is mild (R= 0.173, p= 0.000), and also between the score of the growth of the market share between 2008-2010 (R= 0.156, p= 0.000), and the score of growth/decrease of the company's income between 2008-2010 (R= 0.150, p= 0.001), which are all only mild correlations with encouraging the innovativeness among the employees.

7.3.2.3 Relationship between being advantageous to be innovative in the company, compared to the key economic and performance indicators

The variable 'in our company it is advantageous to be innovative' has quite similar correlations and p-values with the variables measuring profitability, the number of novel products/services introduced, and the share of income investing in the development of novel products/services,

as the other two variables related to innovativeness – 'innovativeness is seen as a key factor of success,' and the second variable about strongly encouraging innovativeness among all employees.

To describe and present the detailed correlation values, there is a medium strong correlation between being advantageous to be innovative in the company, compared to the number of new products/services that the company was the first to present on the market (R= 0.322, p= 0.000), with the use of the newest technological innovations at new products/services (R= 0.365, p= 0.000), and with the share of income the company invests in development or improvements of products/services (R= 0.359, p= 0.000).

We conclude that there exists a statistically mild correlation between the companies where it is advantageous to be innovative and the number of new products/services introduced (R= 0.288, p= 0.000), and also with the number of introduced changes in business processes the company introduced as the first on the market (R= 0.292, p= 0.000) and with the number of innovations introduced in the administrative system (new procedures, politics, organisational forms) (R= 0.275, p= 0.000),

A less significant (only mild) correlation also exists when comparing the score to the profitability between 2008-2010 compared to the competitors of similar age and the level of development (R= 0.157, p= 0.000), the score of the growth of the market share between 2008-2010 (R= 0.118, p= 0.009), and there is no significant correlation with the score of growth/decrease of the company's income between 2008-2010 (R= 0.092, p= 0.041).

7.3.2.4 Relationship between copying good ideas from other companies, or copying products/services by changing their design/form, and the key economic and performance indicators

We will examine these correlations to economic and performance indicators together because of the results and similarities of our correlations. Also, the correlations in the table show they both stand out from other correlations, by having much lower correlations compared to all the other correlations, exposing only some mild correlations, while otherwise there exist mostly no correlations at all, and other variables have numerous medium or strong correlations to the variables of innovativeness and principles and methods of Artful Making.

Two variables regarding the copying, the copying of good ideas from other companies, and the copying products/services from other companies by changing their design/form, both

investigate the subject of copying success of other companies, rather than choosing the possibility of developing good ideas and the final product/outcome in their own development process, from the beginning – generating a good idea – to the final stage of designing it. Though the process is not the same in copying good ideas, and in copying the products/services from other companies which bring very different results, it is interesting that the correlations and the results suggest similarity. It might be due to the misunderstanding of the question among directors, or due to some other unidentified factor, because experience and literature makes a difference among the two, and also sees great potential in using the good (the best) ideas of others and turning them into innovations as a common way of developing processes. For example, Steve Jobs was also known for using innovative ideas and further developing them. Still, some correlations do exist only compared to copying good ideas from the other companies.

This copying good ideas is mildly related to the number of introduced changes in business processes the company introduced as the first on the market (R= 0.105, p= 0.020), and is similarly mildly related to the number of innovations introduced in the administrative system (new procedures, politics, organisational forms) (R= 0.100, p= 0.028), and to the use of the newest technological innovations at new products/services (R= 0.101, p= 0.026). There exists no correlations to these variables compared to copying products/services so that we change their design/form.

Both types of copying show no significant nor even mild correlation to the score of the profitability between 2008-2010 compared to the competitors of similar age and the level of development (R= -0.017, p= 0.711 and R= 0.002, p= 0.962); and also to the score of the growth of the market share between 2008-2010; the score of growth/decrease of the company's income between 2008-2010; the number of new products/services; the number of new products/services that company was the first to present on the market; or the share of income the company invests in development or improvements of products/services.

There is also no correlation to the copying of products/services by changing their design/form, and also no relation to the following variables – the number of introduced changes in business processes the company introduced as the first on the market (R= 0.046, p= 0.309), to the number of innovations introduced in the administrative system (new procedures, politics, organisational forms) (R= 0.078, p= 0.085), and no relation to the use of the newest technological innovations in new products/services (R= 0.054, p= 0.228).

The relationships between the five individual principles and methods of Artful Making, and the key economic and performance indicators

In next sections (7.3.2.5 – 7.3.2.9) we examine and test the relationships between the evaluation of the use of individual principles, the methods of Artful Making, and the economic and performance indicators of the company.

7.3.2.5 Relationship between the development of new products/processes or services through the guided process led by a manager, and the key economic and performance indicators

The development of new products/services through the guided process led by a manager (Artful Making principle no.1) is in significant and positive medium strong correlation to the number of new products/services (R= 0.373, p= 0.000), and there is medium strong correlation also to the number of innovations introduced in the administrative system (new procedures, politics, organisational forms) (R= 0.313, p= 0.000), and the use of the newest technological innovations at new products/services (R= 0.363, p= 0.000).

A somewhat smaller – medium correlation, exists between the development of new products/services through the guided process led by manager, and the number of new products/services that company was the first to present on the market (R= 0.296, p= 0.000), and there is also a mild correlation to the number of introduced changes in business processes the company introduced as the first on the market (R= 0.297, p= 0.000), and the share of income the company invests in development or improvements of products/services (R= 0.276, p= 0.000).

The development of new products/services through the guided process led by a manager is less significantly – mildly – correlated to the growth of the market share between 2008-2010 (R= 0.156, p= 0.000); and the growth/decrease of the company's income between 2008-2010 (R= 0.130, p= 0.004). At the same time, there is no significant correlation with the profitability between 2008-2010 comparing to the competitors of similar age and the level of development (R= 0.054, p= 0.232).

7.3.2.6 Relationship between the variable manager directing the development process in moments of ambiguity and uncertainty, and the key economic and performance indicators

The variable presence of the manager directing the development process in moments of ambiguity and uncertainty (Artful Making principle no.2) is in significant and positive medium strong correlation to the number of new products/services introduced (R= 0.309, p= 0.000), and also to the use of the newest technological innovations at new products/services (R= 0.332, p= 0.000), and to the share of income the company invests in development or improvements of products/services (R= 0.304, p= 0.000).

The correlation is slightly smaller – mild correlation – to the number of new products/services that company was the first to present on the market (R= 0.279, p= 0.000), and also to the number of introduced changes in business processes the company introduced as the first on the market (R= 0.276, p= 0.000), and the number of innovations introduced in the administrative system (new procedures, politics, organisational forms) (R= 0.283, p= 0.000). The development of new products/services through the guided process led by a manager also has a mild positive correlation to the growth of the market share between 2008-2010 (R= 0.106, p= 0.018); and to the growth/decrease of the company's income between 2008-2010 (R= 0.107, p= 0.017). Still, there is no significant correlation with the profitability of the company between 2008-2010, compared to its competitors of similar age and the level of development (R= 0.079, p= 0.077).

7.3.2.7 Relationship between the leaders' support of the members of the team to freely express their ideas and creativity, and the key economic and performance indicators

The leader supporting the members of the team to freely express their ideas and creativity (Artful Making principle no.3) is also in significant and positive correlation with numerous variables, like for example there is a medium strong correlation to the share of income the company invests in development or improvements of products/services (R= 0.359, p= 0.000), and also to the number of innovations introduced in the administrative system (new procedures, politics, organisational forms) (R= 0.311, p= 0.000).

A slightly smaller, but still significant mild correlation exists related to the number of new products/services (R= 0.252, p= 0.000), to the number of new products/services that company was the first to present on the market (R= 0.279, p= 0.000), to the number of introduced changes

in business processes the company introduced as the first on the market (R= 0.274, p= 0.000), and to the use of the newest technological innovations at new products/services (R= 0.232, p= 0.000).

With the other economic and performance indicator variables there are no significant correlations found compared to the variable the leader supporting the members of the team to freely express their ideas and creativity. So there is no significant correlation with the leader supporting the members of the team to freely express their ideas and creativity, and the profitability between 2008-2010 compared to competitors of similar age and level of development (R= 0.040, p= 0.369), and also with the growth of the market share between 2008-2010 (R= 0.064, p= 0.152); and the growth/decrease of the company's income between 2008-2010 (R= 0.071, p= 0.112).

This is the only variable among the principles of Artful Making that is not in significant correlation with the growth/decrease of the company's income between 2008-2010 (R= 0.071, p= 0.112), while all the other principles of the Artful Making are in the correlation with the growth /decrease of the company's income between 2008-2010. Still, the other significant and positive correlations with the number of new products/service and changes exist, and also with the share of income invested in the development or improvements of products/services.

7.3.2.8 Relationship between the leaders' support of cooperation and exchange of ideas in teamwork, and the key economic and performance indicators

The variable 'the leader of the team encouraging in the team cooperation, teamwork, and exchange of ideas, opinions, and suggestions' (Artful Making principle no.4), is significantly and positively correlated with a medium strong correlation only to the share of income the company invests in development or improvements of products/services (R= 0.321, p= 0.000),

There is a significant and medium correlation to the number of new products/services (R= 0.261, p= 0.000), the number of new products/services that company was the first to present on the market (R= 0.256, p= 0.000), to the number of introduced changes in business processes the company introduced as the first on the market (R= 0.242, p= 0.000), to the number of innovations introduced in the administrative system (new procedures, politics, organisational forms) (R= 0.264, p= 0.000), and also to the use of the newest technological innovations at new products/services (R= 0.253, p= 0.000).

The variable ‘the leader of the team encouraging the team cooperation, teamwork, and exchange of ideas, opinions, and suggestions’ has no correlation to the growth/decrease of the company’s income between 2008-2010 (R= 0.099, p= 0.027), and also to the leader of the team encouraging the team cooperation, teamwork, and exchange of ideas, opinions, and suggestions, compared to the profitability between 2008-2010 in the competitors of similar age and the level of development (R= 0.044, p= 0.331), and to the growth of the market share between 2008-2010 (R= 0.053, p= 0.238).

7.3.2.9 Relationship between the leaders’ positive attitude towards mistakes and failures, and the key economic and performance indicators

The leader’s positive attitude towards unsuccessful ideas and unexpected events in the research and development process as a possible way to improve the final outcome (Artful Making principle no.5) is also significantly and positively correlated (mild correlation) to the number of new products/services (R= 0.227, p= 0.000), to the number of new products/services that company was the first to present on the market (R= 0.241, p= 0.000), also to the number of innovations introduced in the administrative system (new procedures, politics, organisational forms) (R= 0.208, p= 0.000), to the use of the newest technological innovations at new products/services (R= 0.265, p= 0.000), and to the share of income the company invests in development or improvements of products/services (R= 0.279, p= 0.000).

A smaller, yet still significant positive (mild) correlation exists with the number of introduced changes in business processes the company introduced as the first on the market, to the leader’s positive attitude toward unsuccessful ideas and unexpected events in the research and development process as a possible way to improve the final outcome (R= 0.190, p= 0.000), and to the score of the growth/decrease of the company’s income between 2008-2010 (R= 0.113, p= 0.012).

No significant correlation exists between the leader’s positive attitude toward unsuccessful ideas and unexpected events in the research and development process as a possible way to improve the final outcome, the profitability between 2008-2010 compared to the competitors of similar age and level of development (R= 0.074, p= 0.097), and also between the growth of the market share between 2008-2010 (R= 0.074, p= 0.101).

7.4 Discussion and Verification of proposed Hypotheses

In the previous section, we presented the results of our survey of directors of Slovenian design companies, where we also used the relevant results and answers of the survey of designers that was conducted in the same larger national research study. In this chapter, we synthesise and analyse the available data from our survey questions with directors, also using statistical programs. We will verify our hypotheses with the obtained results and syntheses by applying bivariate analyses.

We will also describe the present situation in the Slovenian design industry regarding the importance of innovativeness and implementation of specific principles and methods of Artful Making, based on the estimations of directors who participated in our survey. In the final part of the chapter there is a discussion on the results of the survey.

Based on verification of our hypotheses, specifically of the fifth hypothesis (H5), and by using a creative approach in use of all the results, findings, and theoretical knowledge presented, we developed the foundation for a conceptual model for systematically introducing and fostering innovativeness in(to) companies. We believe it can help Slovenian design companies to improve and foster an organisational culture, the management and leadership of innovation processes, and innovativeness itself.

The first two hypotheses: H1: "In the Slovenian design industry the meaning of innovativeness is understood and encouraged", and H2: "The level of importance of innovativeness in the company is associated with the use of Artful Making principles", are important for the overall context of the Slovenian design industry. In the 21st century, which is characterised by a highly competitive and innovative global environment, we assume that innovativeness plays an important role and affects the success of companies in the Slovenian design industry, whether at the present moment they pay attention to the importance of innovativeness or not.

Consequently, we also presume that the awareness of importance of innovativeness is high (with variations), and also that most directors do encourage innovativeness in their companies. The importance of innovativeness and encouraging it among their employees is related to seeing the benefit in being innovative in various ways, as beneficial for the company; as being beneficial for every individual employee involved in the innovative process; and also beneficial for the innovative team developing innovative products/services. We wanted to know more about the attitudes of directors towards innovativeness in the Slovenian design industry

regarding their awareness of the importance of innovativeness regarding their attitude towards encouraging it among all employees, and also regarding appreciating and paying benefits to the ones being successful by being innovative in their company (advantageous). Therefore, we asked directors to evaluate three different statements concerning innovativeness (questions number 1, 2, and 3) to evaluate the level of importance, the level of awareness, and the level of benefit.

Coming from the results of attitudes (awareness of the importance of innovativeness for a company's success, encouraging all the employees to contribute to innovativeness, and allowing employees to experience their innovativeness and contribution as beneficial) of directors towards innovativeness, we further discuss and compare the correlations of these with the specific principles and methods that are known as the core principles of creativity, and at the same time also the principles and methods of Artful Making (our questions number 6-10). We analysed the results by using Pearson's correlation, and tested how and why principles supporting creativity are applied, according to directors, and further use them next to other information, to test the hypotheses H3, H4, and H5.

The final findings and theoretical background will serve us to better illuminate the role of the principles and methods of Artful Making in innovative companies. In the end we test to what level Slovenian managers are equipped to champion innovations (according to the estimations of directors gained in our survey, and our findings). Finally, by using all the information we gained in the research, we create a conceptual model which can help Slovenian design companies to introduce and foster innovativeness and apply Artful Making.

7.4.1 Verification of the proposed hypotheses

Hypothesis 1: In the Slovenian design industry the meaning of innovativeness is understood and encouraged

To study the level of understanding and encouraging the meaning of innovativeness in the Slovenian design industry, we will use data obtained in empirical research (presented in sections 7.3.1.1, 7.3.1.2., and 7.3.1.3.), in addition to other available data. The estimations of directors of the Slovenian design industry, who represent the leadership of the companies, and consequently of the Slovenian design industry, provide valuable insights which we will use to verify Hypothesis 1.

The results (presented in the section 7.3.2.1, 7.3.2.2., and 7.3.2.3.) show that there are significant and positive correlations (mild or medium strong correlations) of the estimations of directors regarding all three innovation variables together (the level of importance of innovativeness in the company, encouraging the innovativeness in the whole company, and advantageousness of being innovative in the company), with all economic and performance indicators as listed below:

- the number of novel products/services,
- the number of new products/services that the company was the first to present on the market,
- the number of introduced changes in business processes the company introduced as the first on the market,
- the number of innovations introduced in the administrative system (new procedures, politics, organisational forms),
- the use of the newest technological innovations at new products/services, and
- the share of income the company invests in development or improvements of products/services.

These results enable us to to reject the null hypothesis (there is no relationship), and conclude that a relationship between the estimations of directors regarding the importance of innovativeness, and ones about the key economic and performance indicators of the company, do exist. These results will help us in further testing hypotheses H1 and H2.

To further explore the meaning and role of innovativeness in the Slovenian design industry, we analysed the answers of the first three questions (estimations). The self-reported awareness (consideration of innovativeness as being important) was relatively high, with 74.4% of respondents agreeing (to varying degrees) with this statement. We further compare awareness of the importance of innovativeness to encourage all employees to be innovative, and to realise the advantage in being innovative.

In the figure below (7.9) we see the estimations on importance and attitude towards innovativeness – verifying it by the attitude towards the awareness of it, encouragement, and benefit. We have chosen these three important indicators that present the different levels of directors' understanding and encouraging innovativeness in their companies and among their employees.

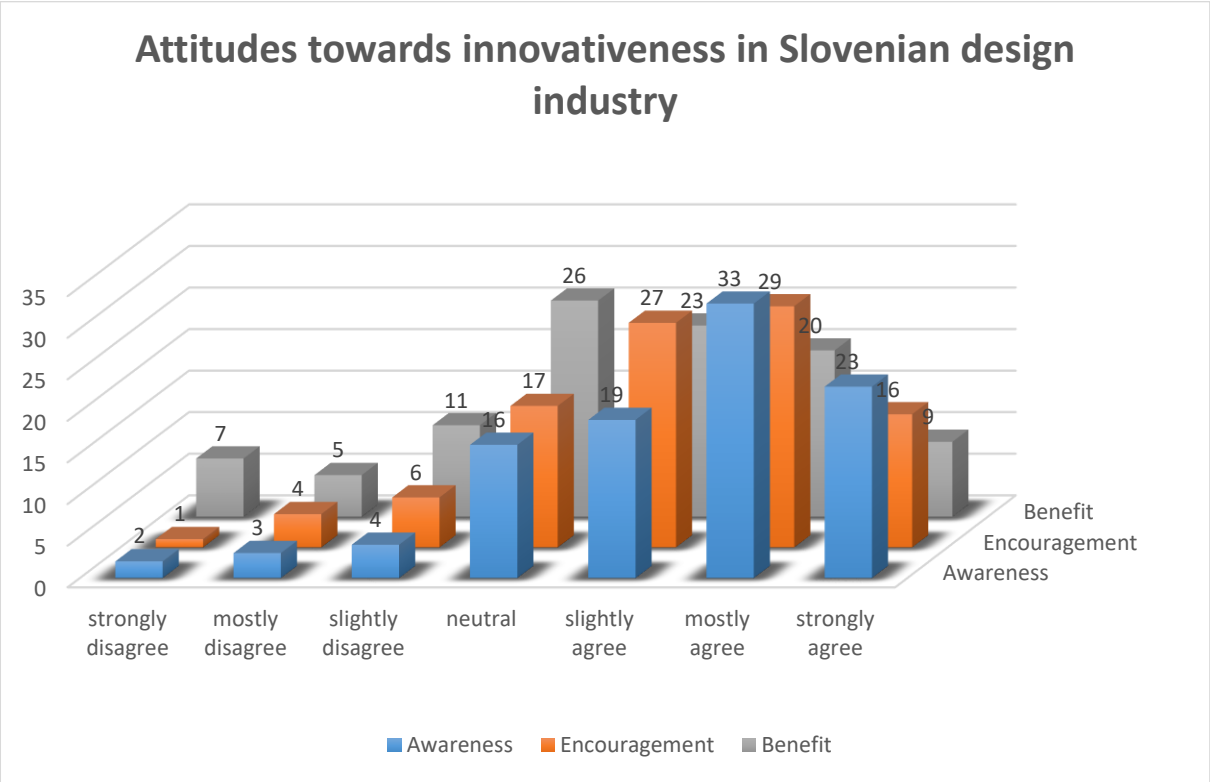
1. Awareness - In our company innovativeness is seen as a key factor for success (our question number 1).
2. Encouragement - We strongly encourage innovativeness among all employees (our question number 2).
3. Benefit - In our company it is advantageous to be innovative (our question number 3).

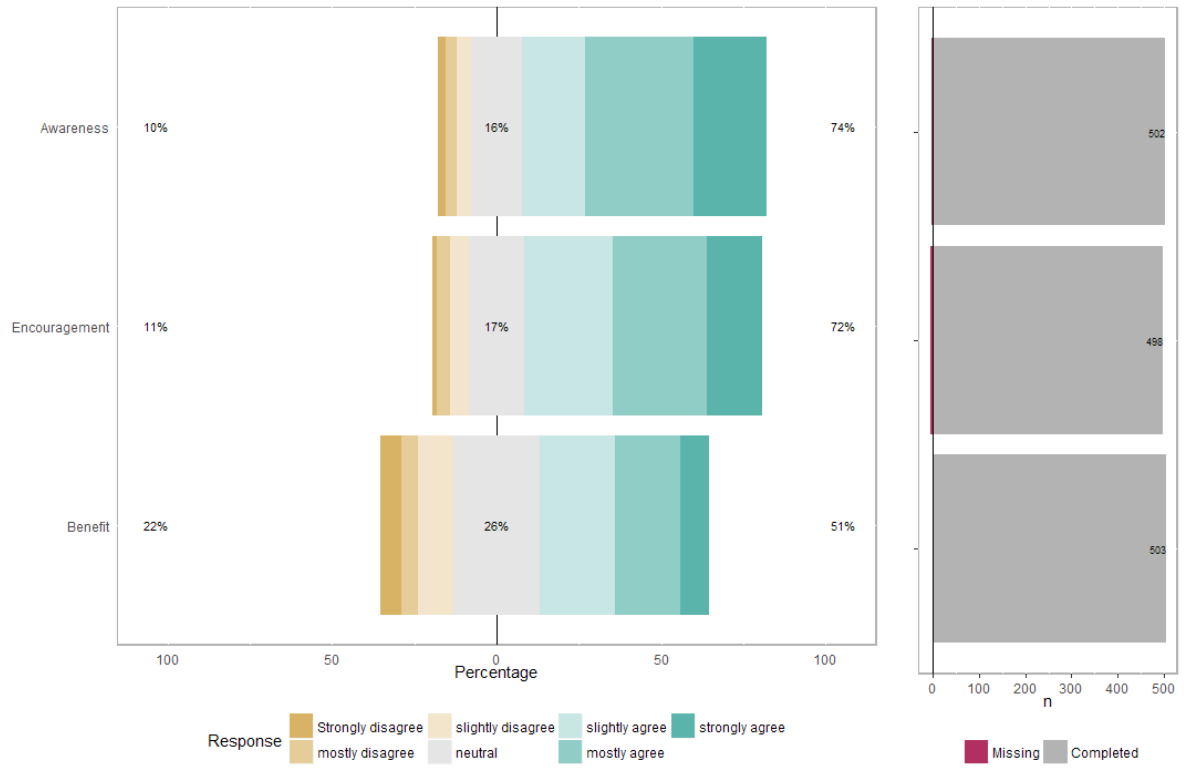
Figure 7.9 shows that opinions regarding the different levels of the importance of innovativeness in Slovenian design industry differ, and that there is no congruity in the three different levels of innovativeness we verified in the survey. We notice the awareness of the importance of innovativeness is very large, and that directors see it as the most important level. Already in the section 7.3.1.1 we interpreted these results in detail, showing that most of the directors (74.4%) see it important to a certain extent – from slightly to mostly agreeing on it, and among them large majority (55.3%) strongly or mostly agree with the statement of seeing innovativeness as a key factor for success. This indicates that the Slovenian design industry and their directors are aware of the importance of innovativeness.

It is interesting to note that the evaluation of the statement "*In our company it is advantageous to be innovative*" showed (in Chart 7.3) that the fewest answers were either strongly for or against (option strongly disagree or strongly agree – together 15.4%), and the percentage of the answers increased the less definitive the answer was. This might indicate that directors were unsure how much innovativeness was actually being encouraged in the company, and it might also indicate to the fact that they subconsciously preferred to project a picture where they and their companies were innovation-oriented, and the importance of innovativeness has a certain place and importance in their companies.

The level of importance of encouragement, and the presence of encouraging innovativeness among all employees is in decline compared to the awareness of its importance. Furthermore, the level of importance of demonstrating and presenting innovativeness as beneficial in any form of benefit is in even stronger decline already from the decrease noticed in encouragement compared to awareness. The level of importance of encouragement we presented in section 7.3.1.2 and interpreted the results, where the majority of directors (72.3%) answered positively to the statement "*In our company we strongly encourage innovativeness of all employees*" with the most of them mostly agreeing with the statement.

Figure 7.9: Three different levels of attitude towards innovativeness in Slovenian design industry according to directors' assessments (for better overview we present a bar chart and a Likert chart of the same Attitudes towards innovativeness in Slovenian design industry)





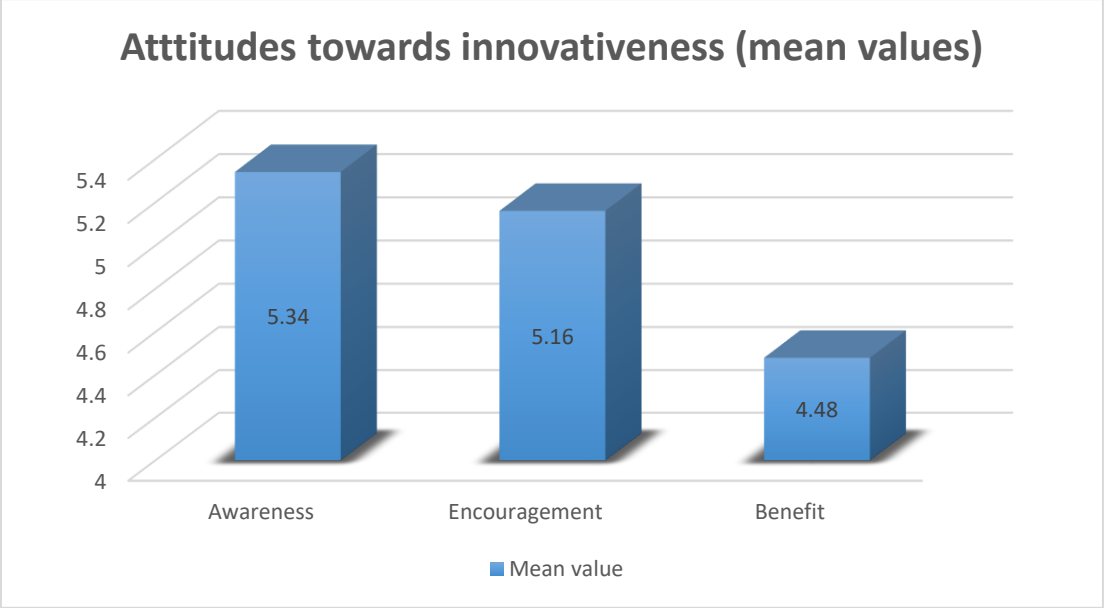
The answers to our first question presents the general attitude and awareness about the importance of innovativeness. The answers to the second and the third questions give additional information regarding the perception of innovativeness in the Slovenian design industry.

First, comparing the evaluations of the first statement to the answers to questions 2 and 3, there is an inconsistency. It is surprising that the strong encouragement in question 2 is not related to the level of presence of benefit in question 3; on the contrary, the results show that there is a remarkable difference from the statement of directors about the encouragement of innovativeness, which is more strongly present than the statement of directors about the benefit of being an innovator (the third question). A similar difference (diminishing) is noticed from question 1 to question 2, meaning that the importance of innovativeness is recognised more and evaluated higher than it is encouraged in practice.

The inconsistency between importance and attitude towards three different levels of innovativeness is seen in Figure 7.10, where we have the mean values of awareness, encouragement, and benefit in the Slovenian design industry.

This difference between a higher importance of 'innovativeness,' middle 'encouragement' and the lower importance of the 'benefit for innovators', illustrates the overall perception of innovativeness in the Slovenian design industry, and the results suggest that awareness of the importance of innovativeness either is not internalised and fully accepted, or else there is an unwillingness or inability to truly commit to it. Let us examine each of the possible explanations to this subject.

Figure 7.10: Mean values of importance of three different levels of innovativeness in Slovenian design industry according to directors' assessments

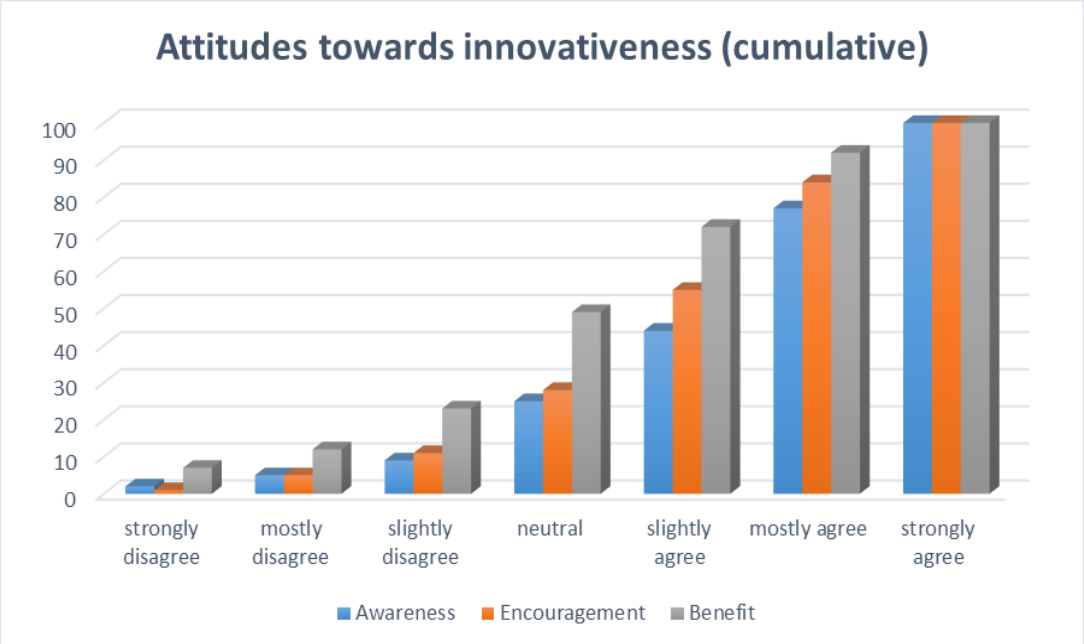


Firstly, there is the possibility that the answers to the first question on importance of innovativeness *(In our company innovativeness is seen as a key factor for success)*, reflect how directors of these companies want to be perceived, or else the attempt to present themselves as the directors leading an innovative company in the eyes of others. However, the difference in the results are much bigger between encouragement (Figure 7.10 - column 2) and the benefit (Figure 7.10 - column 3), than between awareness (Figure 7.10 - column 1) and encouragement (column 2). This suggests that the directors of the companies are unable to effectively encourage innovativeness rather than that they don't try at all. The lack of knowledge how to encourage innovativeness effectively could also offer an explanation why directors report lower encouragement of innovativeness compared to recognising its importance. Since innovativeness is related to insecurity and the unknown, the results could also refer to the fear of making mistakes and stepping into the unknown and insecurities (which was discussed in the section 7.3.1.10, with 15.6% of directors being indecisive, and 7% of them stating that in their company they don't welcome unsuccessful ideas and unexpected events in the research and development process). Knowing the right approach and having the right tools to encourage and support innovativeness is complex knowledge, and not all directors possess them or have learned about them during their studies. If they are not well informed how an innovative process functions, the perception of innovativeness as "artful," risky, experimental, and insecure do not help them to encourage innovativeness in their companies.

In our survey, the question about encouragement was unspecified, so directors could understand and interpret it in various ways and all possible options. So, encouragement could range from a promise of simple praise, respect for the achievement, a pat on the back, to significant financial benefit or promotion.

On the other hand, in the survey the benefit in the company (the third question) was not clearly defined, so it could mean any kind and left open to various options of benefit. This could mean a benefit to the innovator, ranging from simple praise from the director, manager or somebody else in the company, to promotion and leading future innovation processes, and to a possibility where innovators had significant financial benefit. The results of our survey therefore suggest that directors, according to their own estimations, do understand that the innovativeness is of a major importance for the company, while at the same time we discern the incongruence in the estimations of directors in the survey regarding encouragement and benefit, as they dedicated a different level of importance to the awareness, encouragement, and benefit of innovativeness (stagnation), which can also be seen in Figure 7.11 presenting cumulative values of three different levels of attitude towards innovativeness in Slovenian design industry regarding innovativeness.

Figure 7.11: Innovativeness in the terms of awareness, encouragement, and benefit – cumulative values of estimations of directors



The results of our survey regarding the attitudes of directors towards innovativeness and their mean values show that evaluations of the second question (*We strongly encourage innovativeness among all employees)* and the third question (*In our company it is advantageous to be innovative)* indicate that there is a gap and lack of consistency in the attitudes of directors towards encouragement of innovativeness, as well as the benefit for achieving innovations. When a creative employee is encouraged to be innovative (mean value 5.16),[18] it is expected and would be a logical development of events that to the same proportion and extent of encouragement the employee would also experience the benefit (in any form) when achieving innovation. On the contrary, the survey with directors indicates that directors evaluate as less important the benefit for achieving innovativeness (mean value 4.48) and estimate it is less important the advantageousness of being innovative in their own company (difference is -0.68). Figure 7.9 shows how benefit is much less valued, and how the larger percentage of benefit is in disagreement, while regarding awareness and encouragement the disagreement is much lower. We can still notice the slightly higher percentage of directors seeing awareness as more important and valued than encouragement.

To summarise the results of the survey and this discussion, based on the estimations of directors in Slovenian design industry, they are mostly aware of the importance of innovativeness and they do encourage innovativeness among their employees. We can use these findings to test the first hypothesis H1 (*In the Slovenian design industry the meaning of innovativeness is understood and encouraged*) and confirm it.

Hypothesis 2: The level of importance of innovativeness in the company is associated with the use of Artful Making principles

To test and verify the second hypothesis, we use the analyses from sections 7.3.3.1 – 7.3.3.9 and correlations between the importance of innovativeness and attitudes towards it (questions 1, 2, and 3), and the individual Artful Making principles that support creativity and innovative processes. They are tested in the survey questions 6 to 10.

