UNIVERZA V LJUBLJANI
FAKULTETA ZA DRUŽBENE VEDE

Primož Medved

Strukturni model avtonomnih trajnostnih sosesk

Doktorska disertacija

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UNIVERZA V LJUBLJANI
FAKULTETA ZA DRUŽBENE VEDE

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Ljubljana, 2017

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Primus Ursus dedicatus.

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Strukturni model avtonomnih trajnostnih sosesk

Povzetek

Avtonomne trajnostne soseske predstavljajo izvedljiv vzorec/možen zgled za trajnostna mesta 21. stoletja. Trajnostne soseske poosebljajo eksperiment novega bivalnega modela, ki je skladen s sonaravnim razvojem. Trajnostna soseska predstavlja trajnostno bivalno okolje, ki nudi dovolj veliko ter pestro izbiro različnih tipologij stanovanjskih površin in storitveno poslovnih enot; je dobro povezana in lahko dostopna preko javnega prevoza; je načrtovana tako, da ohranja in vzdržuje sonaravno uporabo različnih naravnih virov in temelji na soodločanju prebivalcev soseske ter na odgovornih lokalnih organizacijah, društvih, ki delujejo v skladu z načeli trajnostnega razvoja. Poosebljа prvinsko okolje za ljudi, ki jim poleg zavetišča nudi mrežo socialne podpore ter širok spekter ekonomskih, kulturnih in razvedrilnih aktivnosti.

Iz analize dosedanjih modelov trajnostnih sosesk je bilo ugotovljeno, da noben njihov dosedanji uveljavljeni model ne temelji oz. ne izhaja iz obstoječih dobrih praks in le redki modeli se ukvarjajo s konkretnim družbenim modeliranjem. Implementacijski modeli bi morali poleg okoljskih ciljev sočasno obravnavati tudi družbene in ekonomske razsežnosti ter izhajati iz že vzpostavljenih dobrih praks trajnostnih sosesk. Iz ugotovljenih pomanjkljivosti dosedanjih poskusov izdelave njenih modelov izhaja temeljni raziskovalni problem disertacije: kako vzpostaviti model avtonomnih trajnostnih sosesk, ki bo izhajal iz konkretnih dobrih praks in bo vključeval tudi njihove družbene (kulturne) in ekonomske dimenzije uveljavljanja.

Doktorska disertacija je sestavljena iz osmih poglavij. Po uvodni opredelitvi izhodišč disertacije (poglavje 1) so predstavljene hipoteze, raziskovalna vprašanja (poglavje 2), metodološki pristop ter podrobnejši prikaz strukture in vsebine disertacije (poglavje 3). V četrtem poglavju je podrobno opisanih vseh sedem obravnavanih trajnostnih sosesk, ki so analizirane in primerjane v disertaciji. To so: Vauban (Freiburg), Rieselfed (Freiburg), Kronsberg (Hannover), Western Harbour (Malmö), Hammarby Sjöstad (Stockholm), EVA-Lanxmeer (Culemborg) in GWL Terrein (Amsterdam). Soseske so primerjane na interdisciplinaren, celovit način. Poudarjen je preplet oz. interakcija štirih tematskih področij, ki določajo trajnostne soseske: trajnostni prevoz, družbeno-ekonomska uravnoteženost, urbanistični elementi trajnostnega razvoja in trajnostna raba naravnih virov.

Peto, šesto in sedmo poglavje sestavljajo v mednarodnih revijah objavljeni znanstveni članki. Strukturni model trajnostnih sosesk, ki je podrobno prikazan v petem poglavju, je grajen

v obliki štirih temeljnih stebrov urbane trajnosti in razgrinja celovito shemo t. i. trajnostnih gradnikov (razdeljenih na kvalitativne in kvantitativne parametre), ki definirajo trajnostno sosesko. Vseh štirinajst identificiranih trajnostnih gradnikov modela je skupnih večini analiziranih sosesk. Ključen in najbolj inovativen prispevek k trajnostnemu urbanemu načrtovanju predstavlja četrti steber urbane trajnosti modela; to je družbeno-ekonomsko ravnotežje. Razdeljen je na trajnostne gradnike, ki v dosedanjih modelih urbanega načrtovanja niso bili prisotni ali pa niso bili obravnavani v zadostni meri. To so: sistem LETS (»časovna banka«), socialna ekologija kot lokalni politični okvir trajnostne soseske, lokalne (ekološke) prehrambne kooperative, identiteta lokalne skupnosti in lokalna kultura ter lokalna ekonomija. S strukturnim modelom je ustvarjen nov praktični pripomoček oz. orodje za načrtovanje trajnostne oblike urbanega prostora, ki odpravlja ugotovljene pomanjkljivosti prevladujočih urbanističnih orodij. Strukturni model sosesk dodaja nove nujne elemente uveljavljanja trajnostne soseske: t. i. trajnostne gradnike družbeno-ekonomske uravnoteženosti, ki postavljajo novo perspektivo razumevanja trajnostnih urbanih skupnosti.

Eden od temeljnih fokusov raziskovanja disertacije predstavlja tudi proučevanje interakcije in soodvisnosti med družbeno trajnostjo soseske ter med njenimi urbanističnimi elementi. Po identifikaciji ključnih trajnostnih urbanih elementov trajnostnih sosesk, ki vplivajo na družbeno aktivnost lokalne skupnosti, je še posebej izstopala funkcija enega od urbanih elementov – to je »skupnostni center trajnostne soseske«, ki vključuje/razvija/pospešuje družbeno udejstvovanje lokalnih prebivalcev. V šestem poglavju je tako postavljena obsežna mednarodna primerjalna analiza heterogenih, večnamenskih skupnostnih centrov sosesk, ki so usmerjeni k aktivizaciji lokalne urbane skupnosti. Velika večina skupnostnih aktivnosti, društev, socialnih akcij itd. se odvija v lokalnih skupnostnih centrih trajnostnih sosesk, ki poosebljajo nekakšna lokalna družbena vozlišča, tako omogočajo in pospešujejo manifestacijo družbenih vidikov trajnostnega razvoja v vsaki obravnavani trajnostni soseski.

Za razumevanje avtonomnih trajnostnih sosesk je potreben tudi vpogled v sam postopek nastajanja soseske oz. na genezo njenega nastajanja. Nekatere avtonomne trajnostne soseske so nastale s pristopom od zgoraj navzdol, kjer so imele večinoma občine glavno vlogo upravitelja; nekatere soseske pa so nastale s pristopom od spodaj navzgor. V sedmem poglavju je zato izpostavljeno, kako različna pristopa vplivata na uveljavitev trajnostnih urbanističnih elementov sosesk ter kako vplivata na družbene vidike trajnosti in na lokalno upravljanje skupnosti. V zadnji poglobljeni analizi disertacije (v sedmem poglavju) se primerjava osredotoča na dva reprezentativna predstavnika (ekstremna pola) nasprotnih si

implementacijskih pristopov: na sosesko Vauban – zgrajeno s pristopom od spodaj navzgor, ter sosesko Western Harbour, zgrajeno s pristopom od zgoraj navzdol.

Cilj disertacije so predstavitev in analiza dobrih praks ter hkrati diseminacija/posredovanje konkretnih trajnostnih urbanih rešitev. Njen namen pa sta tudi splošna predstavitev načel trajnostnega razvoja na področju urbanizma ter postavitev teoretskih in praktičnih izhodišč, ki bi olajšali implementacijo novih avtonomnih trajnostnih sosesk.

Ključne besede: trajnostna soseska, skupnostni center soseske, od spodaj navzgor, od zgoraj navzdol, družbeno ekonomsko ravnotežje, družbeni vidiki trajnostnega razvoja, strukturni model trajnostnih sosesk, participacija

The structural model of autonomous sustainable neighbourhoods

Abstract

The autonomous sustainable neighbourhood represents a possible, viable pattern for the sustainable city of the 21st century. Sustainable neighbourhoods are experiments for the new residential model and are completely in line with the sustainable development paradigm. The sustainable neighbourhood represents a sustainable living environment large enough to offer a wide selection of different residential areas and services which could ensure long-term balance in the local community; it is well-connected and easily accessible with efficient public transport designed to preserve and maintain the sustainable usage of different natural resources; it is based on the participation of neighbourhood residents and responsible local organisations (associations) who all together act in accordance with the principles of sustainable development.

An analysis of the current predominant sustainable neighbourhood model revealed that none of the existing well-established models derives from existing good practices and only a few models take into consideration and incorporate the social aspects of the neighbourhood community. The urban models should take into consideration the already established good practices of sustainable neighbourhoods and should also simultaneously address the social and economic dimensions, in addition to environmental objectives. From the identified shortcomings of previous sustainable urban designing models attempts stems the dissertation's main research goal: how to establish a model of autonomous sustainable neighbourhoods which will derive from best practices and will include social (cultural) and economic dimensions.

The doctoral dissertation consists of eight chapters. After the introductory section (Chapter 1), the hypotheses and research questions are presented (Chapter 2), a methodological approach and a detailed overview of the dissertation structure (Chapter 3). All the seven sustainable neighbourhoods analysed and compared in the dissertation are described in detail in the fourth chapter. These analysed sustainable neighbourhoods are: Vauban (Freiburg), Rieselfed (Freiburg), Kronsberg (Hannover), Western Harbour (Malmö), Hammarby Sjöstad (Stockholm), EVA-Lanxmeer (Culemborg) in GWL Terrein (Amsterdam). The neighbourhoods are compared in an interdisciplinary, holistic manner. The research focus of the comparative analysis takes into consideration four thematic areas: sustainable transport, socio-economic balance, sustainable urban elements and sustainable usage of natural resources.

The fifth, sixth and seventh chapters are composed of three scientific articles published in international journals. The structural model of sustainable neighbourhoods, which is presented in detail in the fifth chapter, is built in the form of four fundamental pillars of urban sustainability. The structural model unveils a comprehensive scheme of strategic urban sustainability goals (divided into qualitative and quantitative parameters), which also define a sustainable neighbourhood. All the fourteen strategic urban sustainability goals are common to most of the analysed neighbourhoods. The most relevant and innovative contribution to sustainable urban planning is the fourth pillar of the urban model. This is the "socio-economic balance", which is divided into strategic urban sustainability goals that the current contemporary urban planning model has not adequately addressed. These are the LETS scheme, social ecology as a local policy framework of sustainable neighbourhoods, local (organic) food cooperatives, identity of the local community and local culture, and the local economy.

With the structural model a new practical planning tool for designing sustainable urban forms is created. The new model overcomes the drawbacks identified in dominant urban planning tools. The structural model of sustainable neighbourhoods uncovers new elements of fundamental sustainable urbanism incorporated within the "socio-economic balance" pillar. The innovative pillar gives a new perspective in understanding sustainable urban communities.

One of the main dissertation's research focuses is studying the interactions and interdependencies between the social sustainability factors and urbanistic elements of sustainable neighbourhoods. After the identification of all the key sustainable urban elements affecting the local communities' social activities, it was possible to recognise that one prominent urban element particularly stood out. This was the sustainable neighbourhood community centre, which strongly includes / develops / promotes social participation of the local population. The sixth chapter offers an extensive international comparative analysis of heterogeneous, multi-purpose neighbourhood community centres, which enable the activation of local urban communities. The vast majority of community activities, association, social actions, etc. are held in local sustainable neighbourhood community centres, which in a way represent local social hubs. The neighbourhood community centres enable and accelerate the manifestation of the social sustainability factors in the neighbourhoods.

To understand autonomous sustainable neighbourhoods one must also examine the implementation processes of the neighbourhoods; to analyse the genesis. Some autonomous sustainable neighbourhoods have been implemented using the top-down approach, where in most cases the municipalities played the major role; on the other hand, some neighbourhoods have been formed using the bottom-up approach. How different implementation approaches

affect the formation of sustainable urbanistic elements within the neighbourhoods and how they influence the social sustainability aspects and the community local governance is discussed in the seventh chapter. The last in-depth analysis of the dissertation (in the seventh chapter) is represented with the comparative analysis, which is focused on two representatives (extreme poles) of different implementation approaches: the neighbourhood of Vauban - built using the bottom-up approach, and the neighbourhood of Western Harbour, built using the top-down approach.

The aim of the dissertation is the analysis of sustainable neighbourhood best practices and at the same time the dissemination / transmission / transfer of knowledge of specific sustainable urban solutions. The purpose of the doctoral dissertation is the creation of new sustainable development principles in the field of urban planning, and a theoretical and practical platform that would facilitate the implementation of future autonomous sustainable neighbourhoods.

Keywords: sustainable neighbourhood, neighbourhood community centre, bottom-up approach, top-down approach, socio-economic balance, social sustainability, structural model of autonomous sustainable neighbourhood, participation

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1 UVOD

Planet Zemlja doživlja okoljsko krizo, ki je posledica treh dejavnikov; ti so: hitra rast svetovne populacije in posledično kumulativna ekonomska aktivnost, intenzivno izčrpavanje vseh virov energije in obsežno uničevanje ekosistemov ter biotske raznovrstnosti (Shu-Yang in drugi 2004, 98). V nekaterih državah je mogoče zaznati spremembe v smeri *ekologizacije* prostorskega razvoja, vendar je v odnosu do izkoriščanja naravnih virov in onesnaževanja našega planeta še vedno v ospredju kurativni in ne preventivni pristop (Barrow 1999). Človeštvo se dejansko postopoma približuje zgornjim mejam nosilnosti planeta, spremembe svetovnega ozračja zaradi emisij človekovih dejavnosti pa opozarjajo, da so te meje z veliko verjetnostjo že presežene (Plut 2008). Ključno vprašanje, ki se zastavlja, je, kako zmanjšati »okoljski odtis«[1] planeta Zemlje.

»Prehod v trajnostno, sonaravno družbo in kulturo ni mogoč brez temeljite spremembe naše lestvice vrednot« (Plut 2008, 64). Najosnovnejša načela ekologije, kot je skrb za usklajen razvoj za bolj okoljsko naravnano zavest, so v velikem nasprotju s trenutno ekonomijo, ki homogenizira, standardizira družbo, naravo in individuume (Bookchin 1990, 94). Okoljske krize je potrebno razumeti tudi kot krize družbenih odnosov (Gorz 1994; Chodorkoff 2005). Tradicionalne, komunitarne oblike povezanosti med ljudmi v obliki majhnih skupnosti so v ekonomsko razvitem delu družbe izginile že pred desetletji, ponekod že pred stoletjem. Urbanizacija je postala prevladujoč globalni trend (Hall 1980). V 21. stoletju smo priča največji migraciji ljudi v mesta v zgodovini človeštva. Večina svetovne populacije (približno 3,3 milijarde ljudi) je leta 2008 živela v urbanih območjih. Po napovedih se bo leta 2030 število urbane populacije povečalo na 5 milijard (Marique in Reiter 2011, 27). Združeni narodi napovedujejo, da bo leta 2050 70 % celotne svetovne populacije živelo v urbanih območjih (United Nations 2008). Ti trendi so problematični, ker so mesta največji vir toplogrednih plinov, in glede na to, da se v mestih porabi večina energije, je nujno potrebno zmanjšati ogljični odtis mest in ugotoviti, kako je mogoče izboljšati urbane soseske ter jih preoblikovati v skladu s trajnostnim razvojem (Marique in Reiter

[1] Okoljski odtis (v angl. Ecological Footprint) je kazalec trajnostnega razvoja, ki ga je prvič objavil William Rees leta 1992. Meri povpraševanje človeka po naravi in kapaciteto narave, da zadovolji to povpraševanje na globalni, državni, regionalni in institucionalni ravni, na ravni gospodinjstev ter osebni ravni. Izraža, koliko regenerativne kapacitete biosfere je potrebne tako za proizvodnjo sredstev, ki jih človek porabi, kot za absorpcijo onesnaženja, ki pri tem nastane. Izračun okoljskega odtisa se izraža v standardizirani enoti biološko produktivne površine, globalnem hektarju (gha) na osebo (Ministrstvo za okolje in prostor Republike Slovenije 2010). Izračunavanje ekološkega odtisa temelji na seštevanju površin, potrebnih za proizvodnjo hrane in vlaken, za absorpcijo odpadnih snovi, ki so posledica rabe energije in površin, namenjenih raznovrstni infrastrukturi (Plut 2008).

2011). Po Youngu (2011) je trajnostno načrtovanje urbanih prostorov oz. zelena infrastruktura[2] nujno za zmanjšanje ogljičnega odtisa. Iz predpostavk nevzdržnosti trenutnega okoljskega stanja planeta, množične urbanizacije in iz predpostavk netrajnostnih družbenih trendov je treba uveljavljati praktične spremembe v smeri sonaravnega razvoja. To pa seveda predpostavlja tudi temeljito sistemsko prenovo temeljnih elementov (post)modernih družb.

Z urbanističnega vidika je postmodernizem dejansko prelomil z modernistično idejo širokopoteznega in podrobnega planiranja. Postmoderna družba je fragmentirani palimpsest preteklih oblik, ki se prekrivajo druga nad drugo, je kolaž sodobnih rab, med katerimi so številne precej kratkotrajne (Kos 2003). Klasično vseobsežno prostorsko planiranje (»comprehensive spatial planning«) je stvar preteklosti (Kos 2003). Po Kosu (2003) naj bi bilo to posledica preskoka iz modernega državnega centralno hierarhičnega urejanja v postmoderni decentrični in manj hierarhičen sistem urejanja družbenih odnosov. Pogoste posledice sodobnih fragmentiranih prostorskih ureditev predstavljajo manjši urbanistični posegi (»urbane plombe«), ki pogosto niso celovito integrirani v obstoječi urbani prostor. Zastavlja se namreč vprašanje, ali je med vsemi novodobnimi postmodernimi decentraliziranimi urbanimi tvorbami tudi takšna, ki je vzpostavila dolgoročno celovito trajnostno strategijo.

Disertacija se osredotoča na konkretna preoblikovanja na lokalni (urbani) ravni in na raziskovanju tovrstnih urbanih eksperimentov, ki poskušajo delovati skladno s paradigmo trajnostnega razvoja. Najprej pa je treba predstaviti splošne teoretsko konceptualne premisleke o trajnostnem razvoju, ki jih podrobneje raziskujem v nadaljevanju.

Najpogosteje citirana definicija trajnostnega razvoja (v angl. *sustainable development*) se po Gro Harlem Bruntland glasi: »Trajnostni razvoj pomeni zadovoljevanje potreb sedanje generacije, ne da bi s tem ogrožali sposobnost prihodnjih generacij za zadovoljevanje njihovih potreb« (WCED 1987, 14). Trajnostni razvoj je večinoma obravnavan in definiran skozi tri dimenzije – ekonomsko, socialno in ekološko, ki naj bi se idealno prepletale v konstantnem ravnotežju. Plut omenjene dimenzije poimenuje tudi kot stranice »sonaravnega trikotnika napredka«, ki ga sestavljajo: okoljska odgovornost (zdravo okolje), gospodarska odgovornost (materialno blagostanje) in družbena odgovornost (socialna varnost) (Plut 2002, 17). Popularnemu trajnostnemu trikotniku mnogi dodajajo še kulturno stranico oz. kulturnoetično dimenzijo, zato danes lahko govorimo tudi o »strateškem štirikotniku trajnostnega razvoja«. Tako na primer Loucks in Gladwell (1999) definirata trajnostni razvoj s štirimi dimenzijami oz. štirimi vidiki:

[2] V angl. *Green infrastructure (GI)*.

- okoljski vidik trajnostnega razvoja (ohranjevanje ključnih življenjskih – bioloških sistemov planeta),
- gospodarski vidik trajnostnega razvoja (omogočanje stalnega toka dobrin in storitev, ki izhajajo iz naravnih virov planeta),
- socialni vidik trajnostnega razvoja (zagotavljanje pravične razdelitve koristi proizvodnje dobrin in storitev ter ohranjanje življenjskih oskrbnih sistemov),
- kulturni oz. etični vidik trajnostnega razvoja (spoštovanje vrednot sodelovanja, soodločanja in solidarnosti).

Kos (2004, 332–338) obravnava trajnostni razvoj kot kibernetsko celostni proces, v katerem je treba upoštevati medsebojno odvisnost številnih posameznih komponent. Hkrati se sklicuje na Beckerjevo (1997) operativno definicijo trajnostnega razvoja, ki obeta obvladovanje kompleksnosti koncepta in ohranja tudi povratne informacijske zanke (Kos 2004). Beckerjev model trajnostnega razvoja ponuja sočasno opazovanje trajnostnega razvoja na treh ravneh: a) analitični, b) normativni in c) strateški (Becker in drugi 1997). Na analitični ravni empirično merimo recipročno interakcijo med različnimi okoljskimi dejavniki ter produkcijo sodobnih družb (Becker in drugi 1997, 21). Na normativni ravni ugotavljamo prepletenost in soodvisnost ekoloških, socialnih in ekonomskih dejavnikov. Hkrati pa presojamo razdaljo med analitičnimi ugotovitvami o ekoloških posledicah in družbenim odzivanjem na te ugotovitve (Becker in drugi 1997, 22). Na tretji, strateški ravni pa na podlagi predhodnih analitičnih ugotovitev in normativnih vrednotenj pripravimo operativno strategijo trajnostnega razvoja (Becker in drugi 1997). Opisana trodelna struktura trajnostnega razvoja omogoča integracijo različnih vrst informacij, konkretne trajnostno naravnane ukrepe in upošteva specifike lokalnega okolja (Kos 2004).

Po Fukuyamovem delu »o koncu zgodovine« (1992), ki je pretenciozno poskušala »končati razpravo« o novih mogočih družbenih sistemih, predstavlja trajnostni razvoj zadnjo res »veliko zgodbo«, za katero se zdi, da bi bila lahko splošno globalno sprejemljiva. Poleg demokracije in globalizacije predstavlja trajnostni razvoja najbolj univerzalen, sicer še nekonsenzualen, vendar nepogrešljiv koncept današnjega časa (Castro 2004). Kos (2004, 332) izpostavlja, da bi bilo lahko na prvi pogled celo pozitivno, da so današnje družbe kljub (Fukuyamovemu) deklariranemu koncu zgodovine dosegle vsaj na formalni ravni relativno soglasje o »nujnosti« trajnostnega razvoja. Všečnost, popularnost in radikalnost zamisli so privedle do pandemije razprav in razvojnih strategij o trajnostnem razvoju (Kos 2004). Ta množičnost pa seveda pomeni, da se

pojem trajnostnega razvoja, tudi v strokovnih krogih, pogosto uporablja preveč ohlapno, nediskriminatorno, nedoločeno ter se ga izrablja za marketinške oz. demagoško populistične namene (Kos 2004). Po Kosovem mnenju naj bi bilo problematično predvsem pomanjkanje strokovne analitičnosti pri obravnavanju pojma trajnostnega razvoja in podcenjevanje kompleksnosti pojma. »Nujni pogoj za implementacijo trajnostnega razvoja je refleksivnost, tj. stalno opazovanje in odzivanje na soodvisnosti okoljske, ekonomske in socialne komponente razvoja na lokalni, nacionalni in globalni ravni« (Kos 2004, 335).

Zaradi mnoštva nasprotnih interesov oz. zaradi političnega nesoglasja držav (npr. neuspel Kjotski protokol leta 1997; premalo ambiciozen Pariški sporazum leta 2015 itd.) očitno konkretna operativna strategija za spremembe celotnega sveta v smeri trajnostnega razvoja še ni izvedljiva. Odprto pa je vprašanje, ali je mogoče vsaj na lokalni ravni delovati trajnostno. Ali je mogoče delovati skladno z vsemi tremi oz. štirimi dimenzijami trajnostnega razvoja na ožjem, omejenem prostoru? Kakšne so izkušnje vpeljevanja celostnega trajnostnega razvoja na lokalni ravni oziroma ali je na lokalni ravni mogoče najti že posamezne obetavne ureditve, ki nakazujejo usmeritev v trajnostno preobrazbo? Na ta vprašanja poizkušam odgovoriti z raziskovanjem v praksi že delujočih projektov preoblikovanja lokalnih prostorov v smeri trajnostnega razvoja.

Poleg ekovasi se je v zadnjem desetletju pojavilo kar nekaj projektov preoblikovanja urbanih bivalnih okolij po načelih trajnosti – t. i. »avtonomnih« trajnostnih sosesk. Te po mnenju nekaterih predstavljajo eno od celovitih rešitev za vzpostavitev novih trajnostno vzdržnih ravnovesij na lokalni ravni (Rudlin in Falk 2009). Eden od ključnih namenov doktorske disertacije je, da z izvirnimi analizami primerov (»case studies«) preverjamo uresničljivost trajnostnih načel v izbranih urbanih avtonomnih trajnostnih soseskah oz. ugotavljamo, ali avtonomne trajnostne soseske predstavljajo prostorsko konkretizacijo/spacializacijo trajnostnih načel.

Trajnostne soseske predstavljajo eksperiment, ki naj bi ponudil odgovor na nevzdržnost trenutnega stanja okolja (družbenega ter naravnega). To naj bi bil nov bivalni model, skladen s sonaravnim razvojem (Taylor 2000). Po Carleyu in Falku je trajnostna soseska (Carley in Falk 2012):

- trajnostno bivalno okolje, ki nudi dovolj veliko ter pestro izbiro različnih tipologij stanovanjskih površin in storitveno-poslovnih enot;
- dobro povezana in lahko dostopna z javnim prevozom;
- načrtovana tako, da ohranja in vzdržuje sonaravno uporabo različnih naravnih virov;

- temelječa na soodločanju prebivalcev soseske ter na odgovornih lokalnih organizacijah, društvih, ki delujejo v skladu z načeli trajnostnega razvoja.

Barton in drugi (2003) definirajo trajnostno sosesko kot ekosistem v smislu, da pooseblja prvinsko okolje za ljudi, ki jim poleg zavetišča nudi mrežo socialne podpore ter širok spekter ekonomskih, kulturnih in razvedrilnih aktivnosti. Taka soseska predstavlja nekakšen naravni habitat, v katerem ljudje živijo v sožitju z drugimi organizmi, skladno z načeli trajnostnega razvoja (Barton in drugi 2003).

Načrtovanje trajnostne soseske vključuje vzpostavitev in razvoj skupnosti z upoštevanjem okoljskih, socialnih in ekonomskih ciljev, ki delujejo v usklajenem ravnovesju (Churchill in Baetz 1999). Trajnostne soseske so postavljene v urbana območja, saj je tako zagotovljena potrebna kritična masa ljudi in s tem omogočena določena stopnja samozadostnosti, npr. na področjih javnega prevoza, recikliranja, izobraževanja ipd. (Rudlin in Falk 2009).

Termin trajnostna soseska izhaja iz angleškega prevoda termina »sustainable neighbourhood«, ki se najbolj pogosto uporablja za imenovanje tovrstnih trajnostno naravnanih urbanih tvorb. Jon in ostali (2015) so v svoji raziskavi z analizo znanstvene literature izpostavili vse koncepte oz. termine, ki se uporabljajo za »sustainable city« oz. »sustainable neighbourhood«. Za trajnostne soseske (v angl. sustainable neighbourhood) se v znanstveni literaturi najpogosteje uporabljajo naslednje sopomenke (Jong in ostali 2015): eco, smart, low carbon, knowledge, intelligent, ubiquitous, resilient, green, liveable, digital in information neighbourhood (city). Predvsem zadnja dva pridevnika (»digital« in »information« neighbourhood) poosebljata današnjo informacijsko družbo, ki se prepleta s trajnostnim urbanizmom. Informacijsko družbo lahko definiramo kot skupek ekonomskih, socialnih in prostorskih sprememb, ki jih povzročata razvoj in vključenost informacijsko-komunikacijskih tehnologij (Gulič in Praper 2000). Kot je prikazano v nadaljevanju (predvsem v švedskih trajnostnih soseskah), informacijske komunikacijske tehnologije in na splošno digitalizacija pametnih stanovanj predstavljajo pomemben pripomoček za racionalnejšo rabo energije in drugih naravnih virov v trajnostnih soseskah.

Pri obravnavi trajnostnih sosesk je zaradi dveh razlogov posebej izpostavljena avtonomnost. Prvi je funkcionalni. Po Harveyju je (avtonomna) trajnostna soseska definirana kot neodvisno mesto znotraj mesta in predstavlja osnovno, avtonomno, skoraj povsem samozadostno celico v urbanem območju (Harvey 1990). Avtonomnost trajnostne soseske se odraža pri odločanju, samoupravljanju z lokalnimi viri (energijo, vodo, odpadki itn.), organiziranju lokalnih in ekonomsko socialnih entitet (iniciativ, društev, kooperativ itn.). Seveda pa samozadostnost,

samoupravljanje in neodvisnost (energetska, prehrambna, politična itd.) (še) ne predstavljajo bistvene konstitutivne značilnosti teh skupnosti, ampak želene cilje, h katerim stremijo (nekatere) trajnostne soseske. Drugi razlog pa izpostavlja razumevanje avtonomnosti na simbolni, kulturni ravni. Avtonomna trajnostna soseska je tako lahko razumljena kot *avtonomna cona* v mestu, kot *paralelni urbani prostor*[3] (Williams 1990; Kos 1993), kot *heterotopija*[4] (Foucault 2007) ali kot protipoložaj dominantnemu netrajnostnemu sistemu (Foucault 2007).

Po omenjenih opredelitvah trajnostne soseske je jasno, da koncept avtonomne trajnostne soseske ne zajema samo varovanja okolja (okoljske odgovornosti), ampak predpostavlja celostni, aktivni, participativni, egalitarni bivanjski model. Avtonomna trajnostna soseska prikazuje možnost novega, ustaljenega, vzdržnega razvoja, zato ne predstavlja samo nove prostorske, bivalne enote, ampak predstavlja model egalitarnejšega sonaravnejšega dojemanja in tudi praktičnega udejstvovanja.

Raziskovalci urbanega omenjajo konkretne motive za vzpostavitev avtonomnih trajnostnih sosesk. Lahko jih razdelimo v tri tematske sklope (Barton 2000; Glichrist 2000; Shane 2005; Rudlin in Falk 2009): a) okoljevarstveni motivi (zmanjševanje toplogrednih plinov, zmanjšana uporaba avtomobilov in prevozov, energijsko učinkovita poslopja); b) družbeni motivi (občutek lokalne pripadnosti, povečanje egalitarnosti, lokalno upravljanje z viri, lokalna samoodločba, družbena raznolikost, povečanje samostojnosti in neodvisnosti lokalne skupnosti, lokalna ekološka produkcija hrane, delovna mesta na lokalnem območju) ter c) prostorski motivi (mešana uporaba prostora, ohranjanje spoštovanja in valorizacija lokalne urbanistične značilnosti in raznolikosti).

Za celovito razumevanje sodobnih primerov trajnostnih sosesk je smiseln vpogled v pretekle poskuse njihovega vzpostavljanja. Današnje avtonomne trajnostne soseske ne predstavljajo

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[3] *Fizični paralelni svetovi* oz. *prostorske niše* »omogočajo svojevrsten azil, umik pred hiperkompleksno, velikokrat preveč represivno formalno družbeno regulacijo« (Kos 1993, 165). *Paralelni urbani prostori* so enklave, ki gnezdijo znotraj obstoječega formalnega urbanega reda. So v stalnem konfliktu s sistemom, vendar v določenih razmerah lahko pride do produktivnega sožitja ali celo do tega, da so takšne neformalne oblike urbanega življenja vir inovacij za formalni urbani sistem (Kos 1994, 49).

[4] Po Foucaultu (2007) so heterotopije za razliko od utopij »realni kraji, dejanski kraji, ki so načrtovani v sami instituciji družbe in ki so nekakšni protipoložaji (contre-emplacement) neke dejansko realizirane utopije, v kateri so realni položaji vsi drugi realni položaji, ki jih je mogoče najti znotraj kulture, hkrati reprezentirani, spodbijani in sprevrnjeni, neki kraji, ki so zunaj vseh krajev, čeprav so kljub temu dejansko lokalizabilni« (Foucault 2007, 217). Heterotopije so lahko »negativitete«, »prostori za izrinjanje in skrivanje tistega, kar ne sodi v notranjost prostora neke družbe« (Babič 2009, 126), ali »pozitivitete«, »prostori refleksije, prostori upanja, sanj, domišljije, možnega, novega« (Babič 2009, 126). V heterotopičnem pojmovanju trajnostnih sosesk se sklicujem predvsem na heterotopije – »pozitivitete«. Funkcija heterotopij oz. njihova naloga je, »da ustvarijo neki prostor iluzije, ki razkriva vsak realni prostor, vse položaje, znotraj katerih je zgrajeno človeško življenje, kot še bolj iluzorne. (…) Ali pa da nasprotno ustvarjajo neki drug prostor, drug realni prostor, ravno toliko popoln, ravno toliko natančen, ravno toliko dobro urejen, kolikor je naš brez reda, slabo urejen in zmeden« (Foucault 2007, 222).

revolucionarno novega koncepta, čeprav so danes mogoče prvič (trajno) prostorsko umeščene. V preteklosti je bilo veliko urbanih idejnih zasnov, vizionarskih načrtov, ki so predvideli nekatere družbene in urbanistične elemente današnjih trajnostnih sosesk. Na primer prostorske vizije oz. urbanistični načrti t. i. »utopičnih socialistov«[5] so že vključevali več elementov (trajnostnih gradnikov), ki jih lahko najdemo v današnjih trajnostnih soseskah. Charles Fourier[6] (1979) je na primer v svoji utopični viziji, t. i. falansteriju zelo podrobno izrisal celovito urbanistično tvorbo, ki je upoštevala mešanico urbanih in ruralnih elementov. V falansteriju naj bi veljal poseben egalitarni, socialistični red, ki bi deloval po načelih sestavljene lastnine (»sistem solastnine«), kar zelo spominja na zasnovo današnjih kooperativ. Kakor koli, Fourierjev falansterij, podobno kot večina utopičnih načrtov, v praksi ni bil nikoli uresničen.

Robert Owen[7] je bil v bistvu edini utopični socialist, ki je dejansko prostorsko realiziral svojo utopično vizijo, čeprav le kratkotrajno. Najprej je na Irskem ustanovil delavsko kolonijo, imenovano »New Lanark«.[8] Kasneje pa je v ZDA zgradil utopično komunitarno vas »New Harmony«.[9]

Utopični socialisti in njihove prostorske vizije so v znanstveni literaturi relativno zapostavljeni in jih le redki avtorji (npr. MacLoed in Ward 2002; Paden 2003) obravnavajo kot nekakšne začetnike razvoja trajnostnih mest. Večina raziskovalcev urbanega izpostavlja jo Ebenezerja Howarda kot začetnika modernega trajnostnega urbanizma. Ebenezer Howard je v začetku 20. stoletja s takrat revolucionarnim konceptom »vrtnega mesta« (v angl. »Garden city«)

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[5] Utopični socialisti so bili sodobniki velike francoske revolucije ter tudi angleške industrijske revolucije. To prelomno obdobje okoli francoske revolucije med 18. in 19. stoletjem je radikalno spreobrnilo družbeno politično sfero in »kolektivni« način razmišljanja. V tem času se je v utopičnih spisih stopnjevala socialistična ideja, ki temelji na skupni lastnini. Privatna lastnina je bila označena kot najhujše zlo (Brglez 1979) in izvor vseh neenakosti. Vse socialistične utopije imajo tudi nekaj skupnega: »egalitarizem v težnjah po pravičnosti in enakosti« (Brglez 1979, 13) ter skrb za delavce, druge neprivilegirane, marginalne skupine in reveže.

[6] Charles Fourier (1772–1837) je želel oblikovati nov egalitarni družbeni sistem, ki bi bil zastavljen po »človeških, naravnih merah« in bi spodbujal pozitivne, »naravne« lastnosti človeškega bitja. Notranje sile – »človeške strasti« naj bi bile v novem družbenem sistemu usmerjene v dobro kolektivnosti (skupnosti) in posledično tudi v dobro individuuma (Hertzler 1923, 197–200). Fourier bo ostal zapisan v zgodovini tudi kot velik privrženec enakosti med spoloma ter izumitelj pojma feminizem (Engels 1979).

[7] Robert Owen (1771–1858), ki izvira iz majhnega mesteca v Walesu, je eden izmed redkih Nefrancozov med utopični socialisti. Owen je bil v primerjavi z ostalimi socialističnimi utopisti tudi velik praktik in pragmatik ter je edini dejansko uresničil svojo utopistično vizijo. Owen bo ostal zapisan v zgodovini tudi kot velik borec za delavske pravice (Engels 1979, 498).

[8] V tovarni oz. v delovni koloniji v mestu New Lanark na Škotskem je Owen uvedel novodobni, humani *»minimum za delavce«* (osnovno zdravstveno zavarovanje, skrajšani delovni urnik, obvezno šolanje, prepoved dela za otroke itd.), ki se danes zdi samoumeven, vendar je v obdobju konca 18. stoletja predstavljal izjemen napredek v dojemanju dela in delavskih pravic (Engels 1979; Owen 1979).

[9] Owen je v Indiani (ZDA) ustanovil utopično socialistično vas oz. skupnost, imenovano New Harmony, ki je delovala na egalitarnih principih s skupno lastnino. Skupnost je po nekaj letih razpadla. Razlogov za propad kolonije je več; po eni strani mentaliteta ljudi tistega časa še ni bila zrela za tak preskok v načinu življenja; po drugi strani pa projekt ni obstal zaradi specifik ljudi v komuni, ki niso bili vajeni dela na zemlji (Brglez 1979; Dilas-Rocherieux 2004). Kakor koli, New Harmony danes (tudi neupravičeno) velja za primer neuspele socialistične egalitarne komune.

postavil nekakšen razvojni mejnik za sodobno (trajnostno) urbano planiranje (Farr 2008). Knjiga Garden city, ki je močno vplivala na urbanistično načrtovanje 20. in tudi 21. stoletja, je vključevala načela, skladna s trajnostno paradigmo urbanega. Howard je razmišljal o urbanem hibridu, ki bi združil prednosti oz. pozitivne lastnosti mest s primerjalnimi prednostmi podeželja (Howard 1985).[10]

Ayyoob Sharifi je v svojem nedavnem delu (Sharifi 2016)[11] temeljito predstavil večino najpomembnejših in najvplivnejših gibanj, ki se ukvarjajo z načrtovanjem trajnostnih sosesk od začetka 20 stoletja dalje: npr. Garden city movement, Neighbourhood unit, Modernism (Radiant city), New urbanism, Eco – Urbanism. V preteklosti je bilo (poleg že omenjenih) več poskusov uvajanja (egalitarnih) trajnostih mest ali sosesk. Na primer: v zvezni državi Washington so leta 1897 vzpostavili naselje po vzoru utopičnih socialistov, imenovano Equality Colony; leta 1900 so prav tako v zvezni državi Washington poskusili uvesti socialistično komuno Freelend; leta 1928 je Henry Ford sredi Amazonskega gozda v Braziliji zgradil veliko »avtonomno« delovno kolonijo, imenovano Fordlandia; arhitekt Paolo Soleri je leta 1970 vzpostavil v zvezni državi Arizoni (ZDA) eksperimentalno ekološko mesto Arcosanti itd. Razvoj današnjih t. i. trajnostnih sosesk je mogoče obravnavati kot rezultat mnogih zgodovinskih pobud, urbanističnih gibanj in načrtovalskih usmeritev, ki so poizkušali razviti kakovostne, trajnostno oblikovane soseske po »človeški meri« (Sharifi 2016). Nobena od konkretnih »utopičnih« skupnosti oz. naselbin pa se ni ohranila, vsi poskusi prostorske realizacije trajnostnih vsebin so zaradi različnih vzrokov propadli.

Po letu 1990 prihaja do obnove teh zamisli in tudi do praktičnih konkretizacij. Razlogov oz. povodov, zakaj je prav na prelomu tisočletja prišlo do uvajanja različnih trajnostnih sosesk zlasti v severnozahodni Evropi, je več, vezani pa so predvsem na zgodovinsko dediščino, ekonomski in splošni družbeni razvoj teh mest, regij, držav (več v poglavju 4). Prepoznani razlogi za nastanek večine konkretnih evropskih trajnostnih sosesk so: večja ozaveščenost glede ekoloških oz. okoljskih globalnih problemov in razumevanje nujnosti zmanjševanja količine naravnih virov (dovolj velika kritična masa ozaveščenih ljudi glede okoljevarstvenih problemov), naftne krize v 70. letih ter černobilska katastrofa, ki je še bolj očitno prikazala nujnost prehoda na obnovljive

[10] Njegovo vizijo idealnega mesta predstavlja konstelacija medsebojno povezanih novih mest, obdanih z zelenimi površinami in postavljenih okoli velikega glavnega mesta (Howard 1985; Bergman 2011). Vsako od teh novih krožnih mest bi bilo razdeljeno na šest urbanih enot, v katerih bi živelo in delalo do 5000 ljudi (Howard 1985). Howardova ideja o razdelitvi vrtnega mesta v več zaključenih multifunkcijskih urbanih enot predstavlja nekakšno začetno idejno zasnovo »soseske« v kontekstu urbanega planiranja (Minnery in drugi 2009).

[11] Sharifi Ayyoob, 2016. »From Garden City to Eco-urbanism: The quest for sustainable neighborhood development«.

vire energije, veliko pomanjkanje stanovanj v obravnavnih mestih in zeleno obarvane občinske uprave mest, ki so z dobrimi nameni vplivale na trajnostno usmeritev novih sosesk.

Osebni motiv za raziskovanje avtonomnih trajnostnih sosesk izhaja iz mojih predhodnih raziskovalnih projektov. Na magistrskem študiju na Ecole Supérieure des Science Commerciales d'Angers (Angers, Francija) je bilo moje raziskovanje usmerjeno v študij kooperativ obnovljivih virov energije, na lokalno energetsko avtonomijo in na prenos znanja o skupnostnem oz. kooperativnem upravljanju. Ob želji po nadaljevanju procesa raziskovanja kooperativ in skupnostnega upravljanja ter ob spoznanju doseženih razsežnosti energetske samozadostnosti lokalnega upravljanja in organiziranja in ne nazadnje kakovosti življenja, ki ga omogočajo avtonomne trajnostne soseske, je sledilo logično nadaljevanje – njihova poglobljena analiza z namenom ustvarjanja modela, ki bi olajšal vzpostavljanje trajnostnih sosesk v urbanem okolju. Kljub temu da je v zadnjih 25 letih nastalo kar nekaj trajnostnih sosesk, pa so te specifične urbane tvorbe še vedno neznane večini v Evropi in drugod po svetu. Tudi zaradi tega sem se odločil oblikovati model avtonomnih trajnostnih sosesk, ki bi izhajal iz konkretnih že uvedenih dobrih praks sosesk in bi omogočil lažji prenos trajnostnih urbanih širitev. V nadaljevanju podrobneje predstavljam izhodišča, okoliščine, razloge, ki so botrovali postavitvi strukturnega modela avtonomnih trajnostnih sosesk.

Prvo raziskovalno izhodišče predstavlja, kot rečeno, dejstvo, da delujoče avtonomne trajnostne soseske predstavljajo parcialne primere inovativnih eksperimentov še ne utečene prakse urbanističnega udejstvovanja (Marique in Reiter 2011, 27). Po predstavitvi trenutno netrajnostnih družbenih ureditvah in prikazanih okoljskih in družbenih dobrobitih trajnostnih sosesk sledi vprašanje, na kateri način vpeljati trajnostne soseske v posamezna mesta. Nekatere soseske so prevzele preizkušene rešitve iz že uveljavljenih dobrih praks oz. vzornih trajnostnih sosesk. Vendar so to osamljeni primeri. Načrtovalci, investitorji, gradbeniške zadruge iz drugih krajev, pokrajin in držav zelo redko prevzemajo že uspešne uveljavljene trajnostne soseske (Marique in Reiter 2011, 27). V literaturi sicer obstaja veliko zgledov za načrtovanje trajnostnih sosesk (Breheny in drugi 1993; Barton 2000; Barton in drugi 2003; Shane 2005; Gruis in drugi 2006; Rudlin in Falk 2009) in modelov trajnostnih sosesk (LEED, BREEAM itn.), nobeden pa ne temelji na primerjalnih analizah uspešnih praks (Engel-Yan in drugi 2005, 53). Velika pomanjkljivost je tudi, da obstoječa orodja urbanističnega načrtovanja ne obravnavajo soseske na interdisciplinarni način, ampak upoštevajo predvsem tehnično gradbene posebnosti (trajnostne) gradnje (Georgiadou in Hacking 2011, 185–186).

Iz predstavitve značilnosti avtonomnih trajnostnih sosesk, ki upoštevajo načela sonaravnega štirikotnika, iz razumevanja nujnosti in spoznanja konkretnih razlogov za vzpostavitev

trajnostnih sosesk (Barton 2000; Glichrist 2000; Shane 2005; Rudlin in Falk 2009), iz ugotavljanja, da so dobre prakse uspešnih trajnostnih sosesk premalo poznane in upoštevane pri načrtovanju (Marique in Reiter 2011), iz dejstva, da ne obstaja tovrstna poglobljena primerjalna analiza najboljših praks trajnostnih sosesk, ki bi nudila skupne smernice za uvajanje novih sosesk (Engel-Yan in drugi 2005), je izpeljan osrednji cilj doktorske disertacije – izdelati strukturni model avtonomne trajnostne soseske, ki bo podlaga interdisciplinarnemu načrtovanju in praktičnemu uvajanju trajnostnih sosesk v konkretna okolja. Strukturni model avtonomnih trajnostnih sosesk je primeren kot orodje pri uvajanju sonaravnih načel pri načrtovanju in nadgrajuje obstoječa trajnostna urbanistična orodja.

Doktorska disertacija je sestavljena iz osmih poglavij. Po uvodni opredelitvi izhodišč doktorske disertacije (poglavje 1) so predstavljene hipoteze, raziskovalna vprašanja (poglavje 2), metodološki pristop ter podrobnejši prikaz strukture in vsebine disertacije (poglavje 3). V četrtem poglavju je podrobno opisanih vseh sedem obravnavanih trajnostnih sosesk. V disertaciji so trajnostne soseske primerjane na interdisciplinaren, celovit način. Poudarjen je preplet oz. interakcija štirih tematskih področij, ki določajo trajnostne soseske: trajnostni prevoz, družbeno-ekonomska uravnoteženost, urbanistični elementi trajnostnega razvoja in trajnostna raba naravnih virov.

Peto, šesto in sedmo poglavje pa sestavljajo v mednarodnih revijah objavljeni znanstveni članki (več o povezanosti in temah člankov – glej poglavje 3). Strukturni model trajnostnih sosesk, ki je podrobno prikazan v petem poglavju, temelji na analizah sedmih avtonomnih trajnostnih sosesk. Njihov strukturni model s trajnostnimi gradniki ter trajnostnimi parametri predstavlja tudi osnovno teoretsko izhodišče za raziskovanje v šestem in sedmem poglavju (več v poglavju 2 in 3).

Poseben poudarek raziskovanja disertacije temelji na primerjavi lokalnih skupnosti znotraj trajnostnih sosesk. Kot je bilo že omenjeno, je pri dosedanjem načrtovanju trajnostnih urbanih sosesk družbena komponenta zapostavljena. Zaradi tega sem oblikoval inovativne trajnostne parametre »družbeno-ekonomske uravnoteženosti« trajnostnih sosesk, ki omogočajo kvalitativno vrednotenje ter kvantitativno primerjavo (poglavje 5).

V šestem poglavju je predstavljen in podrobno analiziran temeljni skupnostni urbanistični element, t. i. »skupnostni center trajnostne soseske«. Ta institucija vpliva na razvoj oz. pospešuje uveljavljanje nekaterih trajnostnih gradnikov »družbeno-ekonomskega ravnotežja avtonomnih trajnostnih sosesk. Težišče raziskovanja šestega poglavja je osredotočeno na podrobno analizo družbenega potenciala skupnostnih centrov.

Za razumevanje avtonomnih trajnostnih sosesk je potreben tudi vpogled v sam postopek nastajanja soseske oz. na genezo njenega nastajanja. Nekatere avtonomne trajnostne soseske so nastale s pristopom od zgoraj navzdol, pri čemer so imele glavno vlogo upravitelja večinoma občine; nekatere soseske pa so nastale s pristopom od spodaj navzgor. V sedmem poglavju je zato izpostavljeno, kako različna pristopa vplivata na uveljavitev trajnostnih urbanističnih elementov sosesk ter kako vplivata na družbene vidike trajnosti in na lokalno upravljanje skupnosti.

Cilj disertacije so torej predstavitev in analiza dobrih praks in hkrati diseminacija/posredovanje konkretnih trajnostnih urbanih rešitev. Hkrati je namen disertacije tudi splošna predstavitev načel trajnostnega razvoja na področju urbanizma ter postavitev teoretskih in praktičnih izhodišč, ki bi olajšala uvajanje novih avtonomnih trajnostnih sosesk. Avtonomne trajnostne soseske predstavljajo dokazano izvedljiv vzorec/mogoč zgled za trajnostna mesta 21. stoletja.

2 RAZISKOVALNA VPRAŠANJA IN HIPOTEZE

V pričujočem poglavju je predstavljenih več medsebojno prepletenih in povezanih raziskovalnih vprašanj in hipotez. Celotna disertacija namreč izhaja iz strukturnega modela avtonomnih trajnostnih sosesk in na novo vzpostavljenih družbeno-ekonomskih temeljev trajnostnega urbanizma. Prvi članek *A contribution to the structural model of autonomous sustainable neighbourhoods: new socio-economical basis for sustainable urban planning* predstavlja temeljni prispevek disertacije in je hkrati tudi teoretsko izhodišče, iz katerega izhajata nadaljnja dva članka, v katerih so zastavljena raziskovalna vprašanja in hipoteze. Struktura disertacije in stopnjevanje raziskovalnega procesa sta predstavljena v 3. poglavju (Struktura doktorske disertacije in metodološki pristop).

(a) Raziskovalno vprašanje prvega članka »A contribution to the structural model of autonomous sustainable neighbourhoods: new socio-economical basis for sustainable urban planning« (v nadaljevanju tudi kot **članek 1**, str. 106)

Predhodno je bilo ugotovljeno, da dosedanja orodja oz. modeli vpeljevanja trajnostnih sosesk ne obravnavajo soseske celostno. Z družboslovnega vidika se očitna pomanjkljivost kaže v tem, da se poskusi vpeljevanja sosesk preveč osredotočajo na tehnično-gradbene parametre trajnostnega načrtovanja ter premalo upoštevajo družbene vidike nastajanja novih sosesk (Georgiadou in Hacking 2011, 185–186; Kyvelou in drugi 2012, 570). Kot je razvidno iz analize dosedanjih modelov trajnostnih sosesk oz. iz pregleda znanstvene literature, noben uveljavljeni model sosesk ne temelji oz. ne izhaja iz obstoječih dobrih praks (Engel-Yan in drugi 2005, 53) in le redki modeli se ukvarjajo s konkretnim družbenim modeliranjem trajnostnih sosesk. Celo najbolj uporabljeni model za njihovo implementacijo LEED se osredotoča predvsem na okoljevarstvene dejavnike in ne upošteva družbenih dejavnikov, kot so kvaliteta življenja, socialna vključenost, skupnostno upravljanje ali heterogenost populacije (Haapio 2012, 168). Nekateri modeli (npr. BREEAM, One Planet Living) sicer vključujejo nekatere lokalne elemente ter obravnavajo družbeno vključevanje kot zelo pomemben sociološki vidik, vendar ti elementi predstavljajo manjšinski delež obravnavanja avtonomnih trajnostnih sosesk in se v praksi redko udejanjajo (Sharifi in Murayama 2013, 78). Pri analizi modelov za njihovo implementacijo je bilo ugotovljeno, da je poleg družbene dimenzije v precejšnji meri spregledana tudi ekonomska

dimenzija[12] (Sharifi in Murayama 2013, 78). Implementacijski modeli bi morali poleg okoljskih ciljev sočasno obravnavati tudi družbene in ekonomske razsežnosti (Sev 2011, 244) ter izhajati iz že vzpostavljenih dobrih praks trajnostnih sosesk (Engel-Yan in drugi 2005, 53).

Iz predstavljenih in ugotovljenih pomanjkljivosti dosedanjih poskusov izdelave modelov trajnostnih sosesk izhaja **temeljni raziskovalni problem disertacije**: **kako vzpostaviti model avtonomnih trajnostnih sosesk, ki bo izhajal iz konkretnih dobrih praks in bo vključeval tudi družbene (kulturne) in ekonomske dimenzije njihovega uveljavljanja.** S strukturnim modelom (članek 1) je ustvarjen nov praktični pripomoček oz. orodje za načrtovanje trajnostne oblike urbanega prostora, ki odpravlja ugotovljene pomanjkljivosti prevladujočih urbanističnih orodij. To pomeni, da strukturni model sosesk dodaja nove nujne elemente uveljavljanja trajnostne soseske, t. i. trajnostne gradnike družbenoekonomske uravnoteženosti (v angl. socio-economic balance, glej poglavje 5, Table 4, str. 120), ki postavljajo novo perspektivo razumevanja trajnostnih urbanih skupnosti.

Mednarodna primerjalna analiza je izvedena z analizo posameznih proučevanih primerov oz. trajnostnih sosesk in njenih trajnostnih gradnikov. Cilj analize je ugotovitev trajnostnih gradnikov, na katerih sloni strukturni model avtonomnih trajnostnih sosesk.

Z analizo in normativnimi vrednotenji ter ugotovljenimi skupnimi trajnostnimi gradniki sem skušal ustvariti *operativno strategijo trajnostnega razvoja,*[13] ki je izražena s predlogom strukturnega modela avtonomnih trajnostnih sosesk. Analiza trajnostnih gradnikov razgrinja za vsako sosesko različne kombinacije gradnikov, ki predstavljajo osnovo modela trajnostnih sosesk (glej Tabele 1–4 v članku 1, poglavje 5). Glede na obstoj skupnih trajnostnih gradnikov sem preverjal primarno raziskovalno vprašanje:

> RV 1: *Kateri so temeljni trajnostni gradniki, ki so skupni večini avtonomnih trajnostnih sosesk? Z identificiranimi trajnostnimi gradniki je mogoče ustvariti strukturni model avtonomnih trajnostnih sosesk, ki bi ga bilo z ustreznimi prilagoditvami lokalnim specifikam mogoče aplicirati v različna urbana okolja.*

Proces aplikacije modela trajnostnih sosesk v druga okolja je lahko težaven. Večina že delujočih sosesk je koncentrirana v severozahodnem delu Evrope in večina raziskav, modelov

[12] Različne družbene in ekonomske kategorije se sicer pojavljajo znotraj modelov trajnostnih sosesk v obliki temeljnih načel in smernic, vendar je bilo s podrobno analizo indikatorjev posameznih modelov ugotovljeno, da te kategorije predstavljajo obrobni del obravnavanja soseske (Sharifi in Murayama 2013, 78).

[13] Tretja strateška raven trodelne strukture trajnostnega razvoja (Becker in drugi 1997).

ter analiz je bila narejena prav za severnoevropske avtonomne trajnostne soseske (Kyvelou in drugi 2012, 561). Zato je seveda ključno vprašanje, ali je mogoče te izkušnje posploševati in prenesti v druga okolja. Temeljno kontekstualno vprašanje je identifikacija univerzalnih gradnikov trajnostnih sosesk.

(b) Raziskovalno vprašanje drugega članka »The essence of neighbourhood community centres (NCCs) in European sustainable neighbourhoods« (v nadaljevanju tudi kot **»članek 2«**, str. 133)

V prvem članku je bila ob postavitvi novih družbeno-ekonomskih temeljev strukturnega modela avtonomnih trajnostnih sosesk nakazana soodvisnost med nekaterimi trajnostnimi urbanističnim elementi in družbeno-ekonomskimi gradniki/faktorji (glej Table 5, članek 1, str. 126). Z interdisciplinarno analizo avtonomnih trajnostnih sosesk (ATS) je bilo še posebej poudarjeno, kako pomemben je urbanističen element – skupnostni center soseske (v angl. Neighbourhood Community Centre – NCC). Ta institucija vpliva na razvoj oz. pospešuje uveljavljanje nekaterih trajnostnih gradnikov družbeno-ekonomskega ravnotežja ATS. Raziskovalni fokus drugega članka (članek 2) izhaja iz ugotovitve prvega članka (članek 1) oz. iz nakazanega vpliva heterogenega večnamenskega skupnostnega centra na razvoj trajnostnih značilnosti ATS.

Skupnostni center soseske predstavlja pomemben javni urbani element, ki močno vpliva na oblikovanje partikularne identitete lokalne skupnosti, socialne kohezije oz. na celovito družbeno trajnost soseske (Grant 2006; Dave 2011; Barton in drugi 2003). Izhodišče/podlaga raziskovanja predstavlja naslednja domneva: če naj bi bila trajnostna soseska optimalna trajnostna urbana forma z aktivno lokalno urbano skupnostjo, bi bilo priporočljivo, da razvije večnamensko heterogeno skupnostno središče soseske. Slednje namreč predstavlja bistven trajnostni urbani element, ki aktivira, spodbuja in uveljavlja manifestacijo lokalne skupnosti v urbanem prostoru (več v poglavju 6, str. 133). Iz tega sledi tudi glavno raziskovalno vprašanje:

RV 2: *Ali so najbolj uspešne in znane trajnostne soseske razvile adekvatne, heterogene, večnamenske skupnostne centre soseske, ki so usmerjeni k aktivizaciji lokalne urbane skupnosti?*

Fokus raziskovanja drugega članka je usmerjen na podrobno analizo družbenega potenciala skupnostnih središč v najbolj trajnostno razvitih evropskih urbanih okoljih (v sedmih trajnostnih soseskah, predstavljenih v poglavju 4).

(c) Hipotezi tretjega članka »Leading sustainable neighbourhoods in Europe: Exploring the key Principles and Processes« (v nadaljevanju tudi kot **»članek 3«**, str. 164)

Elementi proučevanja tretjega članka temeljijo na prepoznanih družbeno-ekonomskih trajnostnih gradnikih strukturnega modela trajnostnih sosesk (članek 1, Tabele 1–4) oz. jih nadgrajujejo. Hkrati pa tretji članek izhaja iz nekaterih ugotovitev, osvetljenih v drugem članku. Z analizami lokalnih urbanih skupnosti v sedmih proučevanih soseskah (članek 2) je ugotovljena soodvisnost med faktorji družbene trajnosti (v angl. social sustainability) lokalne skupnosti in začetnim pristopom[14] implementacije sosesk. Tudi drugi raziskovalci urbanega (Frey 1999; Gaventa in Valderrama 1999; Barton in drugi 2003; Bayulken in Huisingh 2015) so v svojih raziskavah ugotovili, da začetni (ne)participativni pristop/način urbanega planiranja vpliva na družbeno manifestacijo lokalne skupnosti (več v članku 2). ATS, nastale s pristopom od spodaj navzgor, so praviloma ustvarile močnejšo, enotnejšo, aktivnejšo trajnostno družbeno strukturo oz. razvitejšo družbeno trajnost[15] v primerjavi z ATS, ki so bile implementirane s pristopom od zgoraj navzdol (poglavje 6, str. 133). Ta ugotovitev je določala fokus raziskovanja v tretjem članku.

Tretji članek temelji na primerjalni analizi dveh izbranih trajnostnih sosesk. Soseska Vauban je najbolj reprezentativna predstavnica pristopa od spodaj navzgor, soseska Western Harbour pa pristopa od zgoraj navzdol (več o izboru sosesk in strukturi dela v 3. poglavju, Metodološki pristop in struktura doktorske disertacije). Cilj tretjega poglavja je prikazati primerjalno analizo in transverzalno razčlenitev avtonomnih trajnostnih sosesk (s posebnim poudarkom na družbeni strukturi lokalne skupnosti) in ugotoviti, na kateri način je začetni pristop vplival na trajnostno urbanistično formo (H1), na družbeno trajnost skupnosti (H2) ter na sistem lokalnega urbanega upravljanja (H2).

[14] Pristopa uvajanja pri načrtovanju in gradnji sosesk sta: od zgoraj navzdol – v angl. top down ali od spodaj navzgor – v angl. bottom up. Kljub temu da se oblika implementacije sosesk določa po omenjenih dveh pristopih, je komparativna analiza pokazala, da trajnostna soseska skoraj nikoli ni bila izključno grajena s samo enim pristopom; vedno je bila v neki meri prisotna kombinacija obeh pristopov.

[15] Glej dejavnike, ki prispevajo k družbeni trajnosti, opomba 51, str. 134; Dempsey in drugi (2011).

Hipotezi drugega članka sta naslednji (več v članku 3, str. 164);

H1: *Trajnostne soseske, implementirane s participativnim pristopom od spodaj navzgor, so razvile lokalni skupnosti bolj prilagojeno urbanistično formo v primerjavi s trajnostnimi soseskami, nastalimi s pristopom od zgoraj navzdol.*

H2: *Trajnostne soseske, implementirane s participativnim pristopom od spodaj navzgor, so razvile bolj družbeno trajnostne lokalne skupnosti in kompleksnejše sisteme lokalnega urbanega upravljanja v primerjavi s trajnostnimi soseskami, nastalimi s pristopom od zgoraj navzdol.*

Na tej točki pa je treba poudariti, da analiza, ki temelji na dveh študijah primerov, ne more podati univerzalne izjave, vendar pa lahko odpira nove možnosti, iztočnice, perspektive za nadaljnje analize, raziskave in razprave. Vauban in Western Harbour pooseblja ta najbolj »ekstremne« primere različnih pristopov implementacije trajnostnih sosesk (od zgoraj navzdol in od spodaj navzgor). »Atipični ali skrajni – ekstremni primeri pogosto razkrijejo več informacij, saj aktivirajo več akterjev in več osnovnih mehanizmov funkcioniranja« (Flyvbjerg 2006, 229).

3 METODOLOŠKI PRISTOP IN STRUKTURA DOKTORATA

Doktorska disertacija temelji na raziskavah treh znanstvenih člankov, zato vsebuje tri skupine/izbore metodoloških pristopov, ki pa so med seboj hkrati povezani in prepleteni. Cilj metodološkega poglavja je temeljito pojasniti prepletenost/vezi med članki, ki tvorijo strukturo disertacije. V vsakem članku (poglavje 5–7) je poglavje, v katerem je podrobno opisana uporabljena metodologija. Teme in raziskovalni fokus člankov si sledijo v logičnem zaporedju in se medsebojno navezujejo. V pričujočem poglavju so predstavljeni predvsem teoretični okvirji raziskovanja ter metodološki pristopi, uporabljeni v člankih (poglavje 3.2). Posebej so predstavljeni terensko delo in metodološka instrumenta intervju ter opazovanje z neposredno udeležbo, saj so predstavljali ključno metodološko orodje pri zbiranju podatkov za empirično podatkovno bazo pri vseh treh člankih (poglavje 3.3). Najprej (poglavje 3.1) pa je pojasnjen postopek izbora trajnostnih sosesk za mednarodno primerjalno analizo.

3.1 IZBOR TRAJNOSTNIH SOSESK ZA MEDNARODNO PRIMERJALNO ANALIZO

Kot je bilo pojasnjeno v uvodu, je trajnostna soseska relativno nov in zelo kompleksen pojem, ki je interpretiran na zelo različne načine. V literaturi ni enotnega mnenja, kaj oz. kateri elementi naj bi točno definirali pojmovanje trajnostne soseske. Ne obstajajo natančna enotna merila, po katerih bi bilo mogoče določati trajnostni urbani razvoj soseske. Iz tega sledi, da se več mest samovoljno deklarira kot trajnostne soseske, čeprav to niso. Nekritično samorazglašanje trajnostih sosesk je otežila začetno iskanje ustreznih trajnostnih sosesk za poglobljeno analizo disertacije.

Za prvi, širši izbor »najbolj« trajnostnih sosesk v Evropi sem temeljito analiziral relevantno znanstveno literaturo in skušal ugotoviti, katere trajnostne soseske so največkrat citirane, analizirane, primerjane oz. omenjene kot dobre prakse trajnostnega urbanega razvoja. Izogibal sem se nepreverjenih in relativno novih trajnostnih projektov, saj večina le-teh sploh še ni bila implementirana in predstavlja le ambiciozne načrte za prihodnost. Držal sem se načela, da mora biti izbrana trajnostna soseska v veliki meri končana in da je že vsaj pet let naseljena. Na koncu se je izkazalo, da so bile vse izbrane soseske za mednarodno analizo (širši izbor) več kot 10 let

implementirane in naseljene. Širši izbor trajnostnih sosesk je temeljil na podlagi podrobne raziskave analiz primerov in primerjalnih analiz evropskih trajnostnih sosesk v recenziranih:

a) *znanstvenih člankih:*

- Marique, Anee-Françoise in Sigrid Reiter. 2011. Towards more sustainable neighbourhoods: are goods practice reproducible and extensible? A review of a few existing sustainable neighbourhoods;
- Williams, Joanna. 2012. Regulative, facilitative and strategic contributions of planning to achieving low carbon development;
- Kasioumi, Eirini. 2011. Sustainable Urbanism: Vision and Planning Process Through an Examination of Two Model Neighborhood Developments;
- Anastasiadis, Panagiotis in George Metaxas. 2013. Formulating the principles of an eco-city;
- Schroepfer, Thomas in Limin Hee. 2008. Emerging Forms of Sustainable Urbanism: Case Studies of Vauban Freiburg and SolarCity Linz;
- Verdaguer, Viana - Cárdenas, Carlos. 2012. Integrated planning for ecological urban regeneration;
- Velázquez in drugi. 2009. Strategies and good practice for sustainable and liveable cities of tomorrow itd.;

b) *knjigah:*

- Fraker, Harrison. 2013. The Hidden Potential of Sustainable Neighborhoods;
- Bächtold, Peter. 2013. The Space-Economic Transformation of the City;
- Campagna in drugi. 2012. Planning Support Tools: Policy Analysis, Implementation and Evaluation;
- OECD. 2010. Cities and Climate Change itd.;

c) *priročnikih ter študijah primerov trajnostnih sosesk:*

- Royal BAM Group. 2011. Strategic priorities for the new framework programme for research and innovation covering the period 2014 – 2020;
- Energy Cities. 2014. Existing sustainable neighbourhoods (case studies);
- Van Cutsem, Michaël. 2010. Cities of tomorrow;
- Energy Cities. 2008. Guidebook of Sustainable Neighbourhoods in Europe;
- Guarini, Stefania. 2011. Quartieri Ecosostenibili in Europa itd.

Iz pregleda in analize znanstvene literature je ugotovljeno, da so najpogosteje navedeni »najboljši primeri« trajnostnih sosesk uresničeni: na Švedskem (soseska *Western Harbour* in *Augustenborg* v mestu Malmö, soseska *Hammarby Sjöstad* v Stockholmu), v Nemčiji (soseski *Vauban* in *Rieselfeld* v Freiburgu, soseska *Kronsberg* v Hannovru, soseska *Scharnhauser Park* v Ostfildernu, soseska *Französisches Viertel – Südstadt* v Tübingenu), na Nizozemskem (soseska *EVA-Lanxmeer* v Culemborgu; soseska *Leidsche Rijn* v Utrechtu, soseska *GWL Terrein* v Amsterdamu), na Finskem (soseska *Viikki* v mestu Helsinki), na Danskem (soseska *Vasterbo* v

Copenhagnu), v Angliji (soseska *BedZed* v mestu Sutton, soseska *Greenwich Millenium Village* v Londonu) in v Avstriji (soseska *Solar city* v mestu Linz - Pichling).

Navedene soseske predstavljajo širši izbor pri izbiri primernih trajnostnih sosesk. Vsako od omenjenih primerov širšega izbora sem dodatno raziskal. Zaradi omejenega časa raziskovanja bi bilo težko obiskati in ustrezno raziskati vseh 16 »najuspešnejših« trajnostnih sosesk, jih primerjati in intervjuvati njihove glavne predstavnike. Zato sem iz seznama širšega izbora naredil ožji izbor 8 izstopajočih trajnostnih sosesk.

Širši izbor je, kot rečeno, temeljil na analizi literature, s katero je bilo mogoče ugotoviti, katere soseske so kategorizirane kot trajnostne v evropskem kontekstu. Pri ožjem izboru pa sem se skliceval na kriterije, ki jih je uporabil Harrison Fraker (2013) v svoji obsežni študiji The Hidden Potential of Sustainable Neighborhoods Lessons from Low-Carbon Communities. Harrison Fraker je bil eden redkih, ki je jasno definiral svoja selekcijska merila pri izboru najboljših praks trajnostnega urbanizma. Pri njegovem selekcijskem procesu mora trajnostna soseska:

- biti dovolj velika (vsaj 1000 enot),
- biti načrtovana z mešano namembnostjo urbanega prostora (storitvene-poslovne funkcije, prepletene z bivanjsko funkcijo),
- omogočiti veliko delovnih mest znotraj soseske,
- biti povezana s funkcionalnim sistemom javnega prevoza z dobrimi in pogostimi povezavami do delovnih mest in storitev,
- določiti agresivne trajnostne cilje pri porabi energije, ohranjanju vode, recikliranju in obdelavi odpadkov,
- generirati večino ali vsaj velik del svoje energije iz lokalnih obnovljivih virov energije,
- biti zgrajena dovolj dolgo nazaj, da so se lahko sistematično zbirali podatki/meritve glede vpeljanih urbanih trajnostnih rešitvah.

V svojem izboru trajnostnih sosesk sem dodal še merila, ki so vezana na lokalno urbano skupnost oz. na urbano družbeno trajnost, ker le-ta predstavlja eno od temeljnih raziskovalnih fokusov disertacije. Pri določanju ravni družbene trajnosti sem upošteval Dempseyjeve (2011) parametre urbane družbene trajnosti (glej str. 134, poglavje 6). Pri končnem (ožjem) izboru obravnavanih sosesk sem upošteval, da vse soseske vključujejo večino omenjenih kriterijev, odstopata lahko največ dva kriterija.

V ožji izbor sem uvrstil 4 trajnostne soseske, ki so še posebej izstopale in so bile tudi največkrat omenjene, citirane ter identificirane kot »najbolj trajnostne«. To so soseske Vauban,

Kronsberg, Western Harbour ter Hammarby Sjöstad. Dva pomembna poznavalca sodobnega trajnostnega urbanega razvoja (Bächtold 2013; Fraker 2013) sta še posebej izpostavljala kot »najboljše prakse« prav te štiri izbrane trajnostne soseske. Glede na to, da so omenjene štiri soseske iz Nemčije in Švedske, sem dodal še dve soseski iz neke druge države. Po temeljiti analizi in raziskovanju sosesk iz širšega izbora je bilo največ trajnostnih urbanih iztočnic mogoče zaslediti v angleških in nizozemskih primerih. Raziskovanju nizozemskih sosesk EVA-Lanxmeer in GWL Terrein sta botrovala dva razloga. Prvi razlog je v tem, da nizozemski soseski celoviteje vključujeta družbeno-ekonomske trajnostne gradnike, povezane z razvojem lokalne skupnosti, in sta tako skladnejši z raziskovalnim fokusom doktorske disertacije. Drugi razlog pa je logistične narave, saj sem z izborom nizozemskih sosesk lahko poenotil in racionaliziral terensko delo (v letu 2015) in v enem potovanju združil obiske treh sosesk v treh mestih, ki so relativno blizu (Hannovru, Culemborgu ter Amsterdamu).

