DIY Platform for Innovative Small Museum Experiences

Licia Calvi
Academy for Digital Entertainment
NHTV University of Applied Sciences
Breda
0031 76 533 2545
calvi.l@nhtv.nl

Arnold P.O.S. Vermeeren
Delft University of Technology
Faculty of Industrial Design
Engineering
0031 15 27 84218
a.p.o.s.vermeeren@tudelft.nl

ABSTRACT

In this paper, we introduce a unique approach to designing museum experiences for small museums. This approach entails methods for end users and stakeholders to collaboratively design experiences without the direct involvement of design professionals, and a platform for embodying the required design knowledge to do so, based on DIY technology for actually building the designs.

Categories and Subject Descriptors

H.5 INFORMATION INTERFACES AND PRESENTATION (e.g., HCI) H.5.3 Group and Organization Interfaces; Design. http://www.acm.org/class/1998/

General Terms

Design, Theory

Keywords

Design Methodology, Experience Design, Cultural Heritage

1. INTRODUCTION

Recently in the Netherlands, various sectorial studies [1, 2, 3] have emphasized the urge for museums to strengthen their profile and product and to innovate if they want to remain active in the cultural landscape now that the economic crises have imposed fierce subsidy reduction on them. This situation is particularly critical for small museums.

Small museums are local museums that tell the story of the territory they are in through the objects they display. These stories often are about a way of life that does not exist anymore (like craftsmanship). While small museums are very well interwoven into their territory and representative of their local community, they have difficulties in projecting themselves into the future because they remain anchored in a way of living that is no longer actual.

Most small museums have no permanent staff but are managed by a board of unpaid volunteers. Such volunteers are also responsible for the daily functioning of the museum, and in this activity they are supported by members of the local community around them.

The volunteers have often first- or second-hand experience with the objects on display and can tell interesting stories about them. The museum De Timmerwerf in De Lier in the Netherlands, for example, is a museum about carpentry. In a preserved carpenter's workshop old carpenters demonstrate how the objects that are exhibited can be used, as a way of illustrating what the life of a carpenter looked like in the old days. In the Generaal Maczek Museum in Breda stories are told by the sons of two Polish soldiers who fought during WW2 at the side of the Allies, through objects that belonged to them. Objects indeed become meaningful for visitors if they tell a story, but they need somebody to tell their story. The current generation of storytellers however (the sons of the Polish soldiers, the old carpenters) is gradually disappearing due to aging and the knowledge of their heritage will disappear if no other means of transferring it is found.

To guarantee their survival, the small museums' and their stories' survival, small museums need to find a way to pass on their knowledge, to keep telling these stories in ways that appeal to the younger generations. It is especially this younger generation that represents a challenge for small museums, as most of them are indeed "digital natives" so they expect different types of experiences than the ones small museums are currently offering. In these experiences, technology plays an important role. However, for various reasons innovations based on digital technologies pose serious challenges to small museums.

In order to help them resolve this tension between their desire to preserve (their objects and their stories) and the need to innovate (to guarantee their future existence in a changing society), we develop an approach that supports small museums in designing new museum experiences in a sustainable way, by involving the community around them, including the younger generation. This approach consists of a collaborative design method that is aimed at non-professional designers like the small museums themselves and their local community. It includes the use of digital technologies.

In the next sections, we will clarify the context in which small museums are currently active and we will outline the challenges and opportunities we envisage to help them innovate by involving their local community using a design method for non-professional designers. This analysis is based on the situation of small museums in the Netherlands, and it is part of a research proposal to help them concretely.

2. THE SMALL MUSEUMS' SITUATION

In the world of museums two main trends are signaled that have a significant impact on the situation small museums are in: one towards digitization of collections, and one from object-centeredness, through a focus on stories, towards community-

centeredness. Moreover, initiatives attempting to deal with the problems small museums are in, are discussed.

