Designing
a digital museum experience
for art lovers
– Case: EMMA Espoo Museum of Modern Art

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Laurea University of Applied Sciences **Abstract**
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Designing a digital museum experience for art lovers. Case: EMMA — Espoo Museum of Modern Art

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In this thesis, the digital museum experience is researched in the context of a development project for EMMA — Espoo Museum of Modern Art. The purpose of the case project was to design a concept for a digital museum service, which operates as an online platform that publishes content about contemporary art. In the service design process, customer-dominant logic of service and the design process model by the Hasso-Plattner Institute were followed as the guiding theoretical frameworks. Service theory and design-thinking methods were backed up by the theories of digital experience (the METUX model and digital servicescape) and museums, focusing on the concepts of new museology, digitalization, and the platformisation of museums.

As a result of the design process, a digital platform concept was successfully created for the museum. In this thesis, similarities between the customer-dominant logic of service and new museology, putting the visitor at the centre of museum operations, were remarked on. Understanding the primary target users, who were identified using the museum's visitor personas, was key to outlining the elements required for the creation of an appealing digital service. For the primary target users, an ideal digital museum service is easy and fun to use, highly visual, and should provide intelligent and inspiring content about contemporary art. The academic research about how to design digital services that respond to users' basic psychological needs of autonomy, competence and relatedness as well as the knowledge about museum visitors' motives will support EMMA in further tailoring the content according to the target users' needs.

The digitalisation of museum services offers new possibilities for social inclusion and accessibility, but conscious focusing is needed to obtain these objectives. The development process revealed a need for a holistic, customer-centric digital strategy, which can help steer the museum's digital vision and integrate the digital activity seamlessly with the museum's curatorial programme.

Keywords: digital experience, new museology, digital strategy, service design, design process

Laurea ammattikorkeakoulu **Tiivistelmä**
Degree Programme in Service Innovation and Design
Master of Business Administration

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Digitaalisen museokokemuksen muotoilu taiteen rakastajille. Asiakkaana EMMA – Espoon modernin taiteen museo

Vuosi 2021 Sivumäärä 90

Opinnäytetyön tavoitteena on tutkia digitaalista museokokemusta, jota tarkastellaan EMMA – Espoon modernin taiteen museolle toteutetun kehittämisprojektin kontekstissa. Asiakasprojektin tarkoituksena oli muotoilla digitaalisen museopalvelun konsepti, joka on nykytaiteen sisältöjä julkaiseva verkkoalusta. Palvelumuotoiluprosessissa palveluiden asiakaslähtöinen logiikka ja Hasso-Plattner-instituutin palvelumuotoilun prosessimalli toimivat työskentelyä ohjaavina teoreettisina kehyksinä. Palveluiden teoriaa ja palvelumuotoilun metodeja tukivat museoiden ja digitaalisen kokemuksen (METUX-malli ja digitaalinen palvelumaisema) teoriat, joissa keskeisiä käsitteitä olivat uusi museologia, digitalisaatio ja museoiden alustoituminen.

Palvelumuotoiluprosessin tuloksena museolle syntyi digitaalisen palvelun konsepti. Opinnäytetyössä käy ilmi yhdenmukaisuus palveluiden asiakaslähtöisen logiikan ja museovierailijat toiminnan keskiöön nostavan uuden museologian välillä. Digitaalisen palvelun tärkeimmän käyttäjäryhmän ymmärtäminen oli avain houkuttavan digitaalisen palvelun osatekijöiden hahmottamiseen. Tärkeimmille käyttäjille, jotka määriteltiin museon käyttämien persoonien avulla, ihanteellinen digitaalinen museopalvelu on helppo ja hauska käyttää, visuaalisesti miellyttävä ja se tarjoaa älykästä ja innostavaa sisältöä nykytaiteesta. Akateeminen tutkimus käyttäjien psykologisia perustarpeisiin (autonomia, pystyvyys, yhteydentunne) vastaavasta digitaalisten palveluiden suunnittelusta sekä tuore tieto museovierailijoiden motiiveista tukevat museota jatkossa sisältöjen räätälöinnissä tärkeimpien käyttäjäryhmien tarpeiden mukaan.

Museopalveluiden digitalisaatio tarjoaa uusia mahdollisuuksia edistää yhteiskunnallista inkluusiota ja saavutettavuutta, mutta niiden toteuttaminen vaatii tietoista keskittymistä näihin tavoitteisiin. Kehittämisprojekti osoitti museon hyötyvän kokonaisvaltaisesta, asiakaskeskeisestä digitaalisesta strategiasta, joka voi auttaa ohjaamaan museon digitaalista visiota ja yhdistämään digitaaliset toiminnot saumattomasti museon kuratoriaaliseen työskentelyyn.

Avainsanat: digitaalinen kokemus, uusi museologia, digitaalinen strategia, palvelumuotoilu

Contents

1 Introduction

Digital technology supports and complements all aspects of museum work today (Navarrete 2020a), and the coronavirus pandemic has accelerated the ongoing digitalisation of museums even more. Since 2020, museums have rushed to develop various concepts for virtual museum services, which include, for example, virtual exhibition tours, 3D copies of real-life museum exhibitions, e-learning services, and other digital content, either on the organisations' websites or on social media. It can be argued that the COVID-19 has shaken up the mindset of museum professionals regarding the importance of digital services, which have long been considered secondary to an onsite visit to the museum venue. In the midst of national lockdowns, technology has offered plausible solutions for bringing museums back to life (Charr 2020).

The aim of this thesis is to research the digital museum experience through a development project for EMMA — Espoo Museum of Modern Art, a leading contemporary art museum in the Finnish capital region. The case study benefits from two earlier projects with the museum, which were realised as part of my service design studies at Laurea. The purpose of the development project was to design a digital service for the museum, EMMA Zone, which will operate as an online publishing platform for articles, podcasts, videos, and other museum content. In the service design process, which expanded to a seven-week-long sprint in August and September 2021, customer-dominant logic of service and the service design process model by the Hasso-Plattner Institute were followed as the guiding frameworks. For this thesis, the framework was strengthened with theories of digital landscape, the METUX model (Motivation, Engagement and Thriving in User Experience), new museology, experience economy, and the digitalisation and *platformisation* of museums. The digitalisation of museums is set into context with other institutional changes, such as the increasing diversity and improving inclusion of cultural heritage organisations and a visitor-focused thinking, impacting all levels of museum organisations.

As a result of the process, a concept of a digital platform was created for the museum. The museum's advertisement agency took over the software development of the platform after the concept was created, and the new service is scheduled to be launched in August 2022. The research process, along with the development project, revealed the museum's need for a holistic, customer-centric digital strategy, which would help steer the museum's digital vision and integrate the digital activity seamlessly with the museum's curatorial programme. How, in today's fast-paced world, museums succeed at transforming and renewing themselves with digital strategies and a visitor-centred focus is an essential question in the field of cultural

heritage, and I hope to continue researching and working with this issue in the future.

1.1 Aim, purpose and objective of the development project

The overall aim of this thesis is to explore and examine the digital museum experience and discover what motivates users to engage in digital museum services, and how a digital museum service should be designed to engage users for a long-term relationship with the museum. In addition, I seek to determine what institutional changes are underway in museums today in order to place the digitalisation of museum organisations within the larger picture.

The purpose of the case project carried out for this thesis was to produce a digital service concept for a contemporary art museum in collaboration with the museum's development team. In April 2021, EMMA received funding for the creation of an online platform from the Finnish Heritage Agency, which enabled the museum to speed up the development process for a completely new service. As a precondition, the museum team had decided that the new platform would be integrated into the museum's current website and that the new service should focus on offering users online content such as podcasts, articles, and videos that deepens knowledge and understanding about the museum's exhibitions and other programme. The working title for the platform was EMMA Zone. Despite this mission, there was room for a service design project to determine the needs and expectations of the assumed primary users of the service and develop the concept based on insights into this user base. Thus, the main objective was to determine the ideal digital service the museum should offer "Pinja" and "Tim", which is one the personas EMMA has identified among the museum visitors. What would the service look and feel like? How, when, and why would they want to use it?

In this thesis (Chapters 4 and 5), I will open the development process phase by phase and explain the grounds for the applied service design process, analyse the process and the results stage by stage, and combine the design practise with services and museum theories.

In the theoretical part of this thesis (Chapters 2 and 3), my intention is to root the case project in the surprisingly intertwined theories of *customer-dominant logic of service* and *new museology*, which both place emphasis on the centricity of the customer (museum visitor) and customer's individual experience of the service, although the two frameworks originate from two different academic disciplines. The similarity can be explained by the two theories correctly reflecting the real-life changes of the service sector in recent decades; however, it must be noted that service research stemming from economic studies points out the centricity of the customer much earlier than research in the field of museum studies. I use the concepts of *digital servicescape* and *platformisation* to present the special characteristics of online services compared to real-life experiences. These concepts highlight

the benefits digitalisation undeniably offers to museums and other institutions operating in the field of the arts or cultural heritage, such as increased accessibility and inclusion; they also reveal new challenges, such as questions of data management and privacy. At the same time, a larger context for the research is opened up as current developments in cultural heritage institutions are revealed. Digitalisation and visitor-centricity are the two major trends, and a call for diversity and inclusion is a third. The METUX model (Motivation, Engagement and Thriving in User Experience) and the ideas circling the theory of experience economy will provide us with methods for designing optimal digital museum experiences.

In the final section (Chapter 6), a conclusion is presented with a reflection on the project as interpreted through the critical theoretical framework of this thesis. Digital strategy is introduced as a tool for advancing holistic, strategic thinking in museums' efforts to strengthen its digitalisation offerings.

1.2 Key concepts

Digital experience, customer-dominant logic, new museology, digitalisation, platformisation, METUX model, experience economy, digital servicescape

1.3 Digitalisation in museums

The first known museum was founded by the University of Alexandria in the 3rd century B.C. Ever since museums have offered interpretations about how human histories and cultures have developed. (Axiell 2016, 2). The turn of the 21st century emerged as an era of intense changes in museums all over the world. Today, there are more museums than ever, and many well-known museums expand their spaces and actively develop programme strategies. In the last 20–30 years, there has been an explosive worldwide growth of museums. According to research by the Global Cultural Districts Network, more than a hundred major art venues have opened up around the world in previous years, which includes the construction of new museums, performing arts venues, and cultural districts, at a cost of 7.2 billion euros (Rodney 2019). Since 2020, the coronavirus pandemic has seriously violated the global arts and culture economy as well as the economies of arts institutions. At the time of this writing, it is still unclear how soon global arts and culture sectors will recover from the financial challenges brought on by the pandemic and whether there will be other consequences, such as long-term changes in the visitor counts or public funding. (Stephens 2020.)

The museum is defined as a service for society that "acquires, conserves, researches, communicates, and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment" (ICOM 2019: Statutes,

Article 3, Section 1). In 2019, the governing body of the International Council of Museums (ICOM) stirred international debate when it put forward an alternate definition that revised the colonial context of the definition that has lasted for almost 50 years. The new proposal included a promise to uphold "social justice, global equality, and planetary wellbeing" and work "in active partnership with and for diverse communities to collect, preserve, research, interpret, exhibit, and enhance understandings of the world" (ICOM 2019). The re-envisioned museum is obliged to "hold artifacts and specimens in trust for society, safeguard diverse memories for future generations, and guarantee equal rights and equal access to heritage for all people" (ICOM 2019). The museum institution is recognised as manifesting "democratising, inclusive, and polyphonic spaces for critical dialogue about the pasts and the futures" (ICOM 2019).

Although the proposed definition of the museum is still in process, as it has not yet been approved by the ICOM members, it can be argued that this aspiration to facilitate inclusion, accessibility and critical thinking makes the museum particularly relevant in the digital era (Wilson-Barnao 2021, ch. 1). The new definition of a museum proposed by ICOM reflects the recent developments in the museum field, such as the museum digitisation movement (which must be differentiated from the larger concept of digitalisation); the movement began at the turn of the millennium (Li et al. 2011, 1), as did discussions of education, audiences, participation, and inclusion. They became the keywords of the "museum age" that started around the 1980s. Although the preservation, development and research of collections are still the core interests of museums, visitors are now gaining an equally key position, and the importance of the visitor can also be noted in ICOM's proposal (Jagodzińska 2017, 75).

Virtual museums

In recent years, museums have shifted their focus to the visitor experience as a longstanding process that extends beyond a visit to the physical museum space (Petrelli et al. 2017, 284). The museum experience begins already before the visit, and it continues long after the visit (Falk & Dierking 2016). Before the visit, museums provide information about the exhibitions and practical issues, and after the visit, they aim to establish a long-lasting relationship with the customer, accompanied by voluntary word-of-mouth promotion and additional future visits (Petrelli et al. 2017, 284). The intent to develop and maintain a long-term engagement of visitors is the reason for museums' experimentation with social media channels. On social media, visitors are encouraged to actively connect with the museum and contribute to the museum's agenda through individual participation.

Let us stop for a moment and consider the concept of a digital museum. According to Wikipedia, a virtual museum is "*a digital entity that draws on the characteristics of a*

museum to complement, enhance, or augment the museum experience through personalisation, interactivity, and richness of content. Virtual museums can serve as the digital footprint of a physical museum, or they can be produced independently. A virtual museum can be designed around specific objects, or it can consist of online exhibitions created from primary or secondary resources" (Wikipedia 2021). The definition shows us that even though the first online museums were born in 1990s, the concept of a digital museum is still relatively new, and its full possibilities are largely yet to be explored. The museum experience is still very much associated with the idea of a real-life visit, and many online museums are created around the idea of an imitation of the physical museum space.

On the other hand, Petrelli et al. argue that museums' interaction with visitors via digital media has been, and still is, *disconnected* from the physical visit at the museum. This can be explained by looking at the way museum organisations are traditionally structured, as collections and exhibitions are usually managed by a completely different team than the one overseeing the museum's online presence (2017, 282). This is a pity, Petrelli et al. state, since museums' online and material presences could be designed as a holistic visitor experience, bridging the division between the two different current approaches. Petrell et al. suggest that the two dimensions of the museum, digital and physical, can be weaved into a seamless, immersive, and novel visitor experience by combining the principles of ubiquitous computing and tangible interaction (2017, 282).

We can understand the virtual museum as a digital service allowing the museum to communicate with its visitors outside the limits of the physical museum space. Digital services enable sharing information with visitors quickly and easily via the internet, without restrictions of place and time. (Li et al. 2011, 1). Digitalisation offers museums a variety of forms for enhancing the visitor experience. Visitors can be encouraged to use mobile phones or tablets throughout the visit, or the museum can offer them digitized collections online, or they can be invited to connect with the museum before or after the visit via online channels. (Axiell 2016, 2).

"Digital curation" was first discussed in a seminar organised by the Digital Preservation Coalition and the British National Space Centre in London in 2001. (Li et al. 2011, 1). The first digital initiatives of the museums were creations of simple, virtual environments by publishing digitised information on the website, for example, or pre-recorded tour guides on portable devices (e.g. the Louvre's virtual museum for the iPhone, the Collection Database of the British Museum, and the Timeline of Art History by the Metropolitan Museum of Art). Digitalisation took major leaps forwards in 2020, when the first round of national lockdowns began due to the coronavirus pandemic. The Rijksmuseum of Amsterdam published a series of videos, in which curators presented highlights from the collection (20 March 2020), which later was developed into a more coherent service, Rijksmuseum Unlocked (12 June 2020), and

finally a permanent selection of museum stories in high-quality videos on the museum's website. Rijksmuseum also launched a Facebook group called Dutch Art Masters, in which followers were asked to share their favourite artworks (17 March 2020) (Navarrete 2020b).

Agostino et al. (2020) divide museums' online activities into three categories, depending on the type of approach selected for connecting with the audience: 1) The first approach is a simple one-way relationship between the users and the museum, in which the museum typically provides users with information, e.g., in the form of interviews, virtual tours or storylines. 2) The second approach is characterised by asynchronous, two-way interaction between the user and the museum. A user may be invited, for example, to join a virtual treasure hunt or a flash mob campaign, and they can choose when and how they participate in or react to the invitation. 3) The third approach is born from the synchronous, real-time interaction between the audience and the museum. In this category, there are initiatives such as live online meetings with Museum Friends or students and children (Agostino 2020). The research by Agostino et al. was based on a survey among the 100 largest Italian museums, which showed that museums had more than doubled their online activities during the coronavirus pandemic. The researchers conclude that the future development of online activities of cultural heritage institutions will likely mean more personalised and tailored museum visits and overlapping digital and physical experiences. They predict that museum services will be increasingly rooted in the use of digital technology (Agostino et al. 2020).

