

UTOPIATYPING

NEW TOOLS & STRATEGIES FOR CITIZEN PARTICIPATION IN URBAN DEVELOPMENT

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Abstract

Citizen participation in planning and planning processes is growing but often discrepancies between citizens' expectations and established planning practices – or between feelings and facts – leads to frustration and antagonism instead of ownership and consensus. The question is what new strategies and tools are needed to bridge the gap and build the capacities for a better understanding between citizens and planners?

In this paper we present a tool for *Utopiatyping*, i.e. presenting easily accessible information about future planning initiatives in a structured way as a basis for a joint vision formulation process between planners and citizens. We also discuss the tool as a part of a new strategy in planning where citizen participation is a two-way process with a greater focus on raising the awareness of the complex issues involved in planning as a practice instead of just focusing on involving the citizens in the project or plan at hand.

The Utopiatyping tool in question is an interactive 3D-based application which allows the user to access information about future planning scenarios in a more explorative way. In the paper we discuss two different instances of the tool. First we discuss the installation *Yet the Waves Reflect* – an interactive installation for presenting information about the potential consequences for planning due to rising sea levels. Second we discuss *KOEGE2027* – an installation created for and in collaboration with the municipality of Koege, Denmark as starting point for an ongoing planning process which runs from 2007-2027.

New strategies and tools for supporting citizen participation is essential for practical urban planning where participatory processes often are viewed and conducted as stand-alone experiments, ad hoc processes or based on outdated strategies and with tools that do not use relevant and up-to-date technology.

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1. Introduction

It will come as no surprise that different people see the world in different ways. We all have different cognitive geographies (Dahl 2008), and while two people with divergent mental models of the ‘good city’ might live in the same neighbourhood for a lifetime without conflict, it is obvious that participatory planning processes increases the risk of controversy just by bringing these two people together at the same workshop table. And when you add a planner with factual knowledge of how the city ought to be, then the mix becomes explosive.

Planning processes in Denmark – as well as in many other countries – have seen a renewed interest in citizen participation in recent years. The reasons why politicians, planners, and experts let citizens participate in planning processes vary greatly, but based on our experiences in a Danish setting we have identified three basic political agendas as the main drivers: 1) to create ownership, 2) to build capacity (at both expert and citizen level), and 3) to promote innovation. There is sometimes also a more (or less) obvious political agenda which can be identified as the need to legitimate urban development plans. On the other hand we have the citizens who are motivated by 1) the possibility of influencing the urban development, 2) building (receiver/sender) capacity, and 3) the experience in itself (which is mostly relevant in those rare cases where there is actually a novel experience to be had). On this side of the table we also have a more or less ‘hidden’ political agenda which can be identified as the need to decimate the influence of other citizens in cases where their views and demands come into conflict with one’s own.

There is basically nothing new about these observations and the same goes for our basic assumption that conflicting notions of the ‘good city’ might be one of the main reasons why participatory processes often end badly – one man’s utopia is often another man’s dystopia, as the saying goes. The main questions are; how do we strategically design participation processes to accommodate conflicting views of what our cities should be like? And how do we create processes that promote ownership, innovation and capacity building – and give the participants a novel experience which makes showing up worthwhile?

In different constellations the authors of this paper have worked with a number of strategies and tools addressing the questions raised above. Through experiments and practical experiences with games, scenarios, explorative tools, visualisations, and different workshop techniques we have found that participation should; a) take place from the earliest stages of the planning process (Løssing 2005), b) adapt its ‘*scale of realism*’ according to the scope of the project and the target groups (Løssing & Delman 2003, Løssing et al. 2003), and be used to raise awareness of the complex issues of planning and planning processes before letting citizens actually plan anything (Delman & Løssing, 2005, Nielsen et al. 2005). Based on our experiences we have formulated a model of participation processes, the AELIA-model (see section 2) which we will discuss as a basis for an understanding of a strategy for participation we have coined *utopiatyping*. We will also discuss some underlying approaches which in different ways qualifies our notion of utopiatyping, primarily prototyping, gaming-simulation, scenarios, and knowledge spaces. These approaches will be exemplified through relevant projects, e.g. prototyping through *The Luminous Planning Table* (Ben-Joseph et al. 2001), gaming-simulation through *The Harbour Game* (Delman & Løssing, 2005, Nielsen et al. 2005), scenarios through *City Voices* (Nielsen, 2006), and *Expositur* (Fuchs & Eckermann 2001) as an example of a knowledge space. As examples of actual utopiatyping tools we will discuss two related projects *Yet the Waves Reflect* from 2006 and a more recent project *KOEGE2027* from 2007-2008.

2. The AELIA-model

Even though light-weight communication and process models are dime-a-dozen we risk our neck by proposing yet another based on our experiences within participation processes in urban development contexts. Our model is originally inspired by the well-known, but rather dusty and simple marketing effect model, the AIDA-model traditionally ascribed to Elias St. Elmo Lewis in 1898 (ProvenModels 2008). Basically the model describes how to grab the customers' *Attention*, awaken their *Interest*, stimulate their *Desire* and goad them into *Action* which is synonymous with buying the product you want to sell. In an urban development context the model might be too simple, but it can still inspire us to think in new ways.

In a Danish context a main problem of engaging citizens in participatory urban development is getting our *attention* in the first place. How can planners and politicians get us, the citizens, to acknowledge their claim on our time when so many other relevant activities are vying for our attention? When they actually succeed in getting our attention they had better keep us interested – they need to give us a novel *experience*. Seeing that urban development often involves very complex issues they will more often than not have to build our capacity and raise the general level of knowledge among all of us participating; they have to introduce an element of *learning*. When we, the participants, are up to speed they need to give us real *influence* and when our input has been integrated into the process relevant actors have to take *action* in various ways depending on the aim of the project. Consequently participatory processes have to encompass *Attention, Experience, Learning, Influence* and *Action* – which give us the AELIA-model.

Though utopiatyping is just one possible strategy for fulfilling the intentions of the AELIA-model it makes sense to use the model as both a basic exposition of the authors' general views on participatory processes and a framework for understanding how the different projects and tools discussed in this paper relates to a more generalised process model. But before we turn to a discussion of these projects and tools, we will try to give a brief introduction to the roots of the notion *utopiatyping*.

