

Planning and implementation – from separation to joint processes

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Abstract

Planning and implementation are often regarded as separate processes with their own actor networks and their interests are, respectively, considered rather opposed. Due to the gap between these two processes, new ideas created in the planning phase risk to be dissolved before the realisation of plans occurs. In several recent urban planning projects new practises have been developed to bridge this gap. Based on the analysis of three urban planning cases, an ideal model is presented for a joint development process of the built environment. This model starts from user needs with an initial visioning phase, then runs through urban planning and building design, and finally ends in the construction phase to satisfy the user needs. The model aims at promoting collaboration and interaction between the stakeholders in order to enhance learning and transfer of knowledge throughout the process. In the next steps of the research, the model will be tested theoretically and further improved through the in-depth analysis of the case studies.

Introduction

In our urban planning system, planning precedes implementation. Planning is usually meant to be a tool to manage competing uses for space and to provide preconditions for a satisfactory physical environment for the users of the area in all their activities. The development of the society around us brings constantly new challenges both to professionals of planning and to decision-makers. As a solution, new stipulations may be created, but on the other hand, urban planners endeavour to prepare new and innovative plans within the existing legislation. Many of those involved in urban planning have, however, observed that visions and new ideas created in the planning phase only too seldom survive until the implementation, even if they are incorporated in the planning documents. In this study, it is assumed that this discontinuity of ideas is unfavourable for both the planning system and the resulting environment.

One way to examine the relation of urban planning and implementation is through process perspective. This view can illustrate the sequence of events during a typical urban planning and implementation process and contribute to understanding of factors that maintain their separation. Additional challenges to the whole process are caused by the time span that is exceptionally long in the development of built environment: the actors in the network change over time, economic trends may shift their direction totally, and the preferences of residents and other users may transform dramatically. This creates uncertainty in goal setting and difficulty in identifying user needs in the different phases of the process.

The duration of the urban planning process has been a constant concern of decision-makers, and this has paved the way for various attempts to reduce the length of certain parts of the planning process, often without an overall view of the total process. It is interesting that recent statistics show that the throughput times of local plans are in fact shorter than what is the general assumption (Rinkinen, 2007). The time pressure on building design also continues to grow. At the same time requirements increase concerning the participation of residents and other users in all parts of the process. Related to this, it is useful to consider that planning and implementation are both basically aimed at satisfying the needs of end users. This gives reason to presume that the interests of these two processes, often seen as opposed, could be combined by adapting new ways of working and new roles in a renewed network.

Research objective

The focus of this study is to examine if planning and implementation could be joint to one process including concurrent elements instead of the prevailing separation. In order to gain understanding of the characteristics of planning processes, three innovative Finnish housing areas are chosen as case studies: Viikki, Suurpelto and Vuores. The urban planning processes of the three cases have been described, modelled and analysed, applying process management theories (Väyrynen, 2007). The findings from these case studies have dealt in particular with the question: What kind of methods could be useful in bridging the gap between planning and implementation?

Based on the preliminary analysis of these cases, we present in this paper an ideal model of the 'development process of the built environment'. This joint process is aimed at superseding, or at least weakening, the dichotomy between planning and implementation. In the next steps of the research, the model will be tested theoretically and further improved through the in-depth analysis of the case studies.

Scientific background and methodology

Process management and urban planning

In this study, the term 'process' is used in the sense of "a sequence of individual and collective events, actions, and activities unfolding over time in context" (Pettigrew, 1997). This definition is suitable when we observe the process in action and describe how some organisational or social entity or issue develops and changes over time.

The theories of management of business processes often distinguish between core processes and support processes (e.g. Hannus 2004). Core processes cross the organisational units and extend beyond the organisational boundaries, to the activities of the customers and other stakeholders. Support processes can be defined as processes that enable the actual core processes. The core process begins from the interests of the stakeholders, runs through the official and unofficial networks and ends with a solution acceptable to the stakeholders.

When the process of urban planning is studied, the analysis often concentrates on the different phases of the planning procedure itself. This setting usually implies that the process of planning has been successful if the resulting plan is acceptable to the stakeholders. When the view is broadened, urban planning can be examined as part of one of the core processes of the

municipality, i.e. the process of development and maintenance of built environment, aimed at enabling activities needed by citizens, such as housing, working, and studying, with corresponding services (Fig. 1).

