

Challenges of practicing digital imaginaires in collaborative museum design

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Abstract

The main objective of this article is to reflect upon the integration of digital media in museums by analysing how the digital is imagined and practised in co-design processes at three Danish art museums. With conceptual reference to Flichy's 'imaginaire', we analyse project descriptions written by project participants to obtain funding. The project descriptions represent initial collective visions and reveal imaginations about the capabilities of digital technology. We find that two categories of imaginaires are similar across the cases and we analyse ethnographic data to identify challenges of practicing these. Our findings suggest that challenges mostly emerge in co-design activities or when such activities are not prioritised. The article concludes with reflections on the integration of digital media in museums and the paradoxical nature of the collective project vision as both a necessary driver and constrainer of collaborative museum design.

Introduction

The development of digital media has given rise to high expectations of the transformative potential afforded by these media technologies, and it has become a truism that the Internet, but more recently also social media, have changed our social, political, economic and cultural life (Castells 2003). Mediatisation processes have not escaped museums and the field of museology where museums in the last two decades have been reframed within new media logics e.g. wired, transmedial, interactive (see Rudloff (2013) for an expanded discussion of the mediatised museum). These new media attributes imply a change of perspective in the institutional identity, as well as new views on the museum's societal role in relation to its visitors. According to Holdgaard (2014) and Rudloff (2013), much of the research associated with this change links 'the digital' to positive and catalytic qualities such as interactivity, play and participation that have already largely transformed the museum institution and the museum experience. Indeed, one can easily find accounts of the digital as fully integrated in museums (e.g. Drotner and Schrøder 2013; Giaccardi 2012; Hermann 1997; Marty and Parry 2008; Parry 2007; Šola 1997). Parry (2013) even speaks of a 'normative' presence of digital media, alleging an absolute absorption of digital capabilities and mind-sets.

The main objective of this article is to reflect upon this proposed integration of digital media in museums by exploring the digital as situated in and entangled with everyday work practices. Thereby, we seek to contribute with digital perspectives to the growing body of research in the intersection of museum studies and design studies that critically investigate organisational processes in collaborative museum design (e.g., Dal Falco and Vassos 2017; Grewcock 2014; Kéfi and Pallud 2011; Lee 2007; Macdonald 2002; Olesen 2015; Peacock 2008; Star and Griesemer 1989; Taxén 2004). The empirical body consists of three different co-design cases from three different Danish art museums. With conceptual reference to Flichy's 'imaginaire' (Flichy 2007), we analyse project descriptions written by project participants to obtain funding. The project descriptions represent initial collective visions and reveal imaginations about the capabilities of digital technology. We find that two categories of imaginaires are similar across the cases and we analyse ethnographic data to identify challenges of practicing these. Our findings suggest that challenges mostly emerge in co-design activities or when such activities are not prioritised, highlighting the importance of collaboration. The article concludes with reflections on the integration of digital media in museums and the paradoxical nature of the collective project vision as both a necessary driver and constrainer of collaborative museum design.

The technical imaginaire

In *The Internet Imaginaire* (Flichy 2007), the French techno-sociologist Patrice Flichy presents the 'technical imaginaire' as a collective vision, common to an entire sector that carries ideal notions and expectations of a

technology's transformative and transgressive capabilities. Flichy argues that despite dominant narratives, the life cycle of the Internet is non-linear and dynamic, and a product of competing collective visions and activities, which are grounded in specific myths and ideological frames. This ongoing process, Flichy underlines, is mediated by two distinct dialect threads—utopia and ideology—where ideology is about 'trying to maintain social order and utopia is about 'trying to disrupt it' (Flichy 2007, 8). Both the utopian and the ideological ideals shape the processes of design, regulation, and use that constitute part of the Internet's successful development and diffusion in a somewhat evolutionary mode. For Flichy, the utopian imagination drives inventions that can turn into experiments. If these experiments become a success, they will turn into myths that attain a certain power that can conceal original causes and contexts as ideological imaginaires. It is in this phase that the technologies are reintroduced as new and the imaginaires can be used to justify and promote technological change (ibid., 8–11).