V znanstveni literaturi je s sosesko Vauban velikokrat povezana soseska Rieselfeld (obe sta tudi v istem mestu – v Freiburgu), zato sem jo dodal v ožji izbor proučevanih sosesk. Terensko delo je potrdilo, da je šlo za pravilno odločitev, saj se je tudi po obisku in opravljenih intervjujih Rieselfeld izkazala kot vzorna trajnostna soseska, ki vključuje večino obravnavanih trajnostnih gradnikov strukturnega modela in tudi večino omenjenih meril za izbor trajnostnih sosesk.

Blizu Freiburga v mestu Tübingen je bila z analizo znanstvene literature (širši seznam) identificirana tudi trajnostna soseska Französisches Viertel – Südstadt. Po njenem obisku, intervjujih z glavnimi predstavniki (glej poglavje 3.3) ter stikih s člani lokalnih društev soseske sem se po temeljitem razmisleku odločil izločiti omenjeno sosesko iz mednarodne primerjalne analize. Kljub temu pa sem nekatere izsledke rezultatov analiz uporabil pri članku 1 (poglavje 5). Eden glavnih razlogov za izločitev je bila šibka družbena aktivnost soseske, ki je bila tudi posledica nesoglasij in odstopov ključnih predstavnikov lokalnih društev. Moč vezi trajnostne urbane skupnosti je pojenjala, zato ni bilo mogoče pridobiti ustreznih predstavnikov lokalnih društev za intervju. To pa ni bil edini razlog za izločitev soseske Französisches Viertel – Südstadt, saj tudi v nekaterih drugih, npr. v soseski Western Harbour, ni močno povezane kohezivne lokalne urbane skupnosti. Za razliko od vseh ostalih obravnavanih trajnostnih sosesk pa v soseski Französisches Viertel – Südstadt večina trajnostnih gradnikov ni bila ustrezno vključena. Urbanistična zasnova npr. ni bila v celoti trajnostno usmerjena; soseska ni trajnostno izstopala ne po prometu, ne po apliciranih obnovljivih trajnostnih virih, ne po recikliranju itd.

Na koncu sem v končnem, ožjem izboru poglobljeno obravnaval in analiziral sedem trajnostnih sosesk: **Vauban, Rieselfed, Kronsberg, Western Harbour, Hammarby Sjöstad, EVA-Lanxmeer in GWL Terrein**. Njihov podroben opis je predstavljen v poglavju 4.

Poglobljena analiza posameznih trajnostnih gradnikov omenjenih sosesk pa je predstavljena v treh člankih.

V razmislek je mogoče dodati, da iz temeljite analize znanstvene literature lahko sklepamo, da je bila večina uspešnih evropskih dobrih praks trajnostnih sosesk implementirana v severni in zahodni Evropi. Zaradi tega nekateri raziskovalci urbanega ne govorijo o evropskem modelu, ampak o »severnoevropskem trajnostnem urbanem modelu« (Kyvelou in drugi 2012, 561). Za uravnoteženje severnoevropskega modela se je celo začel spodbujati/je bil delno vzpostavljen nekakšen južni trajnostni urbani model, imenovan South-European Eco-Quarter Design and Assessment (Kyvelou in drugi 2012), ki predstavlja druga merila pri obravnavanju trajnostnih sosesk – tako imenovane »determinante teritorialnega kapitala«. Tudi na jugu Evrope je bilo v preteklosti načrtovanih nekaj projektov trajnostnih sosesk, kot so San Rocco v Faenzi (Italija), Villaggio Olimpico v Torinu (Italija), Sarriguren v Pamploni (Španija), Trinitat Nova v Barceloni (Španija), Solar Village 3 v Pefki – Atene (Grčija), Boavista v Lizboni (Portugalska) itd. Večinoma so omenjeni urbani projekti ostali kot urbanistični načrti, trajnostne urbane pobude (potencialni projekti) in zelo redko kot dejansko implementirane dobre prakse.

3.2 METODOLOGIJA RAZISKOVANJA

Metodologija raziskovanja disertacije je sestavljena iz prepleta različnih metod kvalitativnega raziskovanja. V prvi fazi raziskovanja sem se opiral predvsem na *analizo in interpretacijo sekundarnih virov* oz. na *znanstveno proučevanje domače in tuje literature*, ki obravnava nevzdržno družbeno ter okoljsko stanje planeta (npr. Harvey 1990; Kos 1993; Gorz 1994; Wallerstein 1999; Shu-Yang in drugi 2004; Chodorkoff 2005; Plut 2008). Nekateri avtorji (npr. Taylor 2000; Barton in drugi 2003; Carley in Falk 2012) iščejo potencialne rešitve za netrajnostno stanje okolja z definiranjem avtonomnih trajnostnih sosesk ter predstavljajo operativne postopke (priročniki, načrti, modeli) vpeljevanja trajnostnih sosesk v mesta (npr. Gruis in drugi 2006; Rudlin in Falk 2009).

Izdelava sodobnega modela trajnostnih sosesk implicira analizo nastajanja avtonomnih urbanih skupnosti zaradi preseganja preteklih napak in razumevanja okoliščin, ki bi lahko privedle do morebitnih ovir pri implementaciji trajnostne soseske. Z analizo utopičnih spisov (npr. Howard 1970; Brglez 1979; Fourier 1979; Saint-Simon, 1979; Weitling 1979; Dilas-

Rocherieux 2004) in s specifičnimi utopično urbanističnimi članki (npr. MacLoed in Ward 2002; Paden 2003) sem zato skušal ugotoviti, zakaj štejemo utopične (urbanistične) načrte za predhodnike današnjih avtonomnih trajnostnih sosesk.

Pri obravnavi sodobnih avtonomnih trajnostnih sosesk (članki 1–3) sem za celovito analizo posameznih sosesk uporabil metodo *študije primerov*. Uporabil sem tudi metodo *opazovanja z neposredno udeležbo* v vseh sedmih oz. osmih uspešnih trajnostnih soseskah, to pa sem nadgradil z *intervjuji* z mestnimi urbanistični načrtovalci in nosilci ključnih civilnih iniciativ ter lokalnih društev (glej poglavje 3.3.1). Pomemben metodološki pristop predstavlja tudi *analiza in interpretacija primarnih virov*. Z obiski sosesk sem analiziral naslednje primarne vire: statute sosesk, interne dokumente civilnih iniciativ, lokalna glasila sosesk (npr. Vauban actuel, Stadtteilzeitung Rieselfeld itd.), prostorske načrte mestnih občin in tlorise sosesk. Za specifične analize posameznih trajnostnih sosesk sem uporabil tudi *analize uradnih statistik* občin (npr. FR.ITZ die Online-Statistik der Stadt Freiburg). Podrobne analize proučevanih avtonomnih trajnostnih sosesk so predstavljale iztočnico za celovito interdisciplinarno *mednarodno primerjalno analizo*, v kateri sem med seboj primerjal trajnostne gradnike obravnavanih sosesk. Poseben poudarek pri raziskovanju sem namenil družbeno-ekonomskim trajnostnim gradnikom.

V soseskah sem pridobil tudi slikovni material (fotografije mej sosesk, šol, trgov, zelenih površin, skupnostnih centrov itd.), ki je relevanten pri primerjalni analizi urbanističnih posegov v posameznih soseskah (podrobneje v članku 2 in 3). Urbanistična zasnova oz. urbanistični elementi sonaravnega razvoja določajo vse trajnostne gradnike soseske (javni prevoz, lokalno ekonomijo, identiteto skupnosti itn.) in vplivajo na njeno celotno delovanje (Rudlin in Falk 2009).

Glede na proučevano literaturo (Harvey 1990; Breheny in drugi 1993; Barton 2000; Barton in drugi 2003; Gruis in drugi 2006; Rudlin in Falk 2009 itn.), intervjuje z načrtovalci trajnostnih sosesk in predstavniki civilnih iniciativ (več o poteku in vsebini intervjujev glej poglavje 3.3.1) nekaterih najprepoznavnejših avtonomnih trajnostnih sosesk v Evropi sem prepoznal trajnostne gradnike in jih razdelil v štiri tematske sklope oz. stebre urbane trajnosti (glej poglavje 5, Tabele 1–4):

- družbeno-ekonomska uravnoteženost,
- energetski steber in naravni viri,
- trajnostni prevoz,
- urbanistični elementi trajnostnega razvoja.

Izdelana shema trajnostnih gradnikov[16] sosesk določa njihov strukturni model, ki je podrobneje predstavljen v članku 1. Prav trajnostni gradniki in trajnostne determinante v članku 1 predstavljajo glavni raziskovalni okvir, na katerem temelji celotna disertacija (poglavje 5, Tabele 1–4, str. 117–120). Trajnostni gradniki in drugi pridobljeni podatki (o proučevanih avtonomnih trajnostnih soseskah) iz vseh do zdaj naštetih raziskovanih metod so uporabljeni pri odgovoru na prvo raziskovalno vprašanje (RV1). S postavitvijo strukturnega modela trajnostnih sosesk sem lahko tudi določil in analiziral trajnostne gradnike, ki so skupni večini obravnavanih trajnostnih sosesk. Poseben fokus in poudarek slonita na analizi konkretnih vključenih trajnostnih gradnikih stebra »družbeno-ekonomsko ravnotežje« (glej poglavje 5, Table 5, str. 126).

Obravnavni tematski sklopi strukturnega modela avtonomnih trajnostnih sosesk so razdeljeni v podstrukture in predstavljajo analitično podlago za nadaljnjo interdisciplinarno analizo. Kot je bilo omenjeno v drugem poglavju, je bila v prvem članku jasno nakazana soodvisnost med stopnjo razvitosti skupnostnega centra trajnostne soseske ter družbeno- ekonomskimi trajnostnimi gradniki/faktorji (Table 5, poglavje 5, str. 126). To povezavo, tj. recipročno vez med pomembnim elementom trajnostnega urbanega razvoja ter družbeno-ekonomskim ravnotežjem lokalne skupnosti, sem podrobno raziskal in zato sem temu posvetil raziskovalni fokus v drugem članku. S podrobnimi analizami sedmih proučevanih trajnostnih sosesk sem skušal ugotoviti (v poglavju 6), ali so najuspešnejše in znane trajnostne soseske razvile zadostne, heterogene, večnamenske skupnostne centre, ki so usmerjeni v aktivizacijo lokalne urbane skupnosti (RV 2). Uporabil sem vse do zdaj naštete metodološke pristope in dodal nov metodološki inštrument, vprašalnike (več v poglavju 6). Namenjeni so bili glavnim akterjem, upravljalcem, sodelavcem skupnostnih centrov v proučevanih trajnostnih soseskah. V drugem članku sem ugotavljal tudi stopnjo družbene trajnosti lokalne urbane skupnosti in povezanost le-te s stopnjo razvitosti skupnostnega centra. V petletni raziskavi sedmih trajnostnih sosesk sem za vsako obravnavano sosesko uporabil naslednje metodološke instrumente: metodo opazovanja z udeležbo, intervjuje z najpomembnejšimi predstavniki v vseh soseskah in analizo lokalnih družbenih aktivnosti. Proučil sem tipologijo in številčnost lokalnih trajnostnih društev, tako sem lahko določil »raven urbane družbene trajnosti« (v angl. level of urban social sustainaiblity). Raven družbene trajnosti

[16] Po večkratnem izmenjevanju mnenj glede najbolj ustrezne definicije trajnostnih gradnikov (v angleškem jeziku) so se recenzenti znanstvene revije Journal of Cleaner Production odločili, da je najprimernejši angleški izraz Strategic urban sustainability goals (SUSG). Drugi izrazi, ki sem jih predlagal, so bili sustainable urban elements, sustainable urban fundamentals, sustainable urban principles itd., vendar se je recenzentom zdel SUSG primernejši termin.

je bila poleg omenjenih metodoloških instrumentov določena tudi z upoštevanjem prisotnosti/manifestacijo Dempseyjevih »dejavnikov, ki spodbujajo družbeno trajnost v urbanih območjih« (v angl. urban social sustainability contributory factors) (Dempsey in drugi 2011).

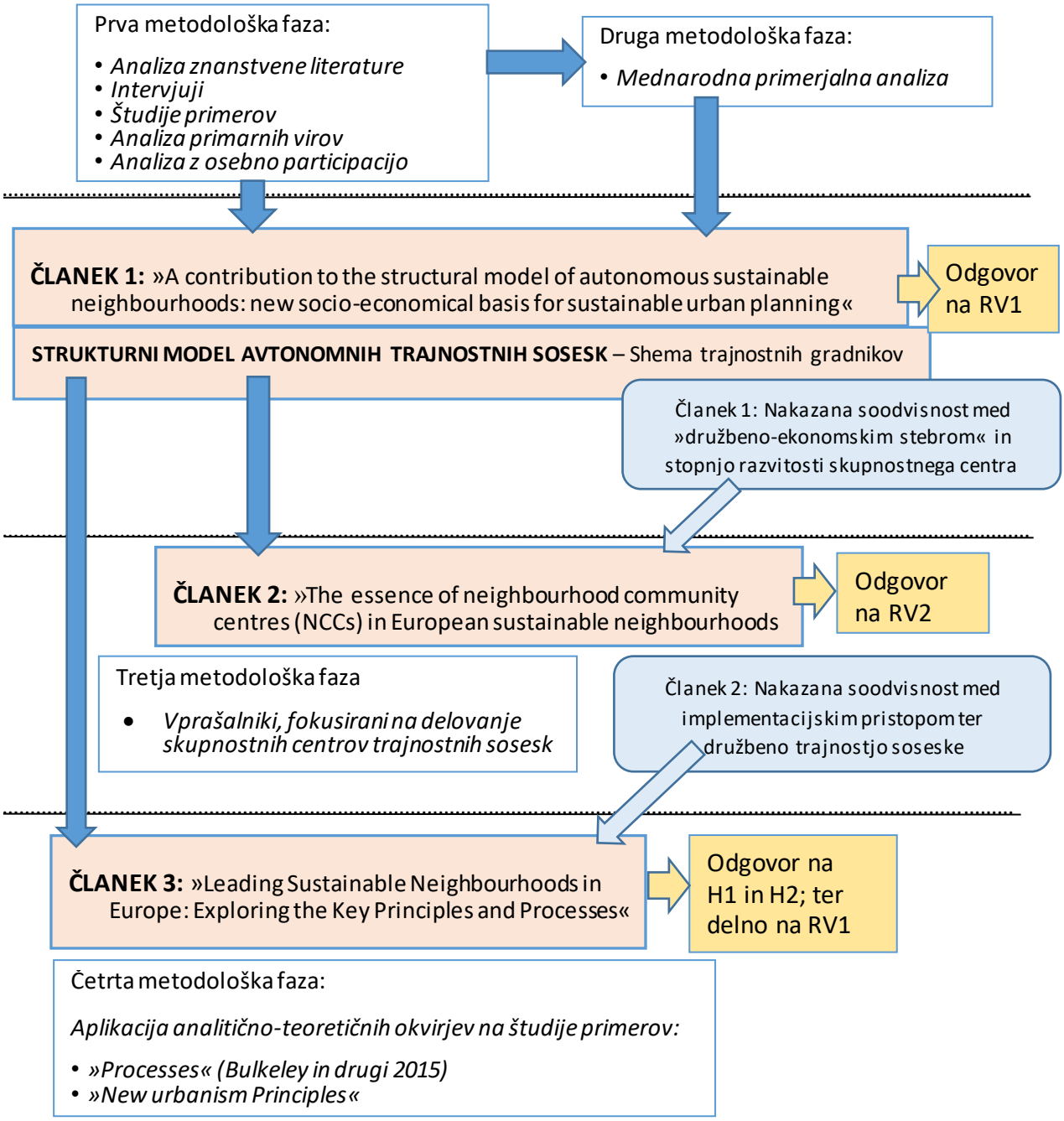
V drugem članku (poglavje 6) je identificirana specifična soodvisnost, ki je bila povod za začetek raziskovanja v tretjem članku (poglavje 7). Identificirana je bila namreč močna soodvisnost začetnega pristopa (od zgoraj navzgor, od spodaj navzgor) trajnostnih sosesk s stopnjo razvitosti družbene trajnosti (v angl. social sustainability) lokalne skupnosti. Raziskovanje v tretjem članku izhaja torej iz omenjene ugotovitve oz. nakazane soodvisnosti, prikazane v drugem članku, ter se opira na ugotovljene trajnostne gradnike prvega članka. Kot je opisano v članku 3, sem za primerjalno analizo izbral samo dve trajnostni soseski, ki sta najbolj skrajni predstavnici obeh diametralno nasprotnih si začetnih pristopov uvajanja le-teh: Vauban – pristop uvajanja od spodaj navzgor; Western Harbour – pristop od zgoraj navzdol (za podrobnejši opis razlogov za izbiro omenjenih dveh trajnostnih sosesk – glej poglavje 7, str. 166–169).

Primerjana analiza sosesk Vauban ter Western Harbour temelji na ugotovitvi, kako začetni pristop vpliva na urbanistično formo, na družbeno trajnost in lokalno (samo)upravljanje sosesk. Za raziskovanje vpliva pristopa na urbanistično formo sem uporabil analitično-teoretični okvir New urbanism principles oz. v slov. načela novega urbanizma (CNU in HUD 2000). Analitični okvir principov novega urbanizma sem izbral, ker novi urbanizem spodbuja uporabo raznovrstnih elementov urbanega načrtovanja, ki jih je treba prilagoditi lokalnim potrebam (ne nasprotno). Poziva k vračanju k urbanizmu po človeški meri, z ulicami, prilagojenimi pešcem, na katerih ne prevladujejo avtomobili, ter s prostori z mešano (trgovsko in bivalno) namembnostjo in veliko gostoto gradnje, ki omogočajo živahno mestno življenje (Kushner 2002) (več informacij o novem urbanizmu v poglavju 7, str. 167, str. 168, str. 170–177). Kot primerjalne faktorje za primerjalno analizo Vaubana ter Western Harbourja sem uporabil definicije desetih temeljnih načel novega urbanizma (Table 1, str. 176–177), s katerimi sem ugotavljal, ali (in kako) začetni pristop uvajanja sosesk pri njihovi gradnji vpliva na doseganje trajnostne urbanistične forme (H1).

Za ugotavljanje vpliva tega pristopa na družbeno trajnost ter na lokalno upravljanje sosesk (H2) pa sem uvedel poseben inovativni analitično-teoretični okvir, imenovan Processes (v slov. procesi). Teoretski okvir Processes so vzpostavili Bulkeley in drugi (2015) in se osredotoča na obravnavanje trajnostnih urbanih eksperimentov z vidika dinamičnih spreminjajočih se odnosov med različnimi interesnimi skupinami skozi čas. Analitični okvir procesov zaobsega tri temeljne procese: making, maintaining, living, s katerimi je mogoče analizirati spreminjajoče se vezi, funkcije, odnose ter pogajalske moči med glavnimi udeleženci. Procesi (Bulkeley in drugi 2015)

razkrivajo ključne vidike urbanega eksperimentiranja ter omogočajo celovit vpogled v lokalno upravljanje (v angl. local governance) trajnostne soseske (podrobnejša predstavitev procesov v sedmem poglavju, str. 168–169, str. 178). Poleg treh proučevanih procesov je dodan nov proces, imenovan disseminating, ki omogoča vpogled v način, kako so moderni urbani eko laboratoriji (oz. trajnostne soseske) širili konkretne urbane trajnostne rešitve v druga mesta. S procesom »disseminating« in proučevanjem prenosa trajnostnih gradnikov v druga mesta je delno podan odgovor tudi na prvo raziskovalno vprašanje (RV1). Del RV1 se namreč nanaša na proučevanje možnosti prenosa nekaterih »severnoevropskih trajnostnih rešitev« v druga urbana okolja.

Tabela 3.1: Metodološka struktura doktorata



3.3 INTERVJUJI IN VPRAŠALNIKI (ČASOVNICA TERENSKEGA DELA)

V celotnem raziskovalnem obdobju doktorata sem opravil 18 poglobljenih intervjujev z glavnimi deležniki trajnostnih sosesk: z urbanisti mestnih občin, z iniciatorji trajnostnih sosesk, s predstavniki lokalnih društev oz. z nosilci lokalnega trajnostnega razvoja (Priloge B – N). Izvedel sem tudi 5 vprašalnikov, izpolnjenih s strani ključnih deležnikov lokalnih skupnostnih centrov trajnostnih sosesk (Priloge R – U). Intervjuji predstavljajo raziskovalno podlago za analizo pri vseh treh člankih (glej Metodologijo člankov 1–3), vprašalniki pa predstavljajo dodatno empirično podlago za analizo v članku 2 (poglavje 6). Celoten proces terenskega dela me je vodil v 9 mest (glej sliko 3.1). V Lundu (Švedska) sem imel tudi možnost intenzivnega trimesečnega raziskovalnega obdobja na International Institute for Industrial Environmental Economics – IIIEE (več informacij o raziskovalnem obdobju na IIIEE v Prilogi A).

3.3.1 INTERVJUJI IN TERENSKO DELO

Intervjuji so bili polodprtega strukturiranega tipa. V njih sem dopuščal dolge odgovore, ki so prehajali tudi v druge tematike z namenom, da pridobim povsem nove informacije, ki jih predhodno nisem predvidel. Nekateri intervjuji so zaradi tega trajali tudi več ur.

Intervjuji so se začeli s predstavitvijo intervjuvanca in njegove/njene vloge oz. pozicije v trajnostni soseski. V nadaljevanju so sledila vprašanja, ki so bila vezana na štiri temeljna področja – na štiri stebre trajnostnega urbanega razvoja, definirane v modelu avtonomnih trajnostnih sosesk. Ti so: trajnostni steber energije in trajnostna raba drugih naravnih virov, trajnostni promet, urbanistični elementi trajnostnega razvoja ter družbeno-ekonomska uravnoteženost. Pri energetskem stebru in trajnostni rabi drugih naravnih virov so bila vprašanja vezana na nizkoenergijske stavbe, na način ogrevanja in proizvodnje elektrike iz obnovljivih virov energije, na organizacijo kooperativ obnovljivih virov energije, na aplikacijo različnih inovativnih rešitev pri upravljanju z vodami in odpadki, na načinu recikliranja itd. Vprašanja, vezana na trajnostni promet soseske, so se nanašala na javni promet (razvejanost, uporabo, frekvenco itd.) in na čas vzpostavitve javnega prometa v soseski (pred ali po naselitvi prvih prebivalcev), na število ljudi, ki posedujejo avtomobil, na število parkirišč in lokalno politiko, ki je omogočila oz. omejila parkirišča v soseski, na vzpostavitev soseske brez avtomobilov, na storitev »car-sharing« in popularnost te storitve, na vzpostavitev kolesarskih in pešpoti itd. Glede tematike urbanističnih

elementov trajnostnega razvoja sem največ vprašanj postavljal v zvezi z razvojem lokalnega skupnostnega centra soseske. Zanimalo me je, zakaj je nastal, kakšen pomen ima za sosesko, kdo ga je vzpostavil, kakšne aktivnosti so vzpostavljene v njem itd. Poleg skupnostnega prostora so se vprašanja nanašala na heterogenost oz. raznovrstnost grajenih objektov, na ohranjanju historičnih objektov soseske, na gostoto njihove gradnje, na vzpostavitev in pomen glavnega trga oz. konvergentnega centra soseske, na vzpostavitev parkov in drugih zelenih površin, na samoupravljanju lokalnih javnih površin itd.

Seveda, pa je glede na tematiko in cilje disertacije bilo vsekakor največ vprašanj zastavljenih v zvezi s trajnostnim stebrom, imenovanim družbeno-ekonomsko ravnotežje. Intervjuvancem sem tako postavljal vprašanja o heterogenosti lokalnih prebivalcev in lokalnih politik, ki spodbujajo heterogenost (socialna stanovanja, omejitev višine najemnin, delež najemnih stanovanj itd.), o identiteti lokalne skupnosti in medsebojne povezanosti le-te, o aktivnostih in društvih, vzpostavljenih s strani lokalnih prebivalcev, o številu lokalnih podjetij in lokalnih delovnih mestih, o stopnji neposredne demokracije, o vzpostavitvi LETS sheme (»časovne banke«), o medgeneracijski vključenosti (dom za ostarele, študentski domovi itd.), o lokalnem časopisu, lokalnem festivalu soseske itd.

Poleg tega pa so se druga vprašanja nanašala tudi na zgodovino soseske, na način implementacije oz. na proces vzpostavitve trajnostnih sosesk v specifičnih mestih. Poseben poudarek na koncu intervjujev je bil namenjen tudi procesu prenašanja trajnostnih rešitev v druga urbana območja. Zanimalo me je, ali se je specifična trajnostna soseska zgledovala po nekaterih trajnostnih rešitvah že vzpostavljenih trajnostnih sosesk; predvsem pa sem spraševal, katere konkretne trajnostne rešitve, aplicirane v soseskah, so bile ponovno uporabljene, prenešene v druge dela mesta, regije, države oz. v druga tuja mesta.

Potrebno je poudariti, da sem vprašanja deloma prilagodil tudi glede na značilnosti sogovorca, glede na delo, ki ga intervjuvanec opravlja ter na njegovo vlogo v trajnostni soseski. Predstavnikom civilnih iniciativ sem postavljal več vprašanj o aktivnostih njihovega društva/iniciative; predstavnike občin pa sem bolj poglobljeno spraševal o vlogi občine pri delovanja trajnostne soseske. Pri dveh intervjujih sem imel težave z znanjem angleščine sogovornikov (Sigrid Gombert – Priloga Č, Jan Johansson – Priloga H), zato sem nekatera vprašanja skrajšal ali jih spustil. Pri dveh intervjujih (Wulf Daseking – Priloga C; Björn Cederquist – Priloga J) pa zaradi karakternih lastnosti sogovorca (dolgi monologi) nisem mogel postaviti vseh vprašanj. Intervju z Lejlo Karović-Kersting je potekal med ogledom skupnostnega centra, tako da nisem mogel opraviti diktafonskega zapisa. Kakor koli, v vseh intervjujih sem dobil bistvene informacije, ki so bile zelo pomembne, da sem lahko postavil vse kvalitativne ter

kvantitativne parametre strukturnega modela avtonomnih trajnostnih sosesk (Tabele 1–4, str. 117–120).

a) April 2013 – obisk trajnostnih sosesk Vauban in Rieselfeld v mestu Freiburg

V aprilu 2013 sem obiskal mesto Freiburg, kjer sem poglobljeno analiziral trajnostni soseski Vauban in Rieselfeld. V Freiburgu sem 10 dni živel v sami soseski Vauban, kjer mi je gostitelj/stanovalec predstavil vsakdanji način življenja v soseski. V Freiburgu sem imel priložnost za poglobljeni pogovor oz. intervju z/s:

- **Andreasom Delleskejem** – vodja nekdanjega ključnega krovnega društva soseske »Forum Vauban« in idejni vodja ter zastopnik prvega večstanovanjskega pasivnega bloka v Nemčiji – »Passivhaus Wohnen & Arbeiten« (transkripcija intervjuja je v Prilogi B),
- **Wulfom Dasekingom** – večletni glavni urbanist občine Freiburg, ki je (so)načrtoval obe trajnostni soseski mesta (transkripcija intervjuja je v Prilogi C),
- **Sigrid Gombert** – bivša glavna urednica lokalnega časopisa Vauban Actuel (transkripcija intervjuja je v Prilogi Č),
- **Lejlo Karović-Kersting** – vodja oddelka za medkulturni dialog društva K.I.O.S.K v skupnostnem centru trajnostne soseske Rieselfeld, imenovanem »Glashaus« (z Lejlo Karović-Kersting je bil opravljen voden ogled skupnostnega centra in ni bilo možnosti snemanja intervjuja).

b) April 2013 – obisk soseske Französische Viertel – Südstadt v mestu Tübingen

V aprilu 2013 sem analiziral trajnostno sosesko Französische Viertel – Südstadt v mestu Tübingen. Mark Mausch je vodil ogled po soseski, kjer sem imel možnost spoznati tudi posebno »trajnostno neformalno naselje« »Wagenburg« na robu gozda, ki leži znotraj trajnostne soseske (več v poglavju 5). V trajnostni soseski Französische Viertel – Südstadt sem opravil intervjuje z/s :

- **Markom Mauschem** – urednik lokalnega časopisa oz. internetne skupnostne platforme Südstadt,
- **Hopfner Karin** – urbana načrtovalka mestne občine Tübingen.

Zaradi že omenjenih razlogov (str. 32) sem sosesko Französische Viertel – Südstadt izločil iz mednarodnih primerjalnih analiz in nisem izvedel transkripcij avdio posnetkov intervjujev.

c) Marec 2014 – junij 2014: gostujoči raziskovalec v mestu Lund (Švedska) – večkratni obisk soseske Western Harbour v mestu Malmö

V letu 2014 sem tri mesece delal kot gostujoči raziskovalec v mednarodno priznanem inštitutu »International Institute for Industrial Environmental Economics – IIIEE« (Lund University) v mestu Lund na Švedskem. Eden od temeljnih raziskovalnih fokusov IIIEE predstavlja analiza strategij/implementacijskih metod pri vzpostavljanju novih trajnostnih mest. Odločil sem se opravljati del doktorske raziskovalne dejavnosti na inštitutu IIIEE, ker je le-ta sodeloval pri številnih pomembnih analizah najuspešnejših švedskih trajnostnih soseskah (Western Harbour, Malmö ter Hammarby Sjöstad, Stockholm). Na inštitutu IIIEE sem imel možnost temeljito spoznati in raziskati obe trajnostni soseski. IIIEE mi je omogočil tudi lažji dostop do intervjujev s ključnimi deležniki obeh sosesk. Med trimesečnim raziskovanjem na IIIEE (Lund University) sem 12-x obiskal sosesko Western Harbour v mestu Malmö. Mesto Lund leži namreč v neposredni bližini mesta Malmö, ki je dosegljivo z vlakom v 12 minutah. V soseski Western Habrour sem se aprila 2015 udeležil tudi vodenega ogleda soseske in predstavitve tehnoloških inovacij eksperimentalnega »showcase« stanovanja, v katerem energetsko podjetje E.on preizkuša nove tehnologije za pametna mesta prihodnosti. V mesecu maju 2014 pa sem imel možnost opraviti poglobljene intervjuje z:

- **Evo Dalman** – vodja/koordinatorica prvega trajnostnega razvojnega urbanističnega projekta "Bo01" – znotraj soseske Western Harbour (transkripcija intervjuja je v Prilogi E),
- **Mario Lööf** – oddelek »Varstvo okolja« občine Malmö (transkripcija intervjuja je v Prilogi F),
- **Rolandom Zinkernagelom** – oddelek »Varstvo okolja« občine Malmö (transkripcija intervjuja je v Prilogi G),
- **Janom Johanssonom** – oddelek za »nepremičnine« občine Malmö (transkripcija intervjuja je v Prilogi H).

d) Junij 2014 – obisk soseske Hammarby Sjöstad v mestu Stockholm

Junija 2014 sem po zaključenem raziskovalnem obdobju na inštitutu IIIEE (Lund University) potoval do Stockholma, kjer sem bival en teden, da sem lahko podrobno analiziral sosesko Hammarby Sjöstad ter imel poglobljene intervjuje z/s:

- **Helene Wintzel** – predstavnica lokalnega društva soseske »Hammarby Sjöstad 2020«, odgovorna za energetsko učinkovitost stavb (transkripcija intervjuja je v Prilogi I),
- **Björnom Cederquistom** – arhitekt in predstavnik družbenih/socialnih tematik oddelka za urbanizem občine Stockholm (transkripcija intervjuja je v Prilogi J),
- **Alanom Larssonom** – nekdanji evropski komisar in trenutni direktor lokalnega društva »Hammarby Sjöstad 2020« (transkripcija intervjuja je v Prilogi K).

e) April 2015 – obisk soseske Kronsberg v mestu Hannover

Aprila 2015 sem uresničil zadnji sklop obiskov trajnostnih sosesk. Začel sem v mestu Hannover, kjer sem imel možnost podrobnega ogleda soseske Kronsberg, v kateri sem se udeležil tudi vodenega ogleda skupnostnega centra soseske Krokus. V Hannovru sem imel priložnost intervjuvati:

- **Gerharda Kiera –** glavni urbani načrtovalec trajnostne soseske Kronsberg,
- **Inge Schottkowski-Bähre** – oddelek »Varstva okolja« občine Hannover (transkripcija intervjuja je v Prilogi L).

f) April 2015 - obisk trajnostne soseske GWL Terrein v mestu Amsterdam

Po opravljenih intervjujih v mestu Hannover sem odpotoval v Amsterdam, kjer sem 3 dni raziskoval in analiziral sosesko GWL Terrein v zahodnem Amsterdamu. Vodilni član lokalnega društva soseske Diego Pos mi je omogočil voden ogled po soseski. V soseski sem imel možnost poglobljenega intervjuja z:

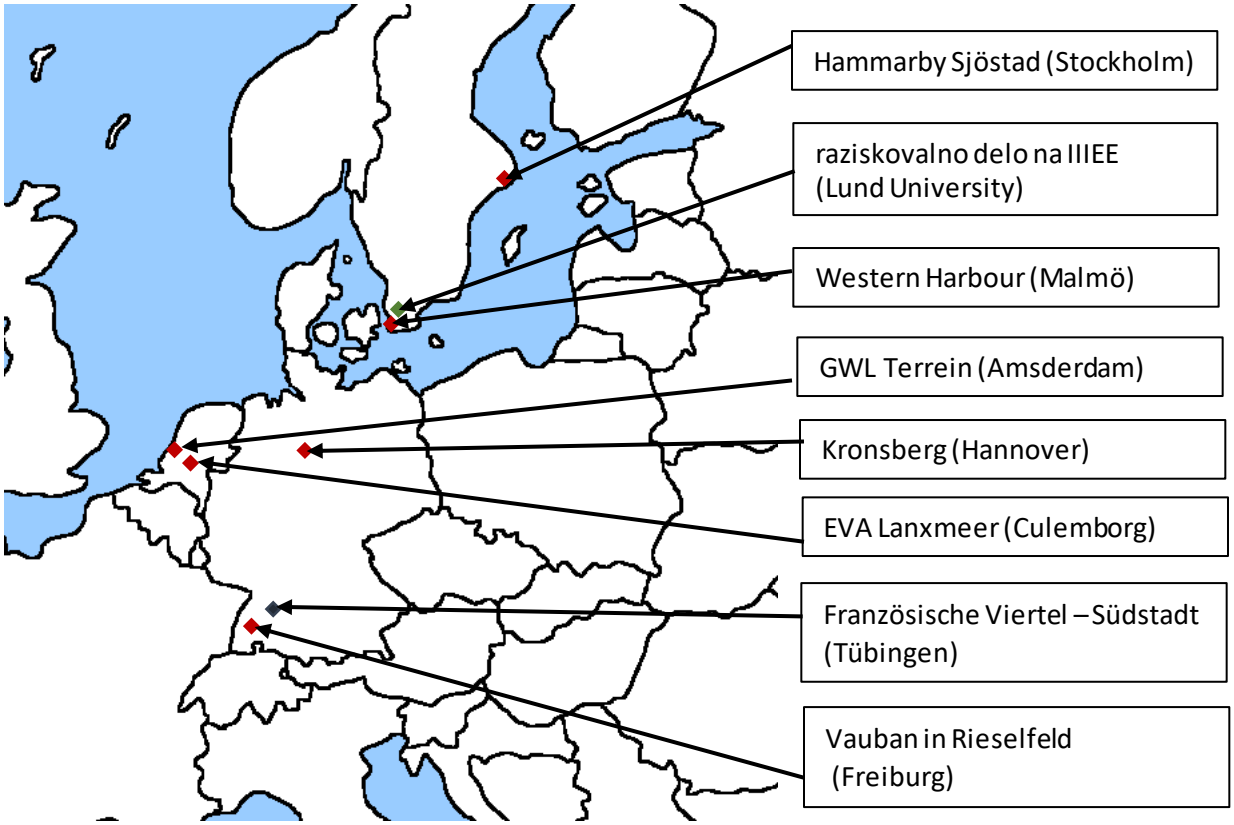
- **Diegoom Posom** – član uprave lokalne krovnega združenje GWL Terrein; vodja več projektov trajnostne soseske ter uradni vodič po soseski (transkripcija intervjuja je v Prilogi M),
- **Joze van Stigt** – pobudnica idejne zasnove trajnostne soseske, začetna aktivistka in predstavnica lokalne skupnosti GWL Terrein (transkripcija intervjuja je v Prilogi N).

g) April 2015 – obisk trajnostne soseske EVA Lanxmeer v mestu Culemborg

Zadnji dan raziskovalnega obdobja na Nizozemskem sem obiskal in podrobno raziskal sosesko EVA Lanxmeer v mestu Culemborg, v katerem sem imel možnost poglobljenega intervjuja z:

- **Gerwinom Verschuurom** – iniciator idejne zasnove trajnostne soseske, član lokalnega sveta soseske EVA Lanxmeer, direktor lokalne energetske kooperative Thermo Bello, član večine lokalnih aktivnosti skupnosti EVA Lanxmeer (transkripcija intervjuja je v Prilogi O).

Slika 3.1: Prikaz lokacij obiskov sosesk in intervjujev



Vir: Lastna slika (2017).

3.3.2 VPRAŠALNIKI

V decembru 2015 in januarju 2016 sem za raziskovalni namen drugega članka poslal poseben vprašalnik glavnim deležnikom sosesk, ki so neposredno odgovorni ali močno povezani s skupnostnimi centri raziskovanih trajnostnih sosesk. Vsi kontaktirani deležniki so dobili enake vprašalnike (glej vzorec vprašalnika v Prilogi P). Vprašanja v vprašalniku so se nanašala na zgodovino skupnostnega centra (leto nastanka, transformacija objekta, začetni namen objekta itd.), na urbanistične značilnosti objekta (velikost, centralnost postavitve, umeščenost/sinergija s trgom itd.), na raznovrstne vsebine, ki jo ponuja skupnostni center (vrsta institucij, aktivnosti, društva v centru) in predvsem na družbeno angažiranost lokalne skupnosti v skupnostnih centrih sosesk (način participacije lokalne skupnosti; izdajanje časopisov, organizacija dogodkov, organizacija, število zaposlenih itd.).

Zbral sem zelo specifične podatke, ki predstavljajo podlago za prvo inovativno mednarodno primerjalno analizo skupnostnih centrov najbolj znanih trajnostnih sosesk v Evropi (glej Table 2, poglavje 6, str. 155–156). Za namene empiričnega zbiranja podatkov pri drugem članku sem tako ponovno kontaktiral predhodno intervjuvane deležnike in jim poslal vprašalnike:

- **Diego Pos** (glej Priloga R – Vprašalnik 1),
- **Lejla Karovic-Kersting** (glej Priloga S – Vprašalnik 2),
- **Andreas Delleske** (glej Priloga T – Vprašalnik 3),
- **Bjorn Cederquist** (glej Priloga U – Vprašalnik 4).

Za zbiranje podatkov glede skupnostnega centra Hammarby Sjöstad sem prvič kontaktiral in poslal vprašalnik še osebi:

- **Malena Karlsson** – informacijska administratorka skupnostnega centra Hammarby Sjöstad, imenovanega GlashusEtt (glej Priloga V – Vprašalnik 5).

4 OPIS TRAJNOSTNIH SOSESK

V četrtem poglavju je podrobno opisanih vseh sedem trajnostnih sosesk, ki so analizirane in primerjane v treh znanstvenih člankih (poglavja 5, 6 in 7). Opis vsake trajnostne soseske v naslednjih podpoglavjih se začne s kratko zgodovino sosesk, kjer so tudi podane specifične zgodovinske, geografske in politične okoliščine, ki so prispevale k njihovemu nastanku. V nadaljevanju so opisane iz štirih zornih kotov, ki se nanašajo na štiri identificirane trajnostne razvojne stebre (oz. v angl. »the four pillars of urban sustainability«), le-ti so izpostavljeni v 5. poglavju (Medved 2016a, Table 1–4, str. 117–120). To so: trajnostna raba naravnih virov, trajnostni promet, urbanistični elementi trajnostnega razvoja, družbeno-ekonomska uravnoteženost. Namen poglavja je predstavitev proučevanih primerov trajnostnih sosesk.

4.1 TRAJNOSTNA SOSESKA VAUBAN, FREIBURG, NEMČIJA

Implementacija dveh trajnostnih sosesk Rieselfeld in Vauban v mestu Freiburg je posledica oz. nadaljevanje geografskih, zgodovinskih, političnih dejavnikov, ki so pripomogli k trajnostni naravnanosti mesta Freiburg. Leta 1975 so se občani mesta Freiburg in tudi širše regije Baden-Württemberg množično uprli gradnji nuklearne postaje v regiji. S tem se je začela oblikovati zelo svojevrstna kolektivna »zelena« naravnanost prebivalcev, ki se je še dodatno podkrepila zaradi černobilske nesreče leta 1986 (glej intervju z Andreasom Delleskejem – Priloga B). Izredno pomembna je bila tudi kontinuiteta[17] v politični upravi mesta Freiburg in dolga vladavina koalicije socialnih demokratov ter stranke zelenih (glej intervju z Wulfom Dasekingom – Priloga C). Omenjene okoliščine so dobrohotno vplivale na možnost tako velikega urbanističnega oz. ekološkega projekta, kot je izgradnja celovite trajnostne soseske. Kakor koli, pa je glavni razlog za gradnjo sosesk Vauban in Rieselfeld predstavljalo izjemno pomanjkanje stanovanj v Freiburgu na koncu 80. in v začetku 90. let (City of Freiburg 2007b; Carsten 2000; Intervju Wulf Daseking –Priloga C).

[17] Župan Rolf Böhme (stranka SPD) je župoanoval mestu Freiburg med letoma 1982 in 2002; glavni mestni urbanist Wulf Daseking je vodil oddelek mestnega planiranja od leta 1984 do leta 2012 (Medved 2015).

Poleg omenjenih dejavnikov je za nastanek soseske Vauban bil ključen odhod francoske vojske iz Nemčije po padcu berlinskega zidu. Leta 1937/38 je bilo namreč območje Vauban osnovano kot militaristična baza nemške vojske. Francoska vojska je po drugi svetovni vojni leta 1954 prevzela vojaške objekte oz. vojašnico Vauban in se iz Nemčije dokončno izselila šele leta 1992. Mesto Freiburg je po odhodu francoskih vojaških sil odkupilo od Zvezne republike Nemčije 38 hektarov veliko območje Vauban (Medved 2015).

Istočasno, ko je mestna uprava Freiburga začela razmišljati o procesu preoblikovanja zapuščene francoske vojašnice v gosto naseljeno stanovanjsko sosesko, je prazno vojašnico »zasedla« skupina trajnostno usmerjenih avantgardnih študentov oz. aktivistov, ki so oblikovali skupino S.U.S.I.[18] V naslednjih letih je skupina postala iniciator lokalne »zelene politike«, povezane z urbanim razvojem lokalnega prostora. S.U.S.I in kasneje ustanovljeno združenje Forum Vauban sta bila glavna pobudnika za trajnostno usmeritev soseske Vauban.

Proces vključevanja nevladnih deležnikov v razvoj strategije soseske je bil formaliziran, ko je leta 1995 mestna občina Freiburg uradno formalno priznala združenje Forum Vauban kot zakonitega zastopnika pri participativnem načrtovanju urbanistične strukture soseske Vauban. Forum Vauban ni bil ustanovljen samo za namene participatornega planiranja, ampak tudi kot družbena, organizacijska in tehnična podporna ustanova pri izvajanju gradbenih projektov stanovanjskih zadrug oz. kooperativ (v nem. »Baugruppen«). Pomembno vlogo je imel tudi pri zagotavljanju kakovosti gradnje, pri ustvarjanju okoljskih standardov trajnostne soseske, pri prometnem in energetskem trajnostnem konceptu soseske itd. (Fraker 2013).

Vauban je umeščen na atraktivni lokaciji ob vznožju znamenitega gozda Schwarzwald in predstavlja danes edinstven in napreden primer trajnostnega urbanističnega načrtovanja. V Vaubanu je 2000 nizkoenergijskih poslopij, v katerih biva približno 5000 ljudi (Field 2011).

4.1.1 TRAJNOSTNA RABA NARAVNIH VIROV V SOSESKI VAUBAN

Vsi cilji trajnostne rabe energije v Vaubanu so bili uspešno doseženi z različnimi strategijami. Prvič, vse stavbe so zgrajene po nizkem energetskem standardu – max. 65 kWh/m2 na leto za ogrevanje. Standard je izredno nizek, če ga primerjamo s standardom max. 100 kWh/m2 na leto za stavbe, zgrajene med letoma 1995 in 2000; in max. 200 kWh/m2 na leto za stanovanja, zgrajena pred 1995 (Scheuerer 2009). Drugič, oskrba z energijo je zagotovljena z lokalno

[18] S.U.S.I. kratica za: »Selbstorganisierte unabhängige Siedlungsinitiative«.

napravo za soproizvodnjo (CHP) z visokim energetskim izkoristkom, ki se napaja pretežno z lesnimi sekanci (85 %) in delno z zemeljskim plinom. Lokalna CHP postaja[19] je povezana s toplotnim omrežjem in dodatno proizvaja električno energijo za lokalno omrežje (Scheuerer 2009).

Slika 4.1: CHP postaja v soseski Vauban

Vir: Lastna slika (2013).

Tretjič, lokalne kooperative obnovljivih virov energije so izkoristile sončno energije na dva načina: s solarnimi sistemi za toplo vodo (s sončnimi kolektorji) in s fotovoltaiko – s PV moduli. Skupaj je bilo nameščenih za 662 kWp sončnih elektrarn (Fraker 2013). Prebivalci Vaubana so lastniki sončnih elektrarn v soseski in so povezani v posebne lokalne kooperative obnovljivih virov energije.

Slika 4.2: Sončne elektrarne na poslopjih v soseski Vauban

Vir: Lastna slika (2013).

[19] Sistem za soproizvodnjo z energijo (CHP) zagotavlja 100 odstotkov potreb po ogrevanju in 60 odstotkov povpraševanja po električni energiji (Fraker 2013).

Večina stanovanjskih kooperativ je v svojih gradbenih projektih dosegla še učinkovitejše energetske standarde od predpisanih. Nastala sta prva dva pasivna večstanovanjska bloka v Nemčiji. Znotraj soseske Vauban je bil zgrajen tudi objekt s 75 enotami, imenovan »Plus energijska hiša« (v nem. Solarsiedlung district), ki preko PV modulov proizvede 15 % več energije, kot jo porabi. Objekt je načrtoval arhitekt Rolf Disch, ki je vpeljal tudi termin »PlusEnergy standard«. Termin se uporablja za objekte, ki proizvedejo več energije (iz obnovljivih virov), kot jo sami porabijo (Medved 2015). Na koncu je v Vaubanu bilo zgrajenih 200 stavb (12 odstotkov od celote) s standardom vsaj pasivne hiše 15 kWh/m2 na leto (več stavb je doseglo tudi »ničelno porabo energije« ali standard »plus energy«) (Fraker 2013).

Cilji trajnostnega upravljanja z vodami (npr. ponovna uporaba vode, zajemanje deževnice itd.) niso bili določeni v začetni strategiji soseske in so bili prepuščeni stanovanjskim kooperativam. Glede na trajnostno naravnanost in na inovativnost soseske se je veliko stanovanjskih zadrug odločilo za uvajanje inovativnih sistemov uporabe sive vode (deževnice) ter drugih tehnoloških zelenih rešitev (npr. vakuumske sanitarije) (Fraker 2013).

V soseski Vauban ni bilo postavljene posebne trajnostne strategije glede ravnanja z odpadki. Strategijo za zmanjševanje količine odpadkov in recikliranje so razvijale stanovanjske zadruge samostojno z veliko pomočjo asociacije Forum Vauban. Soseska Vauban je integrirana v sistem mesta Freiburg za zbiranja odpadkov in recikliranje (Fraker 2013).

4.1.2 TRAJNOSTNI PROMET SOSESKE VAUBAN

Cilji trajnostnega prometa soseske Vauban so naslednji (Scheuerer 2009):

- zmanjševanje uporabe avtomobilov; dajanje prednosti pešcem, kolesarjem in javnemu prevozu;
- vse šole, podjetja, trgovski centri, prehranjevalne zadruge in rekreacijski centri so v neposredni bližini stanovanj;
- prepoved parkiranja v soseski; parkirišča za avtomobile so na voljo le v parkiriščih na robovih soseske;
- omejitev hitrosti prometa na glavni vpadnici soseske je 30 kilometrov na uro; v stanovanjskih območjih je hitrost omejena na »hitrost hoje« (pribl. 5 km/h);
- storitev »car-sharing« (oz. souporaba avtomobila) mora biti stalno na voljo;
- postaje za tramvaj in avtobuse so umeščene v samem centru soseske.

Hrbtenica sistema javnega prevoza soseske Vauban predstavlja tramvaj, ki se ustavlja po glavni aleji soseske, tako da je vsak prebivalec soseske oddaljen največ 300 metrov od najbližje tramvajske postaje. Center mesta Freiburg je s tramvajem dosegljiv v 10 minutah in vozi vsakih 8 minut (Field 2011).

Slika 4.3: Tramvaj v soseski Vauban

Vir: Lastna slika (2013).

Široke ulice soseske Vauban so označene z napisom Stellplatzfrei – kar pomeni, da so ulice namenjene igri otrok in ni mogoče parkiranje avtomobilov (z izjemo dostave) (Field 2011). Parkiranje je možno na treh parkirišči na zunanjih robovih soseske in v dveh obrobnih garažah, ki nudita skupaj 470 parkirnih mest. Infrastruktura soseske daje prednost pešcem in kolesarjem. Posebna pozornost je bila namenjena tudi estetskim in varnim kolesarskim ter pešpotem, ki povezujejo sosesko s centrom in z železniško postajo (Field 2011).

Slika 4.4: Prepoved avtomobilov na ulicah soseske Vauban

Vir: Lastna slika (2013).

Politiko prometne ureditve soseske Vauban nadgrajuje učinkovit sistem avtomobilske izposoje oz. souporabe vozil (v angl. car sharing). Posamezniki plačujejo po prevoženih kilometrih in si delijo vse stroške upravljanja in vzdrževanja avtomobila. V Vaubanu obstajata dve društvi tovrstne avtomobilske izposoje, in sicer »Freiburg Car sharing« in »Grüne flotte« (glej intervju Andreas Delleske – priloga B).

Zaradi vseh omenjenih ukrepov lokalnih urbanih politik ter okoljsko varstvene ozaveščenosti prebivalcev je število lastniških avtomobilov na prebivalca v Vaubanu izjemno nizko; v primerjavi z nemškim povprečjem je več kot trikrat manjše (Medved 2015). Prebivalci soseske Vauban posedujejo 150 lastniških avtomobilov na 1000 prebivalcev (Sperling, 2008). V celotnem mestu Freiburg poseduje avtomobil povprečno 427 ljudi na 1000 prebivalcev. Nemško povprečje pa je 517 avtomobilov na 1000 prebivalcev (The World Bank 2013).

4.1.3 URBANISTIČNI ELEMENTI TRAJNOSTNEGA RAZVOJA SOSESKE VAUBAN

Cilji urbanističnega načrtovanja soseske so skladni s sloganom trajnostne soseske Vauban, ki je »graditi gosto, a zeleno«. V Vaubanu so bile javne zelene površine zasnovane in načrtovane

skupaj z lokalnimi prebivalci. Participativno načrtovanje soseske je pripomoglo k premišljeno zasnovanimi, odprtimi, zelenimi urbanimi prostori, ki se harmonično skladajo z okolico. Vauban ima visoko gostoto naseljenosti (približno 95 enot na hektar), vendar zaradi arhitekturno dovršeno oblikovane urbane strukture visoke gostote pozidave ni čutiti (Field 2011).

Pri ohranjanju posamezne lokalne identitete urbanega prostora je zelo pomemben dejavnik prevrednotenje zgodovinskih objektov (glej tudi poglavje 6, str. 133). Čeprav je bila večina prvotnih vojaških objektov porušenih, so za »novi Vauban« ohranili tri velike objekte. En velik objekt stare vojašnice so preoblikovali v rezidenčno enoto študentskega naselja soseske Vauban. Drugi objekt, ki ga upravlja nevladna organizacija S.U.S.I, je namenjen dostopnim socialnim stanovanjem. Tretji ohranjeni objekt, imenovan Haus 37, pa je lokalna skupnost soseske preoblikovala v skupnostni center soseske (Field 2011). Velik dosežek civilne iniciative Foruma Vauban je bila prav legalizacija tega velikega »skupnostnega prostora soseske«. Objekt Haus 037 (glej Picture 1, poglavje 6, str. 144) so mestni planerji na začetku nameravali podreti, vendar je Forumu Vauban uspelo odkupiti objekt za simbolično ceno, tj. 1 DEM, ga prestrukturirati in ustvariti novodoben heterogeni centralni multifunkcijski objekt,[20] namenjen prebivalcem Vaubana (Medved 2015; glej tudi poglavje 6, str. 142–143).

V Vaubanu je več različno velikih zelenih površin, ki zagotavljajo rekreacijske površine za vse prebivalce soseske (Field 2011). Parki in zelene sprehajalne poti se prepletajo v nekakšnem neprekinjenem zelenem toku znotraj soseske. Tudi površine pod tramvajsko progo so zelene, posejane s travo, in dajejo občutek zelene preproge, ki se sklada z okoliškimi parki (glej sliko 4.3). Vsi bloki imajo tudi skupnostne (neograjene) vrtove.

»Trajnostna soseska Vauban je bila načrtovana kot mala vas oz. srednjeveško mesto, kjer so vse nujno potrebne storitve na voljo praktično pod lastnimi domovi« (glej Intervju – Wulf Daseking, Priloga C). Supermarket, trgovine, kavarne, pubi, restavracije, pekarne, pisarne, bolnišnica, lekarna, osnovna šola se nahajajo ob glavni osi soseske oz. ob glavni ulici Vaubanallee. Večina pritličnih enot ob glavni ulici je namenjenih storitveni funkciji.

Pred skupnostnim prostorom Haus 37 je odlično integriran večnamenski javni trg, poimenovan Alfred Döblin Platz (glej Picture 1, v poglavju 6, str. 144). Javni trg – »plazo«, prebivalci soseske uporabljajo: enkrat tedensko za ekološko tržnico, enkrat mesečno za

[20] Za podroben opis značilnosti skupnostnega prostora Haus 37, glej članek 2, str. 142–143.

izmenjevalne tržnice,[21] enkrat letno za festival soseske in občasno za druge dogodke (Field 2011).

4.1.4 DRUŽBENO-EKONOMSKA URAVNOTEŽENOST SOSESKE VAUBAN

V Vaubanu so prisotne številne iniciative ter društva, ki omogočajo/stimulirajo socialno heterogenost, socialno vključenost in utrjujejo komunitarnost lokalne skupnosti (Medved 2015). Socialna heterogenost različnih skupin, močna lokalna identiteta, izrazita okoljska ozaveščenost ter razvit javni diskurz, temelječ na neposredni demokraciji znotraj soseske, predstavljajo temelje za heterogeno družbeno interakcijo soseske Vauban (Medved 2015). Dolgoletna urednica lokalnega časopisa Vaubana Sigid Gomberd je mnenja, da se partikularna družbena interakcija izraža v širšem sodelovanju prebivalcev v stanovanjskih zadrugah, s kooperativami ekološke hrane »Quartiersladen«, v številnih društvih za otroke, dementne, pešce, starejše občane, z vzpostavitvijo komunitarnega centra soseske Haus 037, z izdajanjem lastnega avtonomnega časopisa Vauban actuel in ne nazadnje v zapuščini preminulega Foruma Vauban, ki se zdaj imenuje Stadtteilverein Vauban in prevzema osrednjo vlogo za socialno, kulturno in politično razpravo (Intervju – Gombert, 2013 – Priloga Č).

Eden od družbenih ciljev soseske Vauban je bil omogočiti ljudem iz različnih družbenih slojev nakup lastnega stanovanja (Scheuerer 2009). Najpomembnejši dejavnik, ki je pripomogel k doseganju tega cilja, je bila vzpostavitev stanovanjskih zadrug, ki so predstavljale za mlade nepremožne posameznike uresničljivo možnost načrtovanja in gradnje lastnih domov (Bächtold 2013).

Ravnotežje različnih družbenih skupin z različnimi dohodki v soseski je zelo pomembno za družbeno-ekonomsko uravnoteženost soseske. Kakor koli, danes ponudba stanovanj, zlasti za skupine z nizkimi dohodki, ostaja nekako omejena tudi zaradi nezadostno razporejenih sredstev (subvencij) zveznih in državnih institucij. Zasebne pobude, kot sta S.U.S.I. in Genova s ponujanjem stanovanj za finančno ranljivejši del populacije, samo delno nadomeščajo vlogo državnih institucij. Danes je v celotni soseski Vauban samo približno 10 % stanovanj,

[21] Na zelo popularnih izmenjevalnih tržnicah si prebivalci soseske izmenjujejo stvari, ki jih ne potrebujejo. Izmenjava blaga deluje po principu bonov oz. po principu »jaz tebi – ti meni«. Izmenjevalna tržnica, ki predstavlja alternativo denarni menjavi, je samo eden od začetnih projektov pri postavitvi »LETS-sheme za Vauban«. Vpeljava LETS-sheme v sosesko je trenutno eden od glavnih ciljev društva Stadtteilverein Vauban (Delleske 2013 v Medved 2015).

namenjenih socialno ogroženim (Field 2011). Kot je podrobno prikazano v poglavju 7, Vauban postajo elitno homogeno območje in se počasi, ampak vztrajno gentrificira. Postaja tudi najdražji del mesta Freiburg. Začetna struktura prebivalstva ter povezanost različnih družbenih neformalnih institucij se počasi razkrajata (več v poglavju 7).

4.2 TRAJNOSTNA SOSESKA RIESELFELD, FREIBURG, NEMČIJA

Zgodovinske okoliščine, ki so vplivale na implementacijo trajnostne soseske Rieselfeld v Freiburgu, so bile podobne kot pri soseski Vauban (glej poglavje 4.1, str. 46–47): veliko pomanjkanje stanovanj, močna ozaveščenost prebivalcev mesta Freiburg glede nujnosti prehoda na nizkoogljično družbo, dolgoletna kontinuiteta zeleno usmerjenih politikov mesta Freiburg itd. Zaradi nenehnega velikega povpraševanja po stanovanjih so se v občinski upravi Freiburga odločili ustvariti novo sosesko Rieselfeld. Cilj mestne oblasti je bil zgraditi trajnostno sosesko z visoko gostoto naseljenosti na oseminsedemdesetih hektarjih kmetijskih površin. V tistem času je bila gradnja trajnostne soseske Rieselfeld s 4200 stanovanjskimi enotami za 11000 ljudi največji gradbeni projekt regije Baden-Württemberg (Mesto Freiburg 2007; Mesto Freiburg 2009).

Leta 1991 je mestna uprava Freiburga oblikovala posebno javno-zasebno projektno skupino, ki je usklajevala financiranje, načrtovanje in konceptualni razvoj trajnostne soseske. Projektno skupino so sestavljali strokovnjaki mestnih oddelkov za planiranje in oddelkov za nepremičnine (Mesto Freiburg 2007). Vključenost širše družbe v projekt in participacija javnosti pri planiranju sta bila zelo pomembna dejavnika pri razvoju soseske, vendar nista predstavljala ključne vloge kot pri soseski Vauban. Participativen dialog z lokalno skupnostjo/javnostjo je privedel do razvoja novih, premišljeno zasnovanih osnovnih šol, vrtcev, otroških igrišč, rekreacijskih centrov, mladinskih in kulturnih centrov ter skupnostnega centra Glashaus (Madearis in Daseking 2012; več v poglavju 6, str. 144–145). Posebna pozornost je bila namenjena specifičnim potrebam družin, žensk, starejših in invalidov (Madearis in Daseking 2012).

Gradnja soseske je bila v celoti financirana s prodajo lastnih mestnih parcel (Mesto Freiburg 2007). Ker je občini Freiburg takrat primanjkovalo finančnih sredstev, sta bili soseska Rieselfeld in Vauban zgrajeni brez denarja iz mestnega proračuna. Vsi izračunani stroški gradnje so bili porazdeljeni na kvadratne metre stanovanj, ki so nastala na zemljiščih v lasti mesta. To pomeni, da so se stroški celotne infrastrukture soseske (šole, ceste, tramvaj itd.) porazdelili v vsak

predvideni meter novonastalih stanovanj in so jih nato vključili v prodajno ceno na enoto (Intervju Wulf Daseking – Priloga C). Gradnja soseske se je začela leta 1993, leta 1996 pa so se lahko že vselili prvi prebivalci. Celoten projekt trajnostne soseske je bil dokončno zaključen leta 2010.

4.2.1 TRAJNOSTNA RABA NARAVNIH VIROV V SOSESKI RIESELFELD

Pri gradnji soseske Rieselfeld so imele ključno vlogo natančno določene ekološke smernice trajnostne soseske. Energetska shema v okviru ekoloških smernic je na primer določala geografsko orientiranost stavb, razdaljo med stavbami; izrecno je določala gradnjo izključno nizkoenergetskih stavb s porabo energije, ki ne sme presegati 65 kWh na kvadratni meter na leto (Mesto Freiburg 2007). Vsi objekti, vključno s 4200 stanovanjskimi enotami, so v soseski Rieselfeld zgrajeni v skladu s konceptom nizkoenergijske gradnje. Soseska izrablja tudi obnovljive vire energije (predvsem sončno energijo) in je vključena v omrežje toplovodnega ogrevanja preko CHP postaje (Mesto Freiburg 2007). Analize energetske porabe so pokazale, da stanovanja v soseski Rieselfeld proizvedejo v povprečju 20 % manj CO_2 kot običajno grajena stanovanja v Nemčiji (Madearis in Daseking 2012). Trajnostna soseska je pod okriljem nemškega Zveznega ministrstva za promet, gradnjo in razvoj mest služila kot vzorčni projekt za zmanjševanje CO_2 v mestih. Posledice gradnje nizkoenergetskih stavb so se pokazale v učinkovitejši energetski oskrbi (daljinsko ogrevanje objektov), v spodbujanju uporabe energetsko varčnih naprav in v množični uporabi javnega prevoza ter v omejevanju uporabe avtomobila. Tako je soseska Rieselfeld dosegla več kot prepolovitev porabe energije – gledano z vidika celotne porabe energije (Ryan in Throgmorton 2003).

Trajnostna soseska Rieselfed ima tudi poseben trajnostni sistem upravljanja z vodami. Po procesu biološkega čiščenja padavin je zagotovljena popolna recirkulacija površinskih voda v zahodnem delu območja Rieselfeld, ki ima status naravnega rezervata (Mesto Freiburg 2007). Zahodni del soseske Rieselfeld, ki ni bil namenjen za gradnjo, je bil leta 1995 razglašen kot zaščiteno naravno območje in kot zaščiten ptičji rezervat.

4.2.2 TRAJNOSTNI PROMET SOSESKE RIESELFELD

Med planiranjem soseske Rieselfed je dostopnost do tramvaja predstavljala, podobno kot v soseski Vauban, glavno prednost pri načrtovanju trajnostnega prometa. Slednji je poleg rednih tramvajskih in avtobusnih linij določen z razvejanimi kakovostnimi kolesarskimi stezami in pešpotmi, razvitim sistemom »car-sharinga«, s parkirnimi garažami pod stanovanjskimi enotami in z omejitvijo hitrosti vozil v soseski – do max. 30 km/h (Madearis in Daseking 2012). V soseski je več ulic s t. i. »mešano rabo«, ki so vzpostavljene na takšen način, da omogočajo otrokom varno igro (Cervero in Sullivan 2011).

Razširitev mestne tramvajske trase do trajnostne soseske Rieselfeld so izpeljali že leta 1997, samo leto dni po prvemu naselitvenem valu soseske, ko je v celotnem Rieselfeldu živelo le 1000 prebivalcev. Na ta način so prebivalci soseske že ob naselitvi imeli dostopen funkcionalni sistem javnega prevoza, kar v Nemčiji ni običajno (glej Intervju Wulf Daseking - Priloga C). Prisotnost treh tramvajskih postaj je spodbudila razvoj soseske okoli tramvajskih vozlišč. Tramvaji vozijo vsakih 7 minut, do centra mesta Freiburg pa je potrebnih le 10 minut (Cervero in Sullivan 2011).

Slika 4.5: Tramvaj v soseski Rieselfeld

Vir : Lastna slika (2013).

Rieselfeld je kolesarko usmerjena soseska, saj nudi razvejane, kakovostne kolesarske steze ter izdatna pokrita parkirišča za kolesa. Iz vidika kolesarske infrastrukture je zelo dobro povezana z drugimi deli Freiburga. Kolesarji lahko uporabljajo kolesarske poti, ki so povsem ločene od avtomobilskega prometa, kar zvišuje stopnjo varnosti (Broaddus 2010).

Lastništvo avtomobilov je v soseski Rieselfeld precej nižje, kot je povprečje v Freiburgu. V mestu Freiburg je povprečno 408 lastniških avtomobilov na 1000 prebivalcev, medtem ko je v soseski Rieselfeld le 292 avtomobilov na 1000 prebivalcev (Madearis in Daseking 2012).

4.2.3 URBANISTIČNI ELEMENTI TRAJNOSTNEGA RAZVOJA SOSESKE RIESELFELD

V trajnostni soseski Rieselfeld je bilo umeščenih skoraj 5000 stanovanjskih in poslovnih enot. Za vse večstanovanjske stavbe je bila predpisana dopustna zgornja višinska meja, ki ne sme presegati petih nadstropij. Planerji soseske so uspešno združili visoko gostoto gradnje z visoko kakovostjo bivanjskega prostora tudi z razvojem manjših namenskih gradbenih parcel. Le-te so bile vnaprej določene z vidika funkcionalnosti. Če je bilo predpisano, so gradbeni projekti, grajeni na t. i. mini parcelah, morali vključevati stanovanjske, rekreativne, trgovske dejavnosti ali pa zagotavljati prostore za zdravstvene ustanove, vrtce, šole in verske objekte (Madearis in Daseking 2012). Rieselfeld je bil načrtovan kot multifunkcijski prostor z mešano rabo prostora (Ryan in Throgmorton 2003). Bistveni pogoj za uspešno trženje celotnega projekta je bil izpolnjen z delitvijo gradbenih parcel v majhnih serijah. Večja gradbena parcela se je običajno prodala petim do desetim vlagateljem. Na ta način sta bili omogočeni večja arhitekturna raznovrstnost in nestandardiziranost urbanega prostora (Mesto Freiburg 2007).

Glavna prometna os soseske, po kateri vozijo tudi tramvaji, je aleja Rieselfeldallee, ki predstavlja nekakšno urbanistično hrbtenico celotne trajnostne soseske. V centru soseske ob Rieselfeldallee so nameščeni osrednji infrastrukturni objekti: srednja in osnovna šola, športni center, skupnostni center in cerkev. Ob glavni prometni osi so umeščeni tudi večfunkcijski stanovanjski objekti, dolgi med 70 in 130 metrov z največjo gostoto naseljenosti, ki se zmanjšuje proti zunanjemu robu soseske. Ob Rieselfeldallee so pritlične enote stanovanjskih objektov, namenjene poslovno storitvenim dejavnostim (restavracije, podjetja in trgovine) (Mesto Freiburg 2007).

Slika 4.6: Prometna os Rieselfeldallee v soseski Rieselfeld

Vir: Lastna slika (2013).

Pomemben vidik trajnostnega urbanističnega načrtovanja predstavlja tudi koncept zelenih površin soseske, ki vključujejo manjše parke v atrijih stanovanjskih blokov in raznovrstne zelene površine ter parke, razpršene po celotni soseski. Kot najzanimivejši urbanistični element je potrebno omeniti še velik skupnostni center soseske, imenovan Glashaus, v katerem se odvija družabno življenje prebivalcev (več v poglavju 6, Picture 2, str. 146).

Slika 4.7: Javni zeleni prostori soseske Rieselfeld

Vir: Lastna slika (2013).

4.2.4 DRUŽBENO-EKONOMSKA URAVNOTEŽENOST SOSESKE RIESELFELD

Planerji so načrtovali trajnostno sosesko Rieselfeld na tak način, da bi bilo mogoče vzdrževati nekakšno socialno ravnotežje med prebivalci z nižjimi in tistimi z višjimi dohodki, med najemniškimi ter lastniškimi stanovanji (Ryan in Throgmorton 2003). Približno 30 % stanovanj v Rieselfeldu je socialnih stanovanj, vendar jih ni mogoče vizualno ločiti od nesocialnih stanovanj. Kakovost lastniških stanovanj je enaka socialnim najemnim stanovanjem (Ryan in Throgmorton 2003). Kakor koli, podobno kot pri vseh obravnavanih trajnostnih soseskah so se tržna stanovanja v zadnjih letih izjemno podražila (Intervju z Lejlo Karović-Kersting 2013).

Posebna pozornost, namenjena spodbujanju družbenega/kulturnega življenja sosesk, je bila začrtana že v začetnih fazah načrtovanja trajnostne soseske. Infrastruktura soseske je skrbno zasnovana in vključuje srednjo šolo, osnovno šolo, vrtce, centre za dnevno varstvo otrok, vrsto športnih centrov itd. Najpomembnejši urbanistični objekt za družbeno udejstvovanje lokalne skupnosti pa predstavlja skupnostni center Glashaus, ki ohranja in pospešuje družbeno kohezijo soseske. Objekt Glashaus predstavlja referenčno stičišče lokalne skupnosti in ga upravlja lokalno društvo KIOSK (Mesto Freiburg 2007).

KIOSK je lokalna civilna organizacija soseske Rieselfled, vzpostavljena leta 1996, in je kratica za »kontakt, informiranje, organizacija, samopomoč, kultura«. Na začetku delovanja je KIOSK zbirala ideje prebivalcev v zvezi s transformacijo območja Rieselfed v funkcionalno trajnostno sosesko. KIOSK je z leti prerastel informacijsko vlogo in danes predstavlja referenčni center družbenega življenja soseske. Tiska lokalni časopis soseske, upravlja namenske tržnice, organizira mladinske dogodke, upravlja knjižnico, organizira raznovrstne dogodke (več v poglavju 6) in hkrati prevzema tudi okoljevarstveni položaj (npr. KIOSK je organiziral proteste za zaščito starih avtohtonih dreves v bližini soseske). Sestava društva KIOSK je zelo razvejana in vključuje poleg sedemčlanskega upravnega odbora tudi več kot sto prostovoljcev – prebivalcev soseske. Člani društva KIOSK se redno srečujejo in kujejo daljnosežno trajnostno strategijo razvoja soseske (Madearis in Daseking 2012). Konec leta 2003 je združenje KIOSK prevzelo vodenje in upravljanje skupnostnega centra Glashaus, v katerem se nahajajo otroški center, mladinski center, skupnostni prostori, javna kuhinja in knjižnica soseske. KIOSK predstavlja dober primer, kako lahko lokalni prebivalci soseske prevzamejo odgovornost pri soustvarjanju lokalne politike urbanega prostora (Mesto Freiburg 2007).

