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ABSTRACT

In this paper, we will discuss how a virtual platform can be used in order to explore communication forms for stakeholders in the planning process of public knowledge institutions. The paper presents the Virtual Culture House, an attempt to stimulate the communication among stakeholders and users of a future culture house. The project is cooperation between Chalmers University of Technology and the municipality of Lundby in Sweden, and aims to find new ways of complementing the traditional architectural visualizations and public hearings for engaging citizens in the development process of public knowledge institutions. The contribution of this paper is two-fold; firstly it presents a virtual platform based on activities to complement the traditional methods for involving stakeholders in the development process of public knowledge institutions, and secondly, it introduces visitors, citizens, contributors and officials as stakeholders on equal ground, and claim that such a dialogical tool can support user involvement and participation and stimulate both staged activities and self-motivated activities. The Virtual Culture House forms, together with the physical local community, an activity-based physical-digital space that shapes the identity of the future physical culture house.

Keywords: Public knowledge institution, user involvement

1 INTRODUCTION

There is a growing trend among both public and private stakeholders of finding new ways to stimulate a dialogue with citizens in the development of public buildings and spaces. Ideally, all public building projects should be initiated by defining how to communicate with the future users around the project, though, when users' gets involved the project is more often almost fully planned for. A public knowledge institution is here defined as e.g. libraries, museums, science centers and culture houses, in line with (Dalsgaard et al, 2008). This type of public large-scale development projects typically has a long time span, aimed at very diverse groups of users. The purpose of engaging in dialogue with the citizens is firstly to make the public aware of the project in order to create interest, and secondly, about introducing a process, where the citizens are invited to take part of and inform the architectural program and planning processes, which finally can provide stakeholders with material for decision making.

User involvement is common in e.g. interaction design, but has in recent years become an important factor also in architecture and urban development (e.g. Sanders, 2010). Although citizen involvement in urban planning has existed for decades (e.g. Al-Kodmany, 1999), it is

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not common practice (Bratteteig & Wagner, 2012). Today, modern urban planning involves a wide variety of interests and individuals, why new methods and tools are needed to assure the active involvement of all relevant parties in the development process. Alexander states that people must be the core in the building and that involving the citizens and stakeholders is essential (2005). Arnstein propose a critical perspective to citizen involvement in public development projects by suggesting a provocative typology, a ladder of citizen participation (1969). Citizen involvement is a mutual relationship in which the visitor in a public knowledge institution encounters a framing of his or her experience and inquiry and gives something to the space through her actions. This contribution may be understood in a very literal sense, e.g. comment on a prospect, or it may have to do with enriching the place through engaged interaction, e.g. participating in an event. Most common methods used today are virtual models, questionnaires, physical architectural models, or public hearings, and too often echo the problem Arnstein identified with one-way flow of information from officials to citizens (Arnstein, 1969). It can be argued that the introduction of web 2.0 services and social media tools has opened up for the possibility for exchanging perspective and actually involving citizens for consultation, just as e.g. the public hearings. Though, too often these consultative initiatives such as public hearings are more used for statistical purposes, rather than actually have a real effect on the process (Arnstein, 1969). Another field of interest is different tools aiming to foster involvement through visualization technologies for staging possible futures, e.g. Urp (Underkoffler & Ishii, 1999) and Colourtable (Bratteteig & Wagner, 2012). These types of visualization tools in planning processes can enable strong community participation and contribute to greater equity among participants (Al-Kodmany, 1999).

When stakeholder involvement is incorporated into large planning processes, power can be redistributed through negotiation, and involvement reach partnership. This takes that the different stakeholders have methods, tools and inspiration in order to be curious, and be able to do new types of explorations and interventions to engage citizens, employees and contributors, both before and after the program. This will eventually provide material to support the decision making process. In AELIA (short for Attention–Experiences–Learning–Influence–Action), which is a strategic process model developed for user involvement and how to create a constructive active dialogue in urban development processes, it is not only stressed that getting the Attention of citizens, keeping them interested through novel Experiences, building capacity by introducing an element of Learning, giving the citizens Influence is important, but also that supporting Action by relevant actors is important to consider (Delman & Nielsen, 2009). But for this Action to happen, we need to develop new methods and tools.

