

## **How might we? Co-constructing recommendations on digital and organisational change**

This article accounts for the process of co-constructing knowledge as a set of recommendations on digital and organisational change for the museum sector. The recommendations were formulated at the end of an 18-month long action research project with 10 participating museums from EU and the USA. The participants did several local experiments in their respective museums during the project, and they met each quarter for a workshop where they could share insights from the experiments with their peers. Here we provide the contextual background for the recommendations and show how the initially open knowledge generating process was stepwise condensed into four so-called How Might We questions that served as the foundation for outlining the final recommendations. The article concludes with a discussion of the value and validity of this kind of co-constructed knowledge and an appeal to other museum professionals to engage in similar knowledge-generating processes within or across organisations.

Keywords: organizational change; digital technologies; action research; co-constructed knowledge

### **Introduction**

In his address to the museum community in 2001 media theorist Manuel Castells portrayed museums as uniquely positioned to ‘become cultural connectors for a society which no longer knows how to communicate’ (Castells 2001a, 7). In his seminal work on the rise of the Network Society Castells traces how networked structures such as the Internet have influenced our society. According to Castells the networked society not only facilitates global technological creativity and cultural communication, there is also strong counter dynamics towards individualization of messages, resulting in a fragmentation of societies and a lack of shared codes of communication: ‘paradoxically, the multiplicity of cultural expressions in reality decreases the capacity to share sense and, hence, to communicate’ (Castells 2001a, 5). However, to fulfill this potential for

connection museums must take active part in public discourse by articulating the temporal dimension of heritage and history within the living experience of the present. If museums function merely as passive archives, they become ‘mausoleums of culture and not means of communication’ (Castells 2001a, 6).

Avoiding the risk of becoming irrelevant means adapting continuously to the rapidly changing conditions. Already at the advent of the Information Age (Castells 2001b) learning theorist Donald Schön pointed to the necessity of organizational learning for adapting to processes of continuous change: ‘we must invent and develop institutions which are “learning systems”, that is, systems able of bringing about their own continuing transformation’ (Schön 1971, 28). Realizing the ideal of a learning organization is not about trying to change your organization from one state to another, but instead regarding your organization as in a perpetual state of *becoming* (Tsoukas and Chia 2002). This is also the case for museums, however museums as legacy institutions face further challenges as they ‘are by nature conservative and resistant to change’ (Ames 1997, 5). However, ‘society will move on whether or not museums move with it’ (Black, 2020, xviii). Another barrier to organizational learning is compartmentalization, where knowledge and learning is contained within siloes, divided along narrowly defined professional fields e.g., conservation, curation, education and communication. Silos are great for division of labor and specialization, and they foster a high degree of accountability. Still, this accountability can also lead to internal rivalries and competition for scarce resources. In addition, silos can lead to tunnel vision, when we fail to see the full picture of the challenges that are facing us (Tett 2015).

In order to disassemble siloed ways of thinking and explore new opportunities, we engaged ten museum professionals in cross-institutional and cross-national action research – a method to engage directly with the challenges we face through reflection,

experimentation and evaluation (Author et al 2022). The action research process lasted 18 months and resulted in a set of recommendations on digital and organizational change for the museum sector. These recommendations are published as part of The GIFT Box a website containing various open access resources for museums developed within the GIFT Project funded by the EU's Horizon 2020 initiative (GIFT 2019a). Therefore, this article acts as a companion piece to the recommendations on the website by providing a deep dive into the background materials underpinning the actual recommendations. Here we will show how the recommendations were developed in a collaborative and iterative process between researchers and museum professionals. First, we present action research as a method for co-constructing knowledge and describe the context and methods of our action research process. Second, we will account for the actual process of co-constructing knowledge focusing on how the learning from the action research was distilled into four so-called How Might We questions that then served as the springboard for constructing the recommendations. Third, we briefly present the recommendations and how they are framed on The GIFT Box website. Finally, we will discuss the validity and value of this kind of co-constructed knowledge for the museum sector.