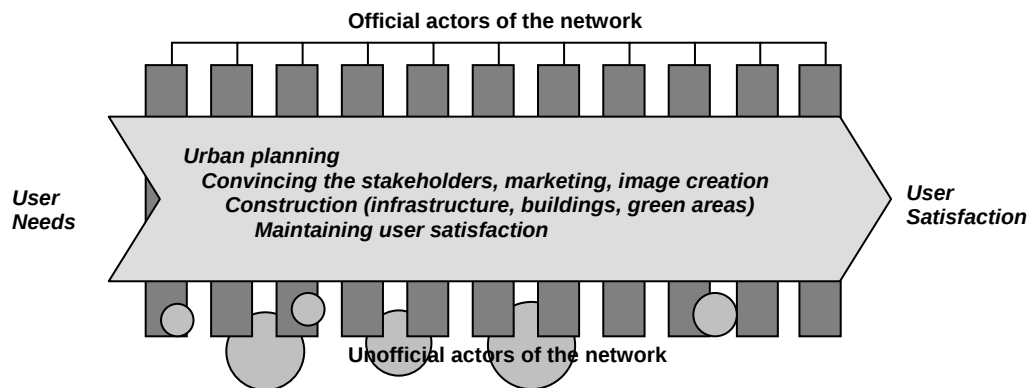


Fig. 1. Urban planning as part of a core process of the municipality (Lemmetty, 2005)

When the process management approach is applied to the development of built environment, it is essential that the process starts from user needs and ends with user satisfaction (Lemmetty, 2005). In addition to future residents, the term 'user' refers in this context to companies and service providers expected to operate in the area as well as to their employees and clients.

Developmental action research

The constructive research approach is common in engineering and management sciences (cf. Kasanen et al., 1993). The approach has also been used and proven efficient in the development of business processes (Smeds, 2001). Based on the findings of Lemmetty (2005) and Väyrynen (2007), this approach is introduced to urban planning, assuming that experience gathered in business process research can contribute to the development of urban planning, perceived as a networked process.

The constructive research starts with a practically relevant problem. To obtain a general understanding of the topic, the problem is linked to theoretical knowledge and a solution model is constructed. The solution model will then be tested and its practical functioning will be demonstrated. The empirical data needed is collected typically through case studies. Finally, the theoretical contribution of the solution model is indicated and the scope of applicability is examined.

The case studies are conducted as action research, aiming both at solving a practical problem in the case at hand, and contributing to science. Consequently, an action researcher participates actively in a development effort and collects data for scientific analysis and theory building at the same time (Gummesson, 2000). The constructive research, combined with case-study and action research strategy, forms the scientific basis of the 'developmental action research' followed in this study.

Case study design

Three innovative Finnish housing areas are chosen as case studies: Viikki, Suurpelto and Vuores. Through these cases, different in many respects, the planning processes and the networks

involved are studied and analysed to gain understanding of the characteristics of the processes and to reveal how new ideas and actions are incorporated in the process. The three cases allow an interesting research design. The Viikki area has already been constructed and taken into use, whereas the Suurpelto and Vuores areas are in early planning phase. By analysing and comparing these cases longitudinally over time from a process perspective, we can empirically cover the full process from the vision of a future area to its realisation.

The qualitative data collection methods applied in all three cases consist of thematic/semi-structured interviews, literature research and archival research. In the Suurpelto case, a special method has been applied to collect empirical research data. The method is called SimLab™ process simulation (e.g. Smeds et al., 2005). In the following, the main characteristics of the three cases are described.

Viikki: Viikki area in Helsinki is the largest sustainable building site in Finland with a strong experimental character. It is a suburban area for nearly 2000 inhabitants, constructed mainly in the years 2000-2003. The planning solutions in Viikki include a wide range of environmental and energy aspects that have received exceptional attention from the very beginning of the planning process. The main objective in Viikki has been the reduction of overall energy consumption by 50% compared to conventional residential buildings. In addition, innovative solutions have been pursued in efficient use of water and other natural resources.

Ecological design and architecture constitute an example of a new idea introduced in urban planning with lots of enthusiasm but, unfortunately, in several cases with a success much below expectations. Nevertheless, Viikki has been quite successful in meeting its original targets which makes it an especially interesting case to follow. The longitudinal analysis of the case will reveal how these objectives have been carried through the processes of planning and implementation, and what has been the network of actors needed in different phases. An important question is how the original innovative ideas have been mediated from plans to reality.

