Breaking the Digital Ceiling

Key Insights from

D   RS

Digital Incubator
for Museums

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Introduction

DOORS – Digital Incubator for Museums was a project dedicated to digitalisation in small and medium-sized museums seen as a way for them to stay relevant in uncertain times.
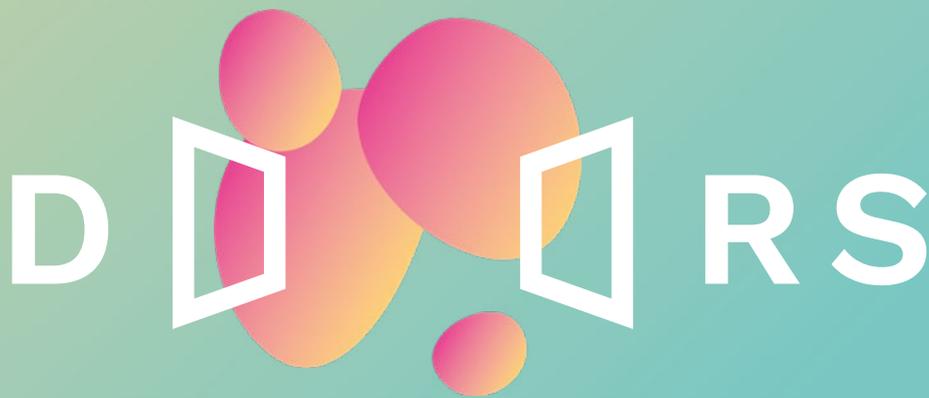
Initiated by partner organisations Ars Electronica, MUSEUM BOOSTER and ECSITE and funded by the European Union's Horizon 2020 research and innovation programme, DOORS – Digital Incubator for Museums ran for two years from October 2021 to September 2023.

For the most part of the two years, the efforts went into designing and running a two-stage incubation programme that would finally help twenty museums break the digital ceiling and contribute to their long-term digital transformations.

We conducted in-depth research into the status quo of small and medium-sized museums to reinforce or leave behind any assumptions we might have had and pave the way for the incubation programme. We published the findings of the research in various reports and armed with a better understanding, we started planning a responsive, agile incubation programme in two stages.

While discussions about the sector's digital transformation had been happening for a while, there was little talk at the time of how this might look different in smaller museums. We focused on local or regional museums, museums located outside urban centres, museums that owed their existence to the dedication of a few volunteers, convinced that we needed to preserve the diversity of these institutions, and that this depended on their ability to go digital.

This publication is a roadmap that marks the steps of our *interpretation of an incubation programme*. The voices of the project team, the experts and the participating museums come together to outline, comment on and contest our methodologies and practices.

Our Legacy summarises how DOORS used knowledge-sharing practices and frameworks and the design of the incubation programme to create long-term impact, hopefully inspiring granular changes at a museum level, and more attuned funding schemes. ***How to Share Knowledge*** unpacks the architecture proposed by DOORS to ease the knowledge-sharing within and beyond the project and includes contributions by Merete Sanderhoff and Dr. Lauren Vargas. ***How to Incubate*** delves into the design of our incubation programme and the reasoning behind it to inspire future programmes. It also includes a contribution from Maaike Verberk. ***How to Make the Most of It*** invites the museum practitioners that participated in our programme to talk about their experience and what they wish they'd known in the beginning, to inspire future participants in similar programmes. ***Future-Proofing Museums*** invites the same practitioners to speculate alongside Dr. Lauren Vargas and Julia Pagel on future incubation and funding schemes that recognise digital transformation as a process, dare we say, a never-ending one.

The first four chapters are a storytelling exercise with a double purpose. On the one hand, they're a map for our peers who want to run similar programmes and might feel as lost as we did in the beginning. On the other hand, they're a translation of the learnings from our groundwork into possible frameworks for the future - for facilitators, a crucial step towards becoming more attuned to the realities of the museum sector. While the first three chapters look back to make sense of the future, the final chapter invites contributors to freely imagine and speculate about possible other frameworks - an equally important step in breaking old moulds and future-proofing them.

Consortium

A project initiated and run by:

ARS ELECTRONICA
Art, Technology & Society

MUSEUM BOOSTER

ecsite
EUROPEAN NETWORK
SCIENCE CENTRES & MUSEUMS

Ars Electronica is a cultural institution, educational facility and R&D lab based in Linz, Austria. Since the Ars Electronica Festival first took place in 1979, Ars Electronica has developed a unique, comprehensive approach to techno-cultural phenomena and gained worldwide recognition. Ars Electronica now includes four divisions — the annual Ars Electronica Festival, the Prix Ars Electronica, the Ars Electronica Center, and the Ars Electronica FutureLab – that work in parallel yet inspire one another in a circuit of creativity. From the international, artistic experimentations celebrated with the Ars Electronica Festival and the Prix Ars Electronica, to the local educational and entertainment programme of the Ars Electronica Center and the ground-breaking research conducted in the FutureLab, their approach responds to the Zeitgeist and transgresses disciplinary boundaries to create a space of dialogue and inter-disciplinary translation.

MUSEUM BOOSTER is a Vienna-based research & consulting company committed to the strategic advancement of museums and cultural institutions through digital transformation and organisational innovation. MB focuses on audience intelligence, visitor experience, data management and organisational innovation, to help museums, science centres, cultural sectoral agencies evolve and enhance their relevance as society changes. They also advise policymakers, funders and investors on their projects and work with and for cultural institutions.

At the core of practice is research, collaboration & sharing. MUSEUM BOOSTER has developed and runs signature projects such as Future Museum and Museum Leadership House, working with 70+ museums around the world. They partner with leading research organisations, including Fraunhofer IMW, the Institute of Digital Culture at the University of Leicester, Vienna University of Economics and The Audience Agency.

Ecsite, the European Network for Science Centres & Museums, is the only Europe-wide network organisation linking science centres and museums, natural history museums, zoos, aquariums, universities, and research organisations. The common thread uniting these organisations is a commitment to public engagement: pursuing the vision of fostering creativity and critical thinking in European society and emboldening citizens to engage with science and technology. Ecsite facilitates co-operation among Europe's science centres and museums by establishing standards, sharing expertise, disseminating best practices, encouraging collaboration, and developing training programmes. The Ecsite Conference is Europe's most prominent meeting bringing together 1,200 science engagement professionals from around Europe and the world each spring.

ROLE IN THE PROJECT

THE PRACTITIONERS & DIGITALISATION FORERUNNERS

Since its opening in 1996, the Ars Electronica Center invited visitors of all ages to reflect on the effects of digitalisation on our society. In their role as coordinator of DOORS – Digital Incubator for Museums, Ars Electronica shared with those at the start of their digital transformation the expertise gathered from years of critical and artistic reflection on digital developments, digitalising their own content, as well as coordinating and participating in European projects.

ROLE IN THE PROJECT

THE RESEARCHERS

Drawing from their experience in similar projects, and the ongoing extensive research and analysis of best practices within the cultural sector, MUSEUM BOOSTER built a comprehensive incubation programme intertwining knowledge sharing, training and mentoring formats, activities for community building and inspiration sessions.

Activating its global database of 5000 museums and an ever-expanding network of creative technologists, digital transformation leaders and experts in new revenue development, MUSEUM BOOSTER engaged external expertise and strengthened the DOORS network fostering collaborations and partnerships for future experiments.

ROLE IN THE PROJECT

THE NETWORK MAKERS

Ecsite used its experience working with and maintaining a unique network of 320+ science centres, museums, and partners to implement the DOORS' pilot programmes. In addition to that, Ecsite led the development of a self-reflection tool to help museums and other cultural institutions understand their digital maturity levels and needs. Alongside MUSEUM BOOSTER and Ars Electronica, Ecsite also had a key role in developing the incubation programme.

Pilot Projects

INNOVATING AUDIENCE ANALYSIS AND ENGAGEMENT

Be A Part - encourage engagement in digital education

The Museum of the Working World in Austria designed a digital platform with gamification elements. Complementing the on-site visit with a 'digital map' of the museum, the platform offers a choice of educational paths – similar to a computer game based on riddles and/or problems to be solved – connected to the museum's exhibitions.

Digital Audience Analysis - Audience segmentation based on motivation

The Neanderthal Museum in Germany investigated the motivation of their digital and analogue visitors by analysing their usage of digital offers and conducting surveys in and outside of the museum. Segments based on motivation were defined as a basis for a wider user segmentation. This will help create more purposeful and relevant content and a more efficient use of resources in future digital development processes.

The Open-Air Museum

Museo Civico Vignola "Augusta Redorici Roffi" developed a web app to connect the exhibition rooms to the open-air museum, a fossil outcrop along the Panaro River. The app allows visitors to enjoy the collections within the museum remotely and connect them to the unconventional - but equally rich with traces of the ancient past - open-air museum, making it easier for them to learn about the fossils and minerals and to reconstruct through them the history of the territory.

Awakening Memories | Leaving Traces

The Regional Museum Goriški Muzej in Slovenia developed an interactive web-based augmented reality application that gives local and foreign visitors the chance to explore the city and its evolution in time through photos from the museum's archive. Besides awakening inhabitants' memories and serving as a travel guide, the app invites locals to contribute to the living archive and leave traces in the form of comments, memories and knowledge about the different places.

Innovation in Audience Analysis and Engagement in the Estonian War Museum

The Estonian War Museum set out to make its exhibitions, events and communication more youth-friendly. Following an in-depth analysis of potential younger audiences, the museum tried to increase its visibility with communication campaigns tailored to the channels most used by youngsters.

Creating an E-park Guide with Gamification Elements to Boost Visitor Participation

The Arboretum Volcji Potok in Slovenia launched an e-park guide augmented with gamification elements as a new, innovative way for families with children to explore the park and connect with nature. The virtual guide highlights points of interest and makes the visitor experience more memorable with stories, illustrations, photographs, games and puzzles.

Mariemont 3D: a new user approach and visitor experience

The Royal Museum of Mariemont in Belgium set out to attract and engage non-, absent or future visitors and stakeholders. For the audience analysis, the team gathered the local stakeholders and the young descendants of the museum's existing patrons, the Friends of Mariemont. The museum also laid the ground for a digital transition by mapping its business architecture, identifying ICT opportunities, assessing past digital activities, brainstorming storytelling ideas, and creating staff training opportunities in 3D scanning and modelling software.

AR Quest: Urajärvi Mansion

The Association of Uräjärvi Mansion´s Friends in Finland created meaningful ways for visitors to interact with the museum's history, exhibits and landscape throughout the year. AR Quest: Urajärvi Mansion is an AR web app that allows visitors to explore the museum's artefacts outside its walls.

Digital Storytelling and Gaming App: THE TSM QUEST!

Terra Sancta Museum in Jerusalem created a hybrid reality experience that merges digital storytelling with site-based learning. The app's storyline and interactive features were co-created with the target group of the project - the marginalized Arab community living in the catchment area of the museum.

The only way to learn is through encounter!

To raise awareness about issues of equality, diversity, and inclusion of people with disabilities, **The Istanbul Dialogue Museum** in Turkey involved its disabled employees in creating a digital story-telling archive that gathers stories about their work experiences and encounters with visitors. To promote the archive to existing audiences and attract new ones, the museums also developed a communication and marketing campaign titled 'Every Experience is Unique'.

Innovating Audience Engagement for Hybrid Events

IMPAKT [Centre for Media Culture] in The Netherlands developed a modular CRM system to communicate and build meaningful relationships with hybrid audiences. The centre developed two "arches of engagement" - user journey visualisations that map the touchpoints of all phases of interaction – to respond to the needs of online and onsite audiences.

Hands on the Map! at Maps Museum

The National Museum of Maps and Old Books in Romania created an AR mobile application that offers edutainment user experiences for children between 10-14 years old. The museum involved teachers in the app's design and referenced the school curricula to bridge between non-formal and formal education, establish itself as an educational environment and diversify its audiences.

NEW CONTENT DISTRIBUTION AND REVENUE MODELS

Ctrl+Shift+Esc | Digital Museum Escape Game

The Computer History Museum in Slovenia created a shared remote experience - an online escape game inspired by retro gaming and treasure hunt TV games. As they try to connect various clues and hints in the online environment, players encounter retro-gaming elements (text adventure, terminals, 8-bit graphics) and become familiar with digital technology (binary system, cryptography, inner-workings of digital circuits) in a fun and exciting way. All this leads up to a live-streamed remote museum treasure hunt event, where a museum team member acts as the on-site avatar for the online the players.