4.3 TRAJNOSTNA SOSESKA WESTERN HARBOUR, MALMÖ, ŠVEDSKA

V Malmöju, tretjem največjem švedskem mestu s 300.000 prebivalci, so v zadnjih desetletjih potekali radikalni družbeno-prostorski procesi prestrukturiranja urbanega prostora (Harvey 2008). Iz propadajočega industrijskega mesta se je Malmö preoblikoval v regionalni center novih tehnologij in »zelenih storitev« (Nylund 2014). Po postindustrijskem propadanju okrog leta 1970 je mesto postopoma začelo uvajati ambiciozne urbane in gospodarske iniciative/reforme. Najobsežnejši projekt urbane prenove mesta, ki hkrati simbolizira trajnostno preobrazbo »novega Malmöja«, predstavlja implementacija trajnostne soseske »Western Harbour«.[22] Zgrajena je bila postopoma, v več fazah na zapuščenem industrijskem območju ob morju, kjer je bilo leta 1870 ustanovljeno podjetje ladijskih tankerjev Kockums Industries. Po propadu podjetja leta 1986 je skladišča prevzelo avtomobilsko podjetje Saab-Scania, kasneje pa podjetje General Motors, ki pa je prenehalo proizvajati avtomobile na Švedskem. Zapuščena zemljišča in industrijske zgradbe je kupilo mesto Malmö, ki je leta 2001 končalo prvi temeljni in tehnološko inovativen urbani del soseske Western Harbourja – to je t. i. Bo01, imenovan tudi The city of tomorrow (Mesto Malmö 2009). Začetek razvoja Bo01 je leta 1995 sovpadal z natečajem državnega sejma EXPO – imenovan European Millennium Housing Exposition. Leta 1996 je bil projekt trajnostne soseske Bo01 izbran na švedskem natečaju EXPO. Zasnovan je bil kot »živi stanovanjski eksponat«, ki naj bi ponujal daljnovidne rešitve za trajnostno gradnjo in razvoj mesta. Osnovna finančna sredstva za tako obsežen projekt so bila zagotovljena preko švedske institucije SVEBO[23] in švedskega investicijskega sklada LIP.[24] Drugi glavni deležniki finančne konstrukcije trajnostne soseske so bili švedska država, mesto Malmö, Sydkraft (regionalno energetsko podjetje), komisija EU in zasebni urbani razvijalci/podjetja (BSHF 2005).

Trajnostna soseska Western Harbour je bil implementirana v štirih fazah in na neki način so bile znotraj območja Western Harbour implementirane štiri zelo povezane manjše trajnostne soseske, ki so zlite v celovito enoto. Najprej je bila implementirana soseska Bo01,[25] ki je bila

[22] V švedščini tudi kot »Västra Hamnen«.
[23] Okrajšava za »Svenska Bostäder«, organizacija, ki je nastala v okviru Švedskega Nacionalnega odbora za stanovanja, gradnjo in načrtovanje.
[24] Leta 1999, je krovna organizacija za Bo01 prejela 250 milijonov švedskih kron (27 milijonov evrov), od organizacije LIP za sofinanciranje 67 projektov soseske (Persson 2015).
[25] Potrebno je poudariti, da je v znanstveni literaturi prisotnih veliko nepravilnosti glede poimenovanja soseske, saj ogromno člankov napačno navaja Bo01 kot sinonim za Western Harbour. Deloma je do te napake prišlo tudi zaradi tega, ker je bila Bo01 prva »mini soseska« znotraj območja Western Harbour, takrat Bo02, Bo03, Bo04 še niso obstajale.

dokončana leta 2001; sledile so Bo02 – *Flagghusen* (2004–2008), Bo03 – *Fullriggaren*, (2009–2013) in Bo04 – *Kappseglaren* (2011–2017). V nasprotju z Bo01 so bili nadaljnji urbani projekti (Bo02, Bo03, Bo04) grajeni po nižjih trajnostnih standardih gradnje, saj so imeli veliko bolj omejene finančne vire. Kakor koli, Bo02, Bo03, Bo04 so bili vseeno implementirani z upoštevanjem celostnih trajnostnih načel in so na neki način »podedovali« dediščino trajnostnega razvoja Bo01 (Anderberg 2015). Ko bo soseska v celoti končana, bo implementiranih približno 8000 stanovanj, trgovin in poslovnih/storitvenih enot na 140 ha. V soseski bo delalo/študiralo 20000 delavcev in študentov na malmöjski univerzi (Fraker 2013).

4.3.1 TRAJNOSTNA RABA NARAVNIH VIROV V SOSESKI WESTERN HARBOUR

Največ pozornosti in tudi finančnih sredstev je bilo namenjenih za prvi del soseske Western Harbour – za Bo01, ki je tudi edini del Western Harbourja, ki se lahko proglaša za ogljično nevtralno sosesko, saj se 100 % oskrbuje z obnovljivimi viri energije. Implementacija Bo01 je omogočila testiranje različnih »zelenih« tehnologij, ki so se potem prenašale v ostale dele Western Harbourja in v druge urbane soseske mesta Malmö ter v druga mesta (tudi izven Švedske) (več v poglavju 7). V sklopu Bo01 je bila zgrajena velika vetrna elektrarna, ki oskrbuje celoten Bo01 z »zeleno« električno energijo (na morju postavljena vetrna elektrarna Lillgrund z zmogljivostjo 2 MW oskrbuje z elektriko kar 60000 gospodinjstev). V soseski je nameščenih 1400 m2 sončnih termalnih panelov za oskrbo soseske s toplo vodo. Poleg tega je v Bo01 še 120 m2 sončnih celic, ki proizvajajo električno energijo in dopolnjujejo lokalno proizvodnjo elektrike vetrnih turbin (BSHF, 2005). Vodne toplotne črpalke Western Harbourja pa proizvajajo energijo iz naravnih vodnih zbiralnikov v podzemnih skalah. Prebivalci soseske lahko spremljajo in upravljajo lastno individualno porabo energije ter elektrike preko različnih kompleksnih informacijskih sistemov, ki so nameščeni v vsakemu stanovanju (Mesto Malmö 2009).

Slika 4.8: Sončne celice na strehah poslopij v soseski Western Harbour

Vir: Lastna slika (2014).

Inovativen prezračevalni sistem in energetsko učinkovite stavbe so zmanjšale porabo energije, vendar pa je prišlo do velikih odstopanj med načrtovano in dejansko porabo energije. Eden izmed redkih kvantitativnih zahtev med načrtovanjem je bil povezan z zahtevano najvišjo porabo energije, ki ne bi smela presegati 105 kWh/m2 na leto.[26] Ta energetski standard je bil v tistem času precej nižji od švedskega povprečja (250 kWh/m2 na leto). Med pogajanji za program kakovosti med občino Malmö in zasebnimi gradbenimi razvijalci je krovna organizacija Bo01 sicer želela uvesti strožje, bolj radikalne standarde kot 105 kWh/m2 na leto, vendar so v pogajanjih gradbena podjetja prevladala z utemeljitvijo, da je 105 kWh/m2 na leto bolj realističen in stroškovno učinkovit standard (Fraker 2013). Kakor koli, povprečna izmerjena poraba energije v Western Harbourju je bila 167 kWh/m2 na leto. Razlogi za takšno odstopanje naj bi bili slaba izolacija in infiltracija zraka (Fraker 2013).

Občina Malmö je pred gradnjo soseske postavila poseben »program za zagotavljanje kakovosti«, ki je bil osnovan z namenom določanja smernic in standardov trajnostne rabe naravnih virov za celotno področje Western Harbourja. V programu za zagotavljanje kakovosti ni bilo posebnih ciljev glede porabe vode. V soseski tudi ni bila načrtovana ponovna uporaba/izraba deževnice. Padavinske vode se hranijo v posebnih kanalih, manjših jezerih znotraj soseske in imajo predvsem estetsko funkcijo. Vzdrževanje kanalov je izredno drago in jih načrtovalci ne nameravajo ponovno uporabiti v prihodnjih trajnostnih projektih mesta (glej Intervju z Janom Johanssonom – Priloga H).

[26] 105 kWh/m2 na leto bi moralo zadostovati za vso energijo, povezano z delovanjem gospodinjstev, vključno z elektriko, toploto, hlajenjem itd. (Persson, 2005).

Mesto Malmö je v Western Harbourju eksperimentalno uvedla dva tehnično izredno dovršena in inovativna sistema za recikliranje (Mesto Malmö 2009):

(1) *Tehnologija vakuumskih tubatur*. Poseben sistem recikliranja odpadkov poteka preko večkilometrskih vakuumskih ceveh v podzemlju. Zbirni centri za vakuumsko reciklažo so postavljeni v neposredni bližini blokov (glej sliko 4.9);

(2) *Sistem zbiranja odpadne hrane preko pomivalnih korit v vsakem gospodinjstvu soseske*. Odpadna hrana, predelana s posebnim drobilcem v koritih, je z vakuumskim sistemom prenesena v cisterne, iz katerih odpadno hrano potem preoblikujejo v bioplin, ki napaja lokalne avtobuse. Zaključen krogotok hrana – bioplin – lokalni avtobusi predstavlja eno najinovativnejših rešitev trajnostne rabe naravnih virov v soseski (Fraker 2013).

Slika 4.9: Vakuumske tubature za recikliranje v soseski Western Harbour

Vir: Lastna slika (2014).

4.3.2 TRAJNOSTNI PROMET SOSESKE WESTERN HARBOUR

»Program za zagotavljanje kakovosti« trajnostne soseske Western Harbour ni določal specifičnih ciljev glede trajnostnega prometa. Po drugi strani pa je program načeloma razglašal trajnostni način prevoza posredno s trajnostno urbano strukturo/obliko soseske, ki spodbuja kolesarjenje, hojo in uporabo javnega prevoza (Fraker 2013). Tudi z zagotavljanjem raznovrstnih storitev in rekreacijskih možnosti znotraj soseske se potreba po potovanjih zunaj soseske bistveno zmanjša (Fraker 2013).

Mesto Malmö je vložilo veliko truda, da bi postalo vzorno kolesarsko mesto.[27] V Western Harbourju je bilo postavljeni kar 8185 metrov novih kolesarskih stez (Mesto Malmö 2009). Zelo razvejane estetske pešpoti so prav tako izdelane iz visoko kakovostnih materialov in v raznovrstnih različicah: iz opek, betona, granita in lesnih tlakovcev (Fraker 2013).

Zelo pogoste[28] avtobusne linije povezujejo osrednje dele mesta Malmö s ključnimi točkami Western Harbourja. Leta 2003 je bil sprožen pilotni projekt, v katerem sta dva mestna avtobusa vozila na gorivo, pridobljeno iz obnovljivih virov energije (8 % iz vodikovega plina in 92 % iz elektrike, pridobljene iz lokalne vetrne energije). Projekt je bil za tisti čas inovativen ter zelo dobro sprejet, zato so ga razširili (Mesto Malmö 2009). Avtobusne postaje znotraj soseske so načrtovane tako, da so oddaljene največ 300 metrov od vsakega stanovanja. Avtobusni sistem je bil postavljen na samem začetka razvoja soseske, preden so se vselili prvi občani. Takšna strategija je bistveno vplivala na priljubljenost javnega prevoza znotraj soseske in zmanjšala odvisnost od avtomobila (glej Intervju z Maria Lööf; Priloga F).

Načrtovalci Western Harbourja so se zavedali pomena omejevanja števila parkirišč, da bi zmanjšali uporabo avtomobilov, vendar pa se je izvajanje takšne strategije izkazalo za zelo problematično. V začetnem načrtu za sosesko Bo01 je bilo predvidenih 0,7 parkirnih mest na gospodinjstvo, kar je bilo bistveno manj v primerjavi s standardom mesta Malmö, v katerem je bilo v tistem času 1,1 parkirno mesto na gospodinjstvo (Foletta 2011c). Kakor koli, lokalni stanovalci niso bili zadovoljni s tako omejenim številom parkirnih mest in so dosegli povišanje na 1,5 parkirnih mest na stanovanje, kar je v bistvu v nasprotju s konceptom trajnostne soseske (glej Intervju z Evo Dalman; Priloga E).

V Malmöju je 480 avtomobilov na 1000 prebivalcev, medtem ko je v Western Harbourju le nekoliko nižja številka, in sicer 440 avtomobilov na 1000 prebivalcev (Foletta, 2011c). V zadnjih letih je tudi souporaba avtomobilov (»car sharing«) v skokovitem porastu v soseski Western Harbour (glej Intervju z Maria Lööf; Priloga F).

[27] Mesto Malmö ima danes približno 420 km kolesarskih stez (Foletta, 2011c).
[28] Avtobusi vozijo v rednih frekvencah vsakih šest do sedem minut (Fraker 2013).

Slika 4.10: Električna postaja car sharing v soseski Western Harbour

Vir: Lastna slika (2014).

4.3.3 URBANISTIČNI ELEMENTI TRAJNOSTNEGA RAZVOJA SOSESKE WESTERN HARBOUR

Urbanističen koncept trajnostne soseske Western Harbour je bil zasnovan z razdelitvijo celotnega območja na posamezne majhne parcele, ki so bile dodeljene znanim arhitektom oz. urbanim razvijalcem. Posebnost soseske se odraža v tem, da so jo planirali in gradili zelo različni arhitekti in gradbeniki, kar daje celotnemu urbanemu območju edinstven značaj. Samo za implementacijo prvega dela soseske – Bo01 (1900 stanovanj) je sodelovalo kar 10 urbanih razvijalcev in dvajset arhitektov (Bächtold 2013). Vsak arhitekt, urbani razvijalec je moral svoje načrte prilagoditi določenim trajnostnim smernicam (npr. glede višine objektov, gostote naselitve, »zelenih točk« itd.), ki veljajo za celoten Western Harbour (Fraker 2013).

Svetovno znani urbanist in arhitekt Klas Tham je bil ključna oseba v procesu oblikovanja prvega dela Western Harbourja – Bo01. Arhitektova idejna zasnova je bila postaviti »visoki zid stanovanj proti morju«, ki bi varovale nižje zgradbe v notranjosti Western Harbourja. Zamisel je bila na začetku kritizirana, podobno kot je bila kritizirana njegova ideja o preoblikovanju ozkega obmorskega dela v javno sprehajališče (Mesto Malmö 2009). Danes je sprehajališče Sundspromenaden zelo priljubljeno in ima funkcijo nekakšnega skupnega družbenega centra/stične točke za vse prebivalce soseske in druge prebivalce mesta ter turiste. Arhitektura soseske Western Harbour se spogleduje z evropsko arhitekturo zgodnjega devetnajstega stoletja, v kateri ima skoraj vsaka stavba mešano namembnost (stanovanjsko, poslovno-trgovinsko, storitveno itd.) (Bächtold 2013).

Slika 4.11: Sprehajalna promenada Sundspromenaden v soseski Western Harbour

Vir: Lastna slika (2014).

Tako kot pri vseh temeljnih zadevah implementacijskega procesa trajnostne soseske Western Harbour je tudi arhitekturni koncept deloval s posebnim programom za zagotavljanje kakovosti soseske, ki je določal arhitekturne smernice, kakovost materialov, »karakter« in dostopnost javnih površin, izvedbo in dovršenost stanovanjskih struktur, energetsko učinkovitost in vrsto drugih standardov glede barv, materialov ter ekoloških standardov (BSHF 2005).

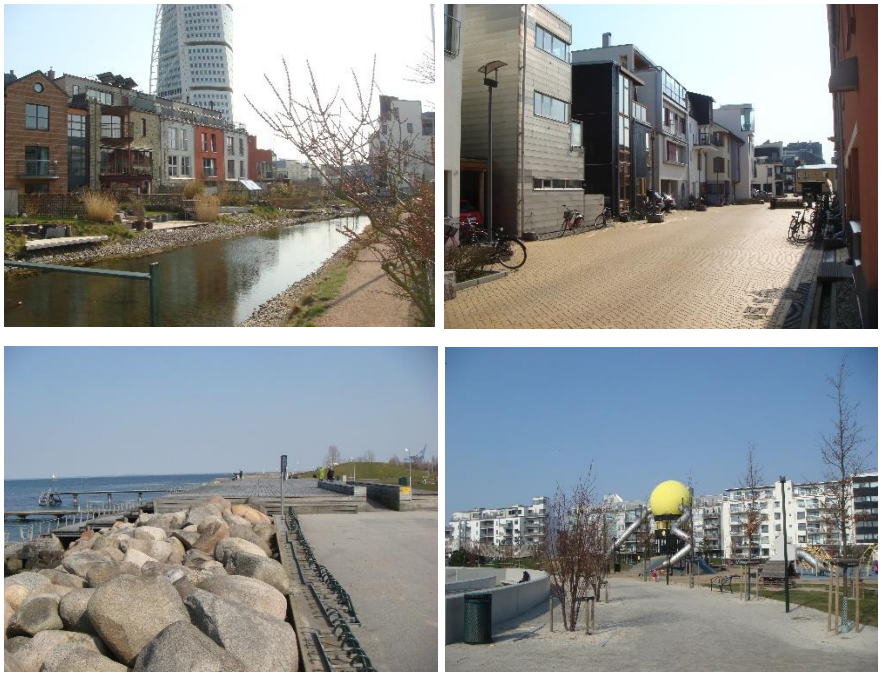
Najznamenitejša in tudi turistično oblegana stavba trajnostne soseske je stolpnica Turning Torso, ki jo je zasnoval znameniti španski arhitekt Santiago Calatrava. S 54 nadstropji in 190 metri je Turning Torso najvišja stolpnica v Skandinaviji in predstavlja najznačilnejši vizualni simbol trajnostne soseske Western Harbour. Sestavljena je iz devetih vrtečih kock, kjer so v spodnjih nadstropjih pisarne, na vrhu konferenčne dvorane, v vmesnih nadstropjih pa je 147 stanovanj (Foletta 2011c). Neto gostota stavbe Turning Torso je 350 enot na hektar, kar izstopa od okolice, ki ima povprečno gostoto 34 enot na hektar. Takšen »hiperkontrast« zelo močno prispeva k partikularni urbani obliki in identiteti soseske. Turning Torso predstavlja tudi referenčno točko za pešce znotraj zapletenih mrež pešpoti med stanovanjskimi bloki soseske. Kot simbol preporoda novega Malmöja postaja nov pomembni akter v regionalnem in globalnem gospodarstvu.

Slika 4:12: Objekt Turning torso (različne perspektive)

Vir: Lastna slika (2014).

V soseski Western Harbour imajo pomembno funkcijo tudi »mreže zelenih površin« (mreža parkov in zelenih prehodov), ki predstavljajo dopolnjujočo alternativo omrežju ulic. Zelene površine in parki so od vsakega stanovanja oddaljeni največ 300 metrov. Načrtovalci soseske so želeli prebivalcem omogočiti, da bi lahko hodili do centra mesta Malmö neprekinjeno v zelenju (skozi parke in zelene površine). V ta namen so tudi ustvarili ogromen Stapelbäddsparken, ki poleg zagotavljanja zelenih poti za pešce do centra deluje tudi kot družabno središče za vse prebivalce mesta in vključuje kavarne, plezalno steno, skate park in ekološka igrišča za otroke (Foletta 2011c).

Slika 4.13: Različni javni prostori soseske Western Harbour



Vir: Lastna slika (2014).

4.3.4 DRUŽBENO-EKONOMSKA URAVNOTEŽENOST SOSESKE WESTERN HARBOUR

Od vseh obravnavanih trajnostnih sosesk je Western Harbour najmanj družbeno kohezivna (brez enovite lokalne skupnosti), saj ni prisotne močne lokalne pripadnosti skupnosti. Iz družbenega vidika skupnosti je soseska običajno »spalno naselje«, v katerem ni prisotnih civilnih iniciativ, lokalnih pobud, lokalnih društev in aktivnosti, ki bi jih posredovali stanovalci. Prvotno je sicer bil cilj načrtovalcev, da bi soseska postala heterogeno in družbeno trajnostno območje (Kärrholm 2011). Danes pa sosesko večinoma naseljujejo premožni prebivalci. Zlasti prvo naselje na območju Western Harbour – Bo01 je bilo očitno namenjeno družinam z višjimi dohodki (Lööf 2014). Madureira (2015) potrjuje, da je bil cilj občinske uprave naseliti središče mesta Malmö z družinami iz srednjega zgornjega družbenega razreda, ki so prej živeli v primestnih območjih mesta. Nekateri kritiki so poudarili, da bi bilo zaradi tega mogoče Western Harbour označiti kot prototip socialne segregacije (Holgersen 2014).

Potrebno pa je povedati, da je občina Malmö v sodelovanju z gradbenimi razvijalci poskušala spodbuditi heterogenost strukture prebivalstva – predvsem v kasnejših naseljih znotraj območja Western Harbour – Bo02 in Bo03. Občina Malmö je subvencionirala najemnine in skupaj z gradbenimi razvijalci določila najvišjo ceno najema, da bi tako zagotovili cenovno ugodne

najemnine (Tjärnstig 2012; glej tudi intervjuja z Mario Lööf in Evo Dalman; Prilogi E in F). Kljub vsem prizadevanjem pa je povprečna najemnina v Western Harbourju še vedno več kot 60 % višja od povprečne najemnine v mestu Malmö (Mesto Malmö 2011).

Mesto Malmö je ne glede na kritike poskušalo spodbuditi raznolikost prebivalstva z zagotavljanjem posebnih namenskih urbanih struktur, kot so študentska stanovanja, hiše za starejše itd. Konkreten urbani poseg za krepitev družbenega vidika trajnostnega razvoja predstavlja postavitev parka Stapelbäddsparken. Poleg morskega sprehajališča Sundspromenaden predstavlja park središčno družabno območje soseske. Postal je zbirališče za vse starostne skupine in ponuja širok spekter dejavnosti, ki spodbujajo zdrav način življenja. Potrebno je omeniti tudi skate park v soseski, ki je danes največji in najbolj obiskan skate park v Skandinaviji (Mesto Malmö 2009).

Malmö se je preoblikoval iz industrijskega mesta v trajnostno naravnano »mesto znanja« in visokih tehnologij. Transformacija je najbolj očitna prav v soseski Western Harbour. Med vsemi analiziranimi trajnostnimi soseskami je v Western Harbourju tudi največ delovnih mest na prebivalca soseske (glej poglavje 5, Table 5, str. 126). Tehnološka podjetja in druga na znanju temelječa storitvena podjetja so danes skoncentrirana v Western Harbourju, ki je postal tudi novo središče informacijskih tehnologij mesta Malmö (Mesto Malmö 2009). Univerza Malmö se prav tako nahaja v območju trajnostne soseske.

4.4 TRAJNOSTNA SOSESKA HAMMARBY SJÖSTAD, STOCKHOLM, ŠVEDSKA

Nastanku trajnostne soseske Hammarby Sjöstad v Stockholmu sta botrovala dva glavna razloga oz. specifično zgodovinsko ozadje. Prvič, sredi sedemdesetih let je prišlo na Švedskem do velike energetske krize in do izrednega pomanjkanja nafte. Zaradi tega je švedska vlada namenila raziskovanju in razvijanju novih »zelenih« tehnoloških inovacij veliko sredstev, ki bi potencialno zmanjšala odvisnost od fosilnih goriv (Iverot in drugi 2013). Drugič, v zgodnjih devetdesetih letih je prišlo v Stockholmu do velikega povpraševanja po stanovanjih, kar je pospešilo gradnjo novih sosesk (glej Intervju z Björnom Cederquistom – Priloga J).

Kakor koli, pa je uradni povod za nastanek trajnostne soseske Hammarby Sjöstad kandidatura mesta Stockholm za olimpijske igre 2004 (Iverot in Brand 2011). Hammarby Sjöstad, nekdanjo veliko industrijsko pristaniško območje, je bilo predlagano, da gosti olimpijsko vas (Mesto Stockholm 1996b). Lokalna mestna uprava je tudi zaradi poziva Mednarodnega olimpijskega

komiteja k trajnostni usmerjenosti olimpijskih iger želela preoblikovati industrijsko območje Hammarby Sjöstad v inovativno trajnostno sosesko (Iverot in Brand 2011). Ko je bila glavna odločitev za trajnostno preoblikovanje soseske v letu 1995 sprejeta, je v mestu Stockholm vladala rdeče-zelena politična koalicija. To dejstvo je pomembno prispevalo k visokim okoljskim ambicijam za celovit razvoj urbanega območja (Vestbro 2004; glej tudi Intervju z Björnom Cederquistom – Priloga J).

V poznih osemdesetih letih prejšnjega stoletja je bilo na območju današnje trajnostne soseske več nefunkcionalnih razpadajočih skladišč in poslovnih prostorov. Degradirana urbana cona je bila slabšalno poimenovana tudi kot »barakarsko naselje«[29] (Iverot in drugi 2013). V nasprotju z drugimi evropskimi trajnostnimi soseskami, ki so nastale na opuščenih industrijskih območjih,[30] Hammarby Sjöstad ni bila zapuščena oz. izpraznjena soseska na začetku procesa trajnostnega preoblikovanja. Kljub temu pa se je občinska uprava odločila, da bo ohranila le peščico obstoječih poslovnih in industrijskih prostorov.

Ob spoznanju, da projekt zahteva razlastitev zemljišč, okoljsko sanacijo onesnaženih tal, obsežno obnovo infrastrukture, vključno s cestami in z novim javnim prometom, je mesto prevzelo vlogo glavnega projektanta (Fraker 2013). Tudi zaradi tega je soseska Hammarby Sjöstad tipičen predstavnik urbanega razvoja »od zgoraj navzdol« (angl. »top-down development«).

Ko so bile septembra 1997 olimpijske igre 2014 dodeljene Atenam, je bil za nekaj časa položaj razvoja soseske Hammarby Sjöstad negotov. Mesto Stockholm pa se je relativno hitro odločilo, da bo še naprej nadaljevalo načrtovano strategijo implementacije trajnostne soseske (Iverot in Brand 2011). Še istega leta je nastal in bil potrjen implementacijski načrt trajnostnega preoblikovanja soseske, ki je vključeval 11500 stanovanjskih enot (za nekaj več kot 26000 ljudi) ter približno 300000 m2, namenjenih poslovnim funkcijam (Fraker 2013).

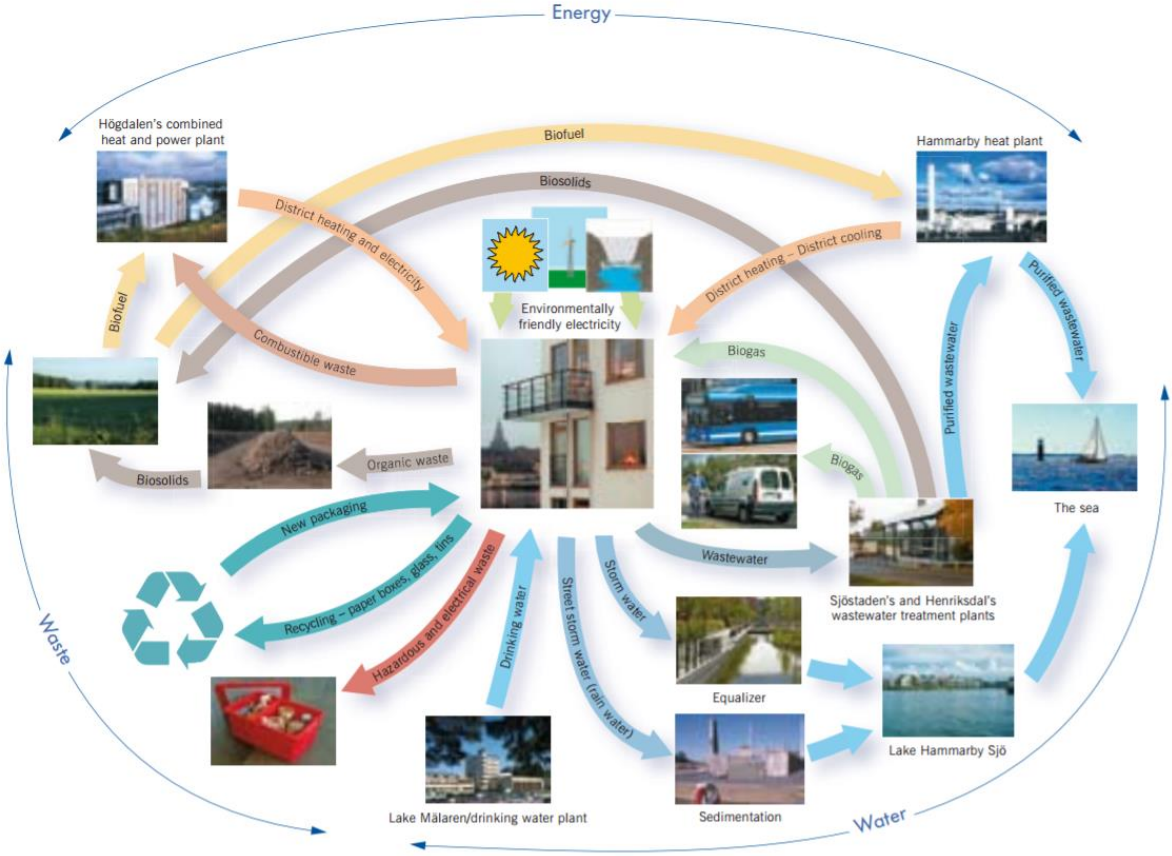
4.4.1 TRAJNOSTNA RABA NARAVNIH VIROV V SOSESKI HAMMARBY SJÖSTAD

Trajnostna soseska Hammarby Sjöstad je najbolj znana, raziskovana, analizirana ter posnemana predvsem po svojem t. i. Hammarby EcoCycle modelu (glej sliko 4.14). Model predstavlja nekakšen zaključen lokalni ekološki cikel in vključuje inovativne trajnostne rešitve na področju upravljanja energije, vode in odpadkov. Nastal je v sodelovanju z občinskimi podjetji

[29] V angl. shantytown.
[30] V angl. brownfield.

Fortum, Stockholm VATTEN AB in mestnim oddelkom za ravnanje z odpadki (SKAFAB). Model je bil postavljen z namenom doseganja posebnih ciljev »okoljskega programa za Hammarby Sjöstad«. Ti so: uravnavanje oz. upravljanje porabe energije, odpadkov, odplak in vode; poudarek je bil na zmanjšanju urbanih presnovnih tokov soseske (v angl. metabolic flows) (Iverot in Brand 2011).

Slika 4.14: Hammarby EcoCycle model



Vir: GlashusEtt (2007).

Začetni operativni cilji za sosesko Hammarby Sjöstad so bili glede upravljanja in proizvodnje energije naslednji (Mesto Stockholm 1996a, 15; Fraker 2013): (1) lokalna proizvodnja energije, ki pokriva najmanj 50 odstotkov lokalne porabe, (2) daljinsko ogrevanje (CHP), (3) fotovoltaične celice in sončni kolektorji za toplo vodo, (4) proizvodnja bioplina iz predelanih odpadnih voda za namene mestnih javnih vozil, (5) poraba celotne energije ne sme presegati 60 kWh/m2; od tega je lahko največ 20 kWh/m2, namenjenih za električno energijo, (6) 80 % od pridobljene energije iz predelave lokalnih odpadkov in odpadnih voda je potrebno ponovno uporabiti v »presnovnem toku« soseske.

Začetni cilj 60 kWh/m2 energije je bil preveč ambiciozen, zato so postavili nov realnejši cilj 105 kWh/m2. Po izvedenih energetskih meritvah leta 2005 je bilo ugotovljeno, da je bila povprečna poraba energije približno 157 kWh/m2 na leto, kar je daleč od zastavljenih ciljev (Fraker 2013).

Poglavitni cilj upravljanja z vodami je bilo zmanjšanje porabe za 50 odstotkov (s pomočjo varčnih vodnih napeljav) oz. spustiti nivo porabe na 100 litrov na osebo na dan. V vsaki stanovanjski enoti so postavili tudi t. i. varčna stranišča. Izmerjeno je bila vodna poraba, ki je znašala 150 l na dan na osebo, kar pomeni, da je bilo doseženo zmanjšanje porabe vode (le) za 50 l (Fraker 2013). Hammarby EcoCycle model ne vključuje oz. predvideva zajema oz. ponovne uporabe deževnice.

Cilji soseske Hammarby Sjöstad so bili glede predelave lokalnih odpadkov naslednji (GlashusEtt 2007): (1) zmanjšanje trdnih odpadkov za 15 odstotkov (glede na maso), (2) recikliranje z inovativnim avtomatiziranim sistemom z vakuumskimi tubami (glej sliko 4.15), (2) kompostiranje organskih odpadkov za proizvodnjo bio gnojila, (3) zbiranje nevarnih odpadkov za ponovno predelavo (ki poteka izven soseske). Predvsem pa je potrebno poudariti, da je redefinicija termina »odpadek« v zavesti lokalnih prebivalcev (»kaj sploh je zares odpadek«) najbolj pripomogel k celovitemu pristopu zmanjševanja količine odpadkov (Fraker 2013). Večina tega, kar proizvede trajnostna soseska Hammarby Sjöstad v obliki odpadkov (gospodinjski odpadki in odpadna voda), se vrne v sosesko v obliki energije (elektrika, daljinsko ogrevanje in hlajenje ter gorivo za prevoz). Gospodinjstva, ki so običajno na koncu verige potrošnje virov oz. na koncu dobavne verige, postanejo proizvajalci dragocenih naravnih virov (Iverot in Brand 2011).

Slika 4.15: Vakuumski sistem cevi za recikliranje v soseski Hammarby Sjöstad

Vir: Lastna slika (2014).

4.4.2 TRAJNOSTNI PROMET SOSESKE HAMMARBY SJÖSTAD

Operativna cilja za sosesko Hammarby Sjöstad sta bila na področju trajnostnega prometa naslednja (Mesto Stockholm 1996a): (1) 80 % vseh dnevnih migracij je opravljenih z javnim prevozom, kolesom ali peš; (2) 15 % vseh motornih vozil v soseski se napaja z obnovljivimi viri energije (bioplin ali elektrika). Raziskava, izvedena v letu 2007, kaže, da 79 % prebivalcev Hammarby Sjöstada bodisi hodi peš, se vozi s kolesom ali dnevno uporablja javni prevoz. (Fannon 2009; Iverot in Brand 2011), kar pomeni, da je bil prvi začetni cilj v veliki meri dosežen.

Slika 4.16: Ulice brez avtomobilov soseske Hammarby Sjöstad

Vir: Lastna slika (2014).

Razpolaganje z avtomobili je v soseski delno omejeno, saj je v soseski le 7000 parkirnih mest, od tega 4000 v podzemnih garažah in 3000 na ulicah (Grønlund 2012). Povprečno ima vsaka stanovanjska enota na razpolago 0,7 parkirnih mest (Foletta 2011b; Grønlund 2012). Potrebno pa je poudariti, da je razmerje parkirišč trajnostne soseske na stanovanjsko enoto (0,7 parkirnih mest na stanovanjsko enoto) višje od povprečja mesta Stockholm (0,5 parkirnih mest na stanovanjsko enoto). V soseski Hammarby Sjöstad poseduje lasten avtomobil 62 odstotkov gospodinjstev (Poldermans 2006).

Javni prevoz ima v vsakodnevnem življenju lokalnih prebivalcev soseske pomembno vlogo. Tramvaj, ki vozi vsakih 10 minut, predstavlja osrednjo hrbtenico sistema javnega prevoza in ima v soseski štiri postajališča (Foletta 2011b). Postajališča tramvaja so nameščena tako, da je vsak prebivalec soseske oddaljen od le-tega največ 300 metrov. Poleg tramvajske linije je Hammarby Sjöstad dosegljiv tudi s tremi avtobusnimi linijami (Fraker 2013).

Slika 4.17: Tramvaj v soseski Hammarby Sjöstad

Vir: Lastna slika (2014).

V soseski Hammarby Sjöstad je trenutno na voljo tudi 40 »car-sharing« vozil, ki jih upravljajo tri podjetja, in sicer Sunfleet Carsharing, Bilpoolen in CityCarClub. Po opravljeni raziskavi naj bi približno 18 % gospodinjstev soseske posedevalo člansko kartico vsaj enega »car-sharing« podjetja (Foletta 2011b). Urbani planer mesta Cederquist (2014) trdi, da bi bila glede na število prebivalcev soseske lahko uporaba storitve »car-sharing« bolj množična (glej Intervju z Björn Cederquist – Priloga J). Kot izvirno in zanimivo dopolnilo javnega prevoza Hammarby Sjöstad je potrebno izpostaviti tudi majhen brezplačni trajekt (glej sliko 4.18), namenjen pešcem in kolesarjem, ki povezuje južni del središča mesta s sosesko Hammarby Sjöstad, in vozi vsakih 15 minut (Grønlund 2012; Fraker 2013).

Slika 4.18: Trajekt do soseske Hammarby Sjöstad

Vir: Lastna slika (2014).

4.4.3 URBANISTIČNI ELEMENTI TRAJNOSTNEGA RAZVOJA SOSESKE HAMMARBY SJÖSTAD

Pred začetkom trajnostne preobrazbe je imelo na območju soseske Hammarby Sjöstad zelo malo objektov zgodovinsko-kulturno vrednost. V bistvu je bil pod spomeniškim varstvom zaščiten samo en stavbeni kompleks (več o pomenu ohranjanja historičnih urbanističnih prvin za oblikovanje lokalne identitete soseske – glej poglavje 6). To je bivša tovarna žarnic Luma, ki danes deluje kot zasebni konferenčni center (Vestbro 2004).

V fazi načrtovanja trajnostne soseske so potekale v mestni upravi politične razprave glede gostote in višine stavb, števila parkirnih mest, deleža najemnih stanovanj, tipologije javnih storitev itd. Na koncu je bilo v veliki meri doseženo soglasje glede vpeljevanja principov urbanistične struje »Novi Urbanizem«[31] (Grønlund 2012). Danes je tako Hammarby Sjöstad uspešen primer sodobne trajnostne soseske z mešano uporabnostjo prostora z gosto posejanimi ulicami in bloki v kombinaciji z visoko kakovostnimi javnimi odprtimi urbanimi prostori in ambiciozno zastavljenimi zelenimi površinami (Grønlund 2012). Urbana struktura Hammarby Sjöstada z mešano namembnostjo, s knjižnico, šolami, z zdravstvenimi ustanovami, s prostori za rekreacijo, z restavracijami in lokalnimi poslovnimi zgradbami pripomore k ustvarjanju kakovostnega urbanega prostora oz. življenjskega okolja za stanovalce (Fraker 2013, 63).

Posebna pozornost in poudarek soseske Hammarby sta bila namenjena sistemu povezanih zelenih koridorjev. Shema zelenih koridorjev se povezuje z drugimi zelenimi javnimi površinami soseske in tvori nekakšen zeleni tok, ki se vleče vse do centra mesta (Mesto Stockholm 2007). Skoraj vsaka stanovanjska enota je oddaljena manj kot 100 metrov od parka in manj kot 300 metrov od vodnih površin jezera (Fraker 2013).

[31] Več o urbanistični struji Novi urbanizem – glej poglavje 7, str. 167, str. 168 in str. 170–177.

Slika 4.19: Javni zeleni prostori soseske Hammarby Sjöstad

Vir: Lastna slika (2014).

Zelo pomemben urbanistični element, ki močno vpliva na lokalno pripadnost in družbeno kohezijo, predstavlja skupnostni center trajnostne soseske. Hammarby Sjöstad nima »pravega« oz. tipičnega skupnostnega centra; ima pa poseben lokalni okoljski in informacijski center, ki se imenuje GlashusEtt (glej Picture 4, poglavje 6, str. 151). Prevzel je veliko funkcij skupnostnega centra (več o karakteristikah in delovanju skupnostnega centra GlashusEtt v poglavju 6, str. 149–150).

4.4.4 DRUŽBENO-EKONOMSKA URAVNOTEŽENOST SOSESKE HAMMARBY SJÖSTAD

Med planiranjem trajnostne soseske Hammarby Sjöstad je v občinskem svetu Stockholma potekal izrazit ideološki boj političnih strank glede vizije trajnostne soseske oz. določanja »komu bo namenjena nova trajnostna soseska« (glej Priloga J – Intervju z Björnom Cederquistom). Sredi devetdesetih let prejšnjega stoletja sta socialna vključenost in vzpostavitev heterogene lokalne skupnosti predstavljali pomembna cilja trajnostne soseske. Namen je bil omogočiti dovolj veliko število dostopnih najemnih stanovanj za gospodinjstva z nizkimi dohodki. Takrat vodilna levo usmerjena politična opcija je vztrajala pri občinskem lastništvu stanovanj, desno usmerjena pa je želela pospeševati prodajo javnih zemljišč zasebnim nepremičninskim vlagateljem (Vestbro 2004). Novoizvoljeni konservativni mestni svet Stockholma je leta 1998 spremenil koncept

trajnostne soseske Hammarby in zamenjal planirano lastniško strukturo Hammarby Sjöstada – 50 % občinskih stanovanj in 50 % zasebnih stanovanj – z novo shemo 70 % – 30 % v korist zasebnih stanovanj (Rutherford 2008; Dahlberg 2015).

Gentrifikacijo Hammarby Sjöstada je še dodatno poglobila postopna odprava (od leta 1980 naprej) stanovanjskih subvencij na Švedskem (Vestbro 2004). Soseska ima danes relativno homogeno socialno strukturo prebivalstva. Povprečni dohodek v soseski je približno 20 odstotkov nad mestnim povprečjem (Rutherford 2008; Fraker 2013). Prejemnikov socialne pomoči v Hammarby Sjöstadu je le med 1,0 % in 1,5 %, kar je bistveno manj kot mestno povprečje (5,7 %) (Rutherford 2008). 19 % prebivalcev soseske Hammarby Sjöstad ima etnične korenine zunaj Švedske, kar je manj od povprečja Stockholma (31 %) (Mesto Stockholm 2013). Glavni razlog za družbeno-socialno homogenost soseske je posledica visokih najemnin in cen stanovanj. V bistvu je mogoče trditi, da je stanovanjska politika ključni razlog za neustvarjanje družbene raznolikosti prebivalcev trajnostne soseske.

Socialno segregacijo oz. socialno monokromatičnost je občina skušala vsaj delno nevtralizirati z izgradnjo specifičnih urbanističnih struktur, ki prispevajo k večji družbeni heterogenosti. V trajnostni soseski je tako na primer: 59 apartmajev s 24-urno oskrbo za starejše, 30 delno oskrbovanih stanovanjskih enot za starejše občane, več študentskih domovanj, integrativna »stanovanjska skupnost« za duševno prizadete in dementne osebe, dvanajst vrtcev, tri osnovne šole, dve visoki šoli, knjižnica, kulturni center, okoljski center, zdravstveni domovi itd.

Oddelek za planiranje mesta Stockholm je veliko pozornosti namenil vzpostavitvi ekonomskih aktivnosti v soseski. V ta namen je mesto prvotno ponudilo dvoletno subvencijo brez najemnine za vse komercialne storitve soseske, da bi olajšalo poslovno aktivnost podjetij že v zgodnjih fazah razvoja soseske (Foletta 2011b). Strategija se je izkazala kot zelo uspešna in danes je v soseski 100 trgovin, restavracij, poslovnih storitev in obrtnikov. V sami soseski je zaposlenih več kot 5000 ljudi (Foletta 2011b).

V trajnostni soseski Hammarby Sjöstad je zelo aktivno tudi skupnostno društvo, imenovano HS2020, ki ga vodi bivši evropski komisar Allan Larsson, ki tudi sam živi v trajnostni soseski. HS2020 se ukvarja predvsem z ozaveščanjem lokalnih prebivalcev glede pomena trajnostnega transporta, trajnostnega upravljanja z energijo, načinov recikliranja itd. Asociacija HS2020 deluje tudi kot vez med lokalnimi prebivalci, lastniki blokov ter podjetij z namenom ustvarjanja novih prihodnjih trajnostnih urbanih rešitev (glej tudi Priloga I – Intervju s Helene Wintzel; Priloga K – Intervju z Alanom Larssonom).

4.5 TRAJNOSTNA SOSESKA KRONSBERG, HANNOVER, NEMČIJA

Območje Kronsberga je bilo že več let pred začetnim planiranjem trajnostne soseske označeno v urbanističnih načrtih mesta Hannover kot nekakšno »rezervno« oz. »potencialno zazidljivo« stanovanjsko zemljišče. Zaradi tega je občina na tem območju dosledno odkupovala zemljišča (Rumming 2004).

Za končno odločitev glede začetka dejanske implementacije trajnostne soseske Kronsberg pa sta bila ključna dva vzvoda. Osnovni razlog za nastanek trajnostne soseske je bil izbor Hannovra leta 1990, da gosti svetovno razstavo EXPO leta 2000. Skladno z geslom razstave EXPO 2000 – »Človeštvo, Narava, Tehnologija« je mesto Hannover nameravalo pri gradnji stanovanj preizkusiti vsa dotedanja razpoložljiva znanja oz. tehnike ekološke optimizaciji (Fraker 2013). Drugi dejavnik, ki je bistveno pripomogel k nastanku soseske, je bilo veliko povpraševanje po stanovanjih v Hannovru v zgodnjih devetdesetih letih prejšnjega stoletja (Energy Cities 2008). Kmalu po padcu berlinskega zidu se je Hannover soočal z velikim pomanjkanjem stanovanj tudi zaradi množične priselitve prebivalstva iz nekdanje NDR (Bächtold 2013). Tudi v Hannovru, podobno kot v vseh ostalih obravnavanih trajnostnih soseskah, je bila mestna uprava v času planiranja trajnostne soseske sestavljena iz koalicije socialnih demokratov in stranke zelenih, kar je pripomoglo k trajnostni urbani vizije soseske (Energy Cities 2008).

Načrtovanje trajnoste soseske Kronsberg je sledilo dvema splošnima ciljema mesta Hannover glede trajnostnega urbanega razvoja (Schottkowski-Bahre 2000): (1) mesto Hannover je leta 1992 izdalo načrt za zmanjšanje emisij ogljikovega dioksida (CO_2) za 25 odstotkov v primerjavi z ravnijo emisij leta 1990; (2) skladno z načeli Agende 21 je mesto nameravalo vzpostaviti vizijo urbanega razvoja, ki hkrati spodbuja gospodarsko rast, izboljšuje kakovost življenja in varuje okolje. Za uresničevanje obeh ciljev v okviru trajnostne soseske Kronsberg je namenski sklad za EXPO 2000 Hannovru dodelil izdatno finančno pomoč. Sredstva so bila namenjena trem velikim krovnim projektom v okviru EXPO 2000 (Schottkowski-Bahre 2000.), poimenovanim »Ekološka optimizacija«, »Vrtno mesto« in »Mesto kot družbeni habitat«. Realizacijo trajnostne soseske so dodatno omogočila namenska sredstva Zveznega ministrstva za okolje Spodnje Saške regije, mesto Hannover in približno 30 zasebnih vlagateljev (Haaren in Reich 2006).

Kronsberg leži v neposredni bližini podeželja, vendar ima hkrati vse prednosti urbane soseske: odlične prometne povezave, delovna mesta, kulturne, poslovne in zabaviščne centre v soseski oz. v neposredni bližini. Ko bo končana, bo soseska obsegala 6000 stanovanj, v katerih bo živelo približno 15000 ljudi (Fraker 2013). V soseski oz. v neposredni bližini je predvidenih tudi 2000 novih delovnih mest (Energy Cities 2008; Fraker 2013).

4.5.1 TRAJNOSTNA RABA NARAVNIH VIROV V SOSESKI KRONSBERG

Planerji trajnostne soseske so oblikovali poseben energijski koncept soseske, ki je bil povsem skladen s cilji energetske politike mesta iz leta 1992: (1) energetsko učinkovita gradnja objektov (max. poraba 50–55 kWh/m2 na leto za ogrevanje stanovanj); (2) učinkovita izraba energije s soproizvodnjo toplote in električne energije (CHP); in (3) povečanje proizvodnje energije iz obnovljivih virov. Skladno z energijskim konceptom so v Kronsbergu gradili nizko energetske hiše oz. bloke s posebnim standardom Low Energy Houses – LEH[32] (Fraker 2013; Rumming 2004).

Sistem oskrbe z energijo z dvema postajama CHP v soseski Kronsberg se je izkazal za zelo učinkovitega (Fraker 2013). CHP postaji zagotavljata soseski toploto (s toplo vodo) in del električne energije. Večino električne energije pa v Kronsbergu proizvajajo vetrne elektrarne. Majhno že obstoječo vetrno turbino (280 kW) sta dopolnili dve veliko večji, ki generirata 1,5 MW in 1,8 MW energije. Poleg vetrne energije v soseski izkoriščajo tudi sončno energijo. Štiri inštalacije sončnih panelov proizvajajo električno energijo v višini 45 kW. Skupaj obnovljivi viri (vetrna in sončna energija) proizvedejo 3,6 MW, kar znaša 72 % celotne porabe elektrike v soseski (5,0 MW) (Fraker 2013).

Trajnostna soseska Kronsberg predstavlja tudi primer dobre prakse celovitega sistema upravljanja z vodami (Copur 2006). Cilji sistema upravljanja z vodami na ravni soseske so bili (Rumming 2004): (1) »polnaravni« sistem za decentralizirano upravljanje deževnice, ki posnema, kolikor je mogoče naravno odvodnjavanje, (2) omogočanje pitne vode s posebnim poudarkom na varčevanju porabe s pomočjo varčevalnih naprav in (3) dvig ozaveščenosti stanovalcev soseske na področju porabe vode z izobraževanjem in informiranjem Kronsbergove lokalne agencije za okolje »KUKA« (Rumming 2004). Vse padavine na pozidanih in asfaltiranih površinah v soseski se absorbirajo, zbirajo in postopoma sprostijo (Energy Cities 2008). Kar 61 % običajno nepropustnih površin različnih vrst, vključno s parkirišči in cestami, so v trajnostni soseski vodno prepustne (Copur 2006).

Glede upravljanja in ravnanja z odpadki so cilji v soseski primarno temeljili na doslednem zmanjševanju količine odpadkov in recikliranju (Rumming 2004). Kar 80 % vseh proizvedenih odpadkov se v soseski reciklira (Energy Cities 2008).

[32] Standard Kronsberg Low Energy House (LEH) se je uporabljal za vse stavbe soseske Kronsberg. Poleg tega so v soseski Kronsberg zgradili osem vrstnih hiš, zgrajenih s standardom pasivne hiše (15 kWh/m2 na leto) (Fraker 2013).

4.5.2 TRAJNOSTNI PROMET SOSESKE KRONSBERG

Cilj v povezavi s prometom v soseski je bil zagotoviti trajnostni sistem prevoza, ki bi čim bolj zmanjšal uporabo osebnega avtomobila in bi privilegiral ter spodbujal hojo, kolesarjenje in uporabo javnega prevoza. Zaradi učinkovitega sistema javnega prometa se danes samo 20 odstotkov prebivalcev soseske dnevno vozi z avtomobilom (Fraker 2013). Javni trajnostni promet temelji predvsem na hitrem tramvaju (glej sliko 4.20), ki povezuje sosesko s središčem mesta in z glavno železniško postajo (Dębczak in Szymski 2012). S tramvajem je od soseske Kronsberg do centra mesta Hannover potrebnih le 17 minut. Tri tramvajske postaje so nameščene v neposredni bližini oz. ob soseski. Vsaka tramvajska postaja je v razdalji največ 600 m od vsakega stanovanja soseske.

Slika 4.20: Tramvaj v soseski Kronsberg

Vir: Lastna slika (2015).

Poleg tramvaja je soseska povezana s centrom mesta z več avtobusnimi linijami. Avtobusne postaje so nameščene v centru soseske (Bächtold 2013; Energy Cities 2008). Sistem javnega prevoza (tramvaji, avtobusi) je bil načrtovan tako, da je bil pripravljen in funkcionalen že pred vselitvijo prvih prebivalcev soseske (Energy Cities 2008).

Parkirišča za avtomobile so na voljo v podzemnih garažah in na ulicah soseske Kronsberg. V povprečju je v soseski zagotovljenih 0,8 parkirnih mest na stanovanjsko enoto (Fraker 2013). Načrtovalci soseske so implementirali zgledno urejene pešpoti in kolesarske poti znotraj same soseske in tudi kakovostno urejeno dolgo kolesarsko ter pešpot, ki povezujeta center mesta Hannover s sosesko Kronsberg.

Slika 4.21: Ulice brez avtomobilov v soseski Kronsberg

Vir: Lastna slika (2015).

4.5.3 URBANISTIČNI ELEMENTI TRAJNOSTNEGA RAZVOJA SOSESKE KRONSBERG

Poudarki trajnostnega urbanističnega načrtovanja soseske Kronsberg so bili na razvoju heterogenega urbanega prostora, na dostopnem trajnostnem transportu, na kakovostnem odprtem javnem prostoru ter na zmanjševanju razdalje med domom in delovnim mestom (Bächtold 2013).

Trajnostna soseska Kronsberg se razteza vzdolž istoimenskega pobočja.. Njena geometrijska oblika je prilagojena tramvajskim tračnicam, ki potekajo iz centra Hannovra do področja, kjer je potekala svetovna razstava EXPO 2000. Več kot štirideset arhitektov je pri oblikovanju soseske uporabljajo različne pristope in arhitekturne rešitve. Namen je bil ustvariti raznoliko prostorsko ureditev soseske, vendar z ohranjanjem njene specifične enovitosti (Fraker 2013). Pomemben arhitekturni cilj je bil tudi ustvariti jasne zunanje meje soseske, ki krepijo identiteto lokalnih prebivalcev soseske.

Eden od ciljev pri načrtovanju je bil ustvariti relativno gosto naseljeno sosesko. Bloki ob vpadnici oz. ob tračnicah imajo štiri do pet nadstropij (gostota območja je 200 enot na hektar). Gostota pozidave se postopno zmanjšuje premo sorazmerno z oddaljevanjem od postaj tramvaja.

Ob vznožju hriba na skrajni točki soseske so postavljene večinoma enodružinske hiše, tako je gostota pozidave manjša (Bächtold 2013; Fraker 2013).

V skladu z idejno zasnovo Kronsbergovega koncepta, tj. »vrtno mesto«, so planerji soseske vključili več ekoloških/okoljskih dimenzij v temeljni arhitekturni plan. Bistveni cilji planiranja, povezanih s konceptom vrtnega mesta, so bili (Rumming 2004): (1) prehod na ekološko kmetijstvo, (2) ohranjanje/krepitev raznolikosti živalskih in rastlinskih vrst, (3) zaščita naravnih biotopov in (4) izboljšanje lokalnih rekreacijskih površin z upoštevanjem/ohranjanjem naravne krajine.

Ohranjanje lokalne biotske raznovrstnosti je predstavljalo enega od glavnih fokusov pri razvoju trajnostne soseske (Haaren in Reich 2006). Na 40 hektarjih velikem zemljišču, ki se razteza med stanovanjskim območjem Kronsberga in kmetijskimi zemljišči, so bila implementirana t. i. skupna zemljišča, imenovana Allmende. Posebno vmesno območje je namenjeno pašnikom za ovce ter tudi različnim vrstam rekreacijskih površin (Haaren in Reich 2006). Na zelenih površinah na mejah soseske Kronsberg, kjer ne gnojijo s pesticidi in z umetnimi gnojili, se je samodejno razvila zelo bogata in dragocena flora, ki omogoča življenje velikemu številu ogroženih vrst. Nekatere od identificiranih vrst živali in rastlin niso bile prisotne v regiji več kot 40 let (Haaren in Reich 2006).

Slika 4.22: Meja, ki loči Allmende in sosesko Kronsberg

Vir: Lastna slika (2015).

Poleg zelenih površin so za sosesko zelo pomembni tudi drugi javni prostori. Na primer, vsi trgi soseske predstavljajo pomembne urbane prostore, kjer se lokalni prebivalci zadržujejo in socializirajo. Trgi so bili načrtovani s sodelovanjem oz. participacijo lokalnih prebivalcev. Glavni trg soseske se nahaja v središču soseske nasproti tramvajske postaje. Obkrožajo ga družbeno pomembne storitvene funkcije: nakupovalni center, kavarne, restavracije, skupnostni in umetnostni center Krokus (glej poglavje 6, Picture 3, str. 148 in str. 146–147), zdravstveni dom, ekumenska cerkev, mladinski klub, namestitev za starejše občane in center za socialno delo (Fraker 2013). Vse družbene ustanove in pomembne storitve so tako vzpostavljene v bližini stanovanj. V soseski Kronsberg se nahaja tudi osnovna šola s športno dvorano, trije vrtci ter okoli 17 dodatnih skupnostnih prostorov (Bächtold 2013).

Slika 4.23: Glavni trg soseske Kronsberg

Vir: Lastna slika (2015).

4.5.4 DRUŽBENO-EKONOMSKA URAVNOTEŽENOST SOSESKE KRONSBERG

Eden od ciljev programa soseske Kronsberg je bil oblikovati družbeno raznoliko sosesko, ki bi preprečevala socialno izključenost z omogočanjem različnih oblik financiranja/subvencioniranja najemnin in s ponujanjem različnih tipologij lastništva stanovanj (Rumming 2004).

Planerji soseske so namenili poseben poudarek večnamenski uporabi urbanega prostora oz. multifunkcionalnosti soseske. Posebej je potrebno izpostaviti družbeno in kulturno središče skupnosti Kronsberga – t. i. »Krokus« (podroben opis skupnostnega centra soseske Krokus je predstavljen v poglavju 6). Lokalni prebivalci soseske v Krokusu sooblikujejo družbeno odgovorne, kulturne, okoljske aktivnosti s posebnimi namenskimi društvi. Center Krokus ima svojo knjižnico in deluje multidimenzionalno kot kulturni, družbeni, socialni, mladinski in delovni center. Ima šest sejnih sob, eno dvorano, center mladih, otroški oddelek itd. Vse sobe se uporabljajo večnamensko, npr. za festivale, konference, klubska srečanja itd. (Bächtold 2013).

Cilj oblikovanja heterogene družbeno mešane večnamenske soseske, ki preprečuje socialno izključenost in zagotavlja cenovno ugodne najemnine, je bil v veliki meri dosežen. Skoraj 50 odstotkov stanovanj je subvencioniranih, kar omogoča cenovno dostopnost najemnin in posledično veliko raznolikost prebivalcev: ena tretjina prebivalcev je priseljencev; ena četrtina je mlajših od osemnajst let; šestnajst apartmajev je namenjenih prebivalcem s posebnimi

potrebami; veliko število prebivalcev je prejemnikov posebnih storitev za starejše občane; 10 odstotkov stanovanjskih enot predstavljajo socialna stanovanja (Fraker 2013).

Prednostni cilj programa (so)financiranja stanovanj, ki so jo vzpostavile zvezne, državne in lokalne oblasti, je zagotoviti stabilno socialno raznolikost prebivalcev soseske Kronsberg na dolgi rok. Mešanica raznovrstnih tipologij stanovanj in virov financiranja/subvencioniranja najemnin ohranja socialno raznovrstno sestavo prebivalstva soseske in preprečuje njeno gentrifikacijo (Bächtold 2013).

V neposredni bližini trajnostne soseske je bilo zagotovljenih okoli 3000 delovnih mest. Veliko novih podjetij se nahaja v novih stavbah LBS. Delovna mesta ponujajo tudi bančne ustanove DVG in več podjetij, ki se ukvarjajo z obdelavo podatkov in se nahajajo v neposredni bližini soseske. Nedaleč od soseske je še na voljo dodatnih 700 delovnih mest pri multinacionalki IBM, sejemski družbi Deutsche Messe AG in v bivših stavbah EXPO 2000, ki so zdaj uporabljene za nove komercialne namene (Rumming 2004). Poleg tega je načrt trajnostne soseske vključil tudi veliko ekološko kmetijsko površino, ki se razprostira na 120 ha, kar tudi pozitivno vpliva na končno število potencialnih delovnih mest soseske Kronsberg (Haaren in Reich 2006).

4.6 TRAJNOSTNA SOSESKA GWL TERREIN, AMSTERDAM, NIZOZEMSKA

Trajnostna soseska GWL Terrein je umeščena v zahodnem okrožju Amsterdama, imenovanem Westerpark, ki je oddaljen tri kilometre od ožjega centra Amsterdama. Razprostira se na 6 hektarjih na območju bivšega občinskega vodovodnega podjetja Gemeente Waterleidingen (GWL), po katerem je nova soseska podedovala tudi ime (Foletta 2011a).

Med letoma 1851 in 1994 je območje, na katerem stoji današnja trajnostna soseska, zagotavljalo mestu Amsterdam pitno vodo (GWL Terrein 2010a). Vodno podjetje je nemoteno poslovalo na lokaciji današnje soseske vse do sredine 80. let prejšnjega stoletja. Takrat se je občinsko vodno podjetje zaradi dotrajanosti infrastrukture odločilo zgraditi novo črpalno postajo na drugi lokaciji Amsterdama. Na ta način se je v neposredni bližini centra Amsterdama sprostilo 6 hektarjev zazidljivega prostora (GWL Terrein 2010a). Leta 1989 se je mestni svet odločil, da bo prostor bivšega občinskega vodnega podjetja namenil stanovanjski gradnji. K nameri o spremembi statusa zemljišča (iz industrijskega v rezidenčni) je pripomoglo tudi lobiranje aktivistov lokalnega urbanega območja (»Staatsliedenbuurt«), ki so idejno zasnovali sosesko

brez avtomobilov. Lokalno urbano okrožje Westerpark je takrat politično vodila zeleno-rdeča koalicija, ki je težila k trajnostnim urbanističnim rešitvam in je bistveno pripomogla k vpeljavi trajnostne soseske (Doren in drugi 2016). Po odločitvi oz. nameri gradnje trajnostne soseske je Mednarodni inštitut za urbano okolje[33] proučil izvedljivost preobrazbe industrijskega območja v trajnostno sosesko. Analiza inštituta na področju trajnostnega upravljanja se je osredotočila na vodo, energijo, odpadke in vegetacijo. Novembra 1992 so bile vse ideje vključene v poseben »memorandum« trajnostne soseske (GWL Terrein 2010b).

Zasebni razvijalci oz. podjetja niso bili zainteresirani za gradnjo soseske z ambicioznimi (in dražjimi) okoljskimi standardi, zato so stekli pogovori s stanovanjskimi družbenimi korporacijami (nekakšni stanovanjski skladi). Za GWL Terrein projekt so na koncu bile izbrane štiri mešane stanovanjske družbe (Protestant Housing Association, Rochdale Housing Association, Zomers Buiten Housing Association, Doelen Housing Foundation), ki so skupaj ustanovile namensko projektno podjetje, imenovano Ecoplan Foundation. Le-to je usklajevalo, razvijalo in financiralo celotno sosesko GWL Terrein. Po končni postavitvi urbanega plana (november 1993) sta mestno okrožje Westerpark in Fundacija Ecoplan izbrali 10 arhitektov (GWL Terrein 2010b). Gradnjo trajnostne soseske so začeli maja 1994 in jo končali februarja 1998. V soseski je 591 stanovanj (273 najemnih socialnih stanovanj ter 318 lastniških stanovanj) (Westerpark municipal district council 2000). Pri tržnih stanovanjih, namenjenih prodaji, so imeli lokalni prebivalci, ki so živeli v neposredni bližini, prednost pri nakupu.

4.6.1 TRAJNOSTNA RABA NARAVNIH VIROV V SOSESKI GWL TERREIN

Področje trajnostne rabe naravnih virov v soseski GWL Terrein je mogoče razdeliti v štiri tematske sklope: trajnostna gradnja in materiali, trajnostno upravljanje z vodami, trajnostno upravljanje z energijo in recikliranje.

Pri načrtovanju in gradnji trajnostne soseske so bili izbrani rešitve in standardi, ki so v tistem času na Nizozemskem veljali za varčne zelene stavbe. Ključne uporabljene trajnostne rešitve pri gradnji so bile: integrirana veriga surovin (surovine naj ostanejo oz. krožijo v soseski; količina smeti naj se postopoma zmanjšuje; recikliranje naj se spodbuja); energijski koncept (varčevanje z energijo in izboljšanje učinkovitosti) in spodbujanje kakovosti (uporaba trajnega kakovostnega

[33] V ang. The International Institute for Urban Environment.

materiala). Pri izbiri gradbenih materialov je Ecoplan uporabil »preferenčni seznam« mesta Amsterdam (verzija 1993). Seznam je vključeval vse tipologije gradbenega materiala (stopnišča, sanitarne armature, laki itd.), ki so bile razvrščene glede na stopnjo prijaznosti do okolja. Pri gradnji trajnostne soseske so, kolikor se je le dalo, vključevali najbolj trajnosten material iz omenjenega seznama, četudi je bil nekoliko dražji (npr. opeke, smrekov les, macesnov les, aluminij itd.) (GWL Terrein 2010č).

Stanovanja so zgrajena v skladu s takratno EPN normo energetske učinkovitosti (poraba 750 m3 zemeljskega plina letno). Nizozemski standard tistega časa je bil 1400 m3. Prihranek energije so dosegli z (GWL Terrein 2010č): dobro izolacijo stavb, izkoriščanjem pasivne sončne energije (položaj sever/jug za večino stanovanjskih blokov) ter s kogeneracijo (CHP postaja, ki dobavlja toplo vodo za celotno sosesko). V soseski ne izkoriščajo obnovljivih virov energije – sončnih ali vetrnih elektrarn.

Varčna poraba vode je predstavljala tudi pomemben cilj pri načrtovanju soseske, ki je privedel do številnih inovativnih tehnoloških rešitev. Ena od inovativnih rešitev, vpeljanih v sosesko, predstavlja nameščanje t. i. »Gustavsbergovih varčnih WC-jev«, pri katerih se za splakovanje uporabi le 3,5 do 4 litre vode namesto standardnih 6 litrov (GWL Terrein 2010č; Doren in drugi 2016).

Na začetku je bil implementiran poseben sistem uporabe t. i. sive vode (deževnice) za splakovanje stranišč. Izkazalo pa se je, da je uporaba deževnice v soseski GWL Terrein eden od manj uspešnih okoljskih trajnostnih poskusov. Uveden sistem se je izkazal za neučinkovitega, saj so se filtri zelo pogosto zamašili. Potrebno je bilo veliko vzdrževanja, saj je za črpanje deževnice zahteval razmeroma veliko količine energije. Zaradi omenjenih problemov je bila uporaba deževnice sčasoma opuščena (GWL Terrein 2010č).

Glede recikliranja je soseska GWL Terrein predstavljala prvo testno območje mesta Amsterdam, ki je bilo opremljeno s sistemom za podzemno zbiranje odpadkov. Danes je podzemno zbiranje odpadkov pogosta praksa v mnogih mestih (GWL Terrein 2010č).

Slika 4.24: Prvi podzemni sistem za zbiranje odpadkov v Amsterdamu (nameščen v soseski GWL Terrein)

Vir: Lastna slika (2015).

4.6.2 TRAJNOSTNI PROMET SOSESKE GWL TERREIN

Največji poudarek pri načrtovanju trajnostne soseske je bil namenjen trajnostnemu prometu. GWL Terrein je med vsemi analiziranimi soseskami edina, ki je brez izjeme (ne samo deklarativno) popolnoma brez avtomobilov. Prepoved velja za vsa osebna vozila z izjemo reševalnih vozil (GWL Terrein 2010č). Zaradi radikalnosti ukrepov na področju prometa (popolna prepoved avtomobilov) je soseska v znanstveni literaturi poimenovana tudi s podaljšanim imenom – GWL Terrein – soseska brez avtomobilov.[34] Vse ulice v soseski so bile grajene izključno za pešce in kolesarje. Posebnih ločenih kolesarskih stez v soseski ni, saj so vse ulice s t. i. mešano rabo, kjer si pešci delijo skupen prostor s kolesarji (Foletta 2011a). Kar 50 % prebivalcev soseske se dnevno vozi s kolesom, kar je zelo visok delež v primerjavi z že visokim povprečnim deležem mesta Amsterdam, ki je 30 % (Foletta 2011a).

[34] V angl. GWL Terrein Car-free.

Slika 4.25: GWL Terrein – soseska brez avtomobilov

Vir: Lastna slika (2015).

V trajnostni soseski je prostor za parkiranje avtomobilov zelo omejen. Nekaj parkirnih mest je postavljenih na zahodnem robu soseske. Za 600 stanovanj jih je na razpolago le 129. Od teh jih je pet namenjenih za »car sharing« – za souporabo avtomobilov (podjetja Diks in Green Wheels). Več kot četrtina gospodinjstev ima člansko izkaznico enega od podjetij »car-sharing« (ITDP Europe 2010).

V trajnostni soseski je na razpolago 0,2 parkirnih mest na gospodinjstvo. Ta delež je zelo nizek, še posebej za novo zgrajene četrti (GWL Terrein 2010č). Povprečje mesta Amsterdam je 0,72 parkirnih mest na stanovanje (Foletta 2011a). Ker je parkirišč tako malo, je čakalna lista za parkirno dovoljenje v soseski 7 let (Scheurer 2001; glej Intervju z Diegom Posom, Priloga M).

Soseska GWL Terrein je zelo dobro oskrbljena s sistemom javnega prevoza. Tik ob soseski je postavljena zadnja postaja mestnega tramvaja (linija 10), ki vozi vsakih 10 minut. Poleg tega je soseska povezana z dvema avtobusnima linijama, ki povezujeta sosesko z glavno železniško postajo (GWL Terrein 2010č; Foletta 2011a).

Vsi ukrepi lokalne urbane politike glede zmanjševanja odvisnosti od avtomobilov so bili uspešni. Raziskava je pokazala, da je 50 % vseh dnevnih potovanj rezidentov GWL Terreina

opravljenih s kolesom,[35] 30 % peš in samo 6 % z avtomobilom[36] (Foletta 2011a). Le približno 20 % prebivalcev trajnostne soseske poseduje lasten avtomobil[37] (Scheurer 2001; Foletta 2011a).

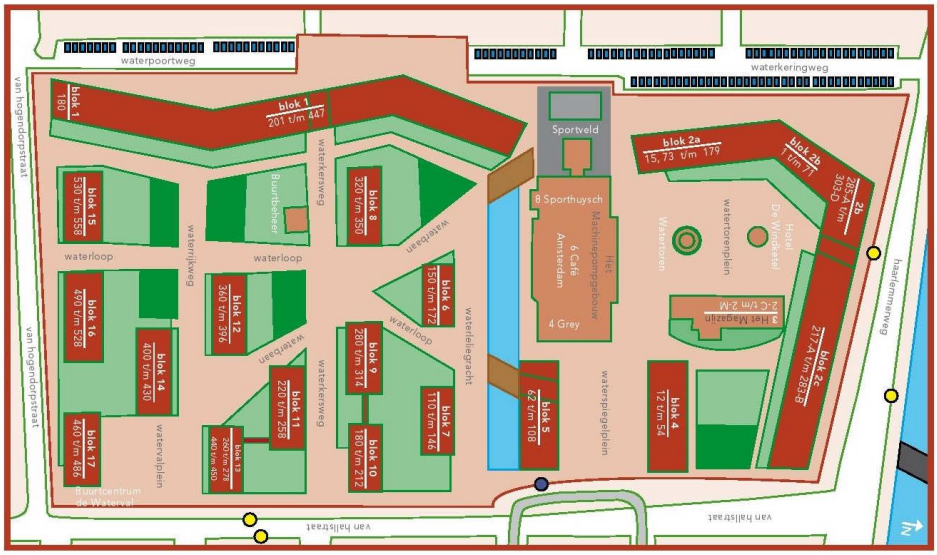
4.6.3 URBANISTIČNI ELEMENTI TRAJNOSTNEGA RAZVOJA SOSESKE GWL TERREIN

Urbanistični plan soseske je vključeval 17 različno velikih stanovanjskih stavb z visoko gostoto pozidave[38] (Foletta 2011a). Pri načrtovanju trajnostne soseske GWL Terrein so posebno pozornost namenili javnim prostorom, vključno z javnimi zelenimi površinami, otroškimi igrišči, skupnimi oz. s skupnostnimi vrtovi in z mešano rabo. Vsem novim stanovanjskim strukturam je bil dodeljen podoben barvni odtenek, da bi dosegli določeno stopnjo urbane kohezivnosti soseske (Foletta 2011a).