Suurpelto: The area of Suurpelto, in the city of Espoo, will be one of the largest development areas in the Helsinki metropolitan region. The total area is 325 hectares. It is estimated that within 10-15 years the number of inhabitants will amount to 7 000, and 8 000 workplaces will be situated in office blocks. The local detailed plans for the area are under preparation. The vision guiding the planning of Suurpelto is very ambitious: Suurpelto will be a distinctive garden city of the information age where housing, work, learning, leisure and services are combined in a novel way. The traditional borderlines between different functions will be blurred and interaction of public and private sectors will be encouraged.

One of the main concerns in Suurpelto is how to sustain the original vision through the planning and construction phases that will span over at least a decade. Suurpelto provides a good opportunity to study how the planning goals are shaped and how they will be embedded in the implementation chain. In this case, action research is particularly suitable for studying the actors and their roles in the networked process (Väyrynen, 2006).

Vuores: Vuores is situated in Tampere area, the second largest urban region in Finland. The vision of Vuores aims at combining nature, creativity and high technology in an ambitious way. The area for development is 1256 hectares. The main goal is to create a 'small town' that is active

throughout the day and provides high-quality services and a variety of residential options as well as attractive work premises to serve the needs of commerce and trade. The natural environment and ecology are an essential part of the area's identity. Environmentally valuable areas shall be protected. The traffic system plan emphasises public transport, walking, and cycling. Central elements include creativity and art in its various forms.

The planning of Vuores is still under way. The aim is to build homes for almost 14 000 residents and premises for 3 000 to 5 000 jobs by the year 2015. The Vuores area offers challenging opportunities for land use planning and construction. The new ideas to complement the conventional planning process are of special interest for this study.

Conventional process for planning and implementation

In order to obtain a model of reference for the three case studies, a conventional process for planning and implementation of a new urban area was visualised, based on literature and interviews of key actors in the studied cases (Väyrynen, 2007). The process was described in a simplified manner over time applying the typology of developmental progressions presented by Van de Ven (1992) (Fig. 2). The developmental pattern of the process in question appears in the form of multiple progressions where the process follows more than one single path (parallel, divergent, and convergent progressions). For a structured examination of the process, the time scale was decomposed into four periods, according to Langley's (1999) temporal bracketing strategy: visioning and goal setting, urban planning and participation, building design, and construction. A fifth period, use and maintenance, was excluded from this examination.