Digital Warmth with tiled stoves

The Museumsmanagement Niederösterreich in Austria developed DIPworld, a digital visualisation platform for regional collections in Austria. Launched during the opening of a new exhibition at the Kaiser Franz Josef Museum Baden, DIPworld accompanied the presentation of the museum's collection of historical tiled stoves. By placing objects in fresh contexts, linking locations, stories, and production processes, the platform offers a tool for cross-collection exchanges between museums, researchers and audiences.

Interactive Hub for Wooden Architecture

Museum of Urban Wooden Architecture in Lithuania addressed the challenge of preserving local historical wooden architecture with a hub that provides the community of wooden house owners with easy access to resources, contractors and service providers and an online shop where they can acquire authentic architectural elements.

An inclusive digital transformation of the museum experience

Muzeon - Storytelling Jewish History Museum in Romania improved their audio guide web app by adding three additional languages and new accessibility features, including a content manager intended to simplify the process of adding new data and content. Their solution will also be marketed to other museums as a subscription service.

RadioMoLI: Archive of Tomorrow

The Museum of Literature Ireland expanded RadioMoLI - an already established creative space with its own distinctive voice that promoted multiple narratives through podcasts, readings, and short-films - by streamlining the 'on demand' feature to create a more user-friendly experience. The museum also upgraded its in-house recording studio to use it for its content production, as well as to hire it to generate revenue.

STRATEGIES FOR INTEGRATING INFRASTRUCTURES

3D Scanning Infrastructure for Nature Education and Remote Research The Computer

The Natural History Museum and Botanical Garden of the University of Tartu in Estonia integrated infrastructure for the 3D scanning of physical objects (insects, bones, taxidermy, fossils etc.) in their collection. An automated 3D-scanning station was set up and the images obtained were stored in the existing collection and biodiversity data management system PlutoF.

EXPERIMENTAL ICT PROGRAMMES

DigiSmALL: Digital Curator for Small Museum

Alonissos Museum of K.& A. Mavriki in Greece developed an innovative, affordable, and user-friendly web-based platform. For a small membership fee, museums can join DigiSmALL to register exhibits and create digital catalogues of their collections, create interpretation lines, exhibitions, and online educational programmes, or open communication channels with researchers to increase their revenues and expand their audiences.

READ - Responsive E-Ink Adaptive Displays

St Ives Museum in the UK revolutionised museum labelling and displays with READ-Responsive E-Ink Adaptive Displays. The responsive e-ink adaptive displays make labels inclusive, personalised, and adaptable and are expected to increase audience engagement. Moreover, they are agile, environmentally sustainable and have low running costs.

Our Legacy

Our overarching mission with DOORS – Digital Incubator for Museums was **to spark lasting changes in small and medium-sized museums**. These changes would outlive our programme and be the start of a **sustainable digital transformation**.

In practical terms, such big words mean more than successful pilot implementations in various small museums across Europe. They meant supporting staff in honing or acquiring new digital skills or helping them make sense of the digital landscape, inspiring change in current practices or ever just unsettling the certainty and necessity around them.

As early as the application stage, we came up with our interpretation of the call that proposed a preliminary investigation into the needs of a less researched segment of the sector – small and medium-sized museums, an incubation programme necessarily combined with capacity-building, a network of experts around the project and a framework for sharing knowledge. In our interpretation, the teams behind the projects incubated, perhaps more so than the projects themselves, were seen as ambassadors of change in their institutions.

This idea continued to guide us in planning the incubation programme, where the focus was as much on the projects as on the practitioners behind them and their potential to continuously drive change. We designed an incubation programme in two stages - a 3-month stage for 40 museums and their staff to access basic digital skills and refine their project proposals, followed by a 9-month stage for 20 museums to implement their projects. Both stages interweaved theoretical and hands-on elements with the first stage focusing on capacity-building and the second on the incubation of the projects selected.

We figured that if "the ability of an organisation to deal with the transformation is defined by its digital maturity and literacy"[1], then boosting the digital maturity and literacy within these organisations must precede any attempt to gear up towards a transformation no matter how time-consuming this might sound. In fact, we argue that a transformation must take time, it must be carefully considered, its products, offers, and services tried and tested, and their value to audiences and communities measured and improved upon. With DOORS – Digital Incubator for Museums, we wanted to give museums the time to reflect upon their choices, become more aware of their individual context and make decisions accordingly, but also the time to be wrong, fail and go back to the drawing board.

This idea was built into the design of the first stage of the incubation programme, conceived as a period of learning and re-examining initial proposals to ensure they fit the local or institutional context, were feasible and brought value to the communities.

In the second stage, we defined success loosely insisting that one can learn from mistakes and thus, any digital product development would be valuable simply by contributing to the digital literacy and maturity of the organisation and its staff. Already in the first part of the Sparkle Report we changed the nomenclature to refer to the case studies presented as '*sparkle cases*' rather than best practice examples, or success stories. We did this to illustrate what we wanted the pilots we incubated to be: sparkles, i.e., experiments and experiences that sparked changes in the museums no matter their momentary success or even longevity. Instead, their success was to be measured in time against the success of the museum's journey towards a digital transformation. Will the museum take on other digital projects? Will it become braver and more curious, prepared to embrace change and become more adaptable? Will the project ease the work of its staff or make it more open to future collaborations?

These are questions we will not be able to answer now, soon, or ever. In a sense, dependant as it is on the success of the pilot projects, the success of DOORS will also be measured in time and become increasingly harder to pin down in the ever-changing, complex digital landscape. We too beg that our success be defined loosely.

In the following three chapters, we look at how the DOORS programme was conceptualised and the reasoning behind some of the decisions we have made, from the invisible structures for knowledge-sharing, to the more evident content and programming decisions that shaped the incubation programme. Finally, we give the word to the museums that experienced our incubation programme first hand to tell their peers what they wish they knew before the start of the programme to make the most of it.

This retrospective does not conclude with a verdict on whether we found the model for sustainability, but rather acknowledges the limitations of our programme and tries to lead to conclusions for the future. Finally, the museum practitioners in our programme and the two contributors that embody the speculative and the realist viewpoints discuss what every successful programme and funding scheme needs if it is to be both feasible and brave.

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[1] https://www.future-museum.com/wp-content/uploads/2021/06/How-can-digitalisation-be-integrated-in-a-sustainable-way-in-the-organisational-structure-of-museums.pdf

The Paradox of Collaboration

ANDREA BANDELLI

Andrea Bandelli is the former Head of International Relations at Vrije Universiteit Amsterdam. From 2016 to 2022, he was Executive Director at Science Gallery International. He is also a member of the board of the Deutsches Museum in Munich, the Expert Network of the World Economic Forum, the scientific board of Universcience in Paris, and has been a Cultural Leader in Davos in 2017 and 2018, and in Dalian in 2017 and 2019.

Let's conduct a thought experiment and imagine how we will reflect on DOORS – Digital Incubator for Museums in five or ten years. Many pilot projects will have evolved into more sophisticated endeavours, driving the continuous digital development of the museum. Others may have disappeared, leaving behind valuable lessons and room for new experiments in various directions. A few may remain as they are now, testimonies to the complexity of digital transformation and the risks of technological investments. Alongside the digital projects, however, DOORS will also leave a unique legacy of collaborations and networking with the potential to profoundly impact institutional strategies and further democratise knowledge and culture. It has successfully created significant social capital among its participants and an awareness of the immense value of *unpredictable* collaborations.

The museums involved in this project might not have connected with each other if not for DOORS. The participants' testimonies highlight the significance of peer-to-peer learning, knowledge transfer, and the institutional (and sometimes also personal) self-confidence gained through the exchange of ideas and approaches. Being part of a cohort where vulnerabilities, doubts, and dreams can be honestly shared boosts personal confidence as participants realize that others face similar situations. It also strengthens institutional confidence and shows internal and external stakeholders the substantial movement of peer institutions that share common ideals and visions.

Both trust and collaboration are delicate currencies. DOORS stands out as an "accelerator of trust", where pre-determined collaborations with specific roles and expectations were replaced with activities structurally designed to foster spontaneous affinities among participants, across the ORBIT members, and even new internal collaborations within each institution. While some of these collaborations will inevitably be stronger than others, they all require maintenance and investment to remain valuable, much like technology projects that need ongoing care, upkeep, and renewal.

The paradox of collaboration is that it is sought after and cherished as invaluable and essential, yet it risks drying up or losing value when not channelled into focused projects. Worse, it can become burdensome, relegated to the backburner, despite its known importance and the efforts to advocate for it.

What are possible ways to build on the social capital created by DOORS?

Let's acknowledge the radical trust that DOORS has fostered. While in-person retreats are excellent for quickly building resilient and enduring social capital, the project's structure, including online gatherings, various layers of support, commenting, and mentoring, has provided over a longer period of time a safe space for participants to share their fragility, weaknesses, and doubts without fear of judgment, while receiving valuable and honest feedback.

We must find ways to maintain these contacts and exchanges. By creating opportunities for cooperation, support, camaraderie, and acts of kindness without any other purpose than building long-term relationships, we can cultivate collaboration as fertile ground for growth. If we neglect it, the ground will dry out. The more versatile and richer we keep this ground, the better. As the activities and structure of DOORS – and similar projects – eventually come to an end with the conclusion of the project, defining new structures and formats for maintaining collaboration becomes crucial. This could involve visits to partners, joint panels at conferences, or feedback sessions on new ideas through informal conversations.

Like "shadows of the future" - the longer-term perspective on mutual collaboration theorised by Robert Axelrod -, investing now in the work started by DOORS will continue to inspire and support innovation and creativity across the museum field.

How to share knowledge

One of the ways in which we could spark lasting change was by **maximising knowledge-sharing** within and across museums. We included in our own interpretation of the call different knowledge-sharing **models, practices, or infrastructures.**

Sharing Our Learnings

We did away with what we *thought was true* and conducted our own research into the needs of small and medium-sized institutions to contribute to the collective knowledge of the sector.

Pairing Incubation with Capacity & Confidence Building

We 'deviated' from the script, to design an incubation programme that paired capacity and confidence building, with the 'conventional' model of incubation focused on implementation.

Creating a Network

We set-up a network to create a vibrant knowledge-sharing environment that is a blueprint future programmes could use or build upon.

Creating a Cascade Effect

We preached the importance of creating a cascade effect where the learnings from our programme would spread beyond our immediate network.

SHARING OUR LEARNINGS

Focusing our project on small and medium-sized museums has meant going into somewhat uncharted territory. We started by mapping more clearly the specific needs of small and medium-sized museums and left behind assumptions in favour of uncovering less visible hurdles.

We first looked for inspiration worldwide and, in the **Sparkle Report**, we gathered stories of digital projects developed in international museums. This helped us anticipate possible challenges our own cohort might encounter and gave them models to follow. The **sparkle cases** were not always successful in the conventional sense of the word but all had something in common – they were learning experiences that had sparked change in their organisations one way or another.

As part of our research, we also ran a survey and summed up the findings in our **Needs Assessment Report**. The respondents of the survey came mainly from small and medium-sized museums. Having an overview of the common tendencies in these museums, and of the differences between them and larger institutions, gave us confidence in planning the incubation programme.

We also **encouraged the participants** in our programme **to document their implementation and extract and share their learnings**. The museums onboard the incubation programme wrote their stories for part two of the **Sparkle Report** that will be published as a source of inspiration for the sector.

All these resources are now a part of the collective knowledge of the sector and can be used by museum practitioners or project facilitators in their planning of future programmes.

PAIRING INCUBATION WITH CAPACITY AND CONFIDENCE BUILDING

We ran a two-stage incubation programme with a strong capacity-building component.

The first stage was designed to ease teams' entry into the world of digital by doing away with ordinary, sometimes unfounded fears and concerns and establishing a common language and an understanding of digital. We onboarded **40 museums**, knowing not all 40 initial pilot proposals would become a reality. Still, we wanted to give more museums a chance to participate in a capacity-building programme that would not only help them rethink their project proposal but would benefit their staff in the long run.

The second stage was **a hands-on, learning-by-doing experience** of developing a minimum viable product. Alongside this, numerous workshops and inspiration sessions helped practitioners understand implementation practices, keep sight of overall goal and articulate and communicate what they learnt.

