Co-designing a co-design tool to strengthen ideation in digital experience design at museums

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This article presents and discusses a paper-based co-design tool that was developed in order to strengthen ideation in digital experience design processes at museums. The tool, called the ASAP Map, was co-designed as part of an action research project with 10 museums from EU and the USA. The museum partners used the tool in their home institutions and the article focuses on their feedback and the following iterations of the tool through ongoing feedback loops. Concludingly, the usefulness and applicability of the tool is discussed, also touching on the relevance of this study for the broader co-design field.

Keywords**:** co-design; design tools; ideation; ideation tools; digital experience design; digital technology; purpose-driven design; design processes; collaboration; museums; designers.

1. Introduction: A co-design tool for 'practical dreamers'

> A lightweight cross disciplinary group of creative thinkers, who excel in content production, strategy, ideation and rapid fire technological implementation. No idea is too "out there" or out of reach with this bunch of practical dreamers!

This is how a museum professional participating in our study described her local working group. She put the group together as part of an action research project where 10 museums from Europe and the USA made experiments, discussed learning and took part in developing knowledge and methods for the museum sector. By calling her group 'a bunch of practical dreamers', she touched on an interesting dichotomy between what one *wants to do* and what one *can do* in actual practice. As advanced in previous studies, museum professionals often seem to be challenged by this dichotomy in digital design projects, for instance because they are constrained by fund attainment procedures (Clay et al. 2014; Olesen 2016), because of difficulties in collaborating with external designers (Knudsen and Olesen 2019; Parry 2007) or because of

organisational challenges (Peacock 2008), such as 'the lack of digital interest, resources and/or competencies and the inaptitude to translate strategic visions into everyday work' (Olesen, Holdgaard, and Laursen 2018).

In these studies, challenges particularly manifest in relation to co-design activities. The co-design tool presented and discussed in this article was created to practically address these challenges. The tool is paper-based, to be printed, and used to facilitate and qualify discussions about a digital idea. We named the tool the ASAP Map to encourage museum professionals to use it *As Soon As Possible* when they develop and qualify an idea in the 'pre-design' and 'generative' phases of design (Sanders and Stappers 2014). The acronym also refers to the map's four categories: *Awareness, Solutions, Alliances and Plans*. The map supports museum professionals in discussing the motive and relevance of an idea – not the actual idea – keeping the attention on purposes rather than solutions. The goal is thus to strengthen the idea by creating shared understanding of what a team of collaborators *wants to do* and how that builds upon what they are already doing, potentially amplifying them to better practice their digital dreams. Figure 1 shows the most recent version of the map. The design process and rationale will be presented in the following sections.

[Figure 1 near here]

By presenting a co-design tool as well as its creation, this article both contributes to actual museum work practices and the expanding body of literature that intersects museum and design studies by critically investigating collaborative museum design processes (Ciolfi et al. 2016; Falco and Vassos 2017; Grewcock 2013; Lee 2007; Macdonald 2002; Olesen 2016; Stuedahl and

Skåtun 2018). The article first outlines how ideation tools have been used to facilitate co-design and argues for the relevance of implementing and exploring such tools in the context of museums. Secondly, the article presents how the map was first created, then used by and iterated with museum professionals. Finally, the usefulness and applicability of the tool is discussed, also touching on the relevance of this study for the broader co-design field.

2. Co-design tools for ideation

Co-design is a design strand where the core activities are based on the collective creativity of designers and people not trained within design, collaborating in design development processes from the pre-design phase (scoping the problem) to the post-design phase (after the design object has come into use) (Sanders and Stappers 2008; 2014). According to Sanders and Stappers, the beginning of a co-design process is characterized by being 'fuzzy' due to the chaotic, indistinct and uncertain nature of the situation when the design object is still unknown and the design problem is being explored and examined (2008).

There exists a number of co-design tools intended to support this fuzzy phase, e.g. design games (Brandt 2006), probes (Gaver, Dunne, and Pacenti 1999; Mattelmäki 2008) and ideation cards (Brandt and Messeter 2004; Halskov and Dalsgaard 2007; Hornecker 2010). Visser et al. (2005) have explored 'contextmapping' as a methodology for understanding the context of use of a product. Dalsgaard, Halskov, and Nielsen (2008) have proposed maps for design reflection, aimed primarily at design researchers. Empirical studies of ideation among designers have emphasized the importance of analog tools (Laamanen and Seitamaa-Hakkarainen 2014; Inie and Dalsgaard 2017). Others have explored ways to integrate analog ideation tools with digital or hybrid systems (Dorta, Pérez, and Lesage 2008; Lundqvist et al. 2018). Combining the hybrid

approach with the mapping metaphor, Darzentas et al. have developed an accompanying augmented reality mapping tool aimed both at supporting a participatory process with hybrid physical/digital ideation cards, as well as offering researchers analytical insight into the process (Wetzel, Rodden, and Benford 2017; Darzentas et al. 2019).