Najvišji stavbi soseske (Blok 1 in Blok 2; glej sliko 4.26) imata t. i. »zeleno streho«, posejano z različno vegetacijo, ki pa na žalost ni vidna zaradi višine stavb. Zeleni strehi, ki sta pokriti z mahom, zelišči in travami, zmanjšujeta toplotne izgube ter nudita vročinsko in zvočno izolacijo, hlajenje v vročem vremenu ter izboljšujeta kakovost zraka (GWL Terrein 2010č).

[35] V širšem urbanem okrožju Amsterdam West je povprečno 32 % vseh potovanj opravljenih s kolesom; povprečje mesta Amsterdam pa je 29 % (ITDP Europe 2010).
[36] V širšem urbanem okrožju Amsterdam West je povprečno 20 % vseh potovanj opravljenih z avtomobilom, povprečje mesta Amsterdam pa je 28% (ITDP Europe 2010).
[37] Povprečno lastništvo avtomobilov v soseski Gwl Terrein je 190 avtomobilov na 1000 prebivalcev; v širšem urbanem okrožju Amsterdam West je 310 avtomobilov na 1000 prebivalcev, v Amsterdamu pa 370 avtomobilov na 1000 prebivalcev (Foletta 2011a).
[38] GWL Terrein ima gostoto naseljenosti 230 oseb na hektar, Amsterdam West 78 oseb na hektar; mesto Amsterdam 34 oseb na hektar (Foletta 2011a).

Slika 4.26: Tloris trajnostne soseske GWL Terrein



Vir: Gwl Terrein (2010c).

V GWL Terreinu je integriran poseben umetni vodni kanal, ki učinkovito razdeli sosesko na dva dela (glej sliko 4.26). Na severnem delu je postavljen trg soseske, obdan z devetnadstropnimi stanovanjskimi stavbami, trgovinami in poslovnimi prostori. Južna stran soseske pa je posejana z odprtimi zelenimi površinami, otroškimi igrali in predvsem z urbanimi vrtovi, ki predstavljajo ključno stično točko lokalne skupnosti. V soseski je kar 85 skupnostnih vrtov, ki jih vzdržujejo njeni prebivalci (glej sliko 4.27). Prebivalcem omogočajo vrtovi priložnost za druženje, vzbujajo občutek odgovornosti do lokalnega prostora in utrjujejo lokalno identiteto prostora (Foletta 2011a). Poleg vrtov obstaja tudi več sadnih (stare sorte jablan in hrušk) in drugih dreves v soseski, ki jih prav tako vzdržujejo njeni prebivalci (GWL Terrein 2010č).

Slika 4.27: Urbani vrtovi trajnostne soseske GWL Terrein

Vir: Lastna slika (2015).

Planerji soseske so premišljeno umestili v prostor tudi obstoječe historične zgradbe. Večino dobro ohranjenih starih poslopij vodnega podjetja so ohranili in so danes namenjena kulturnim, poslovnim in družbenim dejavnostim. Na primer, »vodni stolp« so ohranili predvsem iz estetskega vidika, ki daje celotni soseski posebno identiteto (Scheurer 2001; glej sliko 4.29); stavba »vhodna vrata« bivšega vodnega podjetja danes služi kot skupnostni center trajnostne soseske (glej Picture 5, poglavje 6, str. 153); zgradba motorne črpalke vodnega podjetja je danes ena najbolj priljubljenih kavarn širšega urbanega območja (glej sliko 4.28), bivša zračna komora (Windketelhuis) se je spremenila v enosobni hotel, ki danes predstavlja najmanjši hotel v Amsterdamu itd. (Westerpark municipal district council 2000). Trajnostna soseska GWL Terrein predstavlja primer uspešne pretvorbe namenskosti historičnih urbanih objektov. Z njihovim ohranjanjem v soseski se hkrati krepi tudi lokalna identiteta prostora.

Slika 4.28: Bivša zgradba motorne črpalke vodnega podjetja – danes kot osrednja kavarna soseske GWL Terrein

Vir: Lastna slika (2015).

Slika 4.29: Ohranjen vodni stolp vodnega podjetja v trajnostni soseski GWL Terrein

Vir: Lastna slika (2015).

4.6.4 DRUŽBENO-EKONOMSKA URAVNOTEŽENOST SOSESKE GWL TERREIN

Učinkovito projektno vodenje in participacija vseh deležnikov sta bila ključna dejavnika za uspešno implementacijo trajnostne soseske GWL Terrein. Neprestano sodelovanje in komunikacija med ključnimi zainteresiranimi deležniki (stanovanjska združenja, arhitekti, okoljski strokovnjaki – svetovalci, lokalni prebivalci) so dejavniki, ki so pripomogli k uspešni implementaciji soseske (Doren in drugi 2016). »Zeleno usmerjeni« (bodoči) prebivalci so bili aktivno vključeni v celoten proces načrtovanja soseske in so sodelovali v interdisciplinarnih projektnih skupinah, ki so opredelile celotno strategijo planiranja in upravljanja trajnostne soseske (Doren in drugi 2016).

Za trajnostno sosesko ja bila oz. je še vedno ključnega pomena lokalna krovna zveza,[39] ki je bila ustanovljena, preden se je soseska leta 1996 začela graditi (Foletta 2011a). Krovna zveza GWL Terreina je vključevala lastnike bodočih stanovanj (stanovanjske družbe in združenja lastnikov), bodoče najemnike (lokalne prebivalce) in nekatera podjetja. Namen združenja sta spodbujanje trajnostnega značaja soseske in vzdrževanje socialne kohezije lokalne skupnosti (GWL Terrein 2010d; Foletta 2011a).

Vsi člani krovne organizacije vsak mesec plačujejo mesečni prispevek, s katerim je plačan tudi »hišnik – upravitelj soseske«, ki predstavlja nekakšno referenčno točko soseske glede

[39] Krovna zveza trajnostne soseske je poimenovana v angl. umbrella organization ali pa v nizoz. Koepelvereniging (glej Intervju z Diegom Posom, Priloga M).

vzdrževanja stanovanj in ostalih javnih prostorov (glej Intervju z Diegom Posom – Priloga M). Krovno združenje poleg rednih srečanj organizira za svoje člane tudi strokovna srečanja in nudi vodene oglede soseske[40] (Doren in drugi 2016).

Lokalni prebivalci soseske se občasno srečujejo na formalnih sestankih. Pogosto pa se družijo na neformalnih skupnostnih dejavnostih (nogometni turnirji, božične zabave itd.) (GWL-Terrein 2010d). Za sosesko GWL Terein so značilne t. i. delovne skupine. Na primer, posebna delovna skupina, poimenovana Sadna drevesa, je sestavljena iz lokalnih prebivalcev, ki v prostem času ohranjajo/vzdržujejo sadna drevesa soseske. Druga delovna skupina koordinira 80 malih urbanih vrtov soseske itd. Primer soseske GWL Terrein dokazuje, da lokalna urbana skupnost lahko samostojno upravlja skupnostne prostore (vrtove, parke, drevesa) (Westerpark municipal district council 2000).

Od leta 1996 je soseska imela tudi svoj lokalni časopis de Waterspiege, vendar je leta 2009 prenehal izhajati. Od takrat so lokalne informacije na voljo preko spletne strani in lokalne mailing liste (GWL-Terrein 2010d).

V trajnostni soseski GWL Terrein je kar 90 % prebivalcev, starih med 31 in 60 let. Veliko je tudi družin z mlajšimi otroki. Tržna cena stanovanj je v povprečju za 30 % višja v primerjavi s stanovanji v preostalem okrožju Zahodnega Amsterdama (»Westerpark District«) (Foletta 2011a). 55 % stanovanjskih enot je lastniških in 45 % najemniških. Kar 60 % od najemniških stanovanj predstavljajo socialna najemniška stanovanja (Foletta 2011a). Tako visok odstotek socialnih stanovanj preprečuje gentrifikacijo urbanega prostora in omogoča večjo heterogenost populacije. Za trajnostno sosesko je pomembna tudi lokalna ekonomska aktivnost, ki se izkazuje z več kot 50 podjetji, ki zaposlujejo več kot 200 ljudi (Foletta 2011a).

[40] Kot avtor disertacije sem se tudi sam udeležil vodenega ogleda soseske GWL Terrein (aprila 2015).

4.7 TRAJNOSTNA SOSESKA EVA LANXMEER, CULEMBORG, NIZOZEMSKA

Trajnostna soseska EVA Lanxmeer je tipičen urbani projekt, nastal s pristopom »od spodaj navzgor« (»bottom up approach«). Koncept trajnostne soseske EVA Lanxmeer, ki leži na robu nizozemskega mesteca Culemborg, je razvila skupina nizozemskih znanstvenikov (Energy Cities 2008). V letu 1994 je skupina različnih profilov, a s podobnimi željami in interesi glede trajnostnega razvoja, organizirala vrsto delavnic s poudarkom na proučevanju možnosti implementiranja trajnostne urbane soseske. V delavnicah so bili izvedeni osnutki razvoja bodoče soseske, ki so vključevali ekološko gradnjo, trajnostno arhitekturo, permakulturno kmetijstvo in aktivno udeležbo prebivalcev soseske. Istega leta so ustanovili Fundacijo EVA[41] z namenom nadaljnjega razvijanja ideje o trajnostni soseski (Wals in Noorduyn 2010).

Majhno nizozemsko mesto Culemborg (27000 prebivalcev) blizu mesta Utrecht je bilo naklonjeno ideji trajnostnega načrtovanja soseske. Mesto je že vrsto leto pred gradnjo trajnostne soseske aktivno podpiralo vlaganje v energetsko učinkovitost stanovanj in v trajnostno upravljanje zelenih površin znotraj mestnih predelov, vendar nikoli ni trajnostno celovito delovalo na ravni urbane soseske. Mestna oblast je bila pri urbanem udejstvovanju naklonjena večji participaciji lokalnih prebivalcev. Leta 1995 je Fundacija EVA občinskemu svetu Culemborg predstavila svoje načrte o razvoju trajnostne soseske in sodelovanje se je začelo.

Fundacija EVA je kreirala urbanistične načrte s pomočjo posvetovalnih srečanj in delavnic, na katerih so sodelovali tudi bodoči prebivalci soseske (Energy Cities 2008). Zadnji sprejeti urbani načrt območja soseske je na 24 hektarjih predvideval 200 hiš in stanovanjskih blokov ter številne pisarne in delavnice (Wals in Noorduyn 2010). Gradnja trajnostne soseske se je končala leta 2009.

Za razvoj inovativne trajnostne soseske so bile zelo pomembne različne nepovratne subvencije in ostala finančna sredstva: npr. nemško ministrstvo za izobraževanje, znanost, tehnologijo in raziskave je izbralo trajnostno sosesko EVA Lanxmeer kot demonstracijski projekt in ji zagotovilo določena finančna sredstva; nizozemsko ministrstvo za prostorsko načrtovanje in okolje je namenilo finančno subvencijo za pripravo urbanističnega načrta soseske; poseben nizozemski sklad za arhitekturo je prispeval zasebno donacijo itd. (Energy Cities 2008). V okviru

[41] EVA: v niz. Educatie, Voorlichting en Advies; v angl. Education, Information and Advice; v sl. Edukacija, informiranje in svetovanje.

posebnega natečaja nizozemske vlade v letu 2000 je projekt EVA Lanxmeer pridobil status »Nacionalni primer dobre prakse intenzivne uporabe urbanega prostora« (Eva-Lanxmeer.nl).

Končni trajnostni program soseske vključuje več področij (Energy Cities 2008; Varnay 2013):

• *Energija*. Trajnostni energetski sistemi; prizadevanje za ogljično nevtralnost; zmanjševanje porabe fosilnih energentov; pridobivanje energije iz odpadkov in odplak; energetsko neodvisna stanovanja, ki niso priključena na omrežje.

• *Voda*. Integrirani sistem upravljanja z vodami in lokalno biološko čiščenja vode; uporaba deževnice za stranišče in pralni stroj; odplake se uporabljajo za proizvodnjo bioplina.

• *Materiali*. Program trajnostnih stavb; zaključen cikel materialov; ponovna uporaba odpadkov in recikliranje.

• *Prostorsko upravljanje*. Trajnostno urbano načrtovanje – uravnoteženost med območji stanovanjske rabe in zelenimi površinami, javnimi in zasebnimi vrtovi.

• *Transport*. Funkcionalen in dostopen javni prevoz; omejitev uporabe avtomobila.

• *Hrana*. Ekološko kmetijstvo; biološka prehrana; neposredni stik z naravo.

• *Socialna kohezija*. Participacija/vključevanje prebivalcev v proces načrtovanja in gradnje soseske; raznovrstnost tipologij stanovanj glede na arhitekturo, velikost in cenovno dostopnost, kar posledično omogoča družbeno raznolikost urbanega prostora.

• *Urbana večnamenskost*. Vključevanje/integracija različnih funkcij v urbanem prostoru: bivanje, delo, rekreacija, izobraževanje itd.

4.7.1 TRAJNOSTNA RABA NARAVNIH VIROV V SOSESKI EVA LANXMEER

Povprečna letna poraba energije v trajnostni soseski EVA Lanxmeer je približno 1250 m3 plina in 2.500 kWh električne energije/na gospodinjstvo/na leto. Energija je proizvedena predvsem z obnovljivimi viri (majhne vetrne turbine na hišah; toplarna na biomaso za ogrevanje; sončne celice za električno energijo – glej sliko 4.30; sončni kolektorji za toplo vodo itd.).

Slika 4.30: Sončne celice v soseski EVA Lanxmeer

Vir: Lastna slika (2015).

Arhitekturna zasnova stavb v soseski povečuje energetsko učinkovitost. Strehe so visoke, nagnjene pod kotom in prostorsko usmerjene na tak način, da omogočajo optimalno izrabo sončne energije. Nekatere hiše, obrnjene proti severu, imajo dodatno dvojno stekleno steno za zadrževanje toplote – »efekt tople grede« (Wals in Noorduyn 2010). Celotna soseska ima tudi učinkovito izolacijo stavb iz naravnih materialov (Energy Cities 2008).

Za ogrevanje vseh stanovanj soseske skrbi lokalna energetska kooperativa Thermo bello. Gre za podjetje daljinskega ogrevanja (v angl. distric heating), ki je v lasti prebivalcev trajnostne soseske. Vse se je začelo, ko je mestno vodno podjetje odkrilo, da se pri črpanju podzemne vode sprosti odvečna (dodatna) temperatura. Ugotovljeno je bilo, da se ta energija lahko pretvori/uporablja za mestno ogrevanje stavb (Eva-Lanxmeer.nl). Občina ni pokazala nobenega interesa za implementacijo ogrevalnega sistema in izkoriščanje odvečne energije. Štirje lokalni prebivalci trajnostne soseske EVA Lanxmeer pa so se odločili raziskati možnosti vzpostavitve lokalne energetske družbe in prevzema ogrevalnega sistema. Na koncu je 68 ljudi iz soseske sodelovalo pri procesu nastajanja nove energetske kooperative Thermo bello (Dócia in drugi 2015).

Varovanje voda je tudi eno od ključnih načel trajnostne soseske EVA Lanxmeer. V soseski so lokalni prebivalci uvedli t. i. zaprti vodni krog. To pomeni, da imajo vse stavbe nekakšne ločene

vodne sisteme. En sistem predstavlja sistem čiste pitne vode, ki prihaja iz dveh pip (kuhinja in kopalnica). Drug vodni sistem vsebuje tako imenovano »gospodinjsko vodo«, ki je v bistvu »siva voda« (padavinska voda), in se uporablja za splakovanje stranišč, za pranje ter za čiščenje (Eva-Lanxmeer.nl). Tretji sistem je t. i »črna voda« (odplake), ki se pretaka naprej do lokalne bioplinarne in predstavlja dodaten vir energije, ki je ponovno na voljo prebivalcem EVA Lanxmeera (Energy Cities 2008). Celotna infrastruktura soseske tako vključuje tri ločene sisteme cevi (Wals in Noorduyn 2010).

Skoraj vsaka stavba ima svoj vrt, na katerem prebivalci zbirajo bio odpadke za bio gnojila. Ostale neuporabljene zelene »odpadke« pa zbira posebni t. i. »mestni kmet« soseske, ki pobira tudi bio odpadke, ustvarjene v drugih soseskah Culemborga. »Mestni kmet« prinaša neuporabljene organske odpadke v lokalno tovarno bioplina (Wals in Noorduyn 2010).

4.7.2 TRAJNOSTNI PROMET SOSESKE EVA LANXMEER

Cilj soseske EVA Lanxmeer predstavlja tudi vzpostavitev trajnostne mobilnosti, zato je v soseski omejena uporaba avtomobilov in spodbujena uporaba koles. Soseska je v bistvu skoraj brez avtomobilov, saj le-ti ne smejo biti parkirani pred hišami, ampak samo na občinskih parkiriščih v neposredni bližini soseske. Edina izjeme so dostave, selitve, popravila itd. Prebivalci so pred vselitvijo v trajnostno sosesko zavežejo s podpisom posebne klavzule za »sosesko brez avtomobilov« (Wals in Noorduyn 2010).

Starejši prebivalci in invalidi imajo svoje domove na robovih soseske v bližini skupnih parkirišč (Holubec 2010). Priljubljena je tudi souporaba avtomobilov (car sharing), kjer si 55 gospodinjstev deli vozni park sedmih avtomobilov. Povprečno lastništvo avtomobilov v soseski (oz. ob soseski) je 0,7 avtomobilov/gospodinjstvo (Energy Cities 2008).

Prepoved vožnje v soseski, souporaba avtomobilov, privlačen sistem kolesarskih poti in pešpoti; zelo majhna razdalja do Culemborgove osrednje železniške in avtobusne postaje ter centra mesta so dejavniki, ki zmanjšujejo rabo avtomobilov.

Glede javnega prevoza trajnostne soseske je izjemna bližina glavne železniške postaje mesta Culemborg, saj leži tik ob soseski EVA Lanxmeer.

Slika 4.31: Železniška postaja mesta Culemborg tik ob soseski EVA Lanxmeer

Vir: Lastna slika (2015).

4.7.3 URBANISTIČNI ELEMENTI TRAJNOSTNEGA RAZVOJA SOSESKE EVA LANXMEER

Urbanistična zasnova EVA Lanxmeer je zastavljena tako, da deli sosesko na več prostorskih območij. Oblikovanje zelenih območij soseske in zelenih koridorjev je zato zahtevalo upoštevanje naravnih prehodov/povezav med njenimi različnimi funkcionalnimi območji. Tudi kmetijska območja, ki obdajajo del soseske, postopno prehajajo iz intenzivne v ekstenzivno kmetijsko rabo. Prostori srečevanja so zasnovani s prepletanjem polzasebnih (npr. urbani vrtovi) z javnimi prostori (npr. parki in kmetije) (Eshuis in drugi 2014).

Slika 4.32: Urbani vrtovi soseske EVA Lanxmeer

Vir: Lastna slika (2015).

Za izolacijo več hiš uporablja »stekleno fasado«, ki služi kot dodatni izolacijski sloj. Prebivalci tako izkoriščajo učinek tople grede in pogosto imajo v hišah dodatne rastlinjake (glej sliko 4.33). Presenetljiv element soseske predstavlja tudi široka barvna paleta stavb (svetlo rumena, modra, rdeča itd.), ki ustvarja zelo nestandardizirano dinamično sosesko (glej sliko 4.34).

Slika 4.33: Rastlinjaki znotraj hiš v soseski EVA Lanxmeer

Vir: Lastna slika (2015).

Slika 4.34: Pisane – neuniformirane barve objektov soseske EVA Lanxmeer

Vir: Lastna slika (2015).

V trajnostni soseski EVA Lanxmeer so ohranili stare drevorede, kar daje soseski edinstven značaj. Posebno vlogo imajo tudi skupnostni vrtovi, ki poosebljajo inštrument družbenega vključevanja in sodelovanja v skupnosti. V soseski obstajajo tri vrste zelenih površin: vrtovi pred posameznimi hišami, poljavni kolektivni vrtovi (dvorišča), ki se nahajajo med hišami, in javni

parki ter kmetije. Stanovalci so preko posebnih združenj odgovorni za načrtovanje in upravljanje zelenih površin (Eshuis in drugi 2014). Sosesko nekateri imenujejo tudi »Park 21. stoletja« (Timmeren in Kaptein 2007).

Fundacija EVA je v prvotnih urbanih planih načrtovala velik skupnostni multifunkcijski center trajnostne soseske, imenovan EVA Centrum, ki bi vključeval tudi kongresni in izobraževalni center. V centru bi organizirali kongrese in delavnice o trajnostnem razvoju mest, trajnosti infrastrukturi in lokalnem skupnostnem udejstvovanju. Za razliko od ostalih trajnostnih sosesk pa se v Eva-Lanxmeeru skupnostni center ni nikoli zgradil (Eva-Lanxmeer.nl).

4.7.4 DRUŽBENO-EKONOMSKA URAVNOTEŽENOST SOSESKE EVA LANXMEER

Identiteta lokalne skupnosti trajnostne soseske EVA Lanxmeer je opredeljena/prepletena s trajnostno tematiko, ki predstavlja za lokalne prebivalce soseske nekakšno filozofijo življenja (Eshuis in drugi 2014). Komunitarno participativno trajnostno načrtovanje in vzdrževanje soseske ter ekološka naravnanost skupnosti so razlogi, zakaj so prvotni prebivalci izbrali svoj dom v trajnostni soseski EVA Lanxmeer. Partikularen trajnostni značaj soseske se izraža v vseh procesih vsakdanjega življenja – od načrtovanja in gradnje energetsko varčnih hiš iz trajnostnih materialov do vzdrževanje skupnostnih zelenih površin (Eshuis in drugi 2014).

V okviru Fundacije EVA so bodoči prebivalci trajnostne soseske sodelovali pri urbanistični zasnovi in tudi pri oblikovanju njenih zelenih površin (Energy Cities 2008). Zahvaljujoč se finančni podpori občine, so se lahko med gradnjo soseske bodoči prebivalci srečali s krajinskimi arhitekti in botaniki ter skupaj oblikovali svoje bodoče skupnostne vrtove. Vsak vrt soseske je zato edinstven, kar daje celotni soseski poseben pečat. Začetna participacija pri oblikovanju soseske je bila izredno pomembna za razvoj socialne strukture lokalne skupnosti (Varnay 2013). Ljudje so se že med planiranjem soseske spoznali med seboj in začeli vzpostavljati dolgoročne prijateljske odnose (Eshuis in drugi 2014).

Solastniki skupnostnih vrtov EVA Lanxmeer so se organizirali v posebne delovne skupine, saj so postali odgovorni za vzdrževanje zelenih površin soseske (Varnay 2013). Ustvarili so skupino Terra Bella, ki upravlja vzdrževanje zelenih površin v celotni soseski. Lokalni prebivalci soseske so se dogovorili z občino Culemborg za finančni prispevek, saj občini ni več potrebno vzdrževati javnih zelenih prostorov soseske. Predstavniki občine Culemborg se srečujejo s predstavniki Terra Bella dvakrat letno, da preverijo, če se zelene površine soseske primerno vzdržujejo (Varnay 2013).

V dejavnostih lokalne skupnosti EVA Lanxmeer so na začetku sodelovali večinoma tisti, ki so bili del Fundacije EVA, in so se dobro poznali. Za nove naknadno priseljene prebivalce, ki jim je bil všeč trajnostni koncept soseske, je fundacija EVA ustvarila posebno podporno skupino za pomoč novincem pri integraciji (Wals in Noorduyn 2010).

V soseski obstajajo tudi zelo natančni predpisi in pravila. Stanovalci so na primer dolžni, da se pridružijo lokalnemu združenju stanovalcev. Le-to je vpeljalo več dejavnosti, ki jih večinoma vodijo delovne skupine. Ukvarjajo se s pomembnimi temami trajnostne soseske, kot so energetska samooskrba, trajnostna mobilnost in vzdrževanje skupnostnih prostorov (Eshuis in drugi 2014).

V trajnosti soseski je zaposlenih veliko lokalnih prebivalcev. Nekaj delovnih mest je bilo dodatno ustvarjenih v informacijskem centru EVA in na lokalni urbani ekološki kmetiji (Energy Cities 2008). Urbano kmetijstvo EVA Lanxmeer predstavlja enega od glavnih temeljev trajnostne identitete soseske. Kmetijska zemljišča se razprostirajo na 2,4 ha. Na 2,8 ha pa je postavljen poseben ekološki park, ki vključuje permakulturni eksperimentalni vrt, rastlinjake itd. Lokalni prebivalci sodelujejo pri obdelavi kmetije. Urbana kmetija služi tudi v izobraževalne namene in sodeluje tudi z okoliškimi šolami. Kmetija organizira več festivalov ekološke hrane, na katerih ljudje lahko skupaj pobirajo paradižnike, jabolka (itd.) in kupujejo lokalne proizvode (Varnay 2013).

Razmerje med zasebnimi in najemnimi stanovanji je skladen z nizozemsko regulativno politiko, ki velja za vse novonastale soseske: 30 % je socialnih stanovanj; 20 % stanovanj je namenjenih za najem in nakup prebivalcev srednjega dohodkovnega razreda; 50 % je tržnih stanovanj (Eshuis in drugi 2014; Wals in Noorduyn 2010). Kakor koli, lokalno prebivalstvo soseske je v povprečju na splošno zelo izobraženo in ima nadpovprečno visoke dohodke (Eshuis in drugi 2014, Wals in Noorduyn 2010). Eden od glavnih upraviteljev trajnostne soseske EVA Lanxmeer Gerwin Verschuur je pripomnil, da je skupnost precej homogena, najemniki socialnih stanovanj pa se ne vključujejo v dejavnosti oz. aktivnosti trajnostne soseske za razliko od »staroselcev« oz. prebivalcev, ki so se v sosesko naselili prvi (glej intervju z Gerwin Verschuur v Prilogi O).

Na koncu bi rad dodal še svojo pripombo glede uvrščanja naselja EVA Lanxmeer med urbane soseske. V sami soseski ni goste pozidave, povečini so enonadstropne ali največ dvonadstropne enodružinske hiše, območje nima trgovin in drugih pomembnih storitev, kmetijstvo ima v soseski velik pomen. Glede na našteto in glede na to, da že majhno mestece Culemborg deluje kot vas, menim da bi naselje EVA Lanxmeer lahko umestili kar med ekološke vasi. Tudi nekateri zelo

redki avtorji, na primer Adalılar in drugi (2015), uvršajo EVA Lanxmeer med ekološke/trajnostne vasi in ne med trajnostne soseske.

5 A CONTRIBUTION TO THE STRUCTURAL MODEL OF AUTONOMOUS SUSTAINABLE NEIGHBOURHOODS: NEW SOCIO-ECONOMICAL BASIS FOR SUSTAINABLE URBAN PLANNING

Peto poglavje vključuje znanstveni članek A contribution to the structural model of autonomous sustainable neighbourhoods: new socio-economical basis for sustainable urban planning, objavljen v reviji Journal of cleaner production (založba Elsevier) (Medved 2016a).

Highlights

• A new basis for interdisciplinary urban planning underlining the importance of socio-economic factors is proposed.
• The proposed innovative model includes urban sustainable indicators from successfully implemented sustainable neighbourhoods.
• The concept of "social ecology" is introduced in urban planning (in addressing autonomous sustainable neighbourhoods).

Abstract

Urban researchers have acknowledged that current urban design tools do not sufficiently take into account the complexity of various social factors (integration of the community, local economy, identity of the community, etc.) into the implementation processes of new (sustainable) urban areas. Since the best practices of successful sustainable neighbourhoods are too little known and are not taken into account in urban design tools, because there is no existing comparative analysis of best practices that would provide common guidelines for the implementation of new autonomous sustainable neighbourhoods (ASN), the central objective of the article focuses on creating an interdisciplinary structure for a holistic model of autonomous sustainable neighbourhoods. The aim of the article is to create a framework of strategic urban sustainability goals that derives from "good examples" of sustainable neighbourhoods and that

could represent a new mode of interdisciplinary urban planning, emphasizing the importance of the socio-economic factors in neighbourhood modelling. The article will try to identify a concrete scheme of sustainable elements, which could facilitate the creation of new sustainable districts in cities (with due regard to local specifics). The structural model of autonomous sustainable neighbourhoods could be suitable as a tool for the implementation of strategic urban sustainability goals and might upgrade existing sustainable urban planning tools. The proposed model, which is based on a comparative analysis of the best practices of sustainable neighbourhoods in Europe, is formed and structured by "the four pillars of urban sustainability" (Energy pillar and natural resources, Sustainable Transport, Socio-economic balance, and Sustainable urban design elements). Each of the "pillars" incorporates several "strategic urban sustainability goals".

Keywords

Autonomous sustainable neighbourhoods; Urban design model; Socio-economic balance; Strategic urban sustainability goals; Social ecology; Urban sustainability indicators

1. Introduction

Rapid urbanisation is arguably the most complex and important socio-economic phenomenon of the 20th and 21st centuries (Allen, 2009). 2008 marked the first time the majority of the world's population (about 3.3 billion people) lived in urban areas. The United Nations predicts that by 2050 over 70% of the world's population will live in urban areas (United Nations, 2008). Worldwide cities are responsible for almost 75% of the global resource consumption (Madlener and Sunak, 2011).

Considering the fact that cities represent the largest source of greenhouse gas emissions and are at the same time the biggest resource consumers, it is necessary to transform and develop urban areas in a sustainable way. Cities should no longer be seen as 'problem creating nuclei' (with pollution, criminality, congestion). Nowadays, cities should be considered to be motors for regional development, innovative knowledge centres, economic stimulators, and also social, cultural, and ecological catalysts for sustainable development (Prado et al., 2012).

Obviously, a global simultaneous operational strategy that would shift the direction towards a more sustainable development is not feasible. However, it is possible to perform and function sustainably at the micro level within low-carbon communities (rural and urban). Eco-villages were the first entities that addressed local rural communities in a sustainable way. Subsequent to the crises in the 1970s and 1980s, some countries in Northern and Western Europe also implemented some "experimental" sustainable urban developments by using holistic and integrated approaches (Buyulken and Huisingh, 2015). In the 90s and at the beginning of the new millennium, several new and more complex local projects (forms of sustainable urban transformation) appeared: the so-called sustainable neighbourhoods. These initial exemplary urban development initiatives were achieved through experimentation, continuous learning, and extensive stakeholder engagement (Buyulken and Huisingh, 2015). Sustainable neighbourhoods, together with eco-villages, have developed social, economic, and political activities and modes of lifestyle in line with the image of a "degrowth society" largely based around localism (Xue, 2014).

To achieve the switch to a more progressive, sustainable urban environment at the local level, it is necessary to develop an interdisciplinary model that takes into consideration a holistic perspective of the inter-connected factors that determine a sustainable neighbourhood. Today's urban models do not use an integrated approach to forming/transforming sustainable neighbourhoods. It has been noted that especially the community's socio-economic elements are not considered enough (Haapio, 2012; Kyvelou et al., 2012).

The aim of the article is to uncover a new perspective on sustainable urban planning and to accelerate and ameliorate the creation of new urban sustainable neighbourhoods. To achieve that, the article tries to develop a new basis for a model, which incorporates the interconnected urban elements that are fundamental for a long-term balanced urban environment. The article proposes a new pillar in sustainable urban planning: "the socio-economic balance". At the same time, it tries to rearrange and regroup all the main relevant strategic urban sustainability goals (SUSG) and its (urban) sustainability indicators, which are essential for developing a multimodal sustainable neighbourhood model. The article attempts to form an overview of the crucial aspects that have to be considered when assembling/analysing/developing/comparing Autonomous Sustainable Neighbourhoods (ASNs).

2. The autonomous sustainable neighbourhood concept

The sustainable neighbourhood represents an experiment that could provide concrete solutions to the challenges of our currently unsustainable global environment. This relatively modern social formation could evolve into a new metropolitan pattern completely in line with sustainable development principles (Taylor, 2000). Harvey (1990) defines the sustainable neighbourhood as an independent city within a city that preserves the symbolic richness of the traditional urban form and is based on dialogue and diversity. For Carley and Falk (2012), the sustainable neighbourhood is:

• a sustainable living environment that is large enough to offer a wide selection of different residential areas and services, which could ensure a long-term balance in the local community;
• well-connected and easily accessible with efficient public transport;
• designed to preserve and maintain a sustainable usage of different natural resources;
• based on the participation of neighbourhood residents and responsible local organizations (associations), who together act in accordance with the principles of sustainable development.

The implementation of sustainable neighbourhoods and consequently the development of local urban communities necessitate setting clear environmental, social, and economic goals that are in constant equilibrium (Churchill and Baetz, 1999). Sustainable neighbourhoods are located in urban areas, because the dense urban environment allows the "economy of scale" (unlike the eco-villages) to achieve a minimum level of (economic) self-sufficiency for public transport, recycling, and the educational system (Rudlin and Falk, 2009).

In the presented article, the concept of sustainable neighbourhood is enhanced with the term "autonomous" for two reasons. Firstly, self-sufficiency, self-management, and independence represent the essential social and political characteristics of particularly "green" urban communities. According to Harvey (1990), the sustainable neighbourhood is a basic, autonomous, self-sufficient cell in an urban area. The autonomy of sustainable neighbourhoods is reflected in the decision-making processes (local governance), self-management of local resources (energy, water, waste, etc.), and in the organization of the local socio-economic entities (initiatives, associations, cooperatives, etc.). The second reason for emphasizing the designator "autonomy" is its symbolic connotation. An autonomous sustainable neighbourhood also reflects and indicates an "autonomous zone" in the city, a "parallel urban space"[42] (Williams, 1971), or

[42] Physical parallel worlds, spatial niches allow a unique asylum, a retreat from the hyper complex, often too formal, repressive social control (Williams, 1971). Parallel urban spaces are enclaves within the existing formal urban

a certain "counter-position" to the dominant unsustainable system, the "heterotopia"[43] (Foucault, 1997).

According to the mentioned definition(s) of the autonomous sustainable neighbourhood (ASN), it is obvious that the concept of autonomous sustainable neighbourhoods does only cover the environmental protection issues, but assumes new, active, participatory, egalitarian socio-existential impetuses.

2.1. The best examples of autonomous sustainable neighbourhoods

Autonomous sustainable neighbourhoods are extremely vivid, organic formations and a theoretical concept is not enough to explain this relatively new urban phenomenon. For further analysis, it is necessary to highlight or (at this stage) at least mention the best practices that have been successfully implemented in different cities. As shown in Chapter 3, the model for future sustainable neighbourhoods must derive from the specific solutions of already implemented "good examples" and not just from theoretical analysis. For this reason, the presented urban model framework is based on the "real experience" of the best practices (more in Chapter 4 and 5). In this Sub-chapter, the various ASNs will be located, identified, and named.

To list the best sustainable neighbourhood examples, a scientific literature review was carried out in order to identify which sustainable neighbourhoods are the most quoted, mentioned, analysed. The detailed research and analysis of recent scientific articles (Schroepfer and Hee, 2008; Kasioumi, 2011; Marique and Reiter, 2011; Verdaguer Viana-Cárdenas, 2012; Williams, 2012; Anastasiadis and Metaxas, 2013), books (OECD, 2010; Campagna et al., 2012; Bächtold, 2013; Fraker, 2013), and sustainable neighbourhood guides/handbooks/case studies (Energy Cities, 2008; Van Cutsem, 2010; Guarini, 2011; Royal BAM Group, 2011) reveal that most of the successful sustainable neighbourhoods have been implemented in Northern and Western Europe. Consequently, some researchers define the sustainable neighbourhood concept as a "North European sustainable urban model" (Kyvelou et al., 2012). The literature review determined that the most often cited "best examples" of sustainable neighbourhood

policy. They are in constant conflict with the system, but can lead to a productive coexistence in certain circumstances.

[43] Heterotopias are »real and effective spaces which are outlined in the very institution of society, but which constitute a sort of counter arrangement, of effectively realized utopia, in which all the real arrangements, all the other real arrangements that can be found within society, are at one and the same time represented, challenged, and overturned: a sort of place that lies outside all places and yet is actually localizable« (Foucault, 1997: 352).

implementation are located in Sweden (Western Harbour and Augustenborg in Malmö, Hammarby Sjöstad in Stockholm), Germany (Vauban, Rieselfeld and Weingarten in Freiburg, Kronsberg in Hannover, Scharnhauser Park in Ostfildern, Französisches Viertel – Südstadt in Tübingen), The Nederland (EVA-Lanxmeer in Culemborg; Leidsche Rijn in Utrecht, GWL Terrein in Amsterdam), Finland (Viikki in Helsinki), Denmark (Vasterbo in Copenhagen), The United Kingdom (BedZed in Sutton, Greenwich Millennium Village in London), and Austria (Solar city in Linz-Pichling).

In order to balance the research focus on "Northern European best practices", the "South-European Eco-Quarter Design and Assessment" was also initiated, highlighting different urban sustainable criteria: the so-called "determinants of the territorial capital" (Kyvelou et al., 2012). San Rocco in Faenza (Italy), Villaggio olimpico in Turin (Italy), De Bonne in Grenoble (France), Sarriguren in Pamplona (Spain), Trinitat Nova in Barcelona (Spain), Solar Village 3 – Pefki in Athens (Greece), Boavista in Lisbon (Portugal) are just some urban plans, sustainable urban initiatives (projects), and good practices that stem from Southern Europe. South European sustainable neighbourhoods have great potential, but are rarely quoted or mentioned as "best examples" and are not often analysed in scientific articles, books, and other sustainable neighbourhood guides.

3. Background: preconditions for a new sustainable urban model

Urban planning tools designers have recognized that today's prevailing sustainable neighbourhood models (urban design models) do not sufficiently take into account the complexity of the various social factors (integration of the community, local economy, identity of the community, etc.) when implementing new urban areas (Haapio, 2012: 168; Kyvelou et al., 2012: 570). The predominant models are focused mainly on the technical aspect and ecological parameters of the neighbourhoods (Georgiadou and Hacking, 2011: 186). This shortfall is also present in the most well-known neighbourhood sustainability assessment tool: "LEED for Neighbourhood Development", which ignores the influence of the local community on the process of designing sustainable neighbourhoods (Sharifi and Murayama, 2013: 78). Some other distinctive models of sustainable neighbourhoods and urban assessment tools (BREEAM, CASBEE, One Planet Living, etc.) include certain "social parameters" in the implementation

process of sustainable neighbourhoods, but these factors represent only a marginal part and are rarely applied in practice (Haapio, 2012 ; Sharifi and Murayama, 2013).

The other main shortcoming of the prevailing sustainable neighbourhood assessment tools is that the current models do not reproduce urban sustainability indicators from existing "good practices". The models do not relate to concrete, already implemented sustainable neighbourhoods (Engel-Yan et al., 2005; Marique and Reiter, 2011). A modern urban planning tool should be developed from the perspective of sustainable communities and at the same time should constantly refer to the best examples of sustainable neighbourhoods (Engel-Yan et al., 2005). In order to achieve ambitious targets for sustainable cities, there is a need to analyse and practice different approaches including effective strategic planning, integration of policy instruments, and a "real" engagement of the key stakeholders (McCormick et al., 2013).

The aim of the article is to begin a discussion about a more holistic perspective on sustainable urban design by developing this overlooked aspect in neighbourhood design: "the socio-economic balance". The desired outcome of this paper is to build up an interdisciplinary draft, "a skeleton", a structure of a possible future autonomous sustainable neighbourhood model, which could overcome the two main shortcomings of the current sustainable urban design tools.

4. Methodology and approach

The article's methodological approach in constructing an innovative urban model is divided into two stages. In the first phase, a theoretical framework of the sustainable determinants was created for the model; in part through the examination of the most known sustainable urban design (assessment) tools (LEED, BREEAM, CASBEE, One Planet living, etc.). The initial theoretical analysis of the books and scientific articles about sustainable neighbourhoods allowed the author to determine a basic network of the interconnected strategic urban sustainability goals (SUSG), which was fundamental for the later upgrade with factual, real-life implementation aspects from concrete sustainable urban development.

In the second phase, in 2013 and 2014, the author visited and lived in five of the most successful and advanced neighbourhoods (in Germany and Sweden),[44] where he had the

[44] In April 2013, the author stayed for two weeks in Freiburg, where he had the opportunity to visit and research the sustainable neighbourhoods Vauban and Rieselfeld. After this period, he spent four days in Tübingen, where he analysed the ASN Französisches Viertel - Südstadt. In 2014, from March to June, he was a visiting researcher at the International Institute for Industrial Environmental Economics (Lund University) in Lund (Sweden), where he often

opportunity of interviewing the main actors[45] who have created and significantly contributed to the development of the ASNs. All the interviewees received the same semi-structured and open-ended questions. The questionnaire covered all the fundamental aspects of the ASN, but the main focus was on social (community related) indicators and its implications. These interviews gave him the opportunity to include an insider perspective of the neighbourhood's planning, functioning, and the communities' everyday dynamism into the analysis. He upgraded the theoretical framework with the field work by analysing the everyday processes of each sustainable neighbourhood. He was also able to study the formal legal basis of the neighbourhoods; understand the unique historical conditions allowing the first implementation of the sustainable neighbourhood in each city; understand the differences and common elements between the selected neighbourhoods, etc.

At the end, he compared all the common and unique urban characteristics of the best green districts with an international comparative analysis in order to create the fundamentals for a future interdisciplinary model of autonomous sustainable neighbourhoods. The author, with the mentioned methodological approaches, was able to identify the ASNs' "strategic urban sustainability goals" and its "sustainability indicators" (more in Chapter 5). The author regrouped the goals and indicators into "the four pillars" of the structural model of autonomous sustainable neighbourhoods.

had the opportunity to visit and analyse the not distant ASN Western Harbour in Malmö, and also the ASN Hammarby Sjöstad in Stockholm.

[45] In Freiburg (Vauban and Rieselfeld), the author had the opportunity to interview Andreas Delleske (the urban planner of the Freiburg municipality, who had planned Freiburg's sustainable neighbourhoods), Wulf Daseking (the leader of the former community initiative Forum Vauban) and Sigrid Gombert (the previous editor of the local newspaper Vauban Actuel). In Tübingen, he interviewed Marc Mausch (the editor of the local Südstadt community internet platform) and Hopfner Karin (Urban planner at the Municipality of Tübingen). In Western Harbour (Malmö), he interviewed Eva Dalman (the former project manager of the Bo01 e Western Harbour district), Marial Lööf and Roland Zinkernagel (both: Environmental department of the Malmö municipality), and Jan Johansson (Real estate department of the Malmö municipality). In Hammarby Sjöstad (Stockholm), he interviewed Helene Wintzel (»Hammarby Sjöstad 2020«community platform), Bjorn Cederquist (Urban planning department of the Stockholm municipality), and Alan Larsson (former European Commissioner and project manager of »Hammarby Sjöstad 2020«).

5. The structural model of autonomous sustainable neighbourhoods

The proposed "Structural model of Autonomous Sustainable neighbourhoods" is determined and formed by the "4 pillars of urban sustainability" (Energy pillar and natural resources, Sustainable Transport, Socio-economic balance, and Sustainable urban design elements). Each of the "pillars" incorporates several "strategic urban sustainability goals (SUSG)" (see Table 1, Table 2, Table 3, Table 4). Strategic sustainable urban goals are (desirable) neighbourhood characteristics, green policies, sustainable features, sustainable neighbourhood design elements. SUSGs represent propositions, alternative solutions to current unsustainable practices in cities. SUSGs are completely in line with the concept of the "Urban sustainable development goals" (formulated by the UN Initiative – Sustainable Development Solution Network), which also promote the integration of the economic, social, environmental, and governance dimensions of sustainable development in cities (Sustainable Development Solution Network, 2013). All the chosen pillars and its SUSGs represent the key added-value components, which constitute, embody the contradistinctive essence of autonomous sustainable neighbourhoods' manifestation.

Each SUSG (presented in Table 1, Table 2, Table 3, Table 4) encompasses several "*(urban) sustainability indicators*". Sustainability indicators are designed to support decision making to assess the sustainability of planning alternatives in areas such as environmental assessment, climate change adaptation and mitigation (González et al., 2013). Urban sustainability indicators should contribute to making the city's sustainable development more visible and transparent, aid in comparison, evaluation and prediction, provide decision-making with relevant information, stimulate communication, and promote citizen empowerment and participation (Hiremath et al., 2013). Not all possible "urban sustainability indicators"[46] are mentioned in the presented model, but just the indicators related to the specific SUSG identified in the analysed sustainable neighbourhoods.

For the purpose of further analysis, (urban) sustainability indicators are divided into qualitative and quantitative indicators (second and third column in Table 1, Table 2, Table 3, Table 4). In that way, it is possible to use qualitative indicators to focus on the "unmeasurable", descriptive aspects and "soft policies" of neighbourhoods. On the other hand, the quantitative indicators allow empirical comparisons of different neighbourhoods ("tools for quantifying sustainability performance"). The presented sustainability indicators represent the "real core" of

[46] For an overview of Urban sustainability indicators look also to the EUROFOUND publication: »Urban Sustainability Indicators« (Mega and Pedersen, 1998).

the article, the "skeleton", the fundamentals for the future model and show some very concrete focus points that could stimulate new approaches in urban planning.

The structural model of Autonomous Sustainable Neighbourhoods ("The four pillars").

As can be seen from the proposed structure, strategic urban sustainability goals try to overcome the identified shortcomings (defined in Chapter 3) in sustainable urbanism by emphasizing and suggesting new (social) aspects, new points of references in the development of urban areas (with the innovative sustainable pillar: *Socio economic balanc*e; with the SUSG: *Renewable energy cooperatives, etc.*). At the same time, the proposed framework preserves some "habitual", standard SUSGs that are typically used in common urban models (*Car ban, Public transport, Public green spaces, Sustainable water management*, etc.).

The presented model (in the "*Energy pillar*" – Table 1) gives slightly more attention to the neighbourhood's "energy aspects" compared to other natural resources. This controversial (symbolical) choice derives from the fact that »energy issues« in the urban context (in)directly condition most of the neighbourhood's everyday activities. A neighbourhood's energy needs include energy demand from buildings and other urban features, such as local waste and water systems, parks, public lighting, as well as the energy demand from the public transport.

The "*Sustainable transport"* pillar (Table 2) is fundamental for the existence of a sustainable lifestyle within the neighbourhood. An exemplary sustainable neighbourhood should have a functional, integrated public transport system. Urban green districts usually try to avoid alienated, typical suburban single-family houses, which necessitate more than two cars per family because of the dispersal construction ideology.

The creation of an individual pillar of "*Sustainable urban design elements*" (Table 3) is also not common for traditional neighbourhood tools, but it is essential, because it represents a "physical environment" for the essence of the strategic urban sustainability goals and its manifestation. It symbolizes the "adhesive" that connects, integrates all the SUSG of the different sustainable pillars. For example; in the heterogeneous multi-purpose community space (Sustainable urban design element), which is in an energy passive building (Energy pillar), local citizens meet and discuss about the local issues, their common companies (Local economy; Socio-economic balance), like the solar panel cooperatives (Energy pillar), or cooperatives of organic food (Socio-economic balance). Such community spaces, collective neighbourhood buildings are important, because they enforce the local community identity (Socio-economic balance). This is just one general example, where it is possible to identify the inter-connectivity

of very different sustainable SUSG and their indicators, forming a structure of inter-dependency between the (urban) sustainability indicators.

The most innovative and significant part of the presented structural model is represented by the inclusion of the *"Socio-economic balance"* pillar (Table 4). The subchapter 5.1 will focus on the different characteristics of this innovative pillar, which proposes a new perspective on perceiving sustainable communities.

Table 1
"Energy pillar" (and natural resources).

Strategic urban sustainability goals	Points of interest: urban modelling focus points (qualitative research indicators)	Determinants for the comparative analysis (quantitative research indicators)
Renewable energy Cooperative	- establishment and organizational structure of RES[6] cooperatives - typology of the implemented RES - cooperation between municipalities and civil initiatives → for the creation of cooperatives	- local population's ownership share of RES - share of the local RES with regards to the total energy consumption - energy autonomy (%) - energy consumption (per capita) regarding: 1. electricity, 2. heating, 3. transportation
Energy-saving (passive) multi-dwelling buildings	- method of setting mandatory standards - exerting pressure (by the civil initiatives) for the restoration of wasteful buildings - usage of ecological materials for the neighbourhood construction (wood, glass, etc.) - economic aspects of construction and maintenance; WLC criterion ("whole life costing") - health effects caused by the construction materials - position of buildings with the consideration of "solar geometry" - *Energy efficient buildings*: ventilation; position; insulation; use of water; use of renewable energy for electricity and heating; recycled materials; concept of smart homes, which adapt to external weather conditions; maximization of the exploitation of energy and water; passive solar energy utilization; acoustic comfort	- proportion of passive or "plus energy" buildings, - mandatory energy standards established at the level of the municipalities or neighbourhoods - energy consumption for heating and electricity (per capita) - proportion of neighbourhoods buildings built with "natural materials" - ecological impact of constructions on the environment; CO2 emissions
Innovative solutions to stimulate recycling and to decrease natural resources (water and waste management)	- introduction of innovative concepts to reduce the consumption of natural resources (bio-gas from compost, vacuum toilets, etc.) - specific recycling methods - methods for reducing water consumption - reuse of rainwater - water-saving modes (treatment categories: black water, grey water, and rainwater) - initiatives to reduce the amount of solid waste - organic waste for gardens - "green roof"	- recycling rate (kg/capita) – in general - recycling rate (kg/capita) – which is carried out in the neighbourhood - usage of recycled material in the neighbourhood - water consumption per capita - capture rate of rainwater - kg of produced rubbish per capita

Table 2
"Sustainable transport".

Strategic urban sustainability goals	Points of interest: urban modelling focus points (qualitative research indicators)	Determinants for the comparative analysis (quantitative research indicators)
Efficient public transport	- initiation processes for the public transport - diversity, development, and availability of the public transport system - pollution caused by public transport - actual fluidity: connectedness with the rest of the city - "car sharing" initiative - initiatives to reduce the need for vehicles - public transport: links to the regional hub of public transport/metro to the train station, to the airport - reducing the "need" for cars: proximity of essential services/urban density - multimodality of the sustainable transportation	- closeness to the railway, bus, metro, or tram station (measured from the centre and the extremities of a neighbourhood) - development level of the public transport system (ramifications, the frequency of arrivals) - proximity to crucial services (market, school, etc.). - time of the construction of public transportation in the neighbourhood (before the buildings in the neighbourhoods/or progressive construction/or the introduction of public transport after the neighbourhood completion) - time needed (using public transport) to the city centre; time required to the train station; time required to the nearest airport (measured at different times)
Car ban	- methods for reducing car flow/or a complete ban of cars in the neighbourhood - initiatives from the local community or municipality - parking lots outside the neighbourhood/in the neighbourhood/ restricted parking areas/under the apartments - "fee" for driving in the neighbourhood/town	- no. of car ownership per capita - no. of garage placed outside the neighbourhood or within the neighbourhood - size (proportion) of roads intended for cars in the neighbourhood
Promoting cycling and walking	- cycling and walking routes in the neighbourhood; accessibility to the city centre from the neighbourhood - bike rack and other initiatives - "walkability": safety, aesthetic	- no. of bike roads, routes - no. of walking paths

Table 3
"Sustainable urban design elements".

Strategic urban sustainability goals	Points of interest: urban modelling focus points (qualitative research indicators)	Determinants for the comparative analysis (quantitative research indicators)
"Quality of life with sustainable urban planning"	- heterogeneous multi-purpose Sustainable neighbourhood community centre (as a central facility of the neighbourhood) for strengthening the local community identity - convergent central market – plaza (as a community focal point) - green areas and public spaces - ban of automobiles - clear boundaries of the neighbourhood (which strengthen the adherence of the citizens) - mixed housing typology (mixed use and also personalized buildings' "form design") - public street lighting (to revitalize the public space; to prevent micro criminality) - designing neighbourhoods to reduce crime rates; CPTED (Crime Prevention Through Environmental Design) - concept of "healthy neighbourhoods" with a design that encourages walking/bicycle use (aesthetics, connectivity, permeability, lighting, bike paths, proximity to services)	- proportion, area (ha), and number of public spaces - no. of structures/buildings of public institutions (for public interest) - no. of community/social centres (and their size) - no. of parks, squares, playgrounds - average distance to the first neighbourhood park - share of "green roads" with trees - diversity of construction, heterogeneous aesthetics
"Protection of nature and urbanism"	- biodiversity/diversity of vegetation - taking into account the wind flow as a "natural ventilation" - integration of the natural landscape into the neighbourhood (strategy at the neighbourhood level, city, region) - existence of so-called "natural corridors", "wildlife corridors" - typology of vegetation in the neighbourhood - protection of natural habitats and rare species of plants and animals	- proportion, area (ha) and number of parks and green spaces - number of norms to protect the local natural environment - determination of green areas
"Compactness of buildings and proximity of services"	- urban design in the direction of compact multi dwelling constructions or single sub-urban ("suburbia") family houses - stimulating the creation of services in the neighbourhood - shops and other services in the ground floors of the buildings - presence of banks, post offices, shops, markets, elementary and secondary schools in the neighbourhood	- no. of population per hectare - no. of services per hectare - distance to the first ambulance and fire stations - number of building and floors/per hectare - buildings (construction) density

Table 4
"Socio-economic balance".

Strategic urban sustainability goals	Points of interest: urban modelling focus points (qualitative research indicators)	Determinants for the comparative analysis (quantitative research indicators)
Local exchange trading system (LETS)	- methods of organizing LETS schemes - typology of organizing time banks (or LETS schemes) - "exchange markets" - "initial form" of LETS (exchange of goods, vouchers — "goods for goods")	- number of people involved in LETS - growth trend of LETS
"Social ecology" as a policy framework of the neighbourhood	- level of direct democracy - "bottom up" (or "top down") approach in creating neighbourhoods - degree of self-management and autonomy in decision-making - caring for unprivileged groups - associations for the elderly, children, handicapped people - solidarity between people (initiatives, laws, etc.) - (symbolic) importance of the first sustainable neighbourhoods in the city: implication for the vicinity (town, region, etc.)	- proportion of people involved in the decision making processes - number and typology of topics discussed through direct democracy - number of self-managed initiatives, cooperatives - number of initiatives aimed for integrating marginalized groups
Local (organic) food Cooperative	- urban food gardens - synergy with local farmers - local (organic) market (the location of marketplaces) - local food cooperative characteristics - regional "food chain" integration	- number of urban food gardens - proportion of people involved in the local food cooperative - frequency, variety, and size of the local market
Identity of the local community and the local culture	- participation level in the neighbourhood activities - solidarity within the community - diversity of local civil initiatives and associations - intergenerational solidarity - events to strengthen the identity (e.g. neighbourhood festival, etc.). - "individuality" (against the standardization) of buildings - preservation of local culture, cultural heritage - concern for the preservation of local traditions - preservation of certain historic buildings - development of neighbourhood cultural activities	- existence of a local newspaper and community internet platform - number of associations, initiatives - level of crime in relation to the other parts (relative/absolute) - number and range of networking events for the community
Local economy	- organization and promotion of local economic activities - "economical exchange balance" between the neighbourhood and the city and the wider region - diversification of services - local craft activities - initiatives to prevent commercial food (and other) chains in the neighbourhood - diversity and variety of economic activities in the neighbourhood	- proportion (number) of people who work in their own neighbourhood - number of local businesses (how many local business are locally owned) - proportion of people using local services

5.1. "Socio-economic balance": the new key pillar for interpreting sustainable neighbourhood context

As presented in Chapter 3, the "social" components of autonomous sustainable neighbourhoods have been mostly overlooked in urban planning tools. For this reason, this article attempts to overcome this shortcoming with the proposed model by encouraging new planning approaches, which are concentrated in the "*socio-economic balance*" pillar (Table 4). The selected SUSGs in the pillar "socio-economic balance" were identified after a deep analysis of the best ASN practices, and after the determination of the key (strategic) objectives, that the best ASNs aim to achieve (have achieved).

To better understand the essence of the newly proposed pillar, it is primarily necessary to understand the local community's holistic perspective on sustainable governance and social cooperation in the local urban space. A partial explication of the complex social interaction in a specific (sustainable) urban context lies in the fundamentals of the "social ecology" concept.[47]

Social ecology as a policy framework represents a radical critique of contemporary social, political, and environmental trends. It is expressed by a reconstitution of sustainable, communitarian (collective), and ethical approach to society. The concept of social ecology is correlated with "libertarian municipalism,"[48] which is committed to the decentralization of power and its organization at the local level (Chodorkoff, 1995). Social ecology emphasizes the importance of the "moral economy" (Bookchin, 1990 ; Bookchin, 1986). The moral economy, at the level of ASNs, is also enacted through egalitarian non-monetary exchange, "time bank", or a local exchange trade system (LETS) scheme. The LETS scheme represents a counterweight to money exchange, to a monetised evaluation of work.[49] A moral, sustainable, local economy represents an alternative to the destructive dynamics of today's predominantly individualistic

[47] Social Ecology is a philosophical branch first initiated by the French anarchist and geographer Elisée Reclus, but it was Murray Bookchin who revitalized the concept of social ecology in theoretical and in practical terms in the sixties. Social ecology epitomizes a critique of the current social, political, and anti-ecological global trends. It expresses a reconstructive, ecological, communitarian, and ethical approach to society.

[48] Libertarian municipalism is a political project to give politics a more ethical character through the bottom up ("grassroots") organization. It supports local urban neighbourhood assemblies and promotes a coordinated bottom-up strategy development (Chodorkoff, 1995). Libertarian municipalism strives to regain the public sphere; the public space for genuine, egalitarian, communitarian action. The aim is a communitarian society that combines human needs with ecological necessities and develops a new ethic based on reciprocity (Bookchin, 1986).

[49] However, in practice, not many sustainable neighbourhoods have adopted the LETS scheme; some of them introduced it only partially (e.g. Vauban).

economic activity. Developing the local economy as a counter-force to economic globalization means seeking a local economic autonomy that includes making economic decisions at the local level, developing locally owned business by preferably using local resources, employing local workers, satisfying the needs of the local consumers, and supporting local finance like community banks (Xue, 2014).

Local urban development should be focused, like in eco villages, on conserving and strengthening the local community and on an active role of its members. A cohesive local (urban) community represents the primary, central aim of any sustainable neighbourhood. A local community that strongly identifies with the local space stimulates the development of vibrant local culture activities and defines the sustainable neighbourhood's quotidian dynamism.

As already indicated, it is impossible to persist only on theoretical ideals when pondering about creating vivid districts. Sustainable models, urban planning tools should be based on "real", already implemented good practices. Although it was inspired and formed from "real" good practices, the "socio-economic balance" pillar still represents, to a certain extent, a "desirable formula" of different SUSGs. Apart from the theoretical ideals, it is very interesting to understand how (to what degree) this "desirable formula" is applied in practice. A look at some of the most successful neighbourhoods reveals that socio-economic SUSGs are interpreted, manifested, and concretized in very different ways, also because of the different geographical, historical, and socio-political local specifics.

In some sustainable neighbourhoods, like in Vauban (Freiburg), it is possible to identify the manifestation of all the mentioned SUSG of the "socio-economic balance" pillar. Vauban has a very strong and heterogeneous local community, which has grown gradually and has constantly consolidated the particular local identity. Over the years, with the expansion of the neighbourhood, local residents established a local grassroots community association, called "Forum Vauban",[50] which represented a reference point and a link between all the neighbourhood associations, the municipality, and the local residents. Vauban's local community has created a balanced and vivid network of different social groups, local entities, and associations such as (Bächtold, 2013; Daseking, 2013; Gombert, 2013): housing cooperatives, groups of co-builders "Baugruppen", the "Quartiersladen" organic food cooperative, associations for children, an association for dementia illness, an association for pedestrians, associations for the elderly, the autonomous newspaper "Vauban Actuel", the "Genova" building cooperative,

[50] The legacy of Forum Vauban is now called »Stadtteilverein Vauban«.

the self-organised association S.U.S.I., and Forum Vauban. Vauban's community has been very active in creating local economic entities with locally concentrated ownership. The local residents' ownership over local resources (particularly renewables and the food distribution system) allows them to achieve a greater autonomy in decision-making and a notable degree of self-sufficiency. Some elements of Vauban's LETS scheme are manifested in the monthly "exchange market", which takes place at the neighbourhood's main plaza, Alfred-Döblin-Platz (Delleske, 2013).

However, not all successful sustainable neighbourhoods have implemented such strong and equilibrated socio-economic elements. Vauban is a typical grassroots project, where the involvement of the citizens through various associations (S.U.S.I., Forum Vauban) was very intense and prolific. On the other hand, some top-down driven successful sustainable neighbourhoods (like the Swedish green districts of Western Harbour in Malmö, and Hammarby Sjöstad in Stockholm) experienced different implementation processes. The community identity and the cooperation of the ASNs' residents in Sweden are not comparable with Vauban's (Dalman, 2014). One of the reason derives from the population social structure, which is very homogenised. The district of Western Harbour is mainly populated by wealthy citizens (Holgersen, 2014). However, the municipality of Malmö with the cooperation of building developers tried to encourage the heterogeneity of the ASN's population, signing a contract with the urban developers to secure enough affordable rental apartments in the area to assure a minimal social mix (Dalman, 2014). In Western Harbour, the connection of the local community is relatively weak (compared to Vauban). This could derive from the fact that the entire area was designed with the top-down approach from the municipality, without a very active citizens involvement (Dalman, 2014; Lööf, 2014 ; Zinkernagel, 2014). To a slightly lesser extent, the lack of community identity is also evidenced in the other analysed Swedish ASN – Hammarby Sjöstad (Cederquist, 2014). It seems, it is more difficult to expect a strong local identity or vivid citizens' initiatives in the local environment from a typical top-down development of urban areas.

However, also in the Swedish ASNs some socio-economic SUSGs are successfully achieved. For example, the "local economy" in Hammarby Sjöstad and especially in Western Harbour is extremely strong and prosperous. Currently the Western Harbour accommodates 4300 residents and offers 9000 jobs (Foletta, 2011). The ratio of jobs per resident is very high if we compare it to similar sustainable neighbourhoods across Europe. When fully developed, 30,000 people will work and study in the transformed urban area and will become a new student and economic centre of Malmö. The welcoming public spaces (parks, beach, gardens) of Western Harbour become also a favourite leisure destination for all the Malmö citizen and tourists.

The differences in local community engagement between German and Swedish analysed ASNs are evident. The ASN "Französisches Viertel – Südstadt" is placed in the city of Tübingen, relatively near Freiburg, and experienced a similar sustainable urban development as Vauban (reconstruction of the ex-French military base, alternative activist groups, strong community identity and cooperation, building cooperatives, etc.). A very interesting example of social cohesion represents the cohabitation of two parallel but connected local communities in Französisches Viertel – Südstadt. In the forest, less than 1 km from the main plaza of the Französisches Viertel, is situated an alternative community, which is living in adapted wagons, without any urban infrastructure (Mausch, 2013). This semi urban forest village within the ASN is called "Wagenburg", and is authorised/permitted by the municipality.

From the interdisciplinary ASNs analysis, an important factor/indicator was recognized as crucial for the socio-economic balance, which is "the existence (and the evolvement) of the multi-purpose sustainable neighbourhood community centre". In Rieselfeld ("Glashaus") and Vauban ("Haus 37") there are enormous, monumental buildings designed just for community activities. In the sustainable neighbourhood community centre "Glashaus" for example, there is a children and youth's media resource centre, a city library, a bar and many multipurpose halls. In this local community centre there are community spaces designed for Rieselfeld citizens, where they organize club meetings, lectures and seminars, weddings, birthday parties and other cultural activities. In the Glashaus there are active many children associations, Rieselfeld's sport associations, associations for elderly, for sustainable transport, for social inclusion; there is also the Rieselfeld's newspaper redaction centre. The Rieselfeld example demonstrates how important (for the socio-economic balance) is the existence of a properly designed central neighbourhood community centre, which represents the heart of the district; a meeting point where to exchange ideas and collaborate. This case also shows how the different SUSG from the structural model (Table 1, Table 2, Table 3, Table 4) are interconnected between each other. The Rieselfeld case clearly shows the interdependency between the – heterogeneous multi-purpose "Sustainable neighbourhood community centre" (within the pillar Sustainable urban design elements) and the SUSG "Identity of the local community and the local culture".

The neighbourhood community centre "Haus 37" in Vauban has very similar functions and associations' activities like the community social centre in Rieselfeld. Französisches Viertel – Südstadt in Tübingen also have a smaller neighbourhood community centre, where various local associations meet and discuss about local (or other) topics. In Hammarby Sjöstad there is a very small district "information centre", where a couple of local associations meet (f.ex. local scouts), but is primarily designated for the Stockholm Water company (Cederquist, 2014). However,

there is an ambitious plan to create a bigger community social centre within Hammarby Sjöstad. The local initiative HS2020, which is also active in many neighbourhood's sustainability issues related to the energy field, water management and sustainable mobility, is trying to find a new building for the neighbourhood social centre (Larsson, 2014). On the other hand, in the entire Western Harbour there is no neighbourhood community centre. Eva Dalman, the initial developer of Bo01 (in Western Harbour, Malmö), mentioned that the neighbourhood community centre was not introduced in part because the residents were not motivated to implement that kind of common areas (Dalman, 2014).

Table 5
The manifestation of strategic urban sustainability goals (pillar: "socio-economic balance") in the selected autonomous sustainable neighbourhoods.

ASN	Strategic urban sustainability goals					
	Local exchange trading system (LETS)	"Social ecology" as a policy framework of the neighbourhood	Local (organic) food cooperative	Identity of the local community and the local culture	Local economy	***** *Sustainable neighbourhood community centre*
Vauban (Freiburg)	Initial form of LETS – a monthly "exchange market"	• Building cooperative (Bottom-up approach) • Many local civil associations coordinated by Stadtteilverein Vauban • Direct democracy	• "Quartiersladen" organic food cooperative • Local farmers food market • Alternative "micro residential food cooperative"	• Community internet platform • Local Newspaper • Many cultural, social, sport associations • Neighbourhood festival	Local jobs per resident: 0.12	*Yes, very well developed*
Rieselfeld (Freiburg)	No	• Many local civil associations coordinated by K.I.O.S.K	• Local farmers food market • Urban farming association	• Community internet platform • Local Newspaper • Many cultural, social, sport associations • Neighbourhood festival	Local jobs per resident: 0.09	*Yes, very well developed*
Französisches Viertel – Südstadt (Tübingen)	• "Meeting headquarter" of the "Tübingen LETS org." in the local social centre • Informal LETS in the "Wagenburg" community	• Building cooperative (Bottom-up approach) • Integration with the alternative community village "Wagenburg" in the nearby forest	• Local organic food shop from local farmers	• Community internet platform • Many cultural activities • Neighbourhood festival	Local jobs per resident: 0.41	*Yes*
Western Harbour (Malmö)	No	• Minimal social mix assured with the special "social contract" (for the rental apartments)	No	Not very strong	• Local jobs per resident: 2.09 • "Tourism gem"	*No*
Hammarby Sjöstad (Stockholm)	No	• HS2020 – local residents initiative	• "Urban vegetables boxes" – new small initiative	• Not very strong, but HS2020 is trying to engage local citizens • Cultural institutions • Neighbourhood festival	Local jobs per resident: 0.31	*Yes, but very small (secondary purpose)*

6. Conclusion, discussion and reflection

The analysis of concrete everyday manifestation of "socio-economic balance" strategic sustainability urban goals in the selected ASN's (Chapter 5.1), proposes several variegated responses, sustainable solutions that could be transferred to future sustainable neighbourhoods. The comparative analysis explained the socio-economic SUSGs of three German and two Swedish representative ASNs that have had different histories, implementation processes in very different micro and macro environments. The research evidenced that the two analysed Swedish ASNs have not (yet) developed the (social) community related SUSG at the level of the German ASNs. On the other hand, Western Harbour and Hammarby Sjöstad have achieved impressive ultra-technological solutions in the SUSGs of the other three model's pillars (Table 1, Table 2, Table 3), which are not concretely highlighted in this article.

From the analysed manifestation of SUSGs (pillar: "socio-economic balance") in the selected autonomous sustainable neighbourhoods (Table 5) it could be deducted that the development level of the socio-economic SUSG is closely dependent to the development of neighbourhood community centres. The case studies demonstrate that the neighbourhood community centre is very important for the ASN's community engagement, local culture and community identity. Just some very rare European ASNs, like EVA-Lanxmeer in Culemborg (Nederland), have achieved a very strong local identity, sense of community and community cohesion without the presence of the neighbourhood community centre.

Overall, the proposed structural model of autonomous sustainable neighbourhoods (Table 1, Table 2, Table 3, Table 4) represents an attempt for a new perspective, a new mode in urban planning. The presented urban planning tool framework, which addresses sustainable neighbourhoods in a holistic way, could serve as a pre-structure for the interdisciplinary sustainable urban model of the 21st century. The future model, with an adequate adaptation to local specifics of each micro urban cosmos, could transfer the main strategic urban sustainability goals of the best sustainable neighbourhoods to specific urban environments in different cities.

However, despite the ambitious intent to create an experimental framework for future eco cities, the article opens up many unanswered questions and new subjects for discussion. Firstly, the model is very ethnocentric. It grew from a European perspective and is based solely on North-European examples. Obviously, it is impossible to aggregate all the different global cultural dimensions of each city and it is probably impossible to create a true global universal model. However, from that point of view, it may be better for the model to be called the (North) European

model of autonomous sustainable neighbourhoods. Secondly, despite the fact that the article tries to join the theoretical and practical aspects (determinant) from different methodological approaches, the model (Table 1, Table 2, Table 3, Table 4) will always be unfinished to some extent. There will always be one factor, one indicator that is fundamental and is not mentioned in the model. Creating a sustainable urban model is a constant work in progress and the proposed model is merely a starting point, an upgradable scheme; a skeleton, which needs to be augmented. Thirdly, at this point in 2015, it is perhaps too soon, too utopian to introduce the concept of social ecology into the model, because it is not entirely implemented or expressed even in the most advanced sustainable neighbourhoods (e.g. in the mentioned Swedish sustainable neighbourhoods). Realistically, the detailed analysis of successful ASNs reveals that probably only a few neighbourhoods (listed in the Subchapter 2.1) could cover all the sustainable factors mentioned in the model.