CONCLUSIONS

Those who can do. But can they also teach?

Beyond the successful implementation of the pilots, the success of our incubation programme depended on how well it prepared practitioners to articulate and communicate the knowledge gained to the rest of their team.

We cultivated the ability and confidence to teach in a shared learning programme that allowed museum staff to carefully and thoroughly reflect on processes and helped not just the projects but the teams grow.

Start slowly to build confidence.

We eased practitioners into the first stage by giving them a friendly push into digital waters before the sink-or-swim experience of the second stage. Theory and practice were never separated but rather, at different stages in the process, one was more prevalent than the other.

CREATING A NETWORK

Our network[2] was bound together by the dynamic knowledge exchange that happened in the incubation programme.

The ORBIT brought together a multitude of voices, diverse and complementary experts that took on different roles in the programme. Together with the project team, it formed a network of support that both centred around the museums onboard our incubation programme and included them as contributors to the exchange of knowledge that went on.

ADVISORY BOARD	JURY	WORKSHOP LEADERS	MENTORS	DIGITAL SOLUTIONS PROVIDERS
The strategists.	**The evaluators.**	**The teachers.**	**The tutors.**	**The doers.**
They helped with strategic decisions and were called upon to give the museums feedback in regular progress-sharing sessions.	They evaluated and selected the pilot projects and their feedback informed the content of the incubation programme.	They shared their knowledge with the cohort in hands-on workshops, giving teams more confidence in their digital skills and bringing the pilots closer to reality.	They guided the project teams, sharing knowledge, good practices and personalised advice in one-on-one sessions.	They illustrated cross-sectoral collaborations, presented the diversity of expertise in their sector and helped museums chose their own digital solutions providers.

The Networking Spaces

To conduct a fully digital incubation programme, we opened several meeting spaces for our network to interact and exchange knowledge.

All the participants in the programme were part of the Microsoft Teams group, where they could access files, resources and message peers. This helped create a sense of community and became the go-to place for participants to ask their peers for help. The group will remain open for two years after the end of DOORS, to give members the time to organise other meet-up spaces.

The shared learning spaces were planned by the DOORS team and communicated to both participants and facilitators ahead of time. These spaces took different shapes, sometimes an auditorium, other times an intimate break-out room without a facilitator or a mediator.

CONCLUSIONS		
Networks matter...	**but need ongoing spaces...**	**and a collaborative mindset.**
Respondents to our survey named peer-to-peer exchange as one of the main benefits of programmes like ours.	In practical terms, ongoing networks are dependent on the upkeep of their meeting spaces and communication channels, be them online or offline. Though our online channels have been active throughout the incubation period, it is hard to imagine their continuation without the moderation and troubleshooting provided by the DOORS team. It is one of the main challenges projects like ours face when attempting to establish networks for long-term impact.	Though deemed important, networks are not often established or activated. We invited museums to apply to our incubation programm as consortia. This special innovation area encouraged collaboration and the formation of a network of museums with the same mission. We only had two pilots targeting this innovation area, showing that there is still work to be done when it comes to instilling that collaborative mindset that sustains networks.
Our diverse network and the varied ways in which it came together (talks, workshops or peer-to-peer sessions, chat groups) supported the knowledge exchange and created a safe environment where participants felt comfortable to ask questions and saw others as a source of knowledge.		
Regardless of how time- and resource-intensive building a network might be, one can hardly overestimated its importance for knowledge-sharing.		

[2] A complete list of the ORBIT members can be found here. A complete list of the ital solutions providers can be found here.

CREATING A CASCADE EFFECT

We tried to create a cascade effect that eased knowledge-sharing beyond the borders of our network.

We practiced this by publishing and actively disseminating our research and preached it in various workshops where participants were encouraged to regularly update their teams on how the pilot progressed. The first stage equipped project teams with skills and knowledge and spoke of the importance that these be passed on to the rest of the team. In the second stage, several workshops and inspiration talks highlighted the importance of actively seeking or creating opportunities to share updates on the implementation of the pilot so that the entire team could partake – even as observers – in the process.

These practices were further strenghtened by the documentation of the pilots in the second part of the Sparkle Report. Practitioners wrote the story of the pilot's implementation for their future selves, their teams, or the teams of other museum.

CONCLUSIONS		
Sharing is desirable.	**Sharing means sustainability...**	**but is resource intensive.**
The Action and Sustainability Plans that museums submitted at the end of the project spoke of a desire to make the project known within the organisation and animate team members that were not directly involved in it. The project teams organised informal meetings, workshops and found other creative ways to share their experience with the rest of their team.	We believe structures that enable knowledge transfer in an organisation are key to any project having a legacy and effecting lasting change within museums. We preached this idea in workshops and talks, and looped back to it in the Action and Sustainability Plans which made knowledge-sharing practices part of the sustainability strategy for the incubated pilots.	A lot of the time, these good practices have an expiration date because they are not sustainable in already understaffed and overworked museum teams. Other times, the teams are so small that knowledge transfer is inevitable. It must be said that while knowledge transfer is beneficial, it doesn't solve the issue of resource scarcity.

"A "cascade effect" could be foreseen, making each museum participant an accelerator in his/her organization, further transferring the knowledge to his/her peers and colleagues."

Afroditi Kamara, Alonissos Museum of K.& A. Mavriki (GR)

The Power of Narrating Work: Unleashing Collaboration, Communication, and Continuous Learning

LAUREN VARGAS

By day, Dr. Lauren 'L' Vargas is a digital dragon wrangler with over 20 years of experience assisting organizations with their community, communication, and collaboration strategies. Vargas is the principal of Your Digital Tattoo and operates at the intersection of community and technology. She uses her research and consulting practice to further meaningful connection, purposeful inclusion, and digital civility.

Knowledge, as understood here, encapsulates more than just facts or information. It comprises experiences, skills, insights, and an implicit and tacit understanding that individuals acquire over time. In a work setting, employees can share this knowledge through narrating their work. For example, a software developer might document their steps to debug a piece of code, or a project manager might describe how they navigated a complex stakeholder situation. This creates opportunities for others to learn from these experiences and apply the lessons in their own contexts.

"Working out loud" (WOL) – a term originally coined by John Stepper – is the practice of openly sharing one's thought processes, work-in-progress, and achievements. WOL has been recognized as a powerful tool for driving collaboration, facilitating communication, and reducing errors in modern workspaces. It encourages the transparency necessary to foster an environment of continuous learning and development. Throughout the entire span of DOORS' activities, representatives from participating museums actively shared their experiences, learnings, and processes with one another. **This practice not only boosted their confidence but also provided the courage to replicate this knowledge-sharing approach within their own organizations.** For those participants who implemented pilot projects, nurturing this kind of knowledge network became crucial. It played a key role in the growth and sustainability of their respective projects.

The act of narrating one's work increases collaboration and healthy communication within teams. By openly sharing their work processes and progress, team members can better understand each other's tasks, leading to more coordinated efforts and less duplication or overlap of work. Furthermore, it creates a platform for the team to communicate about potential challenges and jointly devise solutions, thereby reducing errors and enhancing the quality of work. Feedback from DOORS participants revealed that managing 'expectations' and implementing 'change' were among the most challenging tasks they faced. In certain instances, efforts to communicate - explaining the what, when, how, and why of their activities - were initiated too late. This delay resulted in miscommunications and missed deadlines that had already occurred and passed.

Narrating one's work also injects humanity into processes that are increasingly digitally enabled or augmented. As more and more processes become automated, the human element – the reasoning behind decisions, the emotion that drives passion, and the wisdom gained through experience – becomes even more critical. Working Out Loud (WOL) underscores the human element in all tasks, serving as a reminder that every process is driven by a team using their skills, experiences, and judgment. By narrating their work, employees shed light on the combined digital and emotional effort that often remains unseen within complex systems. This practice could prove beneficial for small to medium-sized museums, as it could strengthen their arguments for increased funding, enhance their access and ability to experiment with and learn from emerging technologies, and aid in attracting the necessary skill sets.

For successful work narration, a well-functioning knowledge-sharing network is essential. Such a network, built on diversity, encourages a wealth of perspectives to be shared, leading to a deeper understanding and more innovative solutions. The continuous cycle of sharing, discussing, and building upon knowledge within this network fosters a culture of innovation and learning throughout the organization. Participants from museums are now tasked with integrating the practices developed during the incubation phase into the museum's regular operations. Having established a network amongst themselves during the DOORS

program, they are now set to broaden those connections by linking their skills, projects, ideas, and resources with those within their respective organisations.

Implementing WOL is not without its challenges. Organisations must cultivate a culture that promotes transparency, sharing, and continuous learning. They must also provide the necessary people, platforms, and tools, such as internal blogs, forums, or social networks, to facilitate work narration. The support and guidance from leadership are critical in establishing and sustaining this culture. The practice of sharing ongoing work has already positively impacted the incubation projects and now shows significant potential to transform their respective organisations. By nurturing an environment of openness and continuous learning, organizations can improve collaboration, minimise errors, and ensure their procedures remain human-focused, despite advancing technology. The outcome is a more engaged, informed, and innovative workforce.

Networking Works

MERETE SANDERHOFF

Merete Sanderhoff holds an MA in Art History. She is a curator and senior advisor of digital museum practice at SMK, being responsible for the museum's open access policy and working to foster active re-use of the museum's digitised collections for research, learning, knowledge sharing, and creativity. She has published substantial research in the area of digital museum practice and has set the agenda for openness in the global GLAM community with the Sharing is Caring conferences since 2011. In 2017-18, she was the chair of the Europeana Network Association, and she is currently a member of Europeana Foundation's Advisory Board.

It's about attitude, not technology

Whenever I'm asked to reflect on the key to sustainable digital practices in museums, I come back to a talk given back in 2012 by Dutch consultant and facilitator Jasper Visser, titled *The future of museums is about attitude, not technology*[1]. What Jasper captured so well is that the digital technologies that shape the present are not magic wands but tools that either fit and solve the task at hand or stand in the way of the user experience. The 'magic' lies in an attitude that is ready to listen to the users and embrace the change - a change in attitude that digital technologies have brought about for all of us. What Jasper talks about is, in fact, a digital mindset.

How does a digital mindset create sustainability? First and foremost, it helps us explore with an open mind where and when digital technology may – or indeed may not – support the correlation between the users' needs and our institutional mission. Like most of the evolution in digital museum practices over the past two decades, a digital mindset involves learning by doing, curiosity and exploration. In my opinion, this has lifted our institutions to a higher degree of consciousness about what works and doesn't work in our daily realities.

Failing forward boldly

Inevitably, working with a digital mindset and allowing for experimentation will sometimes lead down blind alleys. But the act of experimenting sparks new insights and ideas and builds the courage to try new things without knowing the end result. The boldness to *fail forward*, as Shelley Bernstein has so aptly put it, is the backbone of a digital mindset.[2]

Failing forward individually is valuable for any museum. However, doing so in a community of peers where it is the established working method, and where no one feels they have to perform perfectly but are free to make mistakes and learn from them together, is priceless.

Networking that works at SMK

When we build on the accumulated know-how of the sector and make sure this know-how doesn't sit with only one or a few enlightened people in your museum but becomes a new way of thinking and doing across the institution, the digital mindset works and can create lasting change. For this change to spread across the sector, we need networks where this digital mindset can spark new ideas and travel between museum professionals and institutions.

SMK has invested heavily and deliberately in networking, and over time we have reached a level of technological capacity and confidence where digital sits centrally in the museum's overall strategy – not as an add-on but as an integrated part of everything we envision and do. Here are some of the concrete ways in which we have used networking successfully over the years:

[1] https://www.smk.dk/en/article/the-future-of-museums-is-about-attitude-not-technology/

[2] https://www.smk.dk/en/article/this-belongs-to-you-1/

- Invite your sources of inspiration - the fabulous people you listen to, read, meet at conferences or learn from - to your museum to meet your directors and provide an outside perspective on the challenges and solutions you're working on. Often, it has more impact to hear from an external respected peer what needs to be prioritized and done, even if you have a good idea yourself.

- Use all the internal channels at hand to communicate regularly about the change processes you're going through, as well as the results. For instance, we use the weekly internal newsletter, the monthly all-staff meeting, and for bigger milestones, we throw a celebration for our colleagues.