Compared to these earlier contributions, the study at hand contributes by suggesting a design not targeted at designers or design researchers but developed by and for museum professionals. The ASAP Map is thus a sector specific tool, aimed at museum professionals to address particular challenges found in the museum sector.

3. Co-design and digital design at museums

While much previous research has examined the use of ideation tools in co-design, the museum sector arguably poses a particularly interesting and challenging arena for co-design. Already, this was noticed by Star and Griesemer (1989) when they portrayed Berkeley's Museum of Vertebrate Zoology as a complex, cross-disciplinary knowledge organisation by analysing the conflicting views of different social worlds related to the museum. Their historical study coined the concept of boundary objects, which has proven relevant beyond the museum field. Later studies (Davies 2010; Knudsen and Olesen 2019; Lee 2007; Macdonald 2002) have also highlighted the complexities of collaborating in the context of museums, pointing towards challenges of collaborating internally across different museum staff groups or communities of practice and externally with designers and users.

A layer of complexity has been added by recent technological developments. Thus, digital technologies offer many opportunities for museums, but also many challenges. Museums have increasingly shifted their focus from presenting information about a collection of artefacts

to highlighting stories and experiences they can share with their audiences (Hooper-Greenhill 2000). Digital technologies have been increasingly used to engage museum visitors and enabling them to co-create their own experiences (Avram and Maye 2016; Ciolfi and Bannon 2007; Ciolfi et al. 2016; Holdgaard and Klastrup 2014). This has also led to calls for new ways of working in museums. As a result, co-design methods have gained acceptance in museums when developing digitally-enhanced museum experiences (Avram, Ciolfi, and Maye 2019; Mygind, Hällman, and Bentsen 2015; Stuedahl 2019). For museums embarking on co-design journeys, the focus has often been on inviting visitors to participate in new or re-designed museum exhibitions (Fuks et al. 2012; Smith and Iversen 2014; Stuedahl and Skåtun 2018; Taxén 2004) or develop museum education research or outreach programs for children or marginalised citizen groups (Ash, Rahm, Melber 2012; Tzibazi 2013).

Many studies display an optimism about the capabilities of technology for supporting, for instance, education, participation and engagement. The digital has even been imagined to fundamentally change museum exhibition and communication practices (Drotner and Schrøder 2013; Giaccardi 2012; Parry and Marty 2008; Parry 2007; 2013; Šola 1997). For some, this change has already happened and we live in a 'postdigital' museum age where we have reached 'a tipping point in the adoption of new media in the museum–a moment where technology has become normative.' (Parry 2013, 24). For others, this change is perceived as much more challenging (Olesen, Holdgaard, and Laursen 2018; Peacock 2008). As recently illustrated by Olesen, Holdgaard and Laursen (2018, 11), practicing digital dreams is indeed a challenging task, often constrained by organisational issues and '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'.

The ASAP Map is a response to this challenge, aimed at museum professionals as a sector specific co-design tool that might help them better practice their digital dreams.

4. Context and method

The ASAP Map was created as one activity in an action research project that formed part of a larger research project called the GIFT Project (Back et al. 2018, Løvlie et al. 2019). The GIFT Project ran from January 2017 to December 2019 and gathered artists, designers, museum professionals, and researchers to collaborate on making and researching digital experience design. The overall project objective was to explore hybrid museum experiences: mixed reality designs that complement, challenge, or overlay physical visits with digital content in order to create deeper personal encounters with cultural heritage for visitors in physical and digital realms. The purpose of the action research project was to investigate this objective in regards to design and organisational challenges at museums. The action research project lasted 1.5 years (from September 2017 to March 2019) and consisted of five two-day long workshops, as well as four action-taking phases in between the workshops as presented in Figure 2. The action research process included a team of university researchers, a knowledge partner and museum partners.

[Figure 2 near here]

In the action-taking phases, the museum participants worked with a group of colleagues at their home institution, running small scale experiments that explored the issues further. Ten museums

from Europe and the USA participated. For most of the museums, one person represented the museum in workshops and in reporting feedback. However, two museums had changing representatives, as illustrated in Table 1 that also presents the other working group members for each museum.

[Table 1 near here]

The participating museums varied in terms of size and digital capacity. While some of the institutions or representatives had a lot of experience in designing digital experiences, others did not or their institution did not. However, all of the museums could be classified as digital-ready in the sense that they were interested in performing digital experimentation and in sharing and discussing experimental results.