### **Action research and co-constructed knowledge**

In museums, action research is most often employed in the context of education in order to involve stakeholders such as teachers, academic researchers and young people in developing new museum programs (Ampartzaki et al. 2013; Carr et al. 2012; Foreman-Peck and Travers 2013; Hooper-Greenhill 1996; Tzibazi 2013). Moreover, Hooper-Greenhill (2000) argues that the work of developing the role of museums in

light of the changing demands and values of our time can in itself be considered a form of action research.

In its classic form, action research consists of systematic cycles of action and reflection alternating between first experimentation and testing practices, then reflection on the results and planning eventual further actions (P. Reason and Bradbury 2008). The exact order and number of cycles vary and will depend on the actual context of the study.

Action research entails a desire not to impose change on others but to change with others (McTaggart 1991; P. Reason and Bradbury 2008) or—as stressed by Freire (1971, 62)—to have faith in people and ‘believe in the possibility that they can create and change things’. An action research process therefore resists linear planning but thrives as a living dialectical process that emerges from the interaction between researchers, participants, and the contexts of action (McTaggart 1997; McIntyre 2008).

Building on pragmatist roots, action research thus values practical and situated knowledge (Horner 2016). Of course, action research can be more or less participatory (Kemmis and McTaggart 2005; Bergold and Thomas 2012) but following a pragmatist perspective, the idea of knowledge is pluralist (Horner 2016). The goal is therefore to co-construct knowledge, recognizing different ways of knowing and multiple forms of knowledge (Gacenta and Cornwall 2008), intertwining theory and action. Counter to traditional scholarship, theory and action are not seen as separate entities and knowledge production can therefore be a collective process between researchers and participants (Horner 2016). We will show how this process played out shortly, but first we will present the context of our project and the methods used.

## **Context and methods**

Our action research process was a subproject of a larger EU funded research initiative

called the GIFT Project (Author 2019). The GIFT Project constituted a collaboration between researchers, artists, designers and museum professionals from January 2017 to December 2019 and aimed at exploring and designing hybrid museum experiences—that is mixed reality designs that augment physical visits with digital content in order to make more personal, meaningful encounters with cultural heritage. The action research process sought to explore the context for this objective in close collaboration with ten museums from EU and the USA. The process lasted from September 2017 to March 2019 during which the participants met at five two-day workshops. In between the workshops, the participants worked with a group of colleagues at their own museums to do small exercises and run experiments that investigated the issues discussed at the workshops (see figure 1).

[Insert Figure 1 near here]

The process was run by a facilitator team, consisting of university researchers and staff from the charity organization Culture24 with thorough experience on conducting action research in a museum context (Finnis 2018). The participating museums varied regarding their remit, digital capacity and size. Some of the representatives—or their institutions—did not have a whole lot of experience with digital designs, but many of them did. Common for all of them was, that they were part of the project because they wanted to explore, experiment, and develop their institutions digitally.

The recommendations for the museum sector were developed towards the end of the process at workshop 4 and 5 and afterwards (see figure 1). At workshop 4, we involved the participants in presenting and summing up learning from their previous experiments and we used affinity mapping (Dam and Teo 2020) and a design method called How Might We (IDEO.org 2015) to analyze and narrow down the learning. Using How

Might We was inspired in part by one of the participating museums, Derby Museums, who had worked systematically with the method (Derby Museums 2016). The idea behind the method is to shift the focus from finding fixed solutions to looking for opportunities. Asking ‘how’ immediately circumvents the fatalistic position of “this is impossible”. Including ‘might’, rather than ‘could’ or ‘should’, in the formulation implies an openness towards failure. It is ok if an idea fails. The important part is to try and learn from eventual failures. ‘We’ implies that “we are in this together”. Therefore, it is a collaborative effort, and we should engage with and build on the ideas of others (IDEO.org 2015; Derby Museums 2016).

We documented the process by collecting data in the form of audio recordings, together with written materials, such as posters and post-its produced at the workshops. The aim of the data collection was to enable us afterwards to do a thorough analysis of the process of co-constructing knowledge and distilling learning using the How Might We questions as a springboard for the final recommendations.