Externally

- Blogging in a straightforward and engaging tone about your initiatives: how they're conceptualized and how they actually pan out, what their goals are and what bumps you meet on the road. This can be a way to share learnings and engage with peers while also keeping a valuable record of your own development process. We keep a blog in English (for broader outreach) where we try to give the floor to a variety of different voices and angles – from key staff to interns and invited guest bloggers.

- Host informal seminars on your ongoing development work and the challenges that resonate with the museum community. Give external mentors and inspirators a stage to talk to your peers and the local museum community.

- If you have the capacity, hook up with like-minded institutions and throw a bigger conference that really sets the agenda for sustainable digital capacity building and audience development in your local, regional, national or international community. This is a powerful way to establish the importance of a topic, to effectively share practical experience and new ideas, and – of course – to build and expand the valuable networks that we need to keep evolving our vision and know-how. SMK has been co-hosting the Sharing is Caring conferences since 2011. Founded on the idea of a shareable format, the conferences have been hosted by many different institutions in different countries as well as online, and have significantly contributed to catapulting the agenda of open cultural heritage forward, both in a Danish, Northern European and broader international context.

The power of networking

Today, museums are regarded as places where people can develop empathy, creativity, well-being and resilience. Furthermore, museums (along with other cultural spaces) are proving to be trusted spaces for democratic engagement where complex issues and difficult content can be debated in an inclusive environment. Digital participation plays a strong part in this, reaching out to more and more diverse users in the spaces where they feel comfortable participating.

However, the digital media landscape can be a jungle to navigate, and technology has not been part of the traditional curriculum and skill set for museum professionals. That is why cross-sector networking is key today for any museum that wants to make informed, sustainable decisions about which technologies to apply. Through the power of networking, we can increase the positive differences we make in people's lives and the society we are part of.
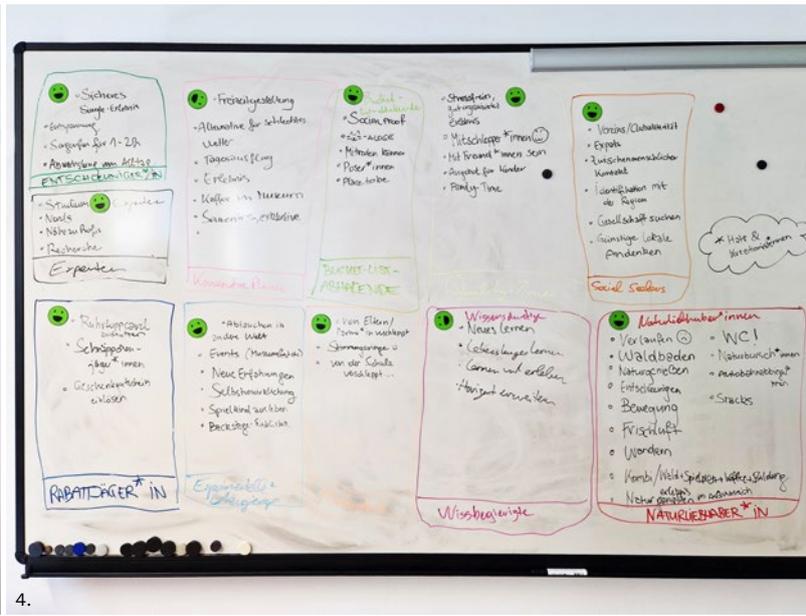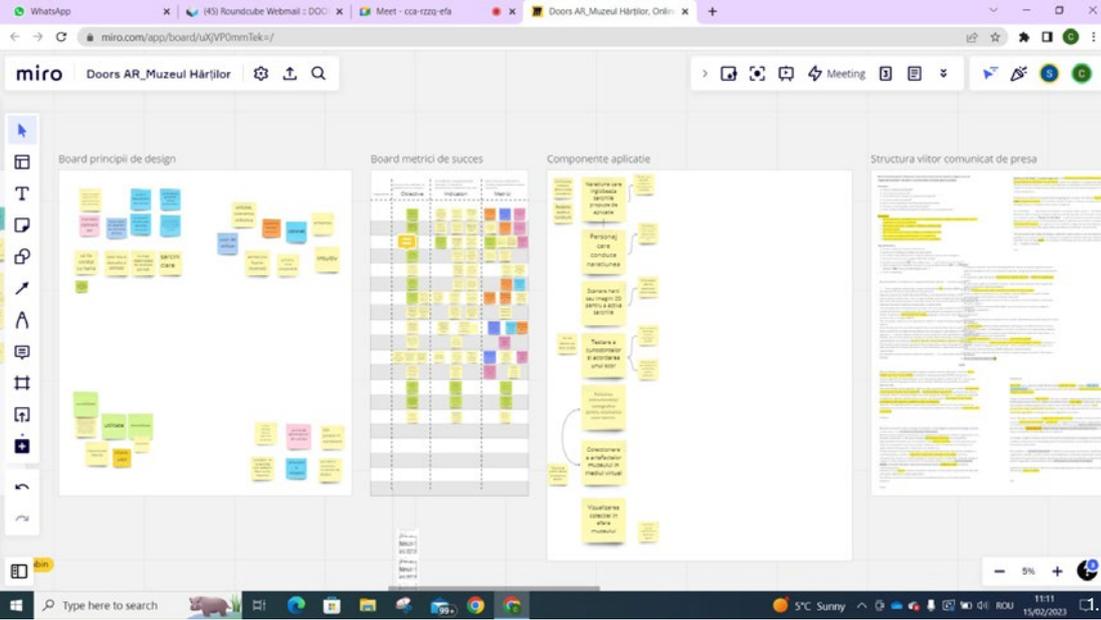
1. Design sprint board for Hands on the Map!

Photo courtesy of The National Museum of Maps and Old Books, Romania

2,5,6. Self-Reflection Tool developed by DOORS - Digital Incubator for Museum, Card Deck

Photo Ana-Maria Carabelea

3. Brainstorm on visitor motivation

Photo courtesy of The Neanderthal Museum, Germany

4. Brainstorm on user and visitor segments

Photo courtesy of The Neanderthal Museum, Germany

How to incubate

Know your audience & respond to their needs

The research on our audiences – small and medium-sized museums – took different forms: the survey, the Needs Assessment Report and the Sparkle Report. We used the research to plan the content of the first stage, and the learnings from the first stage to plan the second stage. Though seemingly counterintuitive, not planning every piece of content from the start allowed us to be agile and respond to challenges that arose as the incubation moved forward.

Why a *two-stage* incubation?

To include more museums

The purpose of the first stage of the incubation was to reach as many small museums as possible with the resources we had. Forty museums joined us initially, even though only half of this cohort would see their projects through within our incubation programme. The first stage was a time for planting the seeds in the hope that, with or without the implementation of this pilot, they might grow into something in the future.

To add a capacity and confidence-building component

In this case, planting more seeds has actually meant investing in the museum staff. Oftentimes, the lack of digital skills, particularly in small and medium-sized museums, leads to a lack of confidence to embark on an institutional transformation. Thus, before jumping into the implementation of digital pilots, we wanted to equip museum staff with a **basic understanding of digital** and **the essential skills to navigate this space**. Even at this stage, though shared, the learning always referenced the individual digital pilots.

"At Mariemont, DOORS has reduced a general fear of the digital in the minds of the cultural mediation staff."

Kathleen Louw, The Royal Museum of Mariemont (BE)

STAGE I | FORMATS

The 3-month first stage had a strong educational component without being purely didactic. Because the museums already had an initial idea for their digital pilot, this stage gave them the knowledge and skills to advance this proposal and refine its purpose. The topics addressed in the first stage were inspired by the learnings extracted from the survey, but most importantly, by the things overseen in the proposals, as astutely pointed out by the jury.

Workshops	Inspiration Talks	Peer-to-peer Sessions	Digital Solutions Providers Sessions	Collective Mentorship Sessions
Hands-on sessions in which the museum practitioners looked at their institutional practices or their pilot project from different viewpoints and applied the theory to their own contexts and practices.	Accompanied the workshops to introduce the views of experts or practitioners from diverse backgrounds on the same topic.	Regular meetups for the cohort to exchange impressions, knowledge and experiences in an informal setting.	A peek into collaborations between the creative and tech sector and the museum sector, the good, the bad and the ugly sides.	A final gathering of the 40 museums in the first stage of the incubation programme to reflect on their experience, assess their progress and think about what's next, that also gave the DOORS team a start in planning the second stage.

STAGE II | FORMATS

The 9-month second stage of the incubation programme delved into the practical aspects of implementing a digital project. After reconsidering their proposals, participants set out to do the hands-on work. At this stage, the content of the workshops and other sessions was aligned with the challenges typically arising at different stages of the implementation.

Workshops	Inspiration Talks	Progress Sharing Sessions	Individual Mentoring	Monthly Open-Hour Sessions	Buddy Scheme
Sessions that gave museums an overview of the aspects of developing digital products, pilots or offers to support them in their implementation journey.	Accompanied the workshops to introduce the views of experts or practitioners from diverse backgrounds on the same topic.	Check-ins for the cohort of museums to share their progress with the advisory board members and the DOORS team and get support.	One-to-one meetings between each museum team and their assigned mentor to receive guidance, support and together map the next steps in the implementation of their pilots.	The space for the participating museums to ask questions, raise doubts, and express fears with a focus on the administrative and financial aspects of their project.	Encounters between buddy institutions to share challenges or successes and get peer feedback.

WORKSHOP I

The first workshop was an opportunity to find out more about the diverse cohort of museums in our incubation programme. As we welcomed them to the programme with its variety of national, cultural and institutional contexts we wanted to pin down both the distinctions and the similarities.

We thought it was important to stress that the value of our incubation programme was not only in the access to the knowledge and expertise of the experienced practitioners invited to 'teach', but also in the knowledge participants could share among themselves. These workshops were our way to create a collaborative atmosphere and a sense that everyone is in this together, sharing not just successes but also fears, challenges and drawbacks.

WHY

Opening the DOORS

This was an exercise of collectively outlining the attitudes towards digitalisation in the museum sector and the future role of museums. Participants pondered on how the ideal museum of the future looks like and how digitalisation fits into it?

▶ By: Sticky Dot

Entering the Realm of Digital

The second part zoomed into each of the pilot projects, as well as the practitioners and institutions behind them. For the first time, project teams had a chance to present their digital pilots to the group and get initial reactions.

▶ By: Sticky Dot

INSPIRATION TALKS *(alongside the workshop)*

Andrea Bandelli, one of the members of our advisory board, talked about what it means to establish a network culture.

▶ By: Andrea Bandelli, former Head of International Relations at Vrije Universiteit in Amsterdam

In his talk titled *Remixed, hybrid and quantum: Meshing the new co-ordinates of museum technology*, Ross Parry introduced the idea of the museum as an analogue of society, pulsing to the beats of the world. Ross pointed to the dimensions in which museums today respond to the signals from the world, and unpacked how old binary anxieties of what is real-virtual, find comfort in quantum duality.

▶ By: Ross Parry, Senior Lecturer in Museum Studies at the University of Leicester

Anne Torregianni, one of the members of our advisory board, talked about the role audiences play in defining the mission of museums.

▶ By: Anne Torregianni, CEO of Audience Agency

DOORS advisory board member, Seb Chan talked about the importance of future-proof technology choices.

▶ By: Seb Chan, Chief Experience Officer at ACMI in Australia

Merete Sanderhoff, one of the members of our advisory board, closed with a talk about the importance of sharing and openness in the process of learning.

▶ By: Merete Sanderhoff, Curator & Senior Advisor at Statens Museum for Kunst in Denmark

"**The network** created with the other beneficiaries became a platform for sharing research and experience, otherwise not found when contacting colleague institution for information."

Kathleen Louw, The Royal Museum of Mariemont (BE)

"Being a part of an online incubator **exposed us to new ideas and best practices by foreign organizations,** that we otherwise would never be exposed to."

Klara Raković, Arboretum Volcji Potok (SI)

WORKSHOP II

Dr. Lauren Vargas and Dr. Sophie Frost shared the key conditions for a CALM approach to digital transformation. In other words, how one can work **C**ollaboratively, be **A**nticipatory in planning, practice **L**etting go of 'command-and-control' leadership and embracing collective leadership and be **M**indful through their rhythm of work, to thrive at all levels of the organization.

The session touched on digital collaboration and communication practices that can scale critical thinking, decision-making, and workflows and build a scaffolding that supports the continuous development of skills required in the 'museum of the future'.