The co-design of the ASAP Map was one activity in the action research process. In this article, we focus exclusively on this work, which was documented through participant observations, materials produced in the workshops, qualitative surveys and individual interviews with the museum professionals. The data was analysed through basic grounded theory coding procedures (Strauss and Corbin 1990) and mapping approaches inspired by Situational Analysis (Clarke 2005). In the following sections, we first present how the map was created and introduced. Second, we analyse the participants' feedback from using the first version of the map. Third, we account for the iterations of the map, based on the participants' feedback and two later feedback sessions. As part of the informed consent procedures the individual participants have been promised anonymity in order to allow them to speak freely about internal challenges in their organisations. They will therefore not be named.

5. The first version of the map

The participants were introduced to the ASAP Map at the first workshop. This version was created entirely by the action researchers, inspired by previous research on digital design at museums as presented in previous sections of this article. The map looked quite different from the final version (cf. Figure 1).

[Figure 3 near here]

The four columns – 'A) Awareness', 'B) Projects / solutions', 'C) Resources' and 'D) Plans' – were chosen in order to support reflections about how people think and act, both individually and in different collectives. The inspiration for these categories came from perceiving museum organisations as emergent from ongoing interactions (Peacock 2008), and digital technologies as constantly evolving in relation to the various social worlds in which they are embedded and negotiated (Orlikowski and Iacono 2001). The three rows hold the concepts that were to be discussed going through the column categories A to D. These concepts reflect some of the main objectives or 'digital dreams' of the larger research project. They were chosen by the action researchers by comparing two sources: The project description of the research project (the GIFT Project) and a qualitative survey filled out by each of the participants before the action research process was initiated. In the survey, the museum partners filled in information about their organisation and the nominated participant. They were also asked to write about why they wanted to participate and what they would be interested in working on through the project. The three concepts mentioned in the project description that were mostly referred to in their answers were chosen: 'personalization', 'playfulness' and 'visitor engagement'.

At the first workshop in the action research process, the participants were introduced to the map and the concepts by the action researchers. They were asked to reflect openly on how they understood the concepts in relation to their context when filling out the map, both thinking about past, present and future projects. They filled out the map individually and the procedure was discussed. They were then asked to set up a working group consisting of three or more participants at their museum (preferably from different departments) in which to, among other things, use the map. After using the map, the participants filled out a qualitative survey reporting their working group session, including exploratory questions about the map. This was followed by an unstructured interview with each participant in order for them to clarify and/or elaborate on survey answers.

6. Analysing feedback

The analysis of the feedback on the first version of the map is divided into three parts: The first part presents how the participants used the map, the second part presents potentials of the map mentioned by the participants and the third part goes through challenges mentioned.

Use

The map was used quite differently depending on the participants' context and needs. Particularly, differences occurred in terms of: *Who participated in the discussions, the setting of the discussions* and *how the map was discussed*.

In relation to *who participated in the discussions*, the participants mentioned a wide array of different museum staff types, such as 'Audience & Communities Manager', 'Business Development Manager', 'Creative Technologist', 'Collections Assistant', 'Curator', 'Digital

Manager', 'Educator', 'Exhibition Designer', 'Head of Education' and 'Project Manager' (see Table 1). Thus, different departments and job functions were involved as were different managerial levels. While some participants involved museum staff from different departments in the discussions – as the action researchers had originally encouraged them to do – others found it more fruitful to use the map within one department. For instance, this was chosen because the organisation was very large with big and diverse departments, because of lack of stability or resources in other departments or simply because it made sense to have the discussions internally in one department. Involving leading managerial levels were typical in cases where the museums were in the process of developing or reworking strategies (or about to do so).

Differences also occurred in terms of *the setting of the discussions*. As mentioned, the action researchers originally asked participants to discuss the map in one group, a working group consisting of three or more members. 6 out of 10 participants followed that model. Among the others, one participant met with different groups–a group of curatorial staff, a group of learning staff and her boss–in order to collect different inputs. Another participant filled out the map before meeting with the group, using her answers as a base for the discussion. Others did not set up a formal meeting but talked more informally with different colleagues about the map.

In terms of *how the map was discussed*, the participants illustrated different ways of relating to the column categories. For instance, under 'A) Awareness', some talked in general terms about the concepts while others talked about quite specific projects. Under 'B) Projects / solutions', some discussed previous projects while others talked about upcoming projects or ideas, the latter mimicking or relating to the fourth category, 'D) Plans'. Also, the relevance of the categories and concepts varied for the museums. For instance, some spent a lot of attention on the intersection of category 'C) Resources' and the concept 'Personalization', while others

almost skipped that category. In general, the dissimilar use of the tool seemed to illustrate differences among the participating organisations regarding interest and/or experience with the categories and concepts. This dissimilarity showed that the map was flexible and could be used according to context and needs of the particular organisation. While the action researchers may have had some ideas about how the ideal situation of use would look like, the participants showed that other ways could be more useful to them, e.g. depending on the size, priorities, experiences and interests of the organisation.