[18] See Appendix C

Figure 7.12: Correlations between three dimensions of importance of innovativeness (Q1, Q2, and Q3), and five individual principles of Artful Making (Q6 - Q10)

		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Q1	Pearson Correlation		.69	.64	.23	.19	.44	.43	.40	.44	.45
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	503	502	498	491	499	499	499	501	499	501
Q2	Pearson Correlation	.69		.70	.27	.20	.48	.48	.54	.57	.44
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	502	502	497	491	498	498	498	500	498	500
Q3	Pearson Correlation	.64	.70		.29	.26	.54	.52	.46	.47	.41
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000
	N	498	497	498	487	495	496	495	497	495	497
Q4	Pearson Correlation	.23	.27	.29		.65	.21	.18	.16	.14	.19
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.002	.000
	N	491	491	487	491	489	488	488	490	488	490
Q5	Pearson Correlation	.19	.20	.26	.65		.23	.17	.08	.07	.08
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.090	.106	.069
	N	499	498	495	489	499	496	496	498	496	498
Q6	Pearson Correlation	.44	.48	.54	.21	.23		.73	.50	.50	.41
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000
	N	499	498	496	488	496	499	497	498	496	498
Q7	Pearson Correlation	.43	.48	.52	.18	.17	.73		.67	.64	.52
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000	.000	.000
	N	499	498	495	488	496	497	499	499	497	499
Q8	Pearson Correlation	.40	.54	.46	.16	.08	.50	.67		.85	.59
	Sig. (2-tailed)	.000	.000	.000	.000	.090	.000	.000		.000	.000
	N	501	500	497	490	498	498	499	501	499	501
Q9	Pearson Correlation	.44	.57	.47	.14	.07	.50	.64	.85		.63
	Sig. (2-tailed)	.000	.000	.000	.002	.106	.000	.000	.000		.000
	N	499	498	495	488	496	496	497	499	499	499
Q10	Pearson Correlation	.45	.44	.41	.19	.08	.41	.52	.59	.63	
	Sig. (2-tailed)	.000	.000	.000	.000	.069	.000	.000	.000	.000	
	N	501	500	497	490	498	498	499	501	499	501

In answering the previous hypothesis, we explored the attitudes of directors towards innovativeness. We noticed that their awareness is more highly evaluated, and is perceived by directors as more important than the benefit for the innovator (by the same directors). The question remains, whether besides encouragement and benefit, the directors take any other concrete action to actually bring about innovation in their companies? We chose to test this by analysing to what extent the use of selected principles of Artful Making is associated to the awareness of importance of innovation. Using these correlations, we aim to establish whether the use of Artful Making principles is mindful and purposeful for the fostering of innovation in the Slovenian design industry.

The data in Figure 7.12 show us two big clusters of strong correlation (R> 0.6, p= .000). The first cluster correlates to questions one, two, and three, which are questions on innovativeness. This result confirms that awareness of the importance of innovativeness is related to

innovativeness being encouraged, and there being a benefit for the innovator (although as observed before, there is a noticeable difference in declining benefit for the innovator).

The second cluster of strong correlations is in between questions about the usage of Artful Making principles (questions 6-10). Despite the fact that this cluster does not fully cover all relationships – as the correlation between usage of some of the principles falls a little lower, though with still a strong correlation (R= 0.40, p= .000 relations between Q1 – Q8) – while the correlations between the other principles (question from 6-10) show the strong correlations all up to R= 0.57, p= .000 (Q2 – Q9).

There is a stable and strong correlation between question one (importance of innovativeness) and questions 6-10 (use of various principles of Artful Making) with $0.40 < R < 0.45$. This confirms the relationship. However, more interesting results are the ones regarding the correlations of questions 2 and 3 with the use of principles of Artful Making. We see that the spread of R for question three is wider at 0.13 (for question 1 was 0.05). Questions eight (*The leader of the team supports the members in freely expressing their ideas and creativity*) and nine (*The leader of the team supports cooperation and exchange of ideas, opinions, and suggestions of the team members (teamwork))* stand out as being noticeably more strongly related (R= 0.57 and 0.54) compared to other questions ($0.44 < R < 0.48$).

Reflecting on these results, we estimate how directors understand 'encouraging innovativeness' in their companies. It seems to be most strongly related to teamwork, the exchange of opinions, and giving enough space to creative employees. This might further explain the gap in results between encouragement and benefit from the previous hypothesis H1: The encouragement is understood as giving creative workers more free space to innovate and bring benefit to the company. Analysing these results, we conclude there is a lack of proactively encouraging creative workers – which would in addition to the benefit for the company produce some kind of benefit for the innovator.

When analysing the third question on benefit for innovators *(In our company it is advantageous to be innovative)* and its correlation to Artful Making principles, it is most strongly related to having a guided process for innovation and leadership when the process is unclear, and the principles presented in question six *(We develop new products/services through the process led by a manager)* (R= 0.54) and question seven *(It is the project manager who directs the process when there are moments of ambiguity and uncertainty about the next step in the development process)* (R= 0.52), along with the overall spread of R being 0.13 again.

By analysing these results, we establish that benefit (the third column in Figure 7.10) is associated with the manager leading the innovative process, rather than all innovators. That suggests that directors see a connection between innovativeness and managers of innovative processes, rather than with all employees participating in the innovative process. We also assume that having a manager in charge of an innovative process, and consequently also responsible for innovations in their company might be perceived as (prohibitively) expensive. This would further explain some observations we will present in the next section when analysing the next hypothesis.

In summary, we have found a consistent correlation between the estimations of importance of innovativeness and the use of Artful Making principles, with some principles standing out for different questions about innovativeness (i.e. three different attitudes towards innovativeness). With all these findings and results we can test the hypothesis H2 – *The level of importance of innovativeness in the company is associated with the use of Artful Making principles* – and confirm our second hypothesis.

Hypothesis 3: Managers in the Slovenian design industry use Artful Making principles and methods in supporting creativity and the innovation process

Creativity is important in the development process, and it is important to support both individual and team creativity. When the leader of the team supports the team members in freely expressing their ideas and creativity that enables the team to progress towards novel products/outcomes. The key in the team is in "finding a collaborative rhythm that incorporates both modes" (Neumeier 2009, 165).

Coming from development in the business worlds, innovative companies have to embrace creativity. This leads to embracing the creativity of their knowledge workers, if they want them to bring innovative results in their working process. As Runco argues, creativity is "strongly tied to originality, while original behaviour is always contrary to norms, all creativity is a kind of deviance. No wonder there is frequent stigma attached to creativity". The logic and the functioning of creative workers are simply different from the sequential process, and therefore we have to be aware that knowledge workers are the biggest value of innovative companies. Managers and directors have to know that, respect their nature of work and support them, since they hired them in the first place because of their wisdom, knowledge, and potential. All of this will lead to creative, and consequently also innovative outcomes (Plucker & Runco 1999, Rubenson & Runco 1992, Runco 2004, 677).

As we have seen already in the previous hypothesis, innovativeness is important for the majority of Slovenian design companies (H1). This also includes innovative processes, where innovative processes are developed. There are still various ways of fostering creativity and supporting creative processes, and some of them are more successful and deliver constant innovative results, while others don't. In our research we were testing the use of individual Artful Making principles and the basis for the potential application of Artful Making.

All the variables presenting the specific principles and methods of Artful Making positively correlate (mild or medium strong correlations) with the economic and performance indicators (Table 7.9). The only exception of any absence of correlations was with profitability, with the growth of the market share from 2008-2010, and with the growth/decline in the income of the company (2008-2010).

So the individual Artful Making principles used in the survey (the development of new products/services through the guided process led by a manager; the manager directing the development process in moments of ambiguity and uncertainty; the leaders support of the members of the team to freely express their ideas and creativity; the leaders support of cooperation and exchange of ideas, opinions, and suggestions in teamwork; and the leader's positive attitude towards the unsuccessful ideas and unexpected events in the research and development process as a possible way to improve the final outcome) significantly and positively correlate (mild or medium strong correlation) with:

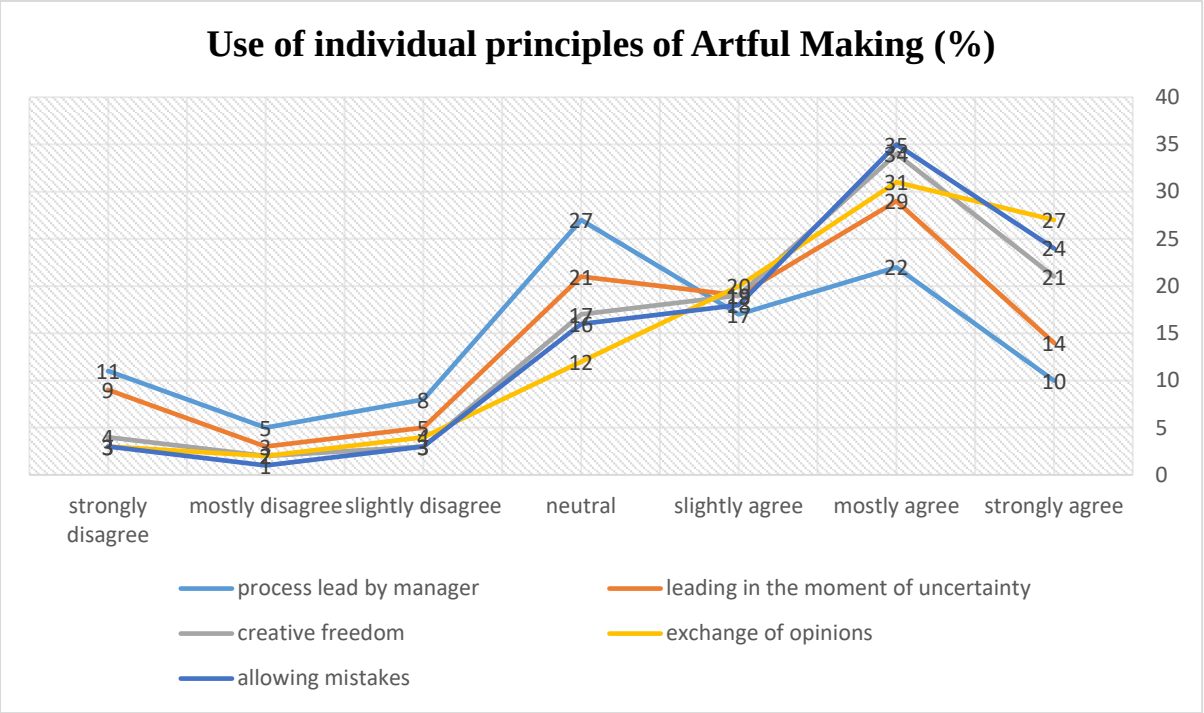
- the number of novel products/services,
- the number of new products/services that company was the first to present on the market,
- the number of introduced changes in business processes, the company introduced as the first on the market,
- the number of innovations introduced in the administrative system (new procedures, politics, organisational forms),
- the use of the newest technological innovations at new products/services, and
- the share of income the company invests in development or improvements of products/services.

Therefore, we claim that our study is significant, reject the null hypothesis, and conclude that a relationship between five variables of individual principles and methods of Artful Making, and the key economic and performance indicators does exist.

To further verify this hypothesis, we first explore the estimations of directors to what extent managers in their companies use individual Artful Making principles, using the questions from number 6 to 10 (Chart 7.11). Question number 6 *(We develop new products/services through the process led by a manager)* is the principle of developing the new product/service all through the process, with a manager responsible for it. In the chart below (7.11) we name this principle "process led by manager".

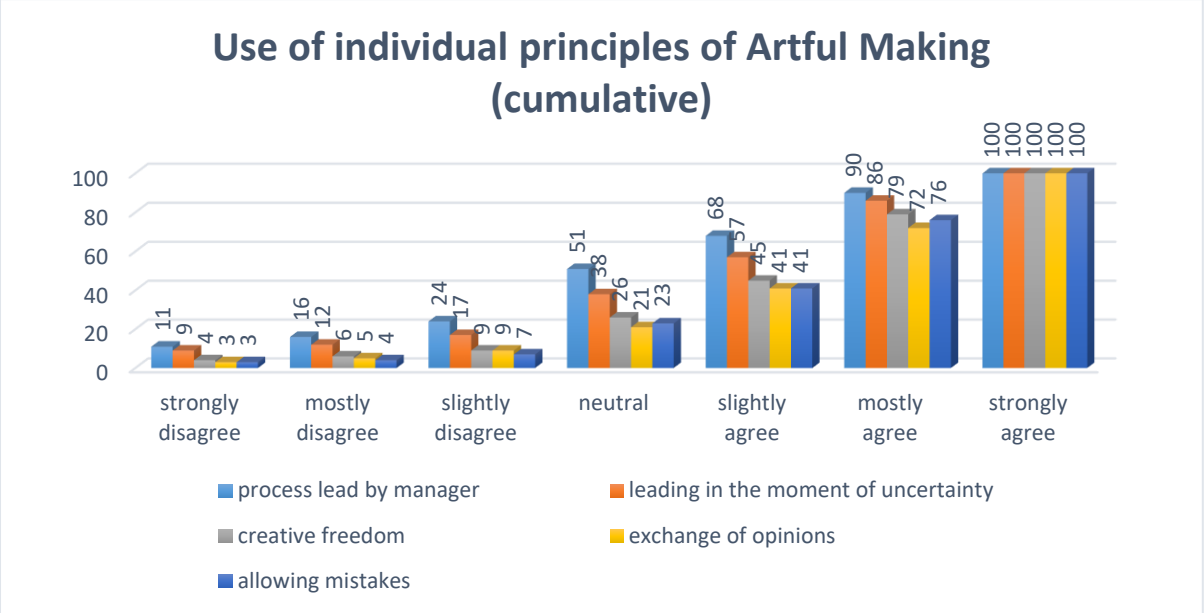
Question number 7 (*When in moments of ambiguity and uncertainty about the next step in the development process*) is the principle of developing the new product/service where it is good if the process gets out of control and unexpected things happen, since often it is the way to create a true innovation, which can't be predicted in advance. In Chart 7.11 we name this principle "leading in the moment of uncertainty." Question number 8 *(The leader of the team supports the members in freely expressing their ideas and creativity*) is the principle of giving the team members the freedom to express and practice their creativity, and supporting them all through the process. In the chart we name this principle "creative freedom". Question number 9 (*The leader of the team supports cooperation and exchange of ideas, opinions, and suggestions of the team members (teamwork))* is the principle where the manager's role is to support: teamwork, cooperation, the exchange of ideas, professional knowledge, suggestions, and improvements. In the chart we name this principle "exchange of opinions." Question number 10 (*Mistakes, failures, and unexpected events/outcomes in the research and development process are a necessity and a way to improve the final product/service*) is the principle of accepting and allowing mistakes and failures in the creative process, knowing they are the crucial part of the process where unexpected things happen and new things occur, which can be valuable. In the chart we name this principle "allowing mistakes". The estimations of directors regarding individual principles of Artful Making are shown in the chart below (7.11).

Chart 7.11: Use of individual principles of Artful Making in Slovenian design industry



Next, we will perform an analysis of the distribution of answers of the usage of individual principles and methods of Artful Making. To make the analysis easier to read, we use the chart of cumulative frequencies for the answers of directors, which is how many directors answered in a more negative way towards certain questions. This means that the higher the number, the more negative answers to the question. The chart below (cumulative) (7.12) presents the correlations between individual principles and methods of Artful Making – a manager leading the process, leading in the moment of uncertainty, creative freedom of the team members to express their ideas and creativity, supporting the exchange of opinions and teamwork, and allowing mistakes due to the awareness that they are a normal part of creative process.

Chart 7.12: Use of individual principles of Artful Making (cumulative) in Slovenian design industry according the estimations of directors



The results and the chart show that according to the answers and estimations of directors, managers do use all the principles of Artful Making, but to varying degrees. The principles represented in questions eight, nine, and 10 (creative freedom, exchange of opinions (teamwork), and mistakes during the innovative process) seem to be most commonly used. Reflecting on the results, we notice that the guided process and leadership – principles represented by questions six and seven in the chart that are the first and second column, the highest two in the cumulative neutral position, meaning that they have the highest sum of negative and neutral answers – are the least used, with the guided process being the one that stands out the most. There are several possible explanations why this is so.

We have to take into account that there is always a cost associated with having a guided process. To have a guided process you need a competent manager to lead it. This could incur additional cost possibly beyond the perceived added value of it. This assumption might be further supported by the weaker correlation between the first question (importance of innovativeness) and question six (use of a guided process) (R= 0.44) compared to other, significantly stronger correlations. We can also see the second strongest correlation between question six and seven (R= 0.73, p= 0.000), which indicates to a more systematic absence of leadership in the innovative process, even when aware of the importance of innovation. While the cost factor offers one explanation, another possible explanation is that managers simply do not know how to lead the innovative process and creative workers, and lack the proper education and training

to do it effectively. As a result they prefer to leave the creative workers as much space as possible, hoping they will be creative on their own. This explanation would be especially troubling considering question seven, which is about the importance of leadership at times when the creative process has stalled and needs the leader responsible taking decisions and giving further directions. At the same time, the relatively high acceptance of mistakes during the creative process suggests they do have the knowledge of creativity and the awareness of importance of accepting and allowing a 'stepping into the unknown,' experimentation, and iterations in the creative process.

Our findings suggest the improvements are still possible, especially when measuring the value of outcomes and number of innovations. This might be also related to the existence of more complex reasons as presented in section 7.3.1.1 (Murovec et al. 2012), of which costs could be a part. Namely, the estimations of directors show that the level of investing in research and development in Slovenian design companies is low, as more than half (61.7% - valid percent) of companies invest less than 5% of their incomes in research and development. Small investments (5-10% of income) are made by 22% of companies, while only 10.2% of companies invest 10-20% of their income into development or improvement of their products/services. Only 6.2% of the companies invest more that 20% of their income in R&D. The results show that many of Slovenian design companies don't make serious investments in R&D, and don't build their identity on innovativeness, since without serious investments in R&D they can make only minor innovations (Murovec et al. 2012, 212). The same opinion was shared by one of the designers, who exposed the same issue regarding investing in the development of the companies' own products/services and brands. Designers marked this as a crucial problem regarding innovativeness, stating that only a few Slovenian companies (seriously) invest in developing their own products/services and brands (Murovec et al. 2012, 46–212). That indicates designers see a potential to make further improvements and reach greater results. This also confirms the report of the European Commission - DG Research and Innovation (2016, 18), related to the economic crisis in Slovenia and its difficulties in making serious investments in research and development. Economic issues do present hurdles and difficulties with regard to fully supporting innovation processes, still our study shows that directors do support creativity and innovation processes in the Slovenian design industry, and that managers do use Artful Making principles and methods.

In summary, the results show that according to the estimations of directors, individual Artful Making principles are present and used in the Slovenian design industry.

Therefore, Hypothesis 3: *Managers in the Slovenian design industry use the Artful Making principles and methods in supporting creativity and innovation process*, can be confirmed.

Still, another exposed issue which calls for additional information and education is the one regarding importance of design in the Slovenian design industry. Pointing back to Figure 7.4 about System Performance in other European countries: Design Users in Denmark, Estonia, Finland and the UK, and comparing it to the situation in Slovenia, and Figure 7.3 about the Embedding of creative industries, according to 'Creativity, Design, and Business Performance'- conceptual mapping of Arts, Science, Design, and R&D, there is still great potential in further improving the functioning of the Slovenian design industry in general (Tether in DTI 2005, 8).

The survey among designers also verified whether Slovenian design companies include the creative team in all its steps of the process, and whether there is a creative team created before the beginning of the process. A great majority (90.9%) of surveyed designers evaluating the statement "*Slovenian companies do not understand the meaning of design and do not include it properly into development processes*" see it as a problem, and more than a half (52.7%) see it as a crucial problem (Murovec et al. 2012, 178). This shows the experience and frustration of designers, that Slovenian companies have difficulties understanding the full meaning of design, and knowing how to include it into development process.

We also conclude that the estimations about the present situation in the Slovenian design industry are a positive starting point for a more systematic introduction and approach to innovativeness in all Slovenian design companies. However, the results suggest discrepancies which could be related to cost, a lack of creative leadership skills, or some other undetected factors. It is also necessary to consider how directors understand and managers apply these principles. It is questionable whether their use of Artful Making principles is representative and applied in the same way as it would be understood and applied by a professional Artful Making practitioner (see section 5.8. and the guidelines to overcome differences and avoid the conflicts in nature of work between managers and creative workers (Austin and Nolan (2007, 29–36)), especially if certain Slovenian design directors (and managers) lack the overall framework for innovation, therefore possibly reducing their synergetic effect in the overall creative process.

Hypothesis 4: Use of the principles and methods of Artful Making in the Slovenian design industry is positively related to the number of innovations

In the previous hypothesis (H3), we analysed the attitudes towards innovation and selected Artful Making principles, so now (with testing the hypothesis 4) we will explore how this is related to innovativeness, as measured by the launch of innovative products/processes. While the number of innovative products/services launched is a good indicator of innovativeness, we use it because it offers easily measurable objective metrics of innovativeness, which are very important for companies. The weakness of these metrics is that companies could aim for few big product launches or many small ones, which would result with different numbers of innovations, as also with different conclusions.

The results as presented in the Table 7.9 (Correlations between variables, measuring innovativeness and Artful Making, and the key economic and performance indicators) show that there is a constant (mild to medium strong) correlation between the number of new products/services and questions about attitude towards innovativeness and Artful Making principles ($0.227 < R < 0.373$, $p= 0.000$). The strongest correlation ($R= 0.373$, $p= 0.000$) between launch of innovative products/services is with the usage of a guided process (question 6 - *We develop new products/services through the process led by a manager*). We recall from analysis of the previous hypothesis (H3) that the "guided creative process" is the least represented of the selected principles. This relationship could be understood as the guided process being the key principle, or else that other principles are already presented and this is the missing principle.

However, this relationship is less strong when testing against new products which the company launched among the first on the market (see Table 7.9). Here the correlation for the guided process ($R= 0.296$, $p= 0.000$) is more in line with the correlations for other principles ($0.241 < R < 0.276$). This indicates that a balanced use of Artful Making principles is important for truly innovative products, which in turn could result with a need for more strategic use of principles, as part of an approach similar to Artful Making, or design management, and that conclusion would be in alignment with both, Artful Making and design management (see Chapters 5 and 6), that creative workers need full support to unleash their potential and creativity.

Furthermore, observing that the correlations between copying ideas (Q4) or products (Q5) from other companies (question 4 - *We copy good ideas from the other companies* and question 5 - *We copy products/services from other companies so that we change their design/form*) show a

negligible correlation to the use of all Artful Making principles, with the use of guided process, where there is an indication of slightly higher correlation - R=> 0.21 – question 6 (see Figure 7.13).

Figure 7.13: Correlations between five individual Artful Making principles, and the presence of copying final products or good ideas from other companies

		Q4	Q5	Q6	Q7	Q8	Q9	Q10
Q4	Pearson Correlation		.65	.21	.18	.16	.14	.19
	Sig. (2-tailed)		.000	.000	.000	.000	.002	.000
	N	491	489	488	488	490	488	490
Q5	Pearson Correlation	.65		.23	.17	.08	.07	.08
	Sig. (2-tailed)	.000		.000	.000	.090	.106	.069
	N	489	499	496	496	498	496	498

The results of the survey with designers indicates improvements are still possible. They show that some of Slovenian design companies base their competitiveness on innovations, while other on the added value of the product/process, on distribution and availability of their product/process, and some on the low price/cost (Murovec et al. 2012, 72). The results show, that only 10.53% of Slovenian design companies base their competitiveness on innovations. Still, 43.37% of companies base their competitiveness on the added-value of their product/service, another 12.85% on the distribution and availability. The rest - 33.26% of companies base their competitiveness on the low prices and costs (see Appendix D).

Klinar (2010, 9-10) argues that the companies are often not used to take risks in development processes. They are known as being highly organised and are adapted to rationally meet the demands of buyers. Often they are doomed to stay on the market segment offering more for lower prices. Development models are usually focused on fast copying of competitors, and as a consequence of time, gap selling with lower prices. According to Klinar, a significant number of Slovenian design companies have this kind of attitude towards low investments in development, and the acceptance of being subcontractors is due to unorganised national politics towards national production. A different and more supportive attitude on the national level would have positive effects on the companies making an effort to rise to the next step towards producing final outcomes which would result in bigger profitability and competitiveness. At the same time, better cooperation of the educational institutions with the business sphere would speed up the exchange of information about the latest achievements, findings, and knowledge. Pilot projects like a Competence Centre for design Management (KCDM) have been organised

to promote the importance of design, to introduce it to Slovenian design companies, and maybe also some other additional projects are needed to push the Slovenian design industry to be more competitive on the global market.

In summary, the results show there is a mild to medium strong correlation between the number of new products and the use of selected principles of Artful Making, while the correlations between copying products and use of principles are mostly negligible. Companies that focus on copying other companies' products/services likely avoid these principles and, according to the statements of directors, do not use them for cost reasons, and also there is no need for them since in copying the product/service of other companies the true development process is not needed, only final refinements and changes.

Applying artful principles in the development process allows experts to step into uncertainty and unknown, and allows new solutions and novel, different, and more optimal options to occur. So, Boland and Collopy (2004, 4–-9) point out that managers using artistic principles in innovation processes encourage the team to search and create a curious, questioning attitude of the present situation and future possibilities, and is a way to produce valuable outcomes and potentially innovations.

Therefore, we can confirm the hypothesis H4 "*Use of the principles and methods of Artful Making in Slovenian design industry is positively related to the number of innovations*".

Hypothesis 5: Directors in the Slovenian design industry are aware of the need for a different approach in leading the creativity of knowledge workers throughout the creative process

This hypothesis is complex, but it discusses one of the key questions regarding the future of innovativeness in the Slovenian design industry. Throughout the process of testing and answering previous hypotheses (H1-H4), we recognised directors' effort to support innovativeness by adapting management approaches to better suit the changing nature of competition. This indicates that in creative processes Slovenian design companies are trying to change their management style that is appropriate for industrial processes, and become more artful by using individual principles and methods of Artful Making. Still, indications and inconsistencies were observed that suggest managers in the Slovenian design industry lack the overall know-how of a creative (artful) management style which should result in valuable outcomes and possibly innovations.

Information gained in our survey (section 7.3.2.7) indicates that there is no significant correlation of leaders' support of the members of the team to freely express their ideas and creativity to the growth/decline of company income from 2008-2010 (R= 0.071, p= 0.112). This could point to the lack of trust and support between the members of the team, which is seen as one of the key factors in the creative process, while all the other principles of Artful Making are in the correlation with the growth/decline of the company's income from 2008-2010. This indicates the need for additional knowledge and a change of attitude towards creative workers in their creative process, and also to the fact that directors might also not be aware of the importance of trust and support. We recognise indications that there is a lack of understanding of creative workers, of nature of their work, and of risks they have to take. Consequently, that creates urge for an encouragement and benefit for creating success. Creative workers need it, as also the prove that their effort and risks are important and respected by director and the company. In our study we recognised discrepancies between the different levels of innovativeness – importance, encouragement, and benefit (see verification of the H1), which should be eliminated.

Another lack of correlation has been noticed among estimations of profitability and growth, in relation to Artful Making principles (see Table 7.12 and sections 7.3.2.5 – 7.3.2.9). It is possible managers don't have the full autonomy to practice all Artful Making principles and are limited by lack of investments in the process and economical limitations, lack of support of director and other employees, lack of full support of the culture in organisation, trust, and consistency in use of all the principles. It is possible the creativity is not practiced in its fullness, and so also the results are not seen in terms of measurable profitability and growth. This question still calls for additional in-depth research.

There is a strong positive correlation (section 7.3.2.2) between encouraging the innovativeness among all the employees, and the share of income the company invests in development or improvements of products/services (R= 0.414, p= 0.000), showing the companies do invest in research and development, and do encourage innovativeness. Survey with designers showed (see section 7.3.1.1) that many Slovenian design companies don't make serious investments in R&D, showing that companies invest less than 5%, and only 6.2% of the Slovenian design companies invest more that 20% of their incomes in R&D. Bigger innovations normally call for bigger investments, so if Slovenian design companies wish to create more innovations, more serious investments in R&D will be needed (Murovec et al. 2012, 212).

Verifying Hypothesis 2 we assumed – according to the answers in our survey – that there could be estimations of directors that a manager of the innovative process is more responsible than other members of the innovative group for innovative results, which also would point to a lack of understanding the full value, process, and input of each member of the innovative group in the creative process of researching and developing innovative products or processes.

Hamel and Tennant (2015) argue that all managers and also directors should be formally and 100% accountable for innovation. If not, innovation can be easily marginalised. According to them, it is erroneous to assume only specialised units of research and development and innovation teams are responsible for innovation, in fact it has to be "the responsibility of every leader at every level. At the same time, if leaders haven't been "trained and coached to encourage innovation within their own teams," how can they be held responsible and accountable for it? Innovativeness in companies calls for managers and leaders educated and trained to be the promoters and nourishers of creativity on their teams. The different level of importance regarding innovativeness – importance, encouragement, and benefit indicate that possibly directors are still not fully aware of their role in the innovation process and the need for a holistic approach to innovation, which will prepare all the conditions needed to produce constant innovations, according to Von Stamm (see section 2.2).

An example of one of the professionals, Klinar, who sees many great lost industrial opportunities in the absence of strategic management and the lack of proper use of all the potentials of knowledge workers in the past. Consequently, the economic situations of traditional industrial branches have declined due to the present situation, like the textile, leather, and glass industries, and soon also the furniture industry. According to Klinar (2010, 10–11), the Slovenian economy also lacks encouragement and strategy to focus on the production of final products. There have been improvements since 2010. One of Slovenia's most successful design agencies, Gigodesign (Klinar is a Senior Partner) organised a pilot project – the Competence Centre for design Management (KCDM) within the framework of the European Union Social Fund, with amazing results. The project was funded by the European Social Fund (its started in 2012 and lasted for 30 months – finished in 2015). It connected 19 partners – ambitious and forward-thinking Slovenian companies – with sources of design management knowledge. The results of the project were significant, showing that there is much potential in the Slovenian design industry and in further improving innovative processes, as well as integrating design in the development processes. The business results of partner companies in 2015 compared to 2012 witnessed 70% growth of added-value per employee, a 245% growth

of net profit, and 14% growth of business income. For that project Gigodesign won first prize from the design Management Institute in 2016.[19] In 2016, the Slovenian government was preparing a new strategy for creative industries, one that will hopefully stress the importance of proper attitude towards creativity in creative industries, pointing to the value of nurturing and stimulating managing and leading the creativity of knowledge workers in their development processes. We hope to also contribute here with new knowledge about Artful Making.

With all the results from our survey and additional information about the present situation of the Slovenian design industry, still, hypothesis 5: *Directors in the Slovenian design industry are aware of the need for a different approach in leading the creativity of knowledge workers throughout the creative process*, could not be verified due to the difficulty and a lack of instruments verifying the awareness of directors about the level and their expertise regarding leadership of innovation processes and other relevant knowledge.

However, summarising all the results, information, and knowledge gathered in this dissertation regarding the innovativeness and success of Slovenian design companies, we hypothesise that additional knowledge of managers and directors in certain moments, and a different approach in leading the creativity of knowledge workers might be welcome and would improve the level of innovativeness of Slovenian design companies. This would also make them even more successful on the global market. As already discussed when verifying the previous hypotheses, there is still great potential in further improving the functioning of the Slovenian design industry in general. The estimations gained in the survey about the present situation in the Slovenian design industry are a positive starting point for a more systematic introduction and approach to innovativeness in all Slovenian companies. Encouraging investments in research and development, and using the potential highly educated knowledge workers by applying the right creative leadership skills, would make a step forward. Our study confirms the use of artistic principles in creative processes.

Still, the question remains, whether they use them in representative way, and apply them in the same way as would be understood and applied by a professional Artful Making practitioner, especially if certain Slovenian design company directors (and managers) lack the overall

[19] It is about the Design Value Awards, recognising teams who have delivered significant value through design or design management practices.

framework for innovation such as Artful Making, therefore possibly reducing their synergetic effect in the overall creative process. The support of creative workers as experts in their innovation process, and when facing a different option for further direction during the development process, is the role of senior management. They have the authority to resolve conflicts regarding major decisions and opinions in development processes, and in taking decisions of future direction of the process (Austin and Nolan 2007, 29–36).

Drastic changes in organisation expose fostering and managing creativity in organisations, where the leadership of creative people and creativity is recognised as a complex task (Mumford and Licuanan 2004). According to Hamel and Tennant (2015), leaders are not self-made by being a manager, it takes more additional knowledge, and "through selection, training, and feedback, companies must work hard to create a cadre of leaders who are as adept at fostering innovation as they are at running the business."

In further discussing this hypothesis and the assumption that there is still potential to improve the Slovenian design industry, we decided to be creative and apply the artistic, more nuanced approach here: instead of directly verifying the hypothesis, we will construct a theoretical framework for how deliberate and consistent innovations are achieved based on the scientific literature we presented and discussed in the dissertation, as well as on our empirical research and findings. Then, we will compare this framework to the Slovenian design industry in order to verify if it fulfils the necessary requirements to be innovative. The model will be applicable in Slovenian and other worldwide design industries to support them in fostering innovativeness through changing their approach in leading the creativity of knowledge workers throughout the creative process.