We wanted to give museums an occasion to think about the institutional ecosystem in which their pilot will operate, reflect on their organisational practices, and how their pilot project might occasion changes that eventually lead to fully-fledged digital strategies.

WHY

Part I: Considering Digital Maturity

The workshop started with understanding and mapping digital activity before highlighting the differences between maturity, transformation, and renovation and suggesting ways to assess the current state and approach aspirational efforts. Participants explored a variety of mapping tools to make sense of complex situations and visualise existing systems, before looking into creative techniques to humanise them.

▶ By: Dr. Lauren Vargas, Your Digital Tattoo

Part II: Digital Maturity Assessment

The second part introduced the Periodic Table of Skills and invited participants to reflect on their current role, responsibilities and skills, as well as aspirational capabilities, and possible skill combinations. It looked into how skill assessment can inform successful collaborations within teams, agile planning methods, incorporating responsiveness when working on new products, and touched on the importance of collective leadership.

▶ By: Dr. Lauren Vargas, Your Digital Tattoo

"The part in which Lauren Vargas spoke about digital strategies has been the most influential for our team. We finally started the strategy writing process and hopefully we will be able to figure out where we are making mistakes and where we are successful. In our processes, we have already included aspects like digital culture compass, social media, 3D scanning and branding."

Justyna Neuvonen, The Association of Uräjärvi Mansion´s Friends (FI)

INSPIRATION TALKS *(alongside the workshop)*

Dr. Sophie Frost introduced the concept of 'digital courage' and talked us through some of the 'keywords' associated with digital change across the cultural sector.

▶ By: Dr. Sophie Frost, Research Fellow at One by One

WORKSHOP III

Using methodologies drawn from Design Thinking and Agile Management, and the principles of 'Audience Centred Experience Design' developed by The Audience Agency with European collaborators in the Adeste+ project, these sessions showed participants the path from idea to prototype.

The evaluation of the pilot proposals uncovered that museums often assume 'flashing technologies' will draw the public's attention and tend to oversee their real needs. After the previous workshop focused on organisational adaptation for the digital age, it was time to spotlight audiences and their demands on museums in the digital age. We gave participants the time to consider their target audiences and the value their pilot brings to them before mapping the path from idea to prototype.

WHY

Part I: The Visitor Experience Today

The workshop started with describing and thinking about visitors and the nature of their experience in relation to museums today. Participants got insights into the process of mapping the visitor journey, from defining the data points needed to the collection process.

▶ By The Audience Agency

Part II: From Ideas to Prototypes

Picking up from where it left off, the second part of the workshop delved into tracking, describing and analysing digital engagement to improve digital visitor experiences and outline the minimum viable experience.

▶ By The Audience Agency

INSPIRATION TALKS *(alongside the workshop)*

Fabrice Jouvenot, designer and producer of mixed reality experiences, talked about his work on digital (gaming) experiences with and for museums.

▶ By: Fabrice Jouvenot, Designer & Producer

In his talk, *Exhibition as Activism: Starting a global conversation about data and society*, Marek told the story of what started as a gallery provocation, turned large scale public intervention and finally became a community project and how the impact of technology on society can become an engaging, empowering and tangible experience.

▶ By: Marek Tuszynski, Executive Director and Co-founder of Tactical Tech

Hailing from one of Basel's most prestigious new media art institutions, Patricia Huijnen spoke about the *Voice of the Visitor at HEK.*

▶ By: Patricia Huijnen, Art Education at HEK

Haruka Koshimoto from AkeruE, addressed the challenge of balancing the analogue and the digital when creating children's physical, creative learning experiences in which digital elements are used to inspire.

▶ By: Haruka Koshimoto, AkeruE

PEER-TO-PEER SESSIONS

The peer-to-peer sessions gathered the museums onboard the incubation programme to discuss topics of shared interest.

We wanted sessions with a more informal atmosphere in which participants could bond organically and felt comfortable to broach any topic. The DOORS team didn't attend these sessions and we don't know what was discussed, but we were told there was never enough time.

"**Sharing ideas** with other projects and museums was a great experience as we could locate ourselves on a ladder of digital evolution and we could share concerns and progress. The rooms in which we could discuss during the early stages of the incubator and the progress sharing sessions were extremely useful parts of the incubation."

Afroditi Kamara, Alonissos Museum of K.& A. Mavriki (GR)

DIGITAL SOLUTIONS PROVIDERS SESSIONS

International digital solutions providers, i.e. creative studios and agencies, were brought in to present the work they had done with and for museums and contribute to making this a cross-sectoral, cross-disciplinary programme.

In the second stage of the incubation programme, each museum had to select a creative studio or agency to work alongside them in the implementation of the digital pilots. The role of these presentations was to inspire museums, confront them with different mindsets and ways of working and prepare them for the future collaborations. These sessions were not pitches. Participating museums were, in fact, encouraged to choose local digital solutions providers with a good understanding of their cultural and national contexts.

INSPIRATION TALKS *(alongside the digital solutions providers sessions)*

Brendan Ciecko talked about his extensive experience building technology that got him recognition as a 'museum influencer'.

▶ By: Brendan Ciecko, Founder & CEO of CUSEUM

Merete and Seb talked about their experiences with technology in museums.

▶ By Merete Sanderhoff, Curator & Senior Advisor at Statens Museum for Kunst in Denmark & Seb Chan, Chief Experience Officer at ACMI in Australia

COLLECTIVE MENTORSHIP SESSIONS

The final session was a collective exercise that sought answers to key questions about the experience of museums in the first stage, and the expectations they had for the second stage. Discussion Points:

• What were the most helpful parts of the first stage of the incubation programme?
• What additional support they expect/need in the second stage?
• How has the incubation programme informed changes to their pilot? What changes do they plan?
• Identify other relevant digital transformation areas for their organisations.

WORKSHOP I

The participants talked about their expectations for the second stage, before having a go at mapping their project's life-cycle from start until after the launch and planning how to acquire internal buy-in - an important step in ensuring their project's sustainability.

We believe a pilot can only as good as its planning. Thus, it was crucial that museums got a sense of the planning work that needed to be done before the actual implementation work started.

Kick-Off

Building upon the collective mentoring session in the first stage, this workshop was dedicated to making sense of the attitudes within museums entering a second stage that was focused on the implementation and delivery of a digital product, service or offer.

Participants talked about what they feared or were excited about, what made them feel confident or less so, and how they imagined the process.

▶ By: the DOORS team

Project Life Cycle

Maria Zolotonosa and Carmen Fenollosa from StickyDot shared their museum-tailored version of the agile methodology and gave tips on how to embed it in each stage of the project life cycle through agile project management, design thinking, and design sprints.

They then delved into the notion of internal buy-in and the importance of internal audiences, i.e. other museum staff, seen as crucial for the development of a project as outside audiences. Participants discussed which staff members they could or should engage in their project, be it as sounding-boards, co-creators, supporters or future users of the product.

▶ By: Sticky Dot

WORKSHOP II

This workshop came with practical advice on how to approach the implementation process to ensure a successful delivery.

We also believe that implementation is everything. Thus, it was important that museums had a good understanding of the typical stages of the implementation process to be able to confidently map theirs and recognise when and if they needed to pivot.

Implementation is Everything

In *Implementation is everything*, Loic Tallon drew attention to the fact that even the best ideas in the world can fail if not well-implemented. Through a Crit. Room approach that spotlighted three of the projects in our programme, the workshop explored the key factors of a successful implementation, from scoping MVPs (minimum viable products), allocating resources, and defining different financial models.

▶ By: Loic Tallon, Associate Partner at McKinsey & Company

WORKSHOP III

The third workshop got participants thinking about why they develop digital products in the first place - what impact these endeavours are expected to have, what values drive them and how they can be sustained.

It was time to start looking towards the future, so we invited participants to set aside the practicalities of implementation for a minute and consider their project's expected impact on audiences and the business models that would ensure its longevity.

Part I: Impact Awareness

Maaike Verbek used national and international examples to illustrate the different ways in which the notion of *impact* is understood in the cultural policy sphere. Starting from the Europeana Impact Playbook, and the Change Pathways Canvas, participants had to find solutions for hypothetical cases with different challenges and institutional structures.

▶ By: Maaike Verbek, Director of DEN

Part II: Business Models

Using Alex Osterwalder's Business Model Canvas, this workshop addressed the challenge of building business models that reflect and centre around the values of an organisation. The discussion then zoomed into the possible value propositions that museums can define in the digital realm.

▶ By: Maaike Verbek, Director of DEN

WORKSHOP IV

The final workshop gave museums the chance to apply the CALM approach introduced in the first stage to figure out their path towards a community.

Towards the end of the programme, as learnings, conclusions and experiences had been gathered, the museums saw the need to build a community around their projects. To create a setting for this to happen, we invited Dr. Lauren Vargas for a final lesson in building digital communityship.

Digital Communityship

Building relationships, contextual intelligence, and communityship inside and outside of organisations is always a challenge. Museums reflected on how they capture learnings and celebrate what works well, and how they are being mindful of what doesn't work well to pin down what was being done, what was not yet being done but could strengthen and amplify communication, collaboration and community efforts within their organisation. Through the lens of the CALM approach participants could envision a way for their organisations to build digital communityships around their pilot projects, and beyond.

▶ By: Dr. Lauren Vargas, Your Digital Tattoo

INSPIRATION TALKS

The inspiration talks brought up topics that had not been tackled in workshops but were nonetheless relevant to any digital transformation.

> *We wanted to create an awareness of topics that were not necessarily relevant to the implementation process but became important in the wider context of a digital transformation.*

Jurij Krpan gave a peek into the cultural formats and artistic content developed in European cooperations and how they impacted national cultural policies.

▶ By: Jurij Krpan, Artistic Director of Kersnikova Institute

Stephane Berghmans talked us through his approach to boost Technopolis, from business model development, value chains and partnership development, to harnessing digital technologies to create cultural offers.

▶ By: Stephane Berghmans, CEO at Technopolis

Annabelle Birnie gave an insight into the efforts to rethink institutional affiliations at the Hermitage Amsterdam after the Ukrainian war and the rebranding that followed.

▶ By: Annabelle Birnie, Director of Hermitage Amsterdam

Roman Senkl and Nils Corte discussed their approach to developing cultural products making a case for iterative implementation and clearly mapped on-boarding processes.

▶ By: Roman Senkl and Nils Corte

Rosemarie Bernabe and Signe Mežinska, part of the European-funded project ROSiE, gave their view on responsible sharing and using open data, protection of research participants and cultural heritage, and authorship in the context of Open Science.

▶ By: Rosemarie Bernabe and Signe Mežinska, ROSiE

Marlies Wirth talked about how the museum engages with digital culture topics in light of the computational tools' influence on cultural, social, political, and aesthetic aspects of reality.

▶ By: Marlies Wirth, Senior Curator at MAK - Museum of Applied Arts

PROGRESS SHARING SESSIONS

In these sessions, the museums presented the progress of their pilots and signalled foreseen challenges to receive advice and guidance when needed.

It was important for us to be up-to-date with the progress of the pilots and, most importantly, give the museums a chance to raise concerns ahead of time and come up with mitigation plans.

In **the first Progress Sharing Session**, the museums received feedback on the **planning of the implementation.**

The **mid-term Progress Sharing Session** invited the teams to present their progress, assess the **feasibility** of the project or propose possible **adjustments.**

In the **final Progress Sharing Session**, the teams presented their plans for the launch of the pilot and its afterlife - in short, their **communication, dissemination and exploitation strategies.**

"(…) our ideal incubation programme would not have progress-sharing sessions and instead would have planning sessions, where plans and next steps would be discussed and advised on."

Klara Raković, Arboretum Volcji Potok (SI)

INDIVIDUAL MENTORING

Two mentors, one museum

secondary mentor // one mentoring session

I   II   III   IV

main mentor // three mentoring sessions

We combined two mentors to involve different perspectives able to highlight different challenges or possibilities for the pilots.

The timeline for the four mentoring sessions was only suggested, allowing museums to call on the expertise of their mentors when they needed it most. The only rule was that the main mentor had both the first and final word on the project, and that prior to the final mentoring session, museums already had a second opinion on their project.