3. Utopiatyping

Since Raphael Hythloday visited Moore's¹ famous island the double entendre of *Utopia* has been in play as an integral part of our common cultural heritage. The word-play making *Utopia* (meaning nowhere) sound like *Eutopia* – the good place – was probably intentional from Moore's hand (Carey 1999); the good place is nowhere, and consequently we will never reach it. At the same time utopias has since Moore coined the term more often than not had the double function of being both a literary genre and a practical political philosophy (Goodwin 2001). As Jameson puts it in the first line of his book, *Archaeologies of the Future*; "*Utopia has always been a political issue, an unusual destiny for a literary form [...]*" (Jameson 2005, p. i). While this paper is concerned neither with Thomas Moore's literary puns nor with the utopian genre as such, both are relevant to an understanding of how utopiatyping as an operational tool for citizen participation in urban development can come about.

First of all the common use of the word *utopia* denotes it as a good, albeit unobtainable place, thus we have coined its opposite, the *dystopia*, to balance the term. This had to be done seeing that some utopias had a tendency to describe ideal societies that in reality would be living hells for many of their inhabitants. Cities in particular have been the source of utopian thinking,

¹ The book was originally published in 1516

and consequently they have also been hit hard by the imagery of dystopian thought; *“Cities have more generally often been viewed as sites of potential freedom, in tension with countervailing perspectives that cast them at the same time as centres of alienation, despair and dystopian nightmares.”* (Pinder 2005, p.7).

One of the more famous dystopias is of course *1984* by Orwell². In some ways his book signalled the end of utopia as a practical political philosophy, at least for some decades to come, since utopias from this point onwards were associated by many people with dictatorial oppression (Jameson 2007, Jacoby 2005). As Pinder expresses it; *“[...] it has become common to speak of living in a post-utopian era, as well as to oppose the very concept of utopia.”* (Pinder 2005, 242) But in recent years the term has been revived (Goodwin 2001) and its relevance as a way of thinking (e.g. Bloch 2000, Jacoby 2005), a literary genre (Carey 1999), a cultural phenomenon (Jameson 2007) and as a political tool (Stillman 2001) is under new scrutiny.

While a full account of the abovementioned perspectives might be necessary to uncover all aspects of utopiatyping as a strategy and tool for citizen participation in urban development we will have to restrict our exposé in this context to a more practical discussion of how utopias can be used in participatory development processes and why we propose the term utopiatyping as a label for this utilisation.

Before we do this, it is nevertheless necessary to turn our attention to a few entries from the comprehensive catalogue of utopian studies. Especially the notion of utopianism as a political philosophy and the idea of utopianism as a way of thinking are relevant to the idea of utopiatyping as both a politically oriented strategy concerned with engaging different actors in urban development and as a driver for innovation in the development process. Utopias are by some seen as a practical political philosophy, *“that considers and assesses ideals, means, and circumstances in order to facilitate wise human action.”* (Stillmann 2001, p. 10). Basically Stillmann promotes utopias as a way of contrasting, with a quote from Macbeth³, *‘what is not’* with the *“ideals, undertakings, and institutions of contemporary society, encourage a critical perspective on them, inspire a thoughtful evaluation of present and alternative individual and social ideals and activities, and consider if and where change is feasible and desirable.”* (Ibid. p. 11). In many ways this is exactly how practitioners and researchers would describe the ideal participatory urban development process. But many still view utopias as a direct route to totalitarianism and it is a *“standard stereotype that utopias present blueprints to be realised or dreams to be established [...]”* (Ibid. p. 11), but *“for many utopians the central concern is the process of raising and reflecting on alternatives, thinking about the present in light of them, and acting where warranted.”* (Ibid. p.11). Also Jameson discerns two separate threads of utopianism; *“[...] the one intent on the realization of the Utopian program, the other an obscure yet omnipresent Utopian impulse finding its way to the surface in a variety of covert expressions and practices.”* (Jameson 2005, p. 3)

Another utopian concerned with utopianism as a way of thinking is Jacoby, who names the two different genealogical lines running from Moore until the present day; he distinguishes between what he terms *blueprint* utopians and *iconoclastic* utopians (Jacoby 2005). In line with Stillmann, Jacoby is not too fond of the former variety; *“The blueprints not only appear repressive, they also rapidly become dated.”* (Ibid. p. 32). Both aspects would also be considered nuisances in participatory urban processes; repression because we would not want to exclude

² Published in 1949

³ *“and nothing is, But what is not”* Act I, scene III

first-rate alternative ideas when trying to promote innovation. And datedness should always be kept in mind when we concern ourselves with processes that may produce built environments that will exist for generations.

A well-known problem in involving users in any kind of innovative processes is that you run the risk of just perpetuating already existing ideas – without proper inspiration and well-planned processes most users will just want more of the same, or as Jacoby puts it; *“In outfitting utopia they order from the catalogue of their day.”* (Ibid. p. 32). What he proposes, then, is a strand of utopianism running counter to the blueprints; the iconoclastic utopianism exemplified by among others Ernst Bloch and his work *The Spirit of Utopia*⁴ (Bloch 2000). He then goes on to trace this approach to utopianism through (primarily) Jewish history all the way back to the second commandment; *“You shall not make for yourself a graven image, or any likeness of anything that is in heaven above, or that is in the earth beneath, or that is in the water under the earth.”* etc. This aversion to depicting what we might term ‘what is not’ is, according to Jacoby, at the heart of the iconoclastic utopianism. What characterises this form of utopianism is basically the omission of *“visual markers”* (Jacoby, 2005, p. 119) and an ethical, value-based longing as opposed to the more aesthetical, descriptive blueprint utopianism; *“While cherishing today, the iconoclastic utopians harbour keen hopes for the morrow, hopes for a world of freer lives and passions.”* (Ibid. p. 143). In section 5 we will return to a more detailed discussion of why both iconoclastic utopianism and blueprint utopianism are relevant in relation to participatory urban development processes.