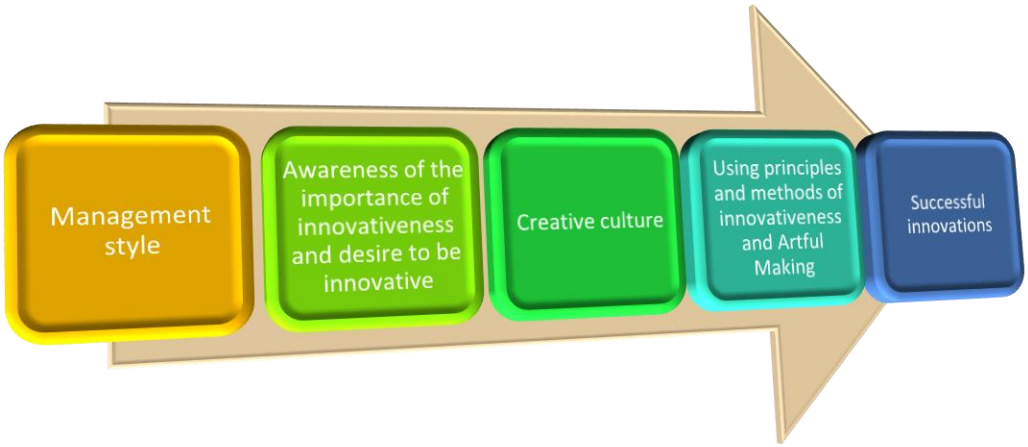
7.4.2 Model for introducing and fostering innovativeness in Slovenian design companies

In this section, we present a model for introducing and fostering innovativeness and describe the process and the expected steps the company would have to go through to create an innovative environment, and meet the conditions needed to be consistently innovative. We base the model on the theoretical part of our dissertation and listed literature, and our empirical research in this dissertation, and give a general opinion of the Slovenian design industry. After we present the model, we try to identify the missing links that prevent the Slovenian design industry from fully implementing and supporting innovativeness. Making a company a

consistent innovator is a transformative process and calls for a new concept of the organisation, having innovativeness in the heart of their message, vision, strategy, and mission, and the culture adapted to support its functioning, according to Von Stamm. Therefore, it is the leaders' utmost responsibility to execute change in people's perceptions, attitudes, and the ways of perceiving things, processes, relationships in the organisation, strong intrinsic motivation to create novel outcomes, and "the desire to continuously improve things." All this requires a holistic approach of managers to their highly educated knowledge workers (Boje et al. 1996; Parker in Kanjuo Mrčela 1999; Austin and Devin 2003; Von Stamm 2008).

Therefore, creating an innovative culture and changing the attitude and vision of these companies is of crucial importance, as is the determination of directors to make a change and create the conditions needed to start creating innovative outcomes themselves. It asks for a major transformation of the company, and using theoretical knowledge, suggestions, and findings, in addition to the theory of Artful Making with its specific set of principles and methods that support the creativity of development group might – in the case where iterations are cheap – help some of these companies lead properly and support them in creating the conditions needed to produce not only copies, but also valuable and true innovations. The question remains to be further discussed about the reasons why a certain share of Slovenian creative companies stays on the level of copying (24.8%) and just slightly changing the design of final products/services of other successful companies, and what specific conditions and needs have to be met in order to rise to the next level and start innovating themselves. Nussbaum reported back in 2006 (Austin et al. 2007, 8), that even Chinese products, previously known for their low prices, are becoming labelled with "designed in China". Today, their products compete on "differentiation, relevance, and value to the customer". Since Chinese products are also present in the Slovenian market, our design companies should be aware of the direction their competitors are going and make a breakthrough, putting design in its heart of development. With the help of leadership and educational programs, projects, government, supporting policies, experts, universities, researchers, professional designers, and Slovenian diligence and dedication, this can be realised.

Figure 7.14: Five-step model towards successful innovation in Slovenian design companies



7.4.2.1 Management Style

Managers have to deal with various issues, such as changing markets, work force challenges and their creativity, their competencies, and the other issues. Among these issues a manager can face: a lack of time and energy for innovative processes; complex adaptation of the company's relationships, attitudes, working processes, management styles, flexibility, and a willingness to change constantly; and also maybe a lack of understanding about the functioning of creative processes, as we have discussed already.

We believe an effective management style that has the right balance between short-term effectiveness, the delivery of results, long-term strategic planning, and a drive to transform the company's culture, values, attitude, vision and strategy, clear and ambitious goals, and to create the proper motivation, is necessary for a company to be successful. If a company is not functional in some other way, it is questionable whether it can be a consistent innovator. Therefore, directors and management need to raise awareness of key issues the company is facing and find appropriate solutions (Bennis and Biederman 1997).

Scholars say that it is significantly important that managers have, in addition to managerial skills, also the ability to manage creative people, creative processes, highly educated knowledge workers, designers, artists, and other different profiles of people with different competences. According to Martin, managers in the 21st century must also have artistic skills to have the know-how to manage the "heuristic" tasks, and the ability to be comfortable in a

constantly changing environment (Gorb 1990, 39). They need to have the broader view and greater perspective and flexibility, and also the ability to think from both sides – on the creative side, in which case innovations usually fail, and on the analytical side, which generally leads to only incremental innovation or, more likely, stagnation (Lockwood 2010, IX).

Orlikowski (2004, 91–95) goes further and states that managers should be well acquainted and also use design approaches, especially the design practices in research and development processes. He interprets managing as designing, in the sense that they have in common various responsibilities and contexts. Moreover, when a manager understands and supports the valuable suggestions and contribution of designers in the development process he gives them ultimate value by developing new and critical capabilities, and encourages them to engage in the process and lead it to transformed and likeable realities.

If directors look for and hire the greatest experts, it would be most logical to give them autonomy and the necessary freedom and support, checking progress only when their work is finished, for approval. A group of innovators is intrinsically motivated and has a sense of responsibility for doing meaningful work, so they don't need to be managed. They need a leader who is creative in a leadership style, and supports the innovation process through encouragement, trust, and support, one who inspires the group to move forward toward the realisation of the vision. So today, every leader at every level should be responsible for innovation, and so we need accountable and capable innovation leaders (Hamel and Tennant 2015; Bennis and Biederman 2007, 50).

Of course, managers should recognise the true situation on the market and the changes, "and then design the management system appropriate to the conditions, and make it work" (Burns and Stalker 2003, 45). Still, according to Hammonds (in Dubrin 2007, 344–350), every innovative company and its management face the challenge of recognising great creative ideas and stopping the brainstorming process at the right time, which is close to gambling. Another creative trait is dealing and leading in times of insecurity and instability. Know-how to recognise something unique can lead to success and a great innovative product. It is a leader's highly important duty to recognise the right idea. A leader of innovative processes needs, in addition to traditional characteristics, some additional and atypical ones for managers, so creative people working in the group can be truly innovative. Some of these are self-confidence, humility, trustworthiness, extraversion, assertiveness, emotional stability, enthusiasm, and a sense of humour.

A research study by Amabile (Dubrin 2007, 342–344) also emphasises the importance of giving creative people flexibility, the freedom to experiment, and a minimum amount of structure. Strict structure and clear limits are distracting, and should be avoided when creating optimal conditions for practicing creativity. Inside the rules and limits given, creative people need freedom and trust, so they can fully express creativity and be playful, and so they can create something new. Trust motivates them, and at the same time trusting creative persons' expertise will allow them to choose a concrete method and way to solve the problem. We believe a supportive educational system can help managers learn the creative skills and the ability to adapt management approach when leading the creative process (see Tables 4.1, 4.2, and 4.3).

7.4.2.2 Awareness of the importance of innovativeness and the desire to be innovative

Our study has shown that directors are aware of the importance of innovativeness, still 21.6% estimate they are worse than competitors regarding the number of new products/services their company first introduced on the market (or was among the first companies to introduce it on the market (see section 7.3.1.2). This discrepancy shows further improvements and changes are needed.

An appropriate management style should not only raise awareness of the importance of innovativeness at a time when the company can afford to go through the transformative process to become more innovative and will benefit the most from innovativeness, but will also begin by directors and managers themselves applying an "innovative" attitude. This requires a good deal of vision and strategic thought. Normally, companies in times of economic downturn tend to cut costs to remain competitive, and this can effectively become a race to the low price. However, research shows that highly innovative companies are often least affected by economic downturn and are indeed often growing even in those times. It is an important factor that innovativeness is being prioritised and as the first step, the most important decision from the top management is to create an innovative company.

Innovativeness demands the significance of understanding the creative process, of overcoming obstacles for the development of new ideas, expanding one's vision, shaping new ideas, and developing a creative relation for a company's success (Adair 2007, 20–49). A valuable creative process needs creative people, people with great knowledge, and motivation to create innovations. Therefore, recruiting people should take into account not just somebody's credentials, but also look at someone's ability, skills, and creativity. When looking for new

workers, an organisation should look for certain traits in a person, and among the most important ones is to seek out excellence and to hire the best people available. The team, as a multidisciplinary potential of creativity, will create something extraordinary when its members are experts who think out of the box, see things differently, are thrilled to explore new things, and are creative in the search for a solution. They should be skilled at connecting their broad knowledge and expertise with other people on the team, and great at communicating with others in working towards the realisation of the common vision. The most talented and intelligent people will be eager to do special things (Bennis and Biederman 2007, 69; Andriopoulos and Dawson 2009, 339).

Organisational and managerial practices should, based on modern science, apply and pay attention to both the rational knowledge of leadership and also to the emotional and intuitive part successful artists have used for centuries. This is just as reliable as the rational part, is in the creative processes even more functional, and brings forth more valuable and innovative outcomes (Car et al. 2015). This also supports creativity in its search for valuable outcomes through processes, which should be well understood by managers and supported with expertise so the desired results can also be reached.

7.4.2.3 Creative culture

The next concrete step that a company has to take is to change its culture. There usually exists resistance to this change on many levels, starting even from our educational system, which encourages conformity to deeper risk aversion. Creativity and innovativeness require from us to reach beyond our comfort zone, into the unknown, and to embrace the change, which can be encouraged and motivated by creating an inspiring vision and mission of the company. Still, creating an innovative culture is further complicated by the fact that not all managers are educated in what a creative culture is, and how to support and embrace it. So, change towards a creative culture might become a risky experiment, when failing to apply all necessary steps. Education (for example based on Artful Making (Chapter 5) or design management (Chapter 6)) could give the managers the confidence and competence to be at the helm of transforming toward a more creative culture.

We described what an organisational culture that supports creativity, innovativeness, and change should look like in section 2.4, and it is a constant process of change and dedication of all employees to create it and keep it.

Bozic and Olsson (2013, 63) define organisational culture as the dynamic interactions of its members, formed by the ways of thinking, acting, collaborating, and functioning of its members. These actions give the opportunity to create and influence culture, and at the same time they are influenced by it. Andriopoulos and Dawson describe culture as a shared phenomenon made by divergent elements, and every one of them is of crucial importance. Among them are shared values, vision, mission, and motivation (section 2.5); the interactions of its members; their socialisation, cooperation, and reactions to specific events, unexpected occurrences; and other artefacts (Chapter 3). It is a form of the "social control" set of norms that shape creative and innovative processes (Andriopoulos and Dawson 2009, 267).

Organisations that want to welcome innovativeness and that have the goal to successfully implement innovation in its business, must most seriously fight an organisational culture of fear, which is innovation assassination, and build an enabling culture that facilitates innovativeness and encourages collaboration and teamwork (Chapter 3). All paradigms, attitudes, management support, collaboration, and the passion of the leaders influence creativity and encourage certain reactions, responses, and imagination (Neumeier 2009, 170; Goodman and Dingli in Connel 2015, 119–121).

Creating and designing the organisation that craves for innovations, where managers are the leaders in forming it, will change people's expectations and perceptions, and will create stronger relationships between employees and their managers. It is a way to form and enact the proper structure, culture, and relationships that will lead towards cooperation and results, and where encouragement and benefit for innovativeness will be perceived as equally important as importance of innovativeness (Weick 2004).

In spite of innovativeness being the motor of success on global market, "The 2015 Global Innovation 1000" survey shows executives still see creating an innovative culture as a challenge, stating they want "to tap into the more innovative culture of the U.S., as well as its more flexible operating environment". So innovativeness and innovative cultures present a great challenge for all, also great and the most successful companies. As the global market is constantly changing, also the culture has to adopt and follow the change by supporting the core competencies of innovators (Jaruzelski et al. 2015). So even today, Kotter's eight steps of leading change in the organisation (1995) still seem to be applicable and useful.

7.4.2.4 Using principles and methods of Artful Making to achieve innovativeness

Finally, Artful Making theory (Chapter 5), past practices of cooperation with different artists (section 4.4), and past research on arts-and-management theory (section 4.5) suggest that using its principles and methods could improve innovativeness. However, it is important to emphasise that knowing about and being able to use certain Artful Making principles is not the same. Reading about playing the piano from a virtuoso pianist will probably not make managers pianists themselves. In addition to knowing what the principles are, and going through the motion of mimicking them, genuine mastery is required. Such mastery usually requires a mentorship of a true artist, or in our case of a true practitioner of Artful Making. Equally, the principles cannot be truly applied effectively in isolation. Each of the Artful Making principles (section 5.4) contributes to final success, makes an important role, and is indispensable, so it is preferred to have knowledge and experience of Artful Making as whole and apply all principles and methods in a synergistic manner to be able to address your company's strength and weaknesses for best success.

It is also very importance to apply four specific characteristic qualities of Artful Making. These are release, collaboration, ensemble, and play. All of them are equally important; they are interdependent, intertwined, and they are the qualities of work that artists know and use. Only by applying them, next to practicing the principles and methods described in the chapter of Artful Making, the full power of the artistic process can be captured and create the deeper level and full potential of Artful Making (section 5.5).

Yet to apply Artful Making, the right conditions must be met (section 5.7), and if they are not, it is recommended to follow through the standard development process. Three specific conditions that must be met are: it is appropriate only when the company is looking for innovation and wants to constantly create new and innovative products and services, so demand for innovation must be high. Another condition is that it must have a possibility for fast and repeated trials and repetitions, and the third – a low cost of virtual exploration, experimentation, and production (when the iteration process is not expensive in comparison to the profit yielded by the experience) (Austin in Devin 2003 and 2006; Thomke 2003).

According to Jelinek (2004, 118–20), managers need to know how to manage in "a constant iteration of closure and fluidity, openness, and commitment, the ephemeral consensus of stability to accomplish one project without losing the mutability to address another", and it is a complex task that demands applying an artistic and creative approach, allowing the

knowledge workers that were hired because of their expertise to do their job and coordinate the team so its output is valuable and desirable to the market.

We suggest that in addition to use of Artful Making theory, it would sometimes also be practical to apply design management (Chapter 6), or combine both, since each one contributes with its specific knowledge and expertise, or as Lupo (2011, 52) points it out "The inspiring relation between art and design, aesthetics and innovation, perfectly fits in the contemporary world cultural production and is the next challenge in the aesthetics of use and development of our material culture".

7.4.2.5 Successful innovativeness and continuity of this process

By practicing Artful Making, one can develop a mastery of it, which for a company would mean deliberate, consistent, and reliable innovativeness. Of course, this process of mastering the art of being innovative is never-ending, has continuity, and is iterative in itself. Achieving innovativeness raises awareness of its importance first among leadership, and consequently also among all employees, deepens its culture, strengthens trust and collaboration, and fortifies and internalises motivation (which makes them connected, interrelated, and willing to work for a common goal). So again, the whole process starts from the beginning, on a deeper level.

On each iteration, this process is refined and adjusted to the particular goal of the innovation, and the teams' interaction reaches new creative levels. It should also constantly adapt to the changes and innovations among competitors, demands on the national level, and has to develop the capability to predict the future, as well as the needs and demands in that future.

Successful innovation and continuity of the process calls for managers who not only support creative knowledge workers, including engineers, designers, computer experts, and all others involved, but are also entitled and empowered to take decisions and to change directions. The differentiation plays an important role on the market, so the design process must be equally supported as all others. Managers should, accordingly, understand designers' nature of designing and options, constraints, space, and the possibilities he/she is given – to build on an existing design or to destroy, redesign, or allow them to create something modified, or completely new (Grant 2004, 182–183). The global innovation survey from 2005 showed that 90% of top managers from 68 countries see that "increased growth through innovation has become a decisive factor for business success" (Austin et al. 2007, 8), and the situation is no different in Slovenia.

When all members of the company are firmly dedicated to innovativeness and the company starts to reach success and launch innovative outcomes, they unleash the additional potential of knowledge workers and dare to aim for more radical changes, risks, and innovations (section 2.3). This means allowing them to create not only new and innovative outcomes (products, processes, or services), but much more – they have the freedom to change the meaning of things they make by changing the paradigm and the culture of purpose and use of their product by also innovating the meaning and purpose of their product.

This kind of approach leads to radical innovations (as described below by Andriopoulos and Dawson), and which are a part of a vision statement of every (want-to-be) innovative company (Verganti 2009). The role of designers here is much greater than the one world-renowned designers are working on – to promote design management and taking on the management role in order to give full meaning to design. With a design-driven innovation approach, designers should take the crucial role of becoming radical researchers in creating radical innovations, by using their skills, attitude, and abilities, and create the culture close and purposeful to people and customers. We also believe artists have rare skills and intrinsically-driven motivation for beauty and perfection, which may enrich the research and development process for creating innovations by giving a hint of emotions to the outcome, on which every human reacts, on a conscious or unconscious level.

Andriopoulos and Dawson (2009, 31) argue there are three different levels of innovation with numerous gradations in between. They rank them from small-scale changes to larger and more important and valuable ones, and the third level is radical, ground-breaking innovations:

- Incremental innovations include the small changes, refinements, and modifications to already existing products. Usually, they are based on the knowledge of the organisation and existing organisational capabilities, which doesn't affect the basic conception of the product much. Incremental innovations are, for example, improvement to a mobile picture and sound quality, or the comfortableness of a bed.
- Modular innovations include middle-range innovations with more significant product improvements. An example would be the transition from black-and-white television to colour television, where the already developed product is taken through the modular innovation.
- Radical innovation that typically happens when current knowledge and products become old-fashioned, so new knowledge is required to create new possibilities and

options. When they happen they usually change the future of the organisation, of other competitive companies, and also customers' expectations. Radical innovation is, for example, developments in electricity, aeroplanes, or AOL's Instant Messenger.

In addition to practicing Artful Making or design management, also additional practical courses with artists, debates, and exchange of experiences are an additional support to deeper understanding and internalising the practicing of the Artful Making and Design management leadership. Understanding creative experts in their process and supporting them gives them impetus and additional motivation to achieve exceptional goals and realise the vision of the company. That makes them highly committed to their endeavour and strive for excellence in their work, unwilling to settle for compromises, searching for perfection, and which will make other employees follow their example (Austin and Nolan 2007).

7.5 Applying the model for introducing and fostering innovativeness in Slovenian design companies and its implications

As mentioned before in this chapter, the construction of this framework was based on theoretical background and findings in our research. Now we apply the framework to Slovenian design companies in an attempt to better understand it and develop guidelines how to improve innovativeness.

Today, the nature of work and constant changes ask for additional skills and expertise of managers. Management today needs to be able to "understand and coordinate variability, complexity, and effectiveness," and also feel safe when stepping into the unknown in the case where leading experts have more knowledge than the manager does. Allowing experts in the creation process to express and refine their works, allows them to increase the possibilities to deal with surprises and create unknown and valuable innovations and growth (Weick 2004, 46–48). The support of creative workers as experts of their innovation process is of utmost importance, and when facing different opinions in the development process, it is the role of senior management to resolve conflicts about valuable results regarding major decisions and opinions in development processes, and in taking decisions of the future direction of the process. "Senior innovation managers must control their affinity for the viewpoint of either steward or creator, restrain the counterproductive inclinations of their testy subordinates, and bring out the best traits of both" (Austin and Nolan 2007, 29–36).

Again, at our starting point is the management style. From our results of the empirical research it seems awareness of the importance of innovativeness (section 7.3.1.1) seems to be high, however, the concrete actions to implement more innovativeness – when understood as both encouragement and providing benefit (sections 7.3.1.2. and 7.3.1.3) for innovators – is lower. This might suggest either cost aversion or more likely a lack of awareness of effective tools how to better support innovativeness, and a know-how to lead knowledge workers in their creative processes.

It is vital for fostering reliable innovations, all three components are to be strongly represented, because they play a crucial role in the "race" for achieving innovations. The awareness should lead to encouragement. However, also in the end when the goal is achieved and the vision completed, a benefit for the work successfully completed is needed, and is just as important as awareness and encouragement. We assume, according to the estimations of the directors, that management recognises (correctly or incorrectly) something else as a more urgent problem, feels that the company cannot make the transformative effort at this time or else doesn't know how to foster innovation. They should be aware that the innovation process requires risks and mistakes, because, since "as by definition it involves action that is novel to some degree (Leonard and Barton 2014, 129), and does not follow the innovations on the market, and is not ready for changes that could present the biggest risk for the organisation".

Interviews with designers pointed out that they are unhappy with the culture and would prefer a more creative culture in their companies, as well as leadership that includes their cooperation from the beginning of the creative process. The survey results with designers point to another issue, that design is not understood as an integral part of the product development process. Survey respondents (designers) evaluated this as a big problem, with the average grade of 6.11 (Murovec et al. 2012, 51), while at the same time the results of the survey with directors show that Slovenian design companies' directors find innovativeness very important. We find a discrepancy here and a gap in expectations and opinions on the functioning of creative processes. The survey we participated in showed that 49.39% of Slovenian design companies created the biggest share of their income (in last three years) on the local market, 30.33% of them on the national market, and 18.24% on the EU market. Only 2.05% of Slovenian design companies created their biggest share of their income on the global market (Murovec et al. 2012, 70).

According to the literature, creative workers (also designers) need support for their experimenting, exploring, and collaborating (Neumeier 2009), since as Davenport and Cantrell (2002) argue, there is a similarity between high-end knowledge workers and creative workers in the perspective of the creative nature of work, and of the importance of having autonomy, resistance to routine, and an embracing of risk in their work. Creative and knowledge workers need the support and understanding of managers, yet designers participating in the research in Slovenia had certain complaints and exposed certain issues regarding the attitude towards their work like what obstructs their creativity, and consequently also their productivity and effectiveness. For example, in the interviews designers in large part agreed with the assertion that the organisational culture in Slovenian design industries is not flexible enough, and not supportive to proper leadership of the design process (grade 5.17). Designers' opinions are based on their own expectations, as also the limitations they face when participating in the development process. The results of an international online survey with designers from 65 countries, conducted in 2015 (InVision 2016), show that 87% of all designers said they have the possibility to prototype during their design process.

In the previous section (sections 7.3.1.6 – 7.3.1.10) our research indicates individual principles and methods of Artful Making are already being used in the Slovenian design industry, but it is not completely clear whether these principles were applied in a skilful manner, and so providing the full benefit. Even more, as shown in our research, we can assume that the principles were not used as part of an innovation framework, such as suggested in Artful Making or design management.

The transition of a manager into a professional leader of creative research and development processes demands developing some extra skills. According to Chung (2004, 185-7), among these skills are:

- analytical skills (with focus on capability to process a complex set of information and alternatives, and ability to choose the best one among them)
- human skills (respectful relationships with people, and the ability to cooperate with and through them to finish the tasks successfully)
- pathfinding skills (ability to find the best way for the company to reach the set goals, and make sure it is also functional in the long term)
- design skills (the ability to design also on company's culture, values, relationships, lifestyle, management structure, strategy and goals, operations, etc.).

To summarise, we assume that the possible weakness in the innovation process in the Slovenian design industry could be the lack of competent leadership in the creative process. This leadership skill is distinct from other leadership and managerial skills and is relatively newly emerging even in theoretical literature. It is therefore understandable that managers have had fewer opportunities to learn about them. We find this information is important for managers in design companies whose role of managing creativity is very delicate and demands additional knowledge of innovation-enabling attitudes not always taught in MBA programs or other leadership development programs (see section 7.4).

7.5.1 Steps to improve the innovation in the Slovenian design companies (with more than four employees)

After our research, many uncertainties still remain about the Slovenian design industry. However, it is clear that there is space to significantly improve the innovativeness of the industry, and thereby also possibly increase the added value of these companies. The question is whether all Slovenian companies are ready to undertake the transformation towards a more innovative orientation. There are individual companies that are clearly doing an outstanding job innovating (e.g. Gorenje (section 7.3.2) and Pipistrel[20]), but there still does not seem to be enough momentum to transform the whole Slovenian design industry.

We described some conflicts that can arise in the innovation process in section 4.6, and are shown in Table 4.3. We assume that one of the key factors to improve innovativeness in Slovenian design companies could be change of the organisational culture. As well, also needed is additional, focused education for managers to drive this improvement towards a more innovative industry, notably one that fully supports the efforts of knowledge workers in their creative processes and makes strides to improve the functioning of innovative processes, notably in areas such as artful leadership.

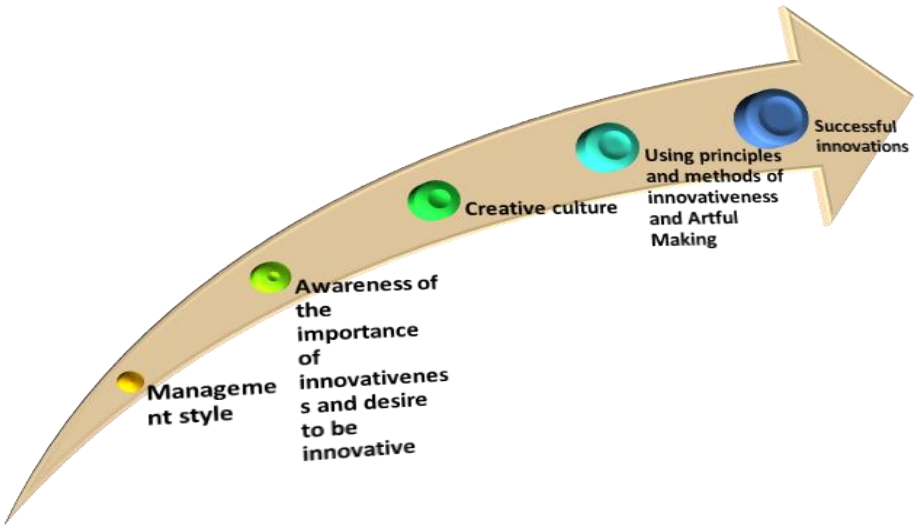
Management education equips managers with different skills and knowledge, which we already described in section 4.6 and presented in Table 4.2. The differences in the educational system between arts and management calls for additional information and expertise in artistic

[20] Pipistrel d.o.o Ajdovščina is a Slovenian light aircraft manufacturer established in 1987 by Ivo Boscarol. By June 2016, Pipistrel had produced more than 1,500 aircraft. They won the NASA Challenges three consecutive times. They make the widest range of advanced light craft in the world. In 2015 Pipistrel was chosen among top 30 most recognisable Slovene trademarks, and won numerous other prestigious awards.

knowledge for managers, that would equip them with artistic principles and would mean better understanding and leading creative people in their working process. Therefore, verification of the present MBA educational programs and leadership programs in Slovenia would offer an overview of programs they offer and potential ameliorations.

Another contribution on this area has been described in verification of hypothesis 5, the pilot project - Competence Centre for Design management (KCDM), with amazing results.

Figure 7.15: Model with the steps towards successful innovations in the Slovenian design companies

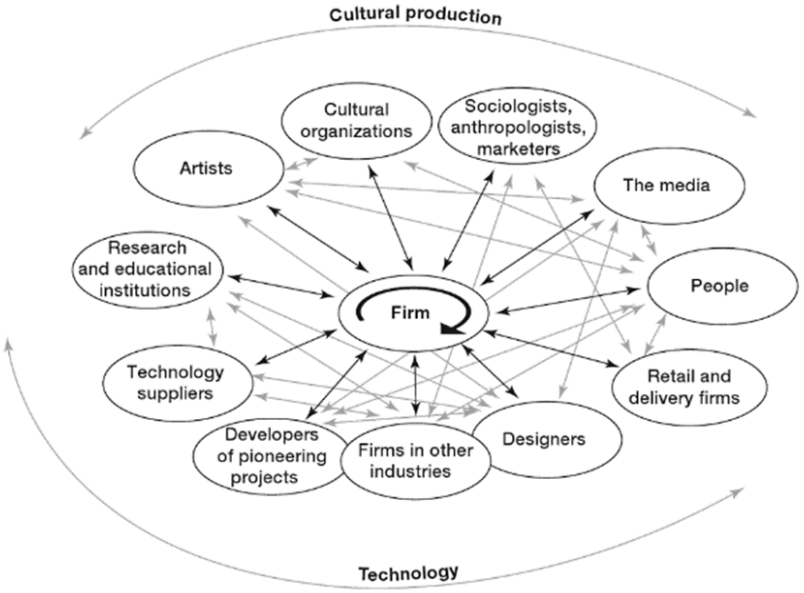


According to our analysis we assume some directors and managers lack the skills to bring out the best out of creative workers, and the strategic overview to come to the forefront of innovativeness on the global level. We estimate that education in creative leadership and senior management support are essential, and that Artful Making in collaboration with design management offer an opportunity to empower managers in innovative processes. We assume it would be prosperous to present a project presenting and educating about Artful Making and design management, so all Slovenian design managers would get acquainted with additional, creative skills and knowledge, which would broaden their perspective of innovative processes. Managers with broader perspective and various approaches to face the challenges, will dare to take the chance of creating a team of experts and motivate them to create not only new design of their products, but also dare to strive to form new technologies, and go after innovations. If they start to create a network of experts from various, different fields, where each will contribute to research and development, and when the involved in the process work together

for a common goal, they will be capable to create valuable, original outcomes, and consequently profit, according to Verganti (2009, 37). The team should be led by questions like “What is the deepest reason people buy our product? Why is it meaningful to them? And most of all, How can we gratify people and make them more content by providing them with products that suggest new meanings,” rather than by fear of making mistakes, fear of losing clients, or a fear of not being recognised as desirable on the market.

The team can first create incremental improvements of the products, on various levels – with innovative design, innovative technology, innovative usability, and also innovative meaning of their products. Just as successful design-driven innovators do, they create a team, or as they call it “a network” of the best experts in their field, and together they conduct research on the people they are targeting as their potential buyers. After a detailed research of sociological, cultural, and technical terms, they create a vision of the potential improvements they can offer these people. Just as we were describing in the process, and by applying the principles and methods of Artful Making and guidelines for managers how to avoid potential missunderstandings between manager and creative workers (Austin and Devin 2007), they exchange ideas, knowledge, and use their imagination (see Chapter 5). They are all focused on the same, common goal, and by prototyping they try to improve a certain situation, product, or experience. Each expert comes from his/her point of view and contribues to improvement, so all together they create not just a new design, not just technical improvement, but also have the power to create new, valuable meaning of their outcome. In the experiments, exchange and exploration of improvements, the contribution of each expert is highly important and should be valued by specific contribution and by leveraging the knowledge of his/her experise, experience, logic, and thinking. The process leads to the point that they explain and give special meaning to their products and then introduce it in a seductive, powerful, and meaningful way to customers to win their attention and their hearts (Verganti 2009). This way, the company collects information for improvement and innovation, not only from its innovation team, but collects information from a much broader pool, as shown in Figure 7.16.

Figure 7.16: Collective research laboratory in design-driven innovation process and its interpreters



Source: Verganti (2009, 12).

Figure 7.16 shows how a company is interconnected and gains information from a very broad set of people, including: experts, companies (competitors), media, artists, designers, users, research and educational institutions, sociologists, suppliers, and just about everyone affecting the culture of their product. Each contribution makes a co-creator of the final products, and also of the new meaning they form for this product. Slovenia has numerous top experts and highly educated employees, and also capable and successful managers, so we believe additional information, education, and skills could be a positive influence on the success of Slovenian design industry.

We believe it is time to help managers bridge the gaps they face in creative processes, and make some improvements in educational process and setting the priorities in the educational system of management. The differences in educational process between art schools and management schools are vast, and on most different levels of transmitting new information, knowledge, and learning. By studying piano, it was a lot about playing, listening, practicing, exchanging opinions, and improving; all that combined with numerous iterations, experimenting, putting into pieces, and trying different interpretations. Management school is mostly text-reading and exchanging discourse-driven. The differences between the two different approaches are described in Table 4.2. In 1934, Dewey described these differences in

his book Art as Experience (Eickmann et al. 2004, 242–4), when writing about the concept of experiential learning, which Kolb described as the process through which by experience and its transformation, knowledge was gained. It is formed of thinking, but also feeling and reflecting, and also actively experimenting. This creates a learning cycle and a process where education and knowledge is created through all four experiences – thinking, feeling, reflecting, and experimenting. We believe Artful Making can be very beneficial to the leadership of innovation processes, and can also enrich management education with deeper understanding, new knowledge, and different ways of thinking and reflecting by learning about an artistic approach to creation, which includes feelings, intuition, imagination, invention, insightfulness, passion, striving for perfection, experimenting, and creativity. We believe it would consequently change their attitude towards creative workers they manage and result in a more sophisticated approach to creative workers, higher respect and understanding of their endeavours, and more valuable innovations.

In reflecting on the concept of Artful Making, we believe it presents a bridge we were looking for in this doctoral dissertation – an explanation, information, and presentation of skills needed for managers, so they can better understand different logic, expectations, ideas, and working process of their experts and employee geniuses, who are often so hard to be understand, and even harder to lead. Artful Making explains that "Conventionally trained managers may need to unlearn practices developed for use with sequential processes . . . may have the wrong reflexes when it comes to knowledge – or innovation-based work" (Austin and Devin 2006, 17), and at the same time offers the tools needed and guidelines how to lead and support creative employees to freely express their creative drive, imagination, and follow their passion.

To conclude, throughout our research and literature review we find numerous similarities between Artful Making and design management and believe connecting of the two would be beneficial for the companies and for innovation process. Each has its specifics and uniqueness; therefore each can contribute their knowledge, expertise, skills, experience, and principles. Cooperation of designers and artists, or to shift it – cooperation of design management and Artful Making practitioners, can be beneficial for Slovenian design companies. "The inspiring relation between art and design, aesthetics and innovation, perfectly fits in the contemporary world cultural production and is the next challenge in the aesthetics of use and development of our material culture" (Lupo 2011, 52).