Flichy's analytical starting point is not 'social movements concerning computing but a corpus of discourses' (ibid., 7). Inspired by for instance Barthes (1970), he argues that discourses should be considered an integral part of technical development. Furthermore, he advances sociological views on technical development, demolishing the idea of technical innovation as deriving from one brilliant inventor. In this respect, he builds on perspectives from Science and Technology Studies, e.g. ANT (Latour 1987) and symbolic interactionist studies, particularly Star and Griesemer (1989). However, counter to STS researchers, he wants to leave 'the short-term dimension' (Flichy 2007, 4) of technical development (a specific project) to look at 'a more long-term dimension' (ibid., 4) and a collective vision that is 'common to an entire profession or sector, rather than to a team or work collective' (ibid., 4).

In our use of Flichy, we are inspired by his macro perspective on collective visions as common to an entire profession or sector. Counter to Flichy, we however, want to investigate how these common digital imaginaires prove to be challenging in small-scale design settings. Thus, we combine Flichy's macro perspective closer to more micro perspectives from STS, particularly inspired by Star and Griesemer (1989), which allows us to analyse the articulation and coordination mechanisms in collaborative work in our three cases. Furthermore, we narrow Flichy's concept 'technical imaginaire' to 'digital imaginaire', since digital is the type of technology in focus in our study. By looking at how the digital is imagined in project descriptions used for attracting funding across three projects, we propose certain common digital imaginaires that can be further investigated in relation to design practices in the three projects.

Museum co-design and the collective vision

In all three cases, the design processes are highly collaborative, meaning that design is a joint activity of participants sharing goals, resources and representations and coelaborating on ideas, knowledge objects and tangible artifacts (Détienne, Baker, and Burkhardt 2012). In our conception, co-design designates not just designing by, for and with potential users (Sanders and Stappers 2008) but, more broadly, also collaborating across different internal staff groups and external parties, such as paid consultants or freelancers, those paid by another organisation, unpaid volunteers etc. (Davies 2010; Knudsen and Olesen Forthcoming).

Concurrent with the increasing focus on digital technologies in museum spaces, there has been a turn towards co-creative processes and collaborative project constellations, in particular related to exhibition design (e.g. MacLeod, Dodd, and Duncan 2015; Taxén 2004). Many of these projects involve the design of digitally enhanced museum experiences in one way or another (e.g. Stuedahl and Ole 2015; Watkins and Russo 2007). Research focusing on these kinds of museum co-design processes highlights different challenges (Olesen 2015; Knudsen and Olesen Forthcoming), for instance related to the depth and timing of involvement of different groups (e.g., Davies 2010; Holdgaard and Klastrup 2014; Roberts 2014), different levels of digital understanding and expertise (e.g., Holdgaard and Simonsen 2011; Jones-Garmil and Anderson 1997; Parry 2007) and difficulties of negotiating across groupings or communities of practice due to different languages, concerns, values, etc. (e.g. Davies, Paton, and O'Sullivan 2013; Lee 2007; Hansen and Moussouri 2005; Parry 2007). These differences should, however, not just be seen as challenges. Rather, inspired by STS perspectives, we see them as potentials for generating new ideas and developing

relevant solutions (Knudsen and Olesen Forthcoming; Lee 2007) that holds ‘at every stage the traces of multiple viewpoints, translations and incomplete battles’ (Star and Griesemer 1989, 413). As pinpointed by Star and Griesemer (1989), translating, negotiating, debating, triangulating and simplifying in the context of a museum is not a matter of just reaching a consensus but, rather, reaching a multitude of complex resolutions. Inspired by Star and Griesemer, we acknowledge that there is no such thing as one collective vision. Rather, a design process is enriched by a multitude of differing visions.

However, co-design thrives through collective standardisation of methods and/or the development of boundary objects (i.e. objects adaptable to different viewpoints) (ibid.). For example, when we consider a project description from a funding proposal as representing the project’s initial vision, our point is that the vision inscribed in this document can be understood as a boundary object developed by some of the participants in the project in order to have an initial objective for collaboration. This vision can be seen as the overall vision driving the project, even though other visions of course coexist and intervene. We focus on this vision since it arguably has a central position for our investigation of practicing digital imaginaires as it ties the actual context of the museums under study to common, sector-wide digital imaginaires, thus combining Flichy’s macro perspectives with micro perspectives.