2.1 Digitization of Collections

Nowadays, innovation in museums generally translates into digitization of collections. Europeana, an European initiative aimed at building an openly accessible database of digitized museum objects, is an example of how such innovation is implemented right now. Europeana, aims to make Europe's heritage 'easier for people to use, whether for work, for learning or just for fun'[1]. It indicates a way for museums to have a stronger and clearer profile through the digitization of their collections. Still, less than 1/5 of all museum collections in the Netherlands are online and only 5% of them are visible to the public[2]. However, digitization is not enough. For example, the recently launched (9th March 2015) Dutch national strategy on digital heritage [3] summarizes the implications of digitized heritage as the need for it to be *visible* (also for users to re-use), *usable* (by connecting and enriching data semantically) and *non-perishable* (sustainable). Thus, digitization in itself is only the first step.

Small museums cannot afford the major investments that digital innovations imply and have difficulties innovating also because of the lack of competencies of the volunteers on which they have to rely. For example, according to the Dutch Provincial Heritage House *ErfgoedBrabant*[3], hardly any of the small museums in the Netherlands has digitized its collection and stored it in Europeana. Even the need to take pictures of all collection items and to provide descriptions of them (as metadata) represents a threshold for many small museums that prevents them from even starting to innovate. Thus, generally, small museums do not possess the financial means nor the competences to design and develop the required technology-based museum experiences. Yet, they are aware of the critical passage they need to get through and for this reason they are the first to question their role in this changing society, wondering how they can remain meaningful and relevant for future generations. They are the first to feel the need to change and to innovate even if they do not seem able to do so by themselves.

2.2 From Collections to Stories to Communities

Digitization in itself, implies a focus on objects, on collections. However, a trend that is gradually emerging (see for instance the projects by ErfgoedBrabant and Diamond LLL project[4]) is to move from collections to stories, and from stories to communities. This means relating the objects more and more to the people they belonged to – by means of telling the story of these objects and of their use – and to the people living today, the younger generations, in order to preserve the memory (of these objects or of their context) and the knowledge around them. Indeed, most of the small museums are still object-centered rather than narrative-centered in their setup, as the examples of De Timmerwerf de Lier and the Generaal Mazcek museum illustrate. However, small museums are not just collections of old items found somewhere in an attic: they have a societal function and they intend to continue to play that role. The issue, however, is that by lack of financial

means and competences in digital innovations they have problems changing this situation on their own. And, according to another Dutch Provincial Heritage House, Erfgoedhuis-Zuid Holland[5], in general, small museums hardly co-operate with other small museums. They mostly focus on their own work unless the other museums have large similarities to theirs. One of the important strengths of small museums, however, is their strong connection to a base of volunteers and to the community surrounding them (e.g., neighborhoods, schools, adult day care centers). We believe this strength can play an important role in resolving their problem, but they need help in finding an appropriate and up-to-date way in using this strength to re-profile themselves. Figure 1 shows the context the small museums function in.
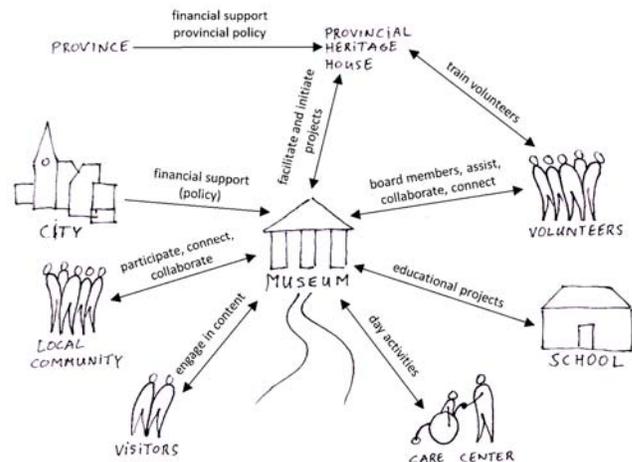

Figure 1 Schematic overview of the small museum context

2.3 Small Museum Initiatives

While small museums are the first to feel the need to change and to redefine their way of approaching the public, few attempts have been made so far to achieve this and of most of those attempts lack a holistic view of the problem. For instance, in the past few years in the Netherlands, various initiatives have started to bring small museums closer together, physically or virtually, in an attempt to converge strengths and to help one another. Examples include:

1. The project Grotekleine Collecties[6] in North-Holland: this is a campaign where 18 small museums located in the same region gain more visibility and attract more visitors by developing and employing new activities together.