Potentials

Analysing responses from the participants illustrated that the map had the potential to support both *micro level discussions* and more *macro level discussions*.

In supporting *micro level discussions*, the responses can be grouped in three categories: Discussing new perspectives, new possibilities or conflicting issues. First, for discussing new perspectives, the participants mentioned that the map supported knowledge sharing across departments, tenure and experiences. As a participant noted: 'It was fun to work together to identify past instances of the three concepts in our program, given the different tenures and experiences of our working group'. Having these discussions further raised awareness about the level of knowledge sharing, as illustrated in the following response: 'They [the other members in the working group] were really more positive than me because I'm so depressed by the whole situation. I actually overlooked a couple of things that we're actually doing, which was great. And I was also impressed by the level of awareness in some points, but in some other points I was kind of surprised about the non-awareness.'

Second, the map helped establish new possibilities in revealing connections to other activities and programs in the organisation. This was particularly evident when discussing

resources. For instance, a participant mentioned how the map helped him figure out ‘how the project could tie in with’ a colleague’s participation in another project.

Third, the participants reported that the map helped identify and open up discussions about conflicting issues, e.g. in relation to sensitive subjects or disagreements among staff. For instance, as a participant from a history museum reported: ‘We would like to work on creativity (activating our audience, moving away from offering a purely passive experience) but the historical facts on offer are not open to interpretations. The stories we tell are mostly very sensitive and difficult.’

For supporting more *macro level discussions*, the participants mentioned having strategic discussions in relation to either professionalisation or priorities and ambitions. First, in terms of professionalisation, the map was seen as a way to professionalise practices and work more systematically with the selected concepts, resulting in better solutions for audiences, as expressed by a participant: ‘We discussed the three concepts and concluded that we are working with all three concepts at the museum and we have several installations which included elements from the three concepts. But we are NOT working systematically with the three concepts […] we need to work more professionally with the concepts and build knowledge and capacity in order to make better solutions for our users.’ Others saw the tool as an ongoing ‘platform for thinking things through’ or a sort of checklist. One even called it: ‘a really good reality check. [...] There’s a universe in which I believe that everything that I do should fit in that grid. Artist videos should fit in that grid. Audio tours should fit in that grid. And if it doesn’t fit in that grid, it might not be worth doing.’

Second, the map could lead to discussions of the organisation’s overarching priorities, strategies for cross-departmental collaboration and ambitions. As noted by a participant,

discussing the map led to reflections on how and why the museum: ‘1. Prioritizes work and projects. 2. When cooperation between departments works well and when it doesn’t. 3. Ambitions – how we want to communicate with our audience in the future, and who that audience should be.’

All in all, the map had the potential to support both micro level discussions on new perspectives, possibilities or barriers and more macro level discussions on strategies or strategic awareness.

Challenges

For some of the participants, using the tool was challenging either because *going through the concepts separately* was experienced as difficult or because of their own or competing *understandings of the concepts*. These challenges were, however, not just perceived as negative.

For some of the participants, it was quite easy and meaningful to *go through each concept separately*. For others, it was very challenging, as expressed by a participant: ‘We do tend to do things a little bit differently and that’s quite a conscious effort on our part to not separate things like visitor engagement, playfulness, personalization […] when I was doing it and going through the list and filling everything out, I just drew a big line through everything and I was like: This is everywhere, I can’t split it, it’s everywhere!’ Others also mentioned issues with ‘keeping the topics separated’ but noted that it was actually useful ‘forcing a bit the boundaries to elaborate a concrete planning and road map’. As similarly advanced by another participant, they would generally go in ‘the opposite direction here, we’re trying to make more of a joined-up service.’ However, he noted that separating the concepts actually ‘increased awareness’ of them, as he elaborated: ‘Yeah, it was really interesting seeing how if we sort of

force separate them, it does make us have to think very much about them almost like a micro activity within the bigger activity.'

The map was also difficult to use for some of the participants because of their own or competing *understandings of the concepts*. Two different aspects were mentioned in this regard. First, some participants found it difficult to work with the structure because they saw the concepts as different kinds of concepts, levelling differently in terms of priority. For instance, a participant saw playfulness and personalization 'as methods to achieve visitor engagement', making it difficult to treat them equally. Also, another participant experienced difficulties in discussing the map in her working group due to different views on the structuring of the concepts: 'The topic of playfulness, for someone working in the educational department, was absolutely difficult to separate from any form of engagement. And also personalization. While for someone much more familiar with production, it's easy to understand how personalization can be sometimes not absolutely playful'.

Second, some of the participants found that the vagueness of the concepts were challenging since different understandings of the concepts – due to dissimilar backgrounds, languages etc. – made it difficult to discuss them. As a participant noted: 'I was surprised by the need of spending quite a lot of time in defining these concepts that we see and understand differently according to our background and orientations.' However, these efforts in discussing both the structuring and understandings of the concepts were, in most cases, mentioned as useful: 'I think it was fruitful, it was not spinning in circles, it was much more […] unfolding possibilities and different aspects.'