It was obvious that at this stage, museums would need guidance and advice that took into account the national or institutional contexts and the particularities of their pilot project. These meetings created a balance within the programme between the knowledge that was useful for all (shared in workshops or inspiration talks) and the pilot-specific feedback the teams needed.

"Our mentors helped us experiment with new forms of digital communication that allowed us to find new ways of engaging with our visitors and make the most of these interactions."

Esther van Zoelen and team, IMPAKT [Centre for Media Culture] (NL)

MONTHLY OPEN HOUR SESSIONS

In these sessions, the DOORS team provided answers to any and all administrative and practical issues, from budgeting and financial reports to other deliverables and obligations.

We wanted to ease the pressure the museums felt – some of them for the first time in a European project – and introduce a less prescriptive format in which museums could dictate the content. If at times we prepared topics in advance, they were always informed by the questions we were receiving.

BUDDY SCHEME

The buddy scheme paired museums with one another according to needs, expectations, availability and resources.

Already in the first stage, we notice a community taking shape. Our buddy scheme was intended to strengthen this community and encourage organisations to support one another.

To supervise or not, that remains the question.

The buddy scheme was prepared and kicked off by the DOORS team, but it was left entirely up to the participants to decide when and how often to meet, or what to discuss. Most museums had initial first meetings with their buddies, but as the implementation of the pilots ramped up, these meetings became fewer and farther between.

The question of whether more supervision or guidance from our side would have helped, remains unanswered. Some seem to think so.

"I think the buddy system would work better, if we had to accomplish a task together. For example, we could write reports or complete an exercise based on real facts. A collaboration of this sort could result in a new joint project/programme. Our project DigiSmALL insists on the value of networking and collaboration, which could start already during the incubation period. Brainstorming, either in pairs or in groups, along with our mentors, could bring up issues that we didn't even realize we had and could end up in valuable solutions or, at least, experiments. Museum e-twinning could be another possible outcome of this collaboration, so one museum's (virtual) visitors could be funnelled to its counterpart museum and vice versa."

Afroditi Kamara, Alonissos Museum of K.& A. Mavriki (GR)

"Our knowledge could have been utilized better and the cohort dynamics and meetings could have been used to cross check projects and as a testing environment."

Justyna Neuvonen, The Association of Uräjärvi Mansion´s Friends (FI)

Incubation and the Role of Individuals, Organisations and Ecosystems in Digital Transformation

MAAIKE VERBERK

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Why digital transformation?

Our world is changing, and it's changing fast. We do our shopping online, monitor our health in an app, our work is stored in the cloud, and our office is anywhere with Wi-Fi. Over the last decade, many sectors and organisations embraced digital innovations in sustainable new business models. Organisations that welcome and anticipate digital innovation become agile and more successful. They strengthen their business models by scoping the future and adapting accordingly. Cultural organisations need to do the same. Afterall, we've seen what happened to those who don't.

Although the future is unpredictable, a few things are certain: cultural organisations face new challenges. Current audiences are ageing, and new audiences have different expectations and spend most of their time online. Cultural organisations need to adapt to their audiences' hybrid worlds. Digital transformation offers a long-term solution. Those that embrace this change, expand their possibilities and know how to reach and engage with future audiences. They stay relevant in a digital society.

Incubation in digital transformation

Digital transformation requires continuous change within the entire organisation, driven and facilitated by digital technologies. It's a transformation of the business model that changes how organisations create value for their audiences, from now into the future. Digital transformation touches upon every aspect of the organisation: strategy, organisational culture, processes, partnerships and skills/capabilities.

Many cultural organisations still consider digital transformation to be just the implementation of digital technologies. In reality, it means fundamentally changing your business model. It is human work that requires new conversations, new partnerships, new skills and new ways of working.

"Digital transformation is 10% technology and 90% human."

Digital transformation requires three key elements: leadership, innovative working and new collaborations. Incubation offers an innovative way of working and it often means growing under conditions that promote development. Incubation allows space for experimenting, making mistakes and introducing iterative working processes to ideate new services or products; it means creating a learning organisational culture. Within the DOORS programme, incubation kickstarted digital transformation by pausing day-to-day thinking, giving space for experimentation with digital technologies, and iterative working methods.

"Digital opens up opportunities: from incidental contact in physical venues to continuous connection with your audiences and vice versa."

How to be successful in a changing environment

A future-proof cultural sector requires change on three levels: individual, organisational and on the level of the ecosystem.

Individual and organisational

The process of digital transformation starts with individuals and organisations taking the first steps. Within their organisations, individuals take on the role of an agent of change: experimenting with digital technologies, changing common practice within their team and challenging existing norms. A common next step is to normalize experimenting and incorporate it into strategy.

At a certain point in the process of digital transformation, digital leadership becomes crucial. In other words: the management team needs to get involved and be committed. Current developments in society affect visitor numbers and financial positions and propel the urge for change. Digital leaders mandate digital transformation by defining the strategy and allocating budgets accordingly. In doing so, they become an agent of change themselves and lay a solid foundation for change in internal processes, conversations, collaborations, and ultimately, culture.

An equally important step is collaboration, especially in a sector that consists of many small-scale organisations. Actively engaging in new collaborations helps organisations share knowledge, skills and resources, increase visibility, and build viable business models. In The Netherlands, we see that cultural organisations are so focused on their unique artistic vision and become blind to shared challenges. They operate with a competitive rather than a collaborative mindset. The cultural sector is highly fragmented, which restrains organisations from collaborating on shared societal challenges while still nurturing their unique artistic narrative.

This causes a gap: larger organisations with bigger budgets and teams develop state-of-the-art online platforms and successful online content thus raising the bar for medium and smaller organisations that have difficulty meeting audience expectations. The consequence? A digital divide between cultural organisations and fewer possibilities for small-scale organisations to thrive in a digital society.

An enabling ecosystem

An enabling ecosystem can help reduce this divide. Although digital transformation starts with individuals and organisations, to fully embrace it, cultural organisations need an environment with supporting policies and funding methods, that facilitates and even enforces collaboration. For instance, funding for experimentation could be provided on the condition that proposals are submitted by consortia of several (smaller and larger) organisations. Additionally, funding requirements should value the ideation process as well as the result of the project and encourage open-source sharing of findings and data.

Incubation programmes, or hubs, are another valuable element of an enabling ecosystem. A community of like-minded cultural professionals can connect, develop and exchange knowledge, ideas, experiences and lessons learned. DOORS, DEN, and other initiatives educate and connect these agents of change.

These programmes provide a fostering environment for agents of change. They bring together museum professionals and inspire new ways of thinking, making cultural professionals stronger in their profession and allowing them to evolve in digital transformation. Once a curator, a manager, a marketeer, an educator or a supervisory board member truly grasps the sustainable concept of innovation and digital transformation, they engage in new conversations with funding bodies, team members, and colleagues from other organisations. Eventually, this ignites the change our sector needs, challenging the competitive mindset and fragmentation and replacing it with collaborations and knowledge-sharing.

But, as mentioned above, this change requires managers to commit and learn. At DEN, we noticed that most of the incubating and learning programmes fail to include members of the top management team. Yet, without managerial support, digital transformation will never be integrated on a strategic level.

Looking at the future

There is then a distinctive need to develop bespoke digital leadership programmes that bring together business leaders from across the sector: museums, archives, theatres, festivals, etc.[1]

Even though the artistic narratives of organisations are diverse and unique, they still share the challenge of staying relevant in an increasingly digital society. Coming together in a highly interactive learning curve helps them develop a shared language and a sector-wide vision and stay connected in a community of practice. Successful digital transformation in the cultural sector requires an ecosystem that supports joint experimenting in incubation programmes, where sharing experiences, knowledge, skills, and tools are default. Such an environment and mindset would benefit the sector, and especially smaller-scale organisations.

Change is happening. We see it in the Netherlands, where in a recent policy brief, the Dutch government asked cultural organisations to develop a digital strategy within their four-year policy plan for 2025-2028. These kinds of push factors are highly relevant for an enabling ecosystem. But a future-proof ecosystem must also support collaboration and shared endeavours at all levels: regional, national, and international.

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[1] This is what we have developed in DEN Academy. The DEN Academy provides cultural professionals and managers with just that. Our Digital strategy & innovation programme consists of four training days in which cultural managers develop their digital vision and strategy. They assess their digital maturity, learn to signal relevant trends and developments, consider their impact and become digital leaders. The DEN Academy's strategic and practical programmes help further digital transformation within the entire cultural industry.

1. Teachers and digital solutions providers' visit to the museum

Photo courtesy of The National Museum of Maps and Old Books, Romania

2. Field research along the Panaro riverbed

Photo courtesy of Museo Civico Vignola Augusta Redorici Roffi, Italy

3. Depot tour

Photo courtesy of Museumsmanagement Niederösterreich, Austria

4. Istanbul Dialogue Museum

Photo courtesy of Istanbul Dialogue Museum, Turkey

5. Photos collecting days

Photo courtesy of The Regional Museum Goriški muzej, Slovenia

6. Team walk along the Panaro riverbed

Photo courtesy of Museo Civico Vignola Augusta Redorici Roffi, Italy

How to make the most of it

Team Structure and Skills

What participants in the incubation programme wish they'd known about structuring their project team and preparing their staff for a digital incubator, especially in light of the common challenge of limited staff resources.

Learning and Sharing Knowledge

What participants in the incubation programme wish they'd known about structuring the learning process and ensuring knowledge is shared with members of their team that were not part of the incubation programme, or not fully involved.

Project Management and Planning

What participants in the incubation programme wish they'd known about planning and managing the implementation of the project, how to define a minimum viable product, plan iterations and get ready for the big launch.

Digital Infrastructure and Cross-sectoral Collabs

What participants in the incubation programme wish they'd known about digital infrastructures and the team's openness to digital tools, as well as what it means to have external collabrators.

TEAM STRUCTURE AND SKILLS

Engage volunteers

In retrospect, we wish we had involved volunteers earlier in the process to have more time to listen to their needs, analyse their (digital) skills, train them, and build a strong and motivated team aware of the shared goals.

Dott. Laura Corsini and Dott. Maria Cristina Serafini, Museo Civico Vignola Augusta Redorici Roffi (IT)

Having a volunteer coordinator is essential. It takes up a lot of time and it is particularly disruptive in an organization with limited staff to approach volunteers, give them insight into the project and their role, and provide necessary support along the way. [...] Having a person that prioritizes this, eases the work of already overworked museum staff.

Vilius Mateika, The Museum of Urban Wooden Architecture (LT)

Establish a process

Formalise the process. Clarify the structure and roles of each team member, as well as the expectations and responsibilities beforehand. Clarify the preferred communication channels and tools, set jour fixe dates and define individual obligations. Last but not least, communicate the goals to the entire team frequently.

Christa Zahlbruckner, Museumsmanagement Niederösterreich (AT)

Limited staff is always an issue for smaller museums. [...] we often felt the need for a 'non-museum' project manager with an unbiased opinion and clear suggestions on redistributing the workload among other staff members to avoid 'one-man army' situations.

Vilius Mateika, The Museum of Urban Wooden Architecture (LT)

Plan for worst-case scenarios

Knowing what we know now, we would approach any project with (at least) minimal plans for 'worst-case scenarios', like big staff changes or volunteers not fulfilling their assignments. For small museums, these changes are incredibly disruptive, putting staff in a position where they need to sacrifice their planned activities to resolve issues.

Vilius Mateika, The Museum of Urban Wooden Architecture (LT)

Our museum is usually quite stable in terms of staff, and we did not consider that we might have to deal with one of our members leaving our museum rather unexpectedly. We overlooked this risk, and now realise we shouldn't have.

Patrick Rang, The Estonian War Museum (EE)

LEARNING AND SHARING KNOWLEDGE

Make it a habit from the start

It is unrealistic for more than one person to attend all incubation programme activities. I wish we had to run and report biweekly internal knowledge transfer sessions from month 0 just to get into the habit early on and not wait for it to become a pressing issue.

Gaja Zornada, The Computer History Museum (SI)

We provided in-depth information to the team members that weren't directly involved in the programme, but we should have invested more time and resources in sharing and engaging a larger group. This would have helped them truly appreciate the pilot's potential, align their efforts, and would have ensured everyone understands and embraces the project's vision.

Sara Cibin, Pro Terra Sancta/Terra Sancta Museum (IL)

The language barriers due to the incubation taking place only in English meant that it was difficult for some team members to follow the programme. Had we realized the extent of this problem from the start, we would have made an effort to translate more things and arrange for weekly meetings to share the knowledge gained throughout the programme.