Jacoby also questions the relation between utopias as a critical mirror of their own time or as a mirage of the future, asking *“To what extent are utopian dreams an attack on the here-and-now, the pedestrian, nonutopian reality, and to what extent are they imaginations of a future?”* (Jacoby 2005, p. 39). While Jacoby assumes that the utopian dream in many ways incorporates both the criticism of contemporary society and the vision of a new, he also introduces, by way of Aristophanes’ play, *The Birds*, and his (in)famous *Cloud-cuckoo-land*, the fact that a great many utopias also more or less implicitly criticises themselves, very often using humour or ironic distancing. The abovementioned plurality is one of the main reasons why a utopia(type) can be an excellent tool in participatory development processes – at the same time it can embrace an acidic criticism of what is, a serious vision of what can be and an inherent debating point often wrapped in disarming, humoristic descriptions that can serve as the basis for further discussion among the participants.

In section 5 we will discuss further how these observations are related to utopiatyping as a strategy for participatory urban development processes, but first we will turn to four different approaches that taken together serve as a foundation for making utopias operational in a more practical context.

3.1. Prototyping

For some it will be evident that the term *utopiatyping* is related to *prototyping* – a well-known method in areas such as industrial design, interaction design, system development and engineering just to mention the obvious ones. In all of these areas prototyping is basically used because: *“It is not usually possible to test the design fully by analyzing the specification; some aspects of usability can be measured only by building and testing a working system. Therefore a prototype is built according to the specification, and is tested in the field or in the laboratory.”*

⁴ Originally published in 1918

(Newman & Lamming 1995, p. 111) Seeing that specifications change during the development process, especially in participatory development, “[...] *the prototype can be modified too, and tested again [...]*” in an iterative process (Ibid. p. 111). Or as Floyd puts it in the context of IT system development a prototype is “[...] *an early practical demonstration of relevant parts of the desired software.*” (Floyd 1984, p.2) that can be used as “[...] *a learning vehicle providing more precise ideas about what the target system should be like.*” (Ibid. p. 3). So, just to state the obvious; prototypes are early, more or less functional versions of a future system or product with a degree of complexity which makes it feasible to spend time and money on testing and evaluating many iterations instead of just putting it out there and let it float or sink. While prototypes are valid tools for processes within the areas mentioned above they are not easily integrated into urban development processes which are infinitely more complex, typically on a much larger scale, with longer time spans, and often, intentional or not, resulting in a multitude of by-products. While a few design products and IT-systems actually have an impact of the users’ quality of life they rarely result in angry letters to the editor, influence election results, or give entire neighbourhoods a bad name over time. Urban development and planning, on the other hand, is considerably more relevant to the well-being of its end-users who have to live with and in the results of bad planning or can enjoy the benefits of conscious urban development.

One fairly recent project or tool that tries to support *prototyping* within some of the classic aspects of urban planning is the *Luminous Planning Table* [LPT] (Ben-Joseph et al. 2001). LPT is an interactive, real-time simulation tool designed for physical planners and urban designers which will supposedly enable them to prototype certain aspects of urban planning and communicate these to a broad range of stakeholders involved in planning processes. The purpose of the tool, according to the authors, is to enrich communication, learning and decision-making between *nondesign professionals*⁵, citizens and planners by integrating different visual representation techniques within the system: “*Often, several different modes of representation must be used within a project to convey different kinds of information and aspects of the design. It is this separation between various representative forms that increases the cognitive load on both the urban designer and the audience, who must draw relationships between dislocated pieces of information.*” (Ben-Joseph et al 2001, p. 195) In other words, the LPT was envisioned as a means to unify two-dimensional, three-dimensional & dynamic modes of representation. In doing so a single creative space is defined that, allegedly, serves the multiple needs of the urban designer and laypersons alike.

The LPT is composed of projectors hanging from above, with cameras pointing down at the surface enabling it to see the changing positions of different physical objects, e.g. models of buildings. Each physical model has a range of virtual properties which are projected onto the worktop table when the physical model is placed on the table. A proposed building is for example capable of showing daylight shadow movement, reflective glare and ground wind patterns and the projections are instantly updated as the user moves the model around the table. A camera can be placed in and around the augmented physical models on the table and the overlaid images are projected above the table for the benefit of both designers and spectators.

The LPT can also function as a distributed workspace allowing two groups of people at different locations to work on the same design. Ben-Joseph et al. recognises that while the LPT’s method of “[...] *giving additional meaning and animate ordinary inert objects is a cognitively*

⁵ By *nondesign professionals* the authors mean people professionally involved with planning processes who are not themselves planners, e.g. politicians, entrepreneurs, students etc.

powerful idea [...]” (Ibid. p. 201), it still lacks something to be desired in terms of incorporating social, political and economic factors.

3.2. Gaming-simulations

Another approach which might address some of the issues left out in prototyping is gaming-simulations. Simulations are characterised by their apparent openness or lack of rules beyond their scale of realism (Løssing et al. 2003) which constrains the user according to e.g. the laws of physics (in a flight simulator) or the amount of resources available (in an economics simulator). As Gray and Borovits put it; *“Simulation offers the ability to generate random scenarios, extreme case scenarios, and statistical output distributions quickly and easily; whereas, gaming provides only a single or a few replications which are never statistically significant. Simulations provide results that help managers understand the range of issues they must cope with. Gaming, on the other hand, provides a “hands-on” feel and the ability to see how people really respond, not just how the simulationist assumes they will respond.”* (Gray & Borovits 1986, p. 233)

A characteristic of any game, *“[...] is that it creates no wealth or goods [...] At the end of the game, all can and must start over again at the same point. Nothing has been harvested or manufactured, no masterpiece has been created, no capital has accrued.”* (Caillois 2001, p. 5). In the game-world activities are also guided – or constrained by – a number of arbitrary rules, it is; *“[...] essentially a separate occupation, carefully isolated from the rest of life, and generally is engaged in with precise limits of time and space. [...] The confused and intricate laws of ordinary life are replaced in this fixed space and for this given time, by precise, arbitrary, unexceptionable rules that must be accepted as such and that govern the correct playing of the game.”* (Gray & Borovits 1986, p. 6-7).

Gray and Borovits also states that, *“On a scale of abstraction, gaming-simulation lies between role playing and computer simulation [...]”* (Ibid. p. 233), meaning that gaming-simulations combine the two worlds by allowing the user to explore different aspects of e.g. a city, as in SimCity, but basically the exploration is controlled by the game design and a set of rules. One such gaming-simulation is The Harbour Game from 2002 (Delman & Løssing 2005, Nielsen et al. 2005, Lauwaert 2007).