Methods

The empirical body of this article consists of three different cases from three different Danish art museums. We use pseudonyms to ensure the anonymity of all participants. The names of the involved museums are also not disclosed due to ethical considerations and irrelevance to the conclusions presented. On the one hand, the three selected cases are similar, since they are all examples of co-design processes with the purpose to evoke digital change in an art museum context. We lean on Sanders and Stappers’ broad definition of co-design as ‘the creativity of designers and people not trained in design working together in the design development process’ (Sanders and Stappers 2008, 6). Even though the museums represent different art collections (from ancient art to contemporary art) and different sizes (in terms of collection, exhibition space, staff, etc.), all cases illustrate exchanges between external designers (exhibition designers and digital designers) and art museum staff groups such as art curators, educators, and managers.

On the other hand, the cases complement each other, since they vary maximally by representing different periods of time and project types. Case 1 received funding in 2008 to develop the museums’ entire digital museum practice. Case 2 received funding in 2011 to develop three digital solutions for three different exhibitions at the museum. Case 3 received funding in 2014 to investigate potentials for new digital practices at the museum. Thus, the cases vary maximally in regard to time (initiated in 2008, in 2011 and in 2014) and project type (focusing on developing the entire digital museum practice, on developing three digital solutions and on investigating potentials for new digital practices). These points of variation are interesting since one might expect digital imaginaires to change over time and possibly be different in relation to different project types. However, if we encounter similarities across these variations, they are likely to represent sector-wide perspectives and to be of general relevance to co-design practices in the context of art museums (Patton 1990).

The data were gathered by the article’s three authors as part of different research projects, all inspired by the ethnographic paradigm (Gobo 2011) and using ethnographic methods such as participant observation and interviews ‘to try to understand the social life and cultural assumptions of those being studied’ (Macdonald 2001, 78). In Case 1, the data were gathered by two of the researchers, one of them taking a mostly observing role, the other a more active role in exchanges at workshops and meetings.

The latter also gathered the data in Case 3, taking an active role in exchanges in this project as well. The data in Case 2 were gathered by the third researchers who took a mostly observing role. In the analysis, we have been attentive to biases and blind spots arising due to the different characters of the research projects and the different levels of participation.

Our empirical material includes project descriptions from funding proposals, interviews, recordings of workshops and meetings, design sketches, field notes, etc.¹ We analysed our data based on basic coding

procedures inspired by Grounded Theory (Strauss and Corbin 1990). Therefore, our coding was a continuous process. In the first step, we exclusively coded project descriptions² using an open coding strategy (Holton 2007). We focused on the project descriptions, since they were written by project participants to obtain funding and thereby represent initial collective visions and reveal imaginations about the capabilities of digital technology. From our coding of the project descriptions, two categories of digital imaginaires across the three cases emerged.

In the second step, we analysed the other data materials (such as interviews, recording of workshops and meetings, design sketches and field notes) based on selective coding (Holton 2007), using the two digital imaginaires from the project descriptions as coding categories and focusing on challenges of practicing these imaginaires. Our analysis went through two coding cycles. Initially, the cases were analysed separately. Then, findings were discussed collectively, and the data were revisited with the discussions in mind.

Analysis

Digital imaginaires in the project descriptions

The analysis is divided in two parts. In the first part, we present how the project descriptions from each of the three cases exemplify the two categories of digital imaginaires. In the second part, we show examples of challenges of practicing the imaginaires. We have framed the two categories of digital imaginaires as:

- (1) Technology as a tool to renew, revolutionise or reassess
- (2) Technology as a tool to make art relevant

Technology as a tool to renew, revolutionise or reassess

Even though digital technologies and museums have a much longer relationship than the popular discourse gives the impression of (Jones-Garmil and Anderson 1997; Parry 2007), digital technologies are still often seen as something new that can transform the museum. In this first imaginaire, the ‘digital’ is indeed inscribed with qualities of renewing, revolutionising and reassessing the museum and the museum experience.