### **Recommendations as co-constructed knowledge**

Building on the extensive experience of the facilitators from Culture24 working with cultural institutions on facing the current challenges of social and digital transformation, we used the concrete experiences of our participants from conducting local experiments [\[CHM1\]](#) as a focal point from which to begin constructing common knowledge about what museums should do to face these challenges. Each participant brought their own perspective on the challenges and potential facing museums—each of them from a different organizational and national context. Our objective was to synthesize the experiences and viewpoints from these diverse museum contexts into a set of

co-constructed recommendations for the museum sector. In this respect our group of participants went beyond the individual community of practice

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In order to showcase the co-constructed nature of our recommendations, we now zoom in on the process leading up to them. The process consisted of five steps: firstly, a diverging phase discovering pressing issues for the museum sector in response to the reflections and insights following from the experiments the participants had previously done. Secondly, followed a converging phase narrowing these insights down by defining a set of *need statements* and, thirdly, further conflating these and reformulating them as How Might We questions. Fourthly, we responded to these questions by developing a corpus of answers to the questions in another diverging phase. Lastly, in a converging phase our participants did another round of experiments, testing answers to the questions, before the collaborative evaluation of the entire process and formulation of the recommendations at the final workshop.

### ***Step 1 and 2: Identifying issues and defining need statements***

During the first day of the workshop, when each participant presented their latest experiment and reflected on what they had learned from it, the other participants were tasked with recording on post-its all the insights, thoughts and issues for the museum sector that came to mind during the presentations. This resulted in a body of 140 post-its. The facilitator team conducted a preliminary coding of the material via affinity mapping (Dam and Teo 2020) that resulted in four categories: Issues related to

processes (46 post-its), issues related to experiences and content (53 post-its), issues regarding audiences (28 post-its) and organizational issues (13 post-its). These categories formed the basis for the next step, where participants were divided into four groups dedicated to one category each. Taking the content of each category as a point of departure each group was tasked with formulating three *need statements* for the museum sector in the format of “Museums need X” where X could be a literal need, something to understand, something to do or just something to think about. This resulted in a list of 12 need statements (see Table 1 for a list of the need statements according to the four categories of issues).

[Insert Table 1 near here]

Then the need statements went through a *voting process* where participants indicated which of the statements, they found to be most important for the museum sector. Each participant was given 9 red votes with a value of 1 and one yellow ‘power vote’ with a value of 5 to place on the need statement that felt most pertinent to them. A ranked list of the need statements according to the results of the voting process are presented in table 2.

[Insert Table 2 near here]

We want to highlight some observations from table 2. First, almost all need statements had some traction with the group with a span of 6-20 votes each, indicating a consensus about their importance. Only statement 12 stand out with just 2 votes. A plausible explanation is that ‘being less risk averse’ is implied in the more popular



statements 01 and 04. Second, the top four statements include one from each group indicating that all four issue categories were considered relevant (or participants might have been biased towards voting for a statement they had been working on). Third, the distribution of power votes was even with just two statements receiving more than one power vote. Indicating a diversity within the group on the pertinence of each need statement. Also, the power votes were indeed powerful pushing these statements to the top of the list.

### ***Step 3: Formulating How Might We questions***

Afterwards, the facilitator team worked on formulating How Might We questions (HMWs), trying to conflate several need statements into each question in order to preserve as much information as possible from the previous step. See table 3 for an overview of which need statements was conflated into each HMW question. The initial formulation of the questions formed the starting point for a collaborative formulation, when participants later engaged in revising them before the process of responding to the questions began. The evolution of different versions of the HMWs can be seen in table 4.