Based on the results of our research and our review of the relevant literature, we believe we can contribute to the theory of Artful Making. Our suggestions for refining Artful Making theory by relevant, additional principles that matter, taken from design management, the relevant literature (see Chapter 6 and 7), or based on the results of our survey, are:

- Consistency in the use of all the principles and methods as suggested by Artful Making
- Differentiation (pointing to the role of designers who play a crucial role here) and giving (creating) meaning of the product
- Measurement of a quality product
- Information about the customer's opinion and novelties on the market
- Creating a vision of the potential improvements, based on research of the potential buyers (research of sociological, cultural, and technical terms) (see Verganti 2009 and Figure 7.16)
- Creative workers need the full support of a director, one who encourages and expresses appreciation (the proper structure, culture, and relationships lead towards cooperation and results, and where encouragement and benefits for innovativeness will be perceived as equally important as importance of innovativeness (Weich 2004).

Artful Making successfully connects and combines two different spheres, which called for embracing different tools, and the studying and translation of individual principles.

Artista, and already their eduaction is individual – one on one, personal, invloved emotions, exchange of feeleing, ideas, opinions and discussion of doubts, missunderstanding and obstacles. Aestetic, constantly involving praxis, while practical experience is inreplacable. Allowing the artistic educational system enter managerial educational system would equip managers with skills needed to understand, support and lead creative workers.

The market is changing, novel outcomes are presented on a daily basis, so also companies and managers mustn't stay behind, but adapt or even better – lead the change. That changes the role of managers, who are less and less intermediaries, and are expected to be "the infomediaries". At the same time, more and more creative people are "increasingly recognizing the importance of developing creative entrepreneurial skills with a view to link arts, creations, business, and connectivity" (UNCTAD 2010, 263).

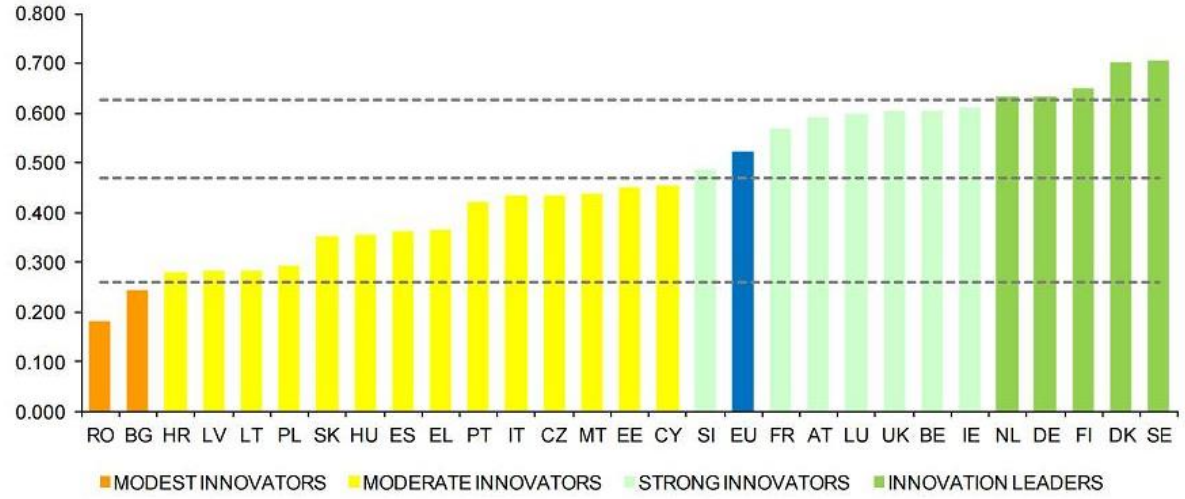
The educational system makes artists equiped with knowledge, skills, creativity, and at the same time teaches them to respect rules and discipline. The same should be with education of

managers leading creative processes – may they experience artistic process and learn artistic principles, to be well-equiped to understand, support, and lead creative workers.

Through the lens of our findings and conclusion, the process of teaching managers and "encouraging leaders at all levels to help create large degrees of freedom" for all employees and knowledge workers, who are experts on their field, can change the level of success and innovativeness of the company. Leaders are given the responsible tasks as they are co-creators of positive and valuable results of the companies, with benefits for their customers and partners. Allowing knowledge workers to create, think, experiment, and try to use the resources and bundles of their skills, can redesign the organisation, its culture, and its approach in facing challenges, and can create the process that will result in innovations (Chung 2004, 186–7).

A shift to better understanding the creative process and ability of managers to not just support creativity, but to be creative him/herself, would give the development team the push needed to deliver value, especially in the Slovenian design industry where its success and profits are dependent in a special way on design as a matter of differentiation, and added value in a highly competent and rapidly changing environment. It would allow creative people to put all their expertise into practice so they can "take what is given and transform it into an idea that communicates the desired message in the most successful way" (Eickmann et al. 2004, 245–6). We find this shift is of utmost importance and urgency, and believe this would push the Slovenian design industry forward, enable it to reach better results, and thrive on national and global levels (see Figure 7.17).

Figure 7.17: EU Member States' innovation performance - Stages of innovators and the position of Slovenia comparing to other European countries



Source: (Hollanders, Es-Sadki, & Kanerva, 2016).

We conclude that the path towards prosperity and profitability in times of increasing tempo of changes, innovations, and unpredictability of the future, is closely related to properly managing highly educated knowledge workers in their endeavour to create innovative, valuable outcomes - whether products, services, or processes, which can lead to reliable innovativeness. Figure 7.17 shows that in 2016, Slovenia was a little below the average of the European Union in its innovations performance, and thus listed among the strong innovators. With additional knowledge and expertise in managing creativity, we are confident Slovenia – especially Slovenian design companies – can soon be positioned even higher and improve its position, compared to other European countries, and even become one of the innovation leaders.

8 CONCLUSION

Focus of this dissertation is managing innovation processes needed in business organisations, in order to respond to the exponential rise of innovative products, processes and services. We tackle questions, such as 'What is the best management style for the creative process?'; 'How can we make the most out of the existing knowledge and capacity?'; 'How can we unleash the potential of the creativity of knowledge workers in creative processes?' are still not given enough attention.

Creativity - the process of producing valuable novel outcomes and innovations - is one of the key drivers of success for innovative companies. Traditionally, it has been associated with artists, who are seen as those who not only are creative and those who understand creativity, but also deeply understand the functioning of the creative process. To gain a better understanding of creativity and innovation processes we studied the intersection of two seemingly very different domains – arts and business. Our analysis contributes to the better understanding of the functioning of creativity, the nature of creative work, and the leadership of the delicate innovation process. These themes are still not researched enough and among still not adequately understood by many managers.

Insight into the work of artists and the ways they incite change and development to attain works of art, is a contribution to forming optimal support to innovation processes and the performance of creative workers and organizations. Accepting new ways of working in companies and learning from artists can develop and facilitate in managers the capacity to think, feel and create differently, and to develop new models of thinking and problem solving, and there by also novel options for leading the processes (Schiuma 2009, Austin and Devin 2003, Adler 2006; Monthoux and Statler 2008).

Leaders can't develop excellent skills just by being managers. In order to perform in the best way, they need additional knowledge. "Through selection, training, and feedback, companies must work hard to create a cadre of leaders who are as adept at fostering innovation as they are at running the business" (Hamel and Tennant 2015).

We study a new management theory of innovation processes created by Austin and Devin (2003). The theory is based on the in-depth study of complex creativity of successful artists. It offers insights into, as well as explanations and understanding of inner workings and functioning of creativity. These are essential for successful leadership of creative workers in

innovation processes. We studied and further developed the principles and methods of the Artful Making theory. The study examined a management approach that creative people need, that is functional for innovative companies, and presents an evolution of the artful, nurturing management of creative processes in the business world. We contribute in this important area by studying relevant literature and examples of cooperation of artists with business organisations.

The Slovenian design industry is the subject of investigation in this dissertation. With empirical study of the design industry in Slovenia we further evaluate Artful Makings' functionality, and at the same time study the present situation and innovativeness in the Slovenian design industry. This thesis is a part of the first all-national survey of the Slovenian design industry. We studied the importance of innovativeness, and the attitudes of directors towards the use of individual Artful Making principles in creative processes in Slovenian design industry.

The study showed that managers of Slovenian design companies possess awareness that innovativeness is critically important for their success. However, we also found inconsistency in the attitudes towards innovativeness: high estimations of its importance (mean value 5.34 out of 7), while paying less importance to encouragement (mean value 5.16 out of 7), and rewarding of innovativeness (mean value 4.48 out of 7). These results suggest that an awareness of the importance of innovativeness is neither internalised and fully accepted, nor there exists willingness, innovation skills and ability to truly commit to making innovation an utterly ubiquitous capability. This question merits further investigation.

We found that individual principles of Artful Making management approaches are already being used in the Slovenian design industry, which shows the effort of Slovenian design companies to be innovative. We confirmed that the level of importance of innovativeness in the company is associated with the use of individual Artful Making principles.

We also confirmed the existence of positive correlations between the use of principles of Artful Making and numerous economic and performance indicators. Among them are the following variables: the number of new products, number of novelties introduced in the administrative system, and the use of the newest technological innovations in new products, processes or services.

Our findings suggest that a part of the Slovenian design industry still relies on replication (copying) and adopting innovations initiated by others, rather than seeing innovation within

their own organisation as the engine of progress and success. According to the estimations of the directors, the share of companies building their success on developing substantial innovations (or design) is 42.7%, while 24.8% of directors stated that their companies copy the products/services from other companies (in a way that they change only their design/form) (Murovec et al. 2012). These findings are supported by identified discrepancies in the use of individual Artful Making principles in development processes.

We confirmed a mild to medium strong correlation between the number of new products, processes or services and questions about attitude towards innovativeness and use of Artful Making principles ($0.227 < R < 0.373$, $p= 0.000$). The strongest correlation ($R= 0.373$, $p= 0.000$) between the launch of innovative products/services is with the usage of a guided process, however, this relationship is less strong when testing against new products which the company's launch was among the first on the market.

Nevertheless, our research could not confirm the existence of correlations between the use of principles of Artful Making, and profitability in the last three years, nor with the growth of the market share or income. This is likely a reflection of our sample rather than a universal finding. We identified low investments in the development of new products. When we compared these results to empirical and theoretical research we found that discrepancies regarding profitability and the number of innovations indicate there is significant potential for further development of Slovenian design companies.

Secondly, we could not verify whether leadership, i.e. directors and innovation managers in the Slovenian design industry, are entirely aware of the need for adapting management approaches to lead the creativity of knowledge workers in the development process, and to better respond to the changing nature of competition. Though, we did find high inconsistency in answers regarding the importance of innovativeness, and the number of innovations. The results reveal that only 10.53% of Slovenian design companies base their competitiveness on innovations, and another 43.37% of companies base their competitiveness on the added-value of their product/service. Additional qualitative and mixed methods research are needed to verify and confirm our findings.

Innovative products and processes, the final output of creativity, call for new management that not only supports innovation processes, but also gives impetus to creativity in the organisations. The practitioners who are acquainted with the creative nature of work, and have the knowledge

to successfully manage creative processes, make the production of valuable outcomes much easier.

Based on the theoretical, conceptual background, synthesis of the literature and the findings and conclusions of our empirical research led us to develop a conceptual model for introducing and fostering innovativeness in Slovenian design companies, in order to make innovation their ubiquitous capability. We present a platform for exploration of key dimensions that need to be taken into consideration for the improvement of the innovativeness and successfulness of the Slovenian design industry. More consistent, systemic and strategic implementation of Artful Making principles could support the Slovenian design industry to advance and improve outcomes. Implementation of Artful Making calls for greater commitment to innovation and for a holistic approach, cooperation and dedication of the whole company. It equally requires the education of directors and managers through leadership educational systems, programs, coaching and pilot projects. In innovative companies, the focus needs to be on dimensions such as: performance of creative workers, supportive personal mentoring and leading innovation teams, embracing "useful mistakes", eliminating the adversaries of creative workers, like the fear of mistakes, the reluctance to stepping into the unknown, the wish to control everything, embracing experimentation, and the reduction of hierarchy. Acts that express and manifest respect and support, especially when they are on the path of innovation and striving to create a novel solution or product can make a world of difference.

We recommend that organisations craving for innovativeness, pursue the adoption, strengthening, and adaptation of management approaches to deeply appreciate and endorse creativity and its complexity. There is a need to continue research into how we can support the greater adoption of Artful Making principles. We conclude that future research needs to as a priority explore seeming discrepancies in value that are given to innovation, and yet the less strong support of processes that lead to it. Such discrepancies are not uncommon in management practices. Finding it in this aspect of leadership, however, puts companies' success and long-term sustainability at risk. As such, it deserves further study as to how to overcome it. With the application of Artful Making, managers will be provided with the expertise, innovation skills, and knowledge needed to successfully lead the innovation process.

Slovenian design companies can become major innovators and leaders among competitors, once directors firmly decide to and inspire all employees to dedicate to that goal. Our model shows the way and emphasises the key steps to reaching it. There must be an effort to include

the whole company in the process, upgrade everyone's innovation skills, and to hold "leaders accountable for innovation, and retool its management processes so they foster innovation everywhere, all the time" (Hamel and Tennant 2015).

This information is important for directors and leaders in Slovenian design companies. They are the ones who have the authority to create change and turn their companies in pivotal brands by transforming their company culture, relationships, management approach, and create the proper support for creativity and production of innovative outcomes.

We propose the cooperation of Artful Making and design management practitioners, with the objective to create novel and unique paradigms and logic for further supporting Slovenian design companies striving for innovations (Lupo 2011).

This empirical study of the design industry presents proactive insights and makes a valuable contribution and offers enrichment to an innovative organisation and its innovation performance. We contribute to the recognition of connections between business and arts, based on our theoretical and empirical findings. We also contribute to organisational theory, and concretely to Artful Making by enriching it with additional principles based on the study of relevant literature and on the results and findings of our empirical research.

To conclude, our study has shown that in the post-modern and post-industrial age, post-modern organisations, and post-modern culture, it is also time for post-modern leadership. Artful Making offers genuine, enduring answers for the (Slovenian) design industry how to advance. In that sense its principles seem to be timeless and universal.

9 LITERATURE

Abele, J. 2011. ‘Bringing Minds Together’. *Harvard Business Review, July-August, 86-93*.

Adair, John. 2007. *The Art of Creative Thinking: How to Be Innovative and Develop Great Ideas*. Kogan Page.

Adair, John. 2009. *Leadership for Innovation: How to Organize Team Creativity and Harvest Ideas*. Kogan Page Publishers.

Adler, N. J. NJ. 2006. ‘The Arts & Leadership: Now That We Can Do Anything, What Will We Do?’ *Academy of Management Learning & Education* 5 (4): 486–99. doi:10.5465/AMLE.2006.23473209.

AEC - The Association Européenne des Conservatoires Académies de Musique et Musikhochschulen. 2014. ‘About AEC - AEC’. http://www.aec-music.eu/about-aec.

Aguirre, DeAnne, Rutger von Post, and Micah Alpern. 2013. ‘Culture’s Role in Enabling Organizaional Change & Survey Ties Transformation Success to Deft Handling of Cultural Issues’. *Strategy&*, 4.

AJPES. 2016. ‘Informacija O Poslovanju Samostojnih Podjetnikov Posameznikov v Republiki Sloveniji v Letu 2015’. Ljubljana.

Alvesson, M, and H Willmott. 2002. ‘Identity Regulation as Organizational Control: Producing the Appropriate Individual’. *Journal of Management Studies*.

Amabile, TM, and SJ Kramer. 2011. ‘The Power of Small Wins’. *Harvard Business Review*.

Andriopoulos, C, and P Dawson. 2009. *Managing Change, Creativity and Innovation*.

Andriopoulos, Constantine. 2001. ‘Determinants of Organisational Creativity: A Literature Review’. *Management Decision* 39 (10). MCB UP Ltd: 834–41. doi:10.1108/00251740110402328.

Antal, AB. 2009. ‘Transforming Organisations with the Arts.’ *TILLTEUROPE*.

Antal, AB, and A Strauss. 2014. ‘Not Only Art’s task—Narrating Bridges between Unusual Experiences with Art and Organizational Identity’. *Scandinavian Journal of Management* 30 (1): 114–23. doi:10.1016/j.scaman.2013.11.001.

Anthony, RN, and DW Young. 1988. *Management Control in Nonprofit Organizations*. Edited by Richard D. Irwin.

Arts & Business. 2009. ‘Leading Business Schools Gather to Debate the Role of the Arts in Organisational Change’. http://www.artsandbusiness.org.uk/News/2009/nov/abi_giovannischiuma.aspx.

Arts & Business Group. 2009. ‘Arts and Business Group’. http://www.artsandbusiness.org.uk/.

Austin, R, and L Devin. 2009. ‘It Is Okay for Artists to Make Money No, Really, It’s Okay’. 09–128. *Harvard Business School Technology & Operations Mgt. Unit*.

Austin, R, and S O’Donnell. 2007. ‘Paul Robertson and the Medici String Quartet’.

Austin, Rob, and Lee Devin. 2004. ‘Successful Innovation through Artful Process’. *Leader to Leader* 2004 (32): 48–55. doi:10.1002/ltl.76.

Austin, Robert D., and Lee Devin. 2006. ‘Innovation in Art and Business: Process, Principle, and Practice Research Design for a Study in Progress’.

Austin, Robert D., Lee Devin, and Erin E. Sullivan. 2012. ‘Accidental Innovation: Supporting Valuable Unpredictability in the Creative Process’. *Organization Science* 23 (5): 1505–22. doi:10.1287/orsc.1110.0681.

Austin, Robert D., Silje Kamille FriisErin, and E. Sullivan. 2007. ‘Design: More Than a Cool Chair’. *Harvard Business School*.

Austin, Robert D., and Richard L. Nolan. 2007. ‘Bridging the Gap Between Stewards and Creators’. *MIT Sloan Management Review*.

Austin, Robert D., and David M. Upton. 2016. ‘Leading in the Age of Super-Transparency’. *MIT Sloan Management Review*. http://sloanreview.mit.edu/article/leading-in-the-age-of-super-transparency/.

Austin, Robert D, and L Devin. 2005. ‘Accident, Intention, and Expectation in Innovation Process Harvard Business School Copenhagen Business School’. *Division of Research, Harvard Business School*.

Austin, Robert Daniel. 1996. *Measuring and Managing Performance in Organizations*. Dorset House Publishing.

Austin, Robert, and L Devin. 2003. ‘Why Managing Innovation Is Like Theater’. *Harvard Business*.

Austin, Robert, and Lee Devin. 2003. *Artful Making: What Managers Need to Know about How Artists Work*. FT Press.

Baer, Markus, Greg R. Oldham, Gwendolyn Costa Jacobsohn, and Andrea B. Hollingshead. 2008. ‘The Personality Composition of Teams and Creativity: The Moderating Role of Team Creative Confidence’. *Journal of Creative Behavior* 255 (4).

Baker, D. F., and S. J. Baker. 2012. ‘A Canvas for Creativity in the Management Classroom’. *Academy of Management Learning & Education* 11 (4). Academy of Management: 704–21. doi:10.5465/amle.2010.0003.

Banaji, S, A Burn, and D Buckingham. 2010. ‘The Rhetorics of Creativity: A Literature Review’.

Banaji, Shakuntala, Andrew Burn, and David Buckingham. 2010. ‘Creativity, Culture and Education Series The Rhetorics of Creativity: A Literature Review 2nd Edition’. *The Rhetorics of Creativity: A Literature Review S Banaji, A Burn, D Buckingham - 2010 - Creativity, Culture and Education*.

Barrett, Richard. 2006. *Building a Values-Driven Organization : A Whole System Approach to Cultural Transformation*. Butterworth-Heinemann.

Barry, D, and S Meisiek. 2010. ‘Seeing More and Seeing Differently: Sensemaking, Mindfulness, and the Workarts’. *Organization Studies*.

Barry, Daved., and Hans Hansen. 2008. *The SAGE Handbook of New Approaches in Management and Organization*. Edited by D Barry and H Hansen. SAGE.

Bartelme, Lois. 2005. ‘The View from the Trenches: An Interview with Harvey Seifter and Tim Stockil’. Edited by Harvey Seifter. *Journal of Business Strategy* 26 (5): 7–13. doi:10.1108/02756660510620716.

Bauman, Zygmunt. 2007. *Liquid Times: Living in an Age of Uncertainty*. Cambridge: Polity Press.

Beavers, Anthony F. 2009. ‘The Phenomenological Mind: An Introduction to Philosophy of Mind and Cognitive Science’. *Philosophical Psychology* 22 (4): 533–37. doi:10.1080/09515080903157932.

Belak, Janko, and Štefan Kajzer. 1993. *Podjetniško Planiranje, Podjetništvo in Management : Zbornik Referatov*. Maribor ;Ljubljana: Društvo ekonomistov;Zavod Republike Slovenije za makroekonomske analize in razvoj.

Bennis, Warren, and Patricia Ward Biederman. 1997. *Organizing Genius*. Vol. 2. Basic Books.

Best, Kathry. 2006. *Design Management : Managing Design Strategy, Process and Implementation*. AVA Academia.

Bešter, Janez, and Nika Murovec. 2010. ‘Spremljanje Inovativnosti Slovenskih Podjetij’.

Billsberry, J. 2013. ‘Special Issue: Integrating Liberal Learning, Humanities, and Management Education: Putting the Carnegie Report Into Practice’. *Journal of Management Education* 37 (3). SAGE PublicationsSage CA: Los Angeles, CA: 432–432. doi:10.1177/1052562913488877.

Birkinshaw, Julian M, Gary Hamel, and Michael J Mol. 2008. ‘Management Innovation’. Edited by Keith D Swenson. *Academy of Management Review*, AIM Research Working Paper Series, 33 (4). Academy of Management: 825–45. doi:10.5465/AMR.2008.34421969.

Boje, D. M., U. C. Haley, and R. Saylors. 2015. ‘Antenarratives of Organizational Change: The Microstoria of Burger Kings Storytelling in Space, Time and Strategic Context’. *Human Relations* 69 (2): 391–418. doi:10.1177/0018726715585812.

Boje, David M., Robert P. Gephart, and Tojo Joseph Thatchenkery. 1996. *Postmodern Management and Organization Theory*. Sage Publications.

Boland, Richard., and Fred. Collopy. 2004. *Managing as Designing*. Edited by J. Richard Boland and Fred Collopy. Stanford University Press.

Boland, RJ, and F Collopy. 2004. 'Toward a Design Vocabulary for Management'. In *Managing as Designing*, edited by RJ Boland and F Collopy, 265–76.

Bond, GW. 2005. 'Software as Art'. *Communications of the ACM*.

Bono, Edward De. 1999. *Six Thinking Hats*. Penguin Books, Limited.

--- 2008. 'How Long Can You Wait for the Benefits of Change Management or Innovation?' *Leadership Review*.

Borja de Mozota, Brigitte. 2003. *Design Management : Using Design to Build Brand Value and Corporate Innovation*. Allworth Communications, New York. .

Božič, Nina. 2008. 'Managerji Na Študiju Pri Umetnikih'. *Revija Manager*. http://manager.finance.si/209398/Managerji-na-%B9tudiju-pri-umetnikih.

Bozic, Nina, and Köping Bengt Olsson. 2013. 'Culture for Radical Innovation: What Can Business Learn from Creative Processes of Contemporary Dancers?' *Organizational Aesthetics Open Access Journal | Vol 2 | Iss 1* 2 (1). The Art of Management and Organization: 59–83.

Broekhuijsen, M, and P Ibbotson. 2007. 'Rehearsal – The Bridge between Text and Context'. In *Organizational Theatre*, edited by L. Darsø, S. Meisiek, and D. Boje, 56–64. Learning Lab Denmark, The Danish University of Education.

Brown, Jim. 2008. 'Design Thinking'. *Havard Business Review*, no. June: 84–95.

--- 2016. 'About IDEO | Ideo.com'. https://www.ideo.com/about.

Buchanan, Richard. 2004. 'Management and Design: Interaction Pathways in Organizational Life'. In *Managing as Designing*, edited by Richard. Boland and Fred. Collopy, 298. Stanford Business Books.

Burgar, Janko, and Borut Likar. 2011. 'Inovacijski Proces. Imam Idejo'. *Javna Agencija Republike Slovenije Za Podjetništvo in Tuje Investicije*. Accessed July 30. http://www.imamidejo.si/Inovativnost/Inovacijski-proces.

Burns, Tom, and G. M. Stalker. 2003. 'The Management of Innovation'. In *The Sociology of Organizations : Classic, Contemporary, and Critical Readings*, edited by Michael J. Handel.

Car, Marijana. 2009. 'Menedžment Nepridobitnih Organizacij Na Področju Glasbenega Šolstva : Magistrsko Delo'. Ljubljana.

Car, Marijana, Aleksandra Kanjuo Mrčela, and Dana Mesner Andolšek. 2015. 'Artful Making: Use Of Principles Of Artistic Creation In Management'. *Teorija in Praksa* (52). (3): 511–37.

Carroll, Maureen, Shelley Goldman, Leticia Britos, Jaime Koh, Adam Royalty, and Michael Hornstein. 2010. 'Destination, Imagination and the Fires Within: Design Thinking in a Middle School Classroom'. *International Journal of Art & Design Education*.

Chesbrough, Henry W, and Melissa M Appleyard. 2007. 'Open Innovation and Strategy'. *California Management Review* 50 (1). UNIVERSITY OF CALIFORNIA: 57–77.

Chung, Po. 2004. 'Drivers versus Designers as an Organization's Building Philosophy'. In *Managing as Designing*, edited by Fred BOLAND, RICHARD J., JR. COLLOPY.

Ciantis, Cheryl De. 1995. *Using an Art Technique to Facilitate Leadership Development*. Center for Creative Leadership. doi:978-1882197095.

Clark, Timothy, and Iain Mangham. 2004. 'From Dramaturgy to Theatre as Technology: The Case of Corporate Theatre*'. *Journal of Management Studies* 41 (1): 37–59. doi:10.1111/j.1467-6486.2004.00420.x.

Clegg, SR, C Hardy, and WR Nord. 1996. *Handbook of Organization Studies*. Edited by SR Clegg, C Hardy, and WR Nord. SAGE Publications Ltd.

Clegg, Stewart R. 1992. '"Postmodern Management?"' *Journal of Organizational Change Management, Vol. 5 Issue: 2*. doi:Stewart R. Clegg, (1992) 'Postmodern Management?', Journal of Organizational Change Management, Vol. 5 Issue: 2, pp.31-49, doi: 10.1108/09534819210014869.

Collins, J. C., and J. I. Porras. 1996. 'Building Your Company ' S Vision Making Differences Matter : A New Paradigm for Managing Diversity Breaking the Functional Mind-Set in the Pitfalls of Parenting Mature Companies'. *Harvard Business Review* 74 (5): 65.

Connell, Julia. 2015. 'Networks and Co-Working: Supporting Creativity, Innovation and Knowledge Sharing?' In *From Knowledge Management to Learning Organisation to Innovation: The Way Ahead! - Google Books*, edited by Fawzy Soliman. Cambridge scholars Publishers.

Cook, Nicholas. 2004. 'In Praise of Symbolic Poverty'. In *Managing as Designing*, edited by FRED BOLAND, JR. RICHARD J COLLOPY.

Cooperrider, David. 2008. 'Sustainable Innovation.' *BizEd* 7 (4). AACSB International: 32–38. doi:10.1007/978-0-387-87581-1.

Cornelissen, Joep P. 2004. 'What Are We Playing at? Theatre, Organization, and the Use of Metaphor'. *Organization Studies* 25 (5): 705–26. doi:10.1177/0170840604042411.

Coughlan, P., and I. Prokopoff. 2004. 'Managing Change, by Design'. In *Managing as Designing* , edited by JR. BOLAND, RICHARD J. and Fred COLLOPY. Stanford University Press.

Council of the European Union. 2009. ‘Culture as a Catalyst for Creativity and Innovation’, 1–5.

Crawford, M, and A Di Benedetto. 2006. ‘New Product Management–International Edition’. *McGraw-Hill, Boston, MA*.

Crossan, Mary M., and Marina Apaydin. 2010. ‘A Multi-Dimensional Framework of Organizational Innovation: A Systematic Review of the Literature’. *Journal of Management Studies* 47 (6): 1154–91. doi:10.1111/j.1467-6486.2009.00880.x.

Csikszentmihalyi, Mihaly. 1996. ‘Creativity, Flow and the Psychology of Discovery and Invention.’ *New York: Harper Collins. - References - Scientific Research Publish*.

--- 2013. *Creativity: The Psychology of Discovery and Invention*. Harper Perenial modern classics.

Čurin, Suzana. 1998. ‘Menedžment Nepridobitnih Organizacij v Demokratični Družbi’. *Razgledi*.

D.school. 2013. ‘Stanford University Institute of Design’. https://dschool.stanford.edu/.

Darsø, L. 2004. ‘Artful Creation: Learning-Tales of Arts-in-Business’.

Davenport, Thomas H., and Susan Cantrell. 2002. ‘The Art of Work’. *Outlook Journal*.

Davies, Stephen. 2007. *Philosophical Perspectives on Art*. *Oxford University Press*.

Davis, S, and D McIntosh. 2005. *The Art of Business: Make All Your Work a Work of Art*.

Bono, Edward De. 2006. *De Bono’s Thinking Course*. BBC Active.

Bono, Edward De. n.d. *Change in Management Thinking: How to Change the Way People Are Thinking in Management*. *Edward de Bono & Robert Heller’s: Thinking Managers*.

Dean, JT. 2003. ‘The Nature of Concepts and the Definition of Art’. *The Journal of Aesthetics and Art Criticism*.

Denhardt, RB, and JV Denhardt. 2005. *The Dance of Leadership: The Art of Leading in Business, Government, and Society*.

Denning, S. 2005. *The Leader’s Guide to Storytelling: Mastering the Art and Discipline of Business Narrative*.

Denning, Stephen. 2001. *The Springboard: How Storytelling Ignites Action in Knowledge-Era Organizations*. Routledge.

Denny, R. 1993. *Motivate to Win: Tested Techniques for Greater Achievement*.

Department for Culture, Media & Sport - GOV.UK. 1997. ‘UK Creative Industries Task Force’. https://www.gov.uk/government/organisations/department-for-culture-media-sport.

Design council UK. 2015. ‘Design Methods for Developing Services’.

Devin, L, and R Austin. 2008. ‘Artistic Methods and Business Disorganization’. In *21st Century Management : A Reference Handbook*, edited by Charles Wankel. Sage Publications, Incorporated.

Dewey, John. 1934. *Art as Experience*. New York: Perigee.

--- 2005. *Art as Experience - Google Books*. The Berkley Publishing Group, USA.

Dewey, John, and Jo Ann Boydston. 2008. *The Later Works, 1925-1953*. Southern Illinois University Press.

Dillman, DA. 2011. ‘Mail and Internet Surveys: The Tailored Design Method--2007 Update with New Internet, Visual, and Mixed-Mode Guide’.

Dimovski, Vlado. 2006. ‘Učeča Se Organizacija: Razvoj Koncepta in Njegova Pomembnost Za Managersko Delo’. *Ljubljana: Ekonomska Fakulteta, Univerza v Ljubljani*.

DMI. 2011. ‘What Is Design Management? DMI - Desing Management Institute’. *2011*. Accessed August 20. http://www.dmi.org/dmi/html/aboutdmi/design_management.htm.

Dobiey, Dirk. 2014. ‘The Head, Hand and Heart in the Arts’. http://www.slideshare.net/DirkDobiey/the-head-hand-and-heart-in-the-arts?redirected_from=save_on_embed.

Dodgson, Mark, David M. Gann, and Nelson Phillips. 2014. ‘Perspectives on Innovation Management’. In *The Oxford Handbook of Innovation Management - Google Books*, edited by Mark Dodgson, David M. Gann, and Nelson Phillips. OUP Oxford.

Dorst, Kees. 2011. ‘The Core of “design Thinking” and Its Application’. *Design Studies* 32 (6): 521–32. doi:10.1016/j.destud.2011.07.006.

Drevdahl, J E, and R B Cattell. 1958. ‘Personality and Creativity in Artists and Writers.’ *Journal of Clinical Psychology* 14 (2): 107–11.

DRS - Design Research Society. 2016. ‘About the Design Research Society’. http://www.designresearchsociety.org/index.php/about.

Drucker, Peter. 2004. *O Managementu*. Ljubljana: GV založba.

Drucker, Peter Ferdinand. 1985. *Innovation and Entrepreneurship: Practice and Principles*. Heinemann.

--- 1990. ‘Managing the Non Profit Organization: Practices and Principles Harper Collins’. *New York*.

--- 1998. ‘The Discipline of Innovation’. *Harvard Business Review*.

--- 2001. *Managerski Izzivi v 21. Stoletju*.

DTI - ECONOMICS PAPER NO.15. 2005. ‘Creativity, Design and Business Performance’. 15.

DuBrin, Andrew J. 2011. *Leadership : Research Findings, Practice, and Skills*. South-Western Cengage Learning.

Dunne, David, Roger Martin, and Joseph L Rotman. 2006. ‘Design Thinking and How It Will Change Management Education: An Interview and Discussion’. *Academy of Management Learning & Education*.

Dutta, Soumitra. 2015. *The Global Innovation Index 2015. Stronger Innovation Linkages for*. doi:978-2-9522210-8-5.

Edquist, Charles. 2005. ‘Systems of Innovation Approaches - Their Emergence and Characteristics 1’. In *Systems of Innovation Technologies, Institutions and Organizations*, edited by Charles Edquist. Routledge.

Eickmann, Paul, Alice Kolb, and David Kolb. 2004. ‘DESIGNING LEARNING Experience Based Learning Systems’. In *Managing as Designing*, edited by Boland R and Collopy F. Stanford Business Books.