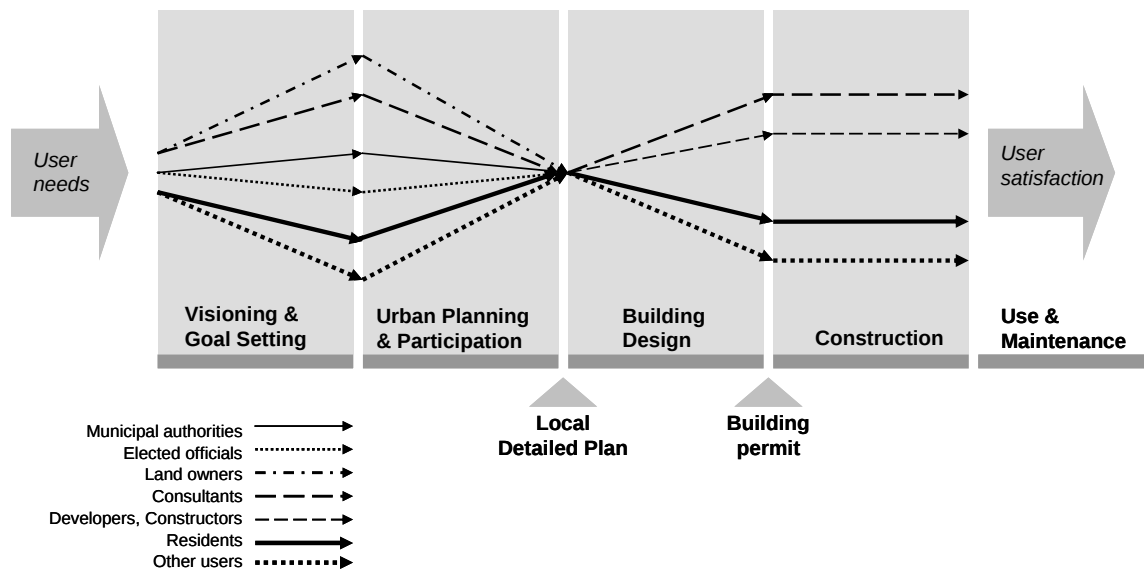


Fig. 2. Conventional process of urban planning and implementation of a new area

The process in Fig. 2 starts from user needs. In the visioning and goal setting phase, a number of actors (municipal authorities, elected officials, land owners, consultants, residents and other users) prepare the vision and set various goals for the new area. This is described with diverging paths. When the actual planning starts, specific participation and assessment procedures are required by law and this creates activity among the stakeholders. The vision and related goals

should act as a guideline for the planning. In practice, the guiding effect is often diminished because of the vagueness of the goals. In process management literature, great emphasis is laid on the importance of deriving concrete goals from the vision (e.g. Hannus, 2004). As the planning proceeds, the pathways gradually converge until all activities and knowledge accumulated in this phase are condensed to a document called the local detailed plan.

The modelling of a conventional urban planning and implementation process indicates that the local plan is a point where discontinuity occurs in the process. When the process then restarts, the process ownership is shifted to urban area developers and constructors. The previous phases are manifested to them merely through the local plan, with its regulations on the intended use of areas and their boundaries as well as the maximal volumes of building and the type of construction. So it can be said that the two processes are separated by a gap of knowledge; the main actors are changed but the knowledge transfer is narrow and formal. The original user needs and the eventual innovative ideas and solutions created during the visioning and planning phases get easily lost behind the stipulations and, hence, remain hidden to the new actors that are responsible for the implementation.

In the building design phase, some divergence of paths may still occur, provided that the local plan is interpreted with creativity. The building permit department controls that the plans are in compliance with legal regulations and the local plan; it has no duty to assess if the plan is accordant with visions or guidelines presented earlier in the process. As nobody seems to be responsible for steering the process towards a common goal, each actor of the construction phase continues the process in parallel without convergence of their pathways.

Results from the cases

The analysis of the three cases has been concentrated on revealing methods and practices that can complement the conventional process by e.g. building bridges across the point of discontinuity explained above. Several interesting practises were identified in all studied cases (Väyrynen, 2007). The impact of these practises on the process model is visualised in Fig. 3 (p. 8).

Case Viikki: Planning competition and quantitative criteria

The preliminary analysis of the Viikki case history has revealed at least two innovative features in the planning process. These new elements of the process are inserted in the process model in Fig. 3. The first is a new type of architectural competition where each participating group has to include, in addition to architects and engineers also developers, able to implement the innovative ideas of the competition entry (Viikki 1, in Fig. 3). The second innovation is the development of a set of ecological criteria to assess the environmental quality of the building projects in the planning phase (Viikki 2).

As Hannus (2004) points out, a central element in process management is measuring the performance in key areas. This requires process-oriented performance indicators and their appropriate measuring. Measures can be developed for both tangible and intangible assets (Kaplan & Norton, 2004). In urban planning, performance measuring is quite seldom utilised; this implies that targets are set without defining the indicators that could show whether the resulting environment reaches the original goals or not.

Case Suurpelto: Land use agreement with steering tools and quality assurance

The land area in Suurpelto is mostly privately owned. The main tool for cooperation between the city and the landowners is a new type of land use agreement. According to this agreement, the municipal infrastructure of the development project, including the implementation of technical systems and facilities as well as schools, day care centres and green areas, should be financed by the sales of new construction rights to the land owners.

The land use agreement includes an important new idea to enhance the quality of built environment in Suurpelto, namely the 'tentative development plan'. The developer is demanded to present a tentative plan to a steering group that then assesses how well the plan fulfils the functional visions of Suurpelto. The plan is then elaborated in collaboration to fit the vision, prior to the application for the building permit (Väyrynen, 2006). The conventional building control process is broadened into a quality assurance process where the plans would accumulate over time into a development portfolio, maintaining the conformity with the vision until implementation. The complementary effect of this new procedure to the process is indicated as 'Suurpelto 1', in Fig. 3.

A second new feature is the upgrading of the status of the plans for neighbourhood and quarter areas (Suurpelto 2). Usually these carefully prepared plans are merely optional guidelines for the developers, but in Suurpelto these documents are appended to the land use agreement, and thus they receive a legally binding status.