The project description from Case 1 frames technology as a means to ‘create room for new dimensions in user experiences’, ‘show new perspectives in the dissemination of art’ and ‘give users possibility to interact with art in innovative ways’. Thus, technology is imagined as a tool to renew art dissemination as well as audience experience. Furthermore, the project is seen as a manifestation of the museum as a ‘visionary art institution’ that wants to be ‘cutting-edge’.

In the project description from Case 2, this imaginaire is even more strongly formulated in framing a new kind of technology (‘pattern recognition’) as a possible means to ‘revolutionise exhibition dissemination by replacing other media for instance screens, wall texts and folders’ and allowing ‘activation of the content everywhere the artwork is represented, in commercials in newspapers, in the catalogue, on the internet. . .’ Again, the renewal of dissemination is linked closely to the use context, thus pinpointing new ways for users to experience and access the museums’ artworks. Interestingly, the project description alludes to the imaginary character by stating: ‘It almost sounds too good to be true’. Therefore, the project not only seeks to develop but to ‘explore the tool’ by making three different apps for three exhibition—a sandpit model that allows experimentation.

The third project description goes even further in terms of questioning the revolutionary ability of technology. Here, technology is not imagined as a tool to renew. On the contrary, it is regarded as something that ‘complements the museum experience in the physical museum space’. Thus, technology is imagined as ‘sustainable’ when developed ‘in the museums’ own pace and spirit’ and thereby as a means to ‘reassess [. . .] existing museum practices’. Even more so than in Project 2, an exploratory setting is suggested. Here, no concrete technological solutions are suggested. Instead, technology should derive from reflections and objectives grounded in the museum organisation.

Technology as a tool to make art relevant

As visualised in Cases 1 and 2, imagining technology as a tool to renew and revolutionise is very much anchored in a desire to influence the user experience. This is closely linked to the second category of imaginaires, namely imagining technology as a tool to make art relevant. In the project description from Case 1, technology is imagined to make art relevant for users by making art 'accessible, relatable and inspiring' and the concrete technical platform is envisioned to be a 'value creational', 'popularly', 'user oriented' and 'relatable' place. The project description mentions different co-design strategies for ensuring this, such as 'user involvement'. Furthermore, the text promises that the project participants 'will always define one or more target groups before content is produced'.

The project description from Case 2 frames technology not only as a way to ensure relevancy for users but also as a necessary approach in a digital age where internal museum statistics predict that 'the number of visitors with smartphones will rise to more than 50% in 2012'. Furthermore, the technology is imagined as a tool to make art relevant for users not only inside the museum walls but everywhere and anytime because the user 'always carries the museums' dissemination in their pocket' (through his/her smartphone). As in Case 1, the project description promises to involve users in co-design activities and four different user groups are mentioned (school classes, the museums' members club, families and young people).

In case 3, the project description contextualises technology as something that is traditionally imagined as having the ability to make museum content 'accessible', 'relatable' and 'meaningful' for users. Navigating within this imaginary is mentioned as something the museum has to do, something demanded by 'legislators, visitors, users, sponsors, artists and media producers'. As in Case 2, it is thus seen as necessary to be relevant. However, in Case 3, technology is only a potential catalyst and relevancy is as much related to the museum in wanting to address 'why, when and how it is relevant for [the museum] to disseminate digitally in a sustainable way'. Thus, Case 3 couples user relevancy with museum relevancy and to attain this coupling, the project description both promises to do 'field studies in the organisation [. . .] to explore [the museums'] work practises' and 'user studies in the physical and online museum space'.

Challenges of practicing the digital imaginaires

In all three cases, the participants experience challenges of practising the two digital imaginaires. To a great extent, these challenges arise or become visible in collaborative design activities or when these are not prioritised.