Despite some obvious deficits, the suggested framework of the proposed model could still implicate a new possible dimension, an alternative perspective to urban planning, which is in contrast with the well-established methods. The article opens a discussion on a new vision in sustainable urban planning and suggests some innovative, concrete urban indicators for (sustainable) urban planning tools. The "socio-economic balance" pillar introduces a new paradigm of egalitarianism based on direct democracy in urban communities. Autonomous sustainable neighbourhoods (in theory; not always in practice) could act as a social, economic, and cultural contrary position to the dominant order. The concept of an autonomous sustainable neighbourhood is not a utopian vision, but a real heterotopian transition to a new city pattern that already exists in fragments.

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6 THE ESSENCE OF NEIGHBOURHOOD COMMUNITY CENTRES (NCCS) IN EUROPEAN SUSTAINABLE NEIGHBOURHOODS

Šesto poglavje vključuje znanstveni članek The essence of neighbourhood community centres (NCCs) in European sustainable neighbourhoods, objavljen v reviji Urban Design International (založba Springer) (Medved 2016b).

Abstract. The paper analyses an often underestimated and ignored urban design element: the Neighbourhood Community Centre (NCC). The aim of the article is to define, describe, and highlight the multidimensional effects that a Neighbourhood Community Centre (NCC) has on a local urban community; and to examine a possible correlation between the level of NCC's development and the neighbourhood's "social urban sustainability" (social cohesion, local identity, sense of place, etc.). The main research effort involves exploring and comparing the implementation and development of NCCs in "exemplary urban systems" - the best and most well-known sustainable neighbourhoods in Europe. The final international comparative analysis of NCCs in European sustainable neighbourhoods offers very specific, valuable propositions that can be transferred to future NCCs, with an adaptation to local urban specifics.

Keywords: Neighbourhood Community Centre (NCC), sustainable neighbourhoods, social sustainability, sustainable urban design, urban community

1. Introduction

The role of cities in sustainable development has become more prominent due to the growing urban population; we are now living in an era where over half of the world's population are urban dwellers (United Nations Population Fund, 2007). It is time to acknowledge that many of the difficulties of the city are in effect the consequences of its inadequate urban form (Frey, 1999). Therefore, today's society requires a fundamental reconsideration and a search for new urban

forms (Friedman, 2015). The spiral of decline can only be arrested by a concerted effort on the part of all the involved stakeholders, not least the local (urban) residents themselves. The community-planning exercises in particular could provide the momentum towards a co-ordinated strategy (Barton et al., 2003).

The formation and manifestation of the local urban community in cities is strongly influenced by the urban design of the neighbourhood (Talen, 1999; Park, 2014). The neighbourhood urban cell represents a crucial dimension of contemporary urban life and influences the processes that shape social identity and life-chances (Forrest and Kearns, 2001). Therefore, the neighbourhood urban unit must be regarded as a vital block of society that is intended to include a social perspective as part of the planning process in addition to economic successes and environmental considerations (Friedman, 2015). Unfortunately, even by the standards of a relatively underdeveloped field (Dempsey, 2009), comparatively little attention has been directed towards the 'social sustainability at the neighbourhood scale" (Hamiduddin, 2015). 'Social sustainability' encompasses notions of equity, empowerment, accessibility, participation, sharing, cultural identity, and institutional stability (Kahn, 1995). Dave (2011) pointed out that "access to facilities and amenities", "community spirit and social interaction", "mix of use of building form" are the aspects that heavily influence and determine the urban social sustainability[51] of a neighbourhood.

All these mentioned aspects are strongly correlated with the Neighbourhood Community Centre's (NCC) concept, essence, and manifestation. The article will try to demonstrate that if a neighbourhood really aspires to be "socially sustainable", it should not avoid the integration of an NCC. The purpose of the article is to evidence that a properly developed Neighbourhood Community Centre is one of the most powerful urban design elements to achieve social sustainability at the neighbourhood scale, because of its importance, influence, and positive social externalities on the local community,.

One of the main impetuses for the article derives from the fact that Neighbourhood Community Centres (NCCs) and especially the sustainable neighbourhoods' NCCs have never

[51] Dempsey et al., (2011) identified and specified the "Urban social sustainability" contributory factors, which are divided between non-physical factors (education and training, social justice: inter- and intra-generational, participation and local democracy, health, quality of life and well-being, social inclusion and eradication of social exclusion, social capital, community, safety, mixed tenure, fair distribution of income, social order, social cohesion, community cohesion, social networks, social interaction, sense of community and belonging, employment, residential stability vs turnover, active community organizations, cultural traditions) and predominantly physical factors (urbanity, attractive public realm, decent housing, local environmental quality and amenity, accessibility, sustainable urban design, neighbourhood, walkable neighbourhood: pedestrian friendly).

been compared and fully analysed in scientific literature. Therefore it is essential for future research to open a new research focus on this important urban design element, which has (as the article will present) a significant influence on a multitude of social aspects related to the neighbourhood's community.

2. Research aims

Public urban spaces represent a democratic forum for citizens and can bring communities together, provide meeting places and foster social ties (Giddings et al., 2011). The Neighbourhood Community Centre (NCC) represents a fundamental public urban design element, which has a strong influence on community identity, social cohesion, and "social sustainability" in general (more in Chapters 4). At the same time, the "sustainable neighbourhood"[52] represents an urban-social form with which to achieve social sustainability (Rudlin and Falk, 2009) and is often described as the ideal urban unit for the 21st century. Consequentially, it could be expected that exemplary urban systems, like the best and most known sustainable neighbourhoods, have already developed NCCs in order to enforce social sustainability. Therefore, the article tries to discover how (and if) NCCs are adequately implemented in the best sustainable neighbourhoods. The implication is the following: if a sustainable neighbourhood represents the optimal sustainable community-oriented urban design form, it should also develop a multifunctional Neighbourhood Community Centre, which is one of the main urban design element that activate, stimulate and enforce the local community manifestation.

First (Chapter 4), the author theoretically explains the ideal role, contribution, essence, manifestation of Neighbourhood Community Centres. For the international comparative analysis (Chapter 5), where the author compares the characteristics, implementation processes, development typologies and other features of the Neighbourhood Community Centres, the author choses 7 case studies of the most known / cited / developed best examples of European

[52] Carley and Falk (2012) define the sustainable neighbourhood as: a sustainable living environment that is large enough to offer a wide selection of different residential areas and services, which could ensure a long-term balance in the local community; well-connected and easily accessible with efficient public transport; designed to preserve and maintain a sustainable usage of different natural resources; based on the participation of neighbourhood residents and responsible local organizations, who together act in accordance with the principles of sustainable development.

sustainable neighbourhoods (Table 1, Chapter 5).[53] The author analyses the NCCs' manifestation in three German *(Vauban* and *Rieselfeld* in Freiburg, *Kronsberg* in Hannover), two Dutch *(EVA Lanxmeer* in Culemborg; *GWL Terrein* in Amsterdam), and two Swedish sustainable neighbourhoods (*Western Harbour* in Malmö, *Hammarby Sjöstad* in Stockholm). The author uses an interdisciplinary international comparative analysis to analyse in depth each NCC from different perspectives, identifies (social) characteristics of each NCC, and tries to point out the correlation between the NCCs' development level and the social (community) aspects / urban social sustainability.

The article's aim is to highlight, define, and analyse a particular urban design element – the Neighbourhood Community Centre (NCC) and to create a complete overview of the NCCs' essence manifested in the most known acclaimed sustainable neighbourhoods. The theoretical presumption is that if the sustainable neighbourhoods are holistically sustainable from environmental, economic, social perspectives, they should have also implemented and integrated an exemplary multi-functional NCC. The main research questions (research focus) is: have the most known sustainable neighbourhoods developed vivid, active, heterogeneous multifunctional community oriented NCCs?

Although the research focuses on a geographically, socially, economically relatively homogeneous territory (Northern-Western EU cities), the selected sustainable neighbourhoods have been developed as "urban sustainable laboratories", which have a global impact on sustainable cities design. The European sustainable neighbourhood have already demonstrated that they could transfer their environmental know-how and technical solutions to other cities across the world (e.g. the energy, waste and water management of Hammarsby Sjostad- "the Hammarby model" was transferred and implemented in the China's Caofeidian Ecocity), Urban planners from all the part of the world are coming to Vauban, Kronsberg, Western Harbour, etc. to learn about sustainable solutions implemented in the European "urban labs".

On the other side, their NCC have never been analysed and compared. Therefore, it is important to analyse and discover how the "top" [54] European sustainable urban cases implemented their NCCs in order to open a discussion about the underestimated social role of

[53] The selected analysed sustainable neighbourhoods have been chosen from a list of the "best sustainable neighbourhood examples", which was determined with a scientific literature review of recent articles, books, sustainable neighbourhood guides, handbooks and case studies (Medved, 2016).

[54] *"Atypical or extreme cases often reveal more information because they activate more actors and more basic mechanisms in the situation studied"* (Flyvbjerg 2006: 229).

NCCs and to discover some new social capabilities of this specific urban design structure, which could eventually represent a source of inspiration or at least a point of reference for future NCCs.

At the same time, the article avoids the tendency toward empiricism, where usually generalistic conclusions are drawn from best practices (Fainstein, 2010). *"Although the "best practices" approach of pragmatism would seemingly imply a judgement as to outcomes, it finesses the issue by avoiding the development of a guide to what is "best" or "competent"* (Fainstein, 2010: 26). The article's aim is to analyse the case studies to define and to explore the potentiality of NCC's, expressed in the most sustainably advanced European urban contexts, in order to open new possible hypothesis, new discussions, and not to create an ideal urban design prototype.

3. Methodological approach

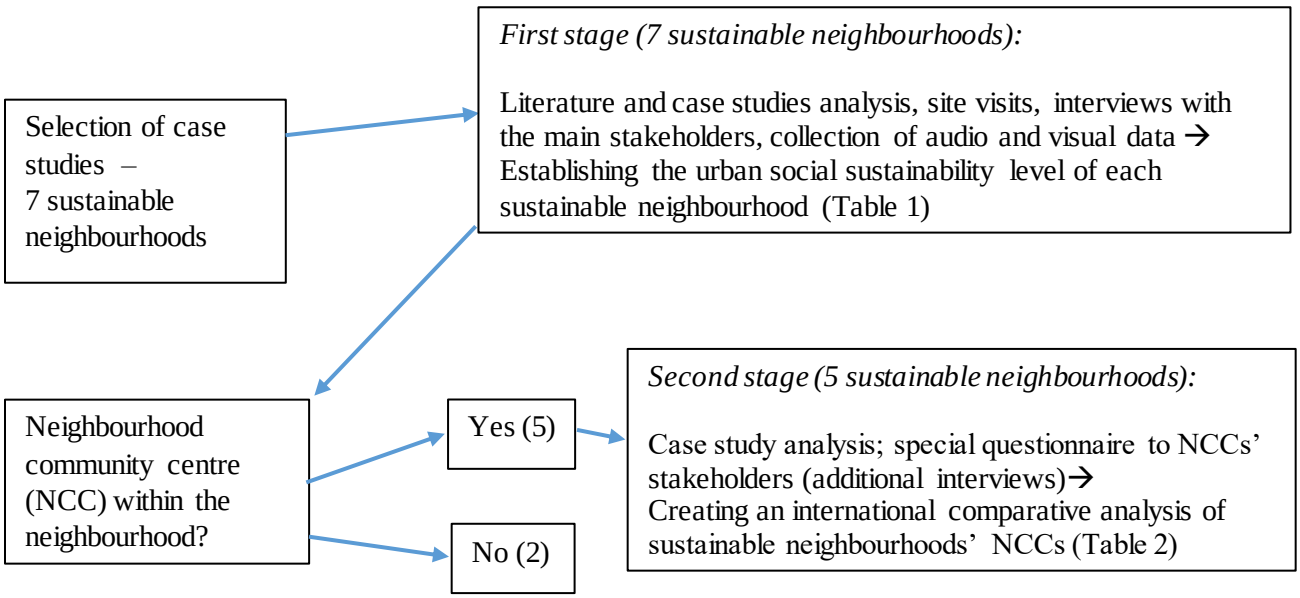
The methodological process is divided into two stages. In the first stage, after a detailed literature review and case studies analysis, the author visited all the analysed sustainable neighbourhoods, interviewed the main stakeholders[55] and collected audio-visual data. In the first methodological stage, the detailed literature analysis of the cases, the site visits, and especially the aforementioned interviews allowed the author to gain an inside perspective of the neighbourhood's social sustainability (strength of the local identity, sense of community and social cohesion, connectedness between the neighbours in each neighbourhood). Based on the

[55] In April 2013, the author visited Freiburg (Vauban and Rieselfeld), where he had the opportunity to interview Andreas Delleske - the leader of the former Forum Vauban community initiative, Wulf Daseking - the urban planner of the Freiburg municipality, who had planned both Freiburg's sustainable neighbourhoods, Sigrid Gombert - the previous editor of the Vauban Actuel local newspaper, and Lejla Karović-Kersting - responsible for the "Intercultural work" department in Rieselfeld's NCC "Glashaus". In May 2014, the author visited Western Harbour (Malmö), where he interviewed Eva Dalman - the former project manager of the Bo01 – Western Harbour district and Marial Lööf - Environmental department of the Malmö municipality. In Hammarby Sjöstad (Stockholm) in June 2014, the author interviewed Helene Wintzel - co-planner of the "Hammarby Sjöstad 2020" community platform, Bjorn Cederquist - Urban planning sector of the Stockholm municipality, and Alan Larsson - former European Commissioner and project manager of the "Hammarby Sjöstad 2020" local platform. In April 2015, he visited Amsterdam, Culemborg, and Hannover. In Amsterdam's GWL Terrein neighbourhood, he interviewed Diego Pos - board member of the local GWL Terrein umbrella association and Joze van Stigt - initiator, activist, and initial resident representative of the GWL Terrein community. In Culemborg's EVA Lanxmeer, he interviewed Gerwin Verschuur - member of the local district council of EVA Lanxmeer and director of the Thermo Bello local energy cooperative company , and in Hannover's neighbourhood Kronsberg, he interviewed Gerhard Kier - Urban planner of the Kronsberg sustainable neighbourhood and *Inge Schottkowski-Bähre* - Department of Environmental protection – Hannover Municipality.

described "first stage" methodological process, the author could determine the development level of social sustainability for each community.

In the second methodological stage in December 2015 and January 2016, the author re-contacted and sent a special questionnaire only to the main stakeholders[56] who are directly responsible or strongly connected to the Neighbourhood Community Centres in each sustainable neighbourhood.[57] All of the contacted stakeholders, in the second methodological stage, were given the same structured and open-question questionnaires, focused especially on the NCC's social engagement (activities, associations, etc.). The author had the opportunity to collect very specific relevant data in order to create an extensive and innovative international comparative analysis of NCC manifestation in the most known sustainable neighbourhoods in Europe (Table 2, Chapter 5).

Figure 1: Methodological process



Source: Author, 2016

[56] The author re-contacted Diego Pos, Lejla Karovic-Kersting, Andreas Delleske, Bjorn Cederquist. The author also contacted (for the first time) Malena Karlsson (Information Officer at the Hammarby Sjöstad's NCC – "Glashus Ett").

[57] Two of the analysed neighbourhoods (Eva Lanxmeer and Western Harbour) have not implemented any form of NCC and were therefore not relevant for the second methodological stage.

4. The definition, the role, and characteristics of the (ideal) Neighbourhood Community Centre

A fundamental obstacle in interpreting the 'neighbourhood' concept lays in the dual definition of the term; "a district" – a physical construct, describing the area in which people live, and "a community" – a social construct, describing the people who live there (Jenks and Dempsey, 2007). The terms 'community' and 'neighbourhood' are often interchanged because of the social and spatial characteristics inherent in both. It is almost impossible to separate the social activity from the physical setting in which it inevitably takes place (Dempsey et al., 2011).

Because the terms "neighbourhood" and "community" are sometimes an interchangeable concept, it follows from the literature review that the "neighbourhood centre" also often becomes a synonym with the term "community centre". The purpose of the article is to address the urban design implementation of a central neighbourhood building (where the "neighbourhood centre" definition would be adequate) that preserves and enforces the essence of the community manifestation, which is activated with citizen activities and local associations (more close to the term "community centre"). The local community is an inseparable soul of the neighbourhood as a physical environment. Therefore, to overpass this intertwining terminology, the author in this article uses and promotes a definition, which is in a way a synthesis of both terms: the "*Neighbourhood Community Centre* (NCC)".

Before the international comparative analysis of NCCs (Chapter 5), it is necessary to theoretically define what constitutes an (ideal) NCC and what are the main characteristics and functions of an NCC. Barton, Grant, and Guise (2003: 22) conceptualize an ideal Neighbourhood Community Centre, which should cover a wide variety of uses and activities necessary for the residents' immediate requirements; and one that, at the same time, fosters the sense of a lively and sociable place. Urban researchers who analysed the essence of Neighbourhood Community Centres (NCCs) pointed out many urban design and community related social factors that characterize an NCC. These characteristics, which also define a Neighbourhood Community Centre (NCC), can be summarized in three main core points (Fleming et al., 1985; Kellogg, 1999; Carley et al., 2001; Hall and Portefield, 2001; Barton et al., 2003; Grant, 2006; Dave, 2011, Friedman, 2015):

- *transportation accessibility, closeness, and "centrality" of the NCC*

The NCCs should be placed centrally and act as architectural anchors. The NCC's layout should be at the convergence of foot, cycle, and bus routes from residential streets – at the point of maximum connectedness. Placing the main amenities (shopping facilities, civic services, recreation centres, post offices, etc.) in the centre of a neighbourhood and in close proximity to each other and the NCC will make the urban area walkable and lively. The "one-stop destination" will encourage transit use and bring down auto dependency.

- *liveliness, sociability, and community involvement (self-managed NCC)*

NCCs should be open and accessible for as much of the time as possible (night and day, weekdays and weekends) and there should be overlaps in the utilization of space and time. A well-developed NCC offers variegated (cultural, sports, social, educational) activities for their residents, which stimulate informal social contact and create a strong social capital. An NCC offers a space for social interaction, where people can meet with each other and create community bonds. Therefore, an NCC represents a neighbourhood holder for the social sustainability values. It is also fundamental to build and engage local community-based organizations (CBOs). CBOs are non-profit organizations that operate in urban neighbourhoods to benefit neighbourhood residents and address their concerns.

- *multi-purpose development and integration of the NCC*

Local residents could use the centre as a single destination for all their basic requirements (civic institutions, cinema, leisure activities, shops, school, library, health facilities, employment centres, theatre, commercial activities, etc.). Concentrations of civic, institutional, and commercial activity should be embedded in NCCs and not isolated in remote, single-use complexes. The social focus of an NCC is a complement to the educational, recreational, entertainment, and all together reinforces the sense of destination and 'place' that serves community needs.

5. The implementation of Neighbourhood Community Centres in European sustainable neighbourhoods (Case studies analysis)

A NCC represents the central "emblem" of the local community and often the NCC and its manifestation reflects the local community's social sustainability. Therefore, it is important to understand how (and if) the concrete NCCs are implemented in the analysed case studies - European sustainable neighbourhoods (Table 1); how they function; what is the NCCs' concrete essence. The factors of interest (Table 2) that have been researched during the international comparative analysis focus on the basic characteristics, functioning, activities of each NCC, with a special interest on social - community oriented aspects.

It is very important to point out that, because of extremely different histories, geographic and climatic predispositions, regional mentality, political systems, micro and macro environments (etc.), and because of different local structural urban predispositions of all the neighbourhoods, the NCCs have been built, implemented, and developed in very different ways. However, a comparative analysis is still necessary to understand the potential of NCCs, to show and compare all the features that a singular NCC has, to highlight this particular and often underestimated urban design element, and to deeply analyse its benevolent functions for the local community. For this reason, this chapter will briefly present each sustainable neighbourhood and the implementation process, background, characteristics of each NCC; with a special focus on the NCCs' activities and NCCs' associations. At the end of the chapter (in Table 2), a complete overview of the sustainable neighbourhoods' NCC essence and their (social) manifestation will be shown.

Table 1. An introductory overview of the selected sustainable neighbourhoods' case studies

Sustainable Neighbourhood / *Factors of interest*	Vauban	Rieselfeld	Kronsberg	Western Harbour	Hamarsby Sjostad	GWL Terrein	EVA Lexmmer
Country	Germany			Sweden		Nederland	
City	Freiburg	Freiburg	Hannover	Malmo	Stockholm	Amsterdam	Culemborg
Neighbourhood's population (approx.)	5000	11000	15000	20000[58]	25000[59]	1400	800
Urban social sustainability (level)[60]	*****	****	****	*	***	****	******
Presence of NCC	Yes	Yes	Yes	No	Yes	Yes	No
NCC's development level	Very developed	Very developed	Very developed	-	Not very developed	Not very developed	-

Source: Author, 2016

VAUBAN AND THE NCC – "HAUS 37"

Vauban represents one of the best examples of the "bottom-up approach" in sustainable urbanism. The Vauban sustainable neighbourhood is a brownfield development, built on the area of former French military barracks. In the early 1990s, the Municipality of Freiburg wanted to build a high-density residential area in the Vauban area (Delleske, 2013). At the same time, concurrently with the city planning for the neighbourhood's revitalization, a group of young students (grouped in the movement – S.U.S.I.) occupied the empty Vauban military building and created the initial cues for an innovative green policy for the local urban space. S.U.S.I (in later phases in collaboration with the Forum Vauban resident association) established a long-term socially and environmentally sustainable vision for the entire neighbourhood (Sperling, 2002; Delleske, 2013). Today, Vauban is known for its cohesive local community with a strong local identity, for numerous multi-residential passive houses created by bottom-up cooperatives

[58, 60] The population is estimated for the time of the completed construction of the neighbourhood.

[60] The determination of the »urban social sustainability« level is based on case studies and a scientific literature analysis, on the interviews with the main stakeholders (see Chapter 3), on the number and development of local (social) activities, the typology of local community-based organizations, neighborhood community-oriented local services (see Table 2), on the identified connectedness between the residents, local identity, and on other perceived community related »urban social sustainability contributory factors« (see Footnote 1; Dempsey et al., 2011).

("Baugruppen"), for the solar energy cooperatives, innovative green technologies, and for its "car-free" zoning. Around 5000 citizens live in Vauban today on the area of 41 ha.

A very large multifunctional Neighbourhood Community Centre, called "Haus 37" was also implemented in Vauban. The building had been originally part of a barrack site, built in the times of fascism (1937), then used by the French military until the fall of the Berlin Wall. Haus 37 is a brownfield and according to an old military designation, it was a casino building (Bächtold, 2013). The local community started using it in 1993, after the French army left the building. The municipality of Freiburg wanted to destroy the building, but the grassroots S.U.S.I association negotiated a future NCC from the German government and reconstructed it together with the local citizens association Forum Vauban. Today, Haus 37 is home to various associations and activities, like: a meditation room, an art workshop, many benevolent associations, a kindergarten, a social workers office, rooms for the youth, a café – restaurant, theatre, concerts, cinema, festivals, lectures, conferences, a youth working group, neighbourhood working groups, children groups, family initiatives, yoga classes, many environmental and social initiatives, etc. The redaction of the "Vauban Actuel" local newspaper and the "Stadtteilverein Vauban" main local association, which took the legacy of "Forum Vauban", also have their offices at Haus 37. The Vauban Neighbourhood Community Centre is a perfect example of a central neighbourhood multi-functional facility with heterogeneous use of public space, which strengthens the identity of the local citizens and offers them a space to meet and communicate.

Picture 1: Vauban's NCC – "Haus 37"

Source: Author, 2013[61]

RIESELFELD AND THE NCC – "GLASHAUS"

Rieselfeld is, unlike the other sustainable neighbourhood in Freiburg, Vauban, a typical greenfield (built on former farming land) and a top-down development project led by the Municipality of Freiburg. The municipality appointed a special team called the "Rieselfed Project Group" to carry out the implementation of the sustainable neighbourhood, which started in 1994. The new Rieselfeld district, situated in the western part of Freiburg, provides about 4200 residential units for approximately 11,000 inhabitants on an area of 70 hectares (Freiburg Municipality, 2009). From the earliest stages of planning, equal attention has been paid to the district's social and cultural life as well as to the technical and ecological aspects, marketing, and urban building (Freiburg Municipality, 2009). All the sustainable goals of the neighbourhood,

[61] The bottom-right photo (aerial perspective) in the Picture 1 was taken from http://www.freiburg.de/ and modified by the Author.

like compact urban planning with high-density living, easy access to public transit hubs and reduced traffic, low-energy and affordable homes, access by proximity, cooperative design and ownership, cultural diversity, all within a 15-minute tram ride from the city centre, have been reached (Daseking, 2013). Rieselfeld has achieved social and cultural diversity with many active sports, cultural, educational, and other social associations. Most of them are concentrated in the NCC "Glashaus".

For Rieselfeld, the municipality planned and developed a monumental structure for its NCC called "Glashaus". The main neighbourhood association K.I.O.S.K[62] organizes, networks, manages, and helps most of the social neighbourhood activities and has its offices in the local NCC. K.I.O.S.K. is also important as a basic communication platform for the neighbourhood (newspaper, website, newsletter, etc.) and for organising district meetings as an open "citizens' forum". It supports the participation of residents in developing the social life of the district and has built a very strong social and cultural network (Karovic-Kersting, 2013). Glashaus has many rentable multifunction halls, including a big kitchen, and is home to a varied range of local social activities and associations, like: a media resource centre for children and the youth, a city library, a disco group, a senior group, flea markets, Christmas markets, different festivals, a district newspaper, discussion forums, an urban gardening group, jazz lounge group, exhibitions and concerts, a film club, etc. (Karovic-Kersting, 2015).

[62] K.I.O.S.K in German: K= Kontakt, I= Information, O= Organisation, S= Selbsthilfe, K= Kultur; in English: Contact, Information, Organization, Self-help, Culture), was established in 1996 and relocated to the "Glashaus" in 2003.

Picture 2: Rieselfeld's NCC – "Glashaus"

Source: Author, 2013[63]

KRONSBERG AND THE NCC – "KROKUS"

Kronsberg is a greenfield, top-down driven project initiated by the Hannover municipality. When faced with a growing housing shortage in the early 1990s, the City of Hannover responded by using the World Expo 2000 as an opportunity to unveil a pioneering socially inclusive eco-district (Price, 2014). The Kronsberg settlement construction started in 1996 and is one of the most acclaimed sustainable neighbourhoods. The Kronsberg uniqueness in planning was the establishment (in 1997) and founding of a special entity: the Kronsberg Environmental Liaison Agency - "KUKA". KUKA assisted in the building process to ensure onsite skilling, quality assurance, and supported residents with facility and systems usage (Price, 2014). KUKA worked as an intermediary institution between all the stakeholders involved such as urban planners, building companies, residents, media, etc. The main sustainable urban implementation features

[63] The bottom-right photo (aerial perspective) in the Picture 2 was taken from http://www.freiburg.de/ and modified by the Author.

that characterize the neighbourhood are: a compact, high-density urban structure (15,000 residents on 140 ha.), a unique green space concept, grass roofs, special stormwater systems with ponds, efficient public transport, low energy building, large district energy systems that integrate solar collectors and wind turbine generators, etc. A special focus in the district was also placed on social sustainability issues with the "Fokus" project – a housing project for the disabled, with "Habitat", an initiative aimed at a better integration of foreign citizens, and especially with several social activities initiated and managed by the "Krokus" Neighbourhood Community Centre.

The KroKuS centre, inaugurated in 2000, was implemented as a sub-project within the EXPO core project "City as Social Habitat" and was opened as the central facility for the networked community work. Today, Krokus is a central meeting point, an information centre, and at the same time represents the social and cultural community centre (Municipality of Hannover). In Krokus, local citizens can participate in extremely varied youth and children activities, theatre classes, cinema sessions, music related activities, literature events, painting classes, dance classes, language courses, etc. Krokus offers many offices to local associations; there are seven rentable halls for meetings, conferences, festivals, etc.; there is a "Youth Café", a playhouse for children, a media room, and a big library (Municipality of Hannover). The available multipurpose social areas in the immediate vicinity make it possible for the local citizens to create a variety of social and cultural activities and enforce the local Kronsberg identity.

Picture 3: Kronsberg's NCC – "Krokus"

Source: Author, 2015[64]

WESTERN HARBOUR – WITHOUT AN NCC

The Western Harbour is a top-down driven (from the Municipality of Malmö) brownfield redevelopment, which has been transformed from an industrial park (shipyard, auto factory) into a lively district focused on knowledge (University of Malmö) and sustainable living. The application and selection by SVEBO[65] to host Sweden's housing exposition was the most important first step towards the implementation of the sustainable neighbourhood. The Bo01 district,[66] the first implemented sustainable area within the Western Harbour, was the first sustainable area in the world that could claim to be supplied by 100% renewable energy

[64] The bottom-right photo (aerial perspective) in the Picture 3 was taken from http://www.unige.ch/ and modified by the Author.

[65] SVEBO (abbreviation in Swedish): Svenska Bostäder, an organization formed by the Swedish National Board of Housing, Building, and Planning. The sustainable neighbourhood was also funded by the Swedish Local Investment Program (LIP) and by the European Union (Fraker, 2013).

[66] Western Harbour was developed in three stages: Bo01; Flagghusen – Bo02, Fullriggaren – Bo03. The area of Western Harbour is still under construction.

(Bächtold, 2013, p. 80). The Western Harbour also represents a space of green innovation in other areas than energy, especially in water and waste management (e.g. rainwater is reused for washing clothes, watering gardens, and flushing toilets; domestic waste is transformed into a new energy source through a waste system with anaerobic vacuum digestion, organic waste is converted to biogas, etc.). Western Harbour has become a very popular area for the other citizens of Malmö and tourists as well, who are attracted by the pleasant public green spaces, cafés, restaurants, the promenade by the sea, and by the beach in the summer. Western Harbour demonstrates that modern development can be both environmentally conscious and attractive (Foletta, 2011). When fully developed, Western Harbour (140 ha.) will accommodate 20,000 people.

Although Western Harbour can be regarded as successful in terms of ecology and technology, the aspects of social and economic sustainability tend to be weaker (Holgersen 2014; Kärrholm, 2011). There are not many local citizens' associations in Western Harbour and the local identity of the community is relatively weak in comparison to the other analysed sustainable neighbourhoods. There is no community centre for the local population in Western Harbour. This can be partly derived from the fact that the entire area was designed with the top-down approach. However, from the interview with the initial project manager of Bo01, Eva Dalman, it was clear that a community centre was not introduced in part because the future residents had not expressed the need for such a communal space (Dalman, 2014).

HAMMARBY SJÖSTAD AND THE NCC – "GLASHUSETT"

Hammarby Sjöstad is a typical brownfield development constructed on reclaimed industrial land. The initial impetus for the urban development of Hammarby Sjöstad began in the early 1990s as the demand for housing in Stockholm rapidly increased (Pandis Iverot and Brandt, 2011). Hammarby Sjöstad represents a very good example of a "top-down" approach in sustainable urbanism. The city established the Hammarby Sjöstad Project Team, an organization within the Stockholm City Planning Administration, which controlled, managed, and delivered the entire planning and implementation of the area (Fraker, 2013). Hammarby Sjöstad, which was initially meant to be the "athletes' residential village" (in the context of the Stockholm Olympic Games' candidacy), is an exemplary sustainable neighbourhood today, known especially for the world-wide acclaimed and copied "Hammarby eco-cycle model" of integrated

environmental solutions.[67] Once fully built, Hammarby Sjöstad will have 11,000 residential units for more than 25,000 people, concentrated on 160 ha. (City of Stockholm, 2007).

Similarly to the neighbourhood GWL Terrein, Hammarby Sjöstad also does not have a typical Neighbourhood Community Centre, but it has a special small "Environmental information centre", called "GlashusEtt", which covers some functionality of a "typical" NCC. However, because GlashusEtt is very small and is not primarily designed for social activities, many typical NCC (social) functionalities are located in different neighbourhood locations.

The NCC GlashusEtt had first been established to inform the residents about the innovative environmental solutions and teach them to contribute to reach the environmental goals (Karlsson, 2015). The centre also functions as a showcase space to exhibit technical solutions about waste, water, and energy (Cederquist, 2015; Gaffney et al., 2007). GlashusEtt is therefore clearly first of all an educational information centre and the "social function" comes after that. However, its public spaces (conference / meeting rooms) are extremely important for the local neighbourhood citizens. In GlashusEtt, the community rooms are available to the Hammarsby Scout association (three times a week); there is meeting place for the "Hammarby Sjöstad" association, for the "People's House" association and also for the Stockholm districts representatives. The building also embodies an important referential function for the neighbourhood's practical needs.[68] Since 2014, GlashusEtt has been run entirely by the Stockholm Water Company. Consequently, the centre is now focused on a more specific point of interest: water treatment, wastewater, and waste collection.

[67] The sustainable neighbourhood implemented very innovative technical solutions for energy supply and energy usage, a pilot sewage treatment plant facility, and a practical automated waste disposal system for waste management (City of Stockholm, 2007).

[68] For example, GlashusEtt is also a neighbourhood collecting point where the residents can get special bags for organic waste (Karlsson, 2015, Cederquist, 2015).

Picture 4: Hammarby Sjöstad's NCC – "Glashusett"

Source: Author, 2014[69]

GWL TERREIN AND THE NCC – "TOEGANGSHUIS (THE GATE HOUSE)"

In 1989, Amsterdam's Westerpark municipal district council decided to develop the former municipal water company area "GWL Terrein" into a residential area. The sustainable neighbourhood is a brownfield and is also considered a bottom-up project, because it was driven, managed, and dramatically influenced by the local residents who already lived in the vicinity of GWL Terrein. A special team of local residents - activists who first proposed the idea for the sustainable residential area supervised each step of the urban planning and implementation (Pos, 2015a). Today, GWL Terrein is a truly car-free, environmentally friendly residential area with generous public outdoor spaces, apartments with roof gardens, communal urban food gardens, and a green public space intended not only for the residents, but also for those living in the densely built adjacent neighbourhoods (GWL Terrein). The communal space, fruit trees, and

[69] The bottom-right photo (aerial perspective) in the Picture 4 was taken from http://en.white.se/ and modified by the Author.

little gardens are all well maintained by the neighbourhood residents (Pos, 2015a). The local citizens are socially cohesive and organize many activities that strengthen the neighbourhood identity and community connectedness, like: football tournaments, painting exhibitions, summer party, planting day, neighbourhood cleaning day, cutting and plucking the apple trees, New Year's party, etc. (Pos, 2015b). In GWL Terrein, 1400 residents are living on 6 ha., which contributes to a wider communal identity of the West Amsterdam area.

Unlike the analysed German sustainable neighbourhoods, GWL Terrein does not have a typical multi-functional NCC. The main social role in the neighbourhood is assumed by a special umbrella organization that networks and manages many local citizen associations and sometimes holds meetings in a building called "Gate House"[70] (Pos, 2015b). There is also a permanent maintenance office for the neighbourhood caretaker in the Gate House. There are rentable offices, which are free for meetings and exhibitions. This picturesque refurbished building embodies a meeting place for its resident representatives. The Gate House is also something of a reference point for the local residents, where they can go if they have a housing problem or other residential inconveniences. For these reasons, the author identified that particular building as the NCC, even if the local residents do not perceive the building in that way, because the selected NCC does not cover all the neighbourhoods' social activities, which are spread out in different locations around the neighbourhood.

[70] In Dutch: "Toegangshuis". This building was built in 1900 on top of the underground water cellar of the local water company and gets its name because the control point for opening the cellar gates was once located there.

Picture 5: GWL Terrein's NCC– "Toegangshuis"

Source: Author, 2015 [71]

EVA LANXMEER – WITHOUT AN NCC

EVA Lanxmeer is a small sustainable neighbourhood (24 ha.; 800 residents) constructed in the municipality of Culemborg in the Netherlands. E.V.A. Lanxmeer is a greenfield project built on a protected zone for drinking water extraction. It is a bottom-up project initiated in 1994 by a group of environmental specialists who established a special entity called the "EVA foundation" (Ecological centre for education, information, and advice). The EVA foundation, together with the Municipality of Culemborg, decided to build a sustainable neighbourhood with a wide array of environmentally friendly solutions like: an organic permaculture urban farm, collective gardening, solar collectors, low energy heating systems, restriction of car use in the district, a

[71]The bottom-right photo (aerial perspective) in the Picture 5 was taken from http://www.kcap.eu/ and modified by the Author.

biogas production facility, a grey water purification system, etc. (Anquetil, 2009, Varnay 2013). The future residents themselves collaborated with the "EVA foundation" multidisciplinary group from the beginning in the urban planning and in the construction process of the neighbourhood. The specificity of EVA Lanxmeer is that the residents have been responsible for the initial urban plan, for the design and the management of the local district heating installations and especially for the communal public green spaces through the Terra Bella foundation (Anquetil, 2009). Eva Lanxmeer has perhaps the most cohesive local community of all the analysed sustainable neighbourhoods, with very strong community ties. They enforce their sense of community through the EVA Lanxmeer residents society (BEL), the Terra Bella foundation, the city farm, the C4real neighbourhood festival, harvesting days (of collective fruit trees), the Thermo Bello semi-cooperative local energy company, and through more than 10 residents' working groups (Verschuur, 2015; Anquetil, 2009).

The Eva Lanxmeer neighbourhood (still) does not have an NCC. A special, relatively big, very innovative multifunctional NCC called "EVA Centrum" was planned in the initial urban plans, integrating a conference centre, hotel, commercial offices, community spaces. However, the Eva Centrum has never been realized (Verschuur, 2015). Without this centre, the relatively low density urban neighbourhood EVA Lanxmeer has a slightly more rural feel to it.

Since the Western Harbour and EVA Lanxmeer sustainable neighbourhoods do not have an NCC implemented in their neighbourhoods, the analysis in Table 2 will continue on a neighbourhood NCCs' comparison without the two analysed neighbourhoods. It also needs to be pointed out that the appointed NCCs in GWL Terrein and Hammarsby Sjöstad have not been "officially" assigned as local NCCs. The author determined the structures "Toegangshuis" and "GlashusEtt" as NCCs because both cover many aspect of a typical NCC (Chapter 4) and in many ways function as an NCC (to a certain extent cover all the three core points that define an NCC) even if they do not have the "status" of an NCC.

Table 2: International comparative analysis of neighbourhood community centres in the selected European sustainable neighbourhoods

Neighbourhood:	*Vauban* *Name of NCC*	*Rieselfeld*	*Kronsberg*	*Hammarby Sjöstad*	*GWL Terrein*
	Haus 37	*Glashaus*	*Krokus*	*GlashusEtt, environmental information centre*	*The Gate House (Toegangshuis)*
Factors of interest					
Year of creation/year of usage as NCC	Occasional use from 1993, official start 2001	1996	2000	2002	1997
Size	In total 2050 sq. m., about 40 rooms	More than 20 halls, many meeting rooms, kitchens etc.	Seven meeting rooms of 40–100 m^2 (for 10–100 persons), one 250 m^2 hall	The "public" spaces are about 200 sq. m. (two presentation rooms)	Approx. 100 sq. m.
Centrality/accessibility	Yes/yes	Yes/yes	Yes/yes	Yes/yes	Yes/yes
NCC (brownfield or greenfield)	Brownfield, former military barracks	Greenfield	Greenfield	Greenfield	Brownfield, gatehouse of former water company
Initial idea, implementation process of the NCC (bottom-up or top-down)	Bottom-up (started with the SUSI association, continuing with Forum Vauban)	Top-down (Freiburg Municipality)	Top-down (Hannover Municipality)	Top-down (Stockholm Municipality)	Bottom-up (local activist of Staatsliedenbuurt District)
Local citizens' participation in NCC urban design	Yes, workshops (aesthetics, energy concepts etc.)	No	No	No	Yes, they decided to keep the NCC in the original form
Communication with local citizens (communication platform)	Local newspaper *Vauban Actuel*, websites, newsletters	Local newspaper *Stadtteilzeitung Rieselfeld*, websites, lift board, newsletters	Local newspaper *Kronsberg Nachrichten*, bulletin board, brochures, "youth guide", mailing list	Some local newspapers, notice board, website	Flyers, website, newsletters
Library in NCC	No	Yes	Yes	No	No
Cafe/restaurant in NCC	Yes, restaurant Süden	Yes, Cafe im glashaus	Yes, Jugendcafé	No	No
Rentable room or hall for local citizens in NCC	Yes; it can be rented for social and cultural activities for free as long there is no entrance admission fee	Yes; many halls and specialized rooms (for youths, music room, kitchen etc.); members have a discount	Yes; seven meeting rooms, one hall; for citizens or conferences, galas, special events etc.	Yes; associations can rent out two rooms in the evening (free for non-commercial activities)	Yes; free for meetings and exhibitions
NCC integrated with the "plaza" (public square)	Yes, the NCC also hosts restrooms for farmers' market-goers and tourists	Yes, the plaza is used for the summer cafe, weekly food market festivals etc.	Yes	No	No
Local festival in neighbourhood (in/directly correlated with NCC)	Yes, the summer district festival	Yes, the summer district festival	Yes, the kite festival	Yes, the Sjöstadsdagen	Yes, the yearly summer festival: dinner under the water tower
People employed at NCC (part-time/full-time)	1 part-time (paid by the municipality and the Vauban association)	5–6 full-time and approx. 10 part-time (all paid by the municipality)	14 full-time and some part-time (all paid by the municipality)	2 full-time employees (paid by the Stockholm Water Company)	1 full-time neighbourhood caretaker (paid by the contribution people pay to the local umbrella association)
Education or training facilities	Educational seminars, exhibitions etc.	Conferences, seminars, exhibitions, training etc.	Educational events, language courses, conferences etc.	Students come for the "energy saving programme"	Seminars for neighbourhoods visits

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Table 2 continued

Neighbourhood:	*Vauban* *Name of NCC*	*Rieselfeld*	*Kronsberg*	*Hammarby Sjöstad*	*GWL Terrein*
	Haus 37	*Glashaus*	*Krokus*	*GlashusEtt, environmental information centre*	*The Gate House (Toegangshuis)*
Social activities/associations (intergenerational and others) in NCC	Two child day-care groups, rooms for youths, youth work association, nursery, end child prostitution and trafficking (ECPAT) association, many benevolent associations, social workers' office, family initiatives	Social workers, KJK (children and youth kiosk) group, media centre for children and youths, senior group, Rikiki children's cinema group etc.	Theatre for children and elderly, many family, youth and children activities, music group activities, dance courses for youths, organized group debates, programmes for social inclusion of foreigners/ language courses for migrants	Boy scouts are regular users of the NCC common room; young schoolchildren come to learn more about sustainability and about the water and waste treatment processes	Not (directly) in NCC
Entertainment activities/ associations in NCC	Art workshops, theatre, concerts, cinema, festivals, lectures, yoga classes, meditation classes, many other cultural events etc.	Cinema, disco, cheese days, jazz lounge evenings, flea market, board game nights, capoeira courses, self-defence courses etc.	Music groups, theatre, literature evenings, film events, painting and dance classes, flea market, self-defence courses etc.	Not (directly) in the NCC	Soccer tournament, painting exhibition, summer party, New Year's party (organized/managed at NCC meetings)
Environmental activities in/ associations organized from NCC	Car-free association Vauban, environmental initiative—Regiowasser	Urban gardening group	"Spring cleaning action", "green care" activities (organized/managed at NCC meetings)	Collection point for "special bio bags", exhibitions, and discussion to inform about water, waste and energy issues	Planting day, cleaning day, cutting and plucking apple trees days (organized/managed at NCC meetings)
Important community-based organization (CBO) association entities in NCC	The main CBO Stadtteilverein Vauban; local magazine *Vauban Actuel*, neighbourhood work group etc.	The main CBO: K.I.O.S.K.; other working groups etc.	The main CBO: Krokus Stadtteilarbeit—the central forum, volunteer association Kromit, "neighbourhood groups", etc.	The main CBO: HS2020 (not based in the NCC; it just occasionally rents the meeting rooms); Stockholm's local (district) authorities have their planning meeting in the NCC	The main CBO: The local umbrella organization GWL Terrein (not based in the NCC, but they have their meeting in the NCC)

Source: Author (2016).

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6. Final analysis and conclusion

The article examines and analyses in depth the NCCs' manifestation in practice, from the perspective of the European sustainable neighbourhoods' best practices. In Chapter 5, it was pointed out that not all the analysed neighbourhoods implemented an NCC. Eva Lanxmeer planned to build a very ambitious NCC but has not implemented it (yet). On the other side, Western Harbour had no intention of building one at all. It was also noted that only the three German sustainable neighbourhoods (Vauban, Rieselfed, Kronsberg) implemented very big multifunctional NCCs. These three NCCs are truly multifunctional and offer several different activities, services, amenities to their residents, like cafes, libraries, theatres, cinemas, activities for children and the youth, activities for the elderly, environmental activities, educational classes, and much more (see Table 2). However, there are some differences between the three German NCC cases. Rieselfeld's NCC ("Glashaus") and Kronsberg's NCC ("Krokus") are much more similar in comparison with Vauban's NCC ("Haus 37"). Contrary to Haus 37, both Glashaus and Krokus are greenfield projects, they were top-down driven from the municipality, and have much greater support from the municipality. In both NCCs, there is an important local library and both employ many more people in comparison with Haus 37.

In comparison with the German NCCs, Amsterdam's GWL Terrein neighbourhood and Stockholm's Hammarby Sjöstad have relatively small NCCs and are consequently very limited regarding the meeting space. However, both neighbourhoods developed social, sport, and cultural spaces in different locations across the neighbourhood. Of course, it must be pointed out again that these two smaller NCCs ("The Gate House –Toegangshuis" and "GlashusEtt") are not primarily designed as NCCs and only cover NCC functions as a secondary purpose (also spontaneously). Even if the two NCCs are not primarily designed as NCCs, they still achieve the multi functionality to a certain extent: from the bio bag collector points and scouts meeting place, to a seminar conference room. It is also necessary to point out that in both neighbourhoods, the most distinctive, characteristic, historical brownfield buildings ("Luma" in Hammarsby Sjöstad and "Engine Pump Building –Machinepompgebouw" in GWL Terrein) have been transformed into a café and restaurant and not in a NCC. These two buildings (that the author has not appointed as an NCC) embody a special historical dimension in the collective consciousness of the local residents.

The common characteristics of all the five analysed NCCs are: they are built in the core of the neighbourhood (see Picture 1-5), placed in the vicinity of public transport (tram and bus stop),

accessible by foot (less than 15-minute walking distance from the edge of each neighbourhood). All five NCCs represent an important reference point for the local community. Even if the NCCs in GWL Terrein and in Hammarsby Sjöstad have not been developed like the German cases, their NCCs are fundamental as a reference point for the local communities' everyday needs (organic bags collecting point, maintenance centre, etc.). There is at least one person in all the analysed NCCs who is there to "solve" residential problems, to answer any questions, and to help in general. This factor is very important in particular for battling alienation, which is usually present in typical suburban non-sustainable low-density districts, and for strengthening the sense of place and the social cohesion.

The article's analysis reveals a sort of correlation between the level of development of an NCC and the "social sustainability level" of the neighbourhood. Of course, the analysis based just on seven case studies is not enough to clearly (universally) determine a "definitive correlation". However, the observed tendency could open a further research and a new discussion.[72] The only exception where the mentioned correlation was not identified is EVA Lanxmeer. Eva Lanxmeer achieved the highest level of social sustainability of all the analysed neighbourhoods without the presence of an NCC, although one was planned. However, it is also worth mentioning that the Eva Lanxmeer neighbourhood differentiates from other analysed neighbourhoods and is in a way a "semi-urban neighbourhood". Culemborg itself is a very small low-density city and its sustainable district is very special, because it is more reminiscent of a rural rather than an urban area. Contrary to the other analysed neighbourhoods, there are no cafés, restaurants, or shops in the Eva Lanxmeer district, no "real" neighbourhood centre; it is a low building density area and is placed in the middle of farming land. These characteristics enforce the perception of the neighbourhoods' "semi-urbanity".

Another important fact that emerged from the comparative analysis is the positive correlation between the social sustainability and the community participation in urban design (the bottom-up approach). The comparative analysis confirms the Barton et al. (2003) thesis that the more the local community is involved in the design and development process of the neighbourhood, the greater likelihood there is of evolving a place that has local relevance. The analysis also confirmed the Frey (1999) findings that the people in a neighbourhood are more responsible for their neighbourhood if they have been involved in shaping it. All the analysed bottom-up projects (Vauban, EVA Lanxmeer, GWL Terrein) have a very strong local identity, a strong social

[72] Flyvbjerg (2006) emphasise the importance of case studies analysis because can be used "in the preliminary stages of an investigation" to generate hypotheses.

cohesion. In these three neighbourhoods, which evolved with the bottom-up approach, the residents are also responsible for the management and maintenance of common public spaces (fruit trees, urban gardens, playgrounds, etc.).

The overall research reveals that because of the multitude of the varied social activities and associations that are connected to a (developed) NCC, the NCC represents a real hub for social sustainability. The comparative analysis demonstrates that NCCs cover most of the factors identified as "Urban social sustainability contributory factors" (see footnote 1). The overview expressed in Table 2 is in a way restrictive, because it takes into account more or less only the (social) features and activities related to the NCC and not the activities that are in other neighbourhood locations. In that way, it was possible to highlight just a singular urban design element alone – the Neighbourhood Community Centre (NCC) and its immense multimodal impact on a community's urban social sustainability. Multimodality really represents one of the key factors to achieving social, economic and environmental sustainability. The complete overview of the NCCs' manifestation (presented in Table 2) could provide many concrete ideas, approaches, propositions on what can be to activated in one singular building for future NCCs. The initial purpose of the analysis was to identify if the theoretical presumptions (from the NCC's definition in Chapter 4) of an ideal NCC has been fulfilled in practice in the most acclaimed European sustainable neighbourhoods. From the comparative analyses, it is possible to confirm the initial thesis that (some) sustainable neighbourhood's NCC have fully achieved / covered / fulfill all the three main core points reassumed in the NCC definition. Most of the analysed sustainable neighbourhoods developed vivid, active, heterogeneous, multifunctional community-oriented NCCs. Finally, just the implementation of an NCC alone is not a magic wand for achieving a strong community. As Barton, Grant, and Guise (2003) pointed out, physical urban design alone cannot entirely create a strong sense of community, but can reproduce the preconditions where a sense of neighbourliness and belonging is more likely to develop. Therefore, the formation of the NCC alone is not a guarantee for a stable and cohesive local community, but it can represent a concrete stimulating environment, where the local identity of a community / social sustainability could more likely be developed and evolve.

To conclude, the European sustainable neighbourhoods have been globally recognized as exemplary urban forms and many (especially Asian) cities transferred their urban design and environmental solutions. However, it is needed to point out that the transferability of the described NCC's solutions is more complicated, because of the specific not reproducible local Fglsocial) characteristics – traditional urban formation, local culture, mentality, history, etc. Nonetheless, the article's research output adds a new perspective in sustainable urban design

research in relation to the role of NCC and its positive effects on the local community. In addition, commencing with the perspective of the most successful European sustainable urban cases, the presented research could represent a starting point in order to generate a further discussion about the importance of implementing fundamental urban design elements, which activate the "urban social sustainability". Certainly, it is needed to take in consideration that each geographical territory has different perception and tradition about, what is "fundamental" in relation to sustainable urban design.

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7 LEADING SUSTAINABLE NEIGHBOURHOODS IN EUROPE: EXPLORING THE KEY PRINCIPLES AND PROCESSES

Sedmo poglavje vključuje znanstveni članek "Leading Sustainable Neighbourhoods in Europe: Exploring the Key Principles and Processes", ki je sprejet v objavo v reviji Urbani izziv (Medved 2017).

Abstract. Local projects involving sustainable urban transformation are increasingly prominent in cities and towns, and are often referred to as sustainable neighbourhoods. These initiatives have been described as experiments in urban sustainability and could provide concrete answers to many challenges facing cities and society. This article investigates the design and development of two leading examples of sustainable neighbourhoods that used different implementation strategies: a top-down development in Western Harbour (Swed. *Västra Hamnen*, Malmö) and a bottom-up (participatory) approach in Vauban (Freiburg). The article investigates how the initial implementation approach in sustainable urban redevelopment influenced and conditioned the urban design, social sustainability and local governance of the neighbourhoods. The research also focuses on how Vauban and Western Harbour have influenced and disseminated sustainable urban solutions to other urban contexts.

Keywords: sustainable neighbourhoods, sustainable urban development, new urbanism principles, urban experimentation processes, eco labs, Vauban, Western Harbour

1. Introduction and background

Small-scale community sustainability initiatives of various types (typically small cities, villages and neighbourhoods) have become increasingly common over the past decade (Forrest & Wiek, 2014). Local projects involving sustainable urban transformation in cities are often referred to as sustainable neighbourhoods. Such developments could represent a

holistic solution for new sustainable urban balances at the local level (Rudlin & Falk, 2009). David Harvey (1990) defines a sustainable neighbourhood as an independent urban area within a city that preserves the symbolic richness of the traditional urban form and that is based on dialogue and diversity. The creation of sustainable neighbourhoods and the development of local urban communities involve setting clear and robust environmental, social and economic objectives that are ideally in constant equilibrium (Churchill & Baetz, 1999). Harriet Bulkeley et al. (2015) claim that the constellation of interventions that together form the urban climate change governance landscape is often explicitly experimental in character, seeking to develop, try and attest to the experience of responding to climate change. Sustainable neighbourhoods can be framed as experiments or living labs providing concrete answers to many challenges facing cities and society. This particular form of development could become a new active urban model, in line with current sustainable development principles. Ideally, sustainable neighbourhoods embody alternative solutions to current unsustainable practices in cities.

From a literature review of sustainable neighbourhoods, it is possible to conclude that most examples of sustainable neighbourhoods in Europe are being implemented in northern and western Europe (Medved, 2016). Consequently, Stella Kyvelou et al. (2012) define the sustainable neighbourhood concept as a northern European model. Southern European sustainable neighbourhoods have great potential, but are rarely cited or mentioned as best-practice examples, and they are not often analysed in the literature on urban sustainability. The best examples of sustainable neighbourhoods (from northern and western Europe) are often grouped, analysed or cited together. The most often recognised and thus cited leading examples of sustainable neighbourhood implementation, as identified in Primož Medved's (2016) extensive literature reviews, have been established in: Culemborg (the Netherlands: EVA-Lanxmeer), Utrecht (the Netherlands: Leidsche Rijn), Amsterdam (the Netherlands: GWL Terrein), Malmö (Sweden: Western Harbour and Augustenborg), Stockholm (Sweden: Hammarby Sjöstad), Freiburg (Germany: Vauban, Rieselfeld and Weingarten) Hannover (Germany: Kronsberg), Ostfildern (Germany: Scharnhauser Park), Tübingen (Germany: Französisches Viertel – Südstadt), Helsinki (Finland: Viikki), Copenhagen (Denmark: Vasterbo), Sutton (UK: BedZed), London (England: Greenwich Millennium Village) and Linz (Austria: SolarCity). However, large differences exist between the case studies, especially in terms of community-related "social sustainability" and governance issues. Most of the acclaimed sustainable neighbourhoods have shown superior excellence in terms of environmental sustainability, but it seems that social sustainability and the local governance system have not been developed systematically in some cases.

2. Research aims

Two contextual circumstances shaped the hypotheses and the research aims of this article. First, based on a preliminary analysis of various sustainable urban communities, the author discovered a potential correlation between a strong cohesive urban community, local governance and the initial implementation approach in urban planning. Several urban researchers have also identified this particular correlation. For example, Hugh Barton et al. (2003) claimed that the more the local community is involved in the design and development process of the neighbourhood, the greater the likelihood is that they will create a place that has local relevance. Hildebrand Frey (1999) noted that people in a neighbourhood are more responsible and connected if they have been involved in shaping the neighbourhood. Participatory urban design supported by workshops, communication forums and competitions was found to increase the sense of the local urban community and commitment to the sustainable urban project (Bayulken & Huisingh, 2015). Strengthening participation in local governance is correlated with direct citizen involvement in making decisions. Local governance calls for increased participation of civil society, which traditionally formed part of the public sphere (Gaventa & Valderrama, 1999).

Based on these theoretical assumptions, the author formulates two research hypotheses:

1) Sustainable neighbourhoods implemented through a participatory bottom-up approach have developed more human-scale, community-oriented urban forms in comparison with top-down sustainable neighbourhoods.
2) Sustainable neighbourhoods implemented through a participatory bottom-up approach are more socially sustainable and have developed a stronger and more complex local urban governance system in comparison with top-down sustainable neighbourhoods.

In order to analyse the implications and confirm the two hypotheses, two leading sustainable neighbourhoods that have used completely different implementation approaches were chosen: Vauban (in Freiburg, Germany) and Western Harbour (in Malmö, Sweden). For more information, see Section 3 “Approach and methodology”. This article first explores and analyses the two sustainable neighbourhoods using unique methodological approaches and investigates whether (and how) the initial implementation approach has conditioned the urban design (Hypothesis 1), social sustainability and especially community involvement in everyday decision-making or the local governance of both neighbourhoods (Hypothesis 2).

The second contextual circumstance the article focuses on is related to the contemporary observation that, with the current rapidly increasing urbanisation rate, it is critically important to take collective action through bottom-up participation and top-down commitment to establish more cases of sustainable urban projects and create mainstream living examples that can share their sustainable urban innovations (Bayulken & Huisingh, 2015). Based on this, the article's second research aim is to identify whether (and how) the two cases have already influenced and disseminated sustainable urban solutions to other urban situations. The author explores whether there is a significant difference related to the transfer of knowledge between the two case studies with a completely different implementation process.

3. Approach and methodology

From among the best examples of sustainable neighbourhoods mentioned in the introductory section, two case studies were chosen for comparative analysis (Bächtold, 2013; Fraker, 2013; Medved, 2016). The first is one of the best-known leading sustainable neighbourhoods developed using the bottom-up approach: Vauban (in Freiburg, Germany). The second is one of the most representative sustainable neighbourhoods developed using the top-down approach: Western Harbour (in Malmö, Sweden). These two neighbourhoods represent practical prototypes of how a sustainable neighbourhood can be designed and developed using the top-down and bottom-up implementation approaches (Bächtold, 2013; Fraker, 2013). Vauban and Western Harbour represent two extremes in relation to urban development implementation strategies. "Atypical or extreme cases often reveal more information because they activate more actors and more basic mechanisms in the situation studied" (Flyvbjerg 2006: 229). Certainly, an analysis based on only two case studies will not make a "universal" statement, but it can still open up new perspectives for further analysis and discussion.

To address the first hypothesis, the comparative analysis of the two sustainable neighbourhoods is based on the "new urbanism principles" analytical framework (CNU & HUD, 2000; Grant, 2006; Rahnama et al., 2012; Internet 1, 2016). To address the second hypothesis, the analytical framework of "processes for urban experimentation" was chosen (Bulkeley et al., 2015). The new urbanism principles framework was selected because new urbanism is one of the main contemporary movements that focuses on how to recreate and generate human-scale dense developments in cities. New urbanism promotes specific urban design elements that should

be adapted to local needs (and not vice versa). New urbanism calls for a more human scale, walkable streets, mixing shops and residences to generate city life, higher density and a less automobile-dominated community (Kushner, 2002). The new urbanism framework was also chosen because it integrates most of the parameters and important basic elements of the compact city framework (Rogatka & Ramos Ribeiro, 2015). The new urbanism principles framework made it possible to address the first hypothesis and eventually confirm that sustainable neighbourhoods implemented with a participatory bottom-up approach have developed more community-oriented, human-scale urban forms in comparison with top-down sustainable neighbourhoods. The comparative analysis starts by examining the basic characteristics and urban design features of Western Harbour and Vauban. After presenting the two neighbourhoods, it uses the checklist in Table 1 to identify whether the neighbourhoods have implemented features that are in line with new urbanism principles. The comparison research elements include the ten principle definitions described in the second column of Table 1 (Section 4). In this way, it is possible to better understand the main sustainable characteristics of both urban areas and to establish the development level toward the urban-planning ideals advanced by the new urbanism movement. The analysis highlights the physical environment of the neighbourhoods and the sustainable goals they achieve, especially those related to urban design and sustainable transport.

Processes for urban experimentation were selected because they appear to be absent from other frameworks on cities and because the framework offers an important perspective on the dynamic relation between various stakeholders through time. Nuno F. Cruz and Rui Cunha Marques (2014) noted that nowadays social, economic and environmental performance is not sufficient to judge the actions of a local authority; it should also be evaluated by its conduct and the way it actually carries out its responsibilities. For this reason it is important to include an analysis of local governance, which relates to the behaviour of institutions, the governing processes and the relations between the state (municipality), the citizens and other stakeholders (Cruz & Marques, 2014). Local governance at the neighbourhood level is highlighted through the processes framework. Analysis of the processes framework by Bulkeley et al. (2015) makes it possible to address the second hypothesis and confirm that sustainable neighbourhoods implemented with a participatory bottom-up approach are more socially sustainable and have developed a stronger and more complex local urban governance system in comparison with top-down sustainable neighbourhoods. For the processes underpinning sustainable neighbourhoods (Section 5), the analysis focuses on the following activities: making, maintaining, living and disseminating. The "processes" section derives from Bulkeley et al. (2015), who identify making, maintaining and living as key aspects of urban

experimentation. The author adds disseminating as an innovative additional process to investigate how sustainable neighbourhoods evolve and influence other urban developments. With the innovative disseminating process, it is possible to achieve the second research aim and identify whether the initial implementation approach influences the transfer of sustainable urban solutions to other urban realities. In this section, the criteria of comparison for the two sustainable neighbourhoods are the four (3 + 1) processes themselves (see the definition of processes in Table 2, Section 5). The process analysis provides an innovative overview of the dynamic formation of the local governance system through time. In this way it is possible to understand how (and whether) the initial implementation approach (the "making" process) in the selected case studies determined social sustainability and local governance within the subsequent processes (maintaining, living and disseminating).

The data collection methods include interviews with key stakeholders, site visits in Vauban and Western Harbour, and literature reviews focused on the case studies. The author visited both sustainable neighbourhoods, where he had the opportunity to gain first-hand experience of the neighbourhoods as living environments, collect audio and graphic material, interview key stakeholders, make site visits and develop the case studies. In April 2013, the author visited and stayed in Vauban (Freiburg) for two weeks. From March to May 2014, he visited Western Harbour nine times. He had the opportunity to interview the main urban developers, municipality representatives and main representatives of local community groups in order understand the role of all of the stakeholders involved in developing the neighbourhood. Interviews primarily focused on municipal staff involved in developing the projects, as well as, in the case of Vauban, local opinion leaders and local associations' representatives. In Western Harbour, he could not interview local citizen representatives because the neighbourhood has no community centres or local community associations. In Vauban in Freiburg, the author had the opportunity to interview Wulf Daseking (the urban planner of the Municipality of Freiburg, who planned the entire sustainable neighbourhood), Andreas Delleske (the leader of the community initiative Forum Vauban) and Sigrid Gombert (former editor of the local newspaper *Vaubanactuel*). In Western Harbour in Malmö, he interviewed Eva Dalman (the former project manager of the Bo01 project in Western Harbour), Maria Lööf (working at the Municipality of Malmö's Environment Department) and Jan Johansson (working at the Municipality of Malmö's Real Estate Department). All of the interviews were based on the same open-ended structured questionnaire. The questions covered the points of interest presented in Medved's (2016) structural model of an autonomous sustainable neighbourhood and refer to topics related to natural resource management, sustainable transport, socioeconomic balance and sustainable urban design. The

interviewees were also asked about the specific local governance system in their neighbourhood, the implementation process for forming sustainable districts, the role and decision-making power of each stakeholder involved, community participation in planning and so on.

4. Principles of new urbanism

In this section, the basic characteristics of each sustainable neighbourhood are presented, with a special focus on urban design elements and sustainable design goals related to new urbanism principles. At the end of the section, the author identifies how these achievements and the urban design characteristics of each sustainable neighbourhood agree with the ten new urbanism principles (see Table 1). The aim is to verify whether the urban form in the neighbourhoods analysed is sustainably built (from the perspective of new urbanism).

Vauban in Freiburg is a neighbourhood with a population of five thousand in the foothills of the Black Forest. Seven hundred people work there (Fraker, 2013). It was built on the forty-two-hectare site of a former French military base. Vauban's bottom-up approach in planning allowed groups of potential residents to design their own homes on allocated plots of land alongside established developers. This has resulted in an architecturally non-uniform, non-standardised and picturesque district (Field, 2011).

Regarding sustainable energy and natural resource management, Vauban is an example of an efficient low-energy urban area and at the same time a space for innovation. At the edge of the neighbourhood, a local cogeneration plant (CHP) was built, which is fuelled by 80% woodchips (from a nearby forest) and 20% natural gas. Over 65% of the total electricity used in the district of Vauban is generated through photovoltaic panels, which are owned by the local residents grouped in various solar energy cooperatives (Sperling, 2002). In terms of building energy use, a mandatory low energy standard applies for both commercial and residential buildings (65 kWh/m^2), and bottom-up initiatives for green technologies in buildings have been promoted and administered by local stakeholders in the neighbourhood. The neighbourhood has provided a testing ground for various techniques with the potential to reduce the consumption of natural resources and increase personal recycling. For example, in the experimental living lab in Vauban – *Passivhaus Wohnen und Arbeiten* – many innovative green technologies have been adopted, such as vacuum toilet systems and small biogas reactors for kitchen use (Internet 3, 2016; Delleske, 2013).

Transport in Vauban is shaped by the vision of life without a car, which promotes and stimulates alternative forms of mobility such as cycling initiatives, car-sharing systems and efficient public transport (Sperling, 2002). Vauban is completely integrated into a public transport network, with several city bus lines and the Freiburg tram (Figure 1c). The local urban plan practically prohibits parking in the neighbourhood of Vauban, where the roads are fully adapted to pedestrians and cyclists (see Figures 1a and 1d). The traffic policy in Vauban is supported by an effective car-sharing system. Because of all these local measures, laws, policies and environmental protection awareness of the locals, car ownership in Vauban is extremely low. Cars ownership per 1,000 people in Vauban is 150. In the Municipality of Freiburg, car ownership per 1,000 people is 427, and in Germany as a whole it is 517 (Sperling, 2008; World Bank, 2013).

Figure 1: "Vauban's sustainable transportation and car-free streets"; a) street as a playground; b) car-free street; c) tram; d) bicycles' garage (photo: Primož Medved)

Regarding urban design, Vauban succeeded in its initial goal to build densely, but green with plenty of parks, trees and open green spaces (see Figures 2b and 2d). The population density (persons/ha) in Vauban is 122, and in the city of Freiburg it is 15 (Foletta, 2011; Banister, 2005). Urban plans aimed to create a living space where there is no need for cars and everything is at the doorstep, like in medieval towns (Daseking, 2013). The buildings primarily consist of

three- to four-storey residential buildings. All ground-floor space is designed for service functions in order to provide basic life necessities to all residents of the neighbourhood.

Regarding public spaces, an important achievement of the civil initiative Forum Vauban was to set up an enormous collective space in the neighbourhood – the central neighbourhood community structure "Haus 037" – which was restructured from the former French barracks (see Figure 2a). Haus 037 embodies a modern multifunctional facility, a heterogeneous public space with a restaurant, a pub, community meeting rooms, offices and a hostel (Fraker 2013). Such a space strengthens the identity of the local urban space and offers the local residents a place where they can meet and communicate. Another important public space in Vauban is the central Alfred Döblin Square (*Alfred-Döblin-Platz*), which is located in front of Haus 037. Alfred Döblin Square is the heart of social life in Vauban, where the organic market (held twice a week) and exchange market (held once a month) take place. Vauban's approach to public urban spaces confirms the findings by Nataša Bratina Jurkovič (2014) that urban renovation plans implemented with the participation of a neighbourhood's residents diminish the risk of inappropriate or even poor programme planning.

Figure 2: "Vauban's public open spaces"; a) the neighbourhood community centre Haus 37 and Vauban's plaza Alfred-Döblin Platz; b) park; c) urban garden; d) park (photo: Primož Medved)

Together with Hammarby Sjöstad in Stockholm, Western Harbour in Malmö is the most representative Swedish example of a sustainable neighbourhood. Western Harbour was primarily used as a port and industrial area, and was also home to the Kockums shipyard. The urban transformation process started with the closure of the Saab factory in 1990 at the original site of the Kockums shipyard, which freed up 140 hectares of attractive land near the centre and the sea. The area has now been developed into a modern neighbourhood with high sustainability ambitions. Western Harbour was developed in three stages: Bo01, Flagghusen (Bo02) and Fullriggaren (Bo03). The entire area of Western Harbour is still under construction. New sustainable construction is being created in the area. Currently, Western Harbour has 4,300 residents and provides jobs for nine thousand people (Foletta, 2011). The ratio of jobs per resident is very high if one compares it to similar sustainable neighbourhoods across Europe. When fully developed, thirty thousand people will work and study in the transformed urban area. Western Harbour is becoming a new student and economic centre of Malmö.

Regarding sustainable energy and natural resource management, the sustainable urban area in Western Harbour called the Bo01 district was the first sustainable neighbourhood in the world supplied by 100% renewable energy (Bächtold, 2013). Electricity is produced from solar and wind energy. The heating for Western Harbour comes mainly from the geothermal potential of groundwater (80%) and partly from solar energy (15%). Western Harbour is also a good example of applying green innovation to other areas than energy, especially to water and waste management. For example, in some buildings rainwater is used for washing clothes, for watering gardens and for flushing toilets (e.g., in the elementary school); domestic waste is transformed into a new energy source through a waste system with anaerobic vacuum digestion; organic waste is converted to biogas; and flat roofs are usually "green", covered with various vegetation (Bächtold, 2013).

Western Harbour's sustainable transport strategy begins, like in Vauban, with reducing car dependency. However, as recently as in 2011 the car ownership rate in Western Harbour was relatively high (440 cars per 1,000 residents), which is slightly less than the Malmö average (480 cars per 1,000; Foletta, 2011). In Western Harbour, cars are allowed in some streets, but the sustainable neighbourhood with a dense and vivid urban design tries to encourage walking and biking (Bächtold, 2013). A significant effort has been made to encourage bicycling and to improve the pedestrian network (see Figures 3c and 3d). Access to the harbour area from other suburbs of Malmö is provided by an efficient bus system running on biogas, electricity and natural gas. Parking is mainly provided through underground parking lots, with limited on-street parking. The parking ratio set by developers for the initial phase of Bo01 was 0.7 spaces per

apartment in order to encourage walking, biking, and public transit use (Fraker, 2013; Zinkernagel, 2014). However, in later phases, because of resident pressure and market demand, the parking policy changed to 1.5 parking spaces per apartment. Neighbourhood residents can use the local car-sharing service (see Figure 3a), which has become very popular (Johansson, 2014; Lööf, 2014). In the development of Fullriggaren (Bo03), membership in a car-sharing scheme was included in the rent for the first two years. Recently, even "bike sharing" of cargo bikes has become popular in Western Harbour.