The starting point for The Harbour Game was the planning strategy and process initiated by the municipality of Aarhus, Denmark. The municipality had started a somewhat traditional master planning process concerning the harbour areas, and the team behind the Harbour Game were interested in facilitating an alternative process for experts as well as the citizens. From this arose the main focus of The Harbour Game - to create a tool that could level the playing field and allow experts, politicians and citizens to engage in a debate about the future harbour on an equal footing.

The general idea behind the game-based approach was that using simple rules facilitates formalised communication which in some ways simplifies the many complex issues involved in large scale urban planning. Thus the rules were designed to assure that all players were equal, regardless of prior qualifications and real-world influence. The common goal for the players were not necessarily to win the game, even though we incorporated competitive elements such as ‘teams’ and ‘points’. Instead our intention was to give the players a better impression of the many aspects of urban development and at the same time ‘force’ them to develop common visions by ‘rewarding’ certain behaviours with points.



Figure 3.2.a. The game in itself consisted of a large gaming table with a map of the areas in question. On this map the players/teams could place project markers representing individual projects.

The game in itself consisted of a large gaming table with a map of the areas in question. On this map the players/teams could place *project markers* representing e.g. an opera house, playground, housing for elderly etc. The harbour was then divided into different areas, individually ‘priced’ with points based on their ‘attractiveness’ – a term that covered every point of view, from the developer’s to the politician’s – which was established by the attending public through a voting system. Each team was then given a secret mission, e.g. to insure that the harbour areas became a cultural centre of the city or that the relevant infrastructure for the other teams’ projects were in place. The teams could then place their project markers in any area, argue why others should support their project and consequently attract ‘investors’ (in a very broad sense of the word) who would share the ‘cost’ of the area. Points were then given for a variety of combinations⁶, e.g. creating a diversified area, obtaining support from many teams etc.

Both the table and the markers were tracked by a camera that allowed us to recognise individual projects, their position on the map and mutual relations. This allowed us to overlay the physical markers with digital information, primarily demographic data, on a large screen and at the same time we could ‘record’ the game and the outcome of each debate as a finite ‘urban development’, i.e. an area where e.g. the mayor of Aarhus, town councillors, NGOs and planners had agreed on a new opera house, canals, more cafés and a large amount of new low cost apartments.

One of the problems with gaming-simulations such as The Harbour Game or SimCity is that even though they allow the actors to relatively risk-free try out different aspects of the future city, they take a top-down, omnipotent view of the city which fails to incorporate some of the finer points of urban life associated with the way that we, as citizens, *experience* the city.

3.3. Scenarios

This risk might to some extent be alleviated through the use of scenarios. Scenario based planning has been around since at least the early sixties, most notably is perhaps Herman Kahn’s use of post-nuclear-war scenarios (Kahn, 1963). Particularly in the mid 80’s scenarios won acclaim as tools for decision making within in the business world (Wack 1985A & 1985B). Scenarios are also essential tools in many interaction design processes, where they are

⁶ The master rules are more than six pages long and we would not want to bore our readers with all the details.

commonly defined as; “[...] a description of an activity, in a narrative form [...]” (Nardi 1992, p. 13) and that “[...] when scenarios look at a system they do it from the outside, from the viewpoint of the user [...]” (Kuutti 1995, p. 21). Seen from this angle scenarios are not just strategic planning tools, but tools with a strong focus on how the design object or system is perceived from a user’s perspective instead of from a designer’s or a developer’s point of view.



Figure 3.3.a. Pictures from some of the structured sessions at the main Library of Aarhus.

As a strategic tool for participatory planning practices scenarios and *visioning* are also rather well-known (e.g. Thomas et al. 1988, Sanoff 2000). The authors have also made extensive use of scenarios in a variety of participatory planning processes. Our project *City Voices* from 2006 (Nielsen 2006) incorporates scenarios as a central element of a participatory urban development process. Basically the project was concerned with involving users and citizens in the early visioning stages of the future Multimedia House, a 28.000 m² building with surrounding areas to be built at the harbour in Aarhus from 2012-2015.

The project consisted primarily of two interactive installations; one exhibited in the main library of Aarhus and one in Aarhus Centre for Contemporary Art. Each installation was an interactive table on wheels and by moving the tables a map displayed on a tabletop screen was panned, making the table a peephole (Gaver et al. 2004) into a larger digital map. The user could choose between three different maps; a local map of Aarhus, a map of Denmark, and a world map. On each of these maps a number of scenarios were placed, each one containing a voice from the future telling about a personal experience in relation to the then finished Multimedia House. The idea was to inspire the users to voice their own opinions and tell us about their experiences from similar places all over the world. A microphone on the table allowed the user to record their own scenario and leave it for the next user to encounter. During the process the users’ scenarios would then be accumulated for all to hear along with the original scenarios. These user scenarios could both be accessed through the two interactive tables and through the project website⁷. The daily use of the tables did not provide us with a multitude of useful scenarios, but we also carried out a number of structured sessions with e.g. interest groups, NGOs, students, and ordinary citizens using the tables as a novel way of engaging the users (Nielsen 2006). These sessions provided us with material that at the moment serves as the basis

⁷ <http://www.byensstemmer.dk>

for parts of the competition brief for the international competition for the Mediaspace, as the project is now called⁸.

While the project showed that scenarios are a good way of engaging citizens and users it also showed that when you have to create shared knowledge spaces for publicly accessible participatory processes you have to think hard about how to frame your scenarios in a way that facilitates both experience, learning and influence among a large variety of users.