Motivations for using digital museum services

"In fact, virtually all individuals visiting a museum understand that museums are educational institutions and consequently expect to learn something during their time there. The fact that people don't always state learning as a reason for visiting is not evidence of a lack of learning motivation," argue Falk and Dierking (2016b), putting the educational and informational aspects of cultural heritage organisations as the key motivator for people to visit museums. Besides educational purposes, the researchers recognise museums as social settings for the recreation of families, couples, friends and other social groupings. The third important motivator for visitors is extraordinary museum displays, creating out-of-the-ordinary personal experiences and the possibility to escape the mundanity of everyday life. Finally, Falk and Dierking identify visitors who go to museums to look for specific professional or hobby-related ideas and inspiration (Falk & Dierking 2016b).

A strong, positive loop is born from the fusion of visitors seeking recreational experiences that respond to their specific identity-related needs and values, and museums providing offerings of education, knowledge, and public space. The identity-related needs and values can be such as seeking novelty, inspiration, or personal fulfilment. The reflection about the

visit and whether the visitor was satisfied with the experience fulfilling their particular need takes time. If the visitor concludes that the museum experience was good, they are likely to tell others about it, which helps the museum build a positive brand.

There are only a few reasons why people visit museums, Falk & Dierking argue. Based on the categorisation of these reasons, they divide the visitors into five groups, which are 1) curiosity-driven explorers, 2) socially motivated facilitators, 3) professionals/hobbyists, 4) experience seekers, and 5) rechargers (Falk & Dierking 2016a, 47–48). Falk and Dierking also add two more categories to explain why people visit some monuments or ethnically specific institutions. These categories are 1) respectful pilgrims and 2) affinity seekers (2016a, 47–48). It must be noted that research on identity-related motivations has largely focused on physical museums (2016a, 50). Falk and Dierking refer to the evidence about the motivations and expectations of virtual visits as differing from those of physical visits, and they point out that motivations for online visits seem to focus on gathering information or searching for specific content information for self-motivated research (2016a, 51).

A more detailed survey about visitors' online motivations by Elena Villaespesa (2014) at Tate Modern show that users have varying motivations to visit the museum website, and their knowledge about art also varies. Therefore, Villaespesa concludes that museums should offer users diverse content and easy usability to find the content that is interesting for them and provide them with a possibility to form their own experiences and meanings. In her research, Villaespesa identified two motivational poles, intellectual and emotional, to which she added another variable – the level of background knowledge of art – thus creating a visitor matrix based on four types: researchers, art enthusiasts, self-improvers, and explorers; this is a similar categorisation to the one devised by Falk and Dierking. Villaespesa proposes that this framework helps museum staff understand the varying ways people seek and use information about art and the museum offerings on the institution's website. The framework also provides tools for choosing the best ways to adapt and tailor content to meet user needs and expectations (Villaespesa 2014, Figure 1).

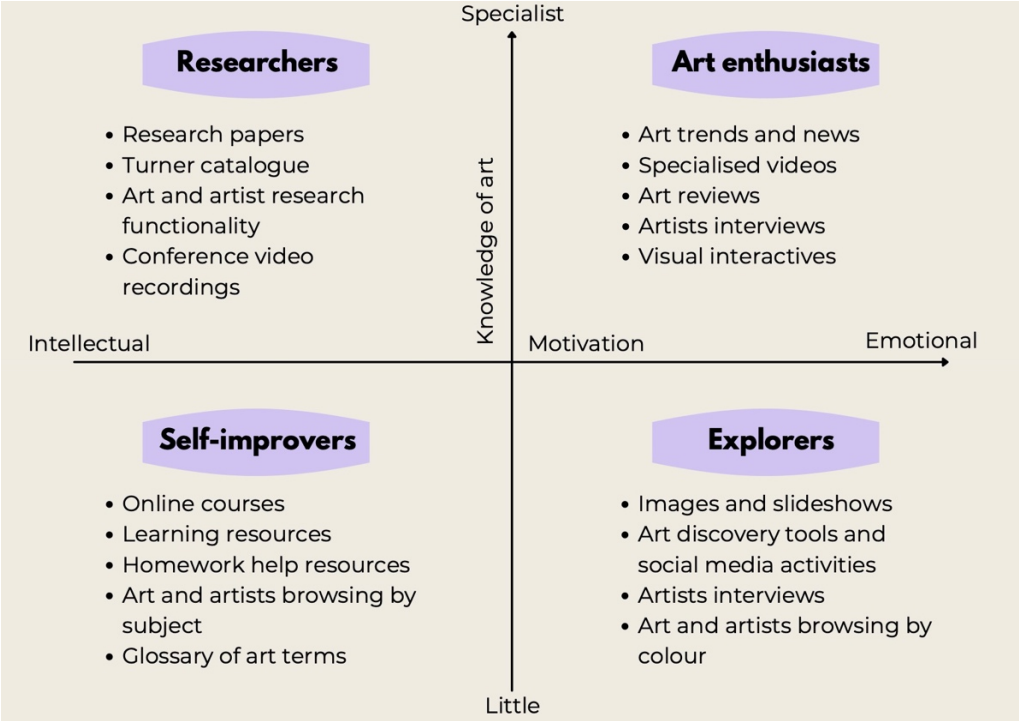

Figure 1. A visit matrix describing the creation of art content and online experiences at Tate Britain. Adapted from the original version by Tate Britain (Villaespesa 2014).

In 2020, Elisa Pellegrini surveyed online museums among 225 Italian residents amid the coronavirus pandemic. The results showed that whereas onsite visits at a museum are driven by a motivation to see the exhibitions and experience the museum venue, online visits give a chance to learn new things, see artworks online, and visit a completely new museum (Navarrete 2020b). Navarrete refers to earlier research, including research by Falk & Dierking, which shows that although people visit museums for the art's sake, they also have identity-related and socio-economic reasons for the visits, such as showing specific taste or belonging to a group (Navarrete 2020b). Pellegrini's findings signify that educational purposes are more emphasised in an online museum experience than an onsite visit's identity-related or recreational purposes.

In another survey among a hundred Dutch online museum visitors about their use of museums (Navarrete 2020b), Aart Grutters found that exhibitions are considered the most important museum service (Figure 2). Figure 2 illustrates the small scale of the use of online museum services in 2020; it is somewhat of a surprise that the pandemic had not accelerated the use of online services. Only 66% of respondents said having used museums' digital services, and during the lockdown months of 2020, the visits had dropped down to 51%. This result of fewer online visits during the pandemic indicates that most people continue to associate a museum website with the onsite visit rather than see it as a location for a digital museum experience.

The most important (56%) online museum service was the website, which was usually visited to glean information about the museum (Figure 3). A third (33%) of the respondents said they follow museums on social media.

What respondents miss from a physical museum visit

	Index
• Look at the artworks in person	1.0
• Walk in museum rooms	0.95
• Enjoy the experience with other people	0.79
• Disconnect from the world outside (e.g. from smartphones)	0.79
• Guided tours and other learning experiences	0.76
• Going to museum conferences	0.52
• Visit the museum archives	0.43
• Buy souvernirs from the museum shop	0.42
• Sketching the artworks	0.37

Reasons to watch museum content online

• Learn something new	1.0
• Look at art	0.97
• Visit a museum that I have never had a chance to visit before	0.92
• Learn directly from museum experts (e.g. an online tour in an exhibition hosted by a curator)	0.87
• Have access to high-quality pictures of artworks	0.83
• Relaxing activity	0.80
• Be creatively inspired	0.79
• Getting updated with the news from a specific museum	0.67
• Test my knowledge of art history (e.g. tests and quizzes)	0.62
• Conclude a physical museum visit with an online experience	0.59

Figure 2. Aart Grutters: A survey about favoured museum services among Dutch museum visitors in 2020. Adapted from the original chart (Navarrete 2020).

When asked about their interest in paying for online museum services, the respondents listed the following services as worthy of a fee:

- Long, informational stories about artworks and museum activities told by museum professionals, artists and well-known people;
- A regular broadcast focusing on the news about the upcoming programme, events and exhibitions
- A digital service for borrowing artworks from a museum collection to home; and
- Limited, special visits at the museum venue outside opening hours for online visitors only (Navarrete 2020b).

Another indicator for the (current) minor relevance of online services compared to onsite visits is the remarkably shorter timeframe users spend using digital services. When researching the online activities of Italian state museums during the COVID-19 pandemic, Agostino et al. (2020) noticed that the main difference between online participation and

onsite museum visit is that online visits typically take place in a very short timeframe. A digital visit to the museum website usually lasts only a few minutes, varying from 2–3 minutes reading a post about an artwork or an artist, for example, to a maximum of 10–15 minutes spent on an interview or a virtual visit (Agostino et al. 2020).

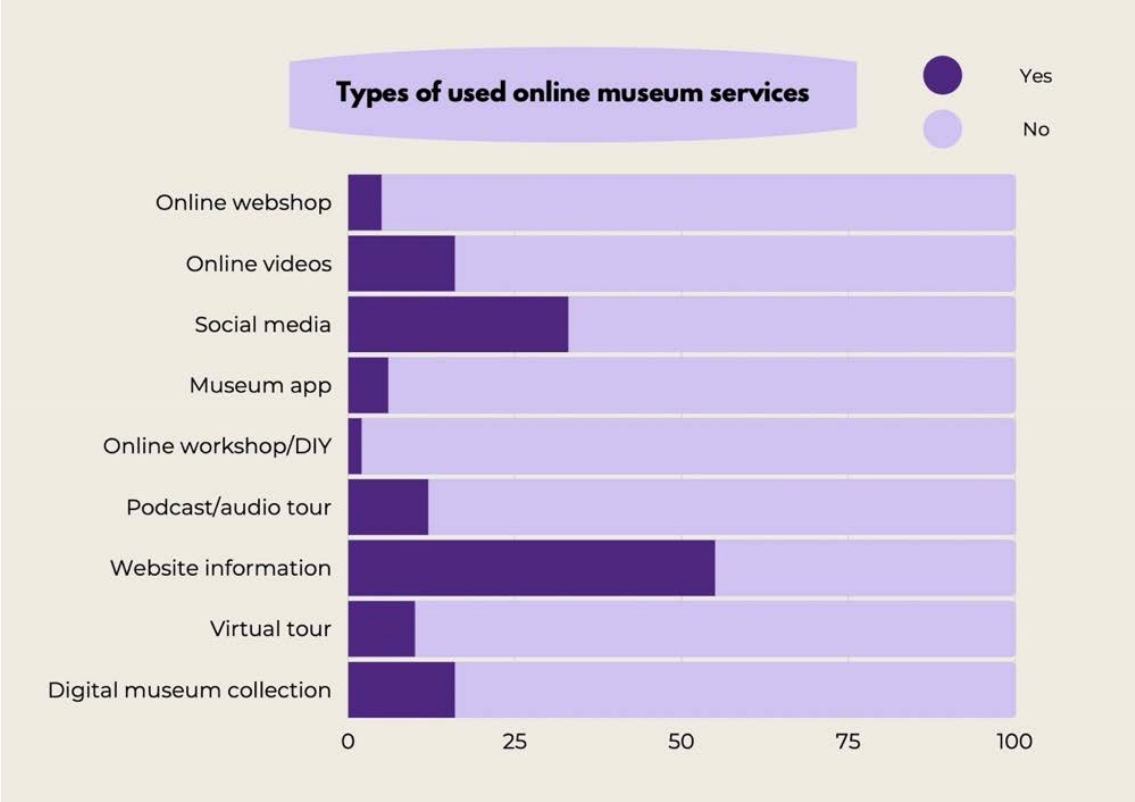

Figure 3. Aart Grutters: A survey about favoured museum services among Dutch museum visitors in 2020. Adapted from the original chart (Navarrete 2020).

1.4 Case organisation: Emma – Espoo Museum of Modern Art

EMMA – Espoo Museum of Modern Art is one of the most well-known contemporary art museums in Finland. It earned the Museum of the Year Award in 2018 from the Finnish Museum Association. Located in the Espoo district of Tapiola in the WeeGee Exhibition Centre, it has Finland's largest gallery space (over 5,500 m2) (Wikipedia 2021). The museum attracted 135,019 visitors in 2019, which was the visitor record for the decade (EMMA Annual Report 2019, 7). The museum works in collaboration with two Finnish art foundations, the Saastamoinen Foundation and the Tapio Wirkkala Rut Bryk Foundation (Wikipedia 2021).

In EMMA's strategy for 2021–23 (EMMA 2021), *interaction* with audiences and collaborators is defined as one of the three core values of the museum. *Meaningful encounters* is listed as a success factor, which is interpreted both as visitors' engagement with the museum's art

programme and as versatile encounters taking place in the museum, online, and outside the museum venue. Full accessibility, including physical, intellectual, economic, cultural and social accessibility, as well as a functional customer journey, are counted as important factors in creating meaningful encounters.

Museums visitors as personas

In 2017, EMMA's marketing, education, and customer-service teams set out on a joint research project to learn more about the museum's primary visitor groups. Based on observation, interviews, and theory about museum audiences (Kalajo & Suojoki 2021), altogether six visitor personas were created. The personas were defined by demographic data (such as gender, age, and hometown), life situation and lifestyle, cultural preferences, and motives for visiting EMMA.

The personas are as following:

- Lenita: a senior and heavy user of cultural and art venues
- Pinja and Tim: a couple of intellectual art-lovers
- Samuli: a teacher with his group of school children
- Théo: a traveller visiting Helsinki for a couple of days
- Ritva: a sociable museumgoer who visits the museum with a friend or a group
- Minna: a parent visiting the museum with a child/children

Since the creation of the personas, they have been used to support the museum curators and other staff members with planning the museum programme and developing the museum services. Recently, the museum staff started updating the personas by developing them further, based more on knowledge about what "jobs" visitors want to get done during their museum visit (drivers and motivations) instead of demographic data and descriptive characterisations (Kalajo & Suojoki 2021).

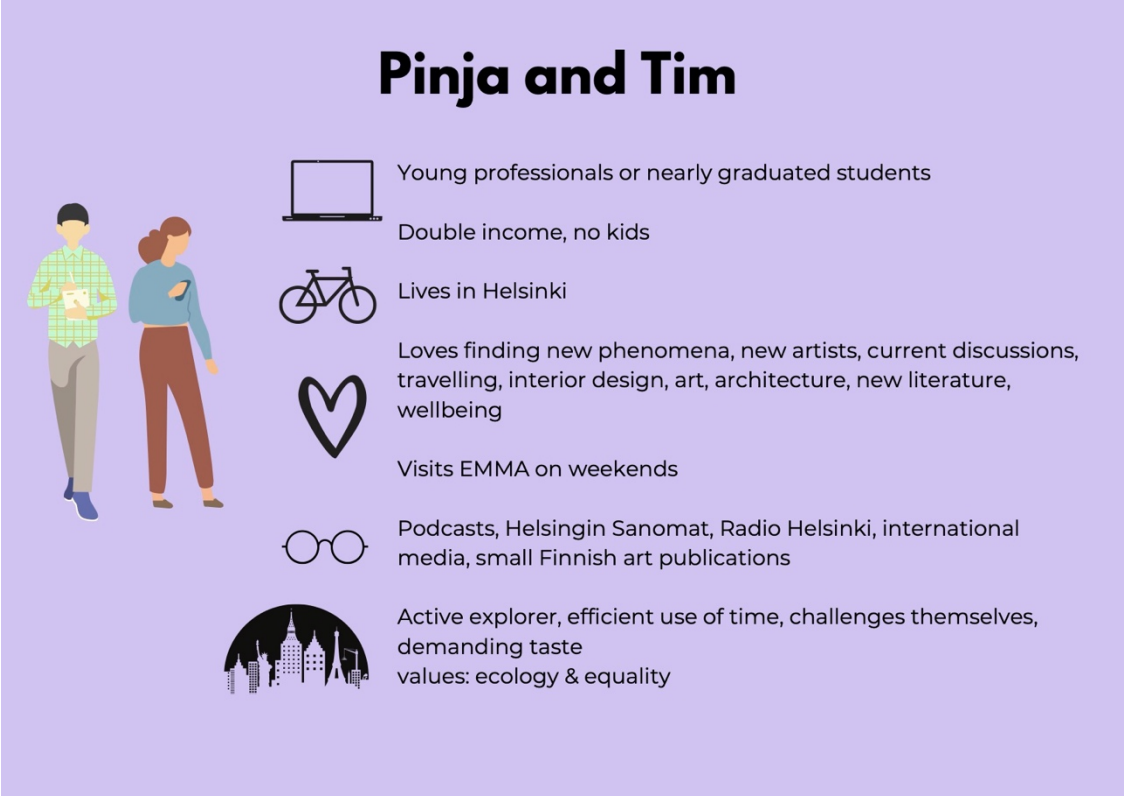

Figure 4: Persona of Pinja and Tim, adapted from the original illustration by EMMA.