All in all, using the map was challenging for some of the participants because of the way they related to, worked with or understood the concepts. Thus, they either found the separation of

the concepts, the structuring of the concepts or the vagueness of the concepts difficult. In most cases, however, the challenges were perceived as positive in the sense that discussing the tool might bring out new perspectives.

7. Iterations of the map

While the first try-outs showed that the map could support interesting discussions and confirmed the relevancy of developing shared understanding, it also highlighted different issues with the text and design. Particularly, the predefined concepts were problematic. Even though participants found the discussions rewarding to some extent, the concepts, or the way they were structured, did not always match well with institutional contexts. In contrast, the categories A to D did not offer enough structure, since participants understood the text differently. While the flexibility of the tool could be perceived as positive, it also signalled that the map could be confusing and unclear.

These issues were further explored approximately one year after the participants first used the map. At workshop 4 (cf. Figure 2), the participants were asked to revisit the map and come up with suggestions for improvement. At this point, the participants had all been through a process of designing and conducting design experiments in their home institutions. The goal of the discussion was to understand how the map could be turned into a more generic tool to support digital experience design at museums. The participants were therefore asked to discuss a version of the map (version 2) almost similar to the original map (see Figure 3). Only one change was made: The three concepts in the left column were replaced with the text: ‘Digital Objective’.

The discussion mirrored the analysis presented above and resulted in some ideas for how to solve the issues.

These ideas were used to design a new version of the map (version 3). This version was further enhanced graphically (see Figure 4). Also, an instruction for use was created as part of the GIFT Project website, documenting the map and offering printable versions of the map for download. At workshop 5 (cf. Figure 2), approximately 4 months later, the participants discussed version 3 and the instructions for use, again resulting in suggestions for improvement.

[Figure 4 near here]

The main feedback points from both workshops are summarised in table 2:

[Table 2 near here]

The feedback on version 3 was used to make a new iteration, resulting in the final version (Figure 1, version 4). This version was shared with the participants approximately three months later. They were again invited to give feedback on the map as well as the other outputs from the action research process. Only positive comments were given at this point. At the time of writing, the map is offered as a 'Design and Planning Tool' at the GIFT Project website (https://gifting.digital/asapmap), where museum professionals can download it as a printable pdf or an editable Adobe Illustrator file, along with documentation and instructions for use.

8. Concluding discussion

In this article we have presented how a paper-based co-design tool, called the ASAP Map, was co-designed with and for museum professionals. The map was created in order to strengthen ideation in digital experience design processes at museums by encouraging early discussions about a digital idea. The article has shown how the map was created for, used by and iterated with 10 museums from Europe and the USA as part of an action research process. Concludingly, we want to consider the usefulness and applicability of the tool, as well as the relevance of this study for the broader co-design field.

While we believe that the participatory nature of the design process leading to the ASAP Map has helped ensure that the tool is useful and applicable for museum professionals, its main value may lie not so much in the tool itself as in its capacity to inspire and support a reflective and collaborative mindset. As noted by Löwgren & Stolterman (2004, p. 2) ‘normative approaches are not enough’. A co-design tool, such as the ASAP Map, needs to be accepted as a way of working in order to actually work. As one of the participants in the action research process advanced: 'For the framework [the ASAP Map] to actually be accepted as a way of doing things, you would need to have the right capacity.' This was further elaborated by another participant: 'Many of the challenges we face to growing our capacity are administrative – an institution that sometimes still sees tech as a layer and not an integral part of the visitor/user experiential fabric.' And even though parts of the organisation do have this capacity, others may not, as mentioned by a third participant: 'I would see digital as being more experimental, thinking about design practices, being more agile, taking more risks, whereas the people in the organization see it very much as technology led.' The efficacy of the ASAP Map may then depend on the ability of museum professionals to persuade their colleagues to work in a more

collaborative and reflective way. However, as one of the participants put it, the map is 'a useful first' for inspiring and supporting such a mindset.

In order to learn more about the usefulness and applicability of the ASAP Map, the final version of the map should be tested further. While the participants took part in co-designing the tool, the version presented here was finalised at the end of the process, and thus could not be tested by the participants. For example, action research could be performed in each participating institution to examine the use of the tool during one or more design projects. Furthermore, it would be relevant to test the tool in other institutions than the ones participating in the action research process. For instance, it could be interesting to test the tool in an institution with less digital resources and competences. Based on further testing, the ASAP Map could potentially be developed into a more useful and applicable tool. In order to encourage such further iterations and adaptations of the tool, the design files (Adobe Illustrator) are shared on the GIFT project website (https://gifting.digital/asapmap).