[Insert Table 3 near here]

In table 3 we see that statement 02 and 11 was conflated into HMW01. Here it was assumed *that triggering personal meaningful experiences is part of making better connections between museum collections and storytelling*. Also, *metadata* was assumed to form part of *collections*. Statement 01, 04, 10 and 12 was conflated into HMW02. Here it was assumed that being *less risk-averse* and engaging in *interdisciplinary*

*collaboration* would be part of having a *bold and open culture*. It was felt that the acknowledgement of *learning from failure* was so important that it remained specified in the HMW even if it can be argued that it is also implied in a bold culture. Statement 03 and 07 was conflated into HMW03. Here it was assumed that adopting a more nuanced way of thinking about people would entail and acknowledge that museums cannot engage everyone. Statement 05, 06 and 09 was conflated into HMW04. Here it was assumed that a *shared understanding of language* would underpin a *better understanding of communication* for explaining museum work. Also, developing a *unique selling point* is fundamental for effective communication. The only need statement that did not become part of a HMW was 08. While presenting an important point, it was felt that the statement was too concrete and therefore ill-suited for the following ideation process as it would be hard to elaborate further ideas from it. Finally, all HMWs, except HMW03, include elements from more than one category/group, which reflect a shared understanding that museum needs span across our categories as they simultaneously address organisational and content issues.

[Insert Table 4 near here]

We want to make the following observations from table 4. The revisions of HMW01 centred first around the word digital. It was felt that the scope of the HMW should be broader in addressing the need for better connections. In addition, storytelling should also include assets other than collections. There were some concerns within the group that the focus on storytelling was delimiting as it excludes other forms of communication. However, after a spirited discussion it was decided to keep it in. Finally, in version 2.1 it was decided that the element of *learning from other disciplines*, was implied in storytelling as seeking inspiration from disciplines that excel in

storytelling is an obvious way of approaching it. The revision of HMW02 was also a broadening of scope as the group wanted to stress that *a bold and open culture* is about more than *acknowledging failure as part of innovation*. The revision of HMW03 was aimed at simplifying the question and it was agreed that *removing binary definitions* and *imperfect audience segments* formed part of creating *a more nuanced way of thinking about people*. Also, they constitute ways of responding to the HMW rather than support the question. The revisions of HMW04 centred first on the notion of a common language, which was felt to constitute part of a shared understanding. There was some discussion around the notion of ‘value’, as in “value for whom?” and “value in terms of what?” In relation to the latter, some participants were concerned that a focus on value might result in a narrow, utilitarian approach aimed only at maximising value. Clearly, HMW04 assumes that museum work has inherent value. The issue is to make this value more obvious. Finally, in the gist of simplifying the question the group decided to remove *externally and internally* in version 2.1 as it was considered to be implicit.

#### ***Step 4 and 5: Exploring answers and formulating the final recommendations***

After formulating the HMW questions, the group collaboratively brainstormed on possible ways to address each question in turn resulting in a corpus of 129 answers to the questions. Between workshop 4 and 5, each participant made a final experiment that addressed one of the four questions – either building on one or more of the 129 ideas or taking another approach. At workshop 5, the questions were further discussed based on these experiments. After this last workshop, the discussions were summed up and turned into recommendations by the facilitator team, involving several feedback loops with the museum participants to ensure that they agreed with the narration. Further, the

participants were asked to write recaps of some of their experiments, exemplifying specific ways of working (GIFT 2019c).

The recommendations consist of four parts: first the issue that the HMW questions seek to address is explained. Next, pointers for further reflection is provided in a section on ‘Things to think about’. Then, in the third part on ‘Things to do’, experiment recaps written by the museum participants relevant to the HMW in question are showcased. Finally, we provide links to further relevant resources in a section on ‘Things to explore further’. The recommendations are featured on the GIFT Box website containing all the outputs from the GIFT project and targeted at museum professionals (GIFT 2019b). They are also available in a pdf version as supplementary material to this article. Whilst the recommendations seek to support museums to embrace digital practices, they are not specifically digital or technological in character. Rather they relate to fundamental organisational conditions that need improving for meaningful organisational change to take place, touching on much more than just digital practices. However, the recommendations are constructed through a ‘digital practice lens’, taking this as a point of departure in investigating how museums are enabled to create deeper personal encounters with cultural heritage for their visitors.