In this thesis, the focus persona for the development of the online service concept is Pinja and Tim, whom EMMA has defined as an intellectual, highly educated couple in their late 20s with a wide circle of friends. Pinja and Tim are young professionals with an urban, outgoing lifestyle and critical, curious mindset. Pinja and Tim often live in double income, no kids (DINK) households with relatively ample spare time to spend on arts and culture. They live in Helsinki but can easily see themselves living abroad at some point in their lives. Pinja and Tim follow media widely, and they find information about interesting cultural events from small online arts media. They like to challenge themselves, and finding new experiences is the main driver for this couple, who feel they are international, active, and careful about spending their valuable time. Attracting this persona with a demanding taste to the museum is in EMMA's interest, as Pinja and Tim often act as influencers on social media and are opinion leaders in their own networks, and their recommendations can have a great impact on an exhibition's success (Kalajo & Suojoki 2020).

In spring 2020, in the context of my service studies at Laurea, I collaborated with EMMA's team to produce a customer journey map depicting the (physical) museum experience of Pinja and Tim. In another project in November 2020, I set up an online workshop to gather insights and ideate EMMA's new digital platform, which the museum team had started planning, with six persons fitting the profile of Pinja and Tim. The workshop yielded several insights into Pinja and Tim. We now knew that they prefer deep and thoughtful art content,

but it must be segmented into formats that are easy to consume in their busy everyday lives. Museums serve Pinjas and Tims with different functions, such as by providing peace, recreation, inspiration, new knowledge, and challenges for thinking, visual stimuli, and aesthetics, as well as updates on topical themes. The physical museum space plays a major role in the formation of a museum experience, and the museum visit has a strong social dimension, as Pinjas and Tims like sharing the experience with friends or partners.

From EMMA's online art content, Pinjas and Tims want discussion, commentary, analysis, and boldness (the rise of the Black Lives Matter movement in summer 2020 probably explains why museumgoers rather strongly urged museums to actively participate in political debate). Personal stories behind the artworks, artists, and curatorial choices, as well as "online only" stories were mentioned as an engaging content. A regular rhythm of publishing and captivating story formats were acknowledged as methods to gain Pinja's and Tim's attention. It was regarded important that digitalisation is an integral part of an exhibition's curation process and not a gimmick glued on top of it. The participants ideated three online concepts: 1) a regular online talk series about current issues related to contemporary art, 2) a guest blog (or vlog/podcast) with alternating contributors and fresh, provoking views, and 3) a weekly dose of info(tainment) about contemporary art in any format (workshop, 20.11.2020).

In this thesis, I continue exploring this target group of forerunners by interviewing and observing their use of digital museum services to form an understanding of their expectations and needs for an online museum. These insights are used to develop the service concept, and the proposal is again tested with a prototype among the Pinjas and Tims as well as among "Lenitas", who are another important persona likely to be a user of the online service.

2 Customer at the centre of service development

In this chapter, a theoretical background for the case project is introduced by first looking into the definitions of *service* and then continues with a presentation of the strategic perspective of *customer-dominant logic of service*. A brief look at the concepts of *customer value creation*, *customer experience*, and the *servicescape* in the digital context will precede a discussion of *service development* with design thinking and service design methods.

2.1 Definition of service

Services have become very important to all modern economies and are crucial to the EU economy, which is heavily dependent on the success of the service industry (European Commission 2021; Meroni & Sangiorgi 2016, 1). In 2020, services represented 66.3% of the gross domestic product generated by the EU's 27 member countries (World Bank 2021). Economic growth, innovation and competitiveness are now in a fundamental role in service economies (Meroni & Sangiorgi 2016, 1).

In service research, the service concept has been defined in different ways (Edvardsson et al. 2005, 107). Services have been defined as processes, deeds, interactions, and activities, but still the concept remains unclear, somewhat fuzzy, which can be explained by the relative newness of the research of service (Edvardsson et al. 2005, 113). Edvardsson et al. argue that in general, there are two approaches for defining the concept of service; we can research service either as a section of market offerings or we can examine service from the viewpoint of value creation (2005, 118). Edvardsson et al. portray service as follows:

- service is approached from the viewpoint of value creation
- the service value is born in the co-creation process with the customer and the service provider (later this service-dominant logic will be contrasted with customer-dominant logic; a perspective which I follow in this thesis)
- co-creation of value takes place in an interactive, experiential process (2005, 118).

Next, I will take a brief look at the earlier definitions of service, since understanding the academic discussion around the concept will help us grasp the challenge that service designers have when working with an imprecise and blurred entity that tends to evade a clear definition.

Traditionally, one of the most well-known definitions for service is the IHIP framework, which approaches services through four characteristics: 1) intangibility, 2) heterogeneity, 3) inseparability of production and consumption, and 4) perishability (Parasuraman et al. 1985; Edgett and Parkinson 1993). This division, which approaches service as a category of market

offerings, has had an enormous impact on the theories of service marketing and service management strategies, although the model has been widely criticised, too (Edvardsson et al. 2005; Meroni & Sangiorgi 2016, ch. 1). Later, Vargo & Lusch (2014b) famously broke down each characteristic as a myth and offered their definition of service to be used instead. Service is produced with the help of particular capabilities – skills and knowledge – and it becomes palpable in deeds, processes and performances that are accomplished for the customer. (Vargo & Lusch 2004a, 334).

Before stepping ahead, let us go back to the IHIP framework and dig into it a bit deeper to fully understand the context for further development. Intangibility refers to the quality of services that, unlike goods, cannot be physically touched. Services are seen as "performances, rather than objects, they cannot be seen, felt, tasted or touched in the same manner in which goods can be sensed" (Parasuraman et al. 1985, 33). The characteristic of inseparability of consumption and production means that services exist only in the presence of customers - without them, they cease to exist. Interactivity is essential to most services, as they require reciprocal action between people (Meroni & Sangiorgi 2016, ch. 1). Heterogeneity refers to the changeable character of service since the quality and nature of service may alter over time, depending on the setting and people involved in the service performance. Perishability recognises the vanishing, temporal nature of the service, which means it cannot be stored easily. (Meroni & Sangiorgi 2016, ch. 1).

The IHIP framework was further developed by Moritz (2005, 29–30), who focused on the intangible characteristics of services. Moritz sees services as complex experiences that are inseparable from consumption and cannot be stored or owned. Services happen over time and across several touchpoints. Clients perceive services on many different levels, and unlike tangible products, no two service delivery experiences are alike (Moritz 2005, 29–30). Edvardsson et al. (2005, 119) see the IHIP characteristics as describing services relevant to the provider's point of view but argue that the model fails to include the customer's perspective. Edvardsson et al. go further, suggesting that the definition of service varies depending on the company, the service, or a specific view (Edvardsson et al. 2005, 119).

As for the definitions of service in the context of value creation, there have been many endeavours to understand service by defining the concept of value. Polaine et al. define care, access, and response as the main service values (2013, 29) and claim that most services contain at least one of these values. A wide range of services provide *care* for a person or to an object they own, from nurseries to nursing homes. Accountants, lawyers, and therapists all provide care for their clients' money, freedom, or happiness. *Access services* are often an elemental part of people's lives that are typically noticed only when they are disrupted, such as when the local train service is cancelled. *A response service* takes place when someone is doing what they have been asked to do, such as a salesperson helping to choose the right size

of a coat. Response services are not predesigned but created in the moment in reaction to a request (Polaine et al. 2013, 29).

Don Peppers and Martha Rogers (2016, 72) add that today's organisations are increasingly focusing on building relationships with individual customers, which means a significant transformation in the organisations' thinking and operations. Previously, organisations based their selling on product-based mass marketing, but now, in the Age of Information and Transparency, the marketing efforts take place in customer-empowered culture. Customers are more valuable than ever before. Maintaining individual customer relationships requires constant improvements in customer experience, and organisations do this by using their knowledge about customers, which is gained from the interaction with them. "Relationship" is the keyword, as organisations must understand how to build and strengthen relationships with the customer (Peppers & Rogers 2016, 506). This way, organisations position themselves as operators who take full benefit from the value of the customer base (2016, 505).

2.2 Customer-dominant logic of service

The concept of "dominant logic" has been discussed both in strategic service theory and business practice as a strategic standpoint for choosing the operational focus of an organisation, whether it is service, customer, networks, relationships, or something else. (Heinonen & Strandvik 2015). Heinonen and Strandvik point out that "dominant logic" has often been presented in academic research as an idealised, simplified approach for business and marketing. In real-life situations, however, the point of view for the dominance of service or a customer, for example, may vary or be mixed. (Heinonen & Strandvik 2015; Strandvik et al. 2014).

The customer-dominant logic of services and business can be explained as a conscious focus on the customer and their engagement with various providers, which takes place in the customer's ecosystem. Thus, it is not the provider who seeks to involve customers in their processes, but on the contrary, it is the customer who decides committing to the service or product. (Heinonen & Strandvik 2015). Here, the term "provider" stands for an organisation, company, seller, or individual who presents an offering to a customer. The term "offering" can be a service or a product or any other value proposition such as a solution or a relationship. Alike, the "customer" also has a broad meaning. The customer is an actor who decides to buy or use the offering. (Heinonen & Strandvik 2015).

CDL's starting point is that providers must seek to understand customers and their activities profoundly and understand the patterns and logic formed in their actions. (Heinonen & Strandvik 2015). Heinonen & Strandvik remind us that CDL was not the first to place a customer at the centre of attention. In 1960, Levitt argued that companies should change

their orientation and processes for delivering customer satisfaction instead of focusing on production processes. In the 1970s, Drucker (1974, 61) argued that businesses should be observed with the customer's eyes, as the customer determines the business and its success anyway (1974, 63). The first outline of the CDL perspective was developed in a research project between Finnish and Swedish partners from 2008–2011, and the fundamental ideas were developed further by Kristina Heinonen and Tore Strandvik. Heinonen and Strandvik wanted to add their new perspective on the debate around service-dominant logic (Vargo and Lusch 2004) and service logic (Grönroos 2006), and they published their two first papers in 2009 and 2010 (Strandvik & Heinonen 2015, 114).

Customer-dominant logic can be considered a competing theory to service-dominant logic (SDL), a revolutionary theory initiated by Vargo and Lusch (2004) that ran over the goods-dominant logic that had ruled academic business thinking for more than a century. The goods-dominant logic can be traced back to the Industrial Revolution when manufacturing goods formed the basic principles of economic exchange. (Vargo & Lusch 2004). As described above, customer-dominant logic assumes that a customer dominates a service situation; service-dominant logic sees the situation from a provider's viewpoint and places them in the dominating role (Berry et al., 2006). SDL observes the interaction between the provider and the customer and focuses on touchpoints between the two parties (Strandvik & Heinonen 2015, 118). When SDL was launched, it immediately became a popular theory, which emphasises dynamic, interactive (operant) resources instead of tangible, stable resources (operand) (Vargo & Lusch 2008). SDL successfully recognised the economic shift, transforming services into a fundamental, integral part of a healthy economy. SDL also saw how the service sector benefited the manufacturing sectors producing goods by facilitating distribution and sales. (Fitzsimmons & Fitzsimmons 2011). The SDL model has been criticised for forgetting that the provider cannot see all the (invisible) interactions happening in the customer's world (Medberg and Heinonen 2014).

Heinonen and Strandvik understood customer-dominant logic from the marketing perspective, seeing marketing infiltrating all the organisational functions from simple operations to the strategic mission (Strandvik & Heinonen 2015, 122). In CDL, service has a two-fold meaning that combines the traditional and the more recent view. It is both an outcome of the provider's activities, but it is also a business perspective. An organisation choosing CDL as a guiding perspective directs its operations with the aspects that rise from the dominance of a customer. Thus, the organisation is not steered by the supremacy of the product, service, or other goals such as growth or smaller costs (2015, 122). This means the leaders must continuously aim for a comprehensive understanding of the customer. It should be asked what tasks and goals the customers want to achieve or what preferences and activities they have (2015, 122).

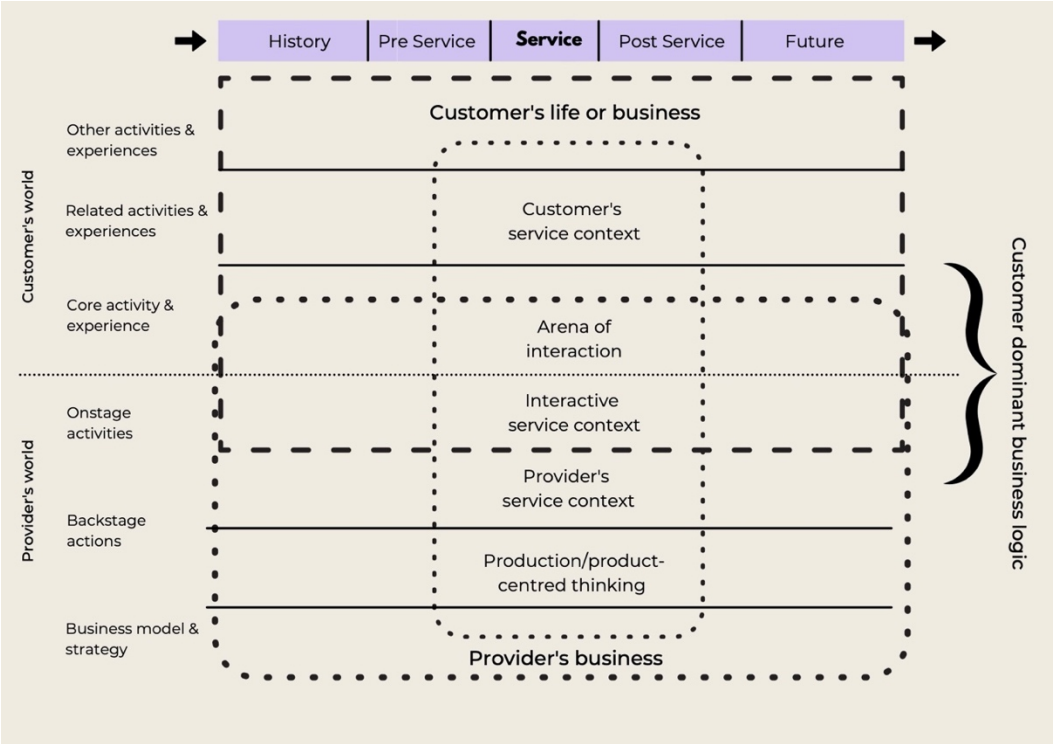

Figure 5. Customer-dominant logic of service. Adapted from the original presentation by Strandvik & Heinonen (2015).

2.3 Customer value creation

In this thesis, the definition presented by Heinonen et al. (2015) is followed, as their ideas about value creation are an essential part of the theory about customer-dominant logic shown above. According to Heinonen et al., value is developed in everyday situations when customers exchange money for services and products. (Heinonen & al. 2015, 539). There are three reasons why organisations cannot see how the value develops in these everyday choices. First, the customer experiences the value of a service or a product in a broad timeframe that begins before the service is experienced and lasts long after the service process ends. In other words, the customer's *value-in-use* is a much more comprehensive and more protracted process than the interaction with the service provider that the provider can perceive. For example, when thinking about a museum visit, customer value can emerge during and before and after the visit. Before the visit, customer value is born from the customer's expectations and the museum's offerings, such as the ticket sales and information on the website. After the visit, customer value continues to be created in memories (Heinonen et al. 2015, 539).

Secondly, Heinonen et al. suggest that the "use" in the concept of "value-in-use" should be understood as a specific term that contains both the process and the outcome of the customer's activity. Earlier, research recognised "use" only as concrete interaction with the service, aiming for the desired result. According to Heinonen et al., value-in-use largely emerges outside the reciprocal action between the service provider and the customer. It includes all kinds of physical and mental activities the customer has going on in their lives when the service exchange takes place. (Heinonen & al. 2015, 539). In a customer-dominant logic, all aspects related to the museum and the actual visit – intentions before and after the visit, memories, discussions with friends, etc. – influence the customer's value-in-use. Understanding this, the museum can strive to have a long-term impact on the customer's life; for example, by offering options for learning new things or meeting new acquaintances at the museum.

Third, Heinonen et al. expand the *value-in-context* definition by Vargo et Lusch (2008) by suggesting that "context" is a constellation that covers the customer's overall role and interaction in society, their values, customs, desires and needs. For the customer, the context provides the baseline for the service situations, as they continually co-create service and evaluate value-in-use from their contextual position. (Heinonen et al. 2015, 540). In addition, value-in-context is a dynamic structure that is updated through the customer's new experiences and affected by earlier experiences that always affect invisibly for the value creation in new situations. (2015, 540). Service experiences occur in the customer's ecosystem, which is formed of a collection of relevant actors (such as other service providers and other customers), structures and other elements related to the customer and the specific service. (Strandvik & Heinonen 2015, 123). Customer ecosystems are different from service ecosystems, but they exist simultaneously and are intertwined. The differentiation of these two ecosystems is made by the two actors at the heart of the two ecosystems: service providers in service ecosystems and customers in customer ecosystems. For customer ecosystems, customers bring in their relevant elements. (2015, 123.)