In this paper, we will apply a previously developed model for stakeholder involvement in a large public project development project, aiming at building a new cultural house. We seek to investigate how different relevant stakeholders can be provided with tools and methods in order to participate in the planning and implementation process, and

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thereby support Action by relevant actors as in the AELIA model (Delman & Nielsen, 2009). The contribution of this paper is twofold; it is the description of a dialogue tool, a virtual platform complemented with physical staging, as well as a discussion on the importance of involving a variety of different stakeholders in the process, both in planning and implementation, and how this can be achieved.

2 BACKGROUND

In 2010, a proposal for a new cultural house in Lundby was approved by the council of Gothenburg, making the project realizable in about 5-10 years. The concept builds on the idea that cultural activities and expressions are important for the life quality of the citizens, and that a culture house is a service that Lundby should provide. The intended content of the culture house is a library, exhibition areas, a multi-purpose hall for lectures, cinema, concert and theatre, rehearsal rooms, meeting rooms, workshops, a café, and possibly other facilities. The activities are meant to be run by three different actors; the municipality of Lundby, other cultural institutions of Gotehnburg, and commercial actors. The vision is that the content and design of the cultural house is developed in close collaboration with the citizens of Lundby, making it flexible and updated for the different and ever-changing activities of the local communities.

In the proposal for the culture house, user involvement is emphasized, both regarding the ongoing planning process and for the future management. The overall goal is that the culture house will be a well-known meeting point and cultural center, both for local citizens and for visitors to Gothenburg. The proposal also points out that the culture house will be built using the latest technology, for sustainability reasons but also for the flexibility and interactivity of the physical space. So far, a physical prototype space for the culture house, called Culture Warehouse, has been established. The building is a huge and empty warehouse situated in a void urban space. Since 2011, different artists have used the space for performances and exhibitions. The purpose of this temporary physical space is to give room to cultural activities that contribute to the citizens' creativity in projects that have low or no budget.

In regards to the case in question here, the vision from the municipality is that the content and design of the culture house is developed in close collaboration with the citizens and future users of the house, to ensure it being flexible and updated for the different and changing activities of the local communities. One of the initial steps in developing this culture house is to define a Virtual Culture House. This has four aligning purposes; 1.) to realize a set of virtual spaces where cultural activities and expressions can take place and later complement the physical culture house, 2.) to inform and support the ongoing design process of the culture house, 3.) to develop an identity for the culture house, and also 4.) to promote it to the citizens. The first part of the project have a more experimental character, focusing on identifying different classes of methods of exploratory interventions that address the unification of physical and digital spaces and stage the interaction between different

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actors relevant for the development of the design process, through interactive tools, and has been described elsewhere (reference hidden for anonymity). The second part of the project is more focused on investigating how a virtual platform, complemented with physical interventions, can contribute to create attention and dialogue among citizens regarding content and use of a future culture house. These questions will be explored by taking on a research through design approach.

3 THE VIRTUAL CULTURE HOUSE

The outcome of this second part of the project is a web-based portal defined as the Virtual Culture house. The portal has replaced all the scattered communications and information channels that the municipality has used previously in order to communicate with the inhabitants. The focus of the development of the Virtual Culture house has firstly been to put focus on gathering all different types of cultural activities in one place, and secondly to get the different actors engaged in contributing to the portal. The result demonstrate what activities, needs, groups and communities there are in the municipality, which ultimately will guide the planners in what the needs are for the future physical culture house.

The Virtual Culture House is a web-based platform that consists of a database back-end and a graphical web interface front-end. The content of the database is created both by the editors of the municipality and the visitors to (co-creators of) the Virtual Culture House, where the editors have direct access to the back-end and the visitors only to the front-end. The relational database was developed in an open source web framework (Django) with a structure that enables upload of text and images on the server, while sound and video are uploaded as links to external servers (YouTube, Vimeo etc). Conceptually, the database works as a central hub where content can be created via the external interfaces of different physical devices and installations. A range of applications can be connected to the database in order to create and use the data in different forms, such as location-based apps, photo apps, and so forth. Traditionally, material from culture events arranged by the municipality is not easily accessible in a format that can be used by other applications. In the way this system is organized, all material created in cultural activities can be used and accessed for the purposes of the Virtual Culture House, that is; to be a place for cultural activities, to inform the design process, to develop an identity for the culture house, and to promote it to the citizens.