Technology as a tool to renew, revolutionise or reassess

In Case 1, the ideal of being a digital trailblazing museum organisation that delivers novel audience experiences and reform digital work practices seems to be largely agreed upon as a strategic guideline for the museum. However, the agreement stops when the participants in the project must convert the visionary project description into concrete action plans. Particularly, this happens since the project involves all departments and some departments appear to be much less invested and interested in the project than others, which becomes evident in workshops where employees from these departments show-up late and unprepared and express their disengagement by being completely passive. Thus, in the start phase, it quickly becomes evident that the project is neither born out of an all-encompassing institutional desire nor an art curatorial wish to embark on such a project journey. Instead, the wish to use technology as a tool to renew clearly comes from the communication and marketing department that has an inherent interest in the digital qua their area of work. As formulated by the museum management, the reluctance from some of the other departments might derive from a lack of digital interest, understanding and resources. 'Because it just means more work. In addition to what else you should do. But then we need to show people what they can actually get by participating in this project.' (Museum Manager, Case 1). However, the museum management does not take part in the everyday work of the project and are therefore not present to show them what they can get. In the end, the lack of digital interest, understanding and resources from certain departments becomes defining, as pointed out by one of the two project managers in the project, 'It is challenging in an organisation as this, which in many ways, is very far, digitally, from the aspirations in

this project.’ (Project Manager 1, Case 1). The second project manager further adds, ‘I cannot launch a cutting-edge platform with new content unless we have the resources to maintain it afterwards. From that perspective, the project has turned towards developing a platform the museum can maintain afterwards and not developing a platform that renews the audience experience.’ (Project Manager 2, Case 1). Overall, the lack of digital interest, understanding and resources in some of the departments in the museum not only challenges but also hampers the development of technology as a tool to renew audience experience and digital work practices. Thus, the ideal of being a digital spearheading museum organisation remains an ideal—a strategic vision that is not practised in the everyday design work at the museum.

In Case 2, the digital imaginaire is similarly challenged in co-design activities. Not as much by different internal staff groups as in Case 1, but more outspoken by external collaborators. Thus, staff from a participating digital design company quite strongly question the choice of mobile technology and propose to talk about ‘content first and not technology. Activating the artwork in a new way – how do we do that?’ (Designer, Case 2). Instead of focusing on the newness of technology, the designer suggests to focus on what new forms of dissemination the chosen technological solution is intended to support. Consequently, the design company suggests a completely different technological solution, namely installing a stationary board in the exhibition. Staff from the museum are not happy about this suggestion, since ‘we have promised that it will be tied to the art works’ (Project Manager, Case 2). Later in the design process, the project manager recalls the discussion at the first meeting, saying, ‘how could they even think that it was an option? It had to be mobile’ (Project Manager, Case 2). The first of the three solutions is indeed a mobile app. However, in the end, the third and last solution developed is not mobile but turns out to be stationary iPads posted in front of selected artworks. For the project manager, this is not a revolutionary solution technologically:

‘I think the product we have developed is very useful and enormously easy to use [. . .] But it’s a lot more low-tech than the original thought. I think it’s great that it’s more low-tech, but when you apply for funding, it’s sort of that technology infatuation that sells a project. There can be some challenges in that, I think.’ (Project Manager, Case 2).

Thus, practicing the initial imagination of technology as a tool to revolutionise turns out to be challenging and, through experimentation, a new direction is chosen. This change in direction is much related to the second imaginaire (technology as a tool to make art relevant) that will be touched upon in the following section. First, we move on to Case 3 where the digital is not concretely defined within specific terms or as specific technologies. Instead, the project objective is primarily focused on breaking away from tech-driven museum development, questioning the revolutionary ability of technology. Instead, technology should derive from reflections and objectives grounded in the museum organisation.