2.4 Definition of customer experience

The customer-dominant logic places a strong emphasis on the customer experience, in which value is created. Now, let us take a closer look at the definition of customer experience, based on research by Becker and Jaakkola (2018). They formed a synthesis of the definition based on the literature review of the customer experience research of the past decades.

The researchers define customer experience as "non-deliberate, spontaneous responses and reactions to a stimulus" (Becker & Jaakkola 2018, 643). They determine that the customer experience is constituted of various, alternating responses and reactions of customers. An

organisation aiming for creating successful customer experiences needs the ability to tailor refined, precise experiences instead of offering plainly "positive" or "memorable" moments from them. Organisations should define what kind of responses and reactions they seek to generate in their customers. Depending on the value proposition, a service provider may hope to trigger a small or unnoticeable response at some touchpoints or hope to evoke a powerful, exceptional response at some others. It is preferable to receive weak reactions from visitors to the museum's cleaning service but strong emotional or even sensory reactions to the exhibition. Becker and Jaakkola encourage organisations to develop their unique measures for categorizing and analysing different types of customer reactions and thus evaluating the customer experience. It is impossible to measure all the dimensions of customer experience evoked by the service offerings accurately only by using perceived quality or customer satisfaction as indicators. (Becker & Jaakkola 2018, 643).

Customer responses to the service depend very much on the customer's situation, position, resources and other sociocultural factors. Just like Heinonen et al. understand "context" (in value-in-context) generally signifying the customer's life situation, Becker and Jaakkola stress the remarkable significance of the contextual factors (in customer experience), which have a great impact on the customer's reactions, satisfaction and loyalty for the service. There are no two similar customers, and thus there are no two similar customer experiences (2018, 644). The more service providers understand their customers, who they are, and how they use and react to the services, the better experiences the providers can design for them. Becker and Jaakkola encourage organisations to do customer research and use the insights to create customer personas and customer journeys, distinguishing different users and service situations. (2018, 644).

Heinonen et al. (2010) highlight two other approaches to customer experience. The first one assumes that customer experience is created over time in a series of service events recurring in a long-term relationship between the customer and the organisation. (Heinonen et al. 2010). Heinonen et al. abandon this view because it neglects the customer's perspective and sees the organisation as the facilitator of the customer experience. Instead, they suggest another perspective that takes the customer's viewpoint better into account. In the "experiential-phenomenological" stream, the consumer experience is an emotional, subjective interpretation of the service events. (Heinonen et al. 2010).

Why does the customer experience matter, then? Jochen Wirtz brings in a practical view from the everyday life of businesses and argues that for a customer, services are experiences. From the organisation's perspective, though, services are processes that are operated and maintained to provide the optimal customer experience (Wirtz 2017, 269). Wirtz's main point is: Organisations will measure better results and success when they put their customers and employees first (Wirtz 2017, 27). Wirtz sees the winners in today's highly competitive service

markets as never-tiring go-getters. The winners rigorously examine their business methods, innovate new services to fulfill their customers' needs better with the help of new technology, and continuously develop their marketing strategies. (Wirtz 2017, 31.) For Wirtz, a service process is a necessary tool for setting the methods and sequences for the work of service systems and analysing how the systems create the value propositions to the customers. Wirtz suggests using a flowchart or a service blueprint for analysing and redeveloping existing service processes and creating new ones (2017, 270).

2.5 Key theories for designing the digital customer experience

Now it is time to apply the theoretical framework of service, customer-dominant logic, value creation, and customer experience to the digital context of the case project. This context can be found by exploring some of the key theories about digital customer experience. First, I will introduce the term "servicescape". Booms and Bitner (1981) defined it as "the service environment that shapes both the expectations of the customer and their satisfaction" (Bitner 1990). Decades later, the concept was adjusted to digital services (Ballantyne & Nilsson 2017). Initially, Bitner presented servicescape as a temporal context for service situations that explicitly and inexplicitly impact the customer's experience of well-being and satisfaction (Ballantyne & Nilsson 2017, 2). The servicescape stressed the importance of the material attributes, such as interior design and the ambiance of the venue, which affect customers' emotional interpretation of the service experience (Bitner 1990) and how the organisation expresses its brand to customers (Ballantyne & Nilsson 2017, 2). In the brick-and-mortar spaces, such as museums, servicescape includes the design of the museum interior and its exterior physical environment, such as the guideposts or the museum's visual identity, maintained by the institution (Bitner 1992; Wakefield & Blodgett 1996).

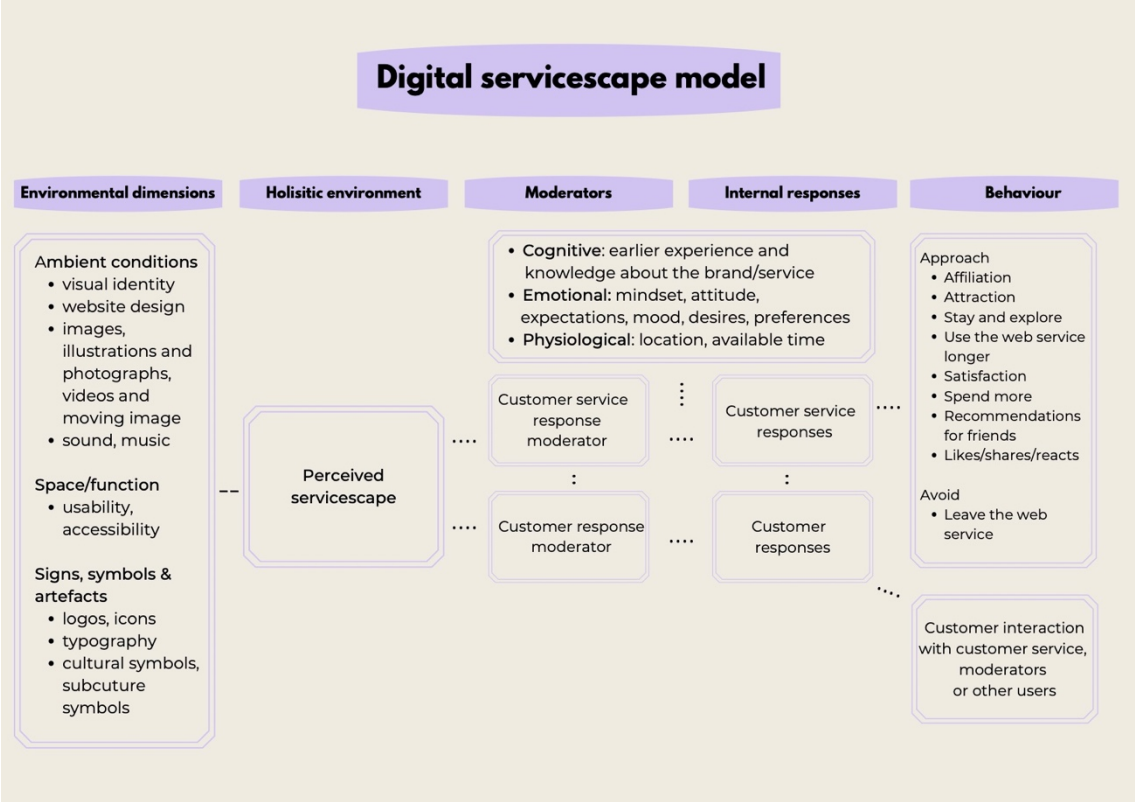

Figure 6. A proposal for a digital servicescape model. Adapted from the original servicescape model by Bitner (1992) by the author.

Since the introduction of servicescape, a new landscape for service has emerged, as the internet and social media have ruptured and profoundly changed the operations of most organisations. During the past two decades, virtual environments have become essential locations for the organisations that offer their services online (Ballantyne & Nilsson 2017, 3). The servicescape offers views into service events that customers interpret through their personal and socio-cultural conventions. The sense of being immersed in the experience, "being there", can occur in the physical world or online. (Ballantyne & Nilsson 2017, 5). Ballantyne and Nilsson have transferred the servicescape concepts to digital platforms by considering customer interactions and service providers' offerings in the online surroundings.

In the digital servicescape, sensory characteristics of the servicescape concept and the interactions between the customer and service provider are maintained on a symbolic level that can be compared to the physical attributes of the real-life servicescape. The words, images and other objects are similar components such as the decor and light design of a physical venue, constructing the ambiance and brand identity for an online service. (Kechagia 2018, 27.) Like real-life services, the virtual servicescape is co-created by customers, providers and other participants. Online, the meaning of "place" is free of its brick-and-mortar connotations, and there is more space for the ideas, reflection and imagination of the

"participant-actors". For Ballantyne and Nilsson, digital servicescape offers the customer a possibility to experience multiple imagined worlds, as the socially constructed line of an objective and subjective reality becomes ambiguous and blurred. (2017, 10).

The METUX model

My proposal for the digital servicescape model (Figure 6), which is a variation of Bitner's classical model (1992), offers a set of details that a service provider should consider when designing a digital service, such as the visual identity, usability, accessibility, and the quality of the online customer service. The digital servicescape model can be further fortified with the METUX model (Motivation, Engagement, and Thriving in User Experience) developed by Peters et al. (2018). In Figure 7, a variation of the METUX model implemented in the museums' digital services is presented.

From the research into museum visitors' motives for digital museum visits (Chapter 1.3), we know both that self-development and learning play a significant role in the successful online museum experience and that user engagement in museums' digital services is still relatively low. Digital services are mostly used for informative purposes in connection with an onsite visit and time spent on the services is short. The METUX model offers a fitting theoretical framework to answer the challenge of how museums can encourage users' interest and long-term engagement with the museum's digital services and the museum as a whole.

The starting point for Peters et al. is a notion that motivation and wellbeing, which are basic preconditions for the satisfaction of certain psychological needs, are rarely considered when developing digital design strategies that cultivate continuous engagement, behavioural change, and wellbeing (Peters et al. 2018, 1). The METUX model combines psychological research and human-computer interaction studies (HCI) to form practical insights for designing digital services that support basic psychological needs of users, increase their motivation and engagement and ultimately their wellbeing. The core elements for designing holistic wellbeing and long-term flourishing instead of immediate hedonistic experience are derived from the Self-Determination Theory (SDT) (Ryan and Deci 2000, 2017), which is an empirically validated approach for analysing factors that promote sustained wellbeing and motivation. SDT identifies three basic needs that are fundamental to people's self-motivation and psychological wellbeing (Peters et al. 2018, 2). These basic needs are:

- Autonomy
- Competence
- Relatedness (Peters et al. 2018, 2).

The term *autonomy* literally means self-governance and refers to acting with high willingness. Autonomous experience results in a higher performance and greater experiences of wellbeing. In digital design, devices offering options and choices as well as personalisation enhance feelings of autonomy and ownership (Peters et al. 2018, 4). *Competence*, understood as a sense of capability and effectiveness, can be enhanced by setting an optimal challenge, nurturing positive feedback and providing opportunities for learning. In usability design, the design process and problem-solving are usually guided by the aim of fulfilling the users' needs for competence and autonomy. Competence can be encouraged or discouraged by the "difficulty" or the "novelty" of the service. For example, a game should not be too easy or too difficult to play, since both extremes will discourage users from playing it. Novelty can be manifested through new levels, new rewards, or new features that boost users' willingness for learning and mastery (Peters et al. 2018, 5). *Relatedness*, described as "a sense of belonging and connectedness to others", is a core element of wellbeing, and social media services supporting relatedness are a major category of the digital experiences of our time (Peters et al. 2018, 5). Whether a digital service succeeds at fostering relatedness in a truly meaningful, genuine way instead of advancing false sense of connection and damaging interaction or even increasing social isolation should be deemed through consistent testing based on the Self-Determination Theory (Peters et al. 2018, 5).

In the process of creating digital services, those three psychological needs should be acknowledged within the following five dimensions of experience:

1. When the service technology is adopted.
2. When the user interacts with the interface.
3. When measuring results of the technology-specific tasks.
4. When assessing changes in (technology-supported) customer behaviour.
5. When evaluating changes in the individual's overall life.

These five dimensions take place within a sixth sphere of experience, which is society (Peters et al. 2018, 7–8).

1) Adoption begins when a person learns about a new digital product and uses it for the first time. According to SDT, a user will likely adopt a new technology when they are autonomously motivated to uptake it. Here, the key question for a digital service designer is to consider how to encourage a user's intrinsic motivation to get familiar with the new service (Peters et al. 2018, 8). Peters et al. suggest that this can be influenced either by aesthetically pleasant design, ease of usability, or marketing (2008, 8).

2) According to SDT, users will engage with digital services if the service interface (in other words, interaction with the service) fulfills their psychological needs. Whether this happens

depends largely on the usability of the service. Poor usability increases frustration and dislike, whereas good usability supports further interaction (Peters et al. 2018, 9).

3) *Technology-specific tasks* refer to the functionalities that enable the user to complete a certain task, such as to count steps or monitor calories. In the context of a museum's digital service, these activating tasks could mean keeping a personal account of exhibition visits, saving images of favourite artworks on an app, or completing a step-by-step online art history course. It is good to note that these tasks can fulfil psychological needs if one finds completing tasks valuable, but they can also be frustrating or make one feel worse when failing to finish the task. (Peters et al. 2018, 9).

4) Many digital services today are designed to enable or enhance *behavioural change*, such as an increase in exercise or healthy eating. The individual tasks provided by digital services support long-term behavioural change, but it is necessary to recognise that although completing tasks may be satisfying to a user, it may not impact their overall behaviour (Peters et al. 2018, 10). For example, a user may find a digital museum service engaging, but this interest does not result in more visits at the museum venue, or even in active use of the digital service.

5) Peters et al. suggest that the concept of the life sphere becomes useful when the impact of digital services that are targeted at improving overall wellbeing is measured, such as a meditation app. A meditation app deals with such fundamental aspects of human personality that it may indeed be able to trespass on all levels of adoption, interaction, tasks, and behavioural change and fundamentally transform a user's life. As a comparison, a superb digital egg timer may improve the cooking experience, but it will not change anyone's life! (Peters et al. 2018, 10.)

6) The sixth sphere, society, steps beyond the user experience and deals with the larger questions of societal wellbeing and ethical, environmental, and economical issues. Here, the service developer's responsibility as an active operator in society is elemental (Peters et al. 2018, 10). In the museum context, this could mean a single museum's capability to transform the national museum scene and its practices with a digital service, for example.

The chapter concludes with a brief presentation of museum-specific vocabulary suggested by van der Akker and Legêne (2016, 8) to be used to describe the new modes of experiencing art and artefacts that new digital technologies support. We can understand art and heritage in digital culture with the help of six concepts that are all related to experience and perception: 1) interaction, 2) haptic experience, 3) ekphrasis (the textual portrayal of an artwork bringing alive its image), 4) immersion, 5) "thinking with the eye", translating as curiosity and 5) the image as an interface (2016, 8). Legêne and van der Akker argue that as the result of the development of the past decades, visitors are not passive observers anymore, but users

interacting with artworks or objects, and participants who actively participate in the meaning-making process of cultural artefacts and performances. This development has strengthened as digital technologies have evolved, and it has thoroughly affected museums' production lines from curators to artists – and to the people visiting the museum (2016, 8).