3.4. Knowledge spaces

In May 2001 Fuchs & Eckermann launched the virtual exhibition *Expositur – Ein virtueller Wissensraum* showing items from 10 Viennese museums. The content were provided by the museums and selected for its ability to be comprehensible to people of “*all ages, educational background and computer literacy*” (Fuchs & Eckermann 2001, p. 1). By using the game engine from Epic Megagames’ UNREAL Fuchs & Eckermann were able to create a three dimensional spatial structure to organise the exhibited objects in. Three simultaneous visitors can freely navigate this constructed universe where the exhibition space and the exhibited objects are combined in a symbiotic and semantic relationship. The 3D generated space becomes more than just a generic exhibition space by encoding it with knowledge relating to the object of Viennese museums. Rather than mimic the 10 traditional exhibition spaces Fuchs & Eckermann designs each space specifically to maximise the experience of the exhibited objects and they connect the notion of moving to the notion of experiencing and gaining knowledge about the subject in hand (Ibid. p.2.) The visitor has to move to unveil the knowledge and find the facts hidden in the structure of the space. “[...] *the user of the virtual museum has to jump into a water zone in order to hear about the extinction of an ancient fish once populating the Danube River. The user has to operate triggers and barriers to learn about the dangers of machinery provided by the Technical Museum. Or he/she has to walk [...] down a spiral staircase to reach the hall of Sigmund Freud’s subconsciousness [“Die Traumdeutung”].*” (Eckermann 2008).

Visitors move around in the space by controlling a three dimensional figure - an avatar. They can walk, run, climb, jump, crouch, swim or fly according to the spatial situation. The visitors of *Expositur* can freely choose their own path through the exhibition and thus create their own cognitive knowledge map. Fuchs & Eckermann compare the system they have designed with traditional e-learning systems based on video footage where the participants ability to self-construct an accurate personal map of the space is diminished due to the restriction of a linear path. The UNREAL game engine allows different ‘player’ styles based on the visitors mood. Some may run around others may walk slowly around.

While the ‘physical’ layout and the interaction of the virtual exhibition was important to create a spatial meaning of the exhibited knowledge yet another sensory input played a crucial part to consolidate this sense making; sound. By using sounds in various ways inspired by theories of filmmaking (Ibid. p. 3) they created an environment that facilitates navigational learning while at the same time giving the user an experience related to both the layout and the content of the knowledge space.

⁸ <http://www.multimediehuset.dk>

4. Utopiatyping in practice

The four approaches outlined above and exemplified through the four projects are not what we would call utopiatyping tools (UT) but rather they form a sort of ancestry that has inspired other projects which falls into the category of UTs. Common to UTs is that they should be able to:

- Allow us to test and debate different aspects of the future urban environment
- level the playing field for the participants
- address the issues from the viewpoint of the user
- create a knowledge space that (at least) facilitates experience, learning and influence through the use of different media

In this section we will briefly present two similar projects, first *Yet the Waves Reflect*, which was conceived as an installation for The Fall Exhibition 2006 at Kunsthall Charlottenborg in Copenhagen, and secondly we will give a more detailed description of *KOEGE2027* which was an exhibition and tool commissioned by the municipality of Køge in 2007.

4.1. *Yet the Waves Reflect*

Yet the Waves Reflect [YWR] was an interactive installation developed by Kollision⁹ in collaboration with COWI, CAVI and the Aarhus School of Architecture for *The Fall Exhibition* at *Kunsthall Charlottenborg* in Copenhagen, Denmark. As such it was not intended as a tool for participatory urban development; nevertheless it was in some ways designed with this use in mind rather than as an art installation. The YWR is concerned with potentially rising sea levels and the possible consequences for planning. Basically the installation consists of a three-dimensional map of Denmark projected on to a large screen and a control console with a joystick and two buttons. With the joystick you move an avatar through the 3D world and with the buttons you can raise the sea level on the map from zero metres up to twelve metres above Mean Sea Level. At each water level interval, 0-3-6-9-12, the user is presented with five different scenarios that he or she can visit by walking towards them. The scenarios are constructed as advertisements for real estate extolling – in the usually quite florid and often somewhat involuntarily funny vernacular of real estate agents – the virtues of e.g. a housing project where now only the top floors are inhabitable, or a gated community on top of the highest hill in Denmark.

"Luxury-tent at Lomborg Preacher-Camp. Near the village of Lomborg in Jutland we offer this 14 square metre, safari-inspired, luxury tent with detached kitchen and close to communal baths. The tent is made from nano-improved cotton and is resistant to most weather. With the tent also comes the right to gather wood in the nearby forest and access to prayer rooms in the village hall. The tent is part of a group of 12 tents and the buyer is expected to take part in the daily chores and attendance at the consensus-meetings, common prayer, soul searching and confession is compulsory. We welcome ye who have faith!"

YWR was intended as a way of showing the general public some of the challenges that faces planning in the coming century, of course (we hope) in a very exaggerated manner to get the point across. At the same time the decision to use real estate agents who have the ability to always find something positive to say about even the most derelict building gave us the

⁹ Kollision is a privately held company owned by the authors of this papers

opportunity to present some of the (global) issues that climate change are triggering in a way that bears very little resemblance to the eschatological lingua franca which, at least in a Danish context, is beginning to have an adverse effect on the general population.



Figure 4.1.a. Pictures from Kunsthall Charlottenborg showing visitors using the installation YWR. On the left is the 'control box', on the right a picture of the projection showing the avatar and the different scales associated with the chosen sea level.

As a tool for utopiatyping the YWR lacks some of the abilities that we mentioned above, but it allows us to test and debate some aspects of the future, while levelling the playing field by presenting complex information in a rather easily accessible way. It also addresses the issue from the viewpoint of the user, i.e. the framing of the project was that the users should help the avatar, Kaptain Ôkay, find a new place to live. The project also creates an environment that facilitates experience, and we also found that people actually learned something by seeking out their hometown and experimenting with different sea levels to see how it would affect their own environment. But as a tool for participation and a platform for influence the YWR is lacking. This could easily be remedied, though, by letting the users record their own real estate advertisements directly on the map for other users to hear. The technology for this would be very similar to the one used for the project City Voices as described earlier. It would also be relatively straightforward to use the installation as a basis for debate and structured sessions presenting more detailed information about the possible consequences. Some of these observations were later incorporated in another project, KOEGE2027.