2. "Het streekmuseum in de 21ste eeuw": an initiative by ErfgoedBrabant; this initiative is an attempt to preserve the knowledge and the stories related to the objects exposed in small local museums by finding new ways of telling them.

3. Brabant Cloud[7]; this is an open source platform for museums to store and share their digital collections among each other. As a repository for (virtual) objects, this brings small museums a step closer to Europeana.

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[1] http://pro.europeana.eu/about-us/who-we-are

[2] http://www.ahk.nl/reinwardt/nieuws/2015/04/08/erfgoedarena-22-april-waar-staan-we-nu/

[3] http://www.erfgoedbrabant.nl/

[4] http://www.diamondmuseums.eu/

[5] Erfgoedhuis-ZH, personal communication Ellen Steendam.

[6] http://www.cultuurcompagnie.nl/portfolio/projecten/detail/q/titel/grotekleine-collecties/idproject/101

[7] http://www.erfgoedbrabant.nl/portfolio/brabant-cloud/

In these examples we recognize the importance for small museums to (a) connect and share experiences, to work as a group and not on an individual basis; (b) to focus on the stories their objects tell and not on the objects themselves; and (c) to digitize the objects, to create an openly accessible archive to share and connect among themselves even more. However, all these initiatives still show a unidirectional view on the fundamental problem small museums are facing: this is still understood as being collection-based, and dealt with from the point of view of the museums' needs mainly, rather than the needs of the community in which they are embedded. What the small museums need is something that can connect people and that can facilitate the shift from a collection-centered to a community-centered approach. Something that strengthens the tie with the local community by finding a middle point between the community's needs (*What can the museum mean / do for us nowadays?*) and the museum's needs (*How can we bring across our message to our local community? How can we tell our story? How can we secure the transfer of our knowledge to future generations?*). We propose an approach that can play a significant role in exactly this interstice, i.e., a method for collaboratively designing technology-based museum experiences with the local community around the small museums.

3. DO-IT-YOURSELF (DIY) PLATFORM

The method we develop will facilitate the combination of the two apparently opposite approaches mentioned before (the community's and the museum's) and will apply digital components by means of a coherent platform through which the online (digitized objects) and the offline (the still physical objects) are combined, using Do-It-Yourself (DIY) technology. A platform specifically designed for small museums, that allows for telling the stories in a way that appeals to a younger audience. In this way, digitization will not be an end in itself but will be part of an overarching approach where the material and the virtual meet to enhance the visitor experience before during and after the physical visit to the museum and to promote in this way knowledge transfer and community development. The method we envisage empowers the local community around small museums by actively involving them in the design of visitor experiences. As one of the possible consequences, museum experiences are no longer confined to *visitor* experiences, but to those involved, the act of designing them can become a museum experience in itself as well.

The DIY platform will provide possibilities for enhancing communication with the local community, for increasing public participation (by co-designing museum experiences, or for instance by offering online tutorials on how to apply novel technologies in design), and for facilitating knowledge transfer. It will lodge new products or services and allow 'smart devices' (e.g., Guideid, iBeacons) to connect to it. By enabling design for non-professional designers, this platform will foster a change within the museum practice that may unlock community development.