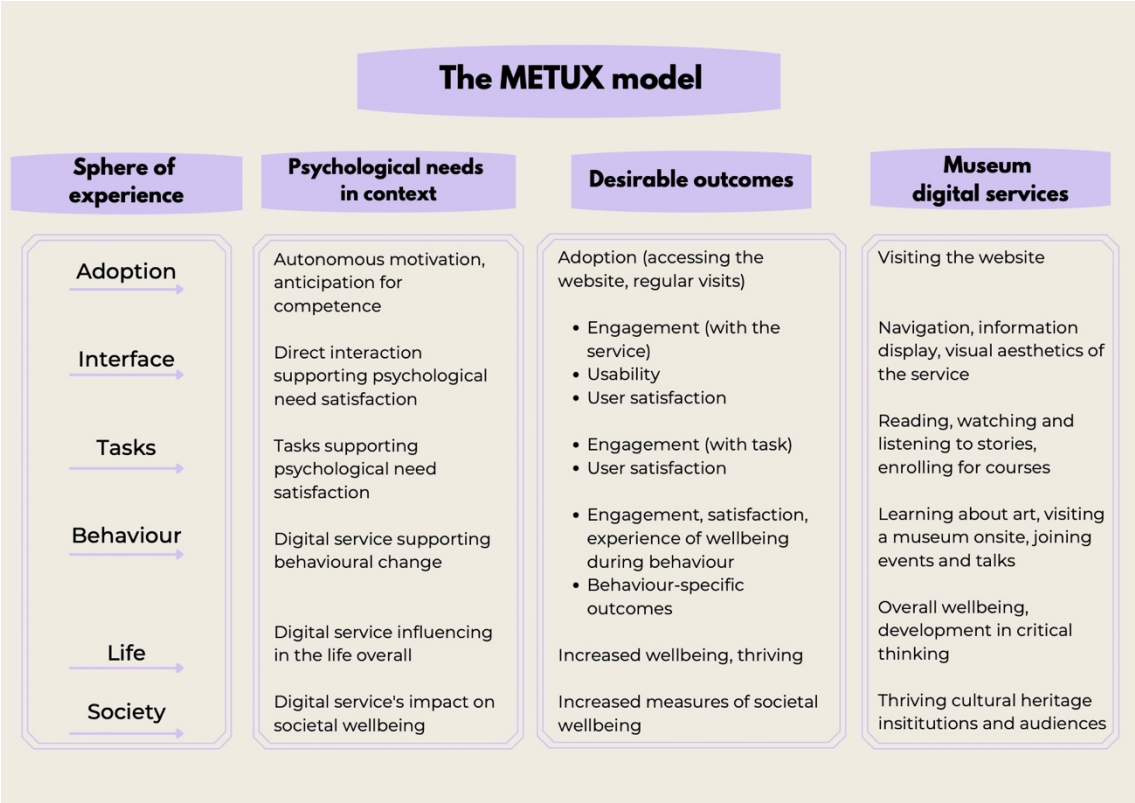

Figure 7. The METUX model (Motivation, Engagement, and Thriving in User Experience) adapted to describe the satisfaction of basic psychological needs in the design of museums' digital services. The original model is developed by Peters et al. (2018), and the visualisation is adapted from the original chart by the author.

Of these six concepts, *haptic experience*, in particular, deserves a deeper explanation, as it summarises the new special role of the user as an autonomous agent who creates their own unique museum digital experience and, on the other hand, the new opportunities that digital technology open for museums providing experiences. In short, by offering new sensory experiences, digital technology may invoke positive reactions to artworks and objects in the user. We can study these reactions with the concept of haptic experiences, which captivates a wide range of the user's activities online, such as spontaneous surfing on the web, engagement and interaction with digital content, and the epistemic changes that these activities result to (Legêne & van der Akker 2016, 9; Stevens 2016, 21). Haptic vision is "the experience of proximity in terms of affinity, connectivity, and attraction, and it does not depend on the material presence of an object." On the contrary, in digital environments, a

user can create new connections between historically and geographically distant items. The images provided by the museum database operate as links and gateways to various "associated objects, people, and events" (Stevens 2016, 27). When reflecting on the concept of haptic experiences with the METUX model by Peters et al., it seems apparent that by offering haptic experiences to digital museum users, a museum will be able to satisfy all their three basic psychological needs by allowing them autonomy and emotions of capability and relatedness.

2.6 The design-thinking process

Finally, before closing Chapter 2, one more perspective on services is required, and that is the theory of service design. A more practical view on the methods and tools provided by service design will be offered in Chapters 4 and 5.

Design thinking looks at the world with a mindset characterised by problem-finding and solving, creativity, human-centeredness, divergent thinking, and convenience with failure and iteration (Clarke 2020, 1). An ordinary design thinking process defines a problem and then creates and implements a solution. The design-thinking process follows design thinking principles through various stages and is thus distinguished from other problem-solving approaches (Clarke 2020, 1). These stages have been formed by various design firms and other design institutions. Although there are variations, a certain pattern can easily be seen. The design-thinking process consists of the following phases: 1. Empathetic discovery 2. Problem definition 3. Idea generation 4. Creation 5. Evaluation (Clarke 2020, 1).

Empathetic discovery and the problem definition

To solve a problem, we must first become aware of what issues exist. Therefore, the first stage of the design-thinking process begins with empathetic discovery, which aims to gain insights into what is happening in each space or context. The problem-solving mindset seeks to identify patterns and clearly express issues and goals that have come up with the empathetic understanding of users and customers as a tool to see things from their perspective. There are dozens of methods available for understanding users and interpreting their needs, expectations, and mindsets, such as interviews, persona creation, shadowing, and mobile ethnography (Clarke 2020, 1). Understanding and framing problems require an empathetic understanding of users.

Idea generation and creation

Idea generation and creation is an innovative phase within the iterative design process that is closely intertwined with the preceding stage of reflection. As the design process stresses the importance of testing and retesting ideas and concepts, these two stages – creation and reflection – are the two stages in which most iterations take place. One of the main paradigms of design thinking is to not avoid making mistakes but aim to fail early in the process and learn from the failures before proceeding further with implementing the service proposal. (Stickdorn 2012.)

At the creation stage, designers aim to develop ideas and solutions for the challenges and problems discovered in the first stage's in-depth insights. The creation process should include and benefit from all the insights gained so far from the customers and the service providers, such as motivations, aspirations, hopes, likes, dislikes of the customers, or processes and internal challenges of the provider. All the main stakeholders should participate in the design process to guarantee a genuinely holistic and sustainable solution for the design challenge. A diverse, multi-voiced team with customers, management, employees involved in the project should ensure a rewarding, inclusive design process. (Stickdorn 2012).

Evaluation and reflection

One of the basic principles of design thinking is to learn from mistakes as early as possible with the iterative method of testing and retesting ideas. Errors cannot be and should not be avoided, but it is essential to test the concept at an early stage and then improve it rather than implement the new, untested idea and then notice that it is not what the customers desire. (Stickdorn 2012). Physical products are typically tested with a prototype given to the customers or experts for their comments and feedback. Then, the prototype is improved and retested until the new product is ready for launch. The intangibility of services brings a challenge for the iterative approach of testing. Instead of tangible prototypes, service designers seek to provide customers with a comprehensible mental image of the new service concept. They can realise it with a visualised storyboard, a comic strip, a video, a dramatized theatre play, photographs, or an online prototype. Stickdorn 2012.)

The service prototype should convey the service idea and encourage emotional engagement, although the user interaction is still missing. Therefore, the prototypes of service concepts should remind of the real-life circumstances with particular attention to an emotional engagement in the delivery of the idea of interaction. Intangible service propositions can be tested reliably at low cost if emotionally relevant aspects of personal interaction are considered in the prototype. There also remains a possibility to improve the service concept during the design process, as the testing is affordable and based on lightweight production.

(Stickdorn 2012.)

2.7 Service design and service innovation

Service design can be defined as an approach that integrates design thinking with a service perspective. It focuses on creating new services or improving existing ones with a human-centred, collaborative method. New service concepts come to life with a sincere urge to understand customer insights and experiences and an innovative attitude to invent new value propositions that are often supported with the latest technology into services. (Joly et al. 2019, 682).

The term "service design" originates from the blueprint design, and it initially referred to the idea generation and the formulation of service concepts (Johnson et al. 2000). In the 1990s, the design community started exploring the application of the design process to the service sector, which led to the birth of service design as a distinguished discipline within the design field. Lately, there has been an emerging interest to research service innovation as an essential topic in service research (Joly et al. 2019, 683). It has been presented that there would be more appreciation for service research if it concentrated on service design and service innovation as the problem solvers of real-world societal and organisational problems. (Patrício et al. 2018).

Joly et al. (2019, 683) criticise service design for its lack of a more complete and integrated approach that would better support the creation of new value propositions. Despite service designers' aim for multidisciplinarity, they seem to be working in silos, Joly et al. argue. There are professionals focusing on the customer experience and professionals concentrating on the new operations and technological solutions, for example. Still, all in all, an expansive vision about the main multidisciplinary perspectives forming and directing the field service design is absent. (2019, 683). Such a vision would enable a substantial dialogue and shared understanding among service designers from different backgrounds (Joly et al. 2019, 683).

Service design has an essential role in service innovation. The design process aims to give birth to new ideas, and service innovation is about creating new services (Ostrom et al. 2015). Witell et al. (2016) approach service innovation from three perspectives, which are: 1) an assimilation, 2) a distinction, and 3) a synthesis perspective. *The assimilation perspective* highlights new technologies as the main drivers of service innovation and the importance of the theories and approaches born in product innovation research. *The demarcation perspective* differentiates service innovation from product innovation, bringing in independent service-specific theories to analyse service innovations. *The synthesis perspective* observes service innovation in the context of service-dominant logic. (Witell 2016.)

Service innovation appears as a multi-faceted concept that reminds of a wide range of innovations in the neighbouring fields, such as business model innovation, social innovation, public sector innovation, and institutional innovation (Joly et al. 2019, 682). In these processes, the support structures vary; organisations usually support business innovation, whereas diverse networks, focused on generating social value, support social innovation. Institutional innovations aiming for new practices occur at an ecosystem level (Joly et al. 2019, 682). Service innovations can be developed at the micro, meso, and macro levels of service ecosystems (Chandler and Vargo 2011). At all these levels, service design plays an influential role in supporting new modes of value co-creation. *The micro-level innovations* occur in interactions between matching actors, such as an organisation and its customers. At *the meso level*, the value is co-created inside the service networks. Service innovations *at the macro level* are processed at an institutional level that connects actors from the micro and meso levels (Joly et al. 2019, 682).

3 The visitor at the centre of new museology

In this chapter, a set of theoretical ideas about the evolving role of museum institutions in the digital context is introduced. We will see that the development evidenced in museums in the recent decades is – maybe somewhat surprisingly – similar to the evolvement of service theories, which place the customer in the key role in the service experience and value creation, as presented above in Chapter 2.

3.1 New museology

The chapter is opened by looking at the big picture and particularly the ongoing transformation of museums into more inclusive and diverse spaces than they traditionally have been. The need for diversity and inclusion can be seen to have been largely sparked and spurred on by the recent decolonisation movement in the Western countries, which was born from frustration with structural racism, as well as the rise of intersectional feminism. Understanding this political undercurrent affecting cultural institutions is necessary, because it sets the scene and context for the research at hand and explains what kind of issues are elemental for museum organisations today. In fact, for very good reasons, these current changes in society's collective thinking give us mandate to develop accessible and inclusive digital museum services too. After the opening, I will move on to the concept of new museology, a term coined by Seph Rodney, which puts the museum visitors at the centre of museum operations.

During the past decade, the decolonisation movement, which originally consisted of a loose US-based coalition of activists, writers, museum professionals, teachers, and museum visitors, and which has now gained wide support, has argued that museums can no longer pretend to be politically neutral spaces (Rodney 2019). The debate has extended to Europe, with Finland being among the countries in which the call for more diverse cultural institutions has intensified, resulting in an initiative by Helsinki Art Institutions for Equality (2019), for example. The activist-led movement demands that museums actively seek more diverse narratives, instead of predominantly white, European-American mainstream understandings of art and culture, and presses museums to recruit staff members from more diverse backgrounds (Rodney 2019). Museums are not only urgently being called to provide a platform to address underrepresented histories and narratives; there's also a plead for systemic changes to the economic power of the commercial art market, and wealthy art collectors are being questioned as well (2019). The need for transformation has led to a largely polarised art world, argues Olga Viso, former director of Minneapolis-based Walker Art Center, who has described the current division as such: "There are now two incompatible art worlds: One

committed to inclusion, artistic freedom, and change, the other driven by money and entitlements". (Rodney 2019).

Another profound, ongoing change in museum organisations is the developing new position of the museum visit itself. Based on experiences from several large-scale art museums, Rodney (2019) observes that the (onsite) museum visit has been reconceived as a personally customisable experience, which significantly differs from the visit as it has been previously known. Whereas the visit used to be oriented towards the transfer of information from the expert curator to the untrained visitor, the visit is now designed towards meeting the needs and preferences of the visitor, who is regarded as a coequal partner in the venture of making a meaningful experience (Rodney 2019). The thinking of the museum experts follows closely the understanding of service researchers about how customer value is created in the customer experience (see Chapters 2.2 and 2.3). On the other hand, this kind of thinking is not new in the cultural field either. Maurizio Lazzarato (2006, 112) describes the production of intangible assets as a "collaboration between brains", in which the artist (producer) and the audience (consumer) act in cooperation to create the experience; half of the product (experience) is the result of the artist's activity, and the other half is produced by the active audience. These "common goods" are the result of more or less spontaneous or improvised encounters. This means that one cannot simply produce an experience; it has to *be experienced* too; a museum experience is *produced* at the same time it is experienced. This phenomenon has been summarised in concepts such as "produsage", "produsers" ("user production") and "prosumer" ("producer-consumer") (Karkulehto & Venäläinen 2016, 28).

Rodney calls this transformation "new museology", which can be traced back to the writings of Nina Simon, who acknowledged the centricity of the visitor in late transformations of the museum (Simon 2010; Rodney 2019), as well as research by Samis and Michaelson (2016) who similarly recognised the visitor as an independent maker of meaning essential to the contemporary museum. Museums now widely regard their visitors as "clients" or "users" with distinct desires, needs, and perspectives and who ask the museum to change its internal structures and professional behaviour. For the museum staff, this means they must work closely in collaboration with the visitors to create a tailored experience (Rodney 2019). Rodney argues that new museology becomes palpable in three keyways:

1) The focus has shifted to the visitor instead of the care of objects and collections. There is a growing self-awareness of museums as cultural institutions that operate in a vital cultural context themselves (Ross 2004) and that contribute to the lives of visitors with their culturally meaningful agenda (Rodney 2019).

2) Museums aim to get rid of their reputation of intellectual elitism and commit to serving the community with the work for inclusion and equality, taking into consideration minorities and other unrepresented groups, in particular (Weil 1999; Rodney 2019).

3) In practice, new museology becomes visible when we look at museum institutions. Museums have established new units and programmes to enhance the visitor experience. There are now programmes dedicated to children and adults, community agendas and teams for visitor services. (Rodney 2019).

3.2 Experience economy: self-fulfilment as the purpose of the museum visit

For Rodney, a loose concept of an "economy of visitors" forms when visitors purchase products and services at museums (events, exhibitions, and experiences). Visitors exchange their money, time and attention for an experience leading to an emotional response, which is essentially the core entity museums sell for them. (Rodney 2019). Rodney's thinking seems to be in line with the once-revolutionary concept of *experience economy* created by Pine and Gilmore (2011, Figure 9), who famously differentiated the experiences from mere acts of services (such as serving a cup of coffee at a café), stating that experiences are rich with sensations and created uniquely by each customer. For Pine and Gilmore, experiences are personal occurrences that evolve in an individual on several levels; emotional, intellectual, physical, and even spiritual. Experiences are unique, and they stem from the synergy of the individual's personality and emotional state and the event offered for an experience by the service provider (Pine & Gilmore 2011). The critical difference between the service and the experience is the personal engagement of the customer. A service that the customer pays for consists of a series of intangible actions carried out on the customer's behalf. In contrast, an experience allows the customer to spend time enjoying meaningful events that a service provider stages for them. (Pine & Gilmore 2011).

In the experience economy, the goal of exchange (of money, time and attention) is the emotional pleasure that derives from the chance to explore and learn more about oneself with the help of the purchased experience (Rodney 2019). The promise offered to a visitor by museum marketers is self-fulfilment and a state of elevated well-being by coming to better know oneself through the visit (2019). Practical research into visitors' motivations for using museum services, as presented in Chapter 1.3, supports this theory. Pine and Gilmore present five design principles for creating experience products: First, a unified theme must be created for the product, and it has to be reflected throughout the experience (Karkulehto & Venäläinen 2016, 21). Second, the theme must be equipped with easy-to-follow clues to ensure effortless interpretations. Third, all extra elements, which may complicate the perception of the theme, must be removed. Fourth, tools must be provided to assist visitors

in remembering the experience afterwards, the aim being to lengthen the temporal duration of the experience in the form of a memory. Fifth, elements that appeal to all five senses must be applied to enhance the value of the experience (Karkulehto & Venäläinen 2016, 22).

The experience economy is not just a matter of discovering new business opportunities, but new opportunities must be actively looked up, even sought out, by new content production technologies and with the participation of consumers (Kalliomäki & Kallionpää 2016, 38). In the model by the Lapland Center for Expertise for the Experience Industry (LEO), Pine and Gilmore's thinking has been redeveloped to a framework offering a vision for developing experience services (Kalliomäki 2016, 75; Tarssanen & Kylänen 2009, 8–23; Figure 8). It is interesting to see the similarities between the LEO's *experience triangle model* and the METUX model by Peters et al. (2018), which was presented in Chapter 2.5. Both models start from the early phase of adoption and proceed through various stages until they finally reach the spiritual, life-transforming stage.