Eisner, Elliot. 2006. ‘Does Arts-Based Research Have a Future? Inaugural Lecture for the First European Conference on Arts-Based Research: Belfast, Northern Ireland, June 2005 on JSTOR’. *Studies in Art Education*.

Europe Economics. 2015. ‘The Economic Review of Industrial Design in Europe — Final Report’.

European Commission. 2010. ‘Green Paper: Unlocking the Potential of Cultural and Creative Industries’. Vol. 183. doi:COM(2010) 183.

European Commission - DG for Research and Innovation. 2016. ‘Science, Research and Innovation Performance of the EU’.

European Commission 2009. 2009. ‘Design as a Driver of User-Centred Innovation’. SEC(2009)501.

Evans, P, and B Wolf. 2005. ‘Collaboration Rules’. *Harvard Business Review*.

Evropska Komisija. 2008. ‘DG Izobraževanje in Kultura’. Accessed December 28. http://ec.europa.eu/education/index_en.htm.

Ferrari, Anusca, Romina Cachia, and Yves Punie. 2009. ‘Innovation and Creativity in Education and Training in the EU Member States: Fostering Creative Learning and Supporting Innovative Teaching Literature Review on Innovation and Creativity in E&T in the EU Member States (ICEAC)’.

Fletcher, Joyce K. 2004. ‘The Paradox of Postheroic Leadership: An Essay on Gender, Power, and Transformational Change’. *The Leadership Quarterly*. doi:10.1016/j.leaqua.2004.07.004.

Frascara, Jorge. 2004. *Communication Design: Principles, Methods, and Practice*. Allworth Press.

Fraser, Heather M. A. 2010. 'Designing Business: New Models for Success'. In *Design Thinking: Integrating Innovation, Costumer Experience, and Brand Value*, edited by Thomas Lockwood, 35–46. Alworth Press, New York.

Fulton, Janet, and Phillip McIntyre. 2013. 'Futures of Communication: Communication Studies~Creativity'. *Review of Communication* 13 (4). Routledge: 269–89. doi:10.1080/15358593.2013.872805.

Furr, Nathan, Dyer, and Jeffrey H. 2014. 'Leading Your Team into the Unknown'. *HBR*. Accessed November 19. https://hbr.org/2014/12/leading-your-team-into-the-unknown.

Gagnon, S., H. C. Vough, and R. Nickerson. 2012. 'Learning to Lead, Unscripted: Developing Affiliative Leadership Through Improvisational Theatre'. *Human Resource Development Review*.

Gephart, RP, TJ Thatchenkery, and DM Boje. 1996. 'Conclusion: Reconstructing Organizations for Future Survival'. In *Postmodern Management and Organization*, edited by D Boje and TJ Gephart, RP Thatchenkery. SAGE publications.

Gibb, S. 2004. 'Arts-Based Training in Management Development: The Use of Improvisational Theatre'. *Journal of Management Development* 23.

Glaser, Barney G., and Anselm L. Strauss. 1967. *The Discovery of Grounded Theory : Strategies for Qualitative Research*. Aldine Pub. Co.

Goodman, Paul S. 1982. *Change in Organizations: New Perpectives on Theory, Research, and Practice*. Jossey-Bass.

Gorb, Peter. 1990. 'Design Management: Papers from the London Business School'. *London : Architecture Design and Technology*. http://capitadiscovery.co.uk/bournemouth-ac/items/102715.

Gorenje Group. 2016. 'Gorenje S Svojimi Izdelki Trdno Zasidrano Med Oblikovalsko Elito'. http://www.gorenjegroup.com/si/za-medije/novice/2016/07/7315-Gorenje-s-svojimi-izdelki-trdno-zasidrano-med-oblikovalsko-elito.

Grant, Julia. 2004. '(Re)design in Management'. In *Managing as Designing*, edited by Richard. Boland and Fred. Collopy, 298. Stanford Business Books.

Gundry, Lisa K. 2008. 'Managing Creativity and Innovation in the 21st Century'. In *21st Century Management*, edited by Charles Wankel.

Hamel, Gary. 2002. *Leading the Revolution : How to Thrive in Turbulent Times by Making Innovation a Way of Life*. Plume Book.

Hamel, Gary, and Nancy Tennant. 2015. 'The 5 Requirements of a Truly Innovative Company'. *Harvard Business Review*. https://hbr.org/2015/04/the-5-requirements-of-a-truly-innovative-company.

Hart, KC. 1984. ‘Changing Public Attitudes toward Funding of the Arts’. *The Annals of the American Academy of Political and …*.

Haskel, Jonathan, Tony Clayton, Peter Goodridge, Annarosa Pesole, David Barnett, Graeme Chamberlain, Khalid Khan, and Alex Turvey. 2010. ‘Innovation, Knowledge Spending and Productivity Growth in the UK: Interim Report for NESTA “Innovation Index” Project’.

Hassard, Martin, and John Parker. 1999. *Postmodernism and Organizations*. Sage Publications (CA).

Hatch, M. J., and D. Yanow. 2008. ‘Methodology by Metaphor: Ways of Seeing in Painting and Research’. *Organization Studies* 29 (1): 23–44. doi:10.1177/0170840607086635.

Hatch, MJ, M Kostera, and AK Kozminski. 2005. ‘The Three Faces of Leadership: Manager, Artist’. *Priest*.

Heidegger, Martin, John. Macquarrie, and Edward Robinson. 1962. *Being and Time*. Blackwell.

Hendry, J. 2013. ‘Management: A Very Short Introduction’.

Hennessey, Beth A., and Teresa M. Amabile. 2010. ‘Creativity’. *Annual Review of Psychology* 61 (1): 569–98. doi:10.1146/annurev.psych.093008.100416.

Herman, Robert D. 1994. *The Jossey-Bass Handbook of Nonprofit Leadership and Management*. Edited by Robert D Herman.

Hersey, Paul, and Kenneth H. Blanchard. 1988. *Management of Organizational Behavior: Utilizing Human Resources*. Edited by Charles Wankel. Prentice-Hall.

Hesmondhalgh; David. 2008. ‘Cultural and Creative Industries’. In *The Sage Handbook of Cultural Analysis*, edited by Tony Bennett and John Frow. Sage.

Hey, Jonathan. 2008. ‘Effective Framing in Design’.

Higgins, James M. 1991. *The Management Challenge: An Introduction to Management*. Macmillan Publishing Company.

Hobcraft, Paul. 2016. ‘Agility Innovation Specialists’. https://www.slideshare.net/Agility_Innovation.

Hollanders, Hugo, Nordine Es-Sadki, and Minna Kanerva. 2016. ‘European Innovation Scoreboard 2016’.

Hoque, Faisal. 2014. ‘How to Create a Culture of Innovation’.

Huber, Rok. 2009. ‘Podjetništvo: Slovensko Okolje Ni Naklonjeno Tveganju’. *Revija Moje Delo*. Accessed December 21. http://www.revija.mojedelo.com/karierni-razvoj/podjetnistvo-slovensko-okolje-ni-naklonjeno-tveganju-212.aspx.

Hughes, J, and J Weiss. 2007. ‘Simple Rules for Making Alliances Work’. *Harvard Business Review*.

IASDR. 2007. ‘Discovering Design in the Organization : Reflecting on Trends in Design and Management’. *He Honk Kong Polytechnic University*.

Ibbotson, Piers. 2008. *The Illusion of Leadership: Directing Creativity in Business and the Arts*. Palgrave Macmillan.

InVision. 2016. ‘Product Design Report 2016’.

Irgens, Eirik J. 2014. ‘Art, Science and the Challenge of Management Education’. *Scandinavian Journal of Management* 30 (1). Elsevier Ltd: 86–94. doi:10.1016/j.scaman.2013.12.003.

Isaksen, Scott G., and Joseph Tidd. 2006. *Meeting the Innovation Challenge : Leadership for Transformation and Growth*. John Wiley.

Isaksen, Scott G., and Joseph Tidd. 2006. *Meeting the Innovation Challenge : Leadership for Transformation and Growth*. John Wiley.

James, David, and Gert Biesta. 2007. *Improving Learning Cultures in Further Education*. Routledge, NY, USA.

James, William. 1975. *Pragmatism*. Harvard University Press.

Jaruzelski, B, K Schwartz, and V Staack. 2015. ‘The 2015 Global Innovation 1000 - Innovation’s New World Order’. *Strategy&*, 1–20.

Jeffcutt, Paul. 2000. ‘Management and the Creative Industries’. *Studies in Cultures, Organizations & Societies* 6 (2): 123–27. doi:10.1080/10245280008523543.

Jelinek, Mariann. 2004. ‘Managing Design, Designing Managemen’. In *Managing as Designing*, edited by Richard. Boland and Fred. Collopy, 298. Stanford Business Books.

Jemielniak, Dariusz. 2008. ‘Software Engineers or Artists? Programmers’ Identity Choices’. *Tamara Journal of Critical Organisation Inquiry* 7 (7): 20–36.

Kanjuo Mrčela, Aleksandra. 1997. ‘Lastništvo Zaposlenih, Menedžment in Uspešnost Podjetij Na Poti K Postmoderni Organizacijski Praksi’. In *Mednarodna Konferenca DEZAP*. Bled.

--- 1999. *Lastništvo in Ekonomska Demokracija*. *Ljubljana : Znanstvena Knjižnica FDV*. Ljubljana : Znanstvena knjižnica FDV.

Kanter, Rosabeth Moss. 1994. ‘Collaborative Advantage: The Art of Alliances’. *Harvard Business Review* 72 (4): 96–108.

Kanter, Rosabeth Moss. 2003. *Frontiers of Management*. Harvard Business School Press.

Karpova, E., S. B. Marcketti, and J. Barker. 2011. ‘The Efficacy of Teaching Creativity: Assessment of Student Creative Thinking Before and After Exercises’. *Clothing and Textiles Research Journal*. doi:10.1177/0887302X11400065.

Kavčič, B, and J Kovač. 1999. ‘Sodobna Razlaga Organizacije’. *Kranj: Moderna Organizacija*.

Klamer, A. 1997. *The Value of Culture: On the Relationship between Economics and Arts*.

Klinar, Miha. 2010. ‘Predlog Vladi K Načrtovanju Strategije Nacionalne Produkcijske Politike* in Ustvarjanju Pogojev Za Razvoj Kreativne Ekonomije’.

Klinar, Miha, Jure Miklavc, and Petra Černe Oven. 2008. ‘Priporočila 9. Razvojne Skupine Za Kreativne Industrije Za Povečanje Konkurenčnosti Slovenije’.

Knights, D, and H Willmott. 1999. ‘Management Lives: Power and Identity in Work Organizations’.

Kolarič, Z, A Črnak-Meglič, and M Vojnovič. 2002. ‘Zasebne Neprofitno-Volonterske Organizacije v Mednarodni Perspektivi’.

Kos, Blaž. 2009. ‘Podjetništvo Kot Umetnost’. http://www.blazkos.com/podjetnistvo-kot-umetnost.php.

Kotter, John P. 1995. ‘Leading Change: Why Transformation Efforts Fail’. *Harvard Business Review*.

--- 2012. *Leading Change*. Harvard Business Review Press.

Kotter, JP, and DS Cohen. 2003. ‘Srce Sprememb’. *Gospodarski Vestnik, Ljubljana*.

Kovač, Bogomir. 2004. ‘Referat Na Strokovnem Posvetu Na Temo Poslovnih Odnosov Med Producenti, Državo, Lokalnimi Skupnostmi in Poslovnim Svetom’. Grad Mokrice. http://seviqc.kolaborator.si/na-sceni/ustanovitev-delovne-skupine-za-podrocje-kulture-koordinacije-nevladnih-organizacij/prof-dr-bogomir-kovac-kultura-in-gospodarski-razvoj/.

Kristeller, P. 1990. ‘“Afterword: ‘Creativity’ and ‘Tradition’”. Renaissance Thought and the Arts, Collected Essays’. *Princeton: Princeton University, Press.*, 247–58.

Lagace, Martha. 2007. ‘High Note : Managing the Medici String Quartet’. *Harvard Business School Working Knowledge*.

Landry, Charles. 2006. *The Art of City-Making*. *Earthscan*. Routledge.

Lawler, EE. 1982. ‘Change in Organizations: New Perspectives on Theory, Research, and Practice’. *Change in Organizations*.

Leonard, Dorothy, and Michelle Barton. 2014. ‘Knowledge and the Management of Creativity and Innovation’. In *The Oxford Handbook of Innovation Management*, edited by Mark Dodgson, David M. Gann, and Nelson Phillips. OUP Oxford.

Lester, Richard K., and Michael J. Piore. 2004. *Innovation—The Missing Dimension*. Harvard University Press.

Levy, David L., Mats Alvesson, and Hugh Willmott. 2003. ‘Critical Approaches to Strategic Management’. In *Studying Management Critically*, edited by Mats Alvesson and Hugh

Willmott, 14:92–110. 1 Oliver's Yard, 55 City Road, London EC1Y 1SP United Kingdom. doi:10.4135/9781446220030.n5.

Lipičnik, Bogdan. 1995. *Ravnateljevo Ravnanje - Menedžment v Vzgoji in Izobraževanju*. Ljubljana: Zavod Republike Slovenije za šolstvo.

Lockwood, Thomas. 2010. *Design Thinking. Integrating Innovation, Customer Experience, and Brand Value. Allworth Press. 2010 Design Management Intitute*. Design Management Institute.

Lupo, Eleonora. 2011. 'Design, Arts and "aesthetics of Innovation"'. *Strategic Design Research Journal* 4 (2): 40–53. doi:10.4013/4470.

Lynch, Robert L. 2008. 'Creating a Brighter Workforce with the Arts: The Skills Taught by the Arts Will Contribute to Success in the Knowledge-Based Economy of the 21st Century'. *School Administrator* 65 (3): 26–28.

MacCormack, A, and T Forbath. 2008. 'Learning the Fine Art of Global Collaboration'. *Harvard Business Review*.

Macur, Mirna. 2007. *Metodologija Za Menedžerje*. Ljubljana: Fakulteta za družbene vede.

Mager, Ingrid. 2004. 'Med Umetnostjo in Naravo Ni Prepada : Miha Pogačnik, Violinist Med Gospodarstveniki'. *Dnevnik*.

Magie, D. 1997. 'Arts Funding into the 21st Century'.

Maitland, Jeffrey, and Albert Rothenberg. 1980. 'The Emerging Goddess: The Creative Process in Art, Science, and Other Fields'. *The Journal of Aesthetics and Art Criticism* 39 (2): 206. doi:10.2307/429817.

Mangham, I. L., and M. A. Overington. 1987. *Organizations as Theatre: A Social Psychology of Dramatic Appearances*. Chichester: Iohn Wiley & Sons. Monks, K.

McKenna, B., D. Rooney, P. Liesch, and K. B. Boal. 2007. 'Wisdom and Leadership'. Sage, 344–47.

McKinsey Quarterly. 2010. 'Innovation and Commercialization'. *Survey: Innovation and Commercialization, 2010: McKinsey Global Survey Results*. https://www.mckinseyquarterly.com/Innovation_and_commercialization_2010_McKinsey_Global_Survey_results_2662.

Meisiek, S, and D Barry. 2007. 'Through the Looking Glass of Organizational Theatre: Analogically Mediated Inquiry in Organizations'. *Organization Studies*.

Meisiek, Stefan. 2004. 'Which Catharsis Do They Mean? Aristotle, Moreno, Boal and Organization Theatre'. *Organization Studies* 25 (5). SAGE Publications: 797–816. doi:10.1177/0170840604042415.

Meisiek, Stefan, and Daved Barry. 'Theorizing the Field of Arts and Management'. *Scandinavian Journal of Management* 30 (1): 83–85. doi:10.1016/j.scaman.2014.01.003.

Meisiek, Stefan, and Daved Barry. ‘The Science of Making Management an Art’. *Scandinavian Journal of Management* 30 (1). Elsevier Ltd: 134–41. doi:10.1016/j.scaman.2014.01.004.

Meisiek, Stefan, Pierre Guillet de Monthoux, Daved Barry, and Robert D. Austin. 2016. ‘Four Voices: Making a Difference with Art in Management Education’. In *The Routledge Companion to Reinventing Management Education*.

Mihavision. 2014. ‘Miha Pogacnik - Speaker & Violinist, Cultural Ambassador of Slovenia’. http://mihavision.com/.

Ministrstvo za kulturo. 2017. ‘Ministrstvo Za Kulturo’. *Javna Predstavitev Osnutka Nacionalne Strategije S Področja Oblikovanja*. http://www.mk.gov.si/si/medijsko_sredisce/novica/article/1328/7252/.

Mintzberg, H. 1998. ‘Covert Leadership: Notes-Knowledge Workers Respond to Inspiration, Not Supervision.’ *Harvard Business Review*, 140–47.

Moir, L, and R Taffler. 2004. ‘Does Corporate Philanthropy Exist?: Business Giving to the Arts in the UK’. *Journal of Business Ethics*.

Monthoux, P Guillet de, and SE Sjöstrand. 2003. ‘Corporate Art or Artful Corporation? The Emerging Philosophy Firm’. *... Theory in Scandinavia, Malmö, Sweden: Liber*.

Monthoux, PG de. 2004. *The Art Firm: Aesthetic Management and Metaphysical Marketing*.

Mootee, I. 2011. ‘Strategic Innovation and the Fuzzy Front End’. *Ivy Business Journal*.

Morgan, G, F Gregory, and C Roach. 1997. ‘Images of Organization’.

Morgan, Glenn. 2003. ‘Marketing and Critique: Prospects and Problems’. *Studying Management Critically*. Sage, 111–31.

Moser, Paul K., and Arnold. Vander Nat. 1987. *Human Knowledge : Classical and Contemporary Approaches*. Oxford University Press.

Mumford, MD, and SB Gustafson. 1988. ‘Creativity Syndrome: Integration, Application, and Innovation.’ *Psychological Bulletin*.

Mumford, Michael D., and Brian Licuanan. 2004. ‘Leading for Innovation: Conclusions, Issues, and Directions’. *The Leadership Quarterly* 15 (1): 163–71. doi:10.1016/j.leaqua.2003.12.010.

Mumford, Michael D, Ginamarie M Scott, Blaine Gaddis, and Jill M Strange. 2002. ‘Leading Creative People: Orchestrating Expertise and Relationships’. *The Leadership Quarterly* 13 (6): 705–50. doi:10.1016/S1048-9843(02)00158-3.

Murovec, Nika, Damjan Kava, and Igor Prodan. 2012. ‘KONČNO POROČILO ZA CILJNI RAZISKOVALNI PROJEKT (CRP) »Stanje Oblikovanja, S Poudarkom Na Industrijskem Oblikovanju, Kot Dela Kreativnih Industrij in Primeri Dobre Prakse v Svetu Kot Podlaga Za Krepitev Te Dejavnosti v Sloveniji« (Šifra Projekta V5-1020)’. Ljubljana.

Musek Lešnik, K. 2003. *Od Poslanstva Do Vizije Zavoda in Neprofitne Organizacije: Kako Razjasniti Vrednote, Opredeliti Poslanstvo in Ustvariti Vizijo Zavoda Ali Neprofitne Organizacije*. Inštitut za psihologijo osebnosti.

Neilson, GL, KL Martin, E Powers, and Neilson et. Al. 2008. 'The Secrets to Successful Strategy Execution'. *Harvard Business Review*, no. June: 60–71.

Nelson, RR, and SG Winter. 2002. 'Evolutionary Theorizing in Economics'. *The Journal of Economic Perspectives*.

Neumeier, Marty. 2009. *The Designful Company: How to Build a Culture of Nonstop Innovation*. Peachpit Press.

--- 2010. 'The Designful Company'. In *Design Thinking: Integrating Innovation, Customer Experience, and Brand Value*, edited by Thomas Lockwood, 15–22. Alworth Press, New York.

--- 2013. *Metaskills: Five Talents for the Robotic Age*. New Riders, USA.

Nissley, Nick, Steven S. Taylor, and Linda Houden. 2004. 'The Politics of Performance in Organizational Theatre-Based Training and Interventions'. *Organization Studies* 25 (5): 817–39. doi:10.1177/0170840604042416.

Nonaka, Ikujiro. n.d. 'Knowledge Creation'. *Goliath Business Knowledge on Demand*.

Nonaka, Ikujirō, and Hirotaka Takeuchi. 1995. *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*. Oxford University Press.

Norman, F, and S Franz. 1996. *Public Sector Management in Europe*.

Northouse, Peter Guy. 2006. *Leadership : Theory and Practice*. SAGE Publications.

Nussbaum, Bruce. 2011. 'Design Thinking Is A Failed Experiment. So What's Next?' https://www.fastcodesign.com/1663558/design-thinking-is-a-failed-experiment-so-whats-next.

Nystrom, Harry. 2000. 'The Postmodern Challenge - From Economic to Creative Management'. *Creativity and Innovation Management* 9 (2): 109–14. doi:10.1111/1467-8691.00163.

OECD. 2002. *Frascati Manual: Proposed Standard Practice for Surveys on Research and Experimental Development*.

Orlikowski, Wanda J. 2004. 'Managing and Designing: Attending to Reflexiveness and Enactment'. In *Managing as Designing*, edited by Richard. Boland and Fred. Collopy, 298. Stanford Business Books.

Osborne, H. 1981. 'What Is a Work of Art?' *British (The) Journal of Aesthetics London*.

Parush, Tamar, and Niina Koivunen. 2014. 'Paradoxes, Double Binds, and the Construction of "creative" Managerial Selves in Art-Based Leadership Development'. *Scandinavian Journal of Management* 30 (1): 104–13. doi:10.1016/j.scaman.2013.12.001.

Peter, FD. 1992. *Inovacije I Poduzetništvo*. *Zagreb, Globus*.

Petrov, Sabina. 2008. 'Do Uspeha S Sodelovanjem'. *Revija Finance*. http://www.finance-akademija.si/?go=article&artid=.

Peus, Claudia, and Dieter Frey. 2009. 'Humanism at Work: Crucial Organizational Cultures and Leadership Principles'. In *Humanism in Business*, edited by Heiko Spitzeck, Michael Pirson, Wolfgang Amann, Shiban Khan, and Ernst von Kimakowitz. Cambridge University Press.

Pine, BJ, and JH Gilmore. 1999. *The Experience Economy: Work Is Theatre & Every Business a Stage*.

Plucker, JA, and MA Runco. 1999. *Enhancement of Creativity*. *Encyclopedia of Creativity*. Academic Press San Diego, CA.

Podjed, Dan. 2006. 'Antropološki Vidiki Postmoderne Organizacije', no. november: 585–90.

Polanyi, Michael. 1967. *The Tacit Dimension*. Garden City N.Y.: Anchor Books.

Polona, Cimerman. 2012. 'Interview: Miha Klinar, Gigodesign'. *TheSloveniaTimes*. http://www.sloveniatimes.com/interview-miha-klinar-gigodesign.

Prahalad, C.K., and R.A. Mashelkar. 2010. 'Innovation's Holy Grail'. *Harvard Business Review*. https://hbr.org/2010/07/innovations-holy-grail.

Preus, Claudia, and Dieter Frey. 2009. 'Humanism at Work: Crucial Organizational Cultures and Leadership Principles'. In *Humanism in Business*, edited by Heiko Spitzeck, 438. Cambridge University Press.

Pušnik, Manja. 2009. 'Musica Ljubljana - Ideja O Podpori Biznisu S Kulturo'. *Manager*. http://www.finance.si/249950.

PWC. 2016. 'PWC 19th Annual Global CEO Survey: Redefining Business Success in a Changing World'.

Rigby, DK, K Gruver, and J Allen. n.d. 'Innovation in Turbulent Times (Digest Summary)'. *Harvard Business Review (June 2009)*.

Rotman. 2010. 'The Artful Management'. *Forbes India Magazine*.

Rubenson, Daniel L., and Mark A. Runco. 1992. 'The Psychoeconomic Approach to Creativity'. *New Ideas in Psychology* 10 (2): 131–47. doi:10.1016/0732-118X(92)90021-Q.

Runco, Mark A. 2004. 'Creativity'. *Annual Review of Psychology* 55 (1). Annual Reviews : 657–87. doi:10.1146/annurev.psych.55.090902.141502.

Scheff, J, and P Kotler. 1996. 'How the Arts Can Prosper through Strategic Collaborations'. *Harvard Business Review*.

Schein, Edgar H. 2004. *Organizational Culture and Leadership*. The Jossey-Bass business & management series.

Scherdin, Mikael, and Ivo Zander. 2011. 'Art Entrepreneurship: An Introduction'. In *Art Entrepreneurship,* edited by Mikael Scherdin and Ivo Zander. Edward Elgar Publishing.

Schiuma, Giovanni. 2009. 'The Managerial Foundations of Knowledge Assets Dynamics'. *Knowledge Management Research & Practice* 7 (4). Palgrave Macmillan UK: 290–99. doi:10.1057/kmrp.2009.21.

Schmidt, G, N Bobadilla, S Debenedetti, and P Mairesse. 2015. 'About Art, Social Science and Restructuring: An Interview with Howard S. Becker'. *Organization*.

Schumpeter, Joseph A. 1939. *Business Cycles : A Theoretical, Historical, and Statistical Analysis of the Capitalist Process*. New York Toronto London : McGraw-Hill Book Company.

SEE - Sharing Experience Europe. 2015. 'No Title'. SEE.

Seifter, H, T Buswick, and L Bartelme. 2005. 'The View from the Trenches: An Interview with Harvey Seifter and Tim Stockil'. *Journal of Business Strategy* 26 (5).

Seifter, Harvey, and Peter Economy. 2001. *Leadership Ensemble: Lessons in Collaborative Management from the World's Only Conductorless Orchestra*. Henry Holt and Company.

Simon, Harriet Furst., Barbara. Levine, and Jo Ann. Boydston. 1991. *Collected Works of John Dewey, Index 1882 - 1953.* Southern Illinois University Press.

Springborg, Claus. 2012. 'Perceptual Refinement: Art-Based Methods in Managerial Education'. *Organizational Aesthetics* 1 (1): 116–37.

Sternberg, Robert J. 1999. *Handbook of Creativity*.

Strati, Antonio. 1999. *Organization and Aesthetics*. SAGE Publications.

Styhre, Alexander, and Michael Eriksson. 2008. 'Bring in the Arts and Get the Creativity for Free: A Study of the Artists in Residence Project'. *Creativity and Innovation Management* 17 (1): 47–57. doi:10.1111/j.1467-8691.2007.00458.x.

Sullivan, Graeme. 2010. *Art Practice as Research : Inquiry in Visual Arts*. Sage Publications.

Sustersic-Dimic, Mateja. 2010. 'Vodenje Oblikovalskih RiR Procesov v Interdisciplinarnih Skupinah – Magistrsko Delo'.

Sutherland, Ian. 2013. 'Arts-Based Methods in Leadership Development: Affording Aesthetic Workspaces, Reflexivity and Memories with Momentum'. *Management Learning* 44 (1): 25–43.

Tavčar, Mitja. 1999. 'Etika Managementa Na Prehodu v Civilno Družbo'. *Civilna Družba v Sloveniji in Evropi*.

--- 2005. *Strateški Management Nepridobitnih Organizacij*. Koper: Fakulteta za management.

--- 2006. *Strateški Management Nepridobitnih Organizacij*. Univerza v Ljubljani.

Taylor, F W. 2004. *Scientific Management*. Taylor & Francis.

Taylor, S. S., and D. Ladkin. 2009. 'Understanding Arts-Based Methods in Managerial Development'. *Academy of Management Learning & Education* 8 (1). Academy of Management: 55–69. doi:10.5465/AMLE.2009.37012179.

Taylor, Steven S., and Inga Carboni. 2008. 'Technique and Practices from the Arts: Expressive Verbs, Feelings, and Action'. In *The SAGE Handbook of New Approaches in Management and Organization*, edited by Daved Barry and Hans Hansen, 220–28. SAGE Publications Ltd. doi:10.4135/9781849200394.n41.

Taylor, Steven S., and Hans Hansen. 2005. 'Finding Form: Looking at the Field of Organizational Aesthetics'. *Journal of Management Studies* 42 (6). Blackwell Publishing Ltd.: 1211–31. doi:10.1111/j.1467-6486.2005.00539.x.

Taylor, Steven S., and Donna Ladkin. 2014. 'Leading as Craft-Work: The Role of Studio Practices in Developing Artful Leaders'. *Scandinavian Journal of Management* 30 (1): 95–103. doi:10.1016/j.scaman.2013.11.002.

Tether, Bruce. 2005. 'The Role of Design in Business Performance'. *ResearchGate*.

Thomke, Stefan H. 2003. *Experimentation Matters: Unlocking the Potential of New Technologies for Innovation*. Harvard Business School Publishing Coorporation.

Thomke, Stefan H., and Ashok Nimgade. 2000. 'IDEO Product Development'. *Harvard Business School Case 600-143, June 2000*.

Tolstoy, Leo. 1995. *What Is Art?* Penguin Books Limited.

Trott, Paul; Dap Hartmann, Victor Scholten, Patrick van der Duin, J. Roland Ortt, and J. Roland Ortt Trott, Paul Dap Hartmann,Victor Scholten,Patrick van der Duin. 2015. *Managing Technology Entrepreneurship and Innovation*.

Trstenjak, Verica. 1998. 'Nevladne Organizacije v Sloveniji–pravna Ureditev, v Pravna Praksa, Št. 7, Str'. *Pravna Praksa*, no. 398.

Tushman, Michael L., and Charles A. O'Reilly. 2002. *Winning through Innovation: A Practical Guide to Leading Organizational Change and Renewal*. Boston, MA: Harvard University Press.

UNCTAD. 2004. 'United Nations Conference on Trade and Development: Creative Industries and Development'.

--- 2010. 'Creative Economy Report 2010'. *UNCTAD/DITC/TAB/2010/3*.

Vaill, Peter B. 1989. *Managing as a Performing Art*. Jossey-Bass Publishers.

VanGundy, AB. 1981. ‘Techniques of Structured Problem Solving’.

--- 1992. ‘Idea Power: Techniques & Resources to Unleash the Creativity in Your Organization’.

--- 2004. *101 Activities for Teaching Creativity and Problem Solving*. Vol. 30. John Wiley & Sons.

VanGundy, Arthur B. and Linda Naiman AB, and L Naiman. 2003. *Orchestrating Collaboration at Work: Using Music, Improv, Storytelling, and Other Arts to Improve Teamwork. Wiley/Jossey-Bass/Pfeiffer*.

Verganti, R, and C Dell’Era. 2014. ‘Design-Driven Innovation: Meanings as a Source of Innovation’. In *The Oxford Handbook of Innovation Management*, edited by Mark Dodgson, David M Gann, and Nelson Phillips. Oxford University Press.

Verganti, Roberto. 2009. *Design-Driven Innovation : Changing the Rules of Competition by Radically Innovating What Things Mean*. Harvard Business Press.

Vila, A. 1994. *Organizacija in Organiziranje*. Kranj: Moderna organizacija.

Stamm, Bettina. Von. 2008. *Managing Innovation, Design and Creativity*. John Wiley & Sons.

Walters, Helen. 2011. ‘“Design Thinking” Isn’t a Miracle Cure, but Here’s How It Helps’. https://www.fastcodesign.com/1663480/design-thinking-isnt-a-miracle-cure-but-heres-how-it-helps.

Wankel, Charles. 2008. *21st Century Management: A Reference Handbook*. Edited by Charles Wankel. SAGE Publications.

Wankel, Charles, and Bob DeFillippi, eds. 2002. *Rethinking Management Education for the 21st Century*. IAP.

Wegge, J, and K-H Schmidt. 2009. ‘The Impact of Age Diversity in Teams on Groups Performance, Innovation and Health’. In *Handbook of Managerial Behavior and Occupational Health*, edited by Alexander-Stamatios G. Antoniou, 452. Edward Elgar.

Weick, Karl E. 1995. *Sensemaking in Organizations*. Sage Publications.

--- 2004. ‘Rethinking Organizational Design’. In *Managing as Designing*, edited by JR. BOLAND, RICHARD J. and FRED COLLOPY.

Werther, Wiliam B, and Keith Davis. 1989. *Human Resources and Personnel Management*. McGraw-Hill.

Yoffie, DB, and M Kwak. 2006. ‘With Friends like These: The Art of Managing Complementors.’ *Harvard Business Review*.

Zakon o gospodarskih družbah. 2006. *Zakon O Gospodarskih Družbah (ZGD-1-NPB14). Uradni List RS, Št. 42/06 Z Dne 19. 4. 2006*.

Zandee, Danielle P., and Marijke Broekhuijsen. 2009. ‘Will It Work? Theatrical Rehearsal as Relational Form Giving Process’. 09–19. NRI Research Paper.

Zandee, Danielle P., and Marijke Broekhuijsen. 2009. *Will It Work ? Theatrical Rehearsal As*. NRI RESEARCH PAPER SERIES.

‘SEE - Sharing Experience Europe | Design for Europe’. 2013. http://www.designforeurope.eu/.

‘Merriam-Webster Dictionary’. 2016. https://www.merriam-webster.com/.