## **Discussion**

In this article, we have shown how a set of recommendations on digital and organizational change for the museum sector emerged out of an 18-month long action research project with 10 participating museums from EU and the USA. In particular we have focused on how the knowledge underpinning these recommendations were co-constructed through a process of distilling learning via consecutive phases of diverging and converging activities. In the remaining part of the article, we want to

discuss the validity and value of this kind of co-constructed knowledge: What is the validity of turning this kind of contextual knowledge into more general advice? And what exactly is the value of these recommendations for the broader museum community?

Clearly, the knowledge generated is contextual. It was constructed with a certain purpose in a particular context and therefore not necessarily readily applicable to the greater museum community. However, in putting together our group of museum participants we have strived for variation in terms of nationality and the challenges they face (Burcaw 1997) to increase the validity of the generalizations we make (Patton 1990). Further, as we describe elsewhere (Author 2022), over time our group of museum professionals became a kind of cross-institutional *community of practice* (Lave and Wenger 1991). Participants valued the safe space for reflection enabled by collaborating with a group of peers away from cultural constraints, hierarchical power relations and challenges of their everyday work. Forming cross-institutional working groups and sustaining them for an extended period is clearly an approach for disassembling siloed ways of working. In addition, Wenger argues that such a community of practice is well-suited to ‘explore radically new insights without becoming fools [...] A history of mutual engagement around a joint enterprise is an ideal context for this kind of leading-edge learning [...]’ (Wenger 1998, 214).

In accordance with a pragmatist perspective and the idea of warranted assertions, the validity of the recommendations and the knowledge underpinning them should be judged by the people whom they impact and who took part in their co-construction (Horner 2016). We have sought to ensure this validation throughout the process. The knowledge co-constructed at the workshops were continuously put to the test through experimentation in the local context of the participants' home museums. Afterwards,

participants reported back on what they had learned from their experiments at the next workshop. This stimulated further collaborative reflection. Thus, our theoretical knowledge was repeatedly corrected by contextualized museum practice. From these repeated loops between local action and more general reflection, we know that our participants valued and found inspiration in the knowledge and recommendations we have co-constructed.

As shown above the need statements were vetted via a voting process to ensure that we carried the most important ones onwards. One legitimate objection to this stage of the process is the function and effect of the power vote. The intention was to visualize which need statements the participants subjectively considered as the most pertinent. However, also assigning the power vote a value of five regular votes effected the final ranking of need statements tremendously. In hindsight we should just have assigned both votes the same value, but still use different colors to explicate the subjective preferences of the participants without unduly affecting the results of the voting.

Further the actual wording of the HMWs and the resulting recommendations was repeatedly validated in a collaborate review to ensure that they reflected the intentions of the whole group. Therefore, we feel confident that the co-constructed knowledge in the form of HMWs and recommendations genuinely reflect the intentions of our participants and given the diverse composition of the group should provide value to the greater museum community.

This value is of course in itself contextual: for some our recommendations can serve as inspiration, for others they will be less relevant. However, we hope that our HMW questions will stimulate many discussions and reflections among museum professionals and our recommendations prove useful in diverse museum settings. Not

least we hope that the recounting of the experiments done by our participants will inspire further action in the museum sector. Together with our participants we believe an experimental approach is necessary in constructing the knowledge required to adapt to the challenges and potentials imposed on museums by digital and societal changes. This is part of the bold culture, where we learn from our failures, envisioned for museums with HMW02. A recent study at the Smithsonian National Museum of Natural History (NMNH) tellingly illustrates the need for such a bolder culture in museums. The study identified six organizational values that they considered constitutive of a learning organization. The two values in which the organizational culture was considered the weakest was ‘experimentation’ (exploring new ideas and approaches in one’s work) and ‘aspirational thinking’ (taking risk in one’s work) (Korn, Chandler, and Marzec 2021). This indicates a decidedly risk-averse organizational culture which unnecessarily constrain creativity and innovation. Similarly Black (2020) holds that courage, implying ‘an appetite for risk and ‘learning from failure’, should be part of the future vision for any museum (2020, 259).