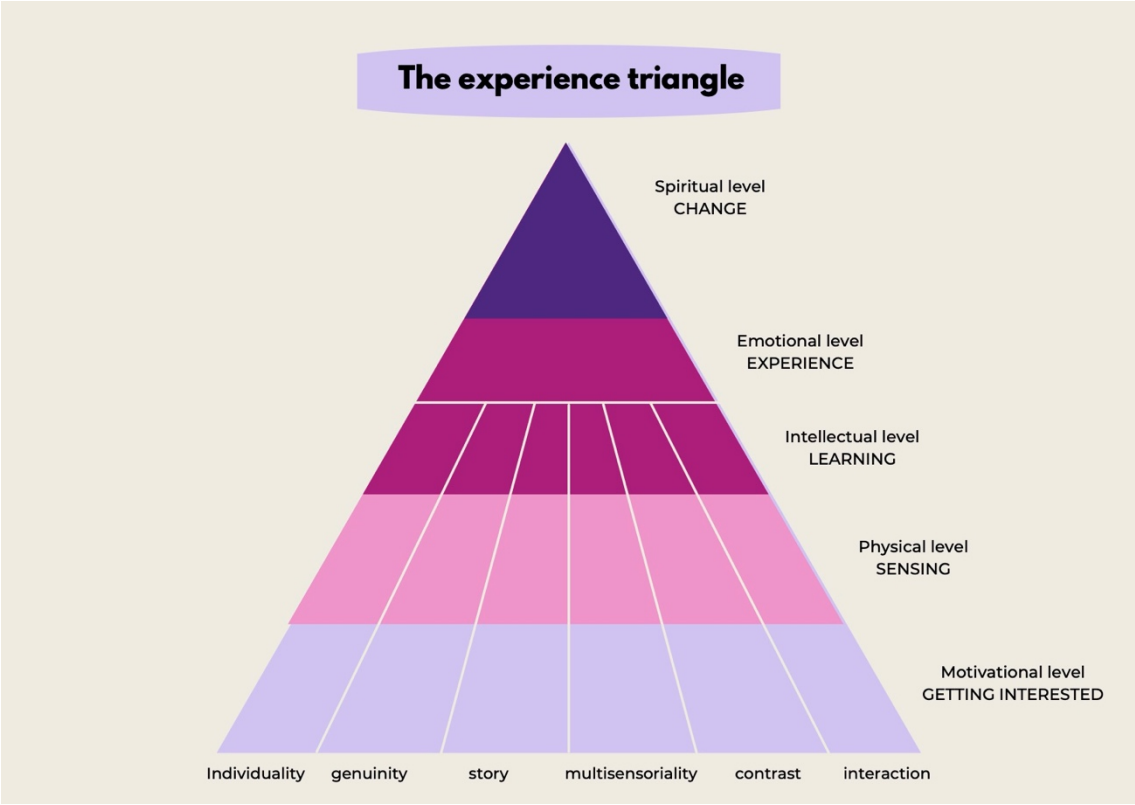

Figure 8. The experience triangle model describing the different levels of customer experience was developed by LEO. Adapted from the original version (Tarssanen & Kylänen 2009).

In the LEO's model, the role of *a story* or *a narrative* is worth closer attention, especially when considering EMMA's aim to develop the digital service with a special focus on stories. What power do stories have in the creation of a concise and immersive experience? According

to the developers of the experience triangle model, Tarssanen and Kylänen (2009, 13), a good story is essential for forming a genuine experience with authenticity, meaningfulness, and content. A good story makes the customer want to be part of the narrative and live the experience (2009, 13). Stories add value to the experience, and it is the reason why so many brands have given up advertising and started producing not only content and single stories but immersive story-based worlds (Kalliomäki 2016, 66). This new shift to the world(s) of stories has given rise to a new profession of story designers who design core stories, story scores, and story identities for service providers. The storyteller combines the elements of service (service sessions) with the help of a story and applies the practices of fictional and dramatic storytelling in their work. The storyteller is thus a kind of service writer (2016, 66).

Stories and narratives have long been in use in museum exhibitions, but it is stimulating to ponder whether stories as immersive "total" narratives could play a bigger role in digital museum services too, especially if there is a special, holistic interest in developing the museum's programme with the help of narratives and stories. An important fact to note, however, is that in the LEO's model by Tarssanen and Kylänen, stories can be cooked up from a fusion of fact and fiction, depending on the brand in question. In the context of museums, blending fictional elements into facts should be avoided due to the nature of museum institutions as interpreters of human heritage and providers of learning and knowledge. Contemporary journalism shows how telling stories that are based on plain facts can still result in compelling stories. Reality must be enough for museums too.

I close the chapter with the summary by quoting van der Akker (2016, 131), who appreciates the potentiality of digital technology for improving the museum experience. Digitalisation can support museums' efforts to reach new audiences and allow the new users to change the museums' agenda and functions as sociocultural institutions. Digital solutions grant the public a new kind of access to create their meanings of the museum's programme, which ultimately will affect the museum's *raison d´être*. The digital technology in the museum services can mean online access to collections and exhibitions, media art installations online, content management systems, user-generated content, and the use of mobile and other digital devices to enhance museum experience, van der Akker writes. van Der Akker claims that although digital culture is changing users' experience and access to art and heritage, these changes are not necessarily as great as they seem, since seeking novelty and new experiences have always been part of the work of museums and artists in their pursuit to be meaningful and relevant to audiences (van der Akker 2016, 131). Van der Akker concludes that we should not compare the onsite and online experiences with each other, and a physical museum experience should not be transferred to an online environment, either. The two experiences are essentially different, and an online museum experience cannot replace a visit to the museum venue. (2016, 131.)

I mostly agree with van der Akker, although I believe a more comprehensive curatorial view of the museum's digital and onsite programme can be adopted instead of seeing digital experience as a mere extension and enhancement of the physical, "genuine" museum experience. In the future, digital and onsite experiences will hopefully be seen as one entity curated seamlessly together for an immersive, universal museum experience, benefiting from the best characteristics of the best worlds. "A digital mind-set needs to become a dimension of everything that museums do," John Stack, digital strategist at Tate Modern, has said (Stevens 2016, 16).

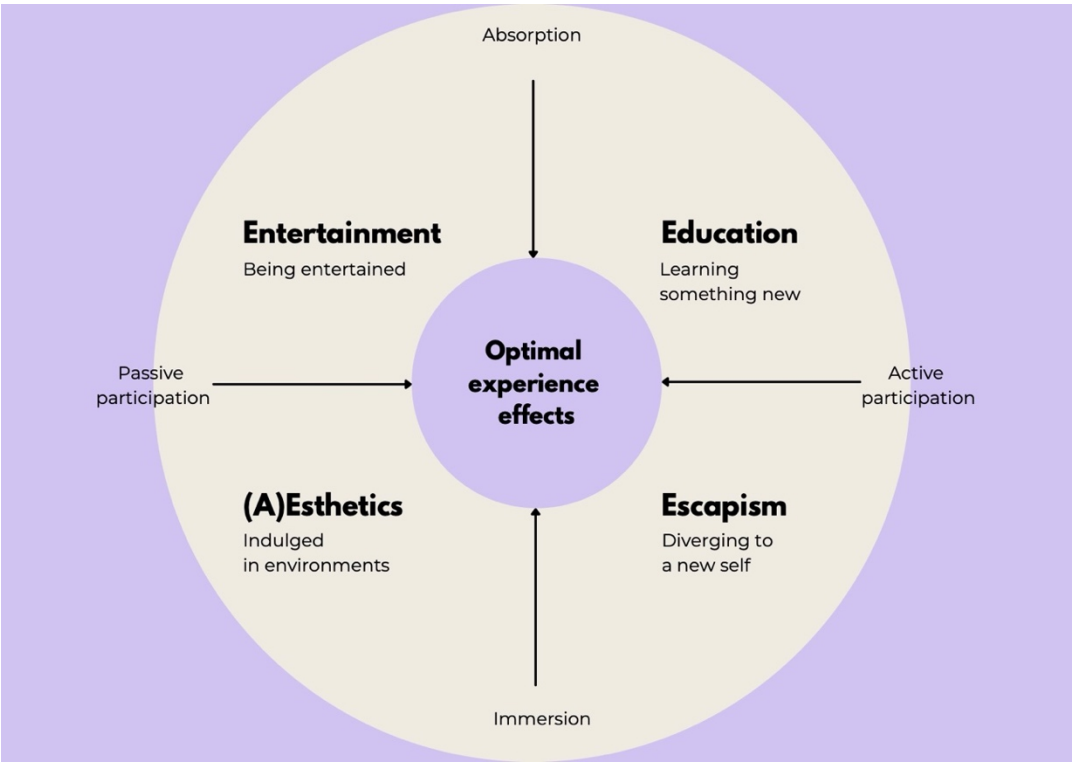

Figure 9. The four dimensions of experience. Adapted from the original illustration by Pine & Gilmore (1999).

3.3 Digitalisation and platformisation of museums

Besides the impact of the decolonisation movement and the changing role of the visitor, a third remarkable transformation is strongly shaping museums. It is the emergence of new technologies and the overall digitalisation of our everyday lives. The three phenomena are intertwined (Wilson-Barnao 2021). The museums and other art institutions, such as art galleries, libraries, and archives, have for long curated their programme for educational and entertaining purposes. However, there is a growing urgency to interact and engage with new audiences in a profound, reciprocal way, caused by the increased demand for democratising and decolonising cultural institutions. Responding to inclusion and equality has become a vital

measure of the museum institutions' relevancy and success. (Witcomb 2003; Wilson-Barnao 2021). Museums have embraced new digital media technologies to transform into interactive and participatory institutions. Visitors can explore museum offerings with their mobile phones or computers at home or the museum venue (Henning 2017; Wilson-Barnao 2021). These actions are based on the belief that the museum can serve the public good and produce social value if it can deliver its activities and discourses to people using their favoured tools and channels (Wilson-Barnao 2021).

Interactive participation has been long encouraged at the museums' social and physical spaces; virtual settings offer a more affordable option for actualising interaction for greater accessibility (Wilson-Barnao 2021). It can be argued that the digitalisation of museums will soon lead to the creation of a "post-digital" museum, which means that museums will start implementing digital technology thoroughly in all of their activities. (Parry 2013, 24; Wilson-Barnao 2021). The museums already apply digital devices, platforms, screens, and networks embedding digital solutions and content in their exhibitions and operations. (Parry 2013, 24).

The museum is distinguished from the media by its physical and material aspects (Wilson-Barnao 2021). The museum is essentially a "third place" (Oldenburg 1999; Wilson-Barnao 2021), an environment between home and work, public and private, where people come together physically and digitally. Digitalisation offers audiences new possibilities for connecting with the museum. At the same time, the location where the museum's offerings are experienced is moving from a physical venue to an online environment. On social media platforms, the museum experience gets increasingly mixed and blurred with the public identities of visitors. (Wilson-Barnao 2016 and 2021).

To Wilson-Barnao, platformisation and access are the main concepts when observing cultural institutions operating in the ever-expanding digital economy. Wilson-Barnao borrows the definition of platformisation from Nieborg and Poell. They see it as the "penetration of infrastructures, economic processes, and governmental frameworks of digital platforms in different economic sectors and spheres of life, as well as the reorganisation of cultural practices and imaginations around them" (Nieborg & Poell 2018, 1). Wilson-Barnao identifies two versions of platform-based museums. A museum can own and use the online platform (a museum website, for example), or a museum can adopt a private social media platform (such as an Instagram account) with the ready-made infrastructure to communicate with the audiences (2021). The idea of museums as platforms invites us to explore the ways digital ecosystems affect the museum as a public sphere. The benefits of using worldwide social media platforms (such as Facebook, Instagram and Twitter) are apparent since they offer a chance to connect with broad audiences. Still, it must also be recognised how the platforms are changing how museums operate (Wilson-Barnao 2021).

Wilson-Barnao examines the concepts of *participation* and *interaction* to further develop the platformisation of museums in the technological context. *Participation* consists of activities that allow people to connect with the museum by sharing content and ideas or creating art and experiences both onsite and online. *Interaction,* in contrast, tends to be linked explicitly to technology. Interactive participation diminishes the authoritative tone of museums and leaves more space for the users' contribution. Here, participation and interaction reflect the past transformation of the passive consumers into active "prosumers" (Wilson-Barnao 2021). The coronavirus pandemic has exposed us to the ongoing fusion of museums, audiences, devices, and platforms (ICOM 2020; Wilson-Barnao 2021). During the pandemic, social media and the internet have appeared as the only channels for audiences to enter cultural institutions. Online platforms have allowed the museums to engage with their audiences in the hope of generating a sense of connection and cultural community (2021), Wilson-Barnao argues.

Finally, it is necessary to set a critical eye on the ever-expanding trend of digitalisation and ask whether enhanced access to culture, enabled by digital platforms, comes with a cost. People give away control of how their personal and user data are collected and used in exchange for getting access to new forms of cultural engagement and personalised content. The data collection of museums, which aims to improve the visitor experience by offering adapted services, is reshaping the traditional practice of curation in the institutions. Is the museum still succeeding in its mission of educating and teaching people if it limits the content to which a visitor is exposed according to algorithmic personalisation? What happens if the museums do not offer us new ideas and experiences but only objects and themes we like? (Wilson-Barnao 2021). Another danger lies in the likely temptation to use the visitor data for marketing or other unrelated purposes. Wilson-Barnao is particularly worried about the use of AI and calls for museums to discuss the ethical applications of AI whenever data is collected from the museum platform (2021).

We should also question whether the museum promotes inclusion, openness and participation by inviting the audience to connect and create online or whether it only seems to be doing so. Wilson-Barnao argues that museums are accommodating capitalist structures in non-profit institutions by accepting that everyone can be a curator, benefiting from peer recommendations of social media, and using the visitor data in the name of marketing and tailored content. Museums should be aware of the complex arrangements of power brought by the emergence of social media capitalism. Very few private social media platforms possess and sell enormous amounts of personal user data to maintain their dominance in the market. Museums are obliged to consider their position in this setting. (Wilson-Barnao 2021).

4 Development project

In this chapter, the development process for concept of a digital museum platform is presented phase by phase. Some of the intermediate results are presented to demonstrate how the insights that were gained at each stage of the workflow directed the design process. The final results are comprehensibly arrayed in Chapter 5.

4.1 The design-process model

In June 2021, EMMA received a positive funding decision from the Finnish National Heritage Agency for the development of the museum's digital service. The funding allowed the museum to proceed with the project and involve their advertisement agency in the concept and software development of the digital platform. Simultaneously, I was invited to participate in the innovation process with service-design methods and skills. It was agreed at an early stage that I would help run through the first service design cycle with discovery, ideation, prototyping, and testing phases, and the advertisement agency would take over the development of the platform after the prototype was tested.

In the funding application, EMMA's development team had described the mission of EMMA Zone, the new digital service, as follows:

"EMMA Zone is a zone where EMMA invites art lovers in Finland and around the world to get excited about culture, delve into art content and enjoy it, even from the home sofa. We offer art content online to read, listen to, watch and experience in customer-centric ways. Diverse content serves a new kind of museum experience and builds a long-lasting data bank into which both researchers and new audiences can delve deeper. EMMA Zone is a new virtual space for the museum and an independent platform, where the exhibitions on display in the museum are not duplicated, but the contents are created specifically for the online environment. The platform is constantly being developed with the public and with sensitive listening to customers.

"EMMA Zone gives voice to artists, experts and influencers. Art content includes articles, columns, artist interviews, auditions, panel discussions, documentaries, videos, mobile or audio guides, guided tours, or online artwork. The content is produced by EMMA's experts together with external actors. EMMA is a museum of contemporary art and design. The online platform brings these issues to the fore in an easily approachable and accessible way, further lowering the threshold for the museum experience."

Bearing this goal in mind, I began outlining the design process for the EMMA Zone. Being aware of the varying yet greatly similar process models in service design, I first decided to

compare the models of the Hasso-Plattner Institute, IDEO, and the British Design Council to find the most suitable model for this project. The Double Diamond by the British Design Council (launched in 2005 and iterated in 2019) is a diagram formed in a shape of a double diamond that illustrates the the divergent and convergent stages of the design process (Hambeukers 2019; Tschimmel 2012, 6). The model is also known as a "4 D" model that describes the four phases included in the design process: **Discover**, **Define**, **Develop**, and **Deliver**. Originally developed for NGOs and social enterprises, the HCD design thinking model of the design agency IDEO is divided into three phases of design: **Hearing**, **Creating**, and **Delivering**. The abbreviation "HCD" also stands for Human-Centered Design, and the focus is very much on the collective nature of service design. The process model, which was originally published in a detailed online toolkit is strengthened with a jam-packed sack of activities to be used at every three stages of the process. The process aims to create innovative and financially sustainable solutions for the challenges that have emerged when listening to the needs of the involved customers or stakeholders. (IDEO 2015, 21–22; Tschimmel 2012, 7).