Our method will provide non-professional designers with tools to design museum experiences, i.e., the building blocks to create exhibits that satisfy the needs of the community and in particular those of the younger generation who will be directly involved in this process. In this respect, our approach looks very similar to the recent Maker Movement (e.g., [4]), a specific form of DIY design with technology, in which for example Arduino, Raspberry Pi and 3D printing are used. According to a study by Kennisnet [5], DIY technology as it is used in the Maker Movement is expected to become mainstream in the Dutch educational system in about 2-5 years. This is a promising development for small museums, as it makes the shift to engage the younger generation in applying novel technologies in museum experience design realistic. However, generally, building blocks such as those used in the Maker Movement, are mainly meant to enable the use of technology by lowering access to it, they do not contain design knowledge supporting the makers in developing designs that are attractive to a general audience. In other words, they focus on the practice of technology use, not on the knowledge that is necessary to apply it properly. This is opposite to for instance what happens in the field of webpage design where publications like blogs and workshops have started to appear focusing on 'non-designers design'[8]. In that case the focus primarily is on providing design knowledge about what constitutes a 'good design', and next to that also on the tools and tutorials for enabling people to use the technology needed for that (e.g., by providing templates).

In our approach, we will provide design knowledge along with – as well as implicitly embedded in – the tools for using the technology: both are necessary and will constitute the building blocks mentioned before. With this design knowledge small museums and their community can build visitor experiences themselves as non-professional designers. In the world of design methodology this is a new approach, as even in co-design approaches the presence of professional designers is generally seen as a requirement, if only to facilitate design sessions.

The design knowledge embedded in our platform, will originate largely from the actual professional designers who will be involved in the development of this approach. This will safeguard the accurate and timely knowledge transfer from them to the non-professional designers. This will also ensure the accuracy of the design knowledge provided to the non-professional designers. Thus, in our approach professional designers will not be involved in the actual design of the visitor experiences. Therefore our approach will also have implications for the role professional designers will be playing in this new setting, namely that of toolmakers (cf. Sanders & Stappers' vision on the future role of designers [6]) and knowledge providers.

4. OTHER APPROACHES

A similar focus on the empowerment of museums and their users is shared by other projects in the field of cultural heritage (CH). Among the many examples that we could refer to, three in particular seem relevant to us:

1. The RICHES project[9] (Renewal, Innovation and Change: Heritage and European Society), a 7FP-funded project on finding new ways to engage with heritage digitally by bringing people together;

2. The meSch project[10] (Material Encounters with Digital Cultural Heritage), also 7FP-funded, which is about the creation of tools to allow curators to develop new experiences for visitors, combining material artefacts with smart objects.

3. The Diamond project (Dialoguing Museums for a New Cultural Democracy), funded by the European Lifelong

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[8] E.g., http://www.designfornondesigners.com/

[9] http://www.riches-project.eu/

[10] http://mesch-project.eu/

Learning programme Grundtvig, which has non-traditional visitors develop stories and tell them with video to open scientific museums to audiences that are normally marginalised or overlooked by the museums themselves, therefore democratising their access.

Our approach differs from these initiatives in that it is not specifically focused on one museum genre (science or art museums), but on a museum typology (small museums) and in that it focuses on exploiting the typical strengths of small museums: their close connection with their local community and stakeholders. Because of this focus on engaging the public, inclusion and bringing people together, as well as its focus on developing co-creative DIY methods for non-designers to design new engaging experiences, our project covers several themes across the projects mentioned above, but fills them in from a different perspective: for instance the DIY methods are not just for CH professionals like curators (as in the meSch project) but for museum staff (often volunteers) and their community and stakeholders altogether; not the whole cultural heritage sector is represented (as in the RICHES project) but only small museums; our project is targeted to all possible audiences with a specific attention to the younger generations using any relevant digital medium not just video (as in the Diamond project) with the goal of supporting knowledge transfer and community development.

5. CONCLUSION
We introduced a unique approach to designing museum experiences for small museums. It entails methods for end users and stakeholders to collaboratively design experiences without the direct involvement of design professionals, and a platform for embodying the required design knowledge to do so, based on DIY technology for actually building the designs. This method is based on an analysis of the financial, organizational and societal situation small museum are in in the Netherlands. While we recognize that certain characteristics are typical of all small museums (e.g., their reliance on volunteers and their strong tie with their local community), we know that certain others are country specific (the lack of financial resources for instance and the innovation challenges as described in some recent sectorial studies). We hope, however, that the method and platform we are developing can be used as a reference point and as inspiration for others in different cultural settings.

6. ACKNOWLEDGMENTS

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