Case Vuores: Planning competition and vision management

The goal in Vuores has been to develop new public-private partnership models to be used in the implementation of the project. The first among these models is a new type of architectural competition developed for preparing the first residential areas (Vuores 1, in Fig. 3). The participating teams are chosen to enter the competition on the basis of certain preliminary criteria. Each multifunctional team has to include developers and constructors as well as architects and engineers. A new performance based quality classification has been elaborated by VTT Technical Research Centre of Finland for evaluating the competition entries (Huovila et al., 2007). The idea of the competition is, on the one hand, to increase the commitment to quality among the developers and constructors. On the other hand, the aim is to involve the actors of the implementation phase already in the early phase of the planning process, in order to achieve, in total, a more efficient process.

A second new model connected to the Vuores project is a frame of reference for the visioning process of an urban area (Riihimäki & Vanhatalo, 2006). According to this frame, all tools for planning, developing and implementation should be connected to the local vision. An open visioning process activates potential actors of the planning and implementation phases and increases their commitment to the results pursued. Riihimäki and Vanhatalo point out that a strong vision can help planning through its whole trajectory. The new visioning process of the Vuores project appears as 'Vuores 2' in Fig. 3.

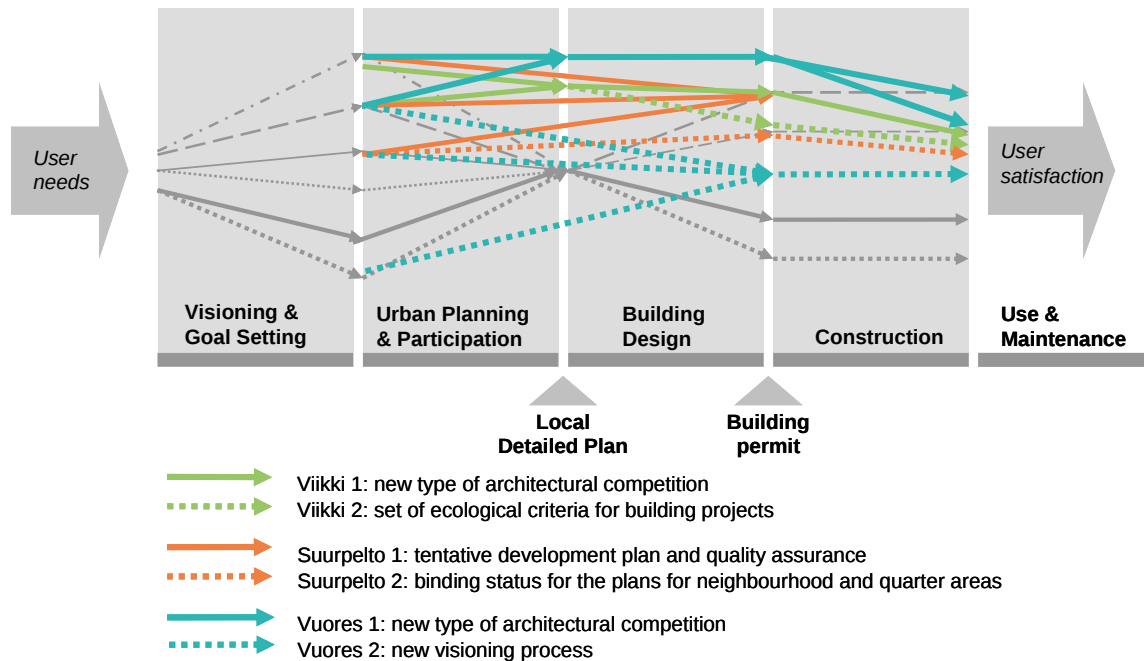


Fig. 3. New practises in urban planning and implementation in three case areas

When the practises of the three cases identified above are inserted in the model of conventional urban planning, following findings appear:

1. In all cases, new methods are introduced to increase concurrence of actions in the process
2. The modelling also indicates that, compared to the conventional model, a greater emphasis is put on the support of original visions and on the satisfaction of user needs
3. Involvement of actors of the implementation phase is strengthened already in the visioning and planning phases, which improves knowledge transfer and enhances the motivation to maintain the vision throughout the process
4. While the collaboration between municipal officials, developers and consultants is encouraged, the role of residents is not equally improved

Ideal model for the development process of the built environment

Based on the preliminary analysis of the three cases, we present in Fig. 4 the first draft of an ideal model for the 'development process of the built environment'. The purpose of this model is to bridge the gap between planning and implementation, illustrated in Fig. 2, by combining various innovative practises revealed by the three case studies to a joint process.