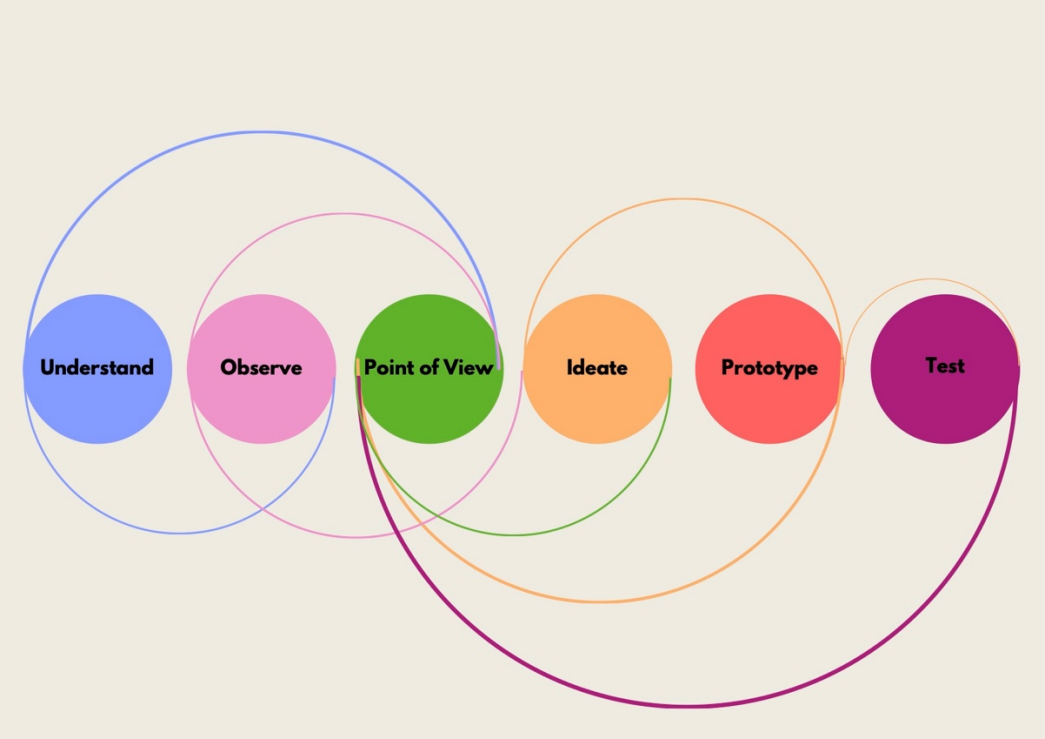

Figure 10. The service design process model by the Hasso-Plattner Institute (updated in 2018). Adapted from the original illustration.

The third design thinking model was developed in an educational context in the School of Design Thinking at the Hasso-Plattner Institute at the University in Potsdam, Germany (Figure 10). In their model, the design thinking process consists of six steps linked to each other by curved lines to indicate that each stage is meant to be realised in iterative loops. The first step, **Understand**, focuses on gathering information about the topic through secondary

research. The second step, **Observe**, uses qualitative research as a starting point to understand the users' needs with the tools such as interviewing and observing (Tschimmel 2012, 8). The gained customer insights are shared among the design team and visualised to a synthesis (third step: **Point of View**), reflecting the user's perspective. The fourth step of **Ideation** is similar to the "ideation" phase in the IDEO's model and the "develop" phase in the 4D model by the British Design Council. The next two steps, **Prototype** and **Test**, are equally similar in all the three models (Thoring & Müller 2011, 38; Tschimmel 2012, 8).

Figure 11. The process timeline for the service development of EMMA Zone, following the service design model by the Hasso-Plattner Institute.

All three models provide a clear, practical structure for a fast-paced design process, and they are all open for cyclical rounds of iteration, which is characteristic to service design. After careful consideration, I chose the model of Hasso-Plattner Institute as a guide for my project, since I felt it gave me clear and detailed instructions, especially for the early stages when understanding the design challenge and discovering insights, which particularly fell within my focus. Having decided about the use of Hasso-Plattner model, I began to plan out the project based on the process steps of understanding, observing, forming a point of view, ideating, prototyping, and testing. As the development process of EMMA Zone is currently scheduled for a nearly year-long process aiming at a launch in August 2022, it is likely that the last two stages of the process – prototyping and testing – will be repeated several times during the development process as the advertisement agency iterates and improves the service proposal

with EMMA's development team. This thesis project, however, focused only on the cycle of the design process, which is presented in Figure 11.

4.2 Understanding the design challenge with benchmarking

The design challenge was laid out clearly in EMMA's funding application: the mission was to design a digital platform offering visitors digital content about contemporary art. Despite a seemingly uncomplicated assignment, EMMA's goal appeared rather blurred to me at the start of the project. I noticed that my thinking about museums' digital services was steered by the 3D exhibitions and digital collections of artworks that I had visited during the pandemic, and it felt difficult to think about other possibilities beyond these familiar options. It felt necessary and logical to start the process with a round of research to understand the design challenge better. Research in the context of service design process means Secondary Research (IDEO 2015, 37), which aims to understand the broader context of the design challenge with tools such as online research and reading books, news, journals, magazines, reports, and surveys. The goal of secondary research is to find recent innovations and other solutions in the area of the design challenge; they can be technological, behavioural, or cultural. Knowing what has been done and what has worked, and understanding the edge of what is possible, helps later in the ideation phase. Secondary research offers the possibility to find out about the facts and figures that are needed to understand the context of the challenge but cannot be found in interviews (2015, 37).

I reasoned that my secondary research should focus strictly on museums – not only on art museums but all kinds of museums – and my specific goal should be finding out about the digital service offerings of other museums. Therefore, I decided to limit my secondary research to benchmarking, which can be considered a more traditional method: finding out what competitors are doing and how they perform in the field of business. Benchmarking is a technique for improving processes based on the analysis and comparison of existing procedures. Benchmarking supports organisations to amend their activities to improve products, services, reduced costs, and other benefits. There may be an urge to find quick and sustainable solutions, solve specific problems or prioritise the projects. (Stapenhurst 2009, 1). The benchmarking process usually contains these four steps: 1) Defining who are the best performers in the field in question, 2) Comparing the performance levels between "us and "the best" to define what the gaps are between the organisation and its competitors, 3) Analysing how the best performers succeed in their goals, 4) Choosing and adopting the best and most suitable practices from the winners of the field. (Stapenhurst 2009, 1).

I started the round of benchmarking from the news stories and articles published by the Museum Next service (2021), which focuses on the education and networking of museum

professionals and aims to creating forerunning, future-oriented thinking in the field of museums and cultural heritage. The articles led me to understand the breadth of digital museum services on offer today and later to define the services in line with EMMA's objectives (see Chapter 1.3 about the definition of a virtual museum).

The benchmarking helped me perceive how few museums operate their digital services based on an idea of a digital media, which is essentially EMMA's goal. In fact, there are several museums or cultural heritage organisations, especially in Europe and the United States, that produce podcasts, such as Museum Podcast by the British Museum (2021), Museopunks by the American Alliance of Museums (2021), and Freud in Focus by the Freud Museum in London (2021). Instead, museums producing long-format stories in the form of articles or videos are quite scarce, based on my research, and in fact I was able to identify only one contemporary art museum, Walker Art Center in Minneapolis, US, that has its own online contemporary magazine, *Walker Reader* (2021). The Walker Art Center is a contemporary art centre with an art, performance arts, film and sculpture programme. It is one of the most popular contemporary art museums in the United States, with around 700,000 annual visitors (Wikipedia 2021).

Identifying the museums who offer digital media content pushed me forwards with the design challenge. The knowledge was useful at the next stage of the process, as I proceeded with customer interviews to gain insight into the Pinja and Tim personas that EMMA's development team had identified as a plausible active user of the new digital service (Kalajo & Suojoki 2021). In addition to the *Walker Reader*, two other media-like online museum services were picked for the interview and observation sessions with Pinjas and Tims: the Museum Unlocked service by Rijksmuseum in Amsterdam, launched soon after the coronavirus pandemic closed down the museum in the spring 2020, and the digital archive by the New Museum in New York, which documents the museum's exhibition history from the late 1970s until today with text, audio, and video (Rijksmuseum 2021; The New Museum 2021).

4.3 Discovering customer insights by observing art lovers

Having understood the design challenge, with its opportunities and limitations, much more specifically than before the round of benchmarking, it was time to move on to qualitative research, which was to be carried out with interviews with the persona that EMMA's team determined, based on their knowledge of museum visitors, to be the best potential user of EMMA Zone. Together with EMMA's team, we identified six persons from our networks who could be singled out as representing the personas of Pinja and Tim, urban trendsetters and genuine art lovers. As described in Chapter 1.4, I had earlier facilitated a workshop of six participants who were identified to fit the personas of Pinja and Tim, with the aim to learn

their wishes and needs for a museum's digital services. Although the workshop results already yielded useful knowledge about the topic, more profound information was required about the issues, such as how Pinja and Tim use social media and the internet or other online platforms and their consumption of cultural services in the digital context. The main objective for the interviews was to determine the ideal digital museum service offering for Pinja and Tim. What would it look and feel like? How, when, and why would they want to use it?

When preparing the field guide for the interviews, I followed Steve Portigal's (2013) instructions for interviewing users. First, Portigal advises one to establish the objectives for the interviews, even though it takes a lot of preparation to set up successful field research (Portigal 2013, ch. 3). I suggested to EMMA's team that the interviews be built around three themes:
1) gaining background information about the interviewee's life situation, use of internet and social media, use of museums and other cultural services, and their relationship with EMMA;
2) observation of the use of three online museum platforms (The New Museum's Digital Archive, Rijksmuseum's Museum Unlocked, and the *Walker Reader* by the Walker Art Center), and
3) asking about attitudes and expectations towards digital (arts-related) platforms.

Observing how the interviewees use online museum services was essential in demonstrating to them an overall idea of a planned digital museum and to gather insights into what they thought about the idea of a museum operating as a digital media platform. Portigal recommends asking interviewees to show how they use a product or a service (2013, 8). Observing how subjects demonstrate and talk about their use of a product or a service can offer the interviewer insights that would not be possible to achieve in other ways. Portigal encourages the interviewer to adopt a practical approach; words can be clumsy and unclear, whereas deeds and action are tangible and easy to grasp. For the prototyping phase, this practical approach means a licence, even a recommendation, to present the interviewee a low-fidelity prototype rather than a high-fidelity model, as people will more likely give their honest opinion when you show them a quick draft instead of a polished product (2013, 58).

Portigal encourages the interviewers to create context by collecting details by asking about sequence, quantity, specific examples, exceptions, relationships – overall, asking "why" and tolerating silence, even to the point when it feels awkward, as it is important to leave space and time for the interviewee's own reflection and stories. Portigal says it is better to ask as succinct a question as possible and to be silent after posing the question (2013, 84). He urges the interviewer to be hungry for what the participant has to say. This attitude may lead to a back-and-forth exchange of question-and-answer, and finally to the point when the participant starts telling stories. And this is what the interviewer is supposed to be looking for, as stories are where the richest insights lie (2013, 24). These moments when the

interviewees share their stories signify trust and a positive rapport between the interviewer and the user. I tried to obey this advice as faithfully as possible and let the interviewees speak as freely as they feel comfortable despite the semi-structured field guide.

The interviews lasted two hours each, and they took place in August 2021. One of the interviews was done on Zoom, one at the interviewee's workplace, and the other four were done in a meeting room at EMMA. I recorded the interviews with my phone, and I took some photos during the interviews, mainly to remember which articles and videos the interviewees commented on during the interview, but I took far fewer pictures than Portigal advises (2013). The photographs I took were to later help me trace back the story or the webpage the interviewee was commenting on during the observation, but all in all, I felt that taking photographs in the middle of a long interview would have distracted the interviewee and myself from the topic and could have weakened the rapport I was trying to build with the interviewee. During the interviews, it regularly turned out that my assumptions and beliefs about the interviewees' use of online services, or expectations towards online museums services, were wrong: I kept on assuming the interviewees would think or feel about the discussed issues the same way as I did, and becoming aware of this bias in my thinking was an essential part of my self-development in the project. Portigal warns us about the dangers of "self-design" by reminding one that "you are not your user", as designing one's favourite products for customers may, for example, create a bias towards innovation and future development (Portigal 2013, 2). I took this advice as a baseline rule to keep in mind the fact that EMMA's team and I simply could not have known what Pinja and Tim would want from the museum's online services without the in-depth interviews, and assuming their needs and expectations based on guessing or on *our own* needs and expectations would have taken us down the wrong path.

Portigal reminds us that interviews work best when combined with other techniques (2013, 9). Interviews alone are not a source of statistically significant data, and we can't predict the customers' behaviour in the future based on the interview results. Interviews are unreliable if we want to find out about customers' intentions to buy a product or what price they would like to buy it, Portigal writes. Asking about future purchase intention or the price will give results about the attitudes and appreciations today, but they will not be automatically correct later. (2013, 8). In this project, we had earlier knowledge about museum visitors and especially about the personas of Pinja and Tim. This information, combined with the knowledge I was able to obtain from the interviews, gave us enough data to move on with the service innovation, but Portigal's advice is a good reminder about the power of interviews. In the analysis of the results, I realised how much information we attained from the lifestyle, attitudes, interests, ambitions, and even fears of our interviewees, but indeed it was important to recognise the limitations of the interviews. There were altogether only six interviewees, and although several themes were revealed, in which their answers were

similar enough to give indications and directions for the service innovation, there remain many questions that we simply cannot be sure about based on the interview results. One such question is how much time Pinja and Tim will spend on the service when it has been launched. In the interviews, all the interviewees said they feel very positive about the idea of a digital museum service, but they then admitted that they are not used to expecting such content from a museum and do not visit museum websites for any other purpose than finding practical information about ongoing exhibitions or opening hours.

On the other hand, one of the questions dealt with the interviewee's willingness to pay for the content on the museum's online service, and this time I feel we were able to gain a reliable indication about the personas' behaviour. All six interviewees answered similarly: although they felt positive about the service, the service would not likely be as desirable for them that they would pay for it. The reactions were similar even in the way most interviewees constructed their answers: first, they said that paying for a such service would be possible if making the payment was as easy as possible (with a monthly payment, for example). Then, they began hesitating and ended up admitting that they probably would not be willing to pay for the service at all or that the sums should be minimal. This is a clear indication to the museum that investing in and constructing a paid service is a risk, or that it likely requires orienting the paid service towards an idea other than the current version of the concept, which includes podcasts, videos, and articles.

The summary of the interview results is presented in the chapter 5.2.

4.4 Development of the concept with the co-creation workshop

Next, it was time to develop an approach for the co-creation of the concept with Empathic Design, which meant planning and running a design workshop based on the customer insights, I had gained from the interviews with Pinjas and Tims. EMMA's development team, fortified with key experts from the museum's advertising agency, was prepared to spend one full day brainstorming the concept. The given timeframe for the brainstorming session helped me set an agenda for the day: there would not be enough time to create a complete service concept; what we could achieve was to brainstorm ideas for the concept module-by-module and thus establish a common understanding about the different elements of the service proposal. At the end of the day, we would ideally have a joint vision for the service proposal, which would provide a pathway towards the first prototype.

Cameron (2005, 24) encourages the facilitator to begin the planning of a workshop with a clearly worded purpose: the facilitator must fully understand the purpose of the workshop before committing to running the event. If the workshop theme comes from a client, it needs to be checked thoroughly before proceeding with the planning. For an effective facilitation,

the topic should be researched as thoroughly as possible, and the facilitator must ensure that participants have access to any pertinent information, either before or during the workshop (Cameron 2005, 24). The carefully accomplished first phase, with the transcribed interviews and the analysis of customer insights, provided me a solid starting point for planning the workshop. I decided to follow Cameron's advice and start by breaking the design challenge down into parts, as our brains work well if we understand both the big picture and its constituent parts (Cameron 2005, 27).

The following three major themes emerged from the interview analysis:
1) How to make the platform fun and entertaining – and can "intelligent fun" be achieved through gamification of the platform?
2) How can the museum's high-quality curatorial programme be extended to the digital platform instead of the platform serving as a mere marketing tool?
3) How should the content intended for the website (articles, podcasts, and videos) be conceptualised to a media-like platform, with an alluring selection of stories about contemporary art?

The fourth mission for the day came from EMMA's development team: in the workshop, we should be able 1) to define the customer promise, 2) the customer value of the service, and 3) draft the website navigation. I divided the workshop's timeframe into four sessions according to the challenges mentioned above and decided to start the day with the summary of the key customer insights to get everyone on board with the challenge ahead.