In spite of its limitations, the ASAP Map could be ‘a useful first’ for addressing the above mentioned challenges in design processes at museums. Moreover, the process of co-designing the ASAP Map has indeed confirmed the need for finding practical ways to address these challenges. The map might be used within other sectors, for instance within other GLAM-institutions or creative businesses, but it should be adapted and potentially further co-designed to match the specific sector. Thus, we argue for the relevance of developing sector specific co-design tools as a supplement to more generic tools aimed primarily at designers or design researchers. Sector specific co-design tools are not only relevant for addressing sector specific challenges but also for empowering other professionals participating in design processes. In

order to achieve this ambitious goal, we argue that a co-design tool should be targeted at and co-designed with the specific professionals that it seeks to empower.

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Table 1

MUSEUM	ROLE OF PARTICIPANT(S)	OTHER WORKING GROUP MEMBERS
ARKEN Museum of Modern Art, Denmark	Head of Education	Chief Curator, 6 curators and 6 educators
Brighton Museum & Art Gallery, United Kingdom	Digital Manager	Curator of Natural Sciences, Collections Assistant and Senior Museums Learning Officer
CAOS Centro Arti Opificio Siri, Italy	Program Manager	Staff from Production Office, Communication and Website and Educational Activity
Danish Museum of Science & Technology, Denmark	Curator	Visitor Experience Manager and Museum Curator
Derby Museums, United Kingdom	Curator	Project Director, Head of Museums, Marketing & Social Media Coordinator, Business Development Manager and Audience & Communities Manager
The Munch Museum, Norway	Director of Learning (Workshop 1-2) Project Coordinator for Digital Visitor Experiences (Workshop 3-5)	Art Educator, Project Manager of Digital Collection, Director of Conservation and Director of Marketing
The Norwegian Center for Studies of Holocaust and Religious Minorities, Norway	Exhibition Designer	Senior Advisor, Head of Education and 2 Educators
Royal Albert Memorial Museum & Art Gallery, United Kingdom	Digital Media Officer	Collections and Audiences Assistant and Collections Officer

San Francisco Museum of Modern Art, United States of America	Head of Interpretive Media (Workshop 1 and 3) Head of Web and Digital Platforms (Workshop 2) Creative Technologist (Workshop 4) Senior Content Producer (Workshop 5)	Lab Fellow and Interpretive Media Associate
Tyne & Wear Archives & Museums, United Kingdom	Digital Programmes Officer	Learning Programmes Manager, Collections, Research and Curatorial Manager and Principal Officer, Communications

Caption: An overview of museums and participants.

Table 2

ISSUES	**FEEDBACK ON VERSION 2**	**FEEDBACK ON VERSION 3**
TEXT	The text of the categories (A to D) is confusing. Formulate the text as questions instead to support reflections. Add audience/people to enable a more human centered approach. The objective should not be 'digital', since digital is only a potential route towards fulfilling an objective.	'Objective' is very broad. 'Purpose' resonates better. The text is still not entirely clear and needs smaller adjustments.
INSTRUCTIONS FOR USE	The map is confusing. There is a need for instructions on how to use it.	The website instructions are useful but there should be instructions on the map as well.
USE CONTEXT	The context of use is unclear. It should be clear that the map is for developing digital installations, useful in early phases of design.	The context of use is still unclear. It should be clear that the map supports ideation but at a point where you already have an idea of doing something digital.
DESIGN	There is no need for having three objectives. Concentrate on the main objective.	The design is too heavy. It should be easy to print (in colour and black and white) and be more subtle.

Caption: A summary of main feedback points.