Figure 3: "Western Harbour's sustainable transportation and car-free streets"; a) electric "car sharing" vehicle; b) car-free public space; c) and d) car-free streets (photo: Primož Medved)

Regarding the architectural perspective, Western Harbour is inspired by urban design from the 1800s with a relatively high population density. The population density (persons/ha) in Western Harbour is 57 and in the city of Malmö it is 19 (Foletta, 2011). Mixed-use buildings facing the main street have residences, services or commercial spaces. There are six-storey buildings in the front, facing the sea, and low-rise buildings inside. In Western Harbour, like in Vauban, the urban design is also very heterogeneous. For the area of Bo01 alone, with 1,900 apartments, there were ten developers and twenty architects (Bächtold, 2013). Western Harbour is pedestrian-friendly with many interconnected streets and it has many green areas, a skate park (Figure 4c) and a large-scale open storm water system with canals, pools and fountains (see Figures 4a and 4d).

Figure 4: "Western Harbour's public open spaces"; a) canal; b) public promenade "Sundspromenaden"; c) skate park; d) park (photo: Primož Medved)

A strip of Western Harbour's waterfront has been converted into a popular public promenade. Although the concept at the beginning was disputable, today the promenade *Sundspromenaden* (Figure 4b) is an attractive place for citizens and visitors (Foletta, 2011). *Sundspromenaden* embodies the social role of an affluent convergent meeting place, like the central plaza in Vauban (Alfred Döblin Square). In contrast to Vauban, in Western Harbour there is no neighbourhood community centre for the local population.

The new urbanism movement especially promotes urban diversity and social heterogeneity within the urban environment. Therefore, a comparison of sustainable neighbourhoods also focuses on these aspects. From the urban design perspective of mixed building types, both neighbourhoods have achieved a very high level of diverse building typologies and public spaces (a promenade, plazas, urban gardens, skate parks, etc.). However, with regard to population heterogeneity, both neighbourhoods eventually failed to achieve (or maintain) a heterogenic social structure, and there is a risk that these sustainable neighbourhoods could become what Susan Fainstein (2010) calls "citadels of exclusivity". Especially in the initial years, Vauban succeeded in providing a considerable share of affordable housing (Fraker, 2013). Unfortunately, in recent times, rents in Vauban increased significantly, and Vauban is now among the most expensive residential areas in Freiburg. Consequently, most of its inhabitants

today are educated professionals (Bächtold, 2013). Sigrid Gombert (2013) and Carsten Sperling (2008) also identified the switch in Vauban's social structure from the initial activists towards young upper-middle class families. However, the initial social urban structure (to a lesser extent) persists within the neighbourhood (Vauban's "social houses": SUSI, Haus 037, etc.). Western Harbour was also initially planned to be a heterogeneous and socially sustainable area (Kärrholm, 2011). Today, however, the neighbourhood is predominantly populated by upper middle-class people. The first settlement in the area (Bo01) in particular was clearly designed for upper-income families (Madureira, 2015).

Table 1: Principles of new urbanism (Vauban and Western Harbour)

New urbanism Principle	Definition / Factor of interest	Vauban	Western Harbour
1. Walkability	• Most things within a 10-minute walk of home and work	✓	✓
	• Pedestrian friendly street design (buildings close to street; porches, windows & doors; tree-lined streets; on street parking; hidden parking lots; garages in rear lane; narrow, slow speed streets)	✓	✓
	• Pedestrian streets free of cars in special cases	✓	✓
2. Connectivity	• Interconnected street grid network disperses traffic & eases walking	✓	✓
	• A hierarchy of narrow streets, boulevards, and alleys		
	• High quality pedestrian network and public realm makes walking pleasurable	✓	✓
		✓	✓
3. Mixed-Use & Diversity	• A mix of shops, offices, apartments, and homes on site; mixed-use within neighbourhoods, within blocks, and within buildings	✓	✓
	• Diversity of people - of ages, income levels, cultures, and races	–	–
4. Mixed Housing	• A range of types, sizes and prices in closer proximity	✓	✓
5. Quality Architecture & Urban Design	• Emphasis on beauty, aesthetics, human comfort, and creating a sense of place	✓	✓
	• Special placement of civic uses and sites within community	✓	**O**
	• Human scale architecture & beautiful surroundings nourish the human spirit	✓	✓
6. Traditional Neighbourhood Structure	• Discernable centre and edge	✓	✓
	• Public space at centre	✓	**O**
	• Importance of quality public realm; public open space designed as civic art	✓	✓

	• Transect planning: Highest densities at town (neighbourhood) centre; progressively less dense towards the edge	✓	✓
7. Increased Density	• More buildings, residences, shops, and services closer together for ease of walking, to enable a more efficient use of services and resources, and to create a more convenient, enjoyable place to live	✓	✓
8. Green Transportation	• A network of high-quality trains/ trams/ buses connecting cities, towns, and neighbourhoods together	✓	✓
	• Pedestrian-friendly design that encourages a greater use of bicycles, rollerblades, and walking as daily transportation	✓	✓
9. Sustainability	• Minimal environmental impact of development and its operations	✓	✓
	• Eco-friendly technologies, respect for ecology and value of natural systems	✓	✓
	• Energy efficiency	✓	✓
	• Less use of finite fuels	✓	✓
	• More local production	✓	✓
	• More walking, less driving	✓	✓
10. Quality of Life	• Taken together these add up to a high quality of life well worth living, and create places that enrich, uplift, and inspire the human spirit	✓	✓

Source: Author, 2016

The presentation of sustainable neighbourhood urban design characteristics shows that both neighbourhoods achieved most of the factors of interest encompassed in the new urbanism principles (Table 1). As described, the only factor (within the third principle: mixed use and diversity) that was not achieved in either of the neighbourhoods is connected with the diversity of people (in terms of age, income level, culture and race). Western Harbour did not achieve a full checkmark regarding the special placement of civic uses and sites within community because it has not implemented a very important urban design element: the neighbourhood community centre. It also fell short regarding public space in the centre because it has not created a main public meeting space in the centre of the neighbourhood.

5. Processes for urban experimentation

This section investigates urban experimentation as defined by Bulkeley et al. (2015), covering making, maintaining and living in order to analyse the local governance system in each neighbourhood. Disseminating is added as an additional activity to investigate (see Table 2). Studying these processes as part of the dynamic evolution of a neighbourhood is fundamental for the research because the "making" process clarifies the "conceiving momentum" of urban regeneration (the initial implementation strategy: top-down vs. bottom-up), which is the main independent research variable. The research also focuses on the impact that the implementation approach (the "making process") has on other subsequent processes.

Table 2: Processes for urban experimentation

Processes	Definition
Making	– conceiving, framing and operationalizing the will to improve the urban milieu in relation to climate change – process of assembling the socio-technical parts, elements and actors, that form a "space of exception", and at the same time a "space of innovation"
Maintaining	– upkeep of the experimental qualities and the keeping at bay of unruly elements – a process of metabolic adjustment (methods in which the application of experiments attempt to reconfigure existing forms of circulation)
Living	– bringing into being distinct subjectivities, including multiple elements that are assembled in the experiments and create a form of "experimental subject" – experiments operate in uncertain terrains (totalizing rationalities and alternative subjectivities are under constant negotiation)
****Disseminating***	– sharing experience with other urban areas and organisations, expanding the know-how to networks outside their borders, incubators of change and conveying sustainability to the wider city environment – introduce sustainable lifestyles, technological solutions to adjacent (and distant) districts, cities, regions by using the neighbourhood as a showcase

Source: Bulkeley et al., 2015 (modified / regrouped by Author, 2016)

5.1 Making

To understand the complex system of different actors and components in Vauban and Western Harbour, it is first necessary to understand the prerequisites, and the history and the development processes for these specific sustainable urban areas. In the beginning, both neighbourhoods

represented "spaces of exception" in relation to common unsustainable urban practices. Both neighbourhoods were eco-labs in sustainable urbanism, or "spaces of innovation". However, the visions, planning strategies and development mechanisms were completely different between the two eco experiments, which involved different stakeholders in planning.

In 1993, the Municipality of Freiburg developed an urban plan to reconstruct the former French barracks into a modern sustainable neighbourhood called Vauban. The timing of the city plan for the neighbourhood transformation coincided with the establishment of the activist organisation SUSI, which occupied the abandoned military barracks in 1992. The SUSI group and later the association Forum Vauban were the initiators of an autonomous sustainable neighbourhood in Vauban. A strong local community and good organisation between the initial residents was crucial in establishing a long-term (local) identity and in strengthening the sustainable orientation of the neighbourhood. During the "making" process, the Municipality of Freiburg recognised the association Forum Vauban as a legitimate partner and coordination entity in the planning process. The association Forum Vauban introduced more radical measures into the local urban master plan and achieved a ban on cars in the neighbourhood in order to create safe streets where children could play (Field, 2011). The energy concept was also developed through collaboration between the Municipality of Freiburg, Forum Vauban and the Freiburg Energy Company (Bächtold, 2013). During the area's development, Forum Vauban supported various non-profit organisations, such as building cooperatives, and at the same time also initiated special food and energy cooperatives. Vauban embodies the radical-ecocentrist transition version, which proposes a grassroots, localist approach to deep social, environmental and cultural transformations (Audet, 2014).

The Western Harbour area was owned by the Municipality of Malmö, which wanted to transform this industrial area after the bankruptcy of many companies (Lööf, 2014). The purpose of the transformation was to create an example of sustainable urban development and to strengthen the image of Malmö as a place to live and invest (Madureira, 2014). The initiators of Western Harbour were not the residents that lived and worked in the area, but the government authorities (namely, the Municipality of Malmö). The public sphere had a very marginal influence on the urban plan of the area of Western Harbour. One reason identified is that the initial architectural plans created by the developers were very detailed from the beginning (Lööf, 2014).

The difference in the initiation process between Vauban and Western Harbour was in the degree of residents' involvement in creating the sustainable neighbourhood concept. The Vauban "learning while planning" participation process, managed by Forum Vauban, was a typical

grassroots project with a bottom-up approach. In Vauban, although the city made the process possible, much greater influence was exerted by residents through building cooperatives (Germ. *Baugruppen*) in terms of setting higher standards, selecting the architect, directing the design and managing the construction. In contrast, for Bo01 and all of Western Harbour, the Municipality of Malmö engaged architect-developer teams and commercial building developers. Western Harbour shows a typical top-down approach in building design, in which the goals and objectives were set entirely by the city. The critics point out that the "making" process of the local transformation in Western Harbour entailed no (effective) participatory involvement from civil society.

5.2 Maintaining

"Maintaining" refers to two distinct but related forms of practice for "the maintenance phase of urban experiments" (Bulkeley et al., 2015). Bulkeley et al. (2015) define two forms of maintenance: upkeep and metabolic adjustment. Upkeep adjustment is more physical and direct; it involves mundane practices (removing waste, painting, etc.) with some more strategic interventions (energy investment and blocking of roads). In contrast, metabolic adjustment relates to methods in which the application of experiments attempts to reconfigure existing forms of circulation (Bulkeley et al., 2015). Metabolic adjustment can be seen in policy adaptations, technological development and the development of new cultural sensitivities, and may also be directed towards new ends and the adaptation of new urban contexts.

This article focuses on how concrete "experiments intervene to reconfigure network circulation through metabolic adjustment" (Bulkeley et al., 2015: 39). To explain the metabolic adjustment of Vauban, it is necessary to consider two main waves of adaptation and modification. The first one is related to the energy standards of the building cooperatives. Forum Vauban was particularly successful in encouraging self-builders to adopt a stricter ecological approach than the compulsory standard. Apparently, the 65 kWh/m²/y set by the Municipality of Freiburg was not stimulating enough, and Forum Vauban initiated an informal competition between the cooperatives to reduce the energy demand of future buildings (Delleske, 2013). Forum Vauban arranged free consultations at organised events and seminars to help and inform self-builders and homeowners by providing information on energy-saving techniques (Bächtold, 2013). Many members of the building cooperatives and developers set their own, more aggressive standards. The second metabolic adjustment of Vauban is based more on the composition of the

neighbourhood population, which has slightly changed over the years. From the radical green activism of the first pioneers, Vauban is slowly moving toward a more family-oriented neighbourhood, but without losing its particular "holistic sustainable orientation". In addition, the initial driver behind the Vauban development, SUSI, is still completely integrated in the neighbourhood and today has an important role in the local community, offering affordable council estate rentals. However, the tendency toward gentrification is evident.

Through urban transformation, Western Harbour has also re-adapted itself many times by adopting specific metabolic adjustments. At the beginning of the sustainable transformation, Western Harbour had a poor image and it was often criticised by the media. A fenced park, a for-pay housing expo for the citizens of Malmö and consequently a boycott of it, financial scandals of building companies, unpaid local companies and the bankruptcy of the main developer are just some of the negative circumstances that accompanied the beginning of the urban transformation (Dalman, 2014; Lööf, 2014). Local criticism and the media also pointed to the high prices for the apartments and the consequent "ghettoisation" of the area (Holgersen, 2014). However, over the years Western Harbour has not only become a highly desired area to live in, but it has also become a central leisure (or recreation) spot in the city and a tourist attraction. The process of maintenance and metabolic adjustment is evident in how the neighbourhood reacted to its new role – that is, by providing special services such as bars, restaurants and so on. However, some local citizens were not very enthusiastic about this new openness to visitors and preferred a more closed local community (Dalman, 2014). The other aspect of reconfiguration during the experiment is shown in the behaviour of the Municipality of Malmö, which reacted to inaccurate predictions about the buildings' energy efficiency (Bächtold, 2013). The city responded to the unexpected situation with a variety of methods to change and improve residents' understanding of and commitment to sustainable development goals (Johansson, 2014).

5.3 Living

Living involves bringing into being distinct subjectivities, or multiple elements that are assembled in the experiment and create an experimental subject (Bulkeley et al., 2015). Both neighbourhoods are experimental living labs, but with a very different local governance system and different decision-making stakeholders. In Western Harbour, the main stakeholder and decision-maker is the Municipality of Malmö. It operates and manages the neighbourhood through its public institutions and with the cooperation of some private companies (such as

E.ON), which perform various technical experiments in relation to the environmental solutions applied in low-energy housing, renewable energy grids and so on. In contrast, Vauban, through its citizens' participative associations Forum Vauban and SUSI, and through its various building cooperatives, renewable energy source cooperatives and various local citizens' organisations, has built up a multitude of interlaced stakeholders, which form a unique local governance system (see Figure 5). Vauban's local governance system, which encompasses many different stakeholders, has empowered local citizens.

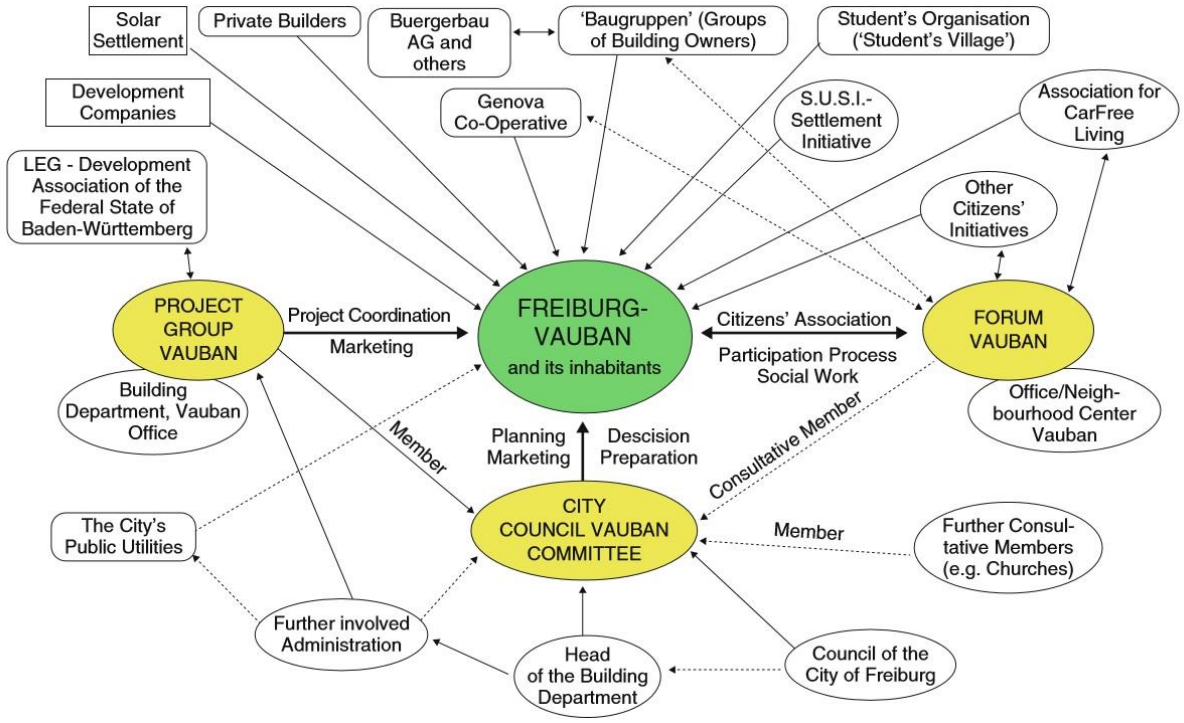

Figure 5: Vauban's local governance structure (source: Öko-Institut)

Bulkeley et al. (2015) claim that experiments operate in uncertain terrain and are under constant negotiation. In Vauban, the association Forum Vauban experienced a serious existential threat and bankruptcy when the EU stopped funding its activities. However, in the end the legacy of Forum Vauban was able to recover under a different name: Stadtteilverein Vauban (Delleske, 2013). The constant negotiation processes and re-adaptation of the internal rules in the local "living" experiments could also be identified in Western Harbour. Because of the unplanned relatively homogenous social structure of the population in Bo01, the Municipality of Malmö negotiated a very specific "social contract" with the building developers for the subsequent developments. The Municipality of Malmö did not want Western Harbour to become "the golden

coast of Malmö" (Dalman, 2014). They wanted to ensure that the continuation of Bo01 provided inclusivity. For this reason, the city wanted to build the cheapest rentals in Malmö. The city subsidised the land for the rentals in some parts of the Bo02 area. In return, the developers had to sign an agreement that they would not charge higher rent than the lowest quartile of the average rentals in Malmö. Unfortunately, the rents did not stay that low for long (Dalman, 2014). As mentioned before, Western Harbour (Bo01) experienced fragility and constant criticism at the beginning (especially from the media). However, after the initial stigma, the experiment of Western Harbour is now globally recognised as a success story of sustainable neighbourhood implementation. The creation of new forms of urban experiments seeks to create new expectations about what is (and is not) normal (Bulkeley et al., 2015).

5.4 Disseminating

Vauban and Western Harbour are sustainable neighbourhoods with a holistic approach to urban sustainability. For this reason, many cities around the world are eager to learn from Vauban and Western Harbour. The innovative disseminating process is important to the ongoing development of sustainable neighbourhoods because it entails sharing experience with other urban areas and organisations. Both neighbourhoods have directly and indirectly expanded their networks outside their borders. It is very complex to measure and define to what extent Vauban and Western Harbour have influenced the rest of their city, region and country with their urban sustainable approaches, and to what extent they have generated international impact. Some concrete actions, influences and knowhow that the two neighbourhoods have transmitted beyond their borders are presented below.

The disseminating process in the case of Vauban can be summarised in four forms of learning. First, knowledge about governance strategies and other organisational solutions has been transferred to other parts of the city (e.g., Rieselfeld) and to urban areas of other cities in the region (e.g., Französisches Viertel – Südstadt in Tübingen). For example, the Vauban building energy standard inspired the standard for energy-efficient buildings in Rieselfeld. These standards formed the basis for a standard, which in 2009 came to apply for the entire city of Freiburg (Bächtold, 2013). Second, the creation of the first plus-energy multifamily house in the world is a technical solution that has been intensively analysed by urban planners, designers and architects. Third, the Vauban guided tours for tourists and researchers by local residents are a channel for spreading experience. The organisation of informational seminars about the

development process of Vauban also promotes learning. Finally, the creation of the living lab *Passivhaus Wohnen und Arbeiten* (the first passive multi-dwelling house), including guided tours of the passive house, provided for more hands-on sharing of the sustainability solutions applied.

The disseminating process in the case of Western Harbour can be described in terms of three learning-related activities. First, knowledge about governance strategies and other organisational solutions has been transferred to other parts of the city (e.g., Hyllie and Augustenborg) and to other urban areas in the region (new plans for a sustainable neighbourhood in Lund; Dalman, 2014). Similarly to Vauban, the sustainable building standards developed throughout the different phases of Bo01 later formed the basis for a programme applying to all buildings developed on municipally owned land in the cities of Malmö and Lund (Smedby, 2016). Also, the builders' dialogue concept (with the social contract) between building developers and the Municipality of Malmö was transferred to the Municipality of Copenhagen (Lööf, 2014). Similarly, the approach to car sharing with a special contract concluded between the municipality, builders and a car sharing company was transferred to a different area of Malmö: Hyllie (Lööf, 2014). The Western Harbour traffic system has also become a model for the entire city of Malmö (Fraker, 2013). Second, in terms of more technical solutions, the waste digestion system that was developed in Western Harbour in Bo01 was used again in Bo03 and it will become a model for the entire city (Dalman, 2014; Lööf, 2014). Finally, guided tours of Western Harbour have been organised for thousands of international visitors.

6. Conclusions

Based on the new urbanism principles framework, it can be concluded that the bottom-up case of Vauban has achieved a human scale and community-oriented urban form very similar to the top-down case of Western Harbour. The initial implementation approach (top-down or bottom-up) did not influence the urban design form of the cases studied. Nearly all of the new urbanism principles were covered in both neighbourhoods. However, it is important to point out that in both neighbourhoods a fundamental aspect of new urbanism – that is, the diversity and heterogeneity of the urban population – has not been achieved. Based on a new urbanism analysis, the first hypothesis is rejected: that sustainable neighbourhoods with a bottom-up implementation approach create more human-oriented sustainable urban forms. In contrast, the

top-down development in Western Harbour's urban form (see Table 1) is completely in line with new urbanism principles. Other top-down sustainable neighbourhoods across Europe (like Hannover's Kronsberg or Stockholm's Hammarsby Sjöstad) similarly have a very functional and sustainable dense urban structure, which encourages walkability, incorporates mixed-use buildings, is well connected with green urban transport, has many parks, offers plenty of (civil) services in the vicinity of residential areas and so on (Fraker, 2013). Therefore, it can be concluded that most of the new urbanism principles in sustainable urban neighbourhoods are attainable regardless of the initial implementation approach.

Based on the comparative analysis, it is possible to confirm the second hypothesis: that the sustainable neighbourhoods implemented with the participatory bottom-up approach generate stronger local governance systems and are more socially sustainable. Based on the processes framework, it can be established that the implementation approach (bottom-up or top-down) is relevant because it determines who (the citizen associations or the municipality) will act or react to the neighbourhood's daily progression or retrogression. It determines which stakeholder is the main protagonist and decision-maker for the neighbourhood. The analytical processes framework showed that in both case studies the initial development process (i.e., "making") directly influenced the subsequent processes and defined the final governance system and community social structure. Vauban's local residents have been the main decision-making stakeholders and, through building cooperatives and the association Forum Vauban, they set the social, economic and environmental targets for the whole area. In contrast, in Western Harbour, the entire area has been managed and developed by the Municipality of Malmö. Through the "maintaining" and "living" processes analysis, it could be established that the main stakeholders – the administrators or caretakers of the neighbourhoods – have not changed drastically over time.

The processes framework analysis also revealed that Vauban's bottom-up case study stimulated more socially sustainable organisations and activities, which have enabled the local community to express its vitality. Similarly, other European sustainable neighbourhoods implemented with the participative bottom-up approach (e.g., Amsterdam's sustainable neighbourhood GWL Terrein and Culemborg's EVA Lanxmeer) have also developed a very strong local urban identity and strong social cohesion, and have empowered local residents, who are now responsible for several neighbourhood issues. Therefore, for developing socially sustainable urban areas with strong community-driven local governance in the future it would be beneficial to include the participative dialogue in planning and include the community-based organisation in the urban development strategy from the beginning (in the "making" phase).

Regardless of the differences between the two neighbourhoods established in terms of their "making", "maintaining" and "living" processes, both have acted similarly in the "disseminating" process. There appears to be no significant difference in the transfer of knowledge processes between the case studies. Both sustainable neighbourhoods have successfully transferred technical knowhow (building energy standards, creation of a living lab, a waste digestion system, etc.) and shared their governance strategies and other organisational solutions (the builders' dialogue concept, car sharing, guided tours, etc.) to other urban communities.

Finally, the case studies provide a range of insights into the principles and processes of sustainable neighbourhoods. There is no universal solution or plan that can be followed when implementing sustainable neighbourhoods. Today both examples are internationally recognised as good urban sustainability models. In addition, both districts are living examples of the possibilities that can inspire cities and organisations around the world. Vauban and Western Harbour provide examples of diverse principles and processes that can be adopted to achieve a similar goal: sustainable neighbourhoods.

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8 ZAKLJUČEK

Doktorska disertacija je s primerjalno analizo trajnostnih sosesk, z raziskovanjem komplementarnosti in odvisnosti med trajnostnimi gradniki in s konstrukcijo inovativnega strukturnega modela avtonomnih trajnostnih sosesk dodala novo perspektivo razumevanja trajnostnega urbanizma. Disertacija omogoča inovativen vpogled v družbeno-ekonomsko strukturo trajnostne urbane skupnosti in njene manifestacije skozi urbano formo. Strukturni model avtonomnih trajnostnih sosesk nakazuje novo možno usmeritev urbanega bivalnega prostora.

Strukturni model avtonomnih trajnostnih sosesk sem vzpostavil na podlagi mednarodne primerjalne analize, interpretacij sekundarnih virov, na podlagi proučevanja dostopne literature, študije primerov, analize in interpretacije primarnih virov, analize uradnih statistik, opazovanja z neposredno udeležbo, obsežnih intervjujev in vprašalnikov. Še posebej izpostavljam svoje terensko delo, kjer sem opravil 18 poglobljenih intervjujev z glavnimi akterji trajnostnih sosesk – z urbanisti mestnih občin, z iniciatorji trajnostnih sosesk, s predstavniki lokalnih društev oz. z nosilci lokalnega trajnostnega razvoja (več v poglavju 3, glej Priloge A – O). Celoten proces terenskega dela (in intervjujev) me je vodil v 9 mest, kjer sem raziskoval trajnostne soseske v treh časovnih sklopih: (1) *april 2013* – obisk trajnostnih sosesk Vauban in Rieselfeld v mestu Freiburg ter soseske Französische Viertel - Südstadt v mestu Tübingen; (2) *od marca 2014 do junija 2014* – gostujoči raziskovalec na International Institute for Industrial Environmental Economics (IIIEE) v mestu Lund (Švedska); večkratni obisk soseske Western Harbour v Malmöju ter obisk soseske Hammarby Sjöstad v Stockholmu; (3) *april 2015* – obisk soseske Kronsberg v mestu Hannover, soseske GWL Terrein v Amsterdamu in soseske EVA Lanxmeer v Culemborgu.

V nadaljevanju izpostavljam poglavitne ugotovitve, ki temeljijo na rezultatih konkretnih analiz oz. raziskav. Po predstavitvi ugotovitev/rezultatov/analiz predstavljam tudi nova izhodišča, novonastale vidike, ki jih odpira doktorska disertacija.

V petem poglavju[73] sem predstavil inovativen interdisciplinarni »strukturni model trajnostnih sosesk«, ki izhaja iz analiz praktičnih izkušenj že implementiranih trajnostnih sosesk, kar predstavlja novost pri urbanem modeliranju. Strukturni model, grajen v obliki štirih temeljnih

[73] Glej članek: Medved Primož 2016a. A contribution to the structural model of autonomous sustainable neighbourhoods: new socio-economical basis for sustainable urban planning. Journal of cleaner production 120, 21–30.

»stebrov urbane trajnosti« (v angl. »pillars of urban sustainability«, glej Tabele 1–4 , str. 117–120), razgrinja celovito shemo t. i. »trajnostnih gradnikov« (razdeljenih na kvalitativne in kvantitativne parametre), ki definirajo trajnostno sosesko. Vseh štirinajst identificiranih trajnostnih gradnikov modela je skupnih večini analiziranih avtonomnih trajnostnih sosesk (odgovor na prvo raziskovalno vprašanje – RV1).

V prvem stebru urbane trajnosti, imenovanem »energetski steber in naravni viri«, sem analiziral in izpostavil tri ključne trajnostne gradnike: kooperative obnovljivih virov energije, energetsko varčne energetske stavbe in inovativne rešitve za stimulacijo recikliranja ter zmanjševanja rabe naravnih virov. V drugem stebru (»trajnostni promet«) sem zasnoval kvalitativne in kvantitativne parametre trem trajnostnim gradnikom: učinkovit javni promet, prepoved avtomobilov, spodbujanje kolesarjenja in hoje. V tretji steber (»urbanistični elementi trajnostnega razvoja«) sem vključil vrsto dejavnikov urbanega modeliranja v sklopu treh trajnostnih gradnikov: kvaliteta življenja z urbanim trajnostnim načrtovanjem, varstvo naravnega okolja in urbanizem, kompaktnost gradnje in bližina storitev. Ključen in najinovativnejši prispevek k trajnostnemu urbanemu načrtovanju predstavlja četrti steber urbane trajnosti: družbeno-ekonomsko ravnotežje (v angl. »socio-economic balance«, glej poglavje 5, Tabela 4, str. 120). Po obsežni analizi znanstvene literature je bilo ugotovljeno, da sodobni modeli trajnostnega urbanega razvoja ne upoštevajo v zadostni meri zgodovinskih, družbenih, ekonomskih in političnih pogojev za uveljavitev urbanega trajnostnega razvoja oz. družbenih vidikov urbanega trajnostnega razvoja (v angl. »urban social sustainability«). Prav zato so v strukturnem modelu še posebej izpostavljene družbeno-ekonomske komponente trajnostnega urbanega planiranja. Steber družbeno-ekonomskega ravnotežja je razdeljen na trajnostne gradnike (»strategic sustainable urban goals«), ki v dosedanjih modelih urbanega načrtovanja niso bili prisotni ali pa niso bili obravnavani v zadostni meri. To so: sistem LETS (»časovna banka«), socialna ekologija kot lokalni politični okvir trajnostne soseske, lokalne (ekološke) prehrambne kooperative, identiteta lokalne skupnosti in lokalna kultura ter lokalna ekonomija.

Četrti steber urbane trajnosti uvaja omenjenih pet inovativnih trajnostnih gradnikov, ker so le-ti prisotni v večini že obstoječih trajnostnih soseskah, in ker dodajajo novi vidik, novo perspektivo razumevanja trajnostnega urbanizma. Izpostavljeni so kvalitativni in, kar je bolj neobičajno, tudi kvantitativni indikatorji, s katerimi lahko primerjamo (kvantificiramo) abstraktne/kompleksne trajnostne gradnike. Analiza urbane družbene trajnosti predstavlja komplementarni vidik že uveljavljenim tehnično-okoljskim primerjavam.

V prvi raziskavi disertacije je bila izvedena tudi mednarodna primerjalna analiza t. i. »dejavnikov urbane družbene trajnosti« (v angl. »urban social sustainability factors«; glej

poglavje 5, Table 5, str. 126) na ravni trajnostnih sosesk, ki uvaja integracijo kvalitativnega in kvantitativnega vrednotenja sosesk. Mednarodna primerjalna analiza izpostavlja manifestacijo trajnostnih gradnikov stebra družbeno-ekonomsko ravnotežja v petih obravnavanih trajnostnih soseskah: Vauban (Freiburg), Rieselfeld (Freiburg), Französisches Viertel - Südstadt (Tübingen), Western Harbour (Malmö), Hammarby Sjöstad (Stockholm). Na ta način je osnovana matrica (Tabela 5, str. 126), s katero dobimo vpogled v družbeno strukturo lokalne trajnostne soseske, tako lahko primerjamo tudi raven urbane družbene trajnosti v soseskah.

Eden od temeljnih fokusov raziskovanja disertacije predstavlja tudi proučevanje interakcije in soodvisnosti med družbeno trajnostjo soseske ter med njenimi urbanističnimi elementi. Po identifikaciji ključnih trajnostnih urbanih elementov trajnostnih sosesk (trgi, šole, parki in druge zelene površine, storitvena infrastruktura itd.), ki vplivajo na družbeno aktivnost lokalne skupnosti, je še posebej izstopala funkcija enega od urbanih elementov – to je »skupnostni center trajnostne soseske«, ki vključuje/razvija/pospešuje družbeno udejstvovanje lokalnih prebivalcev. Velika večina skupnostnih aktivnosti, društev, socialnih akcij itd. se odvija v lokalnih skupnostnih centrih trajnostnih sosesk (v angl. »Neighbourhood Community Centres«; v nadaljevanju tudi s kratico »NCC«),[74] ki pooseblja nekakšna lokalna družbenem vozlišča (v angl. »social hubs«). Skupnostni center trajnostne soseske (NCC) predstavlja temeljni urbani prostor, ki omogoča in pospešuje manifestacijo družbenih vidikov trajnostnega razvoja v vsaki obravnavani trajnostni soseski (odgovor na drugo raziskovalno vprašanje – RV2). V mednarodni primerjalni analizi skupnostnih centrov trajnostnih sosesk (v šestem poglavju;[75] glej Table 2, str. 155–156) so našteti številni družbeni elementi/aktivnosti, ki so uresničeni v t. i. družbenih vozliščih (»social hubs«) – skupnostnih centrih.

Poglobljena primerjalna analiza je pokazala, da se v skupnostni centrih trajnostnih sosesk odvijajo družbeno pomembne dejavnosti (lokalni vrtci, društva za pomoč ljudem s posebnimi potrebami, skupine za pomoč beguncem, brezplačni jezikovni tečaji itd.), dejavnosti za prosti čas

[74] Do izida članka (Medved 2016b) v znanstveni literaturi še ni bilo splošne enotne terminologije glede »skupnostnega centra soseske«. Poimenovanja raziskovalcev urbanega so bila zelo različna: npr. »civic centre«, »community centre«, »neighbourhood centre« itd. Tudi same definicije skupnostnega centra soseske so bile pavšalne, nekoncizne, razdrobljene itd. Delni prispevek k znanosti predstavlja inovativno terminološko poimenovanje/(re)definiranje urbanih skupnostnih prostorov (glej poglavje 6, str. 139–140, *»The definition, the role, and characteristics of the (ideal) Neighbourhood Community Centre«*). Po analizi znanstvene literature sem vključil relevantne definicije skupnostnih prostorov, jih povzel ter na novo definiral »Neighbourhood Community Centre (NCC)«, ki je zdaj določen s tremi ključnimi točkami/poglavji/ stebri. Inovativno terminološko poimenovanje »Neighbourhood Community Centre (NCC)«, objavljeno v relevantni znanstveni reviji »Urban Design International« (založbe Springer), bo lahko postalo referenca pri obravnavanju skupnostnih centrov urbane soseske.
[75] Glej članek: Medved Primož 2016b. The essence of neighbourhood community centres (NCCs) in European sustainable neighbourhoods. Urban Design International 1–18. DOI: 10.1057/s41289-016-0037-1.

(kino, tečaji joge, gledališke predstave, seanse meditacije, jazz večeri, disco itd.), okoljske dejavnosti (društva za urbano vrtičkarstvo, spomladanske čistilne akcije itd.), razna izobraževanja (konference, seminarji, usposabljanja itd.). V centrih so ponavadi knjižnice, bari, restavracije, najemne dvorane, kuhinje itd. Poleg tega skupnostni centri predstavljajo nekakšne komunikacijske platforme za lokalne prebivalce (izdaja lokalnih časopisov soseske, upravljanje internetne strani in upravljanje mailing liste itd.) in medgeneracijska stičišča (različne oblike skupin za mladostnike in skupin za starejše občane).

Ena od temeljnih ugotovitev analize skupnostnih centrov trajnostnih sosesk predstavlja skoraj premo sorazmerna korelacija med razvitostjo/evolucijo skupnostnega centra ter ravnjo družbene trajnosti soseske (v angl. »social sustainability level«) [76] (glej Table 1, str. 142). Drugi temeljni prispevek analize skupnostnih centrov trajnostnih sosesk pa predstavlja identificirana povezava med urbano družbeno trajnostjo (»urban social sustainability«) in implementacijskim pristopom trajnostnih sosesk (v angl. »implementation approach«). Trajnostne soseske, implementirane s pristopom »od spodaj navzgor« (v angl. »bottom-up approach«), v katerih so lokalni prebivalci participirali pri urbanem razvoju soseske, dosegajo višji nivo urbane družbene trajnosti (»urban social sustainability«) v primerjavi s soseskami, nastalimi s pristopom »od zgoraj navzdol«.

Zaradi težnje po globlji analizi, nakazane oz. identificirane soodvisnosti (»urban social sustainability« – »implementation approach«) v tretjem vsebinskem delu disertacije (v sedmem poglavju),[77] raziskujem, kakšen vpliv ima začetni implementacijski proces (pri nastajanju trajnostne soseske) na družbeno trajnost in lokalno upravljanje soseske. Ugotavljam tudi, kako (in če) začetni implementacijski pristop (»top-down«; »bottom-up«) vpliva na trajnostno urbanistično oblikovanje (v angl. »urban design«) trajnostnih sosesk. V zadnji poglobljeni analizi disertacije zato primerjam dva reprezentativna predstavnika (ekstremna pola)[78] nasprotnih si implementacijskih pristopov: soseski Vauban in Western Harbour. Soseska Western Harbour (Malmö, Švedska) je najbolj tipičen primer trajnostne soseske, zgrajene s pristopom od zgoraj

[76] V petletni raziskavi sedmih trajnostnih sosesk, s proučevanjem znanstvene literature, z uporabo metode opazovanja z udeležbo in intervjujev z najpomembnejšimi deležniki v vseh soseskah, z analizo lokalnih družbenih aktivnosti, s proučevanjem tipologij in številčnosti lokalnih trajnostnih društev sem lahko določil »raven urbane družbene trajnosti« (v angl. »level of urban social sustainaiblity«) za vsako obravnavano sosesko. Raven družbene trajnosti je bila določena z omenjenimi metodološkimi instrumenti in tudi z upoštevanjem prisotnosti Dempseyovih »spodbujevalnih dejavnikov družbene trajnosti v urbanih območjih« (v angl. »urban social sustainability contributory factors«) (Dempsey in drugi 2011).

[77] Glej članek: Medved, Primož. 2017. Leading Sustainable Neighbourhoods in Europe: Exploring the Key Principles and Processes. Urbani izziv (sprejeto v objavo – trenutno »v tisku«).

[78] Vauban in Western Harbour pooseblјata najbolj »ekstremne« primere različnih pristopov implementacije trajnostnih sosesk ("od zgoraj navzdol" in "od spodaj navzgor"). »Atipični ali skrajni – ekstremni primeri pogosto razkrijejo več informacij, saj aktivirajo več akterjev in več osnovnih mehanizmov funkcioniranja« (Flyvbjerg 2006, 229).

navzdol (top-down); soseska Vauban (Freiburg, Nemčija) pa je najbolj tipičen primer trajnostne soseske, zgrajene s pristopom od spodaj navzgor (bottom-up). Za analizo vpliva implementacijskega pristopa na trajnostno urbanistično oblikovanje sosesk v sedmem poglavju disertacije uporabljam metodološki teoretičen okvir »New urbanism principles«. Vpliv implementacijskega pristopa na oblikovanje specifične trajnostne družbene strukture sosesk pa analiziram z Bulkeleyovim konceptualnim teoretičnim okvirjem »procesi« (v angl. »processes«), ki vključujejo tri procesualna področja analize (»making«, maintening«, »living«). Bulkeleyovim procesom sem dodal nov ključni proces »disseminating«, ki obravnava način divulgacije trajnostnih urbanih rešitev v druga urbana področja.

Ena izmed glavnih ugotovitev raziskave je, da implementacijski pristop (»top-down«, »bottom-up«) ne vpliva niti na trajnostno urbanistično oblikovanje soseske niti na aplikacijo okoljsko-tehničnih trajnostnih tehnologij v soseskah (zavrnitev prve hipoteze – H1). Po drugi strani pa je bilo ugotovljeno, da je začetni implementacijski pristop odločujoč pri določanju ključnih lokalnih akterjev, ki skozi čas ohranjajo funkcijo glavnega odločevalca, upravljalca oz. administratorja soseske. Začetni implementacijski pristop je torej določil trajno »lokalno upraviteljsko strukturo« (v angl. »local governance structure«) sosesk (potrditev druge hipoteze – H2).

Preko novega analitičnega okvirja »disseminating« sta pri razširjanju/divulgaciji trajnostnih urbanističnih rešitev nazorno prikazana vloga in pomen »prve« trajnostne soseske v mestu, državi, širši regiji. Poudarjen je tudi transfer specifičnih trajnostnih rešitev obravnavnih sosesk v druga urbana območja. Obe soseski imata, ne glede na začetni implementacijski pristop za širšo regijo, vlogo »eko-laboratorijev« trajnostnih rešitev.[79]

Proces deljenja oz. širjenja informacij v soseski Vauban je mogoče povzeti v štirih točkah. Prvič, več konkretnih rešitev na področju energijske učinkovitosti je bilo prenesenih na druge dele mesta Freiburg (denimo Rieselfeld) in v druga mesta v regiji (recimo Französisches Viertel-Südstadt v Tübingenu). Poseben energetski standard v soseski Vauban je bil na primer navdih standardu za energetsko učinkovitost stavb v soseski Rieselfeld. Oba standarda sta bila podlaga za standard, ki je začel veljati leta 2009 za mesto Freiburg (Bächtold 2013). Drugič, implementacija prve plus-energijske večdružinske stavbe na svetu pomeni tehnično rešitev, ki so jo urbanisti in arhitekti intenzivno analizirali in razširjali po svetu. Tretjič, vodeni ogledi soseske Vauban za turiste in raziskovalce, ki so jih organizirali lokalni prebivalci, so učinkovit način

[79] V članku (Medved, P, 2017. Leading Sustainable Neighbourhoods in Europe: Exploring the Key Principles and Processes, Urbani izziv) sem prikazal multiplikativni učinek obeh urbanih eko-laboratorijev in prenos znanja oz. re-aplikacijo socialnih, ekonomskih ter okoljskih trajnostnih rešitev v druga urbana okolja.

širjenja specifičnih izkušenj trajnostnega urbanizma. Tudi informativni seminarji o razvojnem procesu v soseski Vauban omogočajo širjenje znanja. Četrtič, trajnostni živi laboratorij − prva pasivna večstanovanjska stavba v Nemčiji (»Passivhaus Wohnen und Arbeiten«), ki jo je mogoče obiskati tudi z vodenimi ogledi, neposredno predstavlja konkretne trajnostne rešitve soseske.

V soseski Western Harbour je možno proces deljenja/divulgacije informacij opredeliti s tremi aktivnostmi. Prvič, znanje o strategijah upravljanja in drugih organizacijskih rešitvah je bilo preneseno na druge dele mesta Malmö − denimo Hyllie in Augustenborg, in druga mesta v regiji − novi planski načrti za trajnostno sosesko v mestu Lund (Priloga E – Intervju z Evo Dalman). Podobno kot pri soseski Vauban so bili trajnostni standardi za objekte, zgrajene za Bo01 (Western Harbour), kasneje podlaga za poseben program, ki je veljal za vse stavbe na občinskih zemljiščih mest Malmö in Lund. Posebno socialno pogodbo med gradbenimi razvijalci in občino Malmö, ki določa najvišje najemnine v zameno za subvencijo pri nakupu zemljišča, je prevzela tudi občina Kopenhagen (Priloga F – Intervju z Mario Lööf). Strategija za popularizacijo storitve souporabe avtomobilov s posebno pogodbo, ki petletno članstvo v podjetju za souporabo avtomobilov vključuje v najemni pogodbi stanovanja, je bila prenesena tudi na druge soseske v Malmöju, na primer v Hyllie (Priloga F – Intervju z Mario Lööf). Drugič, z vidika aplikacije tehničnih rešitev je bil izboljšan sistem za odpadke (razvit v soseski Western Harbour v Bo01) ponovno uporabljen v Bo03 in bo postal model za celotno mesto Malmö (Priloga E – Intervju z Evo Dalman; Priloga F – Intervju z Mario Lööf). Tretjič, vodene oglede soseske Western Harbour so organizirali za tisoče mednarodnih obiskovalcev.

Seveda tudi druge obravnavane trajnostne soseske (ne samo Vauban in Western Harbour) poosebljajo nekakšne eko-laboratorije oz. eko-pospeševalce trajnostnih urbanih rešitev. Na primer trajnostni urbanistični koncept trajnostne soseske GWL Terrein je bil vzor za nova trajnostna urbana naselja v nizozemskih mestih Haarlem in Amersfoort (Priloga N – Intervju z Joze van Stigt); nemško ministrstvo za izobraževanje, znanost, tehnologijo in raziskave je izbralo nizozemsko trajnostno sosesko EVA Lanxmeer kot demonstracijski projekt za trajnostna mesta (Energy Cities 2008); tehnične in urbanistične rešitve soseske Hammarby Sjöstad oz. njen »Hammarby EcoCycle Modek« je bil skoraj v celoti uspešno prenesen v novo kitajsko trajnostno mesto Caofeidian Ecocity itd.

Po celotnem raziskovalnem procesu disertacije, po poglobljenih analizah sedmih preučevanih trajnostnih sosesk se zastavlja vprašanje oz. dvom o upravičenosti pojmovanja tovrstnih urbanih sosesk z izrazom »avtonomna trajnostna soseska«. Pri njihovem obravnavanju je problematičen predvsem označevalec, vezan na »avtonomnost«. V predstavljeni definiciji avtonomne trajnostne soseske v uvodu termin »avtonomnost« med drugim poosebljа samoupravljanje, neodvisnost in

heterogenost lokalne urbane skupnosti ter organiziranje lokalnih in ekonomsko-družbenih entitet, ki temeljijo na pluralnosti ter egalitarnosti. Kot je predstavljeno v nadaljevanju, pa se tovrstna »avtonomnost« v obravnavanih soseskah ne izraža v celoti. Problematična je predvsem tendenca zmanjševanja pluralnosti oz. heterogenosti populacije.

Danes vse trajnostne soseske predstavljajo zaželena in posledično dražja rezidenčna območja v svojih mestih, čeprav so na začetku obstoja nekatere soseske omogočale cenovno dostopna stanovanja. Visoko kakovostno bivalno okolje v tržnem nereguliranem ekonomskem sistemu očitno poveča povpraševanje po tovrstnih stanovanjih, kar dvigne cene stanovanj. Implementacija trajnostnih sosesk v zahodni Evropi je namreč skladna z relativno novim pojavom ekološkega elitizma (v angl. »eco-elitism«). Le-ta namreč v urbanizmu pomeni usmerjanje urbanističnih politik k ekološkim/okoljskim trajnostnim urbanim rešitvam pri gradnji visokotehnoloških in zato dragih stanovanj, namenjenih predvsem premožnim, ki so pripravljeni plačati dodatno »(eko-)premijo«. Tako je ta pojav postopoma izrinil finančno slabše situirane prebivalce iz trajnostnih sosesk, ki so se zato gentrificirale. Manifestacija ekološkega elitizma je najbolj vidna v proučevanih švedskih primerih, kjer so (lokalne) oblasti od samega začetka določile trajnostne soseske kot urbana območja, namenjena premožnejšim delom populacije. V devetdesetih letih, po koncu dolgega obdobja vladanja socialne demokracije, je švedska vlada v celoti ukinila program socialnih stanovanj in ga nadomestila z nekakšnimi namenskimi najemnimi subvencijami (Priloga J – Intervju z Björnom Cederquistom). Takšen instrument socialne politike se je izkazal kot nefunkcionalen in izrazito nesocialen, saj je v švedskih mestih še bolj gentrificiral centralne in druge zaželene soseske (Priloga J – Intervju z Björnom Cederquistom). Gentrifikacija je prisotna tudi v nemških trajnostnih soseskah (z delno izjemo soseske Kronsberg), ki pa so postale elitne urbane cone šele v zadnjih letih. Po drugi strani pa so nizozemske soseske zaradi državne zakonske odločbe, ki obvezuje visok odstotek socialnih stanovanj v vsaki novozgrajeni soseski, nekako omilile njihovo popolno gentrifikacijo. Kakor koli, preostala (nesocialna) tržna stanovanja v nizozemskih trajnostnih soseskah vseeno dosegajo nadpovprečno visoke cene. Eko-elitizem in proces gentrifikacije sta bila v evropskih trajnostnih soseskah do sedaj malo raziskana, saj sta bila analizirana le v redkih znanstvenih revijah. Prav vprašanje, kako omejiti gentrifikacijo v trajnostnih soseskah, predstavlja temeljni izziv bodočih lokalnih mestnih politik.

Trajnostne soseske odražajo politiko prostora širšega območja mesta, regije in države ter hkrati odražajo specifično mentaliteto lokalnih prebivalcev. Največji kontrast oz. največjo razliko glede značilnosti trajnostnega udejstvovanja lokalnih skupnostni je bilo mogoče zaznati med nemškimi in švedskimi trajnostnimi soseskami. V nemških trajnostnih soseskah je

poudarjeno trajnostno obnašanje lokalnih prebivalcev, od katerih se pričakuje, če ne celo zahteva, da bodo delovali v smeri trajnostnega razvoja in se bodo odrekli avtomobilom, zavestno (aktivno) zmanjševali uporabo naravnih virov, aktivno reciklirali, imeli »zelene delovne akcije« v soseski, delali brezplačno v lokalnih društvih itd.

> *The people in Vauban are a little bit different; but this is a little bit "Freiburg style" also. These people are voting around 70 % Green party and are extremely eco–conscious"* (Priloga C – Intervju z Wulfom Dasekingom).

V švedskih trajnostnih soseskah je bil cilj ravno obraten. Planerji so želeli ustvariti trajnostno sosesko, v kateri bodo trajnostne rešitve nastavljene na takšen način, da bodo ljudje že pasivno, ne da bi se naprezali, »delovali« trajnostno.

> *I think you can show (to people) that they can save a lot of energy. But in the first run you can optimise the system, that's number one and that doesn't cost much. Then it comes the behavior* (Priloga I – Intervju z Helene Wintzel).

Kot trdita Zingernagel (Intervju – Priloga G) ter Lööf (Intervju – Priloga F), trajnostne soseske morajo biti implementirane na takšen način, da ne sme biti pogoj, da si »eko-fanatik« ali »objemalec dreves«, da živiš v skladu s trajnostnim razvojem.

> *You know we tried to do something else than an eco-village in the city. In eco-villages usually people are eco consciousness and make a lot of sacrifices to change their lifestyle to do something that they really believe in it and do something together on a small scale. We thought that in that way it will never be possible to solve the problems of mega cities. For this reason it is necessary to develop new methods, new ideas, that could be applied for »normal people« and not just for eco-driven people* (Priloga E – Intervju z Evo Dalman).

Vsako mesto ima svoje zakonitosti in specifično mentaliteto ljudi. Eva Dalman (Intervju – Priloga E) si je v soseski Western Harbourju prizadevala za večjo participacijo ljudi pri kreiranju soseske, več delovnih skupin, društev, vendar je ugotovila, da so Švedi navajeni voliti politike, ki jim zaupajo, in katerim prepustijo vodenje in upravljanje mest, za razliko od proučevanih nemških mest, kjer so ljudje voljni participirati pri upravljanju urbanih vsebin. Ta primer

dokazuje, kako pomembno je pri implementaciji trajnostnih sosesk upoštevati lokalne geografske, historične, kulturne, socialne, ekonomske dejavnike mest in širšega okolja.

> *Yes but the city of Malmö would be more than happy if there would be a bottom up prospective. But I think, since the city of Malmö is so open to new things and does such a lot of things, there is not such a need for new initiatives. I think in Sweden in general that we are really used to have the authorities that try to do new things. And the people are satisfied with that. Nobody would be happier than I if there would be a group of people who want to do something.* (Priloga E – Intervju z Evo Dalman).

Doktorska disertacija kljub ambiciozni nameri po postavitvi praktične operativne strategije za trajnostna mesta prihodnosti odpira za razpravo nekaj novih vprašanj oz. novih tem. Kot je bilo omenjeno v petem poglavju, je strukturni model usmerjen zelo etnocentrično, saj temelji izključno na severnozahodnih evropskih praksah. Razumljivo je, da je nemogoče združiti vse različne globalne kulturne dimenzije vsakega mesta in postaviti globalni univerzalni model trajnostnih sosesk. Obstaja torej upravičen pomislek, da bi se model disertacije lahko imenoval tudi Severnozahodni evropski model avtonomnih trajnostnih sosesk. Vendar pa glede na to, da so nekatera (tudi neevropska) mesta v celoti uspešno prenesla določene urbanistične rešitve nekaterih trajnostnih sosesk (npr. prenos t. i »Hammarby Eco modela« trajnostne soseske Hammarby Sjöstad v kitajsko trajnostno sosesko Caofeidian Ecocity), je očitno, da lahko predstavljeni model nakazuje določeno mero univerzalnosti. Potrebno je poudariti, da je univerzalnost mišljena predvsem pri prenosu skoraj izključno okoljsko-tehničnih trajnostnih rešitev in nikakor ne družbenih vzorcev lokalne skupnosti.

Kot je bilo že omenjeno, so trajnostne soseske implementirane skoraj izključno v severni in zahodni Evropi. Na jugu in vzhodu Evrope razen redkih izjem niso prisotne. Osebni raziskovalni cilj za prihodnost si predstavljam v ustvarjanju nekakšnega južnoevropskega oz. mediteranskega modela trajnostnih sosesk, v katerega bi lahko prenesel nekatere trajnostne rešitve iz severnoevropskih trajnostnih praks. Mislim predvsem na tehnične okoljske rešitve, vezane na recikliranje in obdelavo odpadkov, gradnjo »plus-energy« hiš, vpeljavo obnovljivih virov energije itd. Seveda pa bi bil oz. bo glavni raziskovalni cilj proučevanje edinstvenih trajnostnih družbeno-ekonomskih značilnosti mediteranskih mest, ki bi jih ovrednotili in jih predstavili širši javnosti v obliki bodočega modela. Zelo zanimivo bo ugotoviti, kateri parametri iz severnoevropskega modela trajnostnih sosesk so sploh primerni pri analizi južnoevropskih

urbanih sosesk. Po drugi strani pa bo predstavljal velik izziv identificirati trajnostne gradnike južnoevropskih mest, ki bi jih bilo mogoče aplicirati v severni urbani kontekst.

Ustvarjanje trajnostnega urbanističnega modela je dinamičen proces, kjer ni mišljeno postavljanje končnih oz. zaključenih verzij modela. Iz tega vidika predlagani model predstavlja le izhodišče, razširljivo shemo, ki jo je mogoče nadgrajevati z novimi trajnostnimi gradniki in z novimi trajnostnimi parametri. Kljub nekaterim omenjenim očitnim kontroverznim elementom strukturni model vseeno implicira novo dimenzijo trajnostnega planiranja oz. pooseblja alternativno perspektivo urbanističnega načrtovanja, ki je v nasprotju z že uveljavljenimi tradicionalnimi modeli/urbanističnimi strategijami. Strukturni model trajnostnih sosesk omogoča praktične, konkretne, inovativne urbane trajnostne gradnike/elemente/kazalce, ki promovirajo zapostavljene družbene vidike trajnostnega urbanega razvoja. Avtonomna trajnostna soseska ni utopična vizija, ampak je heterotopična realnost, ki nakazuje na možen in izvedljiv mestni vzorec prihodnosti.

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Priloga A: Opis raziskovalnega dela na inštitutu IIIEE (Lund University)

FINAL REPORT FOR THE RESEARCH PERIOD AT IIIEE (LUND UNIVERSITY)

I have been a visiting researcher (13.3. 2014 – 17.6. 2014) at the International Institute for Industrial Environmental Economics (IIIEE), Lund University in Lund, Sweden. The aim of the research at IIIEE have been focused especially on the implementation processes of sustainable neighbourhoods in Sweden.

At IIIEE I have researched and analysed the variables (sustainable parameters) that have been used to monitor the sustainable neighbourhood Western Harbour, especially the Bo01 part. With the analysis of specific literature from the IIIEE library and with a prolific collaboration with IIIEE urban researchers I could evaluate sustainable parameters and methodology approaches that have been used to develop the sustainable neighbourhood Western Harbour. I have also used IIIEE's approaches and parameters of measurement sustainable buildings to upgrade my Structural model of Autonomous sustainable neighbourhood (the main objective of my PhD dissertation at University of Ljubljana). The monitoring system for the energy saving building that has been used in the sustainable neighbourhood Western Harbour is especially relevant for my research. This special method have been developed at the IIIEE institute (Lund University). This new expertise of planning and monitoring sustainable energy-saving buildings will be relevant for my structural model. The urban planning of the Malmö sustainable neighbourhood will represent an example of "good practices" in green buildings planning (in my PhD dissertation).

Being a visiting researcher at IIIEE gave me the opportunity to visit two very important conferences that were about "sustainable cities":

1.) Lund University Urban Arena: VISION AND CHALLENGES (Lund 4. April 2014),
2.) Joint seminar AAU-CPH/ DIST and IIIEE: URBAN SUSTAINABILITY AND SUSTAINABLE CONSUPTION (Copenhagen, 25. April 2014).

From the lectures of the conferences I could extract many very useful information, links, ideas related to the sustainable city and sustainable neighbourhoods modelling.

The crucial, indispensable part of the research period in Sweden were the interviews with the most important urban planners. They created, planed, and developed sustainable neighbourhoods in Malmö and Stockholm. IIIEE researches helped me to contact the most important urban developers, planners of Sweden.

Regarding the development of Western Harbour I had the opportunity to interview:

- Eva Dalman, project manager (in 2001) of the neighbourhood Bo01 - Western Harbour,
- Roland Zinkernagel, Environmental department of the Malmö municipality,
- Marial Loof, Environmental department of the Malmö municipality,
- Jan Johansson, Real estate department of the Malmö municipality.

In the last two weeks of the research period in Sweden I was in Stockholm, where I analysed the Hammarby Sjöstad sustainable neighbourhood. I focused my research in identifying the sustainable urban elements of the green district. In Stockholm I had the opportunity to interview:

- Helene Wintzel, co-planer of the community Hammarby Sjöstad,
- Bjorn Cederquist, Urban planning sector of Stockholm municipality,
- Alan Larsson, ex European Commissioner and urban developer of the local platform "Hammarby Sjöstad 2020".

All the mentioned interviews from Stockholm, but also from Malmö and Lund, will be used for the comparative analysis in my PhD dissertation and also for the article that we have developed at IIIEE. All the interviews were taken with the voice- recorder, and digitally stored.

The research period in Sweden was long app. 3 months (from 13 March 2014 until 17 June 2014) and was divided in two parts. The first part (from 13 March from until 2 June 2014) of the research I stayed in Lund at the institute IIIEE, and I have the opportunity to analyse the sustainable neighbourhood Western Harbour in Malmö, which is very near the city of Lund. In the second part (from 2 June until 17 June 2014) of the research period I was in Stockholm, where I could analyse the sustainable neighbourhood Hammarby Sjöstad and interview the urban planners of the green district.

Primož Medved, signature: Medved, in Ljubljana, date: 24.6.2014.

Kes McCormick (Lund University),

signature: _____, stamp: The International Institute for Industrial Environmental Economics at Lund University P.O. Box 196, SE-221 00 Lund, Sweden Telephone: +46-46 222 0200 Telefax: +46-46 222 0210 E-mail: iiiee@iiiee.lu.se www.iiiee.lu.se, in Lund, date: 17-6-2014.

Drago Kos (University of Ljubljana),

signature: _____, stamp: _____ in LJUBLJANA, date: 24.6.2014.

Priloga B: Intervju z Andreasom Delleskejem (Freiburg, 2. april 2013)

Intervjuvanec: Andreas Delleske (v nadaljevanju AD)
Izpraševalec: Primož Medved (v nadaljevanju PM)

…….

PM: What is your personal relation with Vauban? How long how you been living here? How long in how (in general) have you been connected with this eco-district?

AD: I have been living here since 1999, but I was involved even earlier from 1995. Before I was living outside but close to Vauban, and every day I was passing through these abandoned barracks. SUSI, the alternative group, they were using these rooms (the building "HAUS 037") as an improvised cafeteria for their workers. And one day I was meeting a friend here still student, and we were having lunch ….and we started to have an conversation about eco lamps…and next week I was already employed by SUSI, in order to refurbish the old barracks, and then I joined their construction group.

PM: But now you are a member of the organisation "Vonnen and Arbeiten"?

AD: Yes, this is a project name of our passive multifamily house.

PM: Tell me more about this project.

AD: We were among the first who build a proper passive house. Passive houses basically had been known since 1992, but before us nobody built a passive a house as a multi-family house. Today it is rather common, but 15 years ago passive houses were built just as normal single family houses, not multi-families houses.

PM: How was the relation of the municipality to this project? Have they been helpful?

AD: Regarding the passive house project, as a group, we did not have any help from the municipality, except that that they sold us a piece of land which was fit for the passive house, because has the right orientation. We had no financial help or any support.
…
AD: At that time, I was also an elected representative member of the local association Forum Vauban. The city supported us when they accepted Forum Vauban as a legitimate partner for the sustainable neighbourhood redevelopment. They paid one half of the employment of one person. In 1998/99, forum Vauban had 9 half employed people, paid by different institutes. DBU were financing 4 projects and the EU financed one big project. These were the source of financing to procced with our projects.

PM: Did you purchase the land without subvention?

AD: Yes, without any subvention. At that time, every German citizen who would buy their first apartment or build their first house could apply for a loan with very low interest, like a subsidy.

Everyone could get this subsidy. There was any particular subsidy for passive houses. I think this is not necessary, the passive house pays off by itself.

PM: Are all the buildings in Vauban with passive houses standards?

AD: No, most of them have the "low energy houses standard", and some are passive. The passive house that we built was a very ambitious project, because nobody had done this before 1995. Today this low energy standard applied in Vauban, become the federal standard. From today's point of view this standard is not ambitious anymore. Today it would be ambitious if just passive houses would be allowed; and it's perfectly feasible. It pays off.

PM: When you built the houses had you been organised like a cooperative?

AD: To be precise in our specific case it was not a cooperative, because in a cooperative you put the money together and then you build the house. In our case for our building everyone had their own financial condition and budget, everyone had their own loan from different banks. So formally we were organised like a co-ownership.

PM: Could you tell me more about the cooperatives of sustainable sources of energy -the photovoltaic. Do you have a share, are you involved in these cooperatives?

AD: In my building no, but on the building Haus 037 – the neighbourhood community centre- me and 21 other people from Vauban own a solar plant. Each of us has a share. This solar plant was built in 2003, and this year (2013) it will be repaid.

PM: Who own the photovoltaics on the other buildings in Vauban?

AD: Depends, most of the PV panels belong to the private groups. There are some exceptions; for example some of them are owned by building company or housing company in Freiburg, but still most of them are owned by local groups of people. 80 % of Vauban is privately owned . The inhabitants who own the apartment usually is a shareholder of the PV installation. That is the usual way.

PM: What about the installation of solar collectors in Vauban?

AD: Yes there are, but not many, and I think that this is good. We have a district heating, and a district heating is fueled by wood chips. If you place an additional solar colector on the roof you provoke competition between two renewables. It is a sort of "renewables cannibalisation". I think solar collectors are a great solution, but maybe not adequate for the Vauban case.

PM: Who had chosen the local heating provider, who decided to create the CHP power station?

AD: It was the local power company (49 % percent owned by the city) who chose which installation should be applied. The city council decided in 1992 that the cogeneration (CHP) should be installed. So we have now the CHP that covers 100 % of the heat demand for Vauban, and produce more than 100 % of demand for electricity. The CHP is fueled mainly from woodchips and just partly from gas.

PM : Why you did not use the geothermal heat pump in any building?

AD: I would say, before we start with geothermal, let's use all other options which are much cheaper and secure, like passive houses. In Basel, which is very near, they started a massive geothermal installation and they are beginning to have earthquakes!

PM: How many house in Vauban are built from from concrete?

AD: Unfortunately, I would say more than 60 %. We still have not shifted with the construction materials here in Germany. Unfortunately, we still did not switch to wood, like for example the Scandinavian countries did.

PM: How did the sustainable neighbourhood Vauban develop? What was the process of initiation?

AD: Well, first of all it is not a casualty that it started here in Freiburg. Freiburg has a particular, specific history. We could say that started 40 years ago with the protests against the nuclear power here in the region. That was the time where all the competence were developed. The second explanation is the Green Party, which is the strongest fraction in the Freiburg's city council. This fact helps tremendously.

PM: The planners of the municipality of Freiburg helped to develop the sustainable neighbourhood Vauban?

AD: Yes, however the municipality representative will say that they created Vauban on their own. This is not true, because it was definitely the group of local citizens linked within the association Forum Vauban, the motor of the development. The best contribution from the city was that they did not stop or obstruct the process of redevelopment. Of course the municipality played a certain role, but they had to, because they were the owner of the land. All the creative ideas, the ambitious ideas came from the association Forum Vauban, with the two exceptions. The city council decided already in 1992 (before the Forum Vauban really started) that there had to be the low energy houses standard implemented for all the buildings. Another thing that the city council decided was that there had to be central district heating with cogeneration.

PM: How are Forum Vauban Forum and the association S.U.S.I. connected with each other?

AD: Forum VAUBAN and S.U.S.I. are not formally connected at all. S.U.S.I. had been a project / association, which was developed earlier. Informally there were many connections between the two associations (also between the same people in both projects).

PM: What is the process of "decision making" for the Vauban community?

AD: I think we should be empowered for our own decisions. From the point of the view of the city, Vauban's potential mini parliament would not represent any cost. Why not let us (Forum Vauban) decide about "neutral things" in Vauban. Unfortunately the city did not have the courage to do this. We do not criticise the city, but I think that many issues opened by Forum Vauban created many struggle and friction between the city council administration and Forum Vauban. This could be avoided, if the city council listened more to our suggestions.

PM: What was the connection between people? What was the process of deciding together for common things? How many people were involved in the decision process?

AD: From these 3 initial pioneers; very soon started a session of Forum Vauban with 30-40 people, and at the peak time before the Forum Vauban shut down, we had 400 members, and we met together here in this building (Haus 037). From our experiences, the voting system was not the main "connection driver". We experienced that another issue was more important and crucial. It was how the people are informed. The more you inform people, you give them more details, the more people will try to understand the necessity for a particular decision and go with it. Therefore, very often we really did not need to vote because it was really clear the path, the road to take.

PM: Were you talking just about passive houses or about other social activities?

AD: We were talking a lot first of all about technical staff, not so much about social issues. Social activities came like a collateral product. We had an interest in common to build houses and that made us accept the challenge to work together.

PM: What was the percentage of Vauban's population that participate to Forum Vauban's meetings at the peak time?

AD: It is difficult to estimate the percentage of habitants because 40% of them are children. Well let's say that there were approximately 50% representatives of households (apartments). In 2004 there were 1000 apartments in Vauban and half of them (500) were involved in Forum Vauban.

PM: How has Vauban changed in the last years? Has it become more "commercial"? Are the newcomers in Vauban are somehow different from the pioneers?

AD: Well that is a difficult question. The first people in Vauban were of course the most ambitious ones, that's normal. It was not 17 mllion people who broke the Berlin Wall, but 100000 who met in Leipzig, and it was enough. It is not really necessary that the last person understands everything. There has to be a critical mass of people and good arguments. That is all.
…
AD: It is totally normal that the city administration refuse your project, no matter how good your project is. Rejection is the first thing; then you have to create political pressure, and very importantly you have gain the press / the newspapers on your side. Here in Freiburg we were also lucky because the Green Party made a lot of publicity for us in the city council. This is why the city council opened a connection with us.
There are three main reasons why Forum Vauban was initiated: (1) the University of Freiburg - we have young intellectual people that have plenty of time, (2) high unemployment rate (if you are unemployed you have more time to give), (3) "green attitude" in the region (a critical mass of people that are conscious about the negativity of the energy monopoles; nuclear protests of 40 years ago).

PM: However Forum Vauban disappeared. What was the reason?

AD: Yes the reason is quite complicated. Forum Vauban went to bankruptcy because of the bad EU bureaucracy. The EU commission project financed 50 % of our budget. However it is a long story, we have legal problems with them and because of the them we lost our money.

PM: The other organisation S.U.S.I is still alive?

AD: More than alive. I was also one of the responsible representatives of S.U.S.I from 95-98.

PM: How did the association S.U.S.I. start and what is the role of S.U.S.I. in Vauban?

AD: In the beginning of the 90s, before the French army left, it was an emergency situation. It was not possible to find any affordable place to stay. For students especially, everything was too expensive. The students were coming to Freiburg massively and in Freiburg there were no affordable places. When it was clear that the French army will leave Freiburg some of them slowly occupied 4 barracks in order to create a new social and sustainable redevelopment for these large unused spaces. S.U.S.I. had many followers and they presented their ideas in front of the city, but the city council refused them. The municipality feared that S.U.S.I. will end up like the Copenhagen's Cristiania with many drug dealers. It was very difficult for S.U.S.I. to get through, but after a lot of networking, they tried to convince the municipality. At the end, the city accepted (not happily) the idea to somehow deliver / sell the 4 barrack to S.U.S.I. The federal government was positive about this idea. The four barracks are now owned by S.U.S.I., which rents the spaces / the apartment to students and to inhabitants with low incomes.

PM: But if in S.U.S.I. there were all students, how did they buy the barracks?

AD: Exactly, no one had the money. S.U.S.I. introduced a very bright "budget concept" with 4 pillars. The total budget of S.U.S.I. was 10 million EUR. 25% came from normal loans from the banks (from SUSI gmbh), 25% from private loans (that S.U.S.I. returned with a decent profit margin), 25% came from national subsidies that any construction company got if they built student homes, and 25% had been virtually saved, because S.U.S.I. paid half of the money to students (who rebuilt the barracks) in comparison with the professional worker. Moreover everyone who has a room / an apartment in the buildings managed by S.U.S.I. has to work for S.U.S.I. 105 hour / month for free. Now everything is done, all the buildings are built and residents work 105 hours in bar services.

PM: S.U.S.I. is totally different from Forum Vauban in this sense….

AD: No, also within the association Forum Vauban we worked a lot for free, because we did not have any money. For example, we painted this structure (Haus 037) for free. You should know that the building Haus 037 is a citizen central house – a community centre and it was not planned from the city at the beginning. We made pressures on the city in order to obtain it. At the end Forum Vauban bought it for 1 DEM. It was difficult to convince the city council, because at the beginning they wanted to tear down everything and sell the land. We needed to pressure the city often in order to implement our good ideas. The city supported the reconstruction of this building at the end, but it took us 4 years to persuade the city administration. Hopefully, in the future the city will respect and accept the citizens' ideas more.

PM: What are the connections between Rieselfeld and Vauban?