Afroditi Kamara, Alonissos Museum of K.& A. Mavriki (GR)

We found the regular communication of our progress via e-mails, presentations at team meetings and cross-departmental workshops very helpful in preparing our colleagues for the future change.

Rick Springer & Anna Riethus, Stiftung Neanderthal Museum (DE)

Integrate new knowledge into daily routines

The knowledge we gained would have also benefited other strategic projects within our museum. However, embedding the knowledge into daily practices has been a huge challenge for us. Having someone in the organisation with technical and digital knowledge is essential to support other team members in integrating new knowledge into their daily routines.

Maria Vogeser-Kalt, The Museum of the Working World (AT)

PROJECT MANAGEMENT AND PLANNING

Align expectations and objectives

Defining the project scope from the start was crucial to align expectations and objectives. Starting with a Minimum Viable Product (MVP) focused on essential functionalities and user value proved valuable for the development, while the careful financial planning gave us the leeway to adjust the budget along the way.

David Kožuh, The Regional Museum Goriški Muzej (SI)

Choose the right digital solutions provider...

If we could go back, we would choose a company experienced in developing augmented reality apps instead of a local digital solutions provider.

David Kožuh, The Regional Museum Goriški Muzej (SI)

It is crucial to plan a digital solution with an expert before picking your provider. Working with someone in the planning stage who understands your needs and wishes and can advise you on the right digital solutions provider for your project can be very helpful.

Klara Raković, Arboretum Volcji Potok (SI)

....but be prepared not to even need one.

We did not expect youngsters (the main target group of our project) to be, in fact, entering a post-digital era, as it emerged from the results of our survey. We had an ICT expert ready to join our team, but this was not necessary in the end.

Patrick Rang, The Estonian War Museum (EE)

Remember that things always take longer than expected...

No matter how many times you are told, things always take longer than you expect. We understood that the project would undergo iterations following feedback from testing, but we did not realise how adding features would exponentially affect this. For example, each additional feature had iterations and refinements that then interacted with all the other features, so minor changes at the start can have an enormous impact on the timeframe.

Phil Jones, St Ives Museum (UK)

...and they might be more difficult than you had imagined.

I expected low levels of digital knowledge, problems with communication and slow response rates from our stakeholders, but some things were still a complete surprise. This can deeply change the dynamics in the team, and even lead to burnout and anxiety. Even if time were allocated to solving some of the problems, it would be too short, or the scope of problems of another organization too big to fix. We can only learn from experiences and try to improve cooperation between the projects.

Justyna Neuvonen, The Association of Uräjärvi Mansion´s Friends (FI)

DIGITAL INFRASTRUCTURE AND CROSS-SECTORAL COLLABS

Find out where you stand

We wish we had done [...] a prior internal analysis of Mariemont's past digital experiments, gathered more knowledge on the technologies available for digital experiences, investigated what types of pilot projects are possible with a 27K budget. This preliminary work would have helped decide on the most urgent, feasible pilot is for the museum and the teams.

Kathleen Louw, The Royal Museum of Mariemont (BE)

It would have been helpful to be better prepared to design a gamified app with educational content, or have a concise introduction or a comprehensive kit with the necessary steps. [...] Since it was the first time we developed an AR application, we had no idea, for example, of who was in charge of the script or the interactive parts. We didn't know what we, as museum employees should bring to the table and what the responsibilities of the digital solutions providers were. It took us some time and uneasy moments to figure out how things work.

Teodora Dumitrache & the team, The National Museum of Maps and Old Books (RO)

1. Museum guides annual evaluation meeting.

Photo courtesy of Istanbul Dialogue Museum, Turkey

2. Digital Warmth Exhibition Opening

Photo courtesy of Museumsmanagement Niederösterreich, Austria

3. Digital Warmth Exhibition Opening

Photo courtesy of psb/sap Baden, Austria

4. Digital Warmth Exhibition Opening

Photo courtesy of psb/sap Baden, Austria

Future-Proofing Museums

DOORS-Digital Incubator for Museums is a part of a bigger picture. Looking back on it only serves insofar as we translate the learnings into action plans for future-oriented incubation programmes and funding schemes that could help future-proof the sector.

Our experience taught us how important it is for calls to encourage research and leave space for agility so facilitators can respond quickly to newly uncovered needs. It has also showed that calls are never entirely prescriptive but an invitation to creative interpretations and innovation. At the same time as designing more flexible calls, creativity, rooted in the knowledge gained from experience, should make its way into the responses to these calls.

Our learnings are just one side of this story, though. In this chapter, we invite the practitioners onboard our incubation programme and experts Dr. Lauran Vargas and Julia Pagel to speculate on the ideal and implicitly future-oriented incubation programmes and funding schemes.

Future-oriented Incubation Programmes

Future-oriented Funding Schemes

FUTURE-ORIENTED INCUBATION PROGRAMMES

Our cohort believes an ideal, future-oriented incubation programme would offer tailored support, encourage self-reflection, and help museums attract young talent.

Offer tailored support

Programmes should be applied to the specifics of each project, be that through dedicated meetings with mentors much earlier in the process or inspiration sessions with companies/institutions that have experience with these types of projects.

Teodora Dumitrache & the team, The National Museum of Maps and Old Books (RO)

Sometimes the issues we learned about [in this programme] were far from the reality of small Greek museums. I think the incubator programme could start with a self-evaluation test, so that participants could be grouped based on their level of digital competence and readiness.

Afroditi Kamara, Alonissos Museum of K.& A. Mavriki (GR)

In an ideal world, the entire team would work closely with a mentor who continuously asks critical questions about our strategies over an extended period of time.

Esther van Zoelen and team, IMPAKT [Centre for Media Culture] (NL)

In our ideal incubation programme, one mentor would be assigned per museum for the entire duration of the project. Someone who would advise us and point out everything that needs to be considered when making different decisions.

Klara Raković, Arboretum Volcji Potok (SI)

My ideal incubation program would include counselling on selecting the right digital tools for the pilot.

Sara Cibin, Pro Terra Sancta/Terra Sancta Museum (IL)

Encourage self-reflection

For an institution like ours, small are key: we do not always need a great big new project. It is often more helpful to take a moment to understand what is going on, to reflect on past practices and make small adaptions to our every day work. As easy as the latter might sound, it is often a big limitation for institutions like ours, traditionally understaffed and overworked. Creating room for reflection and easy-acess funding, would be a huge support.

Rick Springer & Anna Riethus, Stiftung Neanderthal Museum (DE)

In an ideal incubation programme, the team would be able to move from a reactionary approach to focusing on long-term strategies and growth.

Laura Harvey-Graham, Museum of Literature Ireland (IE)

This experience helped us see that the focus should not be on a specific digital solution, but on using ICT as a means. Thus, an ideal incubation programme would allow us the time to ponder on these issues, as well as the possibility to listen to our peers.

Patrick Rang, The Estonian War Museum (EE)

Attract young talent

An ideal programme would include a sort of "Digital without Borders" or "Digital Corps" programme, in which selected institutions host a capable young innovation-minded digital expert for 18 months for tailor-made assistance on the ground [...]. This could lead to museum leaps and perhaps more naturally and swiftly trigger the opening of subsequent new digital talent positions.

Kathleen Louw, The Royal Museum of Mariemont (BE)

Shaping the Future of Incubation Programs: A Fusion of Imagination, Futuring Practices, and Maturity Models

DR. LAUREN VARGAS

By day, Dr. Lauren 'L' Vargas is a digital dragon wrangler with over 20 years of experience assisting organizations with their community, communication, and collaboration strategies. Vargas is the principal of Your Digital Tattoo and operates at the intersection of community and technology. She uses her research and consulting practice to further meaningful connection, purposeful inclusion, and digital civility.

Incubation programs play a critical role in cultivating innovation and entrepreneurship on a global scale. They are the cradle for budding ideas and businesses, guiding them from conception to maturity. For museums, especially the small to mid-sized ones, it is essential to reevaluate and evolve the foundation of incubation programs to instigate enduring change so they not only survive but thrive in today's rapid digital progression. This evolutionary process taps into the power of creative thinking, foresight methods, maturity models, talent nurturing, process efficiency, technology adoption, and shared leadership.

Incubation programs should foster an environment where radical thinking and the audacity to challenge the status quo are encouraged and celebrated. They should act as fertile grounds where unconventional ideas germinate, spurring the growth of projects and platforms not yet conceived. For this, a shift in mindset is crucial, wherein **failure is recognized as an opportunity** to learn and improve rather than a deterrent. Imagination, thus, becomes a vital tool in the incubation process, powering future innovations and digital transformations.

Creating, nurturing, and evolving successful incubators involves sparking imagination about potential futures and recognizing the power of individuals' futures literacy to shape these outcomes by foreseeing a spectrum of possible, probable, and plausible futures. Attracting and nurturing the right talent is another key aspect of future-proofing incubation programs. A dynamic, diverse, and skilled workforce is fundamental to generating novel ideas, developing viable business models, and driving innovation. Incubators should actively seek individuals with not just technical and/or domain expertise but also an entrepreneurial mindset who can navigate the complexities with agility and resilience. Museums should consider how to engage individuals from both inside and outside their organisation in the program, extending involvement from the idea generation phase through to implementation and beyond. It's also important to determine how everyone is kept informed and involved in the evolution of the idea or project and how to leverage digital technologies and agile methodologies to streamline communication.

Recognizing the needs and potential opportunities within an organisation can be accomplished by assessing its present or aspirational digital readiness or maturity. By employing methods such as trend analysis, scenario planning, and strategic foresight, incubators can anticipate the evolving demands of the market and visitors and adjust and align development strategies to meet these needs effectively. When museums embrace a proactive, future-oriented strategy rather than a reactive one, they may foster innovative environments that can potentially create more robust, sustainable, and pertinent solutions. This approach might help them retain or enhance their significance in the rapidly evolving digital era.

Strategically directing incubation teams to reimagine, reframe, and rethink the museum's operations and engagement strategies paves the way for novel approaches that enhance the museum's relevance, visitor engagement, and adaptability in the dynamic digital landscape. Participants in the DOORS program learned how to employ a maturity model to self-evaluate their organisation's comprehension, usage, management, and creation of digital processes, thus enabling them to align their projects with the organisational strategy better. Applying such models can help incubators refine their support for innovation and handle digital transformation more accurately and efficiently.

Mentoring and coaching play a vital role in incubation programs, both from internal and external perspectives. Internal mentors, typically experienced staff within the organisation, offer unique insights into

the organisation's culture, processes, and strategic goals. Their guidance can aid in aligning the efforts of those participating in the incubation program with organisational objectives and fostering an understanding of the internal dynamics. External mentors and coaches, on the other hand, bring an outside perspective, broad industry knowledge, and diverse experiences. The guidance from mentors can assist participants in understanding financial and technological needs, advise on communication strategies and managing expectations, and provide insights into areas of specialization not readily available within the museum.

The blend of internal and external mentoring creates a well-rounded support system. This balanced approach of internal and external mentoring and coaching is more successful when integrated from the inception of any project within the incubation program, ensuring guidance, support, and valuable insights are readily available from the outset.

An incubation program can be particularly advantageous if it also sets out to open doors to partnerships and technology resource agreements, as well as facilitate shared experimentation. These collaborative relationships can provide access to cutting-edge technologies, financial resources, and unique expertise that may be inaccessible to the organisation. These partnerships allow for the sharing of risks and rewards associated with experimentation and innovation, fostering a culture of learning and adaptation. From piloting new digital tools to experimenting with novel engagement strategies, these partnerships and agreements can significantly enrich the innovation capacity of the incubation program and, by extension, the broader organisation.

Incubation programs can be transformative pathways that dramatically change the future landscape for small to mid-sized museums, strengthening their digital readiness and innovation capabilities, and paving the way for a future where they continue to thrive and stay relevant by meeting the dynamic challenges of the future with creativity and courage.

FUTURE-ORIENTED FUNDING SCHEMES

Our cohort believes ideal, future-oriented funding schemes would invest in upskiling staff, establish knowledge-exchange networks, use small museums as test, and acknowledge that implementation is the beginning, but maintenance is the real journey.

Invest in upskilling practitioners

Future-oriented funding schemes could include research grants for digital strategies, partnerships with technology companies for funding and expertise, and dedicated funds for staff training.