Figure 1

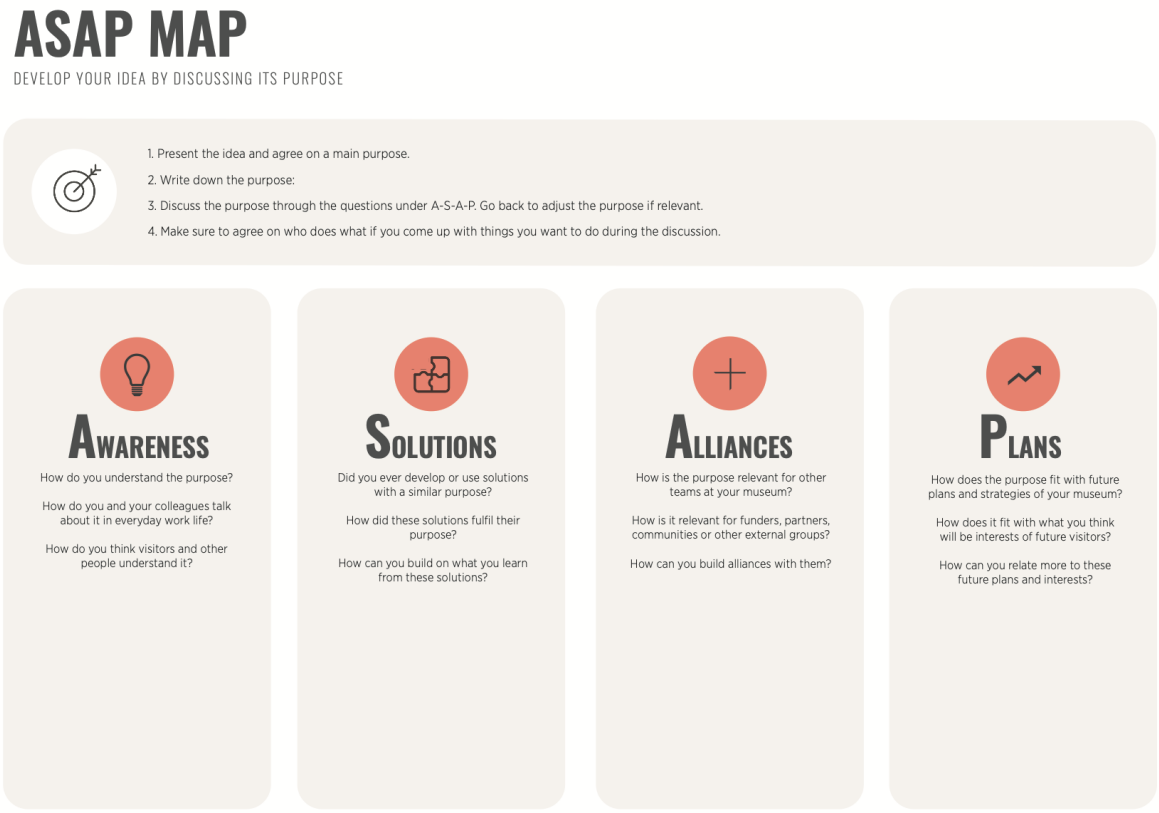
ASAP MAP
DEVELOP YOUR IDEA BY DISCUSSING ITS PURPOSE
1. Present the idea and agree on a main purpose.
2. Write down the purpose:
3. Discuss the purpose through the questions under A-S-A-P. Go back to adjust the purpose if relevant.
4. Make sure to agree on who does what if you come up with things you want to do during the discussion.
AWARENESS
How do you understand the purpose?
How do you and your colleagues talk about it in everyday work life?
How do you think visitors and other people understand it?
SOLUTIONS
Did you ever develop or use solutions with a similar purpose?
How did these solutions fulfil their purpose?
How can you build on what you learn from these solutions?
ALLIANCES
How is the purpose relevant for other teams at your museum?
How is it relevant for funders, partners, communities or other external groups?
How can you build alliances with them?
PLANS
How does the purpose fit with future plans and strategies of your museum?
How does it fit with what you think will be interests of future visitors?
How can you relate more to these future plans and interests?

Figure 2

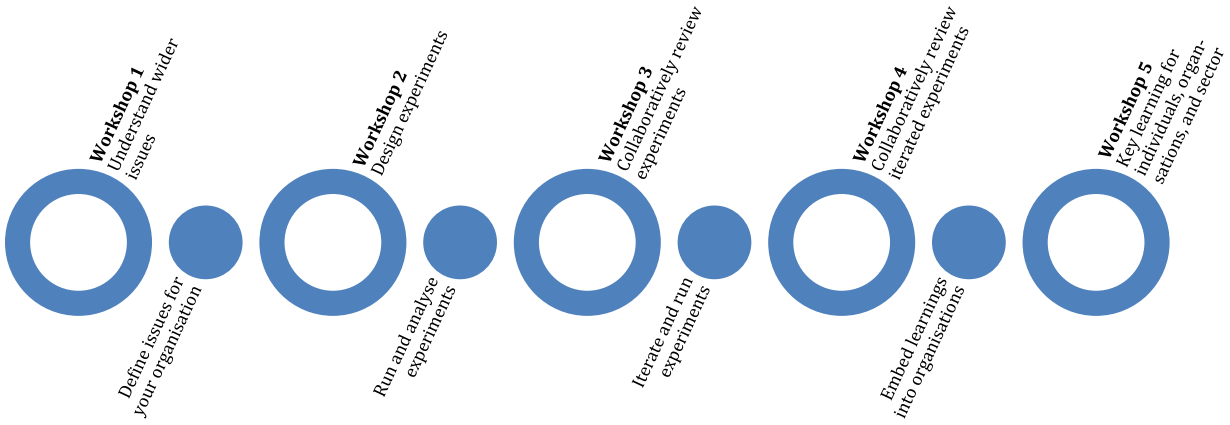
Workshop 1
Understand wider issues
Define issues for your organisation
Workshop 2
Design experiments
Run and analyse experiments
Workshop 3
Collaboratively review experiments
Iterate and run experiments
Workshop 4
Collaboratively review iterated experiments
Embed learnings into organisations
Workshop 5
Key learning for individuals, organ-sations, and sector