INDEX

APPENDICES

Appendix A: Survey with directors of Slovenian design companies

Univerza v Ljubljani
EKONOMSKA FAKULTETA

IER Inštitut za ekonomska raziskovanja
Institute for Economic Research

RAZUMEVANJE DIZAJNA MED NJEGOVIMI UPORABNIKI IN NEUPORABNIKI V SLOVENSKIH PODJETJIH

RAZISKAVA

Prosimo vas, da vrnete izpolnjen vprašalnik v priloženi kuverti na naslov:

Inštitut za ekonomska raziskovanja
Nika Murovec
Kardeljeva ploščad 17
1000 Ljubljana

ZAČNITE TUKAJ

Zahvaljujemo se vam za pomoč pri raziskavi. Pred vami je vprašalnik o razumevanju in uporabi dizajna (oblikovanja) v slovenskih podjetjih. Dizajn je v evoluciji že zdavnaj presegel zgolj estetske kriterije in predstavlja križišče vseh dejavnikov, ki vplivajo na izdelek, sporočilo, identiteto podjetja. Je kompromis med uporabniško izkušnjo, tehnologijo, ceno in znanjem v podjetju. Z besedo **dizajn (oblikovanje)** tako v tem vprašalniku označujemo **vse najrazličnejše oblike dizajna - dizajn izdelkov in storitev, vizualnih komunikacij, identitete, okolja/prostora, procesov, itd.** Za izpolnitev vprašalnika boste potrebovali približno 15-20 minut. Vaši odgovori so **zaupne narave**. Rezultati raziskave bodo objavljeni le v zbirni obliki, tako da posameznikovi odgovori ne bodo razvidni.

Prosimo, da **tudi v primeru, če v vašem podjetju ne uporabljate dizajna** (nimate zaposlenih dizajnerjev niti ne sodelujete z zunanjimi dizajnerji), **odgovorite na vprašanja do vključno številke 28**, saj so le vprašanja pod številkami od 29 do 32 namenjena zgolj tistim podjetjem, ki dizajn uporabljajo.

Vprašanja o delovanju podjetja

1. **Na katerem geografskem trgu je vaše podjetje v preteklih 3 letih (2008–2010) ustvarilo največji delež prihodkov? (označite en odgovor)** *(Opomba: Če je podjetje mlajše od treh let, ocenite za obdobje od ustanovitve do danes.)*

○ Lokalni oz. regionalni trg ○ Nacionalni trg ○ Evropski trg ○ Globalni trg

2. **S prodajo kateri skupini kupcev je vaše podjetje v preteklih 3 letih (2008–2010) ustvarilo največji delež prihodkov? (označite en odgovor)**

○ Drugim podjetjem kot polizdelke ○ Javni upravi (tudi če je končni kupec) ○ Distributerjem ○ Končnim kupcem

3. **Na osnovi česa je vaše podjetje v preteklih 3 letih (2008–2010) v največji meri konkuriralo drugim ponudnikom? (označite en odgovor)**

○ Dodane vrednosti izdelka/storitve ○ Distribucije/ dostopnosti ○ Inovacij ○ Cene/ stroškov

4. **Ocenite dobičkonosnost podjetja v zadnjih treh letih (2008–2010) v primerjavi z vašimi konkurenti približno iste starosti in stopnje razvoja.** *(Opomba: Če je podjetje mlajše od treh let, ocenite za obdobje od ustanovitve do danes.)*

○ Mnogo slabše od konkurentov ○ Slabše od konkurentov ○ Enakovredno konkurentom ○ Bolje od konkurentov ○ Mnogo bolje od konkurentov

5. **Ocenite rast tržnega deleža v zadnjih treh letih (2008–2010).** *(Opomba: Če je podjetje mlajše od treh let, ocenite za obdobje od ustanovitve do danes.)*

○ Bistveno znižanje ○ Zmerno znižanje ○ Ostal približno nespremenjen ○ Zmerno povečanje ○ Bistveno povečanje

6. **Ocenite zmanjšanje/povečanje vaših prihodkov v zadnjih treh letih (2008–2010).** *(Opomba: Če je podjetje mlajše od treh let, ocenite za obdobje od ustanovitve do danes.)*

○ Bistveno znižanje ○ Zmerno znižanje ○ Ostali približno nespremenjeni ○ Zmerno povečanje ○ Bistveno povečanje

7. **Ocenite zmanjšanje/povečanje vaših investicij v design v zadnjih treh letih (2008–2010).** *(Opomba: Če je podjetje mlajše od treh let, ocenite za obdobje od ustanovitve do danes.)*

○ Bistveno znižanje ○ Zmerno znižanje ○ Ostali približno nespremenjeni ○ Zmerno povečanje ○ Bistveno povečanje

8. **Ali ste v zadnjih 3 letih (2008–2010) razvili kakšne za podjetje nove izdelke, storitve ali procese?** *(Opomba: Če je podjetje mlajše od treh let, odgovorite za obdobje od ustanovitve do danes.)* ○ *Ne* ○ *Da*

9. **Ali ste v zadnjih 3 letih (2008–2010) razvili kakšne nove izdelke, storitve ali procese, ki so vključevali bistveno inovacijo ali dizajn?** *(Opomba: Če je podjetje mlajše od treh let, odgovorite za obdobje od ustanovitve do danes.)* ○ *Ne* ○ *Da*

10. **V podjetju imamo funkcijo produktnega managerja** ○ *Ne* ○ *Da*

Nadaljujte

11. **Za vsako od navedenih trditev, ki so povezane s prepoznavnostjo in blagovnimi znamkami, navedite, kako močno se strinjate oz. ne strinjate s trditvijo. Število 1 pomeni, da se močno ne strinjate, število 7 pa pomeni, da se močno strinjate s trditvijo.**

Trditev	Močno se ne strinjam	Večinoma se ne strinjam	Rahlo se ne strinjam	Niti se strinjam, niti se ne strinjam	Rahlo se strinjam	Večinoma se strinjam	Močno se strinjam
11-1 Podjetje ima lastne blagovne znamke, ki so prepoznavne na domačem trgu.	1	2	3	4	5	6	7
11-2 Podjetje ima lastne blagovne znamke, ki so prepoznavne na zahodnoevropskih trgih ali na ameriškem trgu.	1	2	3	4	5	6	7
11-3 Podjetje ima lastne blagovne znamke, ki so prepoznavne na drugih tujih trgih.	1	2	3	4	5	6	7
11-4 Podjetje ima prepoznavno identiteto na domačem trgu.	1	2	3	4	5	6	7
11-5 Podjetje ima prepoznavno identiteto na zahodnoevropskih trgih ali na ameriškem trgu.	1	2	3	4	5	6	7
11-6 Podjetje ima prepoznavno identiteto na drugih tujih trgih.	1	2	3	4	5	6	7

12. **Za vsako od navedenih trditev s področja inovativnosti ocenite uspešnost vašega podjetja v primerjavi z vašimi konkurenti približno iste starosti in stopnje razvoja. Število 1 pomeni mnogo slabše od konkurentov, število 7 pa mnogo boljše od konkurentov.**

Naše podjetje je bilo v zadnjih 3 letih (2008–2010) v primerjavi s konkurenti (mnogo slabše /mnogo boljše) v smislu: *(Opomba: Če je podjetje mlajše od treh let, ocenite za obdobje od ustanovitve do danes.)*	Mnogo slabše od konku-rentov	Večinoma slabše od konku-rentov	Rahlo slabše od konku-rentov	Enako-vredno konku-rentom	Rahlo boljše od konku-rentov	Večinoma boljše od konku-rentov	Mnogo boljše od konku-rentov
12-1 … števila vpeljanih novih izdelkov/storitev.	1	2	3	4	5	6	7
12-2 … števila novih izdelkov/storitev, ki jih je podjetje vpeljalo **kot prvo na trgu** (oz. bilo med prvimi podjetji, ki so vpeljala ta izdelek/storitev)	1	2	3	4	5	6	7
12-3 … števila vpeljanih sprememb v poslovnih procesih, ki jih je podjetje vpeljalo **kot prvo na trgu** (oz. bilo med prvimi podjetji).	1	2	3	4	5	6	7
12-4 … števila novosti v administrativnem sistemu (novi postopki, politike, organizacijske oblike).	1	2	3	4	5	6	7
12-5 … uporabe najnovejših tehnoloških inovacij pri novih izdelkih/storitvah.	1	2	3	4	5	6	7
12-6 … uporabe principov/metod za ugotavljanje potreb uporabnikov izdelkov/storitev	1	2	3	4	5	6	7

13. **Prosimo vas, da odgovorite na naslednja vprašanja v povezavi z vlaganji v razvoj, trženje in dizajn.**

	0%	Več kot 0 do vključno 1%	Več kot 1 do vključno 5%	Več kot 5 do vključno 10%	Več kot 10 do vključno 20%	Nad 20%
13-1 Kakšen delež prihodkov vlagate v razvoj ali izboljšave izdelkov/storitev?	1	2	3	4	5	6
13-2 Kolikšen delež sredstev, ki jih vlagate v razvoj ali izboljšave izdelkov/storitev, namenite za dizajn?	1	2	3	4	5	6
13-3 Kakšen delež v prodajni ceni izdelka/storitve predstavljajo stroški dizajna?	1	2	3	4	5	6
13-4 Kakšen delež prihodkov vlagate v trženje?	1	2	3	4	5	6

14. **Za vsakega od spodaj navedenih virov idej za izboljšanje/spremembe vašega poslovanja označite, kako pomembni so navedeni viri za vas. Število 1 pomeni, da je vir informacij za vas zelo nepomemben, število 5 pa pomeni, da je vir informacij za vas zelo pomemben.**

	Zelo nepomemben	Večinoma nepomemben	Niti pomemben niti nepomemben	Večinoma pomemben	Zelo pomemben
14-1 Uporabniki	1	2	3	4	5
14-2 Zaposleni/managerji	1	2	3	4	5
14-3 Dobavitelji/distributerji/trgovci	1	2	3	4	5
14-4 Informacije o konkurenci	1	2	3	4	5

Nadaljujte

15. **Prosimo, označite v kolikšni meri je vrhnji management podjetja AKTIVNO vpleten v naslednjih stopnjah razvoja izdelkov/storitev (oz. pri izboljšavi obstoječih). Število 1 pomeni, da vrhnji management sploh ni vpleten, število 5 pa pomeni, da ima ključno vlogo pri razvoju novih izdelkov/storitev v posamezni fazi.**

	Sploh ni vpleten	Malo vpleten	Srednje vpleten	Močno vpleten	Ima ključno vlogo
15-1 Priprava projektnih izhodišč	1	2	3	4	5
15-2 Idejni predlog	1	2	3	4	5
15-3 Vrednotenje idejnih predlogov	1	2	3	4	5
15-4 Tehnične dopolnitve in testiranje	1	2	3	4	5
15-5 Priprava na produkcijo/tehnologija proizvodnje	1	2	3	4	5
15-6 Trženje	1	2	3	4	5

16. **Za vsako od navedenih trditev v zvezi z razvojem novih izdelkov/storitev (oz. izboljšavi obstoječih izdelkov/storitev), navedite, kako močno se strinjate oz. ne strinjate s trditvijo. Število 1 pomeni, da se močno ne strinjate, število 7 pa pomeni, da se močno strinjate s trditvijo.**

	Močno se ne strinjam	Večinoma se ne strinjam	Rahlo se ne strinjam	Niti se strinjam, niti se ne strinjam	Rahlo se strinjam	Večinoma se strinjam	Močno se strinjam
16-1 Inovativnost je najpomembnejši dejavnik uspeha našega podjetja.	1	2	3	4	5	6	7
16-2 V našem podjetju se zelo spodbuja inovativnost pri vseh zaposlenih.	1	2	3	4	5	6	7
16-3 V našem podjetju se zelo splača biti inovator.	1	2	3	4	5	6	7
16-4 V našem podjetju kopiramo dobre ideje drugih podjetij.	1	2	3	4	5	6	7
16-5 V našem podjetju kopiramo izdelke/storitve na način, da spreminjamo obliko izdelkov/storitev drugih podjetij.	1	2	3	4	5	6	7
16-6 V našem podjetju razvijamo nov izdelek/storitev preko vodenega procesa.	1	2	3	4	5	6	7
16-7 Vodja projekta usmerja proces v trenutkih nejasnosti glede končnega rezultata projekta.	1	2	3	4	5	6	7
16-8 Vodja projekta sodelujočim zaposlenim daje dovolj prostora, da lahko znotraj zadanih okvirjev izrazijo svoje ideje in ustvarjalnost.	1	2	3	4	5	6	7
16-9 Vodja projekta v timu spodbuja sodelovanje in izmenjavo mnenj (timsko delo).	1	2	3	4	5	6	7
16-10 Neuspele ideje in nepričakovani dogodki so v procesu raziskav in razvoja nujni koraki na poti k boljšemu končnemu rezultatu.	1	2	3	4	5	6	7

Vprašanja o dizajnu

17. **Na kakšen način uporabljate dizajn pri razvoju novih izdelkov/storitev (oz. izboljšavi obstoječih)?**

- ○ Profesionalni dizajn (dizajnerji) ni vključen v proces
- ○ Dizajn (dizajnerji) je vključen pri nekaterih specifičnih stopnjah razvoja
- ○ Dizajn manager ali tim vodi in usmerja celoten process
- ○ Dizajn je strateška funkcija v podjetju

18. **Koliko let izkušenj z dizajnom imate v podjetju?**

- ○ 0
- ○ Več kot 0 do vključno 5
- ○ Več kot 5 do vključno 10
- ○ Več kot 10 do vključno 20
- ○ Več kot 20

19. **Kdo v vašem podjetju običajno sodeluje z dizajnerji na dizajnerskih projektih?**

- ○ Ne sodelujemo z dizajnerji
- ○ Uprava/ lastnik
- ○ Projektni menedžment
- ○ Trženjski oddelek
- ○ Drugi: _____

20. **Kakšna je bila donosnost zadnjega razvojnega projekta, pri katerem ste investirali tudi v dizajn?**

- ○ Nismo investirali v dizajn
- ○ Precej pod pričakovanji
- ○ Nekoliko pod pričakovanji
- ○ Pričakovana
- ○ Nekoliko nad pričakovanji
- ○ Precej nad pričakovanji

21. **Ali imate računovodske mehanizme za merjenje donosnosti investicij v dizajn?**

- ○ Nismo investirali v dizajn
- ○ Ne
- ○ Da
- ○ Ne vem

Nadaljujte

22. **Označite, kako pomembno vlogo ima dizajn v procesu razvoja izdelka/storitev v vašem podjetju v primerjavi s konkurenti primerljive velikosti oz. vodilnimi podjetji na tem področju v širši regiji. Število 1 pomeni, da ima dizajn v vašem podjetju precej manj pomembno vlogo, število 5 pa pomeni, da ima dizajn v vašem podjetju precej bolj pomembno vlogo.**

		Precej manj pomembno vlogo	Manj pomembno vlogo	Niti manj niti bolj pomembno vlogo	Bolj pomembno vlogo	Precej bolj pomembno vlogo
22-1	Kako pomembno vlogo ima dizajn v procesu razvoja izdelka/storitve v vašem podjetju v primerjavi **z vašimi konkurenti primerljive velikosti?**	1	2	3	4	5
22-2	Kako pomembno vlogo ima dizajn v vašem podjetju v primerjavi **z vodilnimi tujimi podjetji na tem področju?**	1	2	3	4	5

23. **Označite kako pomembne so za vas naslednje ovire za (večjo) uporabo zunanjih dizajnerjev. Število 1 pomeni, da je ovira za vas zelo nepomembna, število 5 pa pomeni, da je ovira za vas zelo pomembna.**

		Zelo nepomembna ovira	Večinoma nepomembna ovira	Niti pomembna niti nepomembna ovira	Večinoma pomembna ovira	Zelo pomembna ovira
23-1	**Uporaba lastnih dizajnerskih znanj**	1	2	3	4	5
23-2	**V našem poslovnem procesu ne potrebujemo profesionalnih dizajnerjev**	1	2	3	4	5
23-3	**Stroški najema zunanjih dizajnerjev niso upravičeni**	1	2	3	4	5
23-4	**Netransparentost ponudbe dizajnerskih storitev**	1	2	3	4	5

24. **Za vsako od navedenih trditev, ki so povezane z dizajnom, navedite, kako močno se strinjate oz. ne strinjate s trditvijo. Število 1 pomeni, da se močno ne strinjate, število 7 pa pomeni, da se močno strinjate s trditvijo.**

		Močno se ne strinjam	Večinoma se ne strinjam	Rahlo se ne strinjam	Niti se strinjam, niti se ne strinjam	Rahlo se strinjam	Večinoma se strinjam	Močno se strinjam
24-1	**Dizajn predstavlja nepotrebne stroške pri razvoju izdelka/storitve.**	1	2	3	4	5	6	7
24-2	**V Sloveniji je percepcija dizajna kot gospodarsko pomembne dejavnosti prenizka.**	1	2	3	4	5	6	7
24-3	**Slovenski potrošniki prepoznajo in kupujejo izdelke dobrega dizajna.**	1	2	3	4	5	6	7
24-4	**Tuji potrošniki prepoznajo in kupujejo izdelke dobrega dizajna.**	1	2	3	4	5	6	7
24-5	**Pri razvoju izdelkov/storitev je dizajn v našem podjetju pomemben dejavnik.**	1	2	3	4	5	6	7
24-6	**Dizajn v podjetju razumemo kot investicijo.**	1	2	3	4	5	6	7
24-7	**Pomen dizajna je opredeljen v viziji, poslanstvu podjetja ali drugih strateških dokumentih.**	1	2	3	4	5	6	7
24-8	**Dizajn je del organizacijske kulture v našem podjetju.**	1	2	3	4	5	6	7

25. **Za vsako od navedenih trditev, ki so povezane z razumevanjem dizajna v podjetju, navedite, kako močno se strinjate oz. ne strinjate s trditvijo. Število 1 pomeni, da se močno ne strinjate, število 7 pa pomeni, da se močno strinjate s trditvijo.**

	V našem podjetju razumemo dizajn kot…	Močno se ne strinjam	Večinoma se ne strinjam	Rahlo se ne strinjam	Niti se strinjam, niti se ne strinjam	Rahlo se strinjam	Večinoma se strinjam	Močno se strinjam
25-1	**… integralni/povezovali dejavnik za razvoj novih izdelkov/storitev.**	1	2	3	4	5	6	7
25-2	**… zunanji izgled izdelka/storitve.**	1	2	3	4	5	6	7
25-3	**… delovanje izdekov/storitev v smislu čim boljšega zadovoljevanja potreb uporabnikov.**	1	2	3	4	5	6	7
25-4	**… eden od dejavnikov za povečevanje kreativnosti v podjetju.**	1	2	3	4	5	6	7
25-5	**… sredstvo za podaljševanje življenjske dobe izdelka na trgu.**	1	2	3	4	5	6	7
25-6	**… principe za izboljšanje poslovanja podjetja.**	1	2	3	4	5	6	7

Nadaljujte

Vprašanja o uporabi dizajna

26.	**Ali imate v podjetju zaposlene dizajnerje?**	○ *Ne*	○ *Da, število:* _____
27.	**Ali ste v zadnjih 3 letih (2008–2010) sodelovali z zunanjimi dizajnerji?** *(Opomba: Če je podjetje mlajše od treh let, odgovorite za obdobje od ustanovitve do danes.)*	○ *Ne*	○ *Da*
28.	**Ali ste v zadnjih 3 letih (2008–2010) kakorkoli uporabljali dizajn – dizajn izdelkov in storitev, vizualnih komunikacij, identitete, okolja/prostora, procesov, itd.?** *(Opomba: Če je podjetje mlajše od treh let, odgovorite za obdobje od ustanovitve do danes.)*	○ *Ne*	○ *Da*

Če ste na <u>katerokoli</u> izmed zgornjih treh vprašanj (26 do 28) <u>odgovorili z »Da«</u>,
➔ NADALJUJTE Z VPRAŠANJEM ŠT. 29.

Če ste <u>na vsa</u> izmed zgornjih treh vprašanj (26 do 28) <u>odgovorili z »Ne«</u>,
➔ NADALJUJTE Z VPRAŠANJEM ŠT. 33.

29. **Označite kako pogosto v vašem podjetju <u>dizajnerji (zunanji ali notranji) sodelujejo pri</u> spodaj navedenih procesih oz. stopnjah razvoja izdelkov ali storitev. Število 1 pomeni, da zunanji ali notranji dizajnerji v procesu ne sodelujejo, število 5 pa pomeni, da sodelujejo vedno.**

		Nikoli	Redko	Občasno	Pogosto	Vedno
29-1	Dizajnerji sodelujejo pri **načrtovanju identitiete/komunikacij podjetja.**	1	2	3	4	5
29-2	Dizajnerji sodelujejo pri **načrtovanju izdelkov.**	1	2	3	4	5
29-3	Dizajnerji sodelujejo pri **inženirskem dizajnu.**	1	2	3	4	5
29-4	Dizajnerji sodelujejo pri **dizajnu embalaže.**	1	2	3	4	5
29-5	Dizajnerji sodelujejo pri **načrtovanju ali uvajanju novih storitev (service design).**	1	2	3	4	5
29-6	Dizajnerji sodelujejo pri **načrtovanju okolja/prostora ali arhitekturi.**	1	2	3	4	5
29-7	Dizajnerji sodelujejo pri **načrtovanju postopkov/procesov.**	1	2	3	4	5
29-8	Dizajnerji sodelujejo pri **pripravi projektnih izhodišč.**	1	2	3	4	5
29-9	Dizajnerji sodelujejo pri **idejnih predlogih.**	1	2	3	4	5
29-10	Dizajnerji sodelujejo pri **vrednotenju idejnih predlogov.**	1	2	3	4	5
29-11	Dizajnerji sodelujejo pri **tehničnih dopolnitvah in testiranju (prototipiranju).**	1	2	3	4	5
29-12	Dizajnerji sodelujejo pri **pripravah na produkcijo (tehnologija proizvodnje).**	1	2	3	4	5
29-13	Dizajnerji sodelujejo pri **uvajanju izdelka na trg.**	1	2	3	4	5

Nadaljujte

30. **Označite kako pomembno vlogo ima dizajn v vašem podjetju. Število 1 pomeni, da dizajn nima pomembne vloge, število 5 pa pomeni, da dizajn ima zelo pomembno vlogo.**

Kakšno vlogo ima dizajn pri…	Zelo nepomembna vloga	Večinoma nepomembna vloga	Niti pomembna niti nepomembna vloga	Večinoma pomembna vloga	Zelo pomembna vloga
30-1 … izboljšanju izgleda izdelka/storitve?	1	2	3	4	5
30-2 … izboljšanju funkcionalnosti izdelka/storitve?	1	2	3	4	5
30-3 … izboljšanju tehnoloških lastnosti izdelka/ storitve?	1	2	3	4	5
30-4 … izboljšanju podobe blagovne znamke?	1	2	3	4	5
30-5 … povečanju zadovoljstva uporabnikov?	1	2	3	4	5
30-6 … ustvarjanju konkurenčne prednosti?	1	2	3	4	5
30-7 … povečanju stopnje diferenciacije izdelka/storitve?	1	2	3	4	5
30-8 … povečanju globalne konkurenčnosti izdelka/storitve?	1	2	3	4	5
30-9 … izboljšanju javne podobe (imidža) podjetja?	1	2	3	4	5
30-10 … zmanjšanju proizvodnih stroškov?	1	2	3	4	5
30-11 … zmanjšanju števila komponent izdelka/storitve?	1	2	3	4	5
30-12 … povečanju izvoza?	1	2	3	4	5
30-13 … povečanju tržnega deleža na obstoječem trgu?	1	2	3	4	5
30-14 … ustvarjanju novega tržišča?	1	2	3	4	5
30-15 … omogočanju prodaje v višjih cenovnih razredih?	1	2	3	4	5
30-16 … pospeševanju procesa vpeljave novega izdelka/storitve?	1	2	3	4	5
30-17 … povečevanju frekvence idejnih projektov?	1	2	3	4	5
30-18 … povečevanju usmerjenosti k uporabnikom pri inoviranju?	1	2	3	4	5
30-19 … razvijanju projektnega managementa inovacij?	1	2	3	4	5
30-20 … spreminjanju kulture podjetja v smeri večje inovativnosti?	1	2	3	4	5
30-21 … izboljševanju koordinacije med marketinškimi in R&R funkcijami?	1	2	3	4	5

31. **Označite, kako pomembno je posamezni dejavnik vplival na odločitev za uporabo dizajna v vašem podjetju. Število 1 pomeni, da dejavnik ni imel pomembnega vpliva, število 5 pa pomeni, da je imel dejavnik za vas zelo pomemben vpliv na odločitev za uporabo dizajna.**

	Zelo nepomemben vpliv	Večinoma nepomemben vpliv	Niti pomemben niti nepomemben vpliv	Večinoma pomemben vpliv	Zelo pomemben vpliv
31-1 Potreba po diferenciaciji izdelkov/storitev	1	2	3	4	5
31-2 Potreba po povečanju ugleda blagovne znamke	1	2	3	4	5
31-3 Želja po prevzemu vodilne vloge na trgu (design leadership)	1	2	3	4	5
31-4 Uvajanje novih tehnologij	1	2	3	4	5
31-5 Upadanje prodaje oz. dobička	1	2	3	4	5
31-6 Spremembe v vodstvu podjetja	1	2	3	4	5
31-7 Uporaba dizajna s strani konkurentov	1	2	3	4	5

Nadaljujte

32. **Za vsako od navedenih trditev, ki so povezane s ponudniki dizajerskih storitev, navedite, kako močno se strinjate oz. ne strinjate s trditvijo. Število 1 pomeni, da se močno ne strinjate, število 7 pa pomeni, da se močno strinjate s trditvijo.**

		Močno se ne strinjam	Večinoma se ne strinjam	Rahlo se ne strinjam	Niti se strinjam, niti se ne strinjam	Rahlo se strinjam	Večinoma se strinjam	Močno se strinjam
32-1	**Ponudniki dizajnerskih storitev niso specializirani in se težko prilagodijo potrebam podjetja.**	1	2	3	4	5	6	7
32-2	**Kakovost slovenskih dizajnerjev je mednarodno primerljiva.**	1	2	3	4	5	6	7
32-3	**Dizajnerje izbiramo na podlagi njihovih referenc (pretekli projekti, nagrade,…).**	1	2	3	4	5	6	7
32-4	**Dizajnerje izbiramo na podlagi cene.**	1	2	3	4	5	6	7
32-5	**Dizajnerje izbiramo na podlagi kakovosti njihovih vnaprej ponujenih rešitev (natečaji, samoiniciativa oblikovalcev,…).**	1	2	3	4	5	6	7
32-6	**Gospodarska kriza je vplivala na zmanjšanje naših investicij v dizajn.**	1	2	3	4	5	6	7
32-7	**Pogosto menjujemo ponudnike dizajnerskih storitev.**	1	2	3	4	5	6	7
32-8	**Z dizajnerji predhodno definiramo pričakovanja projekta.**	1	2	3	4	5	6	7
32-9	**Dizajner prevzema velik del odgovornosti za razvojni projekt.**	1	2	3	4	5	6	7
32-10	**Zadovoljni smo bili s fazo, v kateri so zunanji dizajnerji zaključili svoj projekt.** *(Opomba: V kolikor niste sodelovali z zunanjimi dizajnerji, prosimo, da na to vprašanje ne odgovarjate.)*	1	2	3	4	5	6	7
32-11	**Zadovoljni smo bili z odnosom/sodelovanjem zunanjih dizajnerjev.** *(Opomba: V kolikor niste sodelovali z zunanjimi dizajnerji, prosimo, da na to vprašanje ne odgovarjate.)*	1	2	3	4	5	6	7

33. **Zahvaljujemo se vam za trud pri izpolnjevanju vprašalnika. Zelo cenimo vašo pomoč pri pridobivanju informacij. Če bi želeli še karkoli dodati, prosimo, napišite to v prazen prostor spodaj ali pa pošljite e-mail na elektronski naslov murovec.nika@ier.si. V spodnje okno prav tako zapišite, če želite prejeti rezultate študije (prosimo, da zapišete tudi E-mail, na katega vam rezultate lahko posredujemo).**

Prosimo vas, da vrnete izpolnjen vprašalnik v priloženi kuverti na naslov:

Inštitut za ekonomska raziskovanja
Dr. Nika Murovec
Kardeljeva ploščad 17
1000 Ljubljana

ID:

Appendix B: Ten tables (from Tabela 37-46), presenting frequency, percent, valid percent and cumulative percent for our battery of 10 questions

Tabela 37: Vprašanje 16.1

Inovativnost je najpomembnejši dejavnik uspeha našega podjetja.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	močno se ne strinjam	11	2,2	2,2	2,2
	večinoma se ne strinjam	17	3,4	3,4	5,6
	rahlo se ne strinjam	22	4,4	4,4	9,9
	niti se strinjam niti se ne strinjam	79	15,7	15,7	25,6
	rahlo se strinjam	96	19,1	19,1	44,7
	večinoma se strinjam	165	32,8	32,8	77,5
	močno se strinjam	113	22,5	22,5	100,0
	Total	503	100,0	100,0	

Tabela 38: Vprašanje 16.2

V našem podjetju se zelo spodbuja inovativnost pri vseh zaposlenih.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	močno se ne strinjam	6	1,2	1,2	1,2
	večinoma se ne strinjam	20	4,0	4,0	5,2
	rahlo se ne strinjam	30	6,0	6,0	11,2
	niti se strinjam niti se ne strinjam	83	16,5	16,5	27,7
	rahlo se strinjam	136	27,0	27,1	54,8
	večinoma se strinjam	144	28,6	28,7	83,5
	močno se strinjam	83	16,5	16,5	100,0
	Total	502	99,8	100,0	
Missing	System	1	0,2		
Total		503	100,0		

Tabela 39: Vprašanje 16.3

V našem podjetju se zelo splača biti inovator.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	močno se ne strinjam	33	6,6	6,6	6,6
	večinoma se ne strinjam	25	5,0	5,0	11,6
	rahlo se ne strinjam	53	10,5	10,6	22,3
	niti se strinjam niti se ne strinjam	131	26,0	26,3	48,6
	rahlo se strinjam	114	22,7	22,9	71,5
	večinoma se strinjam	98	19,5	19,7	91,2
	močno se strinjam	44	8,7	8,8	100,0
	Total	498	99,0	100,0	
Missing	System	5	1,0		
Total		503	100,0		

Tabela 40: Vprašanje 16.4

V našem podjetju kopiramo dobre ideje drugih podjetij.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	močno se ne strinjam	52	10,3	10,6	10,6
	večinoma se ne strinjam	47	9,3	9,6	20,2
	rahlo se ne strinjam	34	6,8	6,9	27,1
	niti se strinjam niti se ne strinjam	124	24,7	25,3	52,3
	rahlo se strinjam	131	26,0	26,7	79,0
	večinoma se strinjam	71	14,1	14,5	93,5
	močno se strinjam	32	6,4	6,5	100,0
	Total	491	97,6	100,0	
Missing	System	12	2,4		
Total		503	100,0		

Tabela 41: Vprašanje 16.5

V našem podjetju kopiramo izdelke/storitve na način, da spreminjamo obliko izdelkov/storitev drugih podjetij.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	močno se ne strinjam	128	25,4	25,7	25,7
	večinoma se ne strinjam	78	15,5	15,6	41,3
	rahlo se ne strinjam	53	10,5	10,6	51,9
	niti se strinjam niti se ne strinjam	116	23,1	23,2	75,2
	rahlo se strinjam	66	13,1	13,2	88,4
	večinoma se strinjam	41	8,2	8,2	96,6
	močno se strinjam	17	3,4	3,4	100,0
	Total	499	99,2	100,0	
Missing	System	4	0,8		
Total		503	100,0		

Tabela 42: Vprašanje 16.6

V našem podjetju razvijamo nov izdelek/storitev preko vodenega procesa.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	močno se ne strinjam	56	11,1	11,2	11,2
	večinoma se ne strinjam	25	5,0	5,0	16,2
	rahlo se ne strinjam	39	7,8	7,8	24,0
	niti se strinjam niti se ne strinjam	132	26,2	26,5	50,5
	rahlo se strinjam	87	17,3	17,4	67,9
	večinoma se strinjam	110	21,9	22,0	90,0
	močno se strinjam	50	9,9	10,0	100,0
	Total	499	99,2	100,0	
Missing	System	4	0,8		
Total		503	100,0		

Tabela 43: Vprašanje 16.7

Vodja projekta usmerja proces v trenutkih nejasnosti glede končnega rezultata projekta.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	močno se ne strinjam	43	8,5	8,6	8,6
	večinoma se ne strinjam	14	2,8	2,8	11,4
	rahlo se ne strinjam	26	5,2	5,2	16,6
	niti se strinjam niti se ne strinjam	104	20,7	20,8	37,5
	rahlo se strinjam	94	18,7	18,8	56,3
	večinoma se strinjam	146	29,0	29,3	85,6
	močno se strinjam	72	14,3	14,4	100,0
	Total	499	99,2	100,0	
Missing	System	4	0,8		
Total		503	100,0		

Tabela 44: Vprašanje 16.8

Vodja projekta sodelujočim zaposlenim daje dovolj prostora, da lahko znotraj zadanih okvirjev izrazijo svoje ideje in ustvarjalnost.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	močno se ne strinjam	20	4,0	4,0	4,0
	večinoma se ne strinjam	11	2,2	2,2	6,2
	rahlo se ne strinjam	15	3,0	3,0	9,2
	niti se strinjam niti se ne strinjam	83	16,5	16,6	25,7
	rahlo se strinjam	96	19,1	19,2	44,9
	večinoma se strinjam	169	33,6	33,7	78,6
	močno se strinjam	107	21,3	21,4	100,0
	Total	501	99,6	100,0	
Missing	System	2	0,4		
Total		503	100,0		

Tabela 45: Vprašanje 16.9

Vodja projekta v timu spodbuja sodelovanje in izmenjavo mnenj (timsko delo).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	močno se ne strinjam	16	3,2	3,2	3,2
	večinoma se ne strinjam	10	2,0	2,0	5,2
	rahlo se ne strinjam	20	4,0	4,0	9,2
	niti se strinjam niti se ne strinjam	62	12,3	12,4	21,6
	rahlo se strinjam	99	19,7	19,8	41,5
	večinoma se strinjam	156	31,0	31,3	72,7
	močno se strinjam	136	27,0	27,3	100,0
	Total	499	99,2	100,0	
Missing	System	4	0,8		
Total		503	100,0		

Tabela 46: Vprašanje 16.10

Neuspele ideje in nepričakovani dogodki so v procesu raziskav in razvoja nujni koraki na poti k boljšemu končnemu rezultatu.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	močno se ne strinjam	14	2,8	2,8	2,8
	večinoma se ne strinjam	7	1,4	1,4	4,2
	rahlo se ne strinjam	14	2,8	2,8	7,0
	niti se strinjam niti se ne strinjam	78	15,5	15,6	22,6
	rahlo se strinjam	92	18,3	18,4	40,9
	večinoma se strinjam	175	34,8	34,9	75,8
	močno se strinjam	121	24,1	24,2	100,0
	Total	501	99,6	100,0	
Missing	System	2	0,4		
Total		503	100,0		

Appendix C: Our battery of questions (from 1-10), with the number of answers, range of possibilities for answers (min. 1 and max. 7), and the mean values and standard deviation

Vprašanje	N	Min.	Maks.	Srednja vrednost	Standardni odklon
Q16.1	503	1	7	5,34	1,45
Q16.2	502	1	7	5,17	1,37
Q16.3	498	1	7	4,48	1,58
Q16.4	491	1	7	4,17	1,68
Q16.5	499	1	7	3,21	1,79
Q16.6	499	1	7	4,40	1,76
Q16.7	499	1	7	4,84	1,70
Q16.8	501	1	7	5,31	1,49
Q16.9	499	1	7	5,46	1,47
Q16.10	501	1	7	5,47	1,39

Appendix D: Companies' ways of being competitive (based on added value, distribution, innovation, or price), and ways of using design in development of new products/processes

Osnova za konkuriranje drugim ponudnikom:		*Način uporabe dizajna pri razvoju novih izdelkov/storitev*				
		Profesionalni dizajn (dizajnerji) ni vključen v proces	Dizajn (dizajnerji) je vključen pri nekaterih specifičnih stopnjah razvoja	Dizajn manager ali tim vodi in usmerja celoten process	Dizajn je strateška funkcija v podjetju	**Skupaj**
Dodana vrednost izdelka/ storitve	N	72	93	24	17	**206**
	% glede na način konkuriranja	34,95%	45,15%	11,65%	8,25%	**100,00%**
	% glede na način uporabe	38,71%	47,45%	40,00%	51,52%	**43,37%**
Dsitribucija/ dostopnost	N	26	24	8	3	**61**
	% glede na način konkuriranja	42,62%	39,34%	13,11%	4,92%	**100,00%**
	% glede na način uporabe	13,98%	12,24%	13,33%	9,09%	**12,84%**
Inovacije	N	10	26	9	5	**50**
	% glede na način konkuriranja	20,00%	52,00%	18,00%	10,00%	**100,00%**
	% glede na način uporabe	5,38%	13,27%	15,00%	15,15%	**10,53%**
Cena/ stroški	N	78	53	19	8	**158**
	% glede na način konkuriranja	49,37%	33,54%	12,03%	5,06%	**100,00%**
	% glede na način uporabe	41,94%	27,04%	31,67%	24,24%	**33,26%**
Skupaj	**N**	**186**	**196**	**60**	**33**	**475**
	% glede na način konkuriranja	**39,16%**	**41,26%**	**12,63%**	**6,95%**	**100,00%**
	% glede na način uporabe	**100,00%**	**100,00%**	**100,00%**	**100,00%**	**100,00%**

Source: Murovec et al. (2012, 72).