Sara Cibin, Pro Terra Sancta/Terra Sancta Museum (IL)

An even split between funding for staffing and capital for purchases would be useful. It is equally important to invest in people, not just equipment, to deliver a sustainable digital vision.

Laura Harvey-Graham, Museum of Literature Ireland (IE)

We would like to see funding schemes that encourage the analysis of technology trends and best practices in similar institutions, as well as the mapping and acquisition of digital skills needed for a digital transformation.

Klara Raković, Arboretum Volcji Potok (SI)

Funding could be designed [...] as funded seminars targeted at specific digital needs and solutions. These seminars could address museum employees and/or directors based on their skills and role or follow a thematic pathway [...].

Afroditi Kamara, Alonissos Museum of K.& A. Mavriki (GR)

It would be great to get easy-access, onsite trainings on common workplace software, or be able to book inspiring talks from the digital sector [...].

Rick Springer & Anna Riethus, Stiftung Neanderthal Museum (DE)

Acknowledge that implementation is the beginning, but maintenance is the real journey

It would be useful to have a dedicated budget for the continuation or maintenance of existing projects. The digital realm changes almost daily, software ages quickly, and it is imperative that we review the project and adjust it.

Dott. Laura Corsini and Dott. Maria Cristina Serafini, Museo Civico Vignola Augusta Redorici Roffi (IT)

Technology is constantly evolving, and it is becoming more and more expensive to create and maintain a digital product. It would be useful to have funding schemes that support digital projects already implemented in an institution or support their improvement.

Teodora Dumitrache & the team, The National Museum of Maps and Old Books (RO)

Most projects are focused on creating new products and digital innovations, but sometimes smaller museums are in need of resources for subscription-based software, or at least partial financing of digital tools.

Vilius Mateika, The Museum of Urban Wooden Architecture (LT)

A more attuned funding scheme would allow more time before sharing the end results. We have the "last say" in the final month of the implementation, but the real results will emerge after at least a year. Perhaps the Horizon programme could also introduce an "extension phase".

Patrick Rang, The Estonian War Museum (EE)

Establish knowledge-exchange networks

Further visitor research, ideally with a whole group of international colleagues, would help us continously strenghten our understanding of the digital sphere of our work.

Rick Springer & Anna Riethus, Stiftung Neanderthal Museum (DE)

Smart money funding schemes, tied to programs that facilitate mentorships and learning through professional network expansion, encourage digital empowerment beyond a single project and connect institutions to helpful support environments.

Gaja Zornada, The Computer History Museum (SI)

Use museums as test beds

The size of our institutions could be an asset. Small museums could serve as a basis to test the possible innovative solutions. If you test small and something goes wrong, then the losses are also small.

Patrick Rang, The Estonian War Museum (EE)

Funding schemes attuned to the realities of the sector

JULIA PAGEL

Julia holds an MA in Art History and Latin American Studies from Freie Universität Berlin. Before working for NEMO, Julia was a project manager at the German Museums Association and a member and Vice-President of the Executive Committee of Culture Action Europe, a major European culture umbrella network. Since 2019 she has been a member of the EU Commission Expert Group on Cultural Heritage, and since 2021 she has been an Advisory Board member of Europeana. Julia has initiated numerous international cooperation projects around capacity building and organisational transformation in the museum field.

How can we organize public and private funding schemes and investments to better address the varied needs of a heterogeneous museum sector in Europe, in its journey to create the maximum positive impact for its communities and the global audiences in general?

In the following, I bring together the direct feedback and ideas received from the museums participating in the DOORS programme and a general, sector-level perspective of a European museum network on recommendations that emerged from their engagement with funding support meant to increase their digital capacity and innovation on operational, structural and policy level.

1. Invest in upskilling staff

The majority of funding schemes for heritage organisations are project-based. Organisations receive money to create a tangible output, something that is measurable and easy to include in a final report. But is the funding well allocated if it cultivates one single project instead of allowing the organisation to grow as a whole?

Laying the grounds for funding to have a long-lasting impact and extend across the organisation, capacity building must be more than a prospect but a mandatory item. There are European funding mechanisms, including the Erasmus+ programme, which support training and capacity building on the job (among many other forms of learning) and apply to the heritage sector, too. Most of the other EU funding programmes that are relevant for the heritage sector (Creative Europe, Horizon, CERV, among others), however, focus predominantly on tangible project outputs and hardly allow space and funding for staff upskilling. We believe that every project funding should include a training strand to create a long-lasting - beyond project results - impact for the organisation at large. In NEMO's report and policy recommendations on the impact of COVID19 on museums, NEMO recommends investing in and developing museums' skills and knowledge to increase museums' resilience. With a view to their digital development, the network recommends a strong focus on the basics: the development of digital skills and infrastructure of museums, including the development of sound metrics, frameworks and methods to track digital activities and success. The EU-funded project CHARTER has taken up the task at a European level, seeking to create a lasting, comprehensive skills strategy to guarantee that the continent has the necessary cultural heritage skills to support sustainable societies and economies.

2. Establish knowledge-exchange networks

Networks are all around us, affecting who we connect to, what resources we can access, where we get information from, and how work gets done. But networks don't only support us individually and personally. They are perhaps the only organisation form with which we can meet global challenges and encourage development democratically.

Museum work – as any other work nowadays – happens in a global context: our benchmarks are international, and our audiences are - increasingly through museums' digital offers – more diverse. And networks provide a structure that can help museums connect, learn from each other, and become stronger together in this landscape.

Through their open form, networks are capable of bridging and enabling contact between different players (especially in a heterogeneous museum landscape!). They help institutions embrace diversity, build trust, pursue shared goals, and encourage learning and sharing of experiences and best practices by providing space for inspiration, creativity, and reflection and for piloting or testing ideas. Museums should be a laboratory where we develop new learning and sharing systems based on mutual benefits in a globalised world. And engaging in a network - should be part of the learning journey of any museum. This is especially true in publicly funded programmes because embedding project outcomes in a network with shared goals supports their longevity and sustainability.

3. Acknowledge that implementation is the beginning, but maintenance is the real journey

There are various options to support the maintenance and development of project outcomes after the project funding has ended. One solution adopted by various funding organisations is to require a sustainability plan after the project's end, including a business plan, with an option to allocate a certain part of the budget to developing a future strategy for the project. This is especially important if the project needs regular updating, as is often the case with digital projects, where technology is developing fast, and results might be outdated within a short period of time.

The funding logic is mostly based on the idea that funding is provided for the initial phase of a project, and if successful, this project will maintain itself with the resources it generates. In the heritage sector, we define "success" differently than in the business world: success is not necessarily related to financial success and resources. Museums are successful when they make a difference to their communities, change lives, and help build a healthy society. And this objective – in whatever form it takes in a project - should get the opportunity to be continuously funded if successful, either via prolonged funding, the chance to submit a second (and third, and fourth) project phase funding application, or through long term, organisational funding from the start. This would make it possible for museums to integrate project dynamics, knowledge and skills into their DNA. To make a long story short: museums need less support for project-and output-driven one-off initiatives, they need support for long-term, sustainable organizational adaptation and change.

4. Use museums as test beds

How can we increase the participation of small museums in European funding schemes? Most of the opportunities provided by the EU are tailored to organisations with large capacities, a project development team that knows how to handle applications, as well as the administrative and financial management of international projects. To lower the entry barrier, procedures should be simplified to make it easier for first-time applicants and smaller museums to participate and benefit from the various funding programmes.

Indeed, if funding organisations consider the advantages of integrating small museums in their funding structure (advantages such as less hierarchical structures, better integration of projects into the actual organisational structure, short and flexible decision-making, smaller investments, and faster results, to name just a few) they could gain a better understanding of the reality of the implementation and impacts of their funding structures, and could test new funding objectives and processes more effectively and in real-time. In NEMO's Report on EU funding and museums and policy recommendations, we provided an analysis of museums' participation in the centralized EU funding programmes from 2014-2018, including detailed data on national and European levels on the current funding usage that provides a good overview of the needs of the museum sector when it comes European funded cooperation.
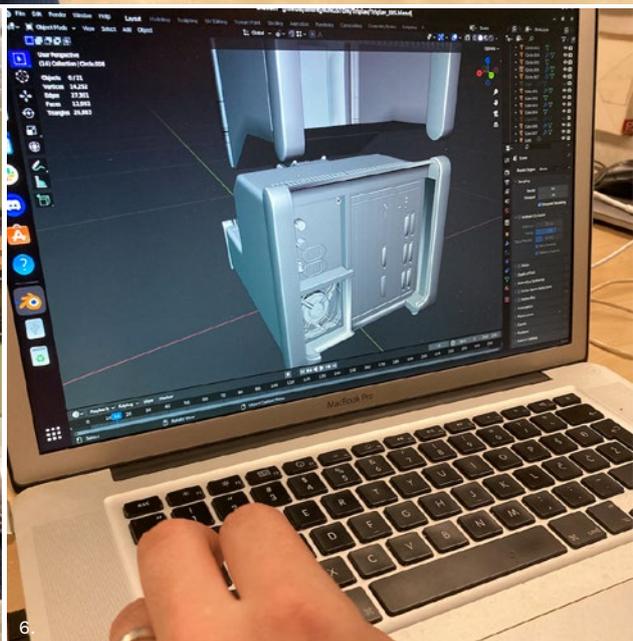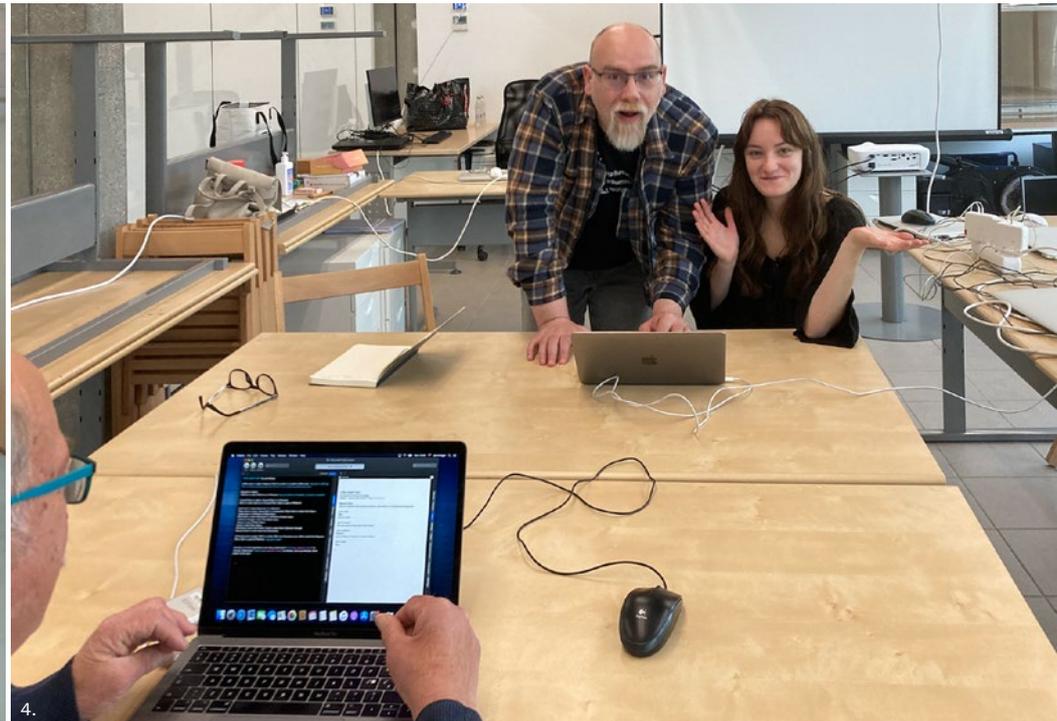
1,4,6. Working group sessions

Photo courtesy of The
Computer History Museum

**2. Artefact, Museo Civico
Vignola Augusta Redorici
Roffi**

Photo courtesy of Museo
Civico Vignola Augusta
Redorici Roffi, Italy

**3. Museo Civico Vignola
Augusta Redorici Roffi**

Photo courtesy of Museo
Civico Vignola Augusta
Redorici Roffi, Italy

**5. Press conference at
Museo Civico Vignola
Augusta Redorici Roffi**

Photo courtesy of Museo
Civico Vignola Augusta
Redorici Roffi, Italy

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A special thank you to

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