4.2. KOEGE2027

The project KOEGE2027 was developed by a project team consisting of *Kollision*, *CAVI*, *Aarhus School of Architecture*, *Køge Jorddepot*, *Municipality of Køge*, and *Grontmij|Carl Bro*. The context of the case is the projected development of a rather large area in central Køge, the harbour areas of *Søndre Havn*, an old fishing and industry harbour in close proximity to the city centre, but cut off from the city by roads and railroads. To free up space for urban development, the municipality is establishing a large landfill site for polluted soil, *Køge Jorddepot*, in the water in front of the northern part of the existing harbour. The idea, then, is to move all existing and future industry to this new part of the harbour, consequently freeing up a large area of the old harbour for new development projects. *Køge Jorddepot* will be finished in 2010/12 and the plan is to start developing *Søndre Havn* from this point onwards with a deadline for completion of the entire area in 2027.

The Municipality of Køge wants Søndre Havn to be an area with a diversity of different life forms and a multitude of small businesses, artists, restaurants etc. Basically they want the new harbour areas to be an integral part of the old city centre, and part of the overall plan is to establish a close connection between the two areas through a new shopping district connecting the harbour to the main square.

The municipality wants to develop the entire area in close collaboration with the citizens and other actors. Consequently the project team was asked to develop strategies and methods for the first step in a much longer participatory process. At this point of the process nothing has been decided, but a first draft of a very general vision (as described above) has been put forward. Our task was to communicate this vision in a manner that did not forestall open discussions of the possibilities at a later stage. This task was to be undertaken as an exhibition which would both be open to the general public and serve as the basis for structured sessions with citizens, interest groups, school classes etc.



Figure 4.2.a. Pictures from the opening of the exhibition i Køge showing the mayor using the interactive installation.

The project team approached the problem within the strategic framework of utopiatyping, i.e. we wanted the visitors to the exhibition to be able to investigate the future and debate aspects of the city to be. We also wanted it to be easily accessible to all participants, we wanted the information to be seen from a user perspective and we wanted to create an exhibition which gave the visitors a novel experience, facilitated learning and provided a foundation for participation in the near future.

The exhibition consist of a) an interactive installation containing the scenarios, b) an orthophoto measuring 4x6 meters (app. 13x20 feet) placed on the floor, c) a number of posters describing the basic facts and visions, d) a screen showing pictures of the areas in question taken by the citizens, e) a letter box and postcards for commenting on the project and the exhibition, f) various posters advertising the exhibition and life-sized figures used as icons for the exhibition. Currently the exhibition is placed in a ferry terminal open to the public. From August 2008 the exhibition will move to a local exhibition centre, *Køge Skitsesamling*.

The interactive installation is based on the commercial game-engine, Virtools, allowing the user to freely navigate a three-dimensional model of the harbour areas of present day Køge. Buildings and structures are rendered very basically with no textures, simple shadows and a minimum of lighting while the ground is the same orthophoto as found on the floor of the exhibition space.

The map also contains a number of *soundscales*, e.g. the sound of birds, light traffic and the occasional dog barking, along with heavy traffic, sounds of industry etc.



Figure 4.2.b. Screen dumps from the interactive installation at KOEGE2027. Left: A user has gone up in Birds-eye view to view a lumber yard from above. Right: A user has navigated to a scenario about commuting.

Distributed across the map are a number of orange boxes containing the scenarios from the future Køge. Each box contains graphics suggesting e.g. a maritime setting, local neighbourhood, shopping district or small restaurants. Every box also contains a localised soundscape related to the specific scenario, e.g. people talking, music playing, children shouting etc. Sounds and graphics are used to create a certain ambience associating the new areas with activities very different from those taking place today. Each box also contains a persona, e.g. a six year old girl, telling about her experiences in the future Køge:

“The best place in Køge is the very long path along the water where I can roller skate really, really fast. My dad says it’s called the boardwalk but that sounds like that funny little animal from Africa my grandfather told me about. Me and my friends call it Roller Skate Lane and as long as we don’t get too close to the water we can go there on our own, my mum says. In the afternoon there’s always lots of people down there, eating and drinking beer and we also meet a lot of people we know. When I grow up I’m going to be a roller skate princess, my dad says. But that isn’t true; I’m going to be a lawyer just like my mum.”

The aim is basically to communicate possibilities and ambience rather than actual plans and projects. Later in the process the idea is to use the scenarios as a starting point for debate, and further on the participants might build on existing scenarios and create their own in a participatory design process while constantly updating the individual utopiatypes with more data.

Observations of users and interviews with visitors confirm that KOEGE2027 generally lives up to the expectations as a tool for utopiatyping; it allows the visitors to investigate the future and debate aspects of the city, it is easily accessible to most visitors, it communicates the planning subjects seen from a user perspective, and it gives the visitors a novel experience. One of the aspects pointed out by visitors was that the large map made it possible to get a quick overview of the areas in question, and many thought that the interactive model added new perspectives and facilitated a better understanding of the area by letting the user move around freely. Generally visitors also acknowledged the scenario boxes as an interesting way of presenting the future, but especially the younger visitors wished for more game-like challenges and suggested that we add e.g. quizzes in relation to each scenario. Still, the same visitors used superlatives as ‘cool’ and ‘fun’ which, in our experience, is not normally how teenagers describe participatory urban development processes – if they bother to show up at all. At the same time they criticised the

factual posters for being too traditional, while these – and the floor map – generally got more attention from the older generations. All in all we get the impression from both visitors and the municipality that the exhibition is successful in supporting the learning aspect, that it gives the visitors a worthwhile experience and that it also seems to be paving the way for the letting the citizens influence the future in a qualified manner.

5. Utopiatyping – strategy, process & tools

In this section we will try to pick up some of the many threads laid out in the previous sections and hopefully knit them together in a coherent pattern addressing the main questions of how we go about strategically designing participation processes to accommodate conflicting views of what our cities should be like. And how we create processes that promote ownership, innovation and capacity building, while at the same time giving the participants a novel experience which makes showing up worthwhile.

5.1. Utopiatyping as a strategy

Basically we believe that to avoid conflicting views of the city to frustrate the process from the very beginning it makes sense to take an iconoclastic approach in the early stages of the project. If we want to create a common frame of reference we have to erase the ‘*graven images*’ that each participant brings to the table. Much too often planning processes present the participants with plans so advanced that it becomes impossible for laypersons to participate in the debate. It is our belief that we have to start by letting the participants build castles in the air, so to speak, before we proceed to blueprints of the future. But if we only involve citizens in castle-building and not in blueprinting, many will have a hard time finding their own input in the finished plan or built environment.