Also, Black (2020), taking stock after a 45-year career working with museums, echoes two of our HMWs in his commitment ‘to an approach based on direct audience participation leading to learning’ (2020, xviii), However, in our view, this requires a more nuanced conception about the audience not in the abstract, but as actual people (HMW03). Further his conviction that ‘museums are defined by their collections, but what matters most is what we do with them’ (2020, xviii) aligns nicely with HMW02 about making better connections to museum collections with storytelling.

Regarding the value of museum work addressed in HMW04 the research project *The cultural value of engaging with museums and galleries* sought to address a lack of consensus among policymakers, funders and practitioners about the value of audience

engagement by drawing together and critically assessing the numerous and diverse body of studies on the subject (Scott, Dodd, and Sandell 2014). But this lack of consensus about the value of museum work goes deeper. We found that it was also present within museum organizations, where siloed ways of working can obscure the value of contributions from different parts of the organization. If the value of our work is not even apparent to our colleagues, it seems unlikely that it will be apparent to the general public.

## **Conclusion**

In providing this explication of the process and co-constructed nature of our recommendations featured on the GIFT website, we hope to inspire other museum professionals to engage in similar knowledge-generating processes. Whilst the recommendations and case stories on the website are readily available for inspiration and people can engage with the four HMW questions by providing their own answers, this article moreover exemplifies how to collaboratively construct HMW questions that are pertinent to your particular institutional context.

When engaging in such a process of collaborative knowledge construction the project has further shown the value of including participants from outside your own organisation. People in other organisations often wrestle with similar challenges and there is a benefit in addressing them together. Expanding the scope of collaboration to also include participants from other sectors or even the general public can provide more nuanced understandings of the challenges you are facing and form the basis for exploring alternate courses of action.



## Endnotes

<sup>1</sup> The participating museums were: ARKEN Museum of Modern Art, Denmark; Brighton Museum & Art Gallery, United Kingdom; CAOS Centro Arti Opificio Siri, Italy; Danish Museum of Science and Technology, Denmark; Derby Museums, United Kingdom; The Munch Museum, Norway; The Norwegian Center for Holocaust and Minority Studies, Norway; Royal Albert Memorial Museum & Art Gallery, United Kingdom; San Francisco Museum of Modern Art, United States of America; Tyne & Wear Archives and Museums, United Kingdom.

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## Disclosure statement

The authors report there are no competing interests to declare.

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## Appendix 1

Figure 1. Overview of the GIFT action research process.



Table 1. Need statements according to the four categories of issues.

| <b>Issues related to</b> | <b>Need statements</b>  |
|--------------------------|---|
| Processes                | Museums need to acknowledge failure as part of innovation.  |
|                          | Museums need to define and record 1) Lifespan 2) objective 3) digital needs/labour of digital products.   |
|                          | Museums need to facilitate interdisciplinary collaboration from beginning to end  |
| Experiences and content  | Museums need better connections between collections, metadata and storytelling. They need to learn from other models 1) media 2) film 3) literature |
|                          | Museums need to have a better understanding of different ways of communicating  |
|                          | Museums need to be less risk-averse   |
| Audiences                | Museums need a nuanced way of thinking about people (removing binary definitions of visitors vs. non-visitors and imperfect audience segments)      |
|                          | Museums need to accept that they will not engage everyone, and funders and policy partners [need] to understand and support this.                   |
|                          | Museums need to use their assets to enable people to trigger their own meaningful experiences   |
| Organization             | Museums need a bold and open culture  |
|                          | Museums need cross-departmental collaborations that have a shared understanding of language   |
|                          | Museums need to define and develop their unique selling point.  |

Table 2: Museum need statements in ranked order after the voting process.