The front-end of the Virtual Culture House is a website, where the content is organized in "Events", "Projects", and "Rooms". The "Events" promote different cultural events that are arranged both by the municipality and other organizations of the local community, such as theatre plays, concerts and exhibitions. The "Projects" present the different local cultural organizations that are supported by the municipality, such as the Skateboard Park group and the Arts & Crafts group. The "Rooms" are collections of cultural content that are presented as thematic virtual exhibitions, where each room can be a

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collection of texts, images, videos and sound files (Fig 1.). In addition to this, users of the Virtual Culture House can submit their own contributions in different media forms and also post messages with their opinions about a future physical culture house. These contributions can then be seen by other visitors in the different rooms.



Fig 1. Examples of different "rooms" that are created and can be accessed in the Virtual Culture House.

Connected to this website there are external applications for creative and playful ways of informing the design process of a future physical culture house (Fig. 2). The example in Figure 2 is an application where anyone can design the culture house, and define how many percentages should be the library, garden, art exhibitions, concerts hall, etc. This means that the content of the Virtual Culture House is built up from the activities that take place in the local community, both physically and through digital media. Parts of these activities are staged by the District and others are self-motivated.



Fig 2. One of the external apps, "The Culture House Creator", where local citizens can create their own proposal for the physical culture house, based on cultural activities.

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The Virtual Culture House has just recently been launched, and we will continue to study the use of it, as well as what potential effects it could have on the planning process of the physical culture house and on the level of participation from the inhabitants.

4 CLASSIFICATION OF EXPLORATORY INTERVENTIONS

In a previous study (Eriksson & Wideström, 2014), the focus was on identifying different classes of methods of exploratory interventions that address the unification of physical and digital spaces and stage the interaction between different actors relevant for the development of the design process. Twelve different experimental prototypes has been developed and tested in the municipality. Based on an analysis from these experiments, a model describing six categories of methods of exploratory interventions mixing the digital and the physical in order to stimulate involvement in the development of public knowledge institutions has been defined, see Table 1.

Twelve exploratory interventions, developed by master students in interaction design in close co-operation with actors in the municipality, were used as exemplars of the six different categories, which differ in purpose, concept and method. A common concept for all six classes of methods presented is that they a) address the unification (co-existence) of physical and digital spaces and b) stage the interaction between different actors relevant for the development of the design process (citizens, stakeholders, planners, decision makers, contributors, visitors, and designers).

The classification is summarized in the following table:

CLASS	INTERFACE	PURPOSE	TARGET
A	Visitors / culture house	Create new experiences	Culture house visitors
B	Citizens / culture activities	Content and community building	Local citizens
C	Citizens / culture house program	Inform design process	Local citizens
D	Visitors / content	Inform citizens about content	Culture house visitors
E	Creators / citizens	Staging cultural content	Local citizens
F	Visitors / visitors	Sharing experiences and community building	Culture house visitors

Table 1: a model for exploratory interventions that intertwine the digital and the physical in order to stimulate citizen engagement in the development of public knowledge institutions

The twelve different design interventions helped to open up the possible design space. Most of all, the officials considered the first part of the project as an eye-opener, and a support to force them to think out of the box. The involvement staged through the exploratory installations acted as an inspiration to the program, and the considerations on how

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humans can affect both the building and the content was new in this process. Also, their basic understanding for materials in general and IT specifically has extended their design space, and the playfulness was been highly appreciated. The stakeholders believe that these types of methods will inspire and involve the citizens in a completely different way than the traditional communication they have used so far, have provided the stakeholders with new means, arguments and ideas to share with other decision makers.

In relation to this classification of tools and methods, the aim of the Virtual Culture House is to incorporate all six categories of exploratory interventions in one platform. The different activities that will take place in the development process of the physical culture house belong to different categories, but are all linked to a common portal. The Virtual Culture House is now in an introduction stage, where categories B, C, and E, which target the local citizens, are prioritized. The purposes of these categories are content and community building, informing the design process, and staging cultural content.

With this new understanding for materials and methods, the experiences and model from the first part of the project was taken in to the second part of the project. The virtual platform started to take shape during several participatory design workshops with representatives on different levels from the municipality and the university. Throughout the process there has been a close contact and cooperation between the developer and the project group, and several iterations of the platform has been tested. On the other side, the municipality started to gather information from scarce sources, distributed channels, and the many potential contributors.