We have to design our processes so all relevant actors are engaged from the moment we grab their *attention* and until the *action* is over. Early in the process we have to keep it simple, break down preconceptions and through novel experiences inspire participants to think in new ways. When we get further in the process we have to raise the general level of knowledge and make sure everyone has common perceptions of the complexities and constraints involved.

When we reach the stage where we want participants to influence the urban development, we think it prudent to start out in an iconoclastic spirit – we want them to dream, wish and hope for the future to begin with, not blueprint or “*order from the catalogue of their day*” (Jacoby 2005, see section 3). Even though we have built capacity and raised the level of knowledge in the *learning-stage* it is still important to keep in mind, that some elements of ‘blueprinting’ is better done by experts. Some of the aspects touched upon in the LPT project (section 3.1) are, in our opinion, better left to expert planners than to the general public. Why should I, as a normal citizen, be interested in glare from facades or wind patterns at ground level? I expect these – technical – problems to be solved by people who actually know something about reflective surfaces or turbulence.

As planners we should also avoid engaging the citizens in discussions about aesthetics and taste, *de gustibus non est disputandum*, as the saying goes. Once again we evoke the spirit of iconoclastic utopianism and propose to steer the participatory elements of the process away from letting citizens actually influence how individual projects *look*. What we are interested in is how they should *feel*, what values they should embody, and how life should be in the future we are trying to plan together.

So, technical blueprinting should be left to engineers and similar experts while aesthetic blueprinting should be left to e.g. the architects. But if we are going to blueprint how to get our kids to school, where to shop, places to meet, the atmosphere at night and a multitude of other aspects pertaining to the realm of everyday life, it makes sense to involve a much broader range of participants.

5.2. Process and tools

When we have a strategy for *what* we want to involve this broad range of participants in, we have to start thinking about: a) the target groups; *who* do we involve? b) The process; *when* do we involve? And c) the tools; *how* do we involve them? The target groups will, of course, vary greatly and in this context we would not presume to give any definite answers as to who should be engaged in a particular project. Let us start instead with *how* to involve the citizens through utopiatyping tools and then try to relate these tools to the AELIA process-model.

If we start out backwards with the *how*, we believe, as mentioned in section 4, that utopiatyping tools should allow us to iteratively test and debate the future, create a level playing field, allow us to address the issues from the viewpoint of the user and embrace some, if not all, steps of the AELIA-model by creating knowledge spaces that support experience, learning and influence as a minimum.

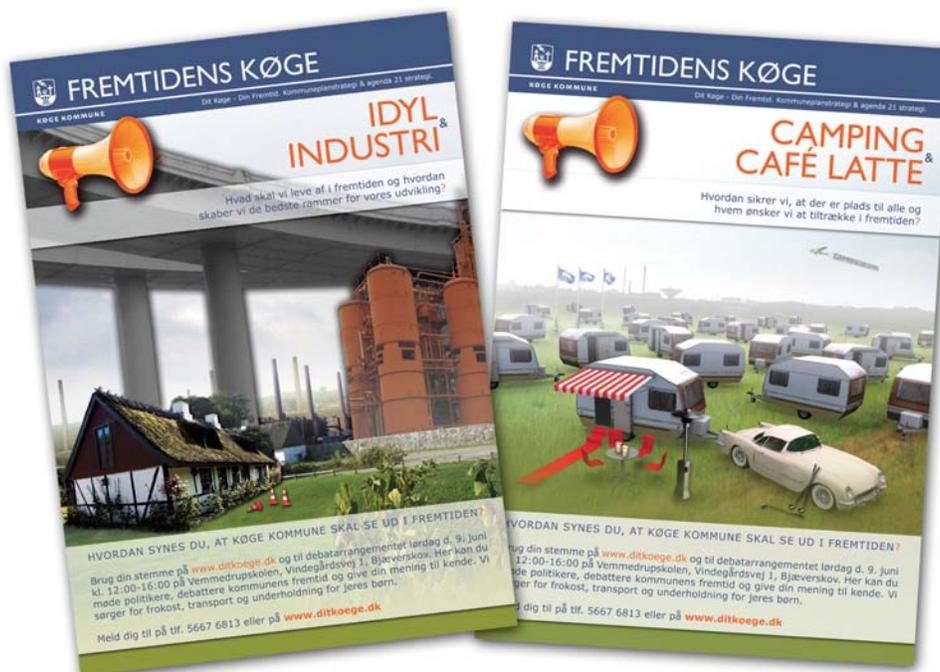


Figure 5.2.a. The poster on the left says: “Idyll & Industry” and the poster on the right: “Camping & Café Latte”

Our project YWR allowed us to test and debate the future of a flooded Denmark, presented the information in a way that made it accessible to all, used a narrative form well-known to most users and gave them a conceptual mission (find a new home for the avatar), it also gave the users a novel experience and let them learn something about the challenges posed by climate change. Unfortunately it did not provide the users with a channel of influence and as it was not part of an ongoing process it was neither iterative in any meaningful sense nor was it directly relevant to

urban development. Even so we count it as a tool for utopiatyping, especially because it served as a basis for KOEGE2027. YWR was about iconoclastic utopianism in the sense that it tried to counter the common cataclysmic picture being painted of the results of climate change; in the future of YWR we still have real estate agents, who will unremittingly try to persuade us that each property could be our own personal utopia, even though the world around it is a rather grim dystopia.

As a tool for utopiatyping KOEGE2027 in some ways started out prior to the actual exhibition. Several months earlier we created five purely iconoclastic posters for the municipality. We wanted the citizens to start thinking about how to find room for opposing world views in the same (physical) space as a starting signal for a series of participation events leading up to a new planning strategy. These posters got the attention of the citizens in a novel way and in that sense they were part of the first step in our AELIA-model even though they were not part of the same actual process as KOEGE2027.

Regardless of who we want to engage, we should start by getting their attention. We cannot just rely on the goodwill of the citizens alone and hope that a hearing on the municipality's webpage saying "Public hearing concerning infrastructural aspects of the possible urban development in area 45-X7/HY" will grab their attention sufficiently to guarantee a record turnout. In some projects we might reach participants through traditional media, advertisements, posters, e-mails etc. In other projects we might have to create an 'event' that can be 'marketed' through press releases, mouth-to-mouth, viral marketing etc. In KOEGE2027 the municipality used advertisements, TV-commercials on a local channel, posters and postcards as some of the ways to get the attention of potential participants.