Challenges of practicing this ideal also emerge in the early phases of the project due to the non-specific starting point with no concrete design plans and a lack of integration with and understanding from the larger museum institution. Thus, staff from the museum do exactly what the project tries to avoid in several occasions. They see technology as a tool to renew and revolutionise, as done in the project descriptions of the two other cases and they do not discuss the actual capabilities that different technologies could offer audiences or the organisational changes caused by introducing new formats for art interpretation. A quote from an exhibition funding application is an illustrative example. ‘[For the project], we [the museum] are in the midst of investigating the use of museum apps and similar digital platforms’ (Funding application, Case 3). The app-solution is proposed neither in accordance with a new digital strategy or vision nor is it grounded in an interest in offering new types of experiences. Instead, it is considered a necessary new tactic for attracting funding and entering into new conversations with new funding partners. In another project at the museum, digital technologies are similarly suggested due to the newness of the technology and when asked why to integrate this particular technology, the project manager replies, ‘It would be cool to be the first museum to do this. . .’ (Museum Manager, Case 3). Even though the participant running the project of Case 3 continually gets staff from the museum to reflect on the capabilities of the digital, the museum staff seem to keep returning to see technology as a mere tool to renew and revolutionise instead of a tool to reassess. The vision of the project is to avert technology traps (Šola 1997) by co-developing digital museum practices

adjusted to the organisation but in practice the organisation tends to be trapped in tech-driven ideas and treat the digital as add-ons to the unmediated object-guest encounter.

Technology as a tool to make art relevant

Moving on to challenges of practicing the second imaginaire, the project description of Case 1 prominently features involvement of users to use technology as a tool to make art relevant. However, co-design competencies are not found within the project team but are planned to be outsourced to external consultants: 'There is not a fixed plan for the user involvement, but it is vital for our work that we involve the users. The supplier and consultants providing us with the platform will have to be willing to engage in co-design activities' (Project Manager 2, Case 1). This becomes a challenge because the user perspective and co-design approach are often lost in the everyday work life and only occur occasionally. For instance, a curator in an internal workshop meeting suddenly says:

'I came to think about, if we want to know what the users think and experience, then we are the wrong people to ask, or at least we need to put a different hat on than we usually wear. We need to create a platform, which reflects the users' needs and not the organisation's' (Curator, Case 1).

With that comment, the curator wants to end the workshop meeting. The project manager running the workshop responds to the comment, 'The important thing today is to sort out the organisational perspective, your needs. Of course, we also need to involve the users, but that is in a different meeting' (Project Manager 2, Case 1). However, this ambition is not fulfilled, as a project team member states: 'we set out to involve users in the design process, but. . . I think we have been too caught up in trying to establish us selves as a project within the larger organisation' (Project Team Member, Case 1). This is partly due to staffing in terms of qualifications and the organisation's inflexible and static way of doing projects. Lastly, it is a question about resources—time and money, as noted by project manager 1: 'Can the project afford to involve the users?' (Project Manager 1, Case 1). The project description from Case 2 also promises to involve users in co-design activities in the pursuit to make art relevant through technology. However, this is not done until after the first solution has already been conceptualised by the participants. Rather than an open invitation to discuss how technology can make art relevant for users, this activity is more a test of what is imagined by the project participants as ways to achieve this. The test is performed with two of the four user groups mentioned in the project description, namely the museums' members club and young people. In both cases, the chosen solution does not appeal to them, as summarised by one of the designers in minutes from a meeting after the test (called 'the user workshop'):

'The user workshop made it clear that neither the members club nor the young art students see themselves as the appropriate target group for such an initiative. However, the members club was rather positive about an app because they see some possibilities for getting extra information in front of the art piece. They are very literal in their approach and would like more information about the specific art pieces. The young art students liked the idea about a very factual information layer, but they didn't like the interpretational framework that a film or soundscape encapsulate the art piece in. They want to experience it by themselves. They were not at all likely to use an offering like that at a museum' (Designer, Case 2).