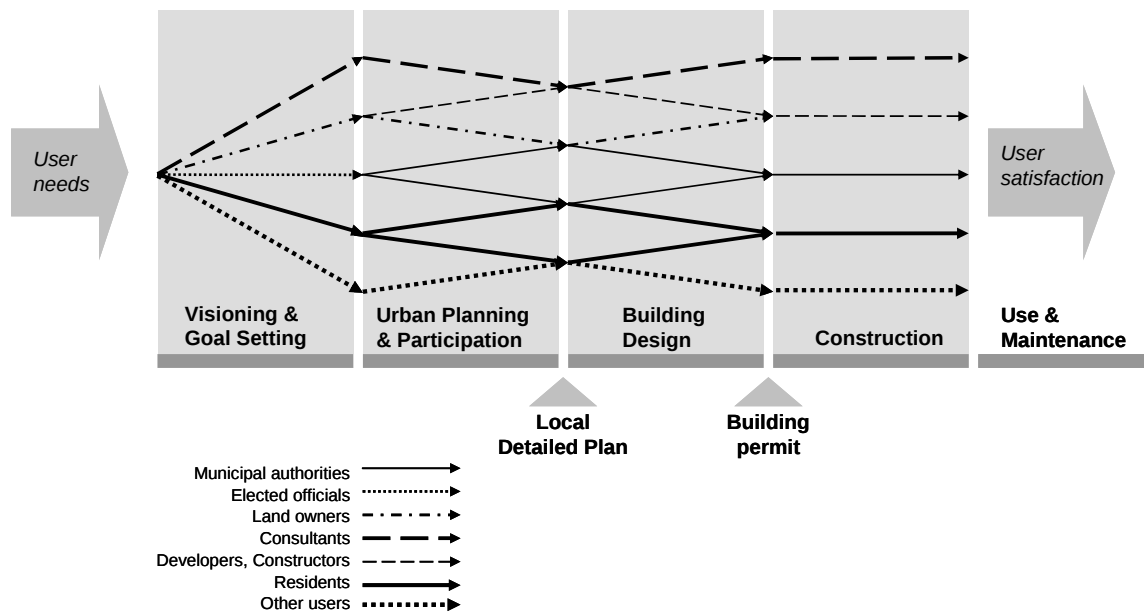


Fig. 4. Ideal model for the development process of the built environment

This model starts from user needs with diverging paths in the initial visioning phase, in the same way as the conventional model in Fig. 2. In the urban planning phase, all actors are involved in cooperation to prepare the local detailed plan. Contrary to the conventional model, concurrent processes are running to transfer the knowledge accrued during the planning phase to the design and implementation phases. The process then runs through the construction phase that satisfies the user needs.

Conclusions

The ideal model for the development process of the built environment presented above combines existing good practises and suggests that the gap between planning and implementation can be bridged in several ways, and some parts of the process can run in concurrence, contrary to the conventional model. Thus according to the model, the dichotomy between planning and implementation is no more perceptible in the joint process.

Attention should be, however, paid to the fact that the ideal model does not necessarily entail savings in time schedules of the process. Instead, the main emphasis should be on promoting such time-consuming actions as collaboration and interaction between the stakeholders in order to enhance learning and transfer of knowledge throughout the process. This in turn should increase satisfaction of the end users, which is the original goal of this joint process.

In the next steps of the research, it seems obvious that the model should be enlarged to include a fifth phase, namely use and maintenance. New cases may also be needed to study further new ways of strengthening the role of residents and other users in the development process of the built environment.

Acknowledgements

The research reported in this paper has been conducted in the collaborative OPUS research project at Helsinki University of Technology. The scientific partners in OPUS are the Enterprise Simulation Laboratory SimLab (Department of Computer Science and Engineering), and the Laboratory of Urban Planning and Design (Department of Architecture). The author is grateful to the multidisciplinary OPUS research team for their creative research effort. The research is financially supported by Tekes, the Finnish Funding Agency for Technology and Innovation, with municipalities and companies, which is gratefully acknowledged.

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