| Need statements |   | Votes       |                |       |
|-----------------|---|-------------|----------------|-------|
|                 |   | Red<br>(=1) | Yellow<br>(=5) | Total |
| 01              | Museums need to acknowledge failure as part of innovation   | 10          | 2              | 20    |
| 02              | Museums need better connections between collections, metadata and storytelling. They need to learn from other models 1) media 2) film 3) literature | 12          | 1              | 17    |
| 03              | Museums need a nuanced way of thinking about people (removing binary definitions of visitors vs. non-visitors and imperfect audience segments)      | 6           | 2              | 16    |
| 04              | Museums need a bold and open culture  | 8           | 1              | 13    |
| 05              | Museums need to have a better understanding of different ways of communicating  | 8           | 1              | 13    |
| 06              | Museums need cross-departmental collaborations that have a shared understanding of language   | 6           | 1              | 11    |
| 07              | Museums need a nuanced way of thinking about people (removing binary definitions of visitors vs. non-visitors and imperfect audience segments)      | 4           | 1              | 9     |
| 08              | Museums need to define and record 1) Lifespan 2) objective 3) digital needs/labour of digital products.   | 8           | 0              | 8     |
| 09              | Museums need to define and develop their unique selling point.  | 7           | 0              | 7     |
| 10              | Museums need to facilitate interdisciplinary collaboration from beginning to end  | 7           | 0              | 7     |
| 11              | Museums need to use their assets to enable people to trigger their own meaningful experiences   | 6           | 0              | 6     |
| 12              | Museums need to be less risk-averse   | 2           | 0              | 2     |

Table 3: From need statements to HMW questions.

| <b>Need statements</b> |   | <b>HMW questions</b><br>(version 1.0)   |
|------------------------|---|---|
| 02                     | Museums need better connections between collections, metadata and storytelling. They need to learn from other models 1) media 2) film 3) literature | How might we make better connections between our digital collections and storytelling, learning from other disciplines?                                   |
| 11                     | Museums need to use their assets to enable people to trigger their own meaningful experiences   |   |
| 01                     | Museums need to acknowledge failure as part of innovation   | How might we create a bold and open culture in museums, that acknowledges failure as part of innovation?  |
| 04                     | Museums need a bold and open culture  |   |
| 10                     | Museums need to facilitate interdisciplinary collaboration from beginning to end  |   |
| 12                     | Museums need to be less risk-averse   |   |
| 03                     | Museums need a nuanced way of thinking about people (removing binary definitions of visitors vs. non-visitors and imperfect audience segments)      | How might we remove binary definitions of visitors & non-visitors, and imperfect audience segments to create a more nuanced way of thinking about people? |
| 07                     | Museums need a nuanced way of thinking about people (removing binary definitions of visitors vs. non-visitors and imperfect audience segments)      |   |
| 05                     | Museums need to have a better understanding of different ways of communicating  | How might we establish a common language to develop shared ways of understanding and explaining the value of our work, internally and externally?         |
| 06                     | Museums need cross-departmental collaborations that have a shared understanding of language   |   |
| 09                     | Museums need to define and develop their unique selling point.  |   |
| 08                     | Museums need to define and record 1) Lifespan 2) objective 3) digital needs/labour of digital products.   | Not included in a HMW.  |

Table 4: The evolution of the four How Might We questions.

|       | <b>Version 1.0</b>  | <b>Version 2.0</b>   | <b>Version 2.1 (final)</b>   |
|-------|---|--|--|
| HMW01 | How might we make better connections between our digital collections and storytelling, learning from other disciplines?                                   | How might we make better connections between our collections + related assets and storytelling, learning from other disciplines? | How might we make better connections between our collections and storytelling?   |
| HMW02 | How might we create a bold and open culture in museums, that acknowledges failure as part of innovation?  | How might we create a bold and open culture in museums, including an acknowledgement that failure is a part of innovation?       | How might we create a bold and open culture in museums, including an acknowledgement that failure is a part of innovation? |
| HMW03 | How might we remove binary definitions of visitors & non-visitors, and imperfect audience segments to create a more nuanced way of thinking about people? | How might we create a more nuanced way of thinking about people?   | How might we create a more nuanced way of thinking about people?   |
| HMW04 | How might we establish a common language to develop shared ways of understanding and explaining the value of our work, internally and externally?         | How might we develop shared ways of understanding and explaining the value of our work, externally and internally?               | How might we develop shared ways of understanding and explaining the value of our work?                                    |