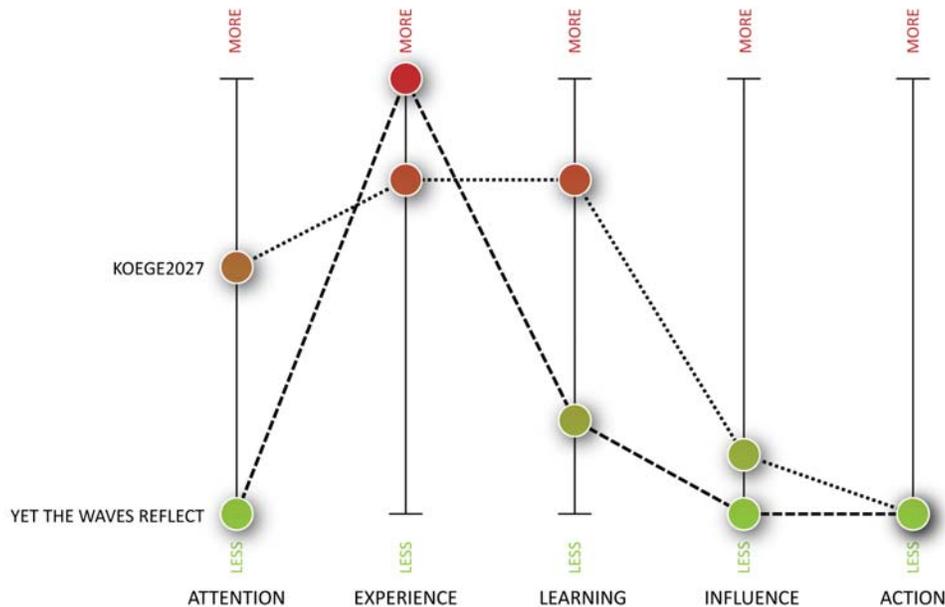


Figure 5.2.b. The figure shows the two projects, YWR & KOEGE2027, and their relation to various stages of the AELIA-model. As shown the YWR is very much focused on experience while KOEGE2027 has a strong focus on learning as well.

When we have their attention, we need to keep them interested through novel experiences as expressed in the AELIA-model. Though focus groups and public hearings might still be considered a novel experience by some, this is obviously not the way to go in the beginning of a

process if we want to keep a broad range of participants engaged. We have found that using various media, often combined with innovative technologies and content structured in a more or less narrative form might be a way to make a larger variety of citizens stay a little longer. This was also the case in KOEGE2027 where we used posters, the printed floor map, slide shows, and an interactive installation. In this respect we tried to cater to the interests of diverse target groups so all would have a worthwhile experience.

In relation to the AELIA-model the *learning* stage was our main focus for the exhibition. The municipality wanted to make the citizens aware of the coming changes in the area, provide them with factual background information for future participation and slowly engage the citizenry in a dialogue about the future of Køge Harbour without proposing concrete plans and tangible projects. The use of factual posters with easily accessible information was one way to do it. Another was the user-oriented scenarios in the interactive installation that allowed the citizens to hear stories from the future and freely explore the areas in question.

Admittedly, as a framework for influence KOEGE2027 currently is lacking. It was planned as a 'static' installation which does not allow participant input and consequently there is no iterative element implemented either. But first of all this is the first step in a much longer process, and secondly the citizens are actually already trying to influence the urban development by engaging each other and the representatives from the municipality in debates concerning different areas and aspects presented in the exhibition. Particularly the large floor map has been the centre of many a heated debate about infrastructure, new beaches and shopping districts.

As a tool for action we obviously have no data from Køge yet seeing that the municipality is still in the very early stages of the planning process. But in the coming years one way to proceed would be to gradually increase the level of influence towards letting the citizens build their own castles in the air and later help actually *blueprint* the future. The installation could quite easily be extended to encompass a variety of participatory elements as the ones we described in relation to e.g. The Harbour Game, City Voices and The Luminous Planning Table. It could also benefit from a brush-up as pertaining to its function as a knowledge space. Maybe a three-dimensional model of the city is not the best way to support learning, maybe we should 'force' users to enter certain areas, and perhaps better soundscapes could further support learning. It would also be interesting to make the interactive installation distributable via the internet so we could create a multi-user knowledge space accessible from anywhere in the municipality.

6. Concluding remarks

We have tried to give an introduction to utopiatyping as both a strategic way of thinking about participatory urban development processes and present examples of some tools that try to make this strategy operational. We have also attempted to describe how these tools are inspired by other projects and how utopiatyping is rooted in many disciplines while at the same time framing it all within a process model based on our own previous experiences. We can only hope we have not failed too miserably. As we see it utopiatyping is still in its infancy and it is our intention to continuously refine this strategy and develop new tools to support participatory urban development.

Strategically we think it would be interesting to cultivate aspects of utopiatyping to serve as both tools for participation and a sort of collective memory for a project. One of the challenges in participatory processes is how to document iterations, capture valuable input (and discard irrelevant input), while at the same time showing how the influences of various actors are actually implemented in a project.

On a more tangible level we believe work will have to be done on tools that allow users to create scenarios which are comparable to the scenarios produced by e.g. the municipality, letting users employ different media to convey a broader range of possibilities. In the future, hopefully, this will allow users to create their own utopiatypes and engage other actors in debates concerning the future of local neighbourhoods, small-scale urban development etc.

We also suggest that work has to be done on how to create multi-user knowledge spaces that facilitates experience and especially learning and influence. How can these spaces be used by iconoclasts and blueprinters alike? And how can technical and aesthetical blueprinting co-exist peacefully with everyday utopias?

On a more detailed level it would be interesting to see how quizzes and small games embedded in e.g. scenarios could facilitate both experience and learning, how more evolved soundscapes support navigation, and how we can utilise utopian humour in participatory processes as an effective way of bridging the gap between actors by reconciling our conflicting views of the city.

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