AD: Rieselfeld, started even before Vauban. Rieselfeld was planned before the Berlin Wall came down. Citizens were contributing similarly like in Vauban, but you will have two points of view in that regards. The point of view of the city is that the ideas of the citizens were not feasible, achievable. From the point of view of the citizens (citizens' associations) the city obstructed all their suggestions. A lot of disillusioned ambitious citizens moved from Rieselfeld to Vauban, with a new consciousness with "the new lesson learned. Vauban is actually Freiburg's "participation 2.0".

PM: What is your personal opinion about the Rieselfeld sustainable solutions?
AD: There are some passive houses, a lot of houses with the right orientation like here in Vauban, but Rieselfeld does not have a special traffic concept. Here in Vauban we had to fight for 4 years for the traffic concept without cars.

PM: Thank you Andreas.

AD: Thank you Primoz for your interesting questions.

Priloga C: Intervju z Wulfom Dasekingom (Freiburg, 3. april 2013)

Intervjuvanec: Wulf Daseking (v nadaljevanju WD)
Izpraševalec: Primož Medved (v nadaljevanju PM)

……

PM: Hello could you introduce yourself, your role in the development of the two sustainable neighbourhoods (Vauban and Rieselfeld)?

WD: I have been responsible for Freiburg's urban development for nearly 30 years. When I started 20 years ago, it was just the time when Freiburg changed the city concept toward reducing resources. This was the main goal. The background for this decision were 3 global events: the first one was the oil crisis in 1973, the second crisis in 1978 and the Chernobyl disaster in 1986. I started to work in 1983, and at that time not all the people had been conscious that something has to change. The biggest switch in the mentality came in 1986 (Chernobyl disaster). At that time it was also a broader discussion about a possibility for new residential development areas in Freiburg, because especially young people who came to Freiburg, had to live out of the city in small villages, because the city was too expensive. At that time there was also a discussion in Germany about the intent to build 17 nuclear stations, and one of them was supposed to be here close by the city of Freiburg. Local farmers did not want to have it, and also the »university people« did not want a nuclear station, the student organised many protests. This was the beginning of the green movement, which is very strong here in Freiburg.
…
When I started in 1983 there was a socialist mayor and you have to know that Freiburg has always had continuity in the city council, we had long term runners. The socialist mayor came in 1982, and he worked until 2002 (20 years), I came in 1983, and have worked until 2012 (30 years). The continuity has been the crucial point.
…
Ok let's continue. I was saying that the main goal was to reduce resources (in everything) and to accommodate the younger generation to the city with new urban developments in Freiburg. We started to think and the question arose "can we build in our already built areas?" Can we just bring the new people in the spots that already exist - the inner development?!! Unfortunately it was not possible, because of the private land, private interest in many areas. We then started the greenfield development in Rieselfeld. The major point, when we started to develop Rieselfeld, was to develop a socially mixed urban area. The priority was also reducing energy consumption, reducing »land consumption«, we made a special water concept, etc.
…
And there was another important point - we (the municipality) had no money at all for the neighbourhood development. However, the area belonged to us (the municipality), so we firstly wrote an environmental urban program for Rieselfeld and we decided in the federal parliament to start a planning competition. We then made a special »town planning calculation«. The town planning calculation consisted in the calculation of how many gardens in Rieselfeld are needed, how many schools, tubes, streets, open in private infrastructure etc. The final costs for the whole infrastructure was then divided and put on every estimated residential square meters. The land at the beginning costed 60 eur/m2 and after the integration of the costs of all the infrastructure for

all public and private usage, it cost 330 eur/m2. With this number all the infrastructure is paid, without any additional budget from the municipality.

…

There was another important point in regards to the Rieselfeld traffic concept. When we wanted to reduce the car circulation we had to integrate a functional public transportation system before the first settlers came. This was kind of new also in Germany. This new public transportation system (tram lines and bus lines) are normally fully implemented 10 or even 20 years after the neighbourhood is built. Public transportation companies usually do not expand to an empty area. However, we forced the implementation of the functional public transport before, because we wanted to influence the residents to switch from cars to public transportation system.

PM: Could you tell me more about the development history / background of the other sustainable neighbourhood - Vauban?

WD: The barracks were built in 1936 from the German army and then after the WW2 were occupied by the French. The history of Freiburg is very closely connected with the history of France and the history of Austria. Freiburg was for hundreds years a former capital of Further Austria (Anterior Austria).

The abandonment of the French army happened very quickly. The French government made a decision in 1991 that that they will leave from Freiburg. No one really expected. They left 1100 flats in the city and they left all the barracks in Vauban.

The socialist mayor of Freiburg managed from the government of Boon a brilliant price for the whole area of Vauban - 22 mio DEM. However, unfortunately a not very perfect politic issue happened. The organization S.U.S.I. just bought some Vauban's barrack directly from the government before the municipality. At that time there were two persons from the government who had very big influence. They were from Green party who and lobbied for S.U.S.I. The mayor of Freiburg was not very happy with this decision.

…

For Vauban we had the same ideas almost like in Rieselfeld: making a social mixture, helping people who do not have a lot of money to get an apartment, dividing the area in small plots, high density of building, reducing the energy consumption, reducing the car circulation as much as we could, etc

….

We made a really innovative participative concept for the green areas in Vauban. All the green areas were not created from the municipality, but we allowed the residents to create their own green spaces – literally. You should know that the »demolishment and vandalism is Zero« in Vauban; also for this reason; in the socialism systems the playgrounds were all destroyed.

PM: How is the community structure in relation to the age; what is the relation between elderly and young generation in Vauban?

WD: Well, more than 32 % of people in Vauban are under the age of 17, so it is a very "young area".

…

WD: I want to talk more about sustainable architecture concept that influenced car ownership.

Vauban is like a village, you have everything inside. The purpose was to build a compact decentralised city within the city, where you can do all your daily requirements just by walking, like in a village. You do not need a car at all. With the tram, in 8 minutes you are in the city centre. Normally in the EU and especially in Germany you have car ownership between 450–

500 cars /1000 people, in Freiburg we have 430 cars /1000 people, and in Vauban we have less than 100 cars /1000 people.
…
WB: There is also a very important market place on the main square. At this market place, 2x a week there is an organic market and once a month they organise a second hand market.
…
WB: The people in Vauban are a little bit different; but this is a little bit "Freiburg style" also. These people are voting around 70 % Green party. The current mayor is also "green", but they (Vauban community) hate him, because he is a conservative. He is green but also conservative.

PM: How have you (the municipality) influenced the people in Vauban to "buy together" the solar plants- with renewable cooperatives?

WD: Well they are all private, we do not have to influence them; they are doing it by themselves. It's a certain sort of people who live there, with a strong consciousness about sustainable development.

PM: Maybe you set a standard of implementation, and they have to follow it?

WD: No, there isn't any standard. Vauban's population is just different from other people, who want to live differently.
…
I am very sure… from my previous experiences that living areas like Vauban would not be possible now!…because all the politicians are looking how can they will be re-elected again!
I am not convinced that you will get the majority to implement new urban areas right now. Nevertheless, in Freiburg there is no industry, we have this technology institute, "science people". Very brainy, but no workers, so we do not have really unemployed people. The biggest employer is the university. It was from the demolishment of the Second World War, 85% of the city was destroyed. Freiburg is the city where everyone wants to live, there was a graffiti at the university where it was written: "Is better to live in Freiburg and have not a job, then to work in northern Germany«. Because here it is fine.

PM: What are the differences between Vauban and Rieselfeld related to community issues?

WD: The main difference is that Rieselfeld is a real suburb and Vauban is a small (urban) village. Rieselfeld has a primary school, high school in the middle, gymnastic area; they have the church (Roman Catholic and Protestant in the same building). There is no infrastructure in Rieselfeld made just for one purpose, for one usage, even the church (has more than one purpose) ….so it is cheaper. Rieselfeld is for the people who are more "normal" than in Vauban area.
…
When you are going to create something new first of all you have to bring very strong people inside before you are going to integrate more social living. You have to mix….and then another point that is very necessary. You have a list of people who need houses,…and you have to look who is »behind« the name of the list. You can not integrate person in new area who are junkies or drinkers,….or persons who socially can not come together.

PM: In Vauban there are many urban interventions that enforce the identity, for example the central market, clear borders, … and the same is in Rieselfeld. What are the others things, that reinforce the community identity?

WD: You have to integrate places and institutions. Why some areas simply could not be governed by themselves?

PM: The association Forum Vauban also want their own parliament in Vauban.

WD: Yes I know, and they will not succeed.

Priloga Č: Intervju s Sigrid Gombert (Freiburg, 2. april 2013)

Intervjuvanec: Sigrid Gombert (v nadaljevanju SG)
Izpraševalec: Primož Medved (v nadaljevanju PM)

……

PM: You have played an important role in the local newspaper of Vauban ("Vauban Actuel"), what is the history of the newspaper?

SG: Cartsen Sperling thought that it would be a good idea to have our own newspaper to enforce our local identity. After he left Vauban, we (3 women /the board of directors) have coordinated and organised the whole magazine which is issued every three months.

PM: So the magazine is issued 4 times a year; who finances the issuing of the magazine?

SG: We are now financed just from the advertisements. In the past the association Forum Vauban helped to finance us, but then EU stopped financing Forum Vauban, and for a period of time the newspaper was not issued. Then Patricia de Santiago asked to continue issuing the newspaper and we restarted the whole thing.

PM: So do you live here from the beginning?

SG: From 1999.

PM: So Cartsen Sperling started the newspaper to enforce the local identity of the neighbourhood; what are the other things apart from the newspaper that reinforce the identity in Vauban?

SG: Kindergartens activities, children organisation, church activities, activities to reduce the utilisation of cars, Groups which help the people with handicaps, organisations for the people with dementia, organisations for elderly people, food cooperatives groups, which recently build up our own food cooperative shop, etc.

PM: The community feeling is still strong in Vauban…. is it more or less strong than before - at the beginning?

SG: Much less, because the forum Vauban stopped, and there are new owners of houses, which are different from the first pioneers. There is no such atmosphere like it was before when we pioneers lived there. There is no such social atmosphere anymore.

PM: But SUSI organisation remains here, it is still important in Vauban?

SG: Yes it is very important,.. a lot of people, energy is there, it is a community of 4 houses, they build the houses and live together, like in a Kibbutz.
…

SG: SUSI, it's like a heart of Vauban and helps people with lower incomes, and provides social housing for them with very low prices.

PM: This local newspaper is an instrument to enforce the community feeling. What else, what are the other things that empower the community feeling - the connection between people. Has there been established here in the neighbourhood a sort of direct democracy within the decision making process?

SG: Yes if we have a problem, we invite some experts to the community centre (Haus 37) and we debate about a specific problematic here in Vauban. Occasionally we also vote regarding local issues. And we have occasionally special markets where we change the things which we do not need between each other. Twice a week we have also an organic market in the main plaza.

PM: Who owns the renewable energy sources in the neighbourhood (the solar panels)?

SG: The people who live here…for example for the solar panel installation at the top of the community centre Haus 37 there are 25 local owners from Vauban.

PM: How many copies of this newspaper do you print each time?
SG: 2200, every issue.

PM: In Vauban there are 5000 people, so for each apartment you have one, and it is free?

SG: Exactly, and we have a young boy, who delivers one copy to all the apartments.

PM: What about the local economy at the neighbourhood level? How many people work here?

SG: In the community centre Haus 037 there are many workers, but just for a limited time - 10 hours a week.

PM: And about local shops, how many people work in these shops?

SG: Many …we have shops for bread, flowers, books, a lot for tallasio terrapies offices, 2 business centres, hairdressers,…however most of the people work in other parts of Freiburg.

….

PM: I saw an open community oven…could you tell me more about it?

SG: Yes, once a month, there are 5 persons who organise it, and sometimes many people come with their own pizza and bake it there.

PM: What are the other similar community projects?

SM: Oh there are many….for example bowling; there is also a special neighbourhood celebration in the summer- Vauban FEST.

PM: Has Vauban introduced the local trade exchange system – LETS? (in German. Tauschring) ?

SG: Yes we have organised from Haus 37 on our own but in the last years it is not working well. It is a little bit forgotten. Before it was better,… it was not easy to involve people.

PM: Do you know the other Freiburg sustainable neighbourhood - Rieselfeld?

SG: Of course, there are a lot of Russians living there, and it is expensive.

PM: It is not like Vauban?

SG: 15000 people are living there, it is a little city.

PM: Do you think that Rieselfeld is sustainable?

SG: In my opinion: not really! The social sustainability is not very strong, the local identity of the community is absent, and there are a lot of cars.

PM: What about the usage of common gardens in Vauban?

SG: Yes we have some common gardens, which are managed in various groups. Outside the neighbourhood and our little gardens within the neighbourhood, and we have also a butterfly gardens in Vauban.

PM: Do you think Vauban is "autonomous"?

SG: No, it is part of the city, absolutely not independent. There was never an idea to be autonomous.

PM: But Vauban was different years ago, I heard you have your own parliament here in Vauban.

SG: Yes but this was a dream of beginners, of pioneers, ..but who likes to pay people for such a thing…nobody.

PM: Is Vauban safe?

SG: Well yes and no. We have now a lot of young people who destroy windows, spray houses, and steal bicycles.

PM: Could you tell me more about the heterogeneity of the local population in Vauban?

SG: Here we have a lot of children, just a few old people. It is a very young neighbourhood. Here there are no super rich here, but just people with medium and low income.

PM: Thank you for your time Sigrid.

SG: It was a pleasure, bye.

Priloga D: Povzetek intervjuja z Lejlo Karović-Kersting (Freiburg, 4. april 2013)

Intervjuvanec: Lejla Karović-Kersting (v nadaljevanju LKK)
Izpraševalec: Primož Medved (v nadaljevanju PM)

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Intervju z Lejlo Karović-Kersting je potekal med vodenim ogledom skupnostnega centra soseske Rieselfeld. Ker je intervju potekal med samim ogledom, ni bilo mogoče uporabiti diktafona. Pogovor se je nanašal na aktivnosti skupnostnega centra Glashaus ter na vlogo Lejle Karović-Kersting kot kulturne mediatorke v centru. Lejla Karović-Kersting je podrobno opisala, na kakšen način vključujejo otroke različnih nacionalnosti v skupnostne aktivnosti centra. Tema pogovora se je nanašala tudi na tipologijo aktivnosti, organiziranih s strani organizacije K.I.O.S.K, na heterogeno namembnost prostorov skupnostnega centra (kuhinje, multimedijski center itd.), na knjige v različnih jezikih v knjižnici skupnostnega centra soseske, na probleme rasizma v soseski, na množično priseljevenaje Rusov v sosesko Rieselfeld itd.

Slike iz vodenega ogleda skupnostnega centra soseske Glashaus v soseski Rieselfeld:

Priloga E: Intervju z Evo Dalman (Lund, 13. maj 2014)

Intervjuvanec: Eva Dalman (v nadaljevanju ED)
Izpraševalec: Primož Medved (v nadaljevanju PM)

……...

PM: Who were the very first pioneers for the Western Harbour implementation- specifically for the urban zone Bo01?

ED: The initiator was the city of Malmö, who was the land owner.

PM: Was it the idea of the mayor to create the sustainable neighbourhood?

ED: Before Western Harbour, the idea was to implement a similar urban development on an island called The Island. And the city of Malmö wanted to host a big housing exposition on a national level, and later an international housing exposition called Bo - to live. There were a lot of cities of Sweden which wanted to host such an event but Malmö won. At the end there were some environmental problems on the Island so the city moved the project to the Western Harbour and postponed it for 1 year. For this reason the expo was in 2001 and not in 2000.

PM: What was your specific role in the project of the sustainable neighbourhood at that time?

ED: I was employed by Bo01 company- not by the municipality. Before, I was working at the Malmö municipality- but then the city "lent me" to the company which worked for the development of the Bo01. My role was to work on the social and environmental quality program. We had a holistic view for the urban area.

PM: What was the specific role of the region and the role of the municipality of Malmö for the project Bo01 and for the whole area of Western Harbour?

ED: The region was not involved at all. It was the municipality of Malmö and the national level - the national authority for planning and building construction who were the main stakeholders.

PM: I know that at that time in 2001 nobody lived in Wester Harbour, but I am interested if there was a public debate of the citizens in Malmö, or more specifically a public debate, which involved the people who lived in the vicinity of Western Harbour?

ED: Yes there was. First thing: when Saab built a factory there – the city built a park all along the sea to comfort the people in Malmö, and the park was very popular. Then we started to build the Bo01 and the park was shut off and this thing made people upset and angry. Secondly – the whole construction area was fenced. The people could not pass by the sea and then when the area was finished we had an expo event and fences of course were still there. The citizens of Malmö had to pay the entrance fee in order to enter, and this was very upsetting and a lot of people of Malmö said: "we do not want to visit the housing expo- we will boycott it". Most of the newspapers were really negative about everything we did. Everything was a scandal. Our company also faced a serious financial problem. We actually bankrupted. The same day the fair

shut down – we shut down and the city of Malmö lost a lot of money. This also upset the local people. And also a lot of local companies did not get paid because of the bankruptcy. The city had to intervene and paid all the debts. It was a big scandal. Also the mayor was sued, and another person from our company was convicted with fines.

PM: Has the municipality ever thought to sell the land to cooperatives like in the sustainable neighbourhood Vauban. I know that just one building in Bo01 was built like a cooperative.

ED: Yes, but this is not even true, not even that building was a true cooperative. However it was discussed a lot and we wanted more cooperatives, but only one building cooperative contacted us. You have to know that we do not have such grass-roots initiatives that they have in Vauban. We in Lund now we try to start to involve people to build such cooperatives. The city of Lund has ads all over in the town with posters and ads in newspapers, but the people simply are not interested.

PM: Different tradition and mentality?

ED: Yes

PM: Why in Western Harbour are there no RES cooperatives? For example the "solar panel cooperatives"? Maybe the reason is related with the feed-in tariff mechanism?

ED: It is interesting to compare, because in Vauban it was a citizen initiative for RES cooperatives. A lot of people want a lot of sustainable things in Freiburg. You do not have any of them in Malmö. In Malmö it is a top-down prospective 100%!

PM: Yes it seem that in some cases in long term it functions even with a top down approach?

ED: Yes but the city of Malmö would be more than happy if there would be a bottom up prospective. But I think, since the city of Malmö is so open to new things and does such a lot of things, there is not such a need for new initiatives. I think in Sweden in general that we are really used to have the authorities that try to do new things. And the people are satisfied with that. Nobody would be happier than I if there would be a group of people who want to do something.

PM: Has a "whole life cost analysis" been made for Western Harbour?

ED: No, we did a cost investment analysis for the city of Malmö, but not for the developers. For the city, the sustainable neighbourhood is a profitable thing in the long term.

PM: Why do you use the organic waste for local bio gas? Have you ever thought to use the organic waste for the local bio gardens?

ED: Of course, and they also used the organic waste for bio humus, because in the first years no biogas was produced. They had a big production of soil. In all cities you could buy cheap soil from the waste. In Sweden the recycling centre works very well and they also are selling soil in sacks. The big scale system works for many people and people are not involved. Therefore you do not need to be "eco-freak" - it works eco anyway.

…

ED: You know we tried to do something else than an eco-village in the city. In eco-villages usually people are eco consciousness and make a lot of sacrifices to change their lifestyle to do

something that they really believe in it and do something together on a small scale. We thought that in that way it will never be possible to solve the problems of mega cities. For this reason it is necessary to develop new methods, new ideas, that could be applied for "normal people" and not just for eco-driven people.

PM: And you think that Western Harbour will succeed in that?

ED: Yes and no, because as we could see, from 2001 so little has happened in Europe, and now in Bo03 the Swedish government has directed money for waste digester with a tube vacuum mechanism to collect the food waste. This was tried in Bo01 11 years earlier and proved to work perfectly well, isn't it sad?

PM: Yes, it is.

ED: It is sad that the fantastic energy system in Bo01 has not been copied in other urban developments in Sweden. Also in Bo02, Bo03, they do not have 100% energy supply from RES. 100% RES is just in south Bo01. I think that today it is like a backlash for sustainable city development / or for radical sustainable experiments. Bo01 was a "pusher for sustainability" but we have a national mainstream policy for big scale developments for the whole city, region.

PM: The car sharing initiative was introduced in Western Harbour in Bo01, but it did not function as predicted, why?

ED: Yes it was introduced and then shut down. When the Bo01 was constructed the zone was isolated and people felt far away from the city centre. It was difficult to move to the city, so the people had a strong need to have a car. A lot of people have also two cars. For this reason we changed the car policy of the neighbourhood from 0.7 to 1.1 car slot per apartment. But there were also some technical problems with the first car-sharing company. However when the new car sharing company Sunfleet came to Bo02, the developers were astonished and impressed because the service was excellent and much more efficient.

PM: Are there community groups of local people in Western Harbour? How strong is the local community identity there?

ED: Again, the city tried to form one.

PM: Why and how?

ED: Because it did not have any. We started 1997 a test panel for citizens to discuss the development of Western Harbour. We had ads in the newspaper if they want to join. And then we started the panel where the people told us their ideas. We restarted the test panel on the second occasion for the people who lived in Western Harbour! But we did not want to be exclusively for them because maybe other people in the future will move to Western Harbour and they should have a voice as well. Therefore the panel was open for the people from outside Malmö as well.

PM: Where did the meetings take place?

ED: At the University in Western Harbour we had like an "expo store" in a "mink house". It is not a real community place; it was an "expo place" for the city of Malmö. There we had all the meetings with the developers. It was open once a week for public. There was a library with all

the information about Bo01 - all the books, all the articles, etc. There we had the meetings and the test panel members were asked to come up with their topics. We also invited the politicians and we had half of the time a lecture and half of the time a work shop, where people with new ideas could present their ideas. And then we had a newsletter after each new thing – on the web, for all the people who also could not attend the test panel. Anyone could join the test panel.

PM: How satisfying were the results of these meetings?

ED: At the beginning it was really great; interesting people came up; we had a lively discussion and many suggestions had been raised. People at the beginning of Western Harbour were upset with the traffic jams. For them was very important to speak directly with the politicians who calmed down the situation. The residents of Western Harbour wanted in a way a gated community. They did not like that so many people come to visit the district.

PM: Really? The residents wanted a gated community?

ED: Yes, it is a romantic view that citizens and visitors would be so democratic and that there should be an idealistic harmony between them. They were very egotistical and they just wanted what is good for them, how their property would gain value. They (the residents) were very upset that the Western Harbour is now the "beach of Malmö". They hated it.
…
ED: In the long run it was hard for us to find new topics that would really engage people. There was also a big house with old people in Western Harbour, an elderly house. However the elderly did not want the young around; it was an aggressive discourse.
…
ED: Then we wanted that this community panel continues but without us - without the projectors. We wanted that they would engage in the community group, and we ask them, but they did not want to. I also problematized that we (the city of Malmö) took the initiative. Maybe would better if they started, but they have not! In my opinion the citizens should take the initiative.

PM: Did you plan to make a community centre in Western Harbour where the local community would have their own associations for the elderly, children, etc.?

ED: No, the local community even did not want to have meetings, and they certainly did not ask me or want such a place. They were not able to meet once a year. They simply do not have this need.
PM: What about the heterogeneity of Western Harbour? Western Harbour is really socially homogeneous (upper middle house), did you ever plan to create also social houses there?

ED: Yes but in Sweden we do not have a national system of social houses. In order to stimulate heterogeneity we created a house for elderly and a student house. In Bo01 the percentage of rentals vs owners of the houses is almost 50-50, because the rentals are really small units (in square meters would be 80-20). The company MKB built publicly owned houses but their rents were really high. …
PM: There for the population is mainly from upper-middle class.

ED: Yes, but then the policy change for Bo02. The politician said that that Wester Harbour should not be "The Gold Coast of Malmö"!! It has to be accessible for ordinary people. Therefore the goal was to build the cheapest rentals in Malmo, and they partially succeeded in Bo02. The city for a period subsidies the land for the rentals and in return the developers had to sign a

contract that they will not charge higher rent than the average rent in the lowest quartile in the city of Malmö.

PM: What is really interesting is how the know-how, the knowledge is transferred from one neighbourhood to another. I know that the neighbourhood Augustenborg is also an eco-district in Malmö. What was the transfer of knowledge from Western Harbour to Augustenborg? What did Malmö concretely take from the experiment of Western Harbour?

ED: From Western Harbour the company Eon transferred a lot of technology and know-how to the new sustainable neighbourhood Hyllie; the waste digestion system was developed in Western Harbour in Bo01 and used again in Bo03, because was proven to be the best system; then the car sharing system thing was tried in Bo01, failed and the idea came back and now is very strong the car sharing system. In Bo03 the car sharing membership is part of the rent. The car sharing company in that way got the "security" of a regular number of users. The car sharing company knows that everyone in the building will be their member for 5 years.

PM: I am also interested if there is a transfer of knowledge between the sustainable neighbourhood Hammarby Sjöstad (Stockholm) and Western Harbour?

ED: We did collaborate and we had a benchmarking session, but is difficult working with Stockholm because they have so many people involved. We have 6 people working for an assignment. For the same assignment they have approximately 50 people. They have a lot of reports, meetings, a very detailed quality program and of course they have much more money! Honestly they do things much better also with very detailed investigations.

PM: What about the cooperation between Copenhagen and Malmö?

ED: I think it is much better now but I am not working anymore there.

PM: And when Western Harbour was built?

ED: No collaboration!

PM: Western Harbour took the "greenery concept" from Berlin?

ED: Yes but actually the environmental expert of Bo01, also worked before in Stockholm. He helped with the environmental concept of Hammarby Sjöstad for the Olympic Games. Then he moved near Malmö and started to work for us - so he came with this idea from Hammarby.

PM: Did any other sustainable neighbourhood from anywhere come to Western Harbour to learn, to take solutions from Bo01?

ED: We had collaboration with Freiburg for example, some people came from Scotland, Norway, etc. It was more an informal network.

PM: What does Western Harbour symbolically represent for Malmö?

ED: A lot - it means a symbol for prosperity and for a good future, because it was so depressing the recession in Malmö and the people were amazed at what Malmö could transform into. It is hope for the future.

Priloga F: Intervju z Mario Lööf (Malmö, 9 maj 2014)

Intervjuvanec: Maria Lööf (v nadaljevanju MA)
Izpraševalec: Primož Medved (v nadaljevanju PM)

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PM: In Western Harbour who were the first pioneers for the sustainable neighbourhood implementation?

ML: It was my boss Per-Arne Nilsson. He was one of the pioneers. A very strong role was played by the architect Klas Tham and there were also many others important players.

PM: The inspiration came from the city of Malmö or any other city of Europe; or from elsewhere?

ML: This ideas were circulating around the world and then we had this national local investment program in Sweden at that time. This funding call coincided with the sustainable urban regeneration idea for the city.

PM: What was the municipality role for the project? Was it a top down implementation approach?

ML: Yes, because it was the municipality land (Western Harbour area) and they want to do something with this area of Malmö. The area was industrial and these big companies, like Saab car factory bankrupted. The city owned all this land and wanted to do something with it.

PM: What was the role of the region Skåne County in the urban regeneration of Western Harbour?

ML: They did not have that much of a role.

PM: Has the municipality ever thought about selling the land to the building cooperatives?

ML: No, not from the start. We have one building built with cooperatives in the second Western Harbour development Bo02, and we tried cooperatives in other part of Malmö. The city currently does not have that much land left to give it to the cooperatives, but from our Environmental department of the municipality we are trying to increase the interest in cooperatives.

PM: Was there any public debate when the city tried to develop the Western Harbour? For example, did the people from the vicinity express their perplexity?

ML: You have to understand that nobody was living in the area. The local opinion was that the new residential area would be too far away. They opinion was that you cannot build a place so far from away the already developed urban area. During the first area (Bo01) development, there were many criticisms that the apartments were very expensive. That was the main criticism.

However, nowadays the city connect Western Harbour with many bicycle roads and buses lines. There were two bus lines implemented before anybody lived there.

PM: In Western Harbour you have a cooperative of Renewable Energy Sources (RES)? Who own the solar panels in Western Harbour?

ML: In Bo01 the RES are owned privately by the company EoN, who owns also the Wind power in Western Harbour. In other areas are the real estate owners who own the renewable sources.

PM: Western Harbour uses organic waste for bio gas for the buses. Has using the organic waste for eco gardens been considered?

ML: I know that they have some project plans in Western Harbour, but I do not know if they have already started to use it.

PM: Did they apply the re-use of rainwater? I know that in Western Harbour they are using raining water for flushing toilets in the public school, for example.

ML: Yes but this application is very rare. They are not interested, because they think that is too problematic to apply this technology.

PM: Were there initiatives to reduce the amount of waste, or seminars to educate the local population in order to reduce the energy consumption in the buildings?

ML: There have been seminars in Bo01 to explain how to use the complex technical home systems in their apartments, but not that much effort has been made to reduce citizens' consumption (regarding waste and energy).

PM: What about the car sharing initiative?

ML: They introduced it from the beginning, but the people at the beginning they did not want to use this service, and for this reason, it did not function very well. It was simply too early in Bo01. However, in Bo02 and Bo03 they have their car sharing initiatives. Then the national car-sharing company Sunfleet came and now car sharing is becoming very popular and is expanding in many other places. I would like to point out that in Western Harbour we have also a special bike sharing system. The bicycle are located in the garages of buildings.

PM: Why the car sharing system and bicycle system is popular in Bo03 and was not so popular in Bo01?

ML: I think it is about time. People need some time to adapt the way of thinking. "Sharing" (in general) is also more popular now than it was in 2001.

PM: The parking spaces - I know that the neighbourhood policy changed.

ML: At the beginning it was 0.7 parking space for one apartment for Bo01, but it was unsuccessful because people have 2 cars per apartment. Then they increase the permitted ratio. In Bo03 the ratio is 0.8, because of the popular car sharing. In Western Harbour, we also have a pilot project where the builders are forced to pay the membership for Sunfleet car sharing for 5 years. We are exporting this concept also to the new urban developments in the city.

PM: How has the local urban community developed? Is there a particular local identity of citizens who are living in Western Harbour?

ML: Is hard to say, because it is changing during the years. At the beginning, there were just fancy houses near the sea and people moved there because of that (Bo01). However, in the latest two areas Bo02 and Bo03 the building companies had started to use the image of Western Harbour as a sustainable neighbourhood to sell the apartments- and also the population changed consequentially.

PM: Is the community somehow self-managed?

ML: No.

PM: Do the local citizens organise meetings together? Is there a community centre?

ML: No, that's one of the thing that we are working now for the future. We are thinking to re-use one of the old buildings of the area in order to transform it to a neighbourhood centre. Today there is no local community centre.

PM: Do you have a sort of place like an open (farmer) market?

ML: We do not decided yet where it should be.

PM: Do you have an internet site for the local community?

ML: We have one blog. The municipality operates it – you could find it on the Malmö municipality site.

PM: Is there any local association specifically aimed for elderly, children, people with disabilities, etc.?

ML: In the same way that we have in other neighbourhoods of the city.

PM: Is there any student residence or elderly house in Western Harbour?

ML: Yes we have a student residence in Western Harbour, near the building "Turning Torso", and we also have a house for self-sufficient elderly (from 55 years old and older), and we have a plan to do a house for really old people who cannot care for themselves.
PM: Have you ever planned to have a special local newspaper just for Western Harbour?

ML: No, but we have one for Malmö.

PM: Do you have a local festival in Western Harbour- have you ever planned to organise one?

ML: No, the Western Harbour area is rather new. We have festivals in other parts of Malmö, which are older. Perhaps it will be developed in the future.

PM: How are the "know-how", solutions of a sustainable neighbourhood transferred to other parts of the city?

ML: They used the water system - the water open system from the neighbourhood Augustemborg to Bo01. The waste management solutions experimented in Western Harbour have been transferred to the whole city of Malmö. The builders and we (the municipality) use Western Harbour as a test site for new things; and then we either transfer it to other areas (if we are satisfied) or leave it. One very concrete solution that we transferred from Wester Harbour is the car sharing system; especially the contract between the municipality, builders, and the car sharing company.

PM: What about the knowledge transfer to any other city of Sweden or the EU, or elsewhere?

ML: Yes, we have visitors from all over Sweden to Western Harbour looking for solutions.

PM: What has been (if any) the cooperation between Hammarby Sjöstad and Western Harbour?

ML: I cannot say…I was not working here at that time.

PM: Did you took any green solutions from German sustainable cities?

ML: Yes, we took the "green space factor" from Germany (Berlin)…when you develop an urban area, you have to develop a green area; it is a complex system behind this scheme.

PM: Did you use LEED or the Bream assessment system?

ML: No, we have our own system.

PM: Did you take any green solutions from Copenhagen?

ML: The way of working with the urban developers– the "builders dialogue" in construction was inspiring for the municipality of Copenhagen. They learned from us.

PM: Did the (future) residents planned together with the building developers common areas / public open areas of Western Harbour?
ML: Well, we have a residential committee that was involved in Bo01. I am not sure, but I think that they had a chance to influence also the common / public areas. The initial main urban plan (made by developers) was already very detailed at the beginning.

PM: What are the main criticisms from the residents and from the public society about the Western Harbour development?

ML: The main criticism was that was too expensive to live here and that ordinary people cannot afford to live here. Another criticism is related to the distance; that is too far away from the centre. However, nowadays it is a very popular place for all the citizens of Malmö. They accepted it and are proud of the new urban area.

PM: In Western Harbour there no main plazas, so the promenade is like the central convergence point of the neighbourhood?

ML: Yes.

PM: What does Western Harbour symbolically represent for Malmö?

ML: I think is a leisure centre, especially in summer.

PM: Thank you for your time.

ML: Thank you and good luck.

Priloga G: Intervju z Rolandom Zingernagelom (Malmö, 9 maj 2014)

Intervjuvanec: Roland Zingernagel (v nadaljevanju RZ)
Izpraševalec: Primož Medved (v nadaljevanju PM)

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PM: Who were the first pioneers, initiators for the development of the sustainable Western Harbour neighbourhood?

RZ: There were many levels of decision-making, and therefore it is complex to establish one person – one initiator. I would definitely say that a very important / crucial person was the Mayor of Malmö, who had a clear vision and also he was responsible for that everything really happened. The National housing exhibition, which is not happening every year in Sweden, was crucial for the development of the project Western Harbour. In 2001, we had the National housing exhibition in Bo01 – part of Western Harbour.

PM: Has the municipality ever thought to sell the land to building cooperatives?

RZ: Not in Bo01, but the cooperative model was introduced for Bo02; for 1 or 2 residential blocks.

PM: Why not more?

RZ: From our site (Environmental department of the Malmö municipality) and from the point of view of the Planning department, we have been very enthusiastic to introduce more cooperatives. We are lobbying for it. We are thinking that is a good idea, a good concept, because it increases the diversity. However, it is a bit tricky in the system of selling land and it is difficult from the administrative procedure to include the housing cooperative. Nevertheless, we have done it and we should continue.

PM: Has there been any debate from the public sphere or from the people who lived near Western Harbour about the development of Western Harbour?

RZ: We did not have residents who lived close by. There was a debate, because there (near) was a special bird habitat and a sort of a park as well. There was a public debate and "yes" the people complained. Then the bird habitat was moved to the Northern Harbour. There was also a company owned by the municipality, which runs all the administration and the financing. Unfortunately, the company's debt was 40mio Swedish Krona (SEK), when they closed down at the end of 2001. The public debate was very intense for this reason.

Regarding the design of the neighbourhood, I would say that there was not a strong influence to the design features from the public sphere. I also think that the city was not very interested to give "high priority" to the public participation either.

PM: In Western Harbour, as I understood, all the renewable energy sources are owned by the private company EoN. Was it ever thought that people could own with the cooperatives a share of renewable energy sources (especially solar)?

RZ: For Bo01, I think it was never discussed this possibility. I think the national financing rules in Sweden for renewables have not stimulated cooperatives. In Sweden, you can apply for an initial subsidy to invest in RES. The money runs out very early each year- in June normally. You can become a cooperative owner of the Wind power sources. There are cases of this typology of cooperatives in Sweden also. However, those cooperatives need to become energy companies. Therefore, they have many administrative issues and it is very complicated.

In Sweden you can choose the energy operator and you can pay a small extra tariff for the green energy produced from the wind plant. However, In Bo01, which claims that it is 100% renewable, the citizens who live there can choose an operator from a "regular" and not a green provider.

PS: Therefore it is in a way useless from the sustainable neighbourhood perspective, that EoN built the wind power for the Bo01, if the citizens are not "obliged" to buy the electricity from the wind plant?

RZ: Well, you can say that, but you should also consider that the wind plant for Western Harbour was implemented very near Bo01, in order that the people who are living there or visitors have the perception of a sustainable urban area.

PS: It seems like a marketing strategy to boost the green perception.

RZ: Exactly.

PM: Did the neighbourhood introduced activities (like seminars, educational initiatives, etc.) in order to reduce the amount of waste and to stimulate recycling?

RZ: The design of the flat has been made to allow an easier recycling for different waste typologies. Of course, we have the famous vacuum tube waste system, which represents an avant-garde solution. We also made some brochures, information materials for people who move to the neighbourhood.

PM: The organic waste of Western Harbour is used for the local bio buses, but have you ever thought about the local bio gardens?

RZ: Not in Bo01, but we experimented with this concept for composts in another sustainable neighbourhood of Malmö – in Augustemborg. This was 2 years earlier than Bo01. Then the biogas technology for buses was actual, and we want to apply it in the Bo01.

PM: What about the car sharing system in Western Harbour. I know you introduced this service to Bo01, and it was not successful, and then in Bo02, Bo03 the car sharing was much more popular. Can you say more about this process?

RZ: We had a car sharing car-pool made just for Bo01, which did not run well for a very long time. I think that one of the reasons that it did not work was that not many people lived in Western Harbour at the beginning. Then the Sunfleet company, an established national car sharing company, come to Malmö, and was very successful in Western Harbour. Many people have used this service.

PM: It is possibly to say that a particular community identity exists in Western Harbour? Is there a common local consciousness that the citizens are living in a sustainable neighbourhood in Western Harbour, or is it just an alienated sleeping dormitory?

RZ: I would say, that most of the people who live in the Western Harbour, they do not live there because of the sustainability issues. I think they appreciate the location more than the sustainability aspects. In a way, this is also meant to be. You know, you should have to be able to live sustainably without being a fanatic on sustainability issues. A normal / regular person should be able to live sustainably without additional effort. This was the aim for Western Harbour. Of course to a certain degree, the life style changes are necessary because you cannot have two cars, but still, I mean you do not have to be a "tree-hugger".

PM: How the people who live in Western Harbour are connected / linked together? Is there any community platform or neighbourhood community centre, where the local citizen associations, activities could be manifested?

RZ: I do not think so. Well, In Western Harbour you do not have any community centre, but there are places (near the skate park, for example) where the people could meet indoors.

PM: Who owns this place?

RZ: The municipality, and you can rent these places for meetings for example, but it is not meant to be a community centre of Western Harbour.

PM: Any other social platform that links the citizens together?

RZ: I do not think that there is any. I know that there is a Facebook group but I do not know who is using it.

PM. What about the social mix of the neighbourood- the heterogeneity of population? I know that upper-middle class people are living there. Is there any plan for social houses, houses for elderly?

RZ: Well, you should know that in Sweden we do not have social housing. Social houses do not exist at all. Instead, you get subsidies for rent. Actually, in Bo01 there are 2 blocks for the elderly and one student house. The municipality was criticised when Bo01 was finished because most of the residents were wealthy. Therefore, for Bo02 the focus had been more on residential areas for not extremely wealthy people, and also on cheaper construction (but still as sustainable as possible). In Bo02 there is a higher degree of rental apartments (70 % rentals vs 30 % ownership),

but at the same time the city could not regulate that process. For the Bo03 I am not sure, but the percentage of rental apartments is definitely lower.

PM: According to the plans will the presence of the University of Malmö be strong in Western Harbour?

RZ: Yes, the University own already many buildings in Western Harbour, and will be a strong stakeholder of the area.

PM: Does the Western Harbour have its own festival?

RZ: Actually yes, but it is not happening every year. It is not a big festival.

PM: What about local newspapers aimed just for the neighbourhood?

RZ: There are but not exclusively for Western Harbour.

PM: How are the residents informed about the activities, or other happenings of Western Harbour?

RZ: We used to have a city planning forum- a physical place- opened 1 time a week- located in the centre of Malmö. That structure was there many years, and people could come and see all the development plans of the area. Because not many people ever came, they closed the city planning forum.

PM: Which solutions have been transferred from Western Harbour to the rest of the city of Malmö?

RZ: I think quite a lot to be honest. The first is the process as such - "the construction's dialogue process" - between the construction companies and the municipality. They set together, the solutions, the vision, the urban policy, etc. This concept has been used in many other parts of the city. The results from the environmental experiments in Western Harbour have been formalised in the environmental construction programme for Malmö and Lund. The "green space factor" that has been used in the Bo01, which regulates the green roofs, the green facades, has been also used in other parts of the city. The parking norms also were transferred elsewhere.

PM: I am interested if you took any sustainable solution from the other Swedish famous sustainable neighbourhoods- the Hammarby Sjöstad, or if maybe they transfered some of the solutions from you?

RZ: Well, the two developments have been developed simultaneously. We had some dialogues, but the decision making process were so much in parallel that is difficult to establish much synergy.

PM: What about the transfer of knowledge between the neighbouring city – with Copenhagen?

RZ: They are looking to us regarding new constructions; we are looking to them regarding energy retrofitting of old contractions, where they are much ahead. In the last 3 or 4 years the cooperation between Malmö and Copenhagen picked up, and is now very stimulating and interesting.

PM: Was there any cooperation between you and for example, the German sustainable areas (Kronsberg, Vauban, etc.)?

RZ: We are going there very often. The mobility issues, the green policy of Vauban for example was very inspiring, and also the energy concept of Kronsberg was very interesting for us.

PM: What are the main criticisms from the local citizens and the public society?

RZ: The perception of Western Harbour was very negative at the beginning, and then after some years the area became very popular. I could imagine that people who are living there are a little bit annoyed that there are so many people now. A lot of criticism came toward the municipality that there are not enough municipal services like schools.

PM: What does Western Harbour mean symbolically for Malmö?

RZ: I think Western Harbour represents the "New- Malmö".

PM: That's it- thank you!

RZ: Thank you.

Priloga H: Intervju z Janom Johanssonom (Malmö, 20 maj 2014)

Intervjuvanec: Jan Johansson (v nadaljevanju JH)
Izpraševalec: Primož Medved (v nadaljevanju PM)

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PM: Hello, could you please introduce yourself?

JJ: My name is Jan Johansson. I have been working with Västra Hamnen (Western Harbour) since the year 2000.

PM: Since the beginning?

JJ: Yes, since the beginning almost. I have been through the whole development of Bo01. And from the side I followed Bo02 and Bo03. My project has been now Bo04, you can call it Kappseglaren.

PM: Ok, so the last urban development?

JJ: Yes.

PM: And what was your role?

JJ: I was project manager for Bo04 and half of the Bo01. The north area of Bo01. I have the role to connect and manage the builders and contractors and also all to control the implementation of all the infrastructure and so on.

PM: Have you ever considered having building cooperatives like in Vauban, Freiburg?

JJ: Of course, we have also a small one in Bo02.

PM: You thought there would be more or before, in Bo01?

JJ: Yes, we have tried, but it was not suitable at that time.

PM: I am really interested in the beginning of the process. How did you develop the goals?

JJ: Yes, it started with Bo01. It was the first project where we tried to start the sustainable building in Malmö. That was the starting point. At that time the market was rather down. So we had to almost force the builders to join this project. We started to write contracts with them and they signed on these goals we put up for Bo01. The problem with this project was that we didn´t have any monitoring for the goals. Some of the goals came out good and others didn't.

PM: Which ones did and which ones didn't succeed?

JJ: The goals for the energy consumption didn't.

PM: But also maybe the people who lived there consumed too much? Or not? Or the building was not built properly?

JJ: Both reasons, I think.

PM: Did you transfer any sustainable solutions from Hammarby Sjöstad?

JJ: No, because Hammarby Sjöstad was developing almost the same time. Bo01 was a bit before I think.

PM: Was there any exchange between the two sustainable neighbourhoods? Any knowledge transferring, some solutions that they took from you or you from them?

JJ: Yes, not in the beginning but after a while we went there and they came to us and we exchanged the experiences.

…

JJ: I want to talk about a special Quality programme that we introduced in Western Harbour. All the builders had to follow this Quality programme when they signed the contracts. The programme set the rules for the building quality, the common areas, the energy consumption and sustainable solutions on how to build solar panels, green areas and so on.

PM: But E.ON owns the solar panels, no?

JJ: Yes, but on the building roofs the builders had to make a place for the E.ON solar panels.

PM: What about the sustainable transport? Could you explain a little bit how it was in the beginning, the idea and the final implementation?

JJ: The goal was to live there without using cars but it didn´t happen. Almost every flat has a car, but there is good public transportation and the tram is planned in the near future.

PM: What about car sharing?

JJ: Yes, it didn´t succeed in Bo01, but in Bo03 and Bo04 it is very popular.

PM: But now the people from Bo01 also use the car share?

JJ: Yes, they started to do it now.

PM: 9000 people work in Western Harbour, I think. I would like to know, do people who live there also work there?

JJ: Honestly, I do not know.

…

PM: All the Western Harbour will be like one big sustainable neighbourhood made from many small eco districts?

JJ: That is the goal, yes. Also we say that the next project must be better than the last so we are constantly improving.

PM: Is the Bo04 the last one?

JJ: Yes, but then we have one more project on the south of Bo04.

PM: Will it be called Bo05?

JJ: Yeah, maybe. However, we prefer to not use this numbering. We call them Flagghusen, Kappseglaren, Fullriggaren and so on.

PM: This fifth project will be the final one?

JJ: No, we have more land / space to work with in Western Harbour.

PM: Were you thinking of having a community centre there? Because in many sustainable neighbourhoods across Europe they have a community centre where people could meet, have association, but here in Western Harbour it was not planned?

JJ: No, no. It isn't.
…

PM: And is it a plan to build passive houses in Western Harbour?

JJ: Yes, we have made passive house in the last building project.

PM: Did the monitoring showed that it was really a passive house?

JJ: Yes, it is.

PM: About the energy consumption, did they try to teach people how to use the home appliances? For example, there are certain hours when electricity is cheaper. Did they teach people about that, make seminars for them?

JJ: Yes, we have one project in Bo04 and the company E.ON was involved in. There they put up a lot of technical appliances in order that the residents can follow the energy consumption by the hour and they can turn the machines on when the hours are best for consumption. E.ON is monitoring it, so people who moved in have to follow this program and report what their consumption is for three years.

PM: This project is already done? And people live there?

JJ: Yes. Yes.

PM: Is there a local newspaper in Western Harbour?

JJ: They have a website.

PM: What is the relation between Augustenborg which is a part of Malmö and Western Harbour? Have you taken any solutions form there?

JJ: We have worked with the water concept because both areas have water open systems.

PM: Which solutions did Malmö try first in Western Harbour and then transfer to other parts?

JJ: It´s the implementation of sustainable buildings, so now we are working like on that issues in all Malmö in every project. We also learned that we should not work with open systems for water.

PM: Why not?

JJ: It´s very expensive and the costs of daily maintenance are high. You have to clean it all the time and it´s complex when the system crosses the roads.

PM: You are talking about open canals?

JJ: Yes.

PM: So it is better to have it underground? Without the open water system?

JJ: Yes.

PM: Thank you for your time.

JJ: No problem, bye.

Priloga I: Intervju s Helene Wintzel (Stockholm, 4 junij 2014)

Intervjuvanec: Helene Wintzel (v nadaljevanju HW)
Izpraševalec: Primož Medved (v nadaljevanju PM)

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PM: Hello Helene, first I am really interested in what your role is?

HW: I am a citizen here, that is my role.

PM: You live here in Hammarby Sjöstad?

HW: Yes, and I was going to retire, so I am on my way to retire but I have some projects at KTH. I am also the chairman of the board of KTH for and I am a member of the board for the research centre at KTH called CESC, Centre for Sustainable Communications. But then I am also a citizen here and I was asked to join this HS2020 project. So I could choose and there was no one working with the energy issues. I am an environmentalist. I have been the CEO of a consultant company for many many years working with environmental issues but not energy. So I said I can start with the energy here without knowing anything. But I have a lot of experts around me and there is so much to do because the energy consumption is much higher here than it was planned to be from the beginning.

PM: It was the same in Western Harbour in Malmö.

HW: I know it was the same. It is still fascinating. I think it is like that all over Europe, that you plan to build something but it doesn't work. And why doesn't it work?

PM: But the passive houses worked somehow. When they really want to make a passive house they really do it and they also monitor it.

HW: Have you seen that?

PM: The passive houses here? No. I have seen the sustainable neighbourhood Vauban in Freiburg, Germany an there are many passive houses, and plus energy houses.

HW: That's fascinating. I was in Freiburg. I think it was about 30 years ago. I brought a lot of politicians from Stockholm and from the council down to Freiburg to look at the treatment of waste, because they are very good. You know the Germans, they are really good at recycling and then I hear Freiburg again is getting better and better.

PM: First of all, I am really interested in the social platform. How did it happen that the people from here came together? How did you meet each other and decided to create this association HS2020?

HW: It started in Alan Larsson´s kitchen. A couple …two, three guys said they wanted to work together to do something. I joined a couple of years later. I think I joined in the second part of 2012, so I have been working on it about almost 2 years.

PM: But how did people connect together? Was it through a mailing list? How did it function?

HW: Well this organisation called Sjöstadsföreningen which started many years ago and I think it had lifted a lot with the HS2020 project that Allan started. We wanted a platform to work from and Sjöstadsföreningen that organises almost all the BRFs here. BRFs is the housing association. You know, you have a quarter of the houses here and they are all owned together in a BRF. You pay a certain amount every month to this BRF.

PM: And what is the role of this BRFs? To maintain the house or …?

HW: They own the houses. I know, for my colleagues across EU is very difficult to explain to a foreigner what a BRF is.

PM: These BRFs are they members of the association HS2020?

HW: No. Each BRF can decide if they want to join Sjöstadsföreningen or not. If you pay a fee of 20 krona per apartment you can join the Sjöstadsföreningen and then you can join the HS2020.

PM: What are the benefits of the apartment to be a part of HS2020?

HW: When we have problems we work together. We are much stronger if we work together, so that´s why. So many have joined since we started the energy projects, because almost every BRF wants to work with energy issues, to lower the energy consumption. We got lots of ideas from each other and we do a pilot BRFs. BRFs that are testing different kinds of technique. We started with making a mapping of all the energy consumption of the houses here, so we got the information from 96 houses and we made some mapping, we made research to get the overview of the energy consumption.

PM: And what were the first results?

HW: Three answers. Something went wrong even before the houses were built in the design plan. Firstly, they were designed wrongly; secondly - they were built wrongly; thirdly - they were maintained wrongly.

PM: It is not related to the behavior of the people, that they consume too much, that they do not save energy? This could also be the reason; it is not just the buildings itself that are the reason for high energy consumption, but also people living there do not behave in an energy efficient way.

HW: I understand what you mean. I have been working in the environment area all my life and I am a bit fed up with putting the blame on the ambiguous issues. So I don't want to start there, let´s start with the buildings. And what the energy expert said was we could spare a lot of energy if we start with optimizing the energy systems. We do not reuse the heat, so the heat just goes out straight away.

PM: But do you all together in the blocks have to decide to optimise? Everybody in the block has to agree with that? Is it impossible to do it if one person decides not to opt for it?

HW: We have our board and they could ask before they do it and then we have a lot of discussions on that subject. It depends if the BRF is poor or rich and I think that our BRF is rich so we can afford it. But if you can see the return of investment over the period of ten years then it is good but the problem is that many people are only staying for two years so they are not interested. I think you can show you can save a lot of energy. But in the first run you can optimise the system, that's number one and that doesn't cost much. Then it comes to behavior.

PM: Are here many solar panels?

HW: No.

PM: How come?

HW: It´s a kind of investment and you have to decide about what is the priority. I think it could be easier now that we work together. I think we should work in this way, I told you, first optimizing, then looking at the heat pump and then solar energy. I talked with my board today about solar energy and they said that it´s not a good investment as it takes to many years to get it back.

PM: What about the geothermal energy in Hammarby Sjöstad??

HW: There are quite a few BRFs that are planning for …but in a way it is irrational because we have our district heating.

PM: They cannibalise each other?

HW: Yes, and they put the prices just below the current prices.
…

PM: So in this BRFs there are no rentals? They are usually just private houses?

HW: The BRFs are always private houses, but then you have rental houses here too. Some were rental houses from the beginning but they were sold to the people who lived there.

PM: Somebody told me today that there were incentives from the municipality for the people to buy the rental houses. But he was critical about that. I don't know- what do you think?

HW: Yes, it depends because if you only have BRFs here you only see rich people here. The apartments are quite expensive around here.

PM: But also the rentals are quite expensive.

HW: Yes, they are quite expensive too. That´s right. But the mix should be good.

PM: Here it is just one passive house in the whole Hammarby? Why didn't they build more passive houses or zero houses when they planned to have a sustainable neighbourhood?

HW: Maybe it was too early. I don't know. So why should they? There are no such incentives for passive houses here and I think that is the answer of why it doesn't happen.

PM: Yes, but this should be imposed by the municipality if they wanted a sustainable neighbourhood.

HW: Yes, I don't know why they didn't. I think energy was not the priority.

PM: And what was the priority? Transport?

HW: Waste management. Of course also transport. We don't have so many parking spaces around here. They thought that people who should move in here would be elderly people with no cars. But instead there are young people with two cars per family so it is a bit different than thought of in the beginning. There are lots of children here.

PM: So what are the other role of HS2020 apart energy part?

HW: We organise sports camps and cultural events. We have our own opera house. Elbil2020 electric cars is one project which will start soon.

PM: And the people from Hammarby are involved in the web community page hs2020.com Is it like a forum where they write posts? How do they communicate about their needs?

HW: You know this mobile platform doesn't work yet. No, it is a plan. But we have a website http://sjostadsforeningen.se/ , where you can read about HS2020.

PM: I am really interested in the process of the transfer of knowledge. What does the Hammarby Sjöstad model represent to Stockholm? How do the other parts of the city consider the standards applied here?

HW: We work close together with the municipality with their energy department. They are the experts who are helping us on this project. But we have a lot of visitors here, that's one way. And we write reports and speak at the conferences. But I think it would be very interesting to start a benchmark with other urban neighbourhoods. I like benchmarking as a tool - it could be within BRFs. We could share data between two apartments, we could share data between BRFs and then between communities. I think that's the way.

PM: Thank you for your time.

HW: Good luck with your PhD.

Priloga J: Intervju z Björnom Cederquistom (Stockolm, 4. junij 2014)

Intervjuvanec: Björn Cederquist (v nadaljevanju BC)
Izpraševalec: Primož Medved (v nadaljevanju PM)

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PM: What was the background for the first sustainable neighbourhood the Hammarby Sjöstad?

BC: In the 80s in Sweden we were talking a lot (there was a public debate) about sustainability and especially about urban sustainability. Then in the 90s there was this switch toward neoliberalism – and the discourse changed. Things were left to the market. The initiative from the society diminished all through the 90s. 1998 was really a milestone – the right wing came to power and was very strong in Stockholm and also on the national level. The right wing immediately change the way of thinking about the schools, about owning land, about health care, etc.

PM: Has this influenced also to the planning and the implementation of the Hammarby Sjöstad project?

BC: Yes, you could see very clearly how this neoliberal switch has an influence on the Hammarby project. In the 90s when the left wing had the majority, the healthcare, the schools … everything was formulated to be planned society, but in 1998 the right wing political party came to the power and changed everything, very quickly.

PM: Has the concept of building cooperatives been applied in Hammarby Sjöstad?

BC: We do not have any typical building cooperatives here in Hammarby. We have housing associations but it is a different thing.

PM: In the neighbourhood of Hammarby it is possible to encounter many cars. When they planned the sustainable neighbourhood of Hammarby did they think about the possibility to limit the cars and roads?

BC: Of course. The left political party and the green party they wanted to impose the rule "no parking slots at all" in Hammarby. When the right wing party came to the power changed the initial policy to 2 parking slots per apartment. At that time there was an enormous debate about the parking slots in the neighbourhood, and it ended up with the - 0.5 parking slot per apartment. Now we have 0.7 parking slots per apartment because there were some new parking houses added.

PM: Are the parking lots underground?

BC: Yes. For instance, all the houses along the main avenue have the cars under their blocks.

PM: What about the car-sharing initiative. How popular is it here?

BC: I do not have the latest figures. It started quite well. We put some space in the street to park these cars. However, this is the crucial problem. You are not allowed (in the long term) to "take" public spaces for private use (also for car sharing).

PM: Yes but the car sharing tries to reduce the Co2 and is from the environmental and social perspective a positive initiative.

BC: Yes, I know, but it is contradicting the law; that everyone should have the same possibility. I really do not how this problem is solved now. There are 2 or 3 car sharing companies that are working in Hammarby now.

PM: Are there any local car sharing companies managed exclusively by Hammarby Sjöstad?

BC: They are not local. The car-sharing firms are working nationally or for the city. Therefore, these are not local companies, but they have a local solution for Hammarby.

PM: And is it popular to use car sharing here in Hammarby?

BC: There are 40 cars parking around in the district. It was registered an increase in the last 20 years from 10 cars to 40 cars for the car-sharing service. However, the ratio of cars per apartment went down, because the increase of new apartments was higher. 40 car sharing cars for 10000 apartments are not much actually. It always depends who you ask, if this is a success or not. In addition, families with one car often use the car sharing for the second car; because in the car sharing pool you have also special cars, like vans, and is always possible to park them everywhere.

PM: Are these electric cars?

BC: I do not think they are electric cars. Maybe they will come soon. Since this is a "market" solution they are not imposed to be sustainable.

PM: How is cycling and walkability promoted in Hammarby? Is there any association or initiative from the municipality that is promoting cycling or walkability?

BC: Promoting cycling and walkability - is a strong city policy. And it has especially promoted in the last 10 years. Now we have bicycle lanes everywhere in Stockholm. We have two solutions- one is a separate lane from the cars, which is much safer. Every year we have more bike-lanes all over the city. For Hammarby a mixed lane with the cars was chosen, which is not ideal.

PM: Now, I have some questions about the socio-economic balance of the sustainable neighbourhoods. What is the degree of autonomy and decision making of the community? Was there any attempt in the community toward direct democracy?

BC: You could say that there have been no attempts by public planners to introduce that. We have in Stockholm the local urban authorities. In the late 80s we divided Stockholm in 24 local authorities. We had the city hall for city projects, and then we had 24 small local authorities which are dealing with local issues.

PM: And how powerful are these local authorities?

BC: In the 90s these local authorities merged and are larger- now they are 14. Hammarby is part of one of the largest local authorities with 110000 people. It is like a city within a city. If you have more people you have (in a way) more power in negotiations with the city authority. I can say the right-wing political party of Stockholm opposed having local authorities. To continue, in the second step then we went down to 14 local authorities, and they got the power to build and manage schools (also in Hammarby). This is an important step.

PM: Are there schools in Hammarby which are privately run?

BC: They are privately operated... We have the publicly owned school building structure, but not the operating managements. The financing is public. There are no fees to attend school. This happened in late 90s all over Sweden.

PM: I am also interested about the heterogeneity of the local population. Could you tell me more about it?

BC: In 50s, 60s Sweden produced publicly owned houses for low prices and at that time it was nationally supported to reduce of the problem of houses. Now it changed dramatically.
In Hammarby, from the late 90s we had 3 publicly owned companies, but the rent is set by the market. The lowest rents in the area (very strangely) are set from private owners in the neighbourhoods. There is no selection at all. Also the subsidies were taken away in the mid 90s. The neoliberal way of thinking is they want to remove the subsidies.

PM: What about social houses?

BC: We have nothing like that.

PM: If everything is adapted to the "market rules" the gentrification should be very strong. Am I right?

BC: Yes, absolutely. Also Hammarby is near the centre, near the water, is a very popular zone, so the price is going up. The only instrument that was used was that they divide the houses in rented and owned apartments. At the beginning it was the balance between 50% rented and 50% owned, and that was in the contract with the developers. The first blocks here with publicly owned apartments were sold to the tenants. The people actually were encouraged to buy the apartment. The segregation is very strong. This topic is discussed all the time.

PM: In many sustainable neighbourhood there are community centres implemented. Is this building - Glashusset a community centre?

BC: Is not…well …in a way it is. You could say that.
PM: But it is small. The LUNA building would be perfect for that.

BC: I agree, also Alan Larsson wants that. But then they opened a brewery instead. Before in the first period it was a library, then the library moved, you are right this LUNA building has a character of a community neighbourhood centre.
…
BC: The Glashusset building was introduced and built by the city. Now it is in cooperation with the water company and also with the energy company and waste treatment association. Actually

it is an environmental information centre and not an official neighbourhood centre, but it works as one. You can used it, the kids come here, is a meeting centre, you could have an educational session for environmental lessons. It is not a permanent centre of that kind, and it depends of the city interest. Now it is taken down. It will become a Water information centre just for water issues; not only for Hammarby, but for the whole Stockholm. The water company has taken over this building completely here. The reason is the enormous rebuilding process of the entire water system here in Stockholm. This project will attract the international interest. That's why the water company wants to concentrate the information here. Therefore, it will not stay a community centre.

PM: Maybe it will really happen somewhere else?

BC: Maybe. There is potential place, which is called "The house for the people", The association HS2020 are using it as a meeting point, where they are showing the metropolitan operas.
I understand that this was their initiative. However this is not a "true cultural centre" and it is not a true community centre.

PM: How many people live here in Hammarby now?

BC: 22000 people

PM: It is a pity, why they did not plan to build a community centre.

BC: Is a policy unfortunately. You know…there was a fight to have a small library. Also the healthcare it should be from the beginning but there is no healthcare facilities in the area. Recently they built a privately operated local healthcare, but we were waiting very long.
So during the late 90s the healthcare were privatised, …ahh this is the amazing change of Sweden to neoliberalism….I don't know… maybe the social democrats were too long in power.

BC: …yes I want to say from before…the prices went up so much here in this sustainable neighbourhood also because is the finest part of the inner city…
…interestingly, it was also discussed if the environmental program increased the construction costs. The developers said, maybe up to 3%. Not more.

PM: What about the food market. Is there any real food market- from organic farms for example?

BC: Nothing local of that kind- there are no vegetables within the area…and there are no markets. We have a food farmer market near- but not in Hammarby.
However we start now a local grow of vegetables and flowers. They are preparing some land to grow vegetables. Is a sort of an urban style thing with special boxes. You can also see it under the bridges…..there are special boxes. From now is for private use, but maybe there will be a special market out of this in the future. Now it is on a very small scale. It is a symbolic statement.

PM: What rules did the municipality imposed on the developers regarding the buildings so they should be under 65 kw/m2?

BC: At the beginning we said 100 kw/m2 but nobody could reach it in the 90s. In the 90s the average was 200 kw/m2. So maybe they come down to 130 kw/m2. Alan Larsson (the ex-EU commissioner) made a real investigation on that. It was the most spectacular and practical initiatives. The owners of the house are interested and there have been made many options,

proposals on how to reduce consumption. The next mission is to go lower. Now the new buildings have the standard of 60 kw/m2

PM: The passive houses at the end.

BC: This could be a goal at the end.

PM: Thank you a lot.

BC: Call me if you need more information. Bye.

Priloga K: Intervju z Alanom Larssonom (Stockholm, 3. junij 2014)

Intervjuvanec: Alan Larsson (v nadaljevanju AL)
Izpraševalec: Primož Medved (v nadaljevanju PM)

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PM: Who were the very first pioneers of Hammarby Sjöstad? Whose was the initial idea for the urban renovation?

AL: The history of the area is industrial and in the last years prior to the urban renovations were really run down. In the Hammarby area there were a lot of disputable shops - "black business" (they did not pay the taxes). This bad area completely changed to a "liveable" area. The switch of the urban area was drastic. The first idea, the decision was made by the City of Stockholm, by the mayor, and was part of the Stockholm's campaign to get the 2004 Olympic Games. This initiative started in mid 90s from the City of Stockholm. They decided to launch the Olympic village- a green Olympic village with several environmental standards. Stockholm did not get the Olympic Games (Athens took it), but the city decided to continue the plan. They had a good team of planners, implementers and developers at the City level, and they saw the potential of this project.

PM: But usually the plan to build an Olympic village comes after the city is selected to host the Olympic Games?

AL: Yes but this was just a possible concept at the beginning which was actually implemented in reality in the later phase.

PM: Did the city plan to sell the land to "building cooperatives" made by citizens – to avoid the "middle man"?

AL: I am not quite sure, however the leading person who initiate the whole project was a social-democrat mayor who would eventually be more pro-cooperative than today's conservative mayor. The construction companies- to be more profitable, they want more flats in it (for a higher profit margin). This plan was accepted at the city level. The initial master plan was targeting the 55 year or older people to come here in this residential area. Therefore, they were planning at the beginning that they would not need the day-case centres for children, schools, sport camps etc. However at the end unexpectedly, the young families with young children moved to the neighbourhood. Therefore, at the end they had to drastically change the masterplan and the whole concept.

PM: What was the public debate about the development of the local area; was there any interaction with the local people?

AL: I do not know, because I was not here at that time, but I do not think there were any objections. Here the people had not been affected, because nobody lived here at that time. In the Hammarby area were mainly just shops, small factories. I could assume that they were not very happy.

PM: In Western Harbour (Malmö) there is no neighbourhood community centre. What about here? Is here any neighbourhood community centre where people could meet, have association, activities, etc.?

AL: This is one of the failures here; and this is a reason why our organisation is acting in order to solve this issue. There is a house called in Swedish "GlashusEtt" (in English - glasshouse), and this house was built partly as a community centre. The building is in responsible share between the Stockholm water company and the Stockholm land development agency. The building is meant for people to have meetings there and to collect special bags for the organic food waste. The GlashusEtt become the Global Centre, and not just a Local Centre. People from the entire world are coming here in this centre to learn about the Hammarby Sjöstad environmental solutions.

PM: Are they seminars there?

AL: Yes in GlashusEtt they have regular seminars. Now the concept of this centre has changed and it is open just 2 days a week. All important decision makers on sustainability – they go there! Xi Jimping (the president of China) was suggested that before building residential areas he has to see Hammarby Sjöstad first. In China now there are copies of Hammarby Sjöstad.
…
GlashusEtt has now taken over the Stockholm water company and they decided to use it for their own purpose. Is now open just 2 days a week, mainly for foreign visitors.
In addition, a few local associations use the rooms in the centre - but mainly you can't use it for evenings, when we usually normally meet. This is an important lack, that in Hammarby Sjöstad you do not have a real meeting place and there is not a place for cultural activities.

PM: Why can't you meet in GlashusEtt?

AL: Because it is complicated to have open it in the evening because there is no staff.

PM: Who is the owner of the centre now?

AL: The Stockholm water company and the reason why they took over the place is because there is a pump station in the bottom of the building.

PM: Which associations are now using this building?

AL: A Scout association, and a local »historical association«; and we have used it also for and umbrella association "Hammarby Sjöstad association" which covers all the local housing associations – 40 members. We are running campaigns for different things.

PM: Thank you, I would like to ask you for more information about the role of your association Hammarby Sjöstad 2020 (HS 2020)?

AL: Under the HS2020, we have many initiatives related to the housing organisations and the umbrella organisation.

PM: What is the purpose of HS2020?

AL: The purpose is very simply – to bring Hammarby Sjöstad to the next level of innovation in sustainable development. We are focusing on many issues; one is to the electric mobility, second is the energy in our houses - to bring it down and change it to renewables, the third is recycling (to improve the available system), the fourth one is water innovation system, the fifth is on local communication (information) system; and then we have one cultural activity. For example, we had 10 first night shows from the »Metropolitan« here in our neighbourhood.
…
AL: In the neighbourhood we also have an old factory building which is transformed in a big studio for advertising films, campaigns, etc. Then we have a sport activity centre, a public cultural school and a private cultural institution Kulturama.

PM: Do you have in the neighbourhood a central plaza, like a convergent centre?

AL: No, we do not have the central main plaza.

PM: Could you tell me more about the heterogeneity of the population in the neighbourhood?

AL: You can say that in general here we have a young population. Here are many children, a few teenagers, young couples – parents (from 25–50 years old), and a few retired people. Socio-economically here are living people with high incomes; upper middle class, above average of Stockholm. This is due the fact that 70% of the houses are in special housing associations of owners. Which is mean that the majority of houses are now owned by the residents.

PM: Do you have "social houses" for low income population?

AL: We do not have social housing in Sweden. Here the idea was to build good housing for everyone; instead that we build bad housing for the poor. We are building good housing and we gave to the underprivileged a sort of compensation.

PM: Ok, but at the end I could see that not many underprivileged people live here in Hammarby?

AL: I mean, one reason was the »selling out« of the publicly owned housing. That is the policy of the current local government.

PM: Ok, but in that way it is losing the heterogeneity of the local urban population.

AL: Unfortunately, yes.

AL: Regarding the heterogeneity; also students are living here in student housing; we have a house for the elderly, and here we have also »collective houses«. In this typology of houses, you have your own flat, but you have also a common collective kitchen.

PM: How the Hammarby Sjöstad is implementing the sustainable transport issues- is there a car sharing initiative?

AL: Yes, we have the Swedish car sharing company Sun-fleet, which is very popular, and they have many cars here.

PM: What are the local community activities organised by the citizens? Is there any community platform; Hammarby organisations, festivals?

AL: Yes, we have 2 neighbourhood festivals every year, in April and in September. We organise many activities for children and families during this festivals. We are also organise Christmas markets here in the neighbourhood.

PM: What did the city of Stockholm learn from Hammarby Sjöstad? What kind of urban experiments was successfully implemented here and transferred elsewhere in the city?

AL: I think the city has seen that is possible to build in a sustainable way…of course the energy issues were not perfect, e.g. energy standard was not as good as planned, and we are trying to compensate for that now. For the next big project in Stockholm, and another sustainable urban area, they want to learn and improve the experimented environmental solutions from Hammarby. They wanted to lift the level in environmental standards.
…
AL: We have learned that a strong political and administrative leadership is very important!

PM: Thank you for the interview.

AL: Thank you and good luck.

Priloga L: Intervju z Inge Schottkowski-Bähre (Hannover, 7. april 2015)

Intervjuvanec: Inge Schottkowski-Bähre (v nadaljevanju ISB)
Izpraševalec: Primož Medved (v nadaljevanju PM)

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PM: Kdo so bili prvi pionirji/ustanovitelji soseske Kronsberg? Čigava je bila prva ideja za vzpostavitev soseske?

ISB: Idejno zasnovo je imel mestni oddelek urbanega planiranja. Hannover je rastel izjemno hitro v devetdesetih letih (prejšnjega stoletja) in mesto se je razvilo hitro. Bil je tudi EXPO v Hannovru in ta dogodek je predstavljal močan vzgib (»push«), da bi lahko pokazali, kaj je mogoče narediti v novem naselju.

PM: Torej je bila prva ideja za nastanek Kronsberga s strani občine?