Appendix E: Crosstabs – our battery of questions – from 1 to 10 - cases

Summary.

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Velikost_podjetja * Inovativnost je najpomembnejši dejavnik uspeha našega podjetja.	498	99.0%	5	1.0%	503	100.0%
Velikost_podjetja * V našem podjetju se zelo spodbuja inovativnost pri vseh zaposlenih.	497	98.8%	6	1.2%	503	100.0%
Velikost_podjetja * V našem podjetju se zelo splača biti inovator.	493	98.0%	10	2.0%	503	100.0%
Velikost_podjetja * V našem podjetju kopiramo dobre ideje drugih podjetij.	486	96.6%	17	3.4%	503	100.0%
Velikost_podjetja * V našem podjetju kopiramo izdelke/ storitve na način, da spreminjamo obliko izdelkov/ storitev drugih podjetij.	494	98.2%	9	1.8%	503	100.0%
Velikost_podjetja * V našem podjetju razvijamo nov izdelek/ storitev preko vodenega procesa.	494	98.2%	9	1.8%	503	100.0%
Velikost_podjetja * Vodja projekta usmerja proces v trenutkih nejasnosti glede končnega rezultata projekta.	494	98.2%	9	1.8%	503	100.0%
Velikost_podjetja * Vodja projekta sodelujočim zaposlenim daje dovolj prostora, da lahko znotraj zadanih okvirjev izrazijo svoje ideje in ustvarjalnost.	496	98.6%	7	1.4%	503	100.0%

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Velikost_podjetja * Vodja projekta v timu spodbuja sodelovanje in izmenjavo mnenj (timsko delo).	494	98.2%	9	1.8%	503	100.0%
Velikost_podjetja * Neuspele ideje in nepričakovani dogodki so v procesu raziskav in razvoja nujni koraki na poti k boljšemu končnemu rezultatu.	496	98.6%	7	1.4%	503	100.0%
Dejavnost * Inovativnost je najpomembnejši dejavnik uspeha našega podjetja.	503	100.0%	0	0.0%	503	100.0%
Dejavnost * V našem podjetju se zelo spodbuja inovativnost pri vseh zaposlenih.	502	99.8%	1	0.2%	503	100.0%
Dejavnost * V našem podjetju se zelo splača biti inovator.	498	99.0%	5	1.0%	503	100.0%
Dejavnost * V našem podjetju kopiramo dobre ideje drugih podjetij.	491	97.6%	12	2.4%	503	100.0%
Dejavnost * V našem podjetju kopiramo izdelke/storitve na način, da spreminjamo obliko izdelkov/storitev drugih podjetij.	499	99.2%	4	0.8%	503	100.0%
Dejavnost * V našem podjetju razvijamo nov izdelek/storitev preko vodenega procesa.	499	99.2%	4	0.8%	503	100.0%
Dejavnost * Vodja projekta usmerja proces v trenutkih nejasnosti glede končnega rezultata projekta.	499	99.2%	4	0.8%	503	100.0%
Dejavnost * Vodja projekta sodelujočim zaposlenim daje dovolj prostora, da lahko znotraj zadanih okvirjev izrazijo svoje ideje in ustvarjalnost.	501	99.6%	2	0.4%	503	100.0%
Dejavnost * Vodja projekta v timu spodbuja sodelovanje in izmenjavo mnenj (timsko delo).	499	99.2%	4	0.8%	503	100.0%

Appendix F: 10 crosstabs for our battery of questions from 1 to 10, regarding the size of the company

Q1: Crosstabs – regarding the size of the company (**1** – micro companies, **2** – small companies, and **3** – medium companies) and Q1.

Velikost_podjetja	*Inovativnost je najpomembnejši dejavnik uspeha n*					*Inovativnost je*		Total
	močno se ne strinjam	večinoma se ne strinjam	rahlo se ne strinjam	niti se strinjam niti se ne strinjam	rahlo se strinjam	večinoma se strinjam	močno se strinjam	
1	11.00	12.00	17.00	67.00	75.00	137.00	92.00	411.00
	2.68%	2.92%	4.14%	16.30%	18.25%	33.33%	22.38%	100.00%
	100.00%	70.59%	77.27%	87.01%	78.13%	84.57%	81.42%	82.53%
	2.21%	2.41%	3.41%	13.45%	15.06%	27.51%	18.47%	82.53%
2	.00	4.00	4.00	8.00	20.00	18.00	17.00	71.00
	.00%	5.63%	5.63%	11.27%	28.17%	25.35%	23.94%	100.00%
	.00%	23.53%	18.18%	10.39%	20.83%	11.11%	15.04%	14.26%
	.00%	.80%	.80%	1.61%	4.02%	3.61%	3.41%	14.26%
3	.00	1.00	1.00	2.00	1.00	7.00	4.00	16.00
	.00%	6.25%	6.25%	12.50%	6.25%	43.75%	25.00%	100.00%
	.00%	5.88%	4.55%	2.60%	1.04%	4.32%	3.54%	3.21%
	.00%	.20%	.20%	.40%	.20%	1.41%	.80%	3.21%
Total	11.00	17.00	22.00	77.00	96.00	162.00	113.00	498.00
	2.21%	3.41%	4.42%	15.46%	19.28%	32.53%	22.69%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	2.21%	3.41%	4.42%	15.46%	19.28%	32.53%	22.69%	100.00%

Q2: Crosstabs – different sizes of the company (1 – micro companies, 2 – small companies, 3 – medium companies) and Q2.

Velikost_podjetja	*V našem podjetju se zelo spodbuja inovativnost pri vseh*					*vseh zaposlenih.*		Total
	močno se ne strinjam	večinoma se ne strinjam	rahlo se ne strinjam	niti se strinjam niti se ne strinjam	rahlo se strinjam	večinoma se strinjam	močno se strinjam	
1	5.00	12.00	24.00	69.00	111.00	122.00	68.00	411.00
	1.22%	2.92%	5.84%	16.79%	27.01%	29.68%	16.55%	100.00%
	83.33%	60.00%	80.00%	84.15%	82.84%	85.31%	82.93%	82.70%
	1.01%	2.41%	4.83%	13.88%	22.33%	24.55%	13.68%	82.70%
2	1.00	8.00	4.00	9.00	22.00	16.00	11.00	71.00
	1.41%	11.27%	5.63%	12.68%	30.99%	22.54%	15.49%	100.00%
	16.67%	40.00%	13.33%	10.98%	16.42%	11.19%	13.41%	14.29%
	.20%	1.61%	.80%	1.81%	4.43%	3.22%	2.21%	14.29%
3	.00	.00	2.00	4.00	1.00	5.00	3.00	15.00
	.00%	.00%	13.33%	26.67%	6.67%	33.33%	20.00%	100.00%
	.00%	.00%	6.67%	4.88%	.75%	3.50%	3.66%	3.02%
	.00%	.00%	.40%	.80%	.20%	1.01%	.60%	3.02%
Total	6.00	20.00	30.00	82.00	134.00	143.00	82.00	497.00
	1.21%	4.02%	6.04%	16.50%	26.96%	28.77%	16.50%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	1.21%	4.02%	6.04%	16.50%	26.96%	28.77%	16.50%	100.00%

Q3: Crosstabs – different sizes of the company (1 – micro companies, 2 – small companies, 3 – medium companies) and Q3.

Velikost_podjetja	*V našem podjetju se zelo splača biti inovator.*							Total
	močno se ne strinjam	večinoma se ne strinjam	rahlo se ne strinjam	niti se strinjam niti se ne strinjam	rahlo se strinjam	večinoma se strinjam	močno se strinjam	
1	26.00	17.00	42.00	108.00	90.00	81.00	43.00	407.00
	6.39%	4.18%	10.32%	26.54%	22.11%	19.90%	10.57%	100.00%
	78.79%	68.00%	79.25%	83.72%	80.36%	83.51%	97.73%	82.56%
	5.27%	3.45%	8.52%	21.91%	18.26%	16.43%	8.72%	82.56%
2	6.00	6.00	9.00	19.00	17.00	12.00	1.00	70.00
	8.57%	8.57%	12.86%	27.14%	24.29%	17.14%	1.43%	100.00%
	18.18%	24.00%	16.98%	14.73%	15.18%	12.37%	2.27%	14.20%
	1.22%	1.22%	1.83%	3.85%	3.45%	2.43%	.20%	14.20%
3	1.00	2.00	2.00	2.00	5.00	4.00	.00	16.00
	6.25%	12.50%	12.50%	12.50%	31.25%	25.00%	.00%	100.00%
	3.03%	8.00%	3.77%	1.55%	4.46%	4.12%	.00%	3.25%
	.20%	.41%	.41%	.41%	1.01%	.81%	.00%	3.25%
Total	33.00	25.00	53.00	129.00	112.00	97.00	44.00	493.00
	6.69%	5.07%	10.75%	26.17%	22.72%	19.68%	8.92%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	6.69%	5.07%	10.75%	26.17%	22.72%	19.68%	8.92%	100.00%

Q4: Crosstabs – different sizes of the company (1 – micro companies, 2 – small companies, 3 – medium companies) and Q4.

Velikost_podjetja	*V našem podjetju kopiramo dobre ideje drugih podjetij.*							Total
	močno se ne strinjam	večinoma se ne strinjam	rahlo se ne strinjam	niti se strinjam niti se ne strinjam	rahlo se strinjam	večinoma se strinjam	močno se strinjam	
1	47.00	36.00	26.00	103.00	108.00	56.00	26.00	402.00
	11.69%	8.96%	6.47%	25.62%	26.87%	13.93%	6.47%	100.00%
	94.00%	78.26%	76.47%	83.06%	83.08%	80.00%	81.25%	82.72%
	9.67%	7.41%	5.35%	21.19%	22.22%	11.52%	5.35%	82.72%
2	3.00	9.00	5.00	18.00	18.00	12.00	4.00	69.00
	4.35%	13.04%	7.25%	26.09%	26.09%	17.39%	5.80%	100.00%
	6.00%	19.57%	14.71%	14.52%	13.85%	17.14%	12.50%	14.20%
	.62%	1.85%	1.03%	3.70%	3.70%	2.47%	.82%	14.20%
3	.00	1.00	3.00	3.00	4.00	2.00	2.00	15.00
	.00%	6.67%	20.00%	20.00%	26.67%	13.33%	13.33%	100.00%
	.00%	2.17%	8.82%	2.42%	3.08%	2.86%	6.25%	3.09%
	.00%	.21%	.62%	.62%	.82%	.41%	.41%	3.09%
Total	50.00	46.00	34.00	124.00	130.00	70.00	32.00	486.00
	10.29%	9.47%	7.00%	25.51%	26.75%	14.40%	6.58%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	10.29%	9.47%	7.00%	25.51%	26.75%	14.40%	6.58%	100.00%

Q5: Crosstabs – different sizes of the company (1 – micro companies, 2 – small companies, 3 – medium companies) and Q5.

Velikost_podjetja	*V našem podjetju kopiramo izdelke/storitve na način, da spreminjamo obliko izdelkov/storitev drugih podjetij.*							Total
	močno se ne strinjam	večinoma se ne strinjam	rahlo se ne strinjam	niti se strinjam niti se ne strinjam	rahlo se strinjam	večinoma se strinjam	močno se strinjam	
1	110.00	58.00	43.00	100.00	53.00	29.00	14.00	407.00
	27.03%	14.25%	10.57%	24.57%	13.02%	7.13%	3.44%	100.00%
	88.00%	75.32%	81.13%	86.21%	81.54%	70.73%	82.35%	82.39%
	22.27%	11.74%	8.70%	20.24%	10.73%	5.87%	2.83%	82.39%
2	12.00	17.00	8.00	15.00	8.00	9.00	2.00	71.00
	16.90%	23.94%	11.27%	21.13%	11.27%	12.68%	2.82%	100.00%
	9.60%	22.08%	15.09%	12.93%	12.31%	21.95%	11.76%	14.37%
	2.43%	3.44%	1.62%	3.04%	1.62%	1.82%	.40%	14.37%
3	3.00	2.00	2.00	1.00	4.00	3.00	1.00	16.00
	18.75%	12.50%	12.50%	6.25%	25.00%	18.75%	6.25%	100.00%
	2.40%	2.60%	3.77%	.86%	6.15%	7.32%	5.88%	3.24%
	.61%	.40%	.40%	.20%	.81%	.61%	.20%	3.24%
Total	125.00	77.00	53.00	116.00	65.00	41.00	17.00	494.00
	25.30%	15.59%	10.73%	23.48%	13.16%	8.30%	3.44%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	25.30%	15.59%	10.73%	23.48%	13.16%	8.30%	3.44%	100.00%

Q6: Crosstabs – different sizes of the company (1 – micro companies, 2 – small companies, 3 – medium companies) and Q6.

Velikost_podjetja	*V našem podjetju razvijamo nov izdelek/storitev preko vodenega procesa.*							Total
	močno se ne strinjam	večinoma se ne strinjam	rahlo se ne strinjam	niti se strinjam niti se ne strinjam	rahlo se strinjam	večinoma se strinjam	močno se strinjam	
1	51.00	22.00	32.00	115.00	71.00	83.00	33.00	407.00
	12.53%	5.41%	7.86%	28.26%	17.44%	20.39%	8.11%	100.00%
	91.07%	88.00%	82.05%	87.79%	82.56%	76.15%	68.75%	82.39%
	10.32%	4.45%	6.48%	23.28%	14.37%	16.80%	6.68%	82.39%
2	4.00	2.00	7.00	14.00	12.00	21.00	11.00	71.00
	5.63%	2.82%	9.86%	19.72%	16.90%	29.58%	15.49%	100.00%
	7.14%	8.00%	17.95%	10.69%	13.95%	19.27%	22.92%	14.37%
	.81%	.40%	1.42%	2.83%	2.43%	4.25%	2.23%	14.37%
3	1.00	1.00	.00	2.00	3.00	5.00	4.00	16.00
	6.25%	6.25%	.00%	12.50%	18.75%	31.25%	25.00%	100.00%
	1.79%	4.00%	.00%	1.53%	3.49%	4.59%	8.33%	3.24%
	.20%	.20%	.00%	.40%	.61%	1.01%	.81%	3.24%
Total	56.00	25.00	39.00	131.00	86.00	109.00	48.00	494.00
	11.34%	5.06%	7.89%	26.52%	17.41%	22.06%	9.72%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	11.34%	5.06%	7.89%	26.52%	17.41%	22.06%	9.72%	100.00%

Q7: Crosstabs – different sizes of the company (1 – micro companies, 2 – small companies, 3 – medium companies) and Q7.

Velikost_podjetja	*Vodja projekta usmerja proces v trenutkih nejasnosti glede končnega rezultata projekta.*							Total
	močno se ne strinjam	večinoma se ne strinjam	rahlo se ne strinjam	niti se strinjam niti se ne strinjam	rahlo se strinjam	večinoma se strinjam	močno se strinjam	
1	38.00	13.00	20.00	93.00	73.00	114.00	57.00	408.00
	9.31%	3.19%	4.90%	22.79%	17.89%	27.94%	13.97%	100.00%
	88.37%	92.86%	76.92%	90.29%	77.66%	79.17%	81.43%	82.59%
	7.69%	2.63%	4.05%	18.83%	14.78%	23.08%	11.54%	82.59%
2	4.00	1.00	6.00	10.00	17.00	20.00	12.00	70.00
	5.71%	1.43%	8.57%	14.29%	24.29%	28.57%	17.14%	100.00%
	9.30%	7.14%	23.08%	9.71%	18.09%	13.89%	17.14%	14.17%
	.81%	.20%	1.21%	2.02%	3.44%	4.05%	2.43%	14.17%
3	1.00	.00	.00	.00	4.00	10.00	1.00	16.00
	6.25%	.00%	.00%	.00%	25.00%	62.50%	6.25%	100.00%
	2.33%	.00%	.00%	.00%	4.26%	6.94%	1.43%	3.24%
	.20%	.00%	.00%	.00%	.81%	2.02%	.20%	3.24%
Total	43.00	14.00	26.00	103.00	94.00	144.00	70.00	494.00
	8.70%	2.83%	5.26%	20.85%	19.03%	29.15%	14.17%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	8.70%	2.83%	5.26%	20.85%	19.03%	29.15%	14.17%	100.00%

Q8: Crosstabs – different sizes of the company (1 – micro companies, 2 – small companies, 3 – medium companies) and Q8.

Velikost_podjetja	*Vodja projekta sodelujočim zaposlenim daje dovolj prostora, da lahko znotraj zadanih okvirjev izrazijo svoje ideje in ustvarjalnost.*							Total
	močno se ne strinjam	večinoma se ne strinjam	rahlo se ne strinjam	niti se strinjam niti se ne strinjam	rahlo se strinjam	večinoma se strinjam	močno se strinjam	
1	17.00	8.00	14.00	74.00	70.00	138.00	88.00	409.00
	4.16%	1.96%	3.42%	18.09%	17.11%	33.74%	21.52%	100.00%
	85.00%	72.73%	93.33%	89.16%	72.92%	81.66%	86.27%	82.46%
	3.43%	1.61%	2.82%	14.92%	14.11%	27.82%	17.74%	82.46%
2	3.00	3.00	1.00	7.00	21.00	24.00	12.00	71.00
	4.23%	4.23%	1.41%	9.86%	29.58%	33.80%	16.90%	100.00%
	15.00%	27.27%	6.67%	8.43%	21.88%	14.20%	11.76%	14.31%
	.60%	.60%	.20%	1.41%	4.23%	4.84%	2.42%	14.31%
3	.00	.00	.00	2.00	5.00	7.00	2.00	16.00
	.00%	.00%	.00%	12.50%	31.25%	43.75%	12.50%	100.00%
	.00%	.00%	.00%	2.41%	5.21%	4.14%	1.96%	3.23%
	.00%	.00%	.00%	.40%	1.01%	1.41%	.40%	3.23%
Total	20.00	11.00	15.00	83.00	96.00	169.00	102.00	496.00
	4.03%	2.22%	3.02%	16.73%	19.35%	34.07%	20.56%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	4.03%	2.22%	3.02%	16.73%	19.35%	34.07%	20.56%	100.00%

Q9: Crosstabs – different sizes of the company (1 – micro companies, 2 – small companies, 3 – medium companies) and Q9.

Velikost_podjetja	*Vodja projekta v timu spodbuja sodelovanje in izmenjavo mnenj (timsko delo).*							Total
	močno se ne strinjam	večinoma se ne strinjam	rahlo se ne strinjam	niti se strinjam niti se ne strinjam	rahlo se strinjam	večinoma se strinjam	močno se strinjam	
1	14.00	8.00	19.00	53.00	73.00	128.00	112.00	407.00
	3.44%	1.97%	4.67%	13.02%	17.94%	31.45%	27.52%	100.00%
	87.50%	80.00%	95.00%	85.48%	73.74%	82.58%	84.85%	82.39%
	2.83%	1.62%	3.85%	10.73%	14.78%	25.91%	22.67%	82.39%
2	2.00	2.00	1.00	8.00	21.00	19.00	18.00	71.00
	2.82%	2.82%	1.41%	11.27%	29.58%	26.76%	25.35%	100.00%
	12.50%	20.00%	5.00%	12.90%	21.21%	12.26%	13.64%	14.37%
	.40%	.40%	.20%	1.62%	4.25%	3.85%	3.64%	14.37%
3	.00	.00	.00	1.00	5.00	8.00	2.00	16.00
	.00%	.00%	.00%	6.25%	31.25%	50.00%	12.50%	100.00%
	.00%	.00%	.00%	1.61%	5.05%	5.16%	1.52%	3.24%
	.00%	.00%	.00%	.20%	1.01%	1.62%	.40%	3.24%
Total	16.00	10.00	20.00	62.00	99.00	155.00	132.00	494.00
	3.24%	2.02%	4.05%	12.55%	20.04%	31.38%	26.72%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	3.24%	2.02%	4.05%	12.55%	20.04%	31.38%	26.72%	100.00%

Q10: Crosstabs – different sizes of the company (1 – micro companies, 2 – small companies, 3 – medium companies) and Q10.

Velikost_podjetja	*Neuspele ideje in nepričakovani dogodki so v procesu raz koraki na poti k boljšemu končnemu rezu*					*iskav in razvoja nujni ltatu.*		Total
	močno se ne strinjam	večinoma se ne strinjam	rahlo se ne strinjam	niti se strinjam niti se ne strinjam	rahlo se strinjam	večinoma se strinjam	močno se strinjam	
1	13.00	5.00	10.00	69.00	80.00	138.00	94.00	409.00
	3.18%	1.22%	2.44%	16.87%	19.56%	33.74%	22.98%	100.00%
	100.00%	71.43%	71.43%	88.46%	86.96%	79.77%	78.99%	82.46%
	2.62%	1.01%	2.02%	13.91%	16.13%	27.82%	18.95%	82.46%
2	.00	2.00	4.00	7.00	10.00	29.00	19.00	71.00
	.00%	2.82%	5.63%	9.86%	14.08%	40.85%	26.76%	100.00%
	.00%	28.57%	28.57%	8.97%	10.87%	16.76%	15.97%	14.31%
	.00%	.40%	.81%	1.41%	2.02%	5.85%	3.83%	14.31%
3	.00	.00	.00	2.00	2.00	6.00	6.00	16.00
	.00%	.00%	.00%	12.50%	12.50%	37.50%	37.50%	100.00%
	.00%	.00%	.00%	2.56%	2.17%	3.47%	5.04%	3.23%
	.00%	.00%	.00%	.40%	.40%	1.21%	1.21%	3.23%
Total	13.00	7.00	14.00	78.00	92.00	173.00	119.00	496.00
	2.62%	1.41%	2.82%	15.73%	18.55%	34.88%	23.99%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	2.62%	1.41%	2.82%	15.73%	18.55%	34.88%	23.99%	100.00%

NAČELA UMETNIŠKEGA USTVARJANJA V POSLOVNIH ORGANIZACIJAH

Opredelitev predmeta raziskovanja in utemeljitev znanstvene relevantnosti

Disertacija sistematično študira in analizira stične točke umetnosti in poslovnega sveta z namenom boljšega razumevanja delovanja kreativnosti, ki se že stoletja pripisuje umetnosti in je značilna za delovanje uspešnih umetnikov. S tem disertacija prispeva k izčrpni analizi sodobne organizacije in upravljanja, pri čemer raziskuje pomen inovativnosti in se osredotoča na vodenje inovacijskega procesa.

Z natančnim proučevanjem uspešnih umetnikov, kakor tudi z odkrivanjem uspešnih principov in metod vodenja ter ustvarjanja njihovega kreativnega procesa prispevamo k boljšemu razumevanju kreativnosti v poslovnem svetu. S tem odkrivamo nove menedžerske pristope, ki razumejo in podpirajo delovanje kreativnih delavcev, in tako prispevamo k menedžmentu inovacijskih procesov ter razvoju menedžerske teorije njihovega vodenja.

V empiričnem delu se naloga osredotoča na menedžerske prakse pri vodenju inovativnih procesov v slovenski oblikovalski industriji. Tako z disertacijo prispevamo tudi k menedžerski praksi, še posebej menedžmentu inovacijskih procesov, in tako zapolnjujemo vrzel na področju sistematičnega uporabljanja umetniških principov pri vodenju kreativnih delavcev.

Umetnost in poslovni svet sta dve pomembni področji človekovega delovanja, ki ju običajno znanstvena literatura obravnava ločeno, pri čemer izpostavlja predvsem razlike med pogledi in načeli. Z doktorsko disertacijo, ki je konceptualno umeščena v sodobno organizacijsko teorijo, smo sistematično proučili podobnosti in stične točke med delovanjem teh dveh področij. Novejša, večinoma tuja literatura (Scheff in Kotler 1996, Klamer 1997, VanGundy in Naiman 2003, Austin in Devin 2004, Kovač 2004, Davis in McIntosh 2005, Bartelme 2005, Denning 2005, Adler 2006, Lagace 2007, Lynch 2008, Austin 2010) na tem področju uporablja koncept strateškega delovanja umetnosti in delovanja poslovnega sveta. Zadnje ugotovitve kažejo, da se lahko poslovni svet nauči nekaterih načel inovativnosti od uspešnih umetnikov. Prejšnje raziskave namreč kažejo, da so pri iskanju novih rešitev in odgovorov glede uspešnega delovanja sodobnih organizacij posamezni umetniki in menedžerji prepoznali specifične, le njim lastne značilnosti, ki jih lahko ponudijo drugim. Z odkrivanjem in ozaveščanjem pomena specifičnih lastnosti so strokovnjaki s področja menedžmenta ob opazovanju (po)ustvarjanja umetnikov namreč prišli do ugotovitve, da lahko umetniki ob umetniških izdelkih, ki so njihov prvotni namen obstajanja in delovanja, ponudijo tudi svoje veščine in znanja, ki lahko

podjetnikom zelo koristijo in pripomorejo k inovativnosti, ustvarjalnosti in uspešnosti podjetja. Ta »skriti zaklad« se vse bolj ceni. Pri opazovanju dela umetnikov in učenju od njih opažajo pozitivne učinke menedžerji in znanstveniki s področja organizacijske kulture in upravljanja (Scheff in Kotler 1996, Austin in Devin 2003, Adler 2006, Austin 2008).

Pobuda, inovativnost, ustvarjalnost in usmerjenost k razvoju so značilnosti, ki jih J. Schumpeter izpostavlja kot ključne za podjetnike (Kanjuo Mrčela 1999, 117). Drucker (1992) je izpostavil, da podjetnik odkriva nove poslovne možnosti in omogoča prihodnost podjetja. Analitiki ugotavljajo, da v novejšem času prihaja do povezovanja prej ločenih vlog, in sicer lastništva, upravljanja in podjetništva, in mnogi med njimi se zavedajo pomena in potrebe po timskem delu, skupni odgovornosti za poslovne rezultate ter spodbujanja kolektivnega duha in občutka pripadnosti podjetju (Kanjuo Mrčela 1999, 117). Novi poslovneži imajo vizijo, kako lahko s svojimi inovativnimi proizvodi spremenijo svet. Tako je tudi podjetništvo »prežeto z odprtostjo, spremembami, kreativnostjo in drugačnostjo« (Kos 2009).

Inovativno delo je ključno zlasti v razvitih gospodarstvih, kjer mora imeti proizvod dodano vrednost – običajno je to diferenciacija in estetska privlačnost, zato so podjetja lahko na trgu bolj uspešna, če imajo strategijo, ki temelji na umetnosti (Devin in Austin 2009, 491).

V sodobnem podjetju sta pomen in vloga človeškega kapitala (in to še zlasti specializiranega človeškega kapitala ali tako imenovanega delavca znanja) presegla pomen fizičnega kapitala in je zato izredno pomembno odpravljanje ovir organizacijski inovativnosti, kot tudi pripravljenost za nenehne izboljšave in spremembe sistema upravljanja (Kanjuo Mrčela 1999, 104–105). Jemielniak (2008) raziskuje postmoderno organizacijo in pristope k njenim delavcem znanja. Ugotavlja, da veliko sodobnih organizacij še vedno zanemarja osebni pristop in umetniško ustvarjanje delavcev. Obenem pa je raziskava z razvijalci programov, s katerimi je opravil intervju, pokazala, da identiteta nekaterih »inženirjev« ustreza nekaterim predpostavkam o projektih informacijske tehnologije in opisuje alternativno metaforo programiranja kot »umetnosti«, ki jo programerji pogosto uporabljajo.

V današnjem poslovnem svetu je »ustvarjalnost povezana z inovativnostjo, ki vpliva na tehnološke spremembe in s tem na gospodarsko rast« (Kovač 2004). Inovativnost pomeni nove ideje prenesti v končne proizvode, ki imajo dodano vrednost in so na trgu uspešni. Rezultati inovativnosti so zanimivi, novi izdelki/storitve z določeno vrednostjo. Z razvijanjem sposobnosti ustvarjanja novih idej lahko podjetja pridobijo tekmovalno prednost pred svojimi

tekmeci, razvoj pa je lahko dragocen tudi za posameznika. Eden vodilnih strokovnjakov na področju vodenja in menedžmenta John Adair poudarja pomen razumevanja kreativnega procesa, premagovanja ovir za ustvarjanje novih idej, razširitev vizije, izoblikovanje novih idej in razvijanje kreativnega odnosa za uspeh podjetja (Adair 2007, 20–49).

To kaže, da potrebujemo nove stile vodenja in menedžmenta, s katerimi bi ustvarili kar najboljše okolje, ki bo podprlo delavce znanja pri inovativnem procesu in pri ustvarjanju novih proizvodov ter doseganju rezultatov.

Tema disertacije je v nepredvidljivem in nenehno spreminjajočem se poslovnem okolju 21. stoletja zelo relevantna, še zlasti za podjetja, ki so ujeta v večletne modele načrtovanja, rigidno hierarhijo odločanja in sprejemanja odločitev ter tog pristop k trgu. V prihodnosti bodo namreč uspešna tista podjetja, ki bodo inovativna pri odkrivanju lastnih poti k napredku, ki bodo dovolj prilagodljiva, da se bodo hitro in kompetentno odzvala na nepričakovane dogodke in situacije ter ki bodo dovolj spontana, da bodo uspešno izvajala spremembe. V postmoderni organizaciji obstaja več različnih pristopov k upravljanju inovativnosti. V našem delu raziskujemo *Artful Making* in *design management*, ter proučujemo možnosti za sodelovanje v prihodnosti.