5 DISCUSSION

In this paper, we have presented a dialogue tool to be used for stakeholder involvement in the development of public knowledge institutions. A model for complementing the virtual platform with physical-digital interventions has been presented previously, and is here applied to a case of developing a new culture house. The discussion will draw from the experiences when iteratively developing the model and the platform, and focus on:

- the importance of involving a variety of different stakeholders in the process, both in planning and implementation, and how this can be achieved

In (Saad-Sulonen, 2014) two types of participation in urban planning is identified, staged participation and self-organization activities. The staged activities are organized by participatory urban planners or officials with and inside out perspective, as a way to initiate dialogue or address existing conflicts. These types of officially staged activities are often limited to planning, and not really a sustainable alternative for the later stages of the process, e.g. implementation phases. On the other side, *self-organization* activities initiated by citizens from outside the formal processes should also be recognized in urban planning (Saad-

Sulonen, 2014), and complement with a necessary outside in perspective. Including these in the development, changes the role of who is relevant to involve in the process, and makes it possible to step beyond traditional tools (questionnaires, architecture models, etc) and especially developed expensive visualization technology (e.g. URP) to rather include everyday technology in the users own spaces.

In previous work, we have presented a model for involving stakeholders in the planning process of public knowledge institutions. The model aim to demonstrate how different forms of digital services and interventions can support the stakeholder involvement to move from single-user to multi-user experiences, from individual design to social design, from closed to extendable and open institutions, from regulated designs to evolving designs, and from systems and processes designed merely to act as information providers to dialogical systems. In the model, the visitors of the institution, the citizens of the city, the contributors to the knowledge institutions activities and programs are considered on equal foot with the officials behind the institutions, and in a sense strive to stage participatory activities or frames in order to stimulate self-organization behavior, as well as open up for self-organization activities to contribute to the planning and implementation phases of the institution.

In the work presented in this paper, where previous work has been applied, we have in a series of workshops developed a virtual platform where both officials, visitors, citizens and contributors are on equal foot in contributing to the development of a culture house, and where spaces are planned based on both self-organized as well as staged activities. The focus on activities rather than needs is a complement to the traditional planning, where requirements are formulated in the beginning, and the goal is to live up to them. Here, of course there are some requirements as well, based on different stakeholders needs, but the virtual platform changes the roles of the traditional process where an institution is defined, to a dialogical process where the activities will form the building.

We have not yet seen the final result of this process, or the final implementation of the culture house, but through the process of developing the virtual manifestation of the culture house to come, the mindset of the officials has changed and an increased openness to experiment with different tools, methods and activities is now highly appreciated and a part of their back bone understanding of the development process. The virtual platform also provides the contributors with a new communication channel both with officials as well as citizens and other contributors, which has increased motivation to stage activities, self-organized or not.

We do not claim that the virtual platform is the only answer to these complicated development processes, but it is an alternative to traditional methods and tools. In the strive for building partnership between different stakeholders (Arnstein, 1969) and to provide tools for Action by relevant actors as proposed in the AELIA model (Delman & Nielsen, 2009), the virtual platform motivate visitors, citizens, contributors and

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officials to initiate activities from both an inside out perspective as well as an inside out perspective. In addition to this, we propose to complement the virtual platform with different physical manifestations and interventions, inspired from the model in the first part of the project, in order to inform the building and the plan.

6 CONCLUSION

The contribution of this paper is to suggest new ways of complementing the traditional architectural visualizations and public hearings for involving citizens in the development process of public knowledge institutions. These new methods aim to support the individual needs of the different actors and needs in every new planning process. The paper is based on experiences from a case where 1) a virtual platform has been developed as a dialogue tool between stakeholders in order to create attention, engage citizens and inform the design process, 2) a model for exploratory interventions that intertwine the digital and the physical in order to stimulate citizen engagement in the development of public knowledge institutions have been proposed.

The Virtual Culture House is a dynamic space for the dialogue between different stakeholders in the development process of the physical culture house. It supports both staged and self-motivated activities that take place in both physical and digital space. The close relations between the Virtual Culture House as digital space and the local community as physical space, creates an activity-based physical-digital space that works as a greenhouse for the development process of the physical culture house. The result of this process will therefore not only be a new physical structure in Lundby but also a gestalt of cultural ideas and expressions that shapes the identity of the future culture house. This also means that the Virtual Culture House is more than a tool in the development process, but rather a place for cultural ideas and expressions with its own *raison d'être*.

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THE VIRTUAL CULTURE HOUSE – SHAPING THE IDENTITY OF A PUBLIC
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