ISB: Tako je. Sestala se je interdisciplinarna skupina strokovnjakov znotraj občine in skupaj planirala trajnostno sosesko.

PM: Zdaj smo na oddelku »environmnetal protection unit« mesta, torej ekipa za planiranje soseske je bil sestavljena s pomočjo več oddelkov?

ISB: Tako je; vsak oddelek, vsaka izpostava mestne uprave je bila tako ali drugače vpletena v projekt Kronsberg.

PM: Kakšna je bila vloga regije? Kako je sodelovala z mestom?

ISB: V tem projektu regijska uprava ni imela velike vloge. To je bil mestni projekt na zemlji v lasti mesta.

PM: Je bila vzpostavljena kakšna debata z javnostjo (javno sfero) oz. javna razprava z lokalnimi prebivalci glede tega, kako naj bi ta soseska izgledala, funkcionirala?

ISB: Ni bilo velike diskusij glede implementacije Kronsberga, ker so bila na tistem območju in v okolici le kmetijska zemljišča. V času nastanka soseske je Hannover potreboval veliko stanovanjskih površin, ne pa kmetijskih. Takrat ni bilo prisotnih kritik.

PM: Je bil kdaj narejen »whole life economic cost analysis«?

ISB: Ne, ni bil. Ampak v času EXSPA je prihajal denar iz cele države, iz EU, EU projektov. Ogromno ljudi je bilo vključenih iz drugih EU državah. Lahko smo tako naredili plan z najnovejšimi energetsko učinkovitimi rešitvami. Gledali smo na prihodnost, na prihodnje multiplikativne učinke.

PM: Kakšen je v Kronsbergu procent obnovljivih virov energije?

ISB: Mislim da okoli 50 %.

PM: Ali je bila vzpostavljena kakšna iniciativa za zmanjševanje odpadkov ali za povečanje recikliranja (brošure, seminarji itd.)?

ISB: Ja, lokalna organizacija KUKA (Krokus) je organizirala razdelitev brošur. In Krokus je tudi center za tovrstne razprave, v katerem se organizirajo razne predstavitve.

PM: Stavbe v Kronsbergu uporabljalo deževnico za vrtove ali WC-je?

ISB: Ne za vrtove, mogoče – ampak to ni bil plan. Za WC pa bi stalo preveč. Za vrtove se sicer lahko uporablja deževnica, ampak izvorna ideja je bila, da gre vsa voda v zemljo. Tako se ne zgubi preveč naravne vode in se ohrani naravni cikel.

PM: Kako deluje »car sharing« v Kronsbergu glede trajnostnega prevoza?

ISB: Mislim, da deluje zelo dobro. Edukacija ljudi in zavedanje koristnosti glede storitve »car sharinga« se je spremenilo v zadnjih letih. Ampak ne samo v Kronsbergu, temveč v celotnem mestu. V Kronsbergu ni veliko parkirnih mest in avtomobilov.

PM: No, glede na to, kar sem videl v Kronsbergu, lahko rečem, da je kar dosti parkirnih mest.

ISB: Ja…definitivno jih ni malo. Res jih je mogoče malo preveč.

PM: Kako to, da v začetnem planu niso vzpostavili »ceste brez avtomobilov« (»car free zone«)?

ISB: Morali smo graditi po zakonu, po katerem moraš imeti vsaj 1 parkirišče na stanovanje (celo več). Torej bi morali obiti zakon.

PM: Kako Kronsberg promovira hojo in vožnjo s kolesom (so posebne ceste za pešce in kolesarje itd.)?

ISB: Imam krožno pot okoli mesta in imamo ogromno cest samo za kolesarje. V Hannovru je zelo popularno kolesarjenje. Tudi obstaja posebna cesta od Kronsberga do centra mesta samo za kolesarje in pešce.

PM: Ali je ta cesta priljubljena?

ISB: Niti ne (smeh). Saj imamo tramvaj v centru Hannovra, ki vozi zelo pogosto in v 20 minutah si že v centru mesta. S kolesoma pa potrebuješ 30–40 minut.

PM: Ker je veliko parkirnih prostorov, me zanima, kakšen je procent lastništva avtomobilov v Kronsbergu v primerjavi z ostalim mestom?

ISB: Ne vem. Ne vem, kje bi sploh lahko dobil te informacije. Imam občutek, da je procent ljudi z lastnim avtomobilom manjši v Kronsbergu.

PM: Ogromno informacij sem že dobil od Kier Gerharda. Zanima me, če obstaja kakšna platforma soseske (internetni portal) ali časopis soseske?

ISB: Ja, časopis se je izdajal preko organizacije KUKA, vendar zdaj mislim, da nič več. Krokus je zdaj center, vendar nima več časopisa.

PM: Kakšen je bil namen društva KUKA?

ISB: Namen organizacije KUKA je bila organizacija vsakega, kar je imelo neko povezavo s Kronsbergom. Kvalificiral in organiziral je obrtnike, planerje, vendar tudi lokalno prebivalstvo, ki je začelo živeti v novi soseski. Vsi, ki so rabili informacijo glede iniciativ, so se obrnili na KUKO. Bila je nekakšna informacijska platforma; delali so brošure itd. KUKE ni več. Končali so svojo misijo, saj je soseska končana. Na neki način so prenesli funkcijo povezovalca oz. glavne organizacije na skupnostni center soseske na Krokus.

PM: Zdaj pa bi rad spregovoril o heterogenosti lokalnih prebivalcev soseske. Ali je bil plan vzpostaviti heterogenost soseske (starejši, mladi, različni socialni razredi, tujci itd.). Vem, da je bil to začeten plan; kako pa je v praksi izgledalo to uresničevanje plana?

ISB: To ni bila začetna vizija. Gradili smo večinoma socialna stanovanja. Tudi danes je fokus na tem. Hiše/bloki so v dobrem stanju in niso predrage.

PM: Kakšen procent je lastnikov in kakšen najemnikov?

ISB: 80 % je najemnikov in zelo malo lastnikov.

PM: Kdo poseduje rentna stanovanja, je to mesto?

ISB: Ne, ampak privatni investitorji.

PM: Koliko pa v soseski stane rentna osnova?

ISB: Cene so skladne s povprečjem Hannovra; stanovanja niso najdražja in niti najcenejša. Standard stanovanj pa je zelo visok.

PM: Kolikšen delež hiš je pasivnih – ima standard pasivne hiše?

ISB: Samo nekatere, ne dosti. Imajo pa vsa stanovanja poseben »Kronsberg standard«, ki ga postavlja mesto. Takrat je bila to zelo nova stvar. KUKA je kvalificirala planerje, da so gradili objekte s tolikšno izolacijo, posebnim prezračevalnim sistemom, z zračno prepustnostjo. To je bila takrat novost.

PM: Kako je bilo s post faktum meritvami glede energetske učinkovitosti? Recimo v Vaubanu niso merili učinkovitosti, v Western Harbourju pa so. Kako pa je z meritvami v Kronsbergu?

IBS: Ja, tukaj pa merimo energetsko učinkovitost. Vzpostavili smo poseben program, imenovan »quality insurance«. Imamo posebne inženirske biroje za te meritve. Od leta 1998 deluje 6 inženirskih birojev, ki so posebno kvalificirani za tovrstne meritve, saj so že gradili pasivne hiše in imajo pri meritvah tovrstno znanje. Te meritve so za nas zelo pomembne.

PM: So bila odstopanja med izmerjenimi količinami ter pričakovanimi rezultati?

IBS: Ne, inženirski biroji so sodelovali z arhitekti že na začetku in so bili prisotni pri vsaki fazi gradnje in energetsko učinkovitih rešitvah. Na ta način so kontrolirali pravilno delovanje implementacije trajnostnih rešitev že med samo gradnjo.

PM: Je potem naknadno mesto Hannover prevzelo ta tako imenovan Kronsberg standard?

IBS: Delno, ne v celoti. Energetski standard je seveda boljši, kot je bil v času devetdesetih. Danes je novi zakonski standard mesta blizu Kronsberg standardu.

PM: Rad bi vam zastavil vprašanja glede prenosa znanja v druga območja – prenosa dobrih praks. Ali je Hannover skopiral, prevzel kakšno rešitev od dobrih praks od drugod?

IBS: Hm … ne direktno. Seveda, vsak pogleda na okoli in premisli, kaj bi bilo dobro ali ne. Ni pa bilo nekega direktnega prenosa. Recimo, imeli smo en inženirski biro, ki je delal tudi v Freiburgu, ki nam je izdelal energetski koncept.

PM: Vem, da je ogromno strokovnjakov prišlo v Hannover »kopirat« – oz. se zgledovat po Kronsbergu. Je kakšno mesto iz regije, Nemčije prevzelo kakšno dobro rešitev iz Kronsberga?

IBS: Seveda, ampak je težko reči, kdo je kaj vzel. To je razvoj, vsi so prišli v Kronsberg in videli, kako je delovalo, potem pa so zanesljivo tudi nehote prevzeli kakšno idejo. To je zelo prav.

PM: Čigava je bila iniciativa postavitve družbeno-socialnega centra soseske »Krokus« v Kronsberg?

BS: Kronsberg je velika naselbina in Krokus je bil že v začetnem planu tega velika projekta.

PM: Ja, ampak vse nove velike urbane naselbine ne planirajo še tako velikega in raznovrstnega centra soseske?!

IBS: Ja, to je bil velik EXPO projekt. V soseski je bila tudi šola, vrtec in tudi skupnostni center Krokus. To je bila zelo pomembna stvar za Kronsberg. Ni se spraševalo med planiranjem, če je to dobra ideja ali ne. Jasno nam je bilo, da je je bilo nujno postaviti vse te javne institucije znotraj soseske.

PM: Kako pa je z lokalnim zaposlovanjem ljudi iz soseske; koliko ljudi iz soseske dela v soseski?

IBS: Ni jih toliko. Ni dosti delovnih mest v soseski. Večina jih dela zunaj soseske. Blizu je sicer nekaj tehnoloških podjetij, ampak ne dosti.
PM: Je kdaj mesto Hannover razmišljalo, da bi ponovilo to uspešno zgodbo in naredilo nekakšen »Kronsberg 2«?

IBS: Hmm, ne. Nismo potrebovali nove urbane naselbine. Hannover sicer raste in razmišljamo o novih naseljih in jih tudi delamo, vendar so manjša. Zdaj delamo majhno naselbino z »0 energetskim standardom«, namenjeno bogatim. To niso tako veliki projekti.

PM: Katere urbane obnovljive energije so implementirali ob postavitvi energetskega koncepta v Kronsbergu?

IBS: Dve vetrnice in nekaj sončnih panelov. Skupaj proizvajajo 40 % energije, ki jo potrebuje soseska.

PM: Kakšne so bile največje kritike javne sfere, medijev, lokalnega prebivalstva glede projekta Kronsberg?

IBS: Ljudje, prebivalci soseske, so na začetku imeli probleme z ventilacijo. Niso se navadili direktne ventilacije preko oken. Potem se je tehnologija spremenila in je bilo lažje.
…
IBS: Drugi malo večji problem je bila posebna mešanica ljudi od vsepovsod. Eni so se pritoževali, da se nekateri ljudje iz socialnih stanovanj niso integrirali dovolj (rasizem). Mediji pa tega projekta niso zelo kritizirali. Mogoče je nekatere motilo, da so bile previsoke stavbe za to napol ruralno območje izven centra.

PM: Kaj simbolično pomeni Kronsberg za Hannover?

IBS: Mislim, da predstavlja nov urbani razvoj, novi način koncepta gradnje. Je začetna točka novega ekološkega standarda. Novi način razmišljanja glede energije, materiala, zemlje.

PM: Trajnostni soseski Vauban, Rieselfeld sta nastali pred 15 leti, porodno Kronsberg. Zakaj v zadnjih 15 letih niso nastale nove trajnostne soseske v Nemčiji?

IBS: Ni bilo možnosti tako velikih naselij. Mislim, da se je izpostavilo veliko dobrih projektov, ampak so manjši in ne tako pomembni. V Kronsbergu živi 7000 ljudi. Od takrat nismo več gradili niti približno tako velikih sosesk. To je glavni razlog.

PM: Hvala vam za zanimiv intervju.

IBS: Hvala vam.

Priloga M: Intervju z Diegom Posom (Amsterdam, 9. april 2015)

Intervjuvanec: Diego Pos (v nadaljevanju DP)
Izpraševalec: Primož Medved (v nadaljevanju PM)

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PM: Pozdravljeni, ali se lahko na kratko predstavite?

PS: Sem Diego Pos, živim tukaj v soseski in sem član uprave krovne organizacije trajnostne soseske GWL Terrein. Vsak prebivalec oz. stanovanje plačuje določeno vsoto denarja (6 EUR) vsak mesec krovni organizaciji. Imamo tudi enega zaposlenega.

PM: Torej ste bili izvoljeni?

DP: Seveda sem bil. Imamo redna srečanja, kjer so tudi volitve, na srečanjih moram tudi predstaviti, kako porabljamo denar, kaj delamo itd.

PM: Kdo so bili pionirji – začetniki pri vzpostavitvi trajnostne soseske?

DP: Odvisno koga vprašaš (smeh), definitivno pa je soseska nastala s pristopom od spodaj navzgor. Na tem območju je bilo prej vodno podjetje. Potem se je podjetje odmaknilo iz centra mesta, in zastavilo se je vprašanje, kaj narediti s tem območjem. Okoli tega specifičnega območja tovarne so živeli industrijski delavci v zelo majhnih stanovanjih. Če vprašaš alternativne organizacije, ki so vpletene v to zgodbo, ti bodo povedale, da je bil namen te nove trajnostne soseske narediti nova stanovanja za ljudi iz soseske, z namenom, da se bodo lahko preselili v večja stanovanja.
…
DP: V tistem času je bila mestna uprava Amsterdama razdeljena v četrtne lokalne uprave. Tudi v Amsterdamu je bila prav takrat nova ambiciozna mestna uprava, ki je hotela pokazati nov urbani ekološki načrt mesta. Danes obe strani (mestna uprava, civilna iniciativa) pravita vsaka zase, da sta bili iniciatorja za preobrazbo soseske.
…
DP: Pred nastankom ekološke soseske je bilo to širše območje zelo poseben del Amsterdama. Bilo je zelo veliko skvoterjev, ki so zasedali stanovanja v 80. letih. Leta 1984 je prišel župan Amsterdama v to četrt, ampak so ga odgnale lokalne grupacije, ki so zasedle četrt. V to območje predstavniki mesta niso mogli več dostopati. Bila je kot nekakšna država v državi. Ogromno stanovanj je bilo zasedenih, bil je izjemno reven del mesta, kjer so živeli imigranti, študenti, anarhisti. Stanovanja so bila v zelo slabem stanju. Potem pa je prišla na oblast koalicija zelenih in socialnih demokratov, skupaj so se nekako (ne brez težav) uskladili z alternativnimi iniciativami. Skupaj so se dogovorili, da bodo na tem degradiranem opuščenemu območju zgradili trajnostno sosesko. To so bili začetki. Na natečaju so skupaj izbrali arhitekturni plan. To so bili zares začetki trajnostnega urbanizma in takrat je bilo vprašanje za vse: kako naj gradimo ekološko naselje? Začetniki so prebijali led trajnostnega urbanizma, saj niso imeli nobenih referenc. Aktivnih je bilo 5 arhitektov in krajinski arhitekt ter vsak od njih je imel kot nadzornike skupino 15 ljudi iz lokalne civilne iniciative, ki so živeli v soseski. Predstavniki lokalne civilne iniciative so gledali pod prsti arhitektom, jih nadzirali in z njimi razpravljali o vseh posameznih rešitvah. V tem posebnem programu je bilo torej vključenih 6 x 15 ljudi iz lokalnega urbanega

območja, ki so skupaj soustvarjali urbani plan. Med njimi je bilo veliko prerekanja, odhodov, kriznih situacij in nasprotovanj. No, na koncu so prišli do kompromisa. Po dolgotrajnem prerekanju pa je prišlo do trdnega dogovora, v katerem so bili vse strani zadovoljne. Od takrat je šlo vse zelo hitro naprej, saj noben ni več zavlačeval zadeve in se pritoževal, saj so v predhodni fazi dosegli kompromis.

PM: Kakšna je bila vloga občine/mesta? Kdo je bil lastnik te zemlje?

DP: Mesto je bilo lastnik in tudi iniciator tega zelo gosto naseljenega projekta: 600 stanovanj na 6 hektarjih – 1500 ljudi. Zanimivo je, da če hodiš malo naokoli v druge bližnje soseske, boš čutil še večjo gostoto naseljenosti, vendar zaradi domišljene arhitekturne rešitve je dejansko GWL Terrein gosteje naseljen prostor kot sosednje soseske.

PM: So vsi prebivalci najemniki?

DP: Ne, v Amsterdamu je praksa, da se gradijo mešani tipi stanovanj – z najemniškimi in lastniškimi stanovanji v novih blokih. Občina je določila, da hočejo 50 % stanovanj prodati, 50 % pa ponuditi socialnemu najemu; in tako se je tudi zgodilo. To ni tipično za ta del, ampak to je praksa za Amsterdam v celoti.
…
Potem pa je nastal problem, saj noben komercialni gradbeni konzorcij ni hotel graditi pod pogoji, ki so jih postavili urbanisti, predvsem zaradi premalo planiranih parkirišč. Problem je bila določba, da je lahko le 100 parkirišč za 600 stanovanj, kar je izjemno malo. Gradbeni konzorciji so menili, da noben ne bo kupil stanovanja brez parkirišča. Kakor koli, na koncu se je zbralo 5 različnih gradbenih podjetij, ki so ustvarili začasno korporacijo Eco-plan. Socialna stanovanja so bila grajena z enako kakovostjo kot stanovanja za prodajo!

PM: V nekaterih nemških soseskah so bile ustanovljene »Baugruppen« – gradbene kooperative bodočih lastnikov. V primeru GWL Terreina ne moremo govoriti o takšni praksi?

DP: V Holandiji je praksa tovrstnih kooperativ bolj poudarjena v zadnjih 15 letih, prej pa ni bilo tako. Kakor koli, v GWLTerrainu so lokalni prebivalci imeli resnično močno vlogo pri določanju, kako bodo izgledala stanovanja oz. celotna soseska.

PM: Kakšne vrste obnovljivih virov energije je bilo implementiranih v soseski?

DP: Pri implementaciji trajnostne soseske so se takrat osredotočali tudi na ekološke energetske rešitve. Cilj je bil, da stanovanja porabijo le 50 % energije v primerjavi s takratnimi novimi stanovanju. Takrat pasivnih hiš še ni bilo.
…
V soseski imamo nekaj sončnih panelov in predvsem lokalno mestno gretje (na kogeneracijo – v CHP) v sami soseski, ki je zelo učinkovito. To je naš glavni vir glede energije. Prednost kogeneracije je v tem, da lahko proizvaja toploto in hkrati poleti klimatizira vse prostore. Druga stvar, na katero smo se osredotočali, je bila močna izolacija stavb. Večji bloki v soseski imajo tudi zelene strehe. Pomembna je bila tudi sama orientacija stavb (sever–jug).

PM: Je bila kdaj narejena LCA (»Life Cost Analysis«) za celotno sosesko?

DP: Ne vem, mislim da ne.

PM: Kako je v soseski z recikliranjem oz. s trajnostnim ravnanjem z odpadki? So bili kdaj organizirani seminarji itd.?

DP: Ko se vseliš v stanovanje, na začetku dobiš posebno knjižico, ki ti sugerira, katero milo uporabi, kako recikliraj itd. Vendar ni kontrole, vsak dela po svoje. Vsako stanovanje ima tudi dva smetnjaka za organske in ostale smeti.

PM: Kot povsod.

DP: Ne, to je izjema, v Holandiji nimamo tega povsod. No… to smo tudi mi opustili. Mesto je nehalo pobirati organske smeti, ker naj ne bi bilo funkcionalno.

PM: Kako so se odločili, da bo to »cona brez avtomobilov«?

DP: Na začetku so bili cilji začetnikov soseske – civilne iniciative še bolj »fanatični«. Hoteli so, da bi se vsak, ki se vseli v sosesko, zaobljubil, da ne bo nikoli kupil avtomobila. To seveda iz pravnega vidika ni bilo mogoče. Gradnja podzemnih garaž bi bila predraga in hkrati ni v skladu z vizijo trajnostne soseske. Namen je bil, da ljudje, ki pridejo v ekološko sosesko, pač ne bi imeli avtomobilov.
…
No, v glavnem, v Holandiji po zakonu na vsako zgrajeno novogradnjo mora biti zagotovljenih vsaj 1.2 do 1.4 parkirinh mest. Tukaj so se pa odločili, da bodo na 600 stanovanj zgradili samo 100 parkirišč (torej 0.16 parkirišč na stanovanje). Za dovolilnico moraš čakati kar nekaj časa. Za prve prišleke je na začetku potekalo žrebanje za parkirišča. Jaz sem čakal 7 let, da sem ga dobil . Zdaj moraš pa čakati 13 let, da ga dobiš. Ta soseska je postala zelo priljubljena in tudi cene stanovanj so se zelo dvignile, tako je postala zelo »bela« soseska.

PM: V bistvu se soseska postopno gentrificira?

DP: Ne postopno,…soseska je že gentificirana. Lokalna uprava je zelo veliko delala na infrastrukturi. Izjemno so izboljšali sosesko. Izboljšali so dostopnost z javnim prevozom, vodovod itd. Vse je postalo dražje. Uporabniki drog so se izselili in prišle so nove kavarne, trgovine itd. Postala je zelo priljubljena soseska. Ta celoten del mesta (vključno z našo ekološko sosesko) je predstavljal eksperiment izboljšanja in gentrifikacije mesta, ... in je bil uspešen. Na začetku je naša trajnostna soseska GWL Terrein znotraj tega širšega urbanega območja veljala za »japi« cono, kar pa seveda ni res, saj je bilo 50 % socialnih stanovanj. Zelo pametno je bil postavljen in tudi dosežen začeten cilj, da se v 50 % socialnih stanovanj naselijo ljudi iz tega urbanega območja in ne iz drugih delov Amsterdama. Še enkrat ponavljam, da je bil ta del Amsterdama en najbolj revnih delov mesta (skvoterji, uporabniki drog, prostitutke, študenti, imigranti itd.). Ostalih 50 % stanovanj, ki so bila namenjena prodaji, pa niso kupili ljudje iz okoliša, saj so bili vsi revni.

PM: Kakšna je bila začetna cena stanovanj za nakup?

DP: Povprečna.

PM: Je prisotna tukaj kakšna »car sharing« (sistem deljene uporabe skupnega prevoznega parka) iniciativa?

DP: Car sharing iniciativa je bila tukaj od začetka, to je bil začetni plan soseske. V Amsterdamu v tistem obdobju še ni bilo car sharing iniciative. Ta soseska je prebila led glede car sharinga v letu 1997. Deloval je pod okriljem mesta. Zdaj je seveda drugače. V Amsterdamu deluje danes več car sharing iniciativ, ki so med prebivalci Amsterdama zelo popularne. Poleg car sharing je zdaj zelo popularna iniciativa »Car2Go« z električnimi avtomobili tipa Smart.

PM: Je bila postaja tramvaja narejena pred nastankom soseske ali kasneje?

DP: Postaja je bila že prej. Saj so tukaj v širšem območju zahodnega Amsterdama že živeli ljudje. Hkrati pa so drugi ljudje prihajali na delo sem, saj je bila tu industrijska cona. Trajnostna soseska GWL Terrein je 5 minut od centra in vsi imajo kolo. Transport v Amsterdamu je organiziran primarno za kolesarje.

PM: Je bila kakšna aktivnost znotraj soseske za zmanjševanje uporabe avtomobilov?

DP: No, čakanje 13 let za parkirišče je že sama po sebi izredno učinkovita »pasivna aktivnost«.

PM: Je v bližini prisotna kakšna avtobusna postaja?

DP: Da, več avtobusnih postaj je tukaj in dve sta zelo blizu.

PM: Kako je z drugo infrastrukturo? Kje je najbližja osnovna, srednja šola, supermarket itd.?

DP: To je v bistvu »živa soseska«. V »starem delu« soseske blizu GWL Terreina so 4 osnovne šole, supermarketi…

PM: Je bil v soseski vzpostavljen poskus glasovanja preko direktne demokracije za lokalne vsebine? Kakšen je nivo participacije lokalnih prebivalcev?

DP: Mi smo zelo organizirani. Naredili smo zelo učinkovito krovno organizacijo. Vsak, ki živi v soseski GWL Terrein, je njen član. Dobra stvar je v tem, da je obvezen za vse člane in vsak mora plačati neko pristojbino, ki je vključena v najemnino (procent) oz. če si lastnik nepremičnine, jo plačaš glede na kvadraturo stanovanja. Ta krovna organizacija je uradno registrirana, skupaj zbiramo denar, imamo dve glavni srečanji za celotno skupnost, imamo upravo soseske znotraj krovne organizacije, ki nadzira potrošnjo denarja itd.

PM: Koliko ljudi oz. procentov ljudi je kakor koli aktivnih v kakršni koli organizaciji oz. v društvu lokalne skupnosti?

DP: Če pogledaš strukturo organizacij … so to majhne skupine, ki se ukvarjajo z različnimi aktivnostmi, in so sestavljene v največji meri z ljudmi, ki živijo tukaj od samega začetka (stari lastniki začetnih stanovanj). Problem je pri socialnih stanovanjih, ker v Amsterdamu se dolgo čaka za pridobitev socialnega stanovanja. In ko ga dobiš, te noben ne vpraša, ali bi živel v ekološki skupnosti ali ne. Ljudje torej lahko (in tudi pridejo) v socialna stanovanja brez nobenega interesa glede trajnostnih zadev soseske. Drugi problem je pri ljudeh, ki kupujejo zadnja leta stanovanje tukaj. Ta stanovanja so postala izredno draga, kupujejo jih razni visoko usposobljeni strokovnjaki, ki delajo cele dneve in pridejo zvečer domov. Torej »novi« ljudje v soseski (tako najemniki socialnih stanovanj kot novi lastniki) niso zelo angažirani v lokalnih aktivnostih. Novi prebivalci ne pridejo v to sosesko, ker bi bila ekološka, trajnostna, ampak ker je na tem območju Amsterdama lepo živeti. Pridejo zaradi kakovosti okolja. Na začetku pa smo vsi ljudje, ki smo

prišli v sosesko, bili nekako pritegnjeni k ideji trajnostne soseske. Danes pa ni več tako. Žal. Torej naključni najemniki in preobremenjeni novi lastniki niso aktivni v naših trajnostnih aktivnostih soseske. Zato se zelo trudimo in vlagamo ogromno energije, da bi jih pritegnili v naše delovne skupine, v organizacijo.

PM: Izdajate tudi lokalni časopis?

DP: Je bil na začetku prvih 10 let, v papirnati obliki, in je izhajal vsake 3 mesece. Potem smo nehali in smo začeli z upravljanjem mailing liste vsake 2 do 3 tedne, kar je boljše, saj deluje pogosteje in ima relevantnejše informacije.

PM: Kakšne aktivnosti organizirate v soseski?

DP: Imamo skupine, ki se ukvarjajo z urbanimi vrtovi, s sadnimi drevesi, imamo čistilne akcije soseske itd. Vsako leto na našem igrišču organiziramo nogometni turnir. S tem pritegnemo tudi otroke. Imam tudi novo letno zabavo soseske v restavraciji. Imamo tudi posebne poletne zabave za sosede. Ljudje na teh poletnih zabavah kuhajo za 200 ljudi. To je največja zabava soseske.

PM: Deluje v soseski kakšno društvo za ljudi s posebnimi potrebam ali društvo za otroke, starejše itd.?

DP: Ja, ena stavba je namenjena samo starejšim ljudem. To pomeni, da je tam dvigalo in vsa stanovanja so v enem nadstropju (tam ni duplex stanovanj). Ta stanovanja so posebej namenjena starejšim ljudem.

PM: So tudi študentski domovi tukaj v soseski?

DP: Ne.

PM: Hvala za intervju

DP: Hvala in lep dan.

Priloga N: Intervju z Joze van Stigt (Amsterdam, 10. april 2015)

Intervjuvanec: Joze van Stigt (v nadaljevanju JVS)
Izpraševalec: Primož Medved (v nadaljevanju PM.)

……

PM: I have been in many sustainable neighbourhoods across the EU and now I am here…

JVS: I know they are many…, I was in France four years ago and all the neighbourhood representatives were there together. Last year I was in Lausanne and they wanted to start a project there - a similar project to what we started here 20 years ago. A lot of things we did are still sustainable now, but there also improvements in time…
…

JVS: Most of the things that I tell people is just how important it is that when you are making a part of the city like ours, it is important that all the people out of the neighbourhood and all the people who will live there should work together from the start - from point zero.

PM: You lived there before?

JVS: Yes.

PM: You are like Freiburg's Vauban that started from the community bottom up initiative. All the others are top down developments.

JVS: Yes, and Lausanne it will also use the bottom up approach.

PM: Really? But they already started?

JVS: No, they did not start to build yet. They had the plans and they asked me to come to tell them how I involved all the people from the neighbourhood and how you can get them involved. And they are now busy with the area they wanted and to talk with all the people from there.

PM: So the first thing, what was your initial role at the beginning of the neighbourhood development and also before?

JVS: I lived in the neighbourhood for 40 years. I was born in Amsterdam and I lived on the site of the area GWL (very near the GWL company). The water company told us they are going to move and we went to see the area and we all agreed this is a nice area to live. And another thing that was important, the soil there was very, very clean. It was as clean as the soil from the forest from 100 years ago. And that was something so special that we wanted to keep. A little bit of Amsterdam that remains clean.

PM: So it was not necessary to decontaminate the soil? The soil was good?

JVS: Yeah, everything was good. It was as good as the soil in the forest. So we said we wanted to live there, to build houses there and we asked the government in 1986 to change the area land use from industrial to residential.

PM: So the idea came from the community?
JVS: Yes. In Amsterdam you have a law that everything is going to be built by the corporations. So we had to ask the government and the government said "Yes, you can build houses there, but a corporation has to do that".

PM: A private corporation?

JVS: No, not private, but a social housing corporation. But they do not talk to the neighbourhood residents before they build in the area. However, in Amsterdam we have a law, that when you want to build you have to talk to the neighbourhood. When you do not do that, it doesn´t happen. So we asked the neighbourhood residents at that time, what they want. They said they wanted a car free, clean, ecological area.

PM: But how was this neighbourhood organised? Under one association or as a community? Was it formal or informal?

JVS: Informal.

PM: Who decided? Did they vote?

JVS: People around … we had a lot of communities from social housing who talked to each other, we have a strong community from the area.

PM: And how did they meet? In a special place to decide?

JVS: Yes, at that time there were special places for it. They are gone now, there is nothing left of it any more. What they did is they talked about the things of the area and how it will change the area. About what you can do to help your neighbours or about social things or cleaning up, … all those kind of things. And we talked about this once in every four … five weeks. We talked about the new eco-neighbourhood that and agreed what we wanted. But the corporation did not want to talk about it with us, but then this changed a little bit.

PM: You wanted a car free neighbourhood?

JVS: A car free, ecological area with houses for families.

PM: So not a heterogeneous … but family oriented?

JVS: Yes. Because this area of western Amsterdam has always had very small apartments. The majority of the apartments have 27 - 35 square meters, something more than a room. So it was for families, so that you could move from cheap to expensive new houses, when they could afford it. We talked to the government and they agreed. All the people who want to live here could be on a waiting list and when you lived in the wider neighbourhood area more than 10 years you had a possibility to rent or to buy a house there.

PM: Ok, so the first people who could buy or rent an apartment in GWL Terrein were the people from the vicinity?

JVS: Yes, everything was on paper.
…
JVS: Yes, so we did it and Kees Christiaanse had made a plan. He is an architect, now he is most of the time in Switzerland. We asked six architects, who draw the plan for the houses. Every architect had to make 100 houses. There are now 630 houses within the project and most of the apartments have 60-100 square meters. My house was 120 m2.

PM: You lived there in the new neighbourhood?
JVS: I lived there until last year.

PM: Why did you move?

JVS: Because I lived on the top floor and I cannot walk so much anymore so that I have to move because there was no elevator.
…
JVS: Every architect had a group of 20 inhabitants who could speak to him for every step of the project. Everybody had a course on how to read the architectural drawings, for how they can change the drawing themselves, etc. Not every architect liked it, that's for sure. Also the project leader did not like it. However, we never had a project that was so quick from the start until the delivery in Amsterdam.

PM: But were they all the residents under one association? What was the name of this neighbourhood association?

JVS: They don't have a name. It was an informal organisation. The community centre at that time was called "Area community centre".

PM: Also now you have the community centre in the GWL Terrein neighbourhood, called the Gate house. How did you decide to have this neighbourhood community centre- together or did you impose on the Ecoplan (association of builders) that they should leave this building for the community?

JVS: No, the government said, when you want to do an area like that you have to control it.

PM: That's good I think, no?

JVS: Yes, that's ok. It´s perfect. Each month everybody in the GWL Terrein neighbourhood has to pay for it, a small fee. In the other neighbourhoods of Amsterdam nobody pays for it.

PM: Why?

JVS: Because it´s our own choice. You choose for this area, you choose for ecological and you need a specially employed person – a caretaker, who doesn´t live there who looks out for all the things.

PM: And other neighbourhoods don't have this caretaker?

JVS: No. But it´s very useful.

PM: I am very interested on the socio-economic balance of the neighbourhood. How is it with self-management and autonomy in decision making in the community? Is there any attempt in the community to create direct democracy driven processes, so that all the people decide together about the neighbourhood issues?

JVS: Yes, you can decide with the rest of the people or you don't decide and don't say anything. That choice is yours, but for all the things there is an already created group. There´s a group for the trees, because the government wanted cherry trees, Japanese cherry trees, but they are only beautiful and useless without fruit that you can eat. We didn´t want it, so we went to the government and said: "we want real fruit trees!" Now we have a group, who take care of the trees and they have a course on how to cut them, etc.

PM: Who organises these groups?

JVS: The local citizens themselves. There is a special group who organised the gardens; there is a technical group and there is a group who looks after social activities, etc.

PM: This is very interesting. How do they organise together?

JVS: There is a chairman and a secretary.

PM: Sometimes there is problem to find a place for the meeting. Is there any special place that they could?

JVS: Yes, they can meet in the "Gatehouse" building. There is a special room where you can have a meeting.

PM: Usually neighbourhoods do not have these rooms.

JVS: We have special "houses of the neighbourhood" here in Amsterdam. In every neighbourhood you have a "house of the neighbourhood" – like a community centre.

PM: Another problem of all sustainable neighbourhoods that I have encountered during my research is that at the beginning they all want heterogeneity, but during the years the sustainable neighbourhood becomes popular and full of upper middle class citizens.

JVS: But that is not possible here, because half of the apartments are social housing and the other half are for sale.

PM: But the prices now are going up. No…?

JVS: Yes, from when we bought it, they are going up. But the last eight years it is sustainable. My house when I bought was 162.000 EUR and when I sold was 455.000 EUR and that was lower than it was worth because the price was going down. Now the prices are going up a little bit.

PM: But compared to other quarters in Amsterdam …?

JVS: No, it doesn´t make that much difference.

PM: So the heterogeneity still exists and it will exist because of the high rental percentage?

JVS: Yes, and because of the community you have here. Because everybody has to pay a small fee for the concierge, because everybody has a voice on local issues and they have also projects together. Everybody knows when they buy a house here about these local characteristics.

PM: How many … do you have any data on how many people own a car in the neighbourhood?

JVS: I think now here 120 people own a car, that is less … that is one fifth. And when you have a car and you don't have a parking place you pay 420 EUR a month. That is a lot money. But you know about it before you buy a house in GWL Terrein.

PM: How many people own a car in Amsterdam (approximately)?

JVS: Amsterdam it´s not so much…maybe half of the population.
…

PM: Do you see a possible problem here that maybe in 10 years this neighbourhood will become extremely popular and also not affordable anymore?

JVS: Oh yeah, it is already more popular than it was.

PM: That will become a sort of gentrified area…

JVS: No, because you have social houses here.

PM: I am really interested in the transfer of knowledge. I think you could provide very relevant information because you were here from the beginning. Did you get the inspiration from other regions in Europe?

JVS: No, there was no such neighbourhood before GWL Terrein.

PM: So you really started from the scratch?

JVS: Yes.

PM: Did any other city want to copy your model?

JVS: Yes, there is a lot of copies … for example in Haarlem, Amersfoort, etc.

PM: So they all got the inspiration from here?

JVS: Yes, but a lot of them still have cars in their areas. They are going on ecological things but in that car-free issue we are unique.

PM: Now I have some question about urban design. Have you ever thought about creating a main plaza, like a main market place, also as the meeting place?

JVS: Yes, they tried to get the main market place but …the area hasn´t got so many inhabitants that it would be profitable for a shop or a market place or something like that.

PM: What about the economic activities in the neighbourhood?

JVS: Yes, there are a few jobs. There are 15 shops for things which are related to the area. There´s an accountant, a bicycle shop, that kind of thing. There is a restaurant-café Amsterdam and next door they have a little place with craft work and all that kinds of things. Café Amsterdam has worked very well, and still works very well.

PM: There aren't many solar panels?

JVS: Yes, there are, a lot more than you can see.

PM: And the people who live below own them?

JVS: You can have a solar panels for your own house or you can have solar panels for the whole block of houses. The "Block 2" has solar panels for the whole block.

PM: And it is like a cooperative of people who own these solar panels? They sell it to the grid, no?

JVS: If they want, but not always. When you have solar panels on your roof and they are your own, it depends on which company you get electricity from, if you get back what you make. But not everywhere do you get money back. It's different for each company. I have a company that pays back the surplus of energy to me.
I have 15 panels on the roof.

PM: There was a neighbourhood newspaper years ago - why did it stop?

JVS: The printed newspaper stopped and now they have only an online edition. They have bulletin boards at the stairs by the mailboxes, where they put everything.

PM: News related to the whole neighbourhood or just for that block?

JVS: Related to the neighbourhood and for the block. Both.

PM: Is there an active association for children, elderly people, under-privileged people. Is there any association that would help them? Diego Pos showed me a space for mentally disabled people and for the elderly.

JVS: Yes, there are spaces for mentally disabled people, for the elderly and for physically disabled people. There are 16 houses for disabled people. 10 houses of these 16 are privately owned houses. That was the first time in Amsterdam that you could buy a house as a disabled person because all the houses for disabled people before were rental houses.

PM: From your perspective, what do you think was successful in the neighbourhood and what do you criticise? Before when you started to build the neighbourhood, what was the vision of your organisation? What do you think was not implemented in the way that you wanted?

JVS: What we wanted was to build a neighbourhood without cars and that people who live there do not own a car. That was what we wanted in the beginning. But that was not possible. You are not allowed to say that somebody can't have a car if he or she lives there. It is not allowed. It´s a shame but it is like that. I think that for 90% of things we wanted we have succeeded. Where we did not succeed was in solar panels for hot water.

PM: And from the social perspective?

JVS: You live there with a community of lot of different people. I think that was a good set.

PM: What was the reaction from the media?

JVS: That we will not succeed, they always told us. The media said that there will be no car for five years and then everywhere you will have cars around.

PM: But it is not true.

JVS: It is not true. I think we proved that you can do it.

PM: Thank you very much.

Priloga O: Intervju z Gerwinom Verschuurom (Culemborg, 12. april 2015)

Intervjuvanec: Gerwin Verschuur (v nadaljevanju GV)
Izpraševalec: Primož Medved (v nadaljevanju PM)

……

PM: Could you introduce yourself?

GV: I am Gerwin Verschuur. I have been living here from 2004. I have different roles in the neighbourhood. I am the director of the local energy company Thermo Bello, and I am also a guide around the neighbourhood. In the past I was involved in the development of the city farm, and in the habitant association called "BEL". I am still on the district council, which is an organ under the general assembly.

PM: Is there a central structure in the neighbourhood, a neighbourhood community centre?

GV: When we have our general assembly we are meeting in a place just beside the district. We rent it. Just for the meeting.
….
Regarding the neighbourhood community centre; yes it was panned, but was never realised. It was part of a bigger conference centre – educational centre, which we still don't have. But we have a different location in the area, where the smaller and bigger groups could meet. We meet also in cafés.

PM: But I did not see any cafés, bars, shops in the district. It is not a real urban district- it is more an urban village…

GV: No, we are a district of a city and the centre of the city is near, just 1 km. All the services are there, you don't need it here.

PM: How does the local community communicate between each other?

GV: There is a newsletter (4 times a year)- there is a web site… and for the rest there are e-mail messages.

PM: Is there a local newspaper?

GV: Yes it is for the city of Culemborg, but not especially for Eva Lanxmeer.

PM: How is the identity of the community? Is it strong? Do you feel part of the district? Do all habitants have this strong identity toward the local place?

GV: Yes it is strong. For some more for some less…but everybody can sense it.
PM: What kind of associations (formal and informal) are present in the district?

GV: Everybody who wants to buy or rent a house in the sustainable neighbourhood has to enter in the citizens' local association – The BEL. BEL is the association of local neighbourhood habitants. Everybody has to be part of the BEL. Under the BEL association, there are 10 to 15 working groups. We are autonomous in the sense that these groups exist because people want to organise something. It is a bottom up approach and is not obligatory. They decide everything; everything is self-managed.
….
GV: And then we have a communal garden and many small community gardens. Each of the small "gardens community" has their representative in the local district council.

PM: What is with the percentage of the rentals versus owners in the area?

GV: 80 % owners, 20 % rentals.

PM: Whose idea was it originally to create a sustainable neighbourhood here?

GV: The first idea came from an organisation called "EVA foundation", which in cooperation with the Dutch urban development program wanted to create a sustainable urban development. The ambition of the Dutch government was to create 800 000 new houses in 20 years in Nederland. The EVA foundation were afraid that this would not be sustainable. EVA Lanxmeer is in a way a pilot – an experiment for future sustainable urban developments.

PM: The EVA foundation was a bottom up or top down development?

GV: Bottom up. It was a multidisciplinary group, with sustainable builders, and energy water specialists etc. Eva Foundation were looking for the place, and they got in contact with the municipality of Culemborg. The municipality owned this land and were interested in "piloting" this concept and they starting the cooperation. EVA foundation brought all the expertise. Municipality paid for the costs. They developed an urban plan together with the experts. During the process special meetings were organised with future inhabitants and they create together an urban plan.
….
There are different types of housing developments; there are houses made by residents; the social housing organisation created the houses here; utility developers created office spaces here; also groups of future owners created together their houses. The first 100 houses were developed by the municipality of Culemborg. So they took the initiative and to contact the first architects for the first two projects. Then after that, the people come with the proposals, and the project teams says yes or not.

PM: How many public institution are here?

GV: 3 schools, the drinking water company, and some offices (Trade union, offices of service companies, etc.). Here is also a city farm, which is part of the urban plan.

PM: Are you also involved in the city farm, how many people are involved in the city farm?

GV: The city farm has a board and one professional farmer. I was on the board to prepare the conditions for the farmer to work.

PM: I understand the role of the municipality, but what is the role of the government?

GV: They owned the land and coordinate the process

PM: What was here before the sustainable neighbourhood?

GV: Agriculture land, farms.

PM: Did this neighbourhood copy some solutions from other sustainable neighbourhoods?

GV: Let's say that the experts who were involved have also experiences elsewhere. One of the experts was also connected with the sustainable neighbourhood in Tübingen. He was the urbanist there. But not just him… all the experts brought something here. Every single aspect was not invented here, but the combination and the special EVA way of the implementation was invented here.

PM: What percent for energy and heating production comes from Renewable energy sources (RES)?

GV: All the houses have collectors for hot water. Some then combined with gas, and I combined with heat pumps (air heat pumps). We have a lot of PV panels and collectors.
The central heating system is on heat pumps. We cool the drinking water, and supply with warm water the houses; and for the energy picks we use gas.

PM: Are any of the houses passive or with zero energy standard?

GV: No

PM: Do you use organic waste for the bio gardens?

GV: Groups of people are composting part of their organic waste for the communal garden, and we have a special system through the municipality scheme.

PM: Why don't you do composting here?

GV: Because we have a surplus, we have enough.

PM: How do you use the rainwater, are you using the rainwater also for toilets?

GV: No, about 100 houses have a system to use it but the application for houses to use rainwater for flush their WC was prohibited by the government. The reason for such prohibition is because the plumber made a mistake around Utrecht and the people got sick because they were drinking secondary water (from flushing toilets) instead of primary water.

PM: Ok but this was just one human mistake.

GV: Yes but you know how it is - the politicians promise that this should not happen again. And they made the new legislation.

PM: I am very interested about the organisation which is under the umbrella organisation BEL? I am interesting about how the self-management works here in the neighbourhood?

GV: Almost everything that you imagine is here. It started with involvement of habitants during the creation of the urban plan. People became part of the project team. Then people were involved in joint commissions, and also were involved in designing and maintaining the collective gardens (the gardens are not municipal space…we own it together!). Then people are involved in the foundation Terra Bella, which is maintaining the public spaces together with the municipality. This is also unique in Nederland that a public space is maintained together with the municipality. Then there is a working group on energy in insulation, who is doing monitoring, who is advising people about their maintenance, about contracts, etc.

PM: How do they communicate among themselves?

GV: By telephone, personal meetings, by e-mails, etc.

…
GV: There is also the local energy company Thermo Bello, which is a commercial company where the neighbourhood people own the shares of the company and are cooperants. We have 70 members from the neighbourhood. And then there is the city farm, which is working on the goals sets by the community, and there is a working group on mobility issues, and many more working groups. Almost on everything that you see regarding the public spaces here around we have a word we have a strong influence on it through our working groups (permanent and sometimes ad hoc).
The Terra Bela has a special cooperation with the drinking water company, who is owning the land with the fruit trees. There is working group of inhabitants, who does the maintenance of the trees and we do the harvest all together.

PM: Do you all participate in these activities voluntarily?

GV: Yes, everybody in everything,…… except I am director of the local energy company and I am paid for that. People depend on me if they heat or not. This is a commercial activity. Also the coordinator of the Foundation Tera Bella is paid. All the rest is on a voluntary basis.

PM: Thank you for the interview.

Priloga P: Vzorec vprašalnika

Questionnaire: Neighbourhood Community Centres ("NCC") in European Sustainable Neighbourhoods

1. What year was the local Neighbourhood Community Centre (NCC) created?
2. What is the story behind the NCC- "why" and "how" it was created?
3. Size in square metres (all together) of the NCC, number of halls, etc.
4. Who was the initiator of the local NCC implementation? Was it a bottom up or a top down approach?
5. The NCC was a brownfield (re-usage of ex industrial buildings) or green field development (new building)?
6. What is the history of the building (if it is an old building)?
7. Have local people somehow participated in the urban design implementation (internal or external) of the NCC?
8. Is there a Library in the NCC? (if yes, how does it work / how popular is it / is it integrated with the municipality library system or university)?
9. Is there any civic institution in the NCC?
10. Is any association in the NCC performing some religious related activities?
11. Are there any health facilities in the NCC, healthy living centres, employment centres, education or training facilities?
12. Are there any cafés/ restaurants / other local (or none) private (or public) companies in the NCC?
13. Is there any room or hall that could be rented for local citizens of the neighbourhood? How much does it cost or it is free?
14. Is the NCC integrated with the "plaza" (public square) in front of the NCC?
15. Are there any local associations of any kind (e.g. children, family, energy, sport or any others?)
16. What kind of public or private activities or services are offered by the local "neighbourhood community centre" (NCC)?
17. Are there any activities, or events, or projects aimed for children / elderly / for the under-privileged / others?
18. Are there any activities, or events, or projects related to local sports / or local culture / or sustainable transport projects / or other sustainability activities/ or other social activities/ etc.?
19. Are there any "common activities" (picnic / football game / festivals / food market / other, etc.) organised in the Neighbourhood? Are these activities organised by associations of the NCC?

20. What is the level of citizen participation in the NCC's activities, events, projects? How many people are involved and participate (in general)?
21. How is the communication with local citizens? How are local people in the neighbourhood informed about the events of the NCC? ("Platform of communication")
22. Is there a Local (Neighbourhood) Newspaper? Brochures? Mailing list? Webpage?
23. Is there a local festival in the neighbourhood? If yes; is it organised by the association from the NCC?
24. How is the heterogeneity of population in the neighbourhood? How is the heterogeneity of population using NCC services?
25. How many people are employed in the NCC (part- time / full time)? Who is paying the salaries for the NCC employees (the municipality / or the region authority / or local neighbourhood citizen / or other)?

Priloga R: Vprašalnik 1

Odgovarja: **Diego Pos** (Neighbourhood Community Centre "Gate House" - GWL Terrein, Amsterdam):

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Questionnaire: Neighbourhood Community Centres ("NCC") in European Sustainable Neighbourhoods

1. *What year was the local Neighbourhood Community Centre (NCC) created?*

1997

2. *What is the story behind the NCC- "why" and "how" it was created?*

The area was built as an ecological living district. It was thought that it is important to keep the people together after the building phase. This is also why the umbrella organisation was formed. Every apartment is an obligatory member of the organisation and pays a monthly fee.

3. *Size in square metres (all together) of the NCC, number of halls, etc.*

100 m2

4. *Who was the initiator of the local NCC implementation? Was it a bottom up or a top down approach?*

Both - bottom up and top down approach. There were a lot of bottom up involvement in the creation process of the area (every architect had a group of 15 inhabitants discussing the plans with him). But the construction company and the local city formalised the umbrella organisation in all the legal structures.

5. *The NCC was a brownfield (re-usage of ex industrial buildings) or green field development (new building)?*

Brownfield

6. *What is the history of the building (if it is an old building)?*

The whole GWL was a water company terrain from 1850. Thus the building was built in 1900 on top of one of the underground water cellars to control the opening of the gates of the cellar.

7. *Have local people somehow participated in the urban design implementation (internal or external) of the NCC?*

No.

8. Is there a Library in the NCC? (if yes, how does it work / how popular is it / is it integrated with the municipality library system or university)?

No.

9. Is there any civic institution in the NCC?

No.

10. Is any association in the NCC performing some religious related activities?

No.

11. Are there any health facilities in the NCC, healthy living centres, employment centres, education or training facilities?

No.

12. Are there any cafés/ restaurants / other local (or none) private (or public) companies in the NCC?

No.

13. Is there any room or hall that could be rented for local citizens of the neighbourhood? How much does it cost or it is free?

Yes we have some rooms and they are free for meetings and exhibitions.

14. Is the NCC integrated with the "plaza" (public square) in front of the NCC?

No.

15. Are there any local associations of any kind (e.g.. children, family, energy, sport or any others?)

No.

16. What kind of public or private activities or services are offered by the local "neighbourhood community centre" (NCC)?

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17. Are there any activities, or events, or projects aimed for children / elderly / for the under-privileged / others?

No.

18. Are there any activities, or events, or projects related to local sports / or local culture / or sustainable transport projects / or other sustainability activities/ or other social activities/ etc.?

Soccer tournament, exhibition of paintings.

19. *Are there any "common activities" (picnic / football game / festivals / food market / other, etc.) organised in the Neighbourhood? Are these activities organised by associations of the NCC?*

Soccer, summer party, planting day, cleaning day, cutting and picking the apple trees, A New Year's party. Organised partly by the NCC.

20. *What is the level of citizen participation in the NCC's activities, events, projects? How many people are involved and participate (in general)?*

Different groups of people are interested in different activities. Participation is voluntary. I guess in total 25 % takes part in one of the activities yearly.

21. *How is the communication with local citizens? How are local people in the neighbourhood informed about the events of the NCC? ("Platform of communication")*

Flyers, website, email, newsletter.

22. *Is there a Local (Neighbourhood) Newspaper? Brochures? Mailing list? Webpage?*

Mailing list and website.

23. *Is there a local festival in the neighbourhood? If yes; is it organised by the association from the NCC?*

Yes. A yearly summer dinner under the water tower.

24. *How is the heterogeneity of population in the neighbourhood? How is the heterogeneity of population using NCC services?*

Not very different from neighbourhoods around us. Maybe a little whiter and higher educated. Not many elderly people, because most apartments don't have an elevator. We don't offer many 'services', we mostly activate people to join activities.

25. *How many people are employed in the NCC (part- time / full time)? Who is paying the salaries for the NCC employees (the municipality / or the region authority / or local neighbourhood citizen / or other)?*

Only the neighbourhood caretaker. He is paid by the contribution / fees that people pay to the umbrella organisation.

Priloga S: Vprašalnik 2

Odgovarja: **Lejla Karović-Kersting** (Neighbourhood Community Centre "Glashaus" – Rieselfeld, Freiburg)

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Questionnaire: Neighbourhood Community Centres ("NCC") in European Sustainable Neighbourhoods

1. *What year was the local Neighbourhood Community Centre (NCC) created?*

1996

2. *What is the story behind the NCC- "why" and "how" it was created?*

City Administration wanted to omehow connect the social and cultural life of the neighbourhood.

3. *Size in square metres (all together) of the NCC, number of halls, etc.?*

On the ground floor we have 2 bathrooms, a cafeteria, 3 offices, one storage room, a hall, a library and an entrance space with a staircase. On the first floor there is a large hall, 2 bathrooms, 3 conference rooms and a large kitchen, 3 offices, 3 large rooms for children and youth, a small kitchen and 3 storage rooms.

4. *Who was the initiator of the local NCC implementation? Was it a bottom up or a top down approach?*

…

5. *Was the NCC a brownfield (re-usage of ex industrial buildings) or greenfield development (new building)?*

It is a new building – greenfield.

6. *What is the history of the building (if it is an old building)?*

….

7. *Have local people somehow participated in the urban design implementation (internal or external) of the NCC?*

…

8. *Is there a Library in the NCC? (if yes, how does it work / how popular is it / is it integrated with the municipality library system or university)?*

Yes, within the building there is a media centre for children and youth, and a department of the city library.

9. Is there any civic institution in the NCC?

Yes, the library.

10. Is any association in the NCC performing some religious related activities?

Directly across the street there is a church. See: http://www.kirche-im-rieselfeld.de/index.php/oekumene/

11. Are there any health facilities, healthy living centres, employment centres, education or training facilities in the NCC?

In the centre there are all rooms available for all types of activities - conferences, seminars, exhibitions, trainings, etc.

12. Are there any cafés/ restaurants / other local (or none) private (or public) companies in the NCC?

Yes, a café that is owned by the centre. See: http://kiosk.rieselfeld.org/glashaus/cafe-im-glashaus/

13. *Is there any room or hall that could be rented by local citizens of the neighbourhood? How much does it cost or it is free?*

Room	Private	Members
Room - Saal (OG)	275,00 EUR (whole day) 100,00 EUR (only evenings) 80,00 EUR (public)	235,00 EUR (whole day) 55,00 EUR (only evenings)
Kitchen- Küche (OG)	62,00 EUR (whole day) 46,00 EUR (only evenings)	52,00 EUR (whole day) 36,00 EUR (only evenings)
Conference room . I + II - Konf. I + II	105,00 EUR (whole day) 62,00 EUR (only evenings)	82,00 EUR (whole day) 41,00 EUR (only evenings)
Conference room IV. - Konf. IV	65,00 EUR (whole day) 42,00 EUR (only evenings)	55,00 EUR (whole day) 36,00 EUR (only evenings)
Youth space - Jugendraum (UG)	220,00 EUR	190,00 EUR
Music office - Musikanlage	50,00 EUR (Youth space) 41,00 EUR (Room)	50,00 EUR (Youth space) 41,00 EUR (Room)

14. *Is the NCC integrated with the "plaza" (public square) in front of the NCC?*

In front of the building the space is used for a summer cafe, in the summer the fountain serves for refreshing children, on Wednesdays and Saturdays it is market day throughout the year, there are also various festivals, etc.

15. *Are there any local associations of any kind (e.g. children, family, energy, sport or any others?)*

The entire lower floor is designed to for social work with children and young people. All inhabitants were explicitly asked to voluntarily initiate actions in accordance with the constitution of the centre.

16. *What kind of public or private activities or services are offered by the local "neighbourhood community centre" (NCC)?*

See answer for question 14 and 15.

17. *Are there any activities, or events, or projects aimed at children / elderly / for the under-privileged / others?*

See the whole programme here: http://kiosk.rieselfeld.org/kinder-jugend/

18. *Are there any activities, or events, projects related to local sports / local culture / sustainable transport projects / other sustainability activities/ other social activities/ etc.?*

Yes. See: http://kiosk.rieselfeld.org/quartiersarbeit/k-i-o-s-k-gruppen/

19. *Are there any "common activities" (picnics / football games / festivals / food markets / other, etc.) organised in the neighbourhood? Are these activities organised by associations of the NCC?*

Yes, in the past two years in particular stands out the program for elderly (see more http://kiosk.rieselfeld.org/quartiersarbeit/aelter-werden-im-rieselfeld/)

20. *What is the level of citizen participation in the NCC's activities, events, projects? How many people are involved and participate (in general)?*

…

21. *How is the communication with local citizens? How are local people in the neighbourhood informed about the events of the NCC? ("Platform of communication")?*

Through the news, leaflets and an 'information board'.

22. *Is there a local (neighbourhood) newspaper? Brochures? Mailing list? Webpage?*

…

23. *Is there a local festival in the neighbourhood? If yes; is it organised by the association from the NCC?*

…

24. *What is the heterogeneity of population in the neighbourhood? What is the heterogeneity of population using NCC services?*

More than 100 different nationalities live in Rieselefeld. Therefore services serve to a different variety of inhabitants.

25. *How many people are employed in the NCC (part- time / full time)? Who pays the salaries for the NCC employees (the municipality / the region authority / local neighbourhood citizens / other)?*

5- 6 people are employed full-time and 10 people are employed part-time. Out of a budget provided by the municipality authorities, the centre funds all employees.

Priloga T: Vprašalnik 3

Odgovarja: **Andreas Delleske** (Neighbourhood Community Centre "Haus 37" – Vauban, Freiburg):

……

Questionnaire: Neighbourhood Community Centres ("NCC") in European Sustainable Neighbourhoods

1. *What year was the local Neighbourhood Community Centre (NCC) created?*

The first idea was in 1992, when the soldiers left; an intermediate use from 1993 onward; the official start: between 2001 and 2007, because it had to be renovated first.

2. *What is the story behind the NCC- "why" and "how" it was created?*

When the first project of the former barracks site Vauban (SUSI, see http://www.susi-projekt.de) had been created, they wanted to conserve this "fifth" building but their funding was not sufficient. SUSI decided to install a kindergarten so that the city administration could not destroy it overnight. Then, they and the rest of the district had some years of time to think about future uses, about the renovation and to find a financing concept.

3. *Size in square metres (all together) of the NCC, number of halls, etc.*

2050 sq. meters, about 40 rooms. See http://www.haus037.de/geschichte/das-konzept-von-1999

4. *Who was the initiator of the local NCC implementation? It was a bottom up or top down approach?*

Definitely bottom up – the association SUSI was the first one who cared about the building, then also Forum Vauban.

5. *The NCC was a brownfield (re-usage of ex industrial buildings) or green field development (new building)?*

The building had been part of a barracks site, built in the times of fascism (1937), then used by the French military until the Berlin Wall fell. In 1992 they moved out.

6. *What is the history of the building (if it is an old building)?*

See 5. and here: http://www.vauban.de/themen/15-vauban/soziales/270-stadtteilzentrum-haus-037

7. *Have local people somehow participated in the urban design implementation (internal or external) of the NCC?*

Definitely, a lot. There have been several workshops to decide on everything - from the activities topics to aesthetic questions and energy.

8. *Is there a Library in the NCC? (if yes, how does it work / how popular is it / is it integrated with the municipality library system or university)?*

No - SUSI has a small library and there is a library bus coming to the Vauban district once a week.

9. *Is there any civic institution in the NCC?*

The city administration has the right to book some of the halls and we have a half-time employed lady who works as a social worker, paid by the city.

10. *Is any association in the NCC performing some religious related activities?*

Not in the Vauban district, but there are about three churches in a 2km radius. Most of us are non-religious.

11. *Are there any health facilities, healthy living centres, employment centres, education or training facilities in the NCC?*

Not in the Haus 037, but in the district. Maybe our meditation room would count in that list.

12. *Are there any cafés/ restaurants / other local (or none) private (or public) companies in the NCC?*

Yes, we have the privately-owned restaurant "Süden" (http://www.freiburgersueden.de) inside.

13. *Is there any room or hall that could be rented for local citizens of the neighbourhood? How much does it cost or it is free?*

Depends on what you offer. For social and cultural activities it can be rented for free as long there is no entrance admission fee. For private parties, a weekend can cost about 200 EUR.

14. *Is the NCC integrated with the "plaza" (public square) in front of the NCC?*

I would say perfectly... it also hosts a toilet for marketgoers and tourists.

15. *Are there any local associations of any kind (e.g. children, family, energy, sport or any other?)*

Sure, two childre's daycare groups, a meditation room, an art workshop, three benevolent associations, a kindergarten and the social worker's office, rooms for youth.

16. *What kind of public or private activities or services are offered by the local "neighbourhood community centre" (NCC)?*

The Haus 37 social worker organises flea markets, some cultural events, the yearly district party, and other gatherings (e.g. political or others) as demand arises.

17. *Are there any activities, or events, or projects aimed for children / elderly / for underprivileged / others?*

There is a lot for children association and activities but I do not have an overview.

18. *Are there any activities, events, or projects related to local sports / local culture / sustainable transport projects / other sustainability activities/ other social activities/ etc.?*

Not so much in Haus 037, but there are sports opportunities in the school and in the neighborhood.

19. *Are there any "common activities" (picnics / football games / festivals / food markets / other, etc.) organised in the neighbourhood? Are these activities organised by associations of the NCC?*

Yes, see the above answers.

20. *What is the level of citizen participation in the NCC's activities, events, projects? How many people are involved and participate (in general)?*

I can't say because I do not have an overview with numbers. One should ask for all the individual activities.

21. *How is the communication with local citizens? How are local people in the neighbourhood informed about the events of NCC? ("Platform of communication")=*

Mainly by their website http://www.haus037.de and by our district newspaper http://www.vaubanactuel.de and http://www.vauban.de

22. *Is there a local (neighbourhood) newspaper? Brochure? Mailing list? Web page?*

See point 21; not a real mailing list but you may subscribe to any topic in the forum system of the vauban.de website.

23. *Is there a local festival in the neighbourhood? If yes; is it organised by the association from the NCC?*

Yes, yes.

24. *What is the heterogeneity of population in the neighbourhood? What is the heterogeneity of population using NCC services?*

I can't tell but I would guess it's equal to the demographics of the district.

25. *How many people are employed in the NCC (part- time / full time)? Who pays the salaries for the NCC employees (the municipality / the region authority / local neighbourhood citizens / or other)?*

One person employed half-time.

Priloga U: Vprašalnik 4

Odgovarja: **Björn Cederquist** (Neighbourhood Community Centre "GlashusEtt" – Hammarby Sjöstad, Stockholm)

……

Questionnaire: Neighbourhood Community Centres ("NCC") in European Sustainable Neighbourhoods

1. *What year was the local Neighbourhood Community Centre (NCC) created?*

2002

2. *What is the story behind the NCC- "why" and "how" it was created?*

…

3. *Size in square metres (all together) of the NCC, number of halls, etc.*

300 350 m2, 4 floors

4. *Who was the initiator of the local NCC implementation? Was it a bottom up or a top down approach?*

It was not in the plan at the beginning in 2000. The first impetus came from the water company. Then they realised that it was important for social activities.

5. *Was the NCC a brownfield (re-usage of ex industrial buildings) or a green field development (new building)?*

…

6. *What is the history of the building (if it is an old building)?*

…

7. *Have local people somehow participated in the urban design implementation (internal or external) of the NCC?*

No

8. *Is there a Library in the NCC? (if yes, how does it work / how popular is it / is it integrated with the municipality library system or university)?*

No

9. *Is there any civic institution in the NCC?*

…

10. *Is any association in the NCC performing some religious related activities?*

…

11. *Are there any health facilities in the NCC, healthy living centres, employment centres, education or training facilities?*

Yes- educational for schools. They teach them about energy, waste and water management!

12. *Are there any cafés/ restaurants / other local (or none) private (or public) companies in the NCC?*

No.

13. *Is there any room or hall that could be rented by local citizens of the neighbourhood? How much does it cost or it is free?*

Sometimes it is free,…for commercial activities you need to pay.

14. *Is the NCC integrated with the "plaza" (public square) in front of the NCC?*

…

15. *Are there any local associations of any kind (e.g. children, family, energy, sport or any others?)*

The members of the Hammarby Sjöstad association meet here; also the local Boy-scouts are regular users, etc.

16. *What kind of public or private activities or services are offered by the local "neighbourhood community centre" (NCC)?*

The space for meeting; exhibitions to inform people about waste water and energy issues; the centre is the collecting point for bio paper bags for the neighbourhood.

17. *Are there any activities, or events, or projects aimed at children / elderly / the under-privileged / others?*

No.

18. *Are there any activities, events, projects related to local sports / local culture / sustainable transport projects / other sustainability activities/ other social activities/ etc.?*

…

19. *Are there any "common activities" (picnics / football games / festivals / food markets / other, etc.) organised in the neighbourhood? Are these activities organised by associations of the NCC?*

…

20. *What is the level of citizen participation in the NCC's activities, events, projects? How many people are involved and participate (in general)?*

At most 10,% (2000 people) are engaged in neighbourhood activities.

21. *How is the communication with local citizens? How are local people in the neighbourhood informed about the events of the NCC? ("Platform of communication")*

….

22. *Is there a local (neighbourhood) newspaper? Brochures? Mailing list? Webpage?*

Yes.

23. *Is there a local festival in the neighbourhood? If yes; is it organised by the association from the NCC?*

Yes, and at the beginning it was organised by GlashusEtt, but now not any more.

24. *What is the heterogeneity of population in the neighbourhood? What is the heterogeneity of the population using NCC services?*

…

25. *How many people are employed in the NCC (part-time / full-time)? Who pays the salaries for the NCC employees (the municipality / the region authority / local neighbourhood citizens / other)?*

2 people (part-time) paid by the water company.

PRILOGA V: Vprašalnik 5

Odgovarja: **Malena Karlsson** (Neighbourhood Community Centre "GlashusEtt" – Hammarby Sjöstad, Stockholm):

……

Questionnaire: Neighbourhood Community Centres ("NCC") in European Sustainable Neighbourhoods

1. What year was the local Neighbourhood Community Centre (NCC) created?

June 2002.

56. What is the story behind the NCC- "why" and "how" it was created?

To inform the residents about the environmental solutions, and how they can contribute in order to reach the environmental goals. But also to be a platform for companies which have been involved in the development. Envac, the company behind the waste vacuum system, is the company which has been most active in that regard

57. Size in square metres (all together) of the NCC, number of halls, etc.

I don't have the figure, and don't see how that can be of any interest. The "public" spaces are about 200 sqm. That is, the entrance floor and the two rooms where we make the presentations. One bigger one where, at the most 80 people could sit and listen, and a smaller one where only ten people can sit.

58. Who was the initiator of the local NCC implementation? Was it a bottom up or a top down approach?

It was initiated by the city of Stockholm.

59. The NCC was a brownfield (re-usage of ex industrial buildings) or green field development (new building)?

GlashusEtt is a new building, as are most of the buildings in Hammarby Sjöstad. Very few buildings were good enough to be renovated.

60. What is the history of the building (if it is an old building)?

…

61. Have local people somehow participated in the urban design implementation (internal or external) of the NCC?

No, as nobody lived here when it was planned and designed.

62. Is there a Library in the NCC? (if yes, how does it work / how popular is it / is it integrated with the municipality library system or university)?

Not in the centre, but yes, there is a library here in Hammarby Sjöstad. It is focusing on children and children's rights together with an association called Retoy, that also works with exchanging toys instead of buying new ones. All libraries in Sweden are run by the municipalities.

63. Is there any civic institution in the NCC?

No, as it is not a NCC. However we let the local Scout association borrow the facilities three evenings/week.

10. Is any association in the NCC performing some religious related activities?

Opposite GlashusEtt there is a church. We are not at all involved in their activities. However, we do cooperate when necessary.

11. Are there any health facilities in the NCC, healthy living centres, employment centres, education or training facilities?

Not in the NCC. In the neighbourhood there are both elderly care, dentists, maternal and children's care, health care centres, five schools at the elementary level and approx. 13 kindergartens.

12. Are there any cafés/ restaurants / other local (or none) private (or public) companies in the NCC?

Not in the NCC.

13. Is there any room or hall that could be rented by local citizens of the neighbourhood? How much does it cost or it is free?

…

14. Is the NCC integrated with the "plaza" (public square) in front of the NCC?

You are probably thinking of the fountain behind GlashusEtt. The architects have been very keen on the design and integration of everything here in Hammarby Sjöstad.

15. Are there any local associations of any kind (e.g. children, family, energy, sport or any others)?

Yes, there are some that has connection only to Hammarby Sjöstad. One domestic association, the Scouts, and also what we in Sweden call People's House. Then of course a lot of people are engaged in associations that do not limit themselves to city areas and are open to anyone, no matter where you live.

16. *What kind of public or private activities or services are offered by the local "neighbourhood community centre" (NCC)?*

We are open to anyone who wants to know about issues regarding environmental solutions in Hammarby Sjöstad or regarding drinking water, waste water and/or waste.

17. *Are there any activities, or events, or projects aimed at children / elderly / the under-privileged / others?*

We have no restrictions on who can visit us. Stockholm Water is focusing on school children from the ages of 9 and 12 years. We invite the schools and classes to come here to the information centre to learn more about sustainability and about water and waste.

18. *Are there any activities, or events, or projects related to local sports / local culture / sustainable transport projects / other sustainability activities/ other social activities/ etc.?*

…

19. *Are there any "common activities" (picnics /football games / festivals /food markets/ other, etc.) organised in the Neighbourhood? Are these activities organised by associations of the NCC?*

We cooperate with any activity that can be combined with our engagement. Like Sjöstadsdagen, the day of Sjöstaden, where both local companies and organisations and people are engaged.

20. *What is the level of citizen participation in the NCC's activities, events, projects? How many people are involved and participate (in general)?*

…

21. *How is the communication with local citizens? How are local people in the neighbourhood informed about the events of the NCC? ("Platform of communication")*

Should there be some kind of activities for the people living here we have the different channels to use, like local associations, local newspapers and the notice board in our window here at the information centre.

22. *Is there a local (neighbourhood) newspaper? Brochures? Mailing list? Webpage?*

Yes and no. The two newspapers are not distributed on a regular basis. Several different web sites. Regarding a mailing list, we do not have any information about that.

23. *Is there a local festival in the neighbourhood? If yes; is it organised by the association from the NCC?*

Not really a festival. Look at the answer mentioning the day of Sjöstaden.

24. *What is the heterogeneity of population in the neighbourhood? What is the heterogeneity of population using NCC services?*

It is rather homogenic. Middle aged Swedish families.

25. How many people are employed in the NCC (part-time / full-time)? Who pays the salaries for the NCC employees (the municipality / the region authority / local neighbourhood citizens / other)?

We are two full-time employees here. Salary is paid by the Stockholm Water company.