Struktura disertacije

Disertacija po uvodu predstavlja poslovni svet in teoretične koncepte postmoderne organizacijske teorije. V naslednjem poglavju predstavlja pomen delavcev znanja v postmoderni inovativni organizaciji, kot tudi pomen kreativnosti kot zahtevnega in kompleksnega procesa. Poudarja pomen znanja, izkušenj in kompetenc, kakor tudi sodelovanja in timskega dela, kjer visoko izobraženi zaposleni s skupnimi močmi, znanjem in preizkušanjem skozi inovativni proces izboljšujejo obstoječe ter ustvarjajo nove izdelke. Četrto poglavje predstavlja umetnost, umetniško delo ter način njihovega delovanja, da bi proučevali in razumeli proces kreativnosti kot eno od značilnosti umetniškega ustvarjanja in upravljanja. Predstavlja tudi primere sodelovanj uspešnih umetnikov s podjetji z namenom učenja in pridobivanja novih, umetniških znanj in veščin s področja vodenja, ustvarjanja, timskega dela. Peto poglavje natančno in poglobljeno predstavlja teorijo *Artful Making* – umetniško ustvarjanje (oziroma umetniško upravljanje)[21], njen izvor in nastanek ter posamezne principe in metode, ki jih uporabljajo uspešni umetniki pri svojem ustvarjalnem delu in so »prevedeni«

[21] Artful Making v slovenskem jeziku še ni ustrezno poimenovan, zato mi ponujamo strokovni javnosti termin »umetniško upravljanje«, ki ga bomo v nadaljnjem tekstu tudi uporabljali.

v menedžerske principe in metode, primerne pri vodenju kreativnega procesa. V naslednjem poglavju predstavljamo *design management,* za katerega je v Sloveniji uveljavljen strokovni termin »upravljanje z oblikovanjem«[22]. Upravljanje z oblikovanjem je v oblikovalski industriji znano in se postopoma uveljavlja tudi v praksi. Ker smo izvajali raziskavo v oblikovalski industriji, predstavljamo in proučujemo tudi ta koncept ter iščemo možne skupne točke in potencialne možnosti za sodelovanje, da se spodbudi inovativnost ter podpre inovacijski proces in doseganje izjemnih rezultatov. Sedmo poglavje je empirični del disertacije in je osredotočen na slovensko oblikovalsko industrijo, pomembnost inovativnosti in uporabo posameznih umetniških principov, ki smo jih za oblikovanje vprašalnika izpeljali iz teorije *Artful Making,* ki smo ga poimenovali »umetniško upravljanje«. V empiričnem delu disertacije prispevamo k nadaljnjemu procesu preverjanja in dokazovanja še mlade teorije *Artful Making* ter na splošno razumevanja kreativnega procesa in vodenja, ki podpira kreativnost delavcev znanja. Teorija je že bila preverjana med različnimi umetniki, kot tudi v različnih industrijah, ni pa še bila izvedena raziskava v oblikovalski industriji. Tako smo z našo primerjalno in empirično analizo izbrane industrije dopolnili proces potrjevanja umetniškega upravljanja in hkrati tudi prispevali k sedanji organizacijski in upravljavski teoriji, s poudarkom na vodenju kreativnega procesa.

Teoretska in konceptualna izhodišča

Postmoderna organizacija pozna nove načine iskanja popolnega modela za doseganje uspeha, pri čemer je inovativnost ena ključnih prvin. Medtem ko modernistična organizacijska teorija skuša skozi znanost najti najboljši model učinkovitosti, pa je postmoderna organizacijska teorija osredotočena na iskanje praktičnih in ekološko smotrnih skupin »prizorov učinkovitosti, ki predstavijo niz pogledov in pomislekov različnih skupin« (Boje idr. 1996, 362–363). Pregled literature nam kaže, da so se postmoderne organizacije razvile skladno s spremembami v okolju, v katerem so, različni teoretiki pa jih predstavljajo predvsem kot prilagodljive, mrežne organizacijske oblike (Clegg v Kanjuo Mrčela 1999, 259–261). Postmoderna organizacija se mora zavedati pomena prilagodljivosti, timskega dela, procesne organizacije, tekmovanja (primerjanja z najboljšimi) in biti popolnoma usmerjena h kupcu, kar vodi k temu, da se pomembnost hierarhije zelo spreminja, postmoderna organizacija pa postane brez meja in nenehno odprta za spremembe in sodelovanje (Vila v Kavčič in Kovač 1999, 328–370). Zaradi pomembne spremembe postmoderne organizacijske kulture se morajo menedžerji prilagoditi

[22] V strokovnih krogih v Sloveniji je za *design management* uveljavljen termin »upravljanje z oblikovanjem«. Tudi mi bomo v nadaljnjem tekstu uporabljali ta termin.

novi situaciji. Upravljanje razvoja novih proizvodov zahteva sodelovanje z delavci znanja, ki so strokovnjaki na svojem področju, in so sposobni ustvariti nove, cenjene izdelke/storitve. Pri tem je naloga menedžerja, da jih vodi na najboljši možen način.

Literatura nam ne razkriva veliko o podrobnostih upravljanja postmoderne organizacije in delavcev znanja ter njihovih kreativnih procesov, ki naj bi ustvarili kar najboljše možnosti in delovno okolje, ki bi spodbujalo zaupanje in vzajemno odvisnost, prilagodljivost, organizacijo postopkov in »praznovanje« napak; pa tudi načine, na katere bi lahko menedžerji podprli inovacije delavcev znanja, da bi ti »ustvarili predmete, ki jih ni nihče prej videl, predvidel in ne sanjal« (Austin in Devin 2003, 173). Spremembe so vedno težke, menedžerji pa imajo ključno vlogo pri tem, da v organizaciji vzpostavljajo kar najboljše okolje za ustvarjalne delavce znanja. Raziskovali bomo uspešne načine in načela, s katerimi lahko delavce spodbudimo, da spremembe sprejmejo skupaj z novim načinom dela in inovativnostjo.

Organizacijska teorija in delovanje umetnikov

Sedanja organizacijska teorija obravnava analizo poslovnega delovanja umetnikov predvsem znotraj ločenega področja organizacijske in poslovne analize – upravljanje neprofitnih organizacij (Drucker 1990, Kolarič idr. 2002, Jelovac 2002, Kanter 2003, Musek Lešnik 2003). Z analizo podjetij in organizacij se na splošno ukvarja več znanstvenih disciplin: ekonomija (ekonomika podjetja), organizacijska teorija in sociologija organizacij. Ekonomika podjetja proučuje oblike podjetja, možnosti njegovega delovanja, poslovne procese in funkcije v podjetju, teorija podjetja in sociologija organizacij pa se ukvarjata z abstraktnim podjetjem – z njegovo strukturo, cilji, vlogami pomembnih akterjev v podjetju in zunaj njega (Kanjuo Mrčela 1999, 95–96). Po sedanji teoriji podjetje sestavljajo načela združevanja in gospodarskega subjekta: »Podjetje predstavlja obliko združevanja sredstev za proizvodnjo in ljudi – njihove fizične in umske sposobnosti – zaradi opravljanja ekonomske in druge dejavnosti, ob pomoči katere se uresničujejo določeni ekonomski in socialni rezultati kot razlika med uporabljenim in pridobljenim« (Deželjin, Vujić v Kanjuo Mrčela 1999, 97).

Drugačen pristop spodbujanja inovativnosti, ki ga poslovni svet vse bolj priznava, je učenje od uspešnih umetnikov. Crawford in Benedetto zastavljata vprašanje, ali je danes proizvodni menedžment umetnost ali znanost. Glede na svojo naravo sta proizvodni menedžment in upravljanje inovativnosti umetniškemu delu bliže kot kadarkoli prej (Crawford in Benedetto 2006, 17): »Gospodarstvo prihodnosti bo temeljilo na ustvarjanju vrednosti in primernih oblik,

o tem postopku pa nihče ne ve več kot prav umetniki« (Austin in Adler 2006), vendar o tem v organizacijski teoriji ni veliko napisanega.

Ta vrzel v teoriji zahteva nove predloge; nekatera izhodišča so že predstavili raziskovalci, ki so proučevali delo različnih umetnikov in ugotovili, da postmoderne organizacijske teorije in postmodernih organizacij, ki nujno potrebujejo kreativnost in inovacijo, ni mogoče obravnavati enako kot tradicionalnega industrijskega ustvarjanja. Potrebujeta namreč nov, drugačen pristop. V postmodernih organizacijah so delavci znanja postali največje premoženje. Vse bolj postaja tudi jasno, da delavcev znanja ne moremo upravljati enako kot industrijskih delavcev. Raziskovalci so ugotovili, da je potreben drugačen, bolj prilagodljiv menedžerski pristop, pri čemer skušamo med njimi in njihovim delovnim okoljem ustvariti kar najboljše komuniciranje. Pri raziskovanju dela umetnikov so odkrili številne podobnosti s kreativnim procesom in ugotovili, da se lahko od njih veliko naučimo (Austin in Devin 2003). V disertaciji poglobljeno raziskujemo in predstavljamo posamezna načela, ki jih uspešni umetniki uporabljajo pri svojem delu ter jih lahko uporabimo tudi pri upravljanju in vodenju inovacijskega procesa.

Umetnost, načela umetniškega upravljanja in njihov pomen za poslovni svet

Umetnost je vpeta v družbo in čas: izraža odnos do družbe v določenem času, ozira se v preteklost in uporablja zgodovinske ideje, pri čemer odseva preteklost in zre v prihodnost; razmišlja o družbi in človekovi usodi v prihodnosti. Delovanje umetnika v težnji in potrebi po doseganju popolnosti in nenehni inovativnosti tako pri ustvarjanju novih umetniških del kot tudi pri poustvarjanju stvaritev velikih mojstrov zahteva od umetnika posebne veščine. Harold Osborne je trdil, da je »umetniško delo tisti primerno pripravljeni izdelek, ki v nas vzbudi in ohranja estetsko izkušnjo« (Osborne 1981, 3); in tudi vodenje, sodelovanje, inovativnost, razvoj in programiranje so umetnost tedaj, ko vzbudijo estetske občutke in zahtevajo ustvarjalnost, vsak v nekaterih ozirih (Jemielniak 2008, 24).

Umetniki in teoretiki upravljanja so analizirali delovni proces umetnikov, njihovo pot k ustvarjanju in doseganju odličnosti. Veliko lastnosti, ki jih ima ali naj bi jih razvijala današnja postmoderna organizacija, odkrivajo znanstveniki pri umetnikih, pri opazovanju njihovih načinov delovanja in na njihovi poti do odlične izvedbe nekega vrhunskega dela na odru pred navdušeno publiko. To še posebno velja za poslovne organizacije, ki jih opredeljujeta ustvarjalnost in inovativnost – lastnosti, ki jih pripisujemo umetnosti. Dan Björkegren primerja ustvarjalni praksi ter proizvode umetniške in organizacijske teorije in trdi, da je praksa izdelovanja lepih predmetov za občudovanje elite skupna obema področjema. Meni, da je lahko

estetska vrednost dela v organizacijski znanosti boljši vodnik k uporabnosti kot njena domnevna zveza z resnico (vsebino), ter tako postavlja kot merilo vrednosti resnico in lepoto (Hassard in Parker 1999, 101–110).

Posebne spretnosti, znanje, izkušnje s področja umetnosti ter (po)ustvarjanje in improvizacija na temo umetniškega dela lahko spodbudijo ustvarjanje določene organizacijske kulture, izboljšajo kreativne procese, timsko delo, inovativnost, občutek pripadnosti in ustvarjalno okolje na splošno, odprto za spremembe, in podjetja dvigne visoko nad povprečje po tudi po uspešnosti (Božič 2008, Austin in Devin 2009). Tako je danes umetniška spretnost eno najbolj iskanih znanj in kvalifikacij v poslovnem svetu (Pink in Adler 2006, 486–490), upoštevajoč dejstva, da je svetovno gospodarstvo izredno tekmovalno, uspeh in pozitivne rešitve izzivov pa so enako pomembne. Voditelji namreč odkrivajo, da je »ustvarjalnost, ki je osnovna v umetnosti, hkrati pomembna tudi v poslovnem svetu« in da je, kot pravi Harvey, »umetnost nafta ekonomije 21. stoletja, umetniki pa neprimerljiv in edinstven vir ustvarjalnosti« (v Bartelme 2005).

Česa se lahko poslovni svet nauči od umetnikov?

V zadnjem desetletju literatura večkrat obravnava podobnosti med delom umetnikov in postmoderno inovativno organizacijo, zlasti ustvarjalne poklice in delavce znanja. Literatura analizira podobnosti in razlike med ustvarjanjem umetnikov, ki temelji na inovativnosti in odličnosti, in delovanjem podjetnikov pri iskanju inovacij. Znanstveniki ob analizi in spoznavanju delovanja posameznih umetnikov odkrivajo velik, še neizkoriščen potencial, ki ga lahko v podjetništvu sprosti ravno posnemanje delovanja umetnikov. Drugi viri, ki jih analiziramo (Scheff in Kotler 1996, Austin in Devin 2003, VanGundy in Naiman 2003, Mager 2004, Davis in McIntosh 2005, Adler 2006, Lagace 2007, Arts and Business 2009), pričajo o izrednem prispevku in obogatitvi delovanja in kulture podjetja ter hkratnem odpiranju novih smeri v kulturi organizacije, upravljanja in inovativnosti. Predstavljajo študije primerov, kjer so znanstveniki, podjetniki in vodilni menedžment prepoznali dodano vrednost, s katero lahko umetniki vidno vplivajo na delovanje in uspeh organizacije, vodstva, na način delovanja in ustvarjanja, povezovanje različnih kultur in komuniciranje med njimi (umetniki se lahko prilagajajo), na motiviranost in posledično na konkurenčnost ter prepoznavnost podjetja. Omenjena literatura obravnava načrtno sodelovanje podjetij in posameznih umetnikov (Bartelme 2005, Austin in Lagace 2007, Austin in Devin 2003), pozitivne izkušnje vodilnega

menedžmenta s spremembo v podjetju, ki jo je vneslo sodelovanje z umetniškimi organizacijami.

Umetniško upravljanje – Artful Making

V knjigi Artful Making, ki je izšla leta 2003, in v *21st Century Management Handbook* (Priročnik za vodenje v 21. stoletju) (2008, 492–494), sta Devin in Austin predstavila koncept umetniškega upravljanja ter metod in načel, ki jih umetniki uporabljajo, ko ustvarjajo umetniško delo. Naša disertacija prva predstavlja *umetniško upravljanje* (*Artful Making*) kot teorijo vodenja inovacijskih procesov slovenskemu znanstvenemu okolju in tudi poslovnemu okolju v Sloveniji. V umetniškem upravljanju vidita umetnike kot ustvarjalce, posel kot ustvarjanje. Austin in Devin (2003) sta opravila natančno študijo metod in načel, ki jih različni uspešni in priznani umetniki uporabljajo pri svojem delu. Ugotovila sta, da lahko ta ista načela uspešno uporabimo pri upravljanju delavcev, ki delajo z znanjem v poslovnih organizacijah. Na osnovi študije sta razvila principe in metode, ki so ob določenih pogojih primerni za vodenje kreativnih procesov. Pogoji, ki morajo biti izpolnjeni, da je primerno uporabljati umetniško upravljanje, so potreba po inovacijah ter možnost številnega, hitrega, in poceni prototipiranja.

Artful Making je primerno uporabiti še posebej, ko je potreba po inovacijah velika, ko prototipiranje ni drago in obstaja možnost za večkratno, hitro preizkušanje. Umetniško upravljanje predstavlja sveže in uporabne pristope, principe, metode ter predloge sodobnemu menedžmentu, katerega vodenje mora biti inovativno, ustvarjalno. Predlaga drugačen pristop vodenja, ki se razlikuje od koncepta industrijskega procesa. Pri njem ni znano v naprej, kakšen bo končni izdelek, ampak se razvija in izpopolnjuje med celotnim procesom (Austin in Devin 2003, 30–86). Med njegovimi načeli so:

- vnaprejšnje zastavljanje cilja in izida ne sme veljati za najboljši pristop, končni rezultat bi namreč morali iskati med procesom,
- zavedanje pomembnosti priprav namesto načrtovanja ter pripravljenost sprejeti neuspehe in napake kot običajen del odkrivanja in ustvarjanja nečesa novega in vrednega,
- zunanja variacija in presenečenja v procesu, ko ne vemo, kaj točno je naš cilj, so običajna stvar,
- nadzor z opuščanjem omogoča več svobode pri upravljanju in zahteva več samozavesti, spodbujanja in ciljnega delovanja,
- dvoumnost je pozitivna, saj se osredotočamo na sam proces, in ne na končni izdelek,
- umetniško upravljanje ozavešča, da so delavci znanja večji strokovnjaki od menedžerjev, zato spodbuja zaupanje v njihovo znanje in delo,
- pripravljenost na spremembe, ko se okoliščine spreminjajo,

- umetniško upravljanje je proces ustvarjanja prototipov, ki so izdelani, nato preizkušeni in ponovno vrnjeni v postopek raziskav in razvoja, kjer so dodatno izboljšani.

Ta umetniška načela ponujajo nova spoznanja in predloge, kako upravljati delavce znanja v postmoderni organizaciji in jim omogočiti uresničevanje lastnih idej, razvoj lastnih vizij, jim dati prostor za navdušenje in ustvarjalnost, zaradi katerih bodo vključeni in močno motivirani (Austin in Devin 2003).

Sprejemanje novih načinov dela v podjetjih lahko spodbudi njihovo zmožnost razmišljati širše in spodbujati ter podpirati stopanje v še neznano. Mnogi vodilni strokovnjaki menijo, da je rešitev za recesijo v ustvarjalnosti in inovativnosti, in *umetniško upravljanje* ponuja pristop k vodenju, ki menedžerje oskrbi s potrebnimi znanji in veščinami za podpiranje in spodbujanje ustvarjalnosti (De Bono 1999, Austin in Devin 2003, Drucker 2004, Schiuma 2009, Verganti in Dell'Era 2014).

Upravljanje z oblikovanjem

Ker raziskujemo področje oblikovalske industrije, si bomo pobliže pogledali upravljanje z oblikovanjem kot teoretski pristop, ki poudarja pomembno vlogo načrtovanja v poslovnem svetu in pomembnost učinkovite uporabe oblikovanja med razvijanjem novega proizvoda in ga spodbujajo oblikovalci. Teoretski premisleki o upravljanju z oblikovanjem tudi raziskujejo povezave med poslovnim svetom in umetnostjo. »Na globlji ravni dizajn menedžment išče povezavo med oblikovanjem, inovacijo, tehnologijo, menedžmentom in strankami, da bi omogočil konkurenčno prednost ekonomskih, družbeno-kulturnih in okolijskih dejavnikov« (DMI 2011).

Gorb vidi funkcijo učinkovitega oblikovanja kot spoj analize in domišljije, praktičnosti in čutnosti ter vseh spretnosti, ki jih potrebujemo, da naredimo nove, delujoče predmete, k čemur prišteva tudi uspeh pri prodaji. Delovno opredelitev oblikovanja opisuje kot »načrt za artefakt ali sistem artefaktov«, in ta opredelitev je »izredno pomembna za svet upravljanja« (Gorb 1990, 69–70).

Danes je bistvenega pomena, da imajo menedžerji poleg menedžerskih sposobnosti tudi sposobnost voditi proces načrtovanja in oblikovanja. Biti morajo sposobni razmišljanja z obema polovicama možganov ter ob tem, da so racionalni, znati v kreativnem procesu biti tudi bolj umetniški in pokazati razumevanje za kreativni proces ter nuditi podporo kreativnim delavcem. »Vse prevečkrat se zdi, da so podjetja uspešna pri analizah, kar po navadi vodi le v

postopne inovacije, medtem ko »izzivi sodobne ekonomije pa zahtevajo veliko več«. Zahtevajo znanja in veščine menedžerjev, da razumejo tudi kreativnost, ki je v svoji osnovi umetniška in ob znanju vključuje tudi čustva, kakor tudi stopanje v neznano in sprejemanje možnosti napak (Lockwood 2010, IX).

Raziskovalna metodologija

Podatke za raziskavo smo pridobili s sodelovanjem pri vseslovenski raziskavi oblikovalske industrije v Sloveniji v sklopu Inštituta za ekonomske raziskave (IER). Avtorica disertacije se je pridružila anketi, ki je bila opravljena v sklopu projekta »Stanje oblikovanja, s poudarkom na industrijskem oblikovanju, kot dela kreativnih industrij in primeri dobre prakse v svetu kot podlaga za krepitev te dejavnosti v Sloveniji«. Gre za prvo poglobljeno analizo oblikovalske industrije v Sloveniji (Murovec et al. 2012), v sklopu katere je ob omenjeni anketi, ki je bila poslala direktorjem slovenske oblikovalske industrije, bila opravljena tudi anketa z oblikovalci. Predhodno pa so bili opravljeni še intervjuji z oblikovalci in menedžerji, ki jih tudi uporabljamo pri preverjanju zastavljenih hipotez.

Omenjena anketa je bila poslana 4.000 direktorjem slovenske industrije s štirimi ali več zaposlenimi, ki uporabljajo ali so potencialni uporabniki dizajna. Vrnjenih je bilo 536 anket, od katerih je bilo uporabnih 503 (Murovec et al. 2012, 37–39). V anketi z direktorji smo imeli naš sklop vprašanj glede pomena inovativnosti v podjetju, ter glede uporabe izbranih posameznih principov *umetniškega upravljanja*.

Za preverjanje hipotez smo uporabili mešano metodo. Ob sklopu naših vprašanj iz vprašalnika smo uporabili tudi ostala vprašanja in odgovore ter celotno raziskavo v slovenski oblikovalski industriji (prej omenjena oba vprašalnika in intervjuje), kot tudi relevantno literaturo. Pri empiričnem raziskovalnem delu smo poleg uporabe podatkov, pridobljenih v anketi, ter tudi drugih relevantnih vprašalnikov in intervjujev uporabili še pregled relevantne literature ter kritične analize obstoječih empiričnih podatkov. Uporabili smo mešano metodo, kvantitativno in kvalitativno, skupaj s kombinacijo podatkov iz intervjujev.
Preverjamo pet postavljenih tez**:**

1. V slovenski oblikovalski industriji se zavedajo pomena inovativnosti in inovativnost tudi spodbujajo.
2. Stopnja pomena inovativnosti v podjetju je povezana z uporabo principov umetniškega upravljanja.

3. Menedžerji v slovenski oblikovalski industriji uporabljajo principe in metode umetniškega upravljanja v podporo kreativnosti in inovacijskega procesa.
4. Uporaba principov in metod umetniškega upravljanja v slovenski oblikovalski industriji je pozitivno povezana s številom inovacij.
5. Direktorji slovenske oblikovalske industrije se zavedajo, da je pri vodenju kreativnega procesa potreben drugačen menedžerski pristop.

Rezultati empirične raziskave

V raziskavi smo ugotovili, da se direktorji v slovenski oblikovalski industriji zavedajo pomembnosti inovativnosti za uspeh njihovih organizacij ter inovativnost tudi spodbujajo. Rezultati raziskave namreč kažejo, da obstajajo srednje do srednje močne korelacije med tremi pomembnimi kazalniki inovativnosti, ki predstavljajo tri različne stopnje razumevanja direktorjev in spodbujanja inovativnosti v njihovem podjetju. Prvi kazalnik je stopnja pomembnosti inovativnosti za podjetje, drugi je spodbujanje inovativnosti v celotnem podjetju ter tretji spremenljivka, da se v njihovem podjetju splača biti inovator. S temi rezultati smo potrdili prvo tezo – *V slovenski oblikovalski industriji se zavedajo pomena inovativnosti ter inovativnost tudi spodbujajo.* Smo pa zaznali tudi indikacije za razhajanja med posameznimi kazalniki – pomenom inovativnosti (srednja vrednost 5,34 od 7), manjšim pripisovanjem pomembnosti spodbujanju inovativnosti med zaposlenimi (srednja vrednost 5,16 od 7) ter dodatnemu upadu pomembnosti nagrajevanja za uspehe na področju inovativnosti (srednja vrednost 4,48 od 7). Morebiten razlog za razhajanje je v tem, da zavedanje pomembnosti inovativnosti ni ponotranjeno in popolnoma sprejeto ali ne obstaja volja, ne potrebna znanja in inovacijske veščine ter sposobnosti, da se v polnosti podpre inovacijski proces. Razloge za to razhajanje je treba še nadalje preveriti v prihodnjih raziskavah.

Tudi druga hipoteza – *Stopnja pomena inovativnosti v podjetju je povezana z uporabo principov umetniškega upravljanja*, je bila potrjena. Primerjava spremenljivk glede pomembnosti inovativnosti in posameznih principov umetniškega upravljanja kaže, da obstajajo pozitivne korelacije med pomembnostjo inovativnosti in uporabo posameznih principov umetniškega upravljanja. Med prvim kazalnikom inovativnosti in posameznimi principi umetniškega upravljanja je močna korelacija ($0{,}40 < R < 0{,}45$), medtem ko smo ugotovili delen upad korelacij z ostalima dvema kazalnikoma inovativnosti, ki pa še vedno obstaja.

Tretja hipoteza – *Menedžerji v slovenski oblikovalski industriji uporabljajo principe in metode umetniškega upravljanja v podporo kreativnosti in inovacijskega procesa*, je bila tudi potrjena.

Rezultati kažejo, da se v slovenski oblikovalski industriji v kreativnem procesu uporabljajo umetniški principi vodenja. V anketi smo direktorje prosili za oceno, v kolikšni meri njihovi menedžerji uporabljajo posamezne umetniške principe (ki smo jih izpeljali iz metode *umetniškega upravljanja*), ki se uporabljajo pri vodenju kreativnega procesa in vodenju kreativnih delavcev. Čeprav ta metoda še ni znana v Sloveniji in jo prvi predstavljamo slovenskemu okolju, so izbrani principi, ki jih ta metoda promovira, v določeni meri že prisotni v slovenski oblikovalski industriji. To kaže, da se podjetja v oblikovalski industriji v Sloveniji trudijo prilagajati menedžerske pristope, da bi bolj ustrezali spremenljivi naravi konkurentov, in tako spodbujajo inovativnost. V tem smislu ugotavljamo, da se slovenska oblikovalska podjetja trudijo obvladovati industrijske reflekse ter postajajo bolj umetniška, v smislu uporabe in prakticiranja tudi umetniških principov. Kljub temu opažamo, da manjka doslednost pri njihovi uporabi. Raziskava je tudi pokazala, da ti principi umetniškega upravljanja pozitivno korelirajo z ekonomskimi kazalniki in inovativnostjo. Tako smo dokazali obstoj srednjih do močnih korelacij s:

- številom vpeljanih novih izdelkov/storitev,
- številom novih izdelkov/storitev, ki jih je podjetje vpeljalo kot prvo na trgu (oz. bilo med prvimi podjetji, ki so vpeljala ta izdelek/storitev),
- številom vpeljanih sprememb v poslovnih procesih, ki jih je podjetje vpeljalo kot prvo na trgu (oz. bilo med prvimi podjetji),
- številom novosti v administrativnem sistemu (novi postopki, politike, organizacijske oblike),
- z uporabo najnovejših tehnoloških inovacij pri novih izdelkih/storitvah in
- z deležem prihodkov, ki se vlaga v razvoj ali izboljšave izdelkov/storitev.

Manj pomembno povezani pa so z:

- dobičkonosnostjo podjetja v zadnjih treh letih (2008–2010) v primerjavi s konkurenti približno iste starosti in stopnje razvoja,
- rastjo tržnega deleža v zadnjih treh letih (2008–2010) in
- zmanjšanjem/povečanjem prihodkov v zadnjih treh letih (2008–2010).

S tem smo zavrgli ničelno hipotezo ter sklepamo, da obstaja povezava med uporabo principov umetniškega upravljanja in ekonomskimi kazalniki in kazalniki inovativnosti v slovenski oblikovalski industriji.

Četrta hipoteza – *Uporaba principov in metod umetniškega upravljanja v slovenski oblikovalski industriji je pozitivno povezana s številom inovacij*, je tudi potrjena. Ugotovili smo pozitivne korelacije med uporabo principov umetniškega upravljanja in številom inovacij. Potrdili smo korelacije med številom novih proizvodov, procesov ali storitev in pomembnostjo

inovativnosti ter uporabo principov *umetniškega upravljanja* (0,227 < R < 0,373, p= 0,000). Direktorji so odgovarjali tudi na vprašanja glede procesa raziskav in razvoja. Izkazalo se je, da določen delež podjetij kopira dobre ideje drugih podjetij, nekatera pa tudi kopirajo izdelke/storitve, in sicer tako, da spreminjajo končno obliko izdelkov/storitev drugih podjetij. Na osnovi mnenj direktorjev le 10,53 % podjetij v slovenski oblikovalski industriji gradi svojo konkurenčnost na osnovi inovativnosti, 42,7 % podjetij gradi uspeh na osnovi razvoja novih izdelkov, storitev ali procesov, ki so vključevali bistveno inovacijo, medtem ko je 24,8 % direktorjev odgovorilo, da njihova podjetja kopirajo izdelke/storitve od drugih podjetij, tako da spreminjajo samo obliko (Murovec et al. 2012).

Naše pete hipoteze, ki je kompleksna – *Direktorji Slovenske oblikovalske industrije se zavedajo, da je pri vodenju kreativnosti delavcev znanja skozi kreativen proces potreben drugačen pristop*, nismo uspeli preveriti, čeprav obstajajo indikacije, da so možne izboljšave, večja doslednost in konsistentnost pri uporabi umetniških principov pri vodenju inovativnega procesa. Na osnovi sinteze relevantne teorije, rezultatov in zaključkov predstavljamo model za uvajanje in izboljševanje inovativnosti v slovenski oblikovalski industriji, ki predstavlja ključne postavke za celosten pristop k uvajanju in spodbujanju inovativnosti v organizaciji (Von Stamm 2008). Model ima pet korakov. Prvi je uporaba primernega menedžerskega stila, ki podpira naravo dela in ustvarjanja kreativnih delavcev ter jim s tem omogoča potrebne možnosti, da lahko ustvarijo nekaj novega, kar ima dodano vrednost. Drugi korak je zavedanje pomembnosti inovativnosti in resnična želja, da bi bila organizacija inovativna. Za to je najprej potrebna sprememba vodenja in odnosa nadrejenih, tako da s svojim zgledom spodbudijo spremembe tudi pri ostalih zaposlenih. S tem vplivajo na predanost celotnega podjetja in vsakega zaposlenega, da ustvarja in prispeva k inovativnemu okolju, ki podpira kreativnost in kreativne procese delavcev znanja. Tretji korak je ozaveščanje pomembnosti ustvarjanja inovativne kulture. Bozic in Olsson (2013, 63) opisujeta organizacijsko kulturo kot dinamično interakcijo njenih zaposlenih, ki jo izoblikujeta način razmišljanja, delovanja, sodelovanje in funkcioniranje zaposlenih. Četrti korak je uporaba principov in metod umetniškega upravljanja. Ko so izpolnjeni pogoji za uporabo umetniškega upravljanja, njihova sistematična uporaba podpira kreativnost zaposlenih in ustvarja potrebne razmere, da lahko uporabijo vse svoje znanje, veščine, strokovnost in ideje ter ustvarijo vredne inovacije. Ko se enkrat v podjetju začne ustvarjati inovativno okolje in tudi inovacije, je to za vse zaposlene dodatna spodbuda, da nadaljujejo z izboljševanjem in nadaljnjim ustvarjanjem idealnih razmer za ustvarjanje inovacij. Ta umetniški proces *biti inovativen* je trajen in se nenehno spreminja ter

je tako tudi sam po sebi s konstantnimi izboljševanji ponavljajoči se in traja. Vendar je to pot, da se ustvarijo potrebne razmere, v katerih lahko organizacija ustvarja tudi radikalne inovacije z veliko dodano vrednostjo (Andriopoulos in Dawson 2009, 31). Tako lahko organizacije v resnično inovativnem okolju začnejo ustvarjati končne izdelke, ki imajo svoje specifike in prepoznavnost ter imajo poseben pomen, s čimer potem osvojijo kupce in jih navdušujejo (Verganti 2009).

Doktorska disertacija je pomemben prispevek k organizacijski teoriji ter konkretno k dopolnjevanju k teoriji umetniškega upravljanja. Dokazali smo, da znanja in izkušnje umetnikov vidno prispevajo k razumevanju vodenja inovacijskih procesov in podpiranja kreativnosti s ciljem ustvarjanja vrednih inovacij. S tem tudi potrjujemo obstoj skupnih točk med umetnostjo in poslovnim svetom, ki ju povezuje pomen in razumevanje kreativnosti. Na osnovi pregleda relevantne teorije in rezultatov empirične raziskave smo metodo dopolnili z dodatnimi principi, ki pozitivno vplivajo na podpiranje kreativnosti ter na spodbujanje uspešnosti in inovativnosti v podjetju, in smo tudi predlagali spremembe izobraževalnih programov za menedžerje, ki naj bi ponujali med drugim tudi znanja umetniškega vodenja inovacijskih procesov in tudi praktično izkušnjo uporabe umetniških veščin.

Teorijo umetniškega upravljanja pa smo obogatili z dodatnimi principi, kot so nujnost konsistentnega uporabljanja vseh njenih načel (in ne le nekaterih), pomena diferenciacije in oblikovalcev (pomembni pri ustvarjanju pomena proizvoda) ter merjenja kvalitet izdelka, seznanjenost z željami in pričakovanji kupcev ter novostmi na trgu, ustvarjanje vizije potencialnih izboljšav, pomembnost podpore organizacijskega okolja, kot tudi samega direktorja kreativnim delavcem in njihovemu delu.

Poleg teoretskega prispevka rezultatov predstavljene raziskave na področju organizacijske in upravljavske teorije s to disertacijo prispevamo tudi k organizacijski praksi. Slovenska oblikovalska industrija bo lahko še bolj inovativna, če bo imela vsestransko izobražene menedžerje, seznanjene tudi umetniškimi vidiki kreativnega procesa (Hamel and Tennant 2015).

Ugotovitve naše raziskave kažejo, da se menedžerski procesi v slovenski oblikovalski industriji lahko še izboljšajo (delovni procesi, načini doseganja polnega potenciala postmoderne organizacije z ustvarjanjem kar najboljšega okolja in podpore delavcev znanja), pri čem predstavljamo umetniško upravljanje kot teorijo, ki skrbno vodi kreativni proces na poti do

doseganja idealnih končnih izdelkov, proizvodov ali procesov. Tako disertacija prispeva k proučevanju možnosti in pomena uvajanja pristopa, ki izvira iz umetnosti, v slovenski poslovni svet, zlasti pa v slovensko oblikovalsko industrijo – kot pot k svežim idejam in večji inovativnosti.