Figure 3

		A	B	C	D
		AWARENESS (e.g. your own, in team, in department, cross-department? How do you think/talk about it)	PROJECTS / SOLUTIONS (e.g., developed/implemented by one, a small team, entire department, across departments? Describe examples)	RESOURCES (e.g., yourself, in team, in department, cross-department? Related to concrete projects or free agents? From funding?)	PLANS (e.g., your own, in team, in department, cross-department? What are your concrete plans? Future ambitions?)
1	PERSONALIZATION (e.g., through narratives, appropriation, social networking)				
2	PLAYFULNESS (e.g., through games, interactives, challenges)				
3	VISITOR ENGAGEMENT (e.g., through dialogue, co-creation, flexibility)				

Figure 4

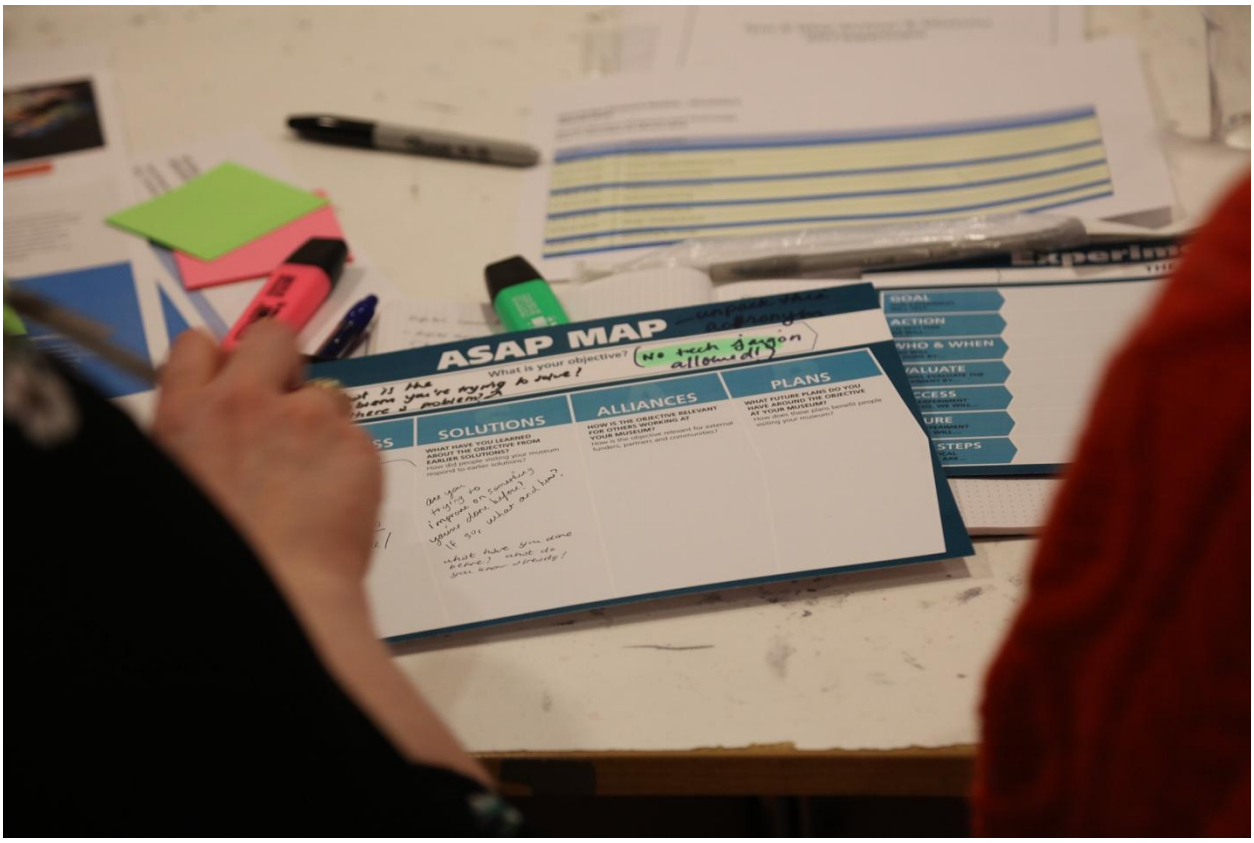
ASAP MAP
What is your objective?
SOLUTIONS
ALLIANCES
PLANS
GOAL
ACTION

Figure captions

Figure 1: Final version of the ASAP Map (version 4).

Figure 2: Overview of the action research process.

Figure 3: First version of the ASAP Map (version 1).

Figure 4: Participants giving feedback on version 3.