Due to lack of time and resources, the participants decide not to change the concept. Instead, they reflect on whom the design might appeal to and decide to focus on 'the creative segment 25 to 35 years old who are well educated and crazy about new gadgets' (Designer, Case 2) in their on-going work. In developing the two remaining solutions, the participants initially reflect more on target groups and they actually involve users in earlier phases of conceptualisation. Due to the experimental setup in this case, codesign activities are thus increasingly weighed and through these activities, the more low-tech third solution mentioned in the previous section emerges.³

In Case 3, the project description promises to address why, when and how digital technology is relevant through 'field studies in the organisation [. . .] to explore [the museums'] work practises' and 'user studies in

the physical and online museum space'. However, this meta-holistic approach proves to be challenging as the project proceeds since the museum staff generally struggle with disentangling the digital object (what to develop) from the objective (why should we be doing this and for whom?). Furthermore, collaborative processes are unfamiliar to parts of the organisation that instead seem to be accustomed to top-down and linear design processes. Target group questions such as 'who is our users?' and 'who do we want as users?' are repeatedly asked by the participant running the project of Case 3 in exhibition meetings. However, these questions are often pushed aside as a 'thing' to discuss in a different meeting and referred to the museum's core values. As an educator express, 'We need the [museum management] to be present. We can't decide this on our own. Can we?' Thus, concrete target group explications mainly reside in strategic documents used by communication and marketing employees and is not an integrated practice of the rest of the museum staff. As a museum manager concludes, 'The strategy was developed with help from an external consultancy company. From it [the strategy] left the printer, we have not succeeded in implementing the strategy in our daily work.' (Museum Manager, Case 3). This disintegrated practice results in challenges of operationalising the second imaginaire because it is never clear for whom the art should be relatable and relevant. Moreover, the intentions of engaging users are, as in Case 1, drowned in organisational qualms and discussions.

Conclusion

'It's interesting, you can have all kinds of thoughts and principles about how it should be, and then you have a daily life, which in practice, just tear along.' (Project Manager, Case 1). By analysing ethnographic data from three co-design processes at three different Danish art museums, this article has showcased challenges of practicing two categories of digital imaginaires: technology as a tool to renew, revolutionise or reassess; and technology as a tool to make art relevant. These imaginaires are similar across the three cases and can thus be viewed as representing more sectorwide perspectives. We have seen how practising the two imaginaires are challenged by the lack of digital interest, resources and/or competencies and the inaptitude to translate strategic visions into everyday work, which among others is manifested in the tardy user involvement. In addition, the museums, despite all intentions, tend to be trapped in tech-driven ideas and start with the technological object rather than the objective for development. Our intent has not been to systematically lay out these different challenges. Rather, we aim to reflect upon what we find to be inadequate claims about the status of digital media as fully integrated and even normative in museums. Not to say that these ideals are not useful or cannot be fulfilled in certain contexts but to highlight the importance of exploring the digital as situated in and entangled with everyday, collaborative museum practices. Most notably in our three cases, there is a tendency towards tech-driven development where certain technologies and their imagined capabilities become defining for digital design. As a result, the technologies overshadow the purposes and ambitions concerning, for instance, education, participation and engagement.

Furthermore, we find that these challenges emerge in co-design activities or because collaboration is not prioritised, pointing to the importance of collaboration. While the collective visions manifested in the project descriptions indeed drive the projects under study, they paradoxically also constrain them, since technology and work methods are defined before actual collaboration is initiated to receive funding. Thus, as the project manager in Case 2 says, 'technology infatuation sells a project'. Again, it is not to say that we should not use our imagination or be visionary. However, we need to question the rationale of these imaginations and visions, how they are described and how much power they are given. For instance, as suggested by Olesen (2015), fund attainment processes could be different, weighting specifications of co-design and human resources over specifications of technology and their imagined capabilities. Thus, as exemplified in the sandpit model of Case 2, having room for experimentation is crucial in the sense that the participants in this project can actually change their course away from what they 'sold'. From Cases 1 and 3, we also learn that resources are essential—not just for concrete digital projects but for heightening the general level of digital interest and understanding in an organisation. Integrating the digital in museum practices is an enormous task. It is not just something that happens from day to day or has already happened as some propose. Such changes are constant and dynamic, just like digital technology itself.

Notes

1. All data are originally in Danish and translated by the authors.
2. In Case 1, the project description is quite extensive since the aim is to develop the museums' entire digital museum practice. In our analysis, we focus on two parts of the description: An introductory part describing the overall objectives of the project and a part describing one of the concrete initiatives, namely the development of a new web platform, in relation to which the other data from the project were primarily derived.
3. For more details, see Olesen (2015).

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