I chose a different facilitation method for each of the sessions. In the workshop, the participants were asked to:
1) visualise their ideas for a fun and entertaining EMMA Zone with the 10+10+10 method (Buxton et al. 2012)
2) discuss their ideas about the curation of the platform with the Me, We, Us method (Oudt 2021)
3) brainstorm the story concepts for the content with the brainwriting method (Mindtools 2021)
4) define the customer promise and customer value, then develop a proposal for the site map with the altered version of Me, We, Us method, with voting at the end of the session.

As for the workshop methods, in the 10 + 10 exercise, team members start with a joint task by sketching individually several ideas, aiming for ten ideas per person or per team (depending on time). They share their visualised ideas in the team and then choose together one of the sketches for the starting point for the second round. After the next round, the team members share their new ideas again with each other. As the result of the one broad and one deep round, the team should now have at least 20 visual ideas to take further into

idea selection. (Buxton et al. 2012; This is Service Design Doing 2021).

Me, We, Us is an easy method in which the session is divided into three parts: me-time, we-time, and us-time. During me-time, each participant works on a given task for a set amount of time. In the we-group, each participant shares their best idea while others ask clarifying questions, develop ideas further, and provide feedback. If me-time is ideal for brainstorming, we-time is useful for finding patterns and refining ideas. The last step of the framework is to bring all participants back to the joint session and to share their best ideas at us-time. After the ideas from each group have been presented, the matter can be put to a vote. Which ideas will be developed further, and which will be taken into use right away (Oudt 2021)?

Brainwriting was developed by Bernd Rohrbach in 1969 for sharing and innovating new ideas and encouraging creativity. Brainwriting is a tool for creating ideas individually in a team and developing them further with the help of the comments of the other team members. During the exercise, there are several rounds of short brainwriting sessions. In the first round lasting for five minutes, participants write down silently three ideas each. Then, each team member gives their notes to another team member, reads the other person's notes, and then continues with three more ideas. The new ideas can be completely new or built on the previous writer's ideas. After the three rounds, the team discusses the ideas together and agrees on the next steps. (Mindtools 2021).

The plan was approved by EMMA's team with minor changes. Bens (2011, 2) recommends a professional facilitator spend as much time preparing for a session as they do leading the actual event. The standard timeframe for professionals is one day of preparation for each day of facilitation. In this case, the preparation process lasted for four days, as I wanted to choose the methods for each session carefully and rehearse each stage in advance. Collating the interview results into a presentation was part of the preparation process.

4.5 Testing the first prototype

Service designers aim to give testers a reliable mental image of the service concept proposal with the prototype. As with tangible products, designers use the similar iterative process of testing and retesting but with a set of more diverse methods. In most cases, presenting a physical prototype to a customer is not an option. (Stickdorn 2012.) The prototype should communicate emotional and interactive elements of a service proposal (see Chapter 2.6). Stickdorn recommends using playful methods, such as staging or roleplay approaches, as they are likely to increase the emotional engagement of the users and more honest feedback. It is essential to get an authentic and direct response from the testers instead of flattery, and therefore the testing circumstances should be as close to reality as possible. If the real-life

situation cannot be arranged, the testing environment should be prepared as a rough and straightforward scenery, which can inspire imagination and result in genuine responses from the participants. (Stickdorn 2012.)

Given that we were designing a digital service, it felt logical to set up this kind of scenery online. I followed step-by-step guide provided by This is Service Design Doing toolbox to build the digital prototype and a field guide for the test sessions (2021).
1. Choose a persona or user type. Altogether four people were invited to individual testing sessions, which I organised online via Zoom. The two testers were identified as the personas of Pinja and Tim, and the two other testers were identified as "Lenitas", a senior arts enthusiast. Again, the testers were found through my and the EMMA development team's networks.
2. Plan the scope and the prototyping questions by asking what should be learn from the testing. Prepare. The prototype was created to demonstrate to the users the main ideas and concepts that had emerged in the worksho There were ideas about how to make the service fun and entertaining, and there were ideas about the story concepts. We also wanted to test the proposals for the navigation and find out whether the proposed title "EMMA Zone" worked well enough. The field guide with the questions was planned in advance, but in the test situation, I followed the field guide only as a discussion framework and let the conversation flow naturally.
3. Set up the prototyping ap Sketch everything the user will deal with while using the interface. Keeping in mind the importance of visualising ideas to make them easily understood, I designed the prototype with a template provided by Canva and paid attention to intermediating the original ideas with illustrations, images, icons, and animations supported with short texts. Canva's prototype did allow a wide use of visuality but, unfortunately, the template could not be equipped with a clickable interface. (This is Service Design Doing 2021.)

Each test lasted approximately one hour, and the results were summarised in a detailed report. First, in the test, I explained the context for the testing and EMMA's goals for the development of the online platform. Next I gave the tester the possibility to browse the first of the thematic units, which were alternating options for the navigation bar. Seeing the navigation options gave the testers an overall impression about what the service proposal was about, and therefore it was the first entity to be tested. I let the testers comment on the options as soon as they had moved through all the options. The same procedure was applied to the ideas for the story concepts and with the ideas for making the platform fun and entertaining. In the end, we discussed the whole service proposal, and I made sure to ask how the tester uses online services and social media, as well as the role museums play in their own lives.

Before the tests, I had doubts that four testers would be enough to find out whether the ideas gathered in the prototype worked or not, but after the test sessions, it was easy to pinpoint similarities in their answers and make conclusions about which ideas were strongest and which should be abandoned.

4.6 Identifying capabilities for delivering solutions

At the last stage of the development project under my supervision, the test results were summarised with an analysis of the results and a set of recommendations for further development of EMMA Zone. The testing phase with the prototype gave us valuable feedback about all three thematic entities described above. The results were shared with EMMA's development team in the final project meeting, which ended my involvement in the development project. With the help of the test results analysis, the museum team was ready to make final decisions about the details of the service concept and start the software development. I will discuss the results more closely in the Chapter 5.

5 Results

In this chapter, the results from each stage of the service development for the museum's online platform are summarised. The stages were 1) Understanding the design challenge with benchmarking, 2) Gathering insights with the interviews, 3) Ideating the concept with a creative workshop, and 4) Testing the prototype and drawing conclusions for the final concept.

5.1 Identifying museums operating as media platforms

As the development process followed closely the design model of the Hasso-Plattner Institute, the project was begun with the secondary research, which in this case meant, in particular, benchmarking other digital museum services (IDEO 2015, 37). Gathering an understanding about various solutions for an online museum experience today was needed to define and limit the design challenge in question. Secondary research resulted in the following list of current types of digital services:

- 3D exhibition spaces, usually following the structure of the physical museum spaces,
- digital archives or artwork collections presenting the museum collections of art or design objects, or other materials related to the museum's exhibitions online,
- live guided tours online introducing current exhibitions, usually taking place on the museum website or on social media
- special live events usually taking place on social media
- audio guides, curatorial articles and texts, and other online content supporting the museum experience during the physical visit, and
- other content related to the museum, exhibitions or artists, such as podcasts, videos, and essays.

The majority of museums offering digital services today lean on expanding the exhibition space online with the help of 3D-modelling software. Museums that have extended their operations to producing media content, such as podcasts, videos, and texts (articles, interviews, long reads), seem to trust podcasts and videos more than text. There is a worldwide trend of museum podcasts, and especially Australian, European, and North American museums and cultural heritage organisations actively produce them.

EMMA had decided they were not interested in exploring the possibilities offered by 3D technology and extending their museum activities as such online. Rather, they were seeking to build a platform based on publishing media content; thus, they sought to identify other art museums operating in a similar way. The research helped me pinpoint three art museums

producing media content for the interviews with the personas of Pinja and Tim. The online services of 1) Walker Art Center (Walker Reader) in the United States, 2) Rijksmuseum (The Museum Unlocked) in the Netherlands, and 3) the New Museum (the digital archive) in the US were tested during the sessions by observing how the interviewees used the services while asking about their thoughts about each service. All three services appear to be built to achieve different goals: Walker Reader is a long-term contemporary art publication targeting art professionals and other people deeply interested in current phenomena and discussions around contemporary art, whereas Rijksmuseum's Museum Unlocked is a quickly developed response to the museum's closure caused by the coronavirus pandemic, with the purpose of opening up the museum's art collections to a larger audience enduring lockdown in their homes. The New Museum's massive digital archive collects and presents the museum's exhibition activities with texts, photographs, and images, as well as audio and video recordings for a period covering 40 years. All three services are available in English, which made them easily accessible to the interviewees.

5.2 The optimal digital museum experience for Pinja and Tim

The interviews with the most important target group for EMMA Zone, the personas of Pinja and Tim, were successful in three respects, as they gave useful information about: 1) the ways young adults use social media and the internet, 2) why and what they follow in contemporary art, and 3) what they expect from EMMA's online services. The main findings were gathered in a separate report.

Analysing the interview results helped me form a vision for the workshop planning. It felt important that we focus the design challenge around three thematic questions that had arisen from the interviews. The interviews had shown that the motivations for using an online museum service do not rise only from the aspiration for self-improvement and learning but also from the fascination for entertainment and fun and even for games. Thus, the first question for the design team was: **How can EMMA Zone serve as a fun yet intellectually stimulating platform about contemporary art?** The interviewees regarded the gamification and elements of fun as tools to create interaction on the platform. One of the interviewees reminded us about the participatory methods already in use at EMMA, meaning the DIY tasks sometimes provided for the museum visitors as part of the exhibition programme. This possibility for exploring the museum in an engaging, participatory way was seen as a method for deepening the museum experience, and a question was raised how this interactional dimension could be transferred to the online platform.

Another thematic question emerged from the fact that the interviewees regard the online content produced by the museum as an undetachable part of the museum programme and

curation. They found it unappealing to think about EMMA Zone only as a marketing tool for the museum, and some even said it would damage the museum's brand if the museum team chose to reduce the service to a communication instrument. Luckily, producing interviews, podcasts, and other media content for EMMA's website is already a joint task underway among marketing and curatorial teams. However, extending the vast majority of the museum's curatorial choices across the onsite venue and digital presence is still a work in progress in the museum. Thus, the second question emerged as: **How can EMMA Zone become an integral part of the museum curatorial programme instead of having a separate, marketing-driven identity?**

Thirdly, the interviews revealed the busy lifestyles of Pinja and Tim: they are constantly online but lack motivation to focus on any content that is not truly in their interest. Contemporary art is their passion, but not all the content derived from it is. The interviewees felt they have a close or rather close connection with EMMA, and they regularly follow the museum programme, but their engagement has so far been focused on the physical museum space, and they have not longed for a more total museum experience including online services. EMMA's website or social media presence was not especially familiar to all the interviewees, and they said they were not used to expecting any media content from a museum. This was sort of good news. EMMA has the possibility to surprise their audiences with the new platform, and there certainly is an interest in following EMMA's initiatives, since the museum brand is highly regarded. However, although all the interviewees said they feel positive about EMMA's intention to expand their activities online, they all stressed they would be interested in it only if the service was produced at a very high quality. Otherwise, they would not see themselves spending time on the service.

This requirement of outstanding quality sets the bar high, and it means that EMMA's team should aim for high-end media production with EMMA Zone to ensure the audience's genuine interest and engagement. EMMA Zone will be compared to other media services Pinja and Tim use in their everyday lives. The insight into Pinja's and Tim's demanding tastes was already very well known in the museum, but now the task was to think about how to fulfil the requirement for high quality in the service development of EMMA Zone. **How can EMMA, which is a museum and not a form of media, *act like* professional media to fulfil its own mission to offer compelling experiences and promote new art?** My suggestion to EMMA's team was that this professionalism could be achieved through polished story concepts. With the crystallised story concepts for podcasts, articles, or videos, it would be easier for EMMA to find museum audiences online and make them to commit to the museum's message. The continuous concepts are more likely to become popular, beloved, and expected than single stories, which are much more difficult to market than a regular series. To solve this, one of the workshop sessions focused on ideating story concepts.

The interim results of the research project, which answer to the **main objective** of the thesis, are crystallised as a proposal for an optimal digital museum experience for Pinja and Tim, are presented in Figure 12, following the four dimensions of experience diagram by Pine & Gilmore (1999).

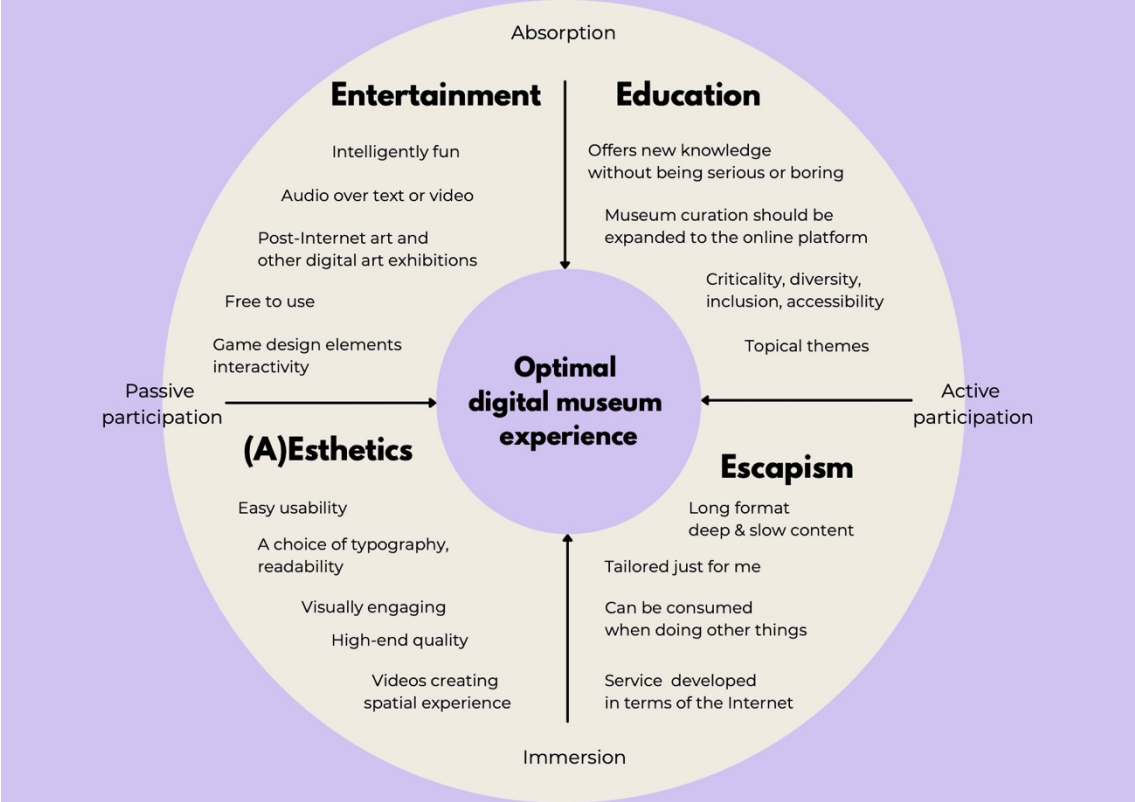

Figure 12. The optimal digital museum experience for Pinja and Tim, following the four dimensions of experience diagram by Pine & Gilmore (1999).

5.3 The concept proposal for EMMA Zone

In the workshop, the development team ideated the EMMA Zone's concept from four aspects: 1) the entertaining dimension of the service, 2) the idea of the museum's curation expanding to the online service ("holistic curation"), 3) the service promise to the customer, and 4) navigation of the website.

The main results were gathered in a separate report, which was later converted to a prototype. Most ideas about making the service entertaining and fun and using elements of games were developed with the intention to tailor the content to different users with the gamification of the service. The users could, for example, choose their favourite game character, who would take them on a tour of EMMA Zone, or users could choose their favourite art form and get a selection of related art to explore, or they could take a tour with

their favourite art curator. Another variant of the theme was related to choosing how much time the user wants to spend on the platform, and content would be offered according to the given timeframe. There were also ideas about using memes, emojis, or digital art tools to make the service fun and participatory. The idea of 3D exhibitions was also presented as an option to bring the museum alive online.

As for the question of expanding the museum's ambitious art curation from the physical space to the online platform, the ideas were mainly developed around the question of how to deepen the museum's exhibition programme with more information, such as with online guided tours with curators or a podcast series hosted by EMMA's curators talking about the ongoing exhibitions. Online master class lectures with artists or a cultural "workout" programme coordinated by the museum curators were also ideated as an initiative to build a closer, more meaningful relationship between the museum experts and the audience. Overall, the theme of "a total curation" brought up the need to establish a dialogue with online visitors by introducing and highlighting the museum's specialists as well as using the curators' expert knowledge as a method for creating a true connection with online visitors.

A load of proposals arose when ideating story concepts. Again, the museum team recognised the necessity to serve users with a special knowledge that cannot be reached anywhere else. There were ideas aiming at interacting with online audiences by offering them a chance to participate in the content-creation process or introducing the museum's curatorial team and other professionals through stories about the museum's everyday activities. Some of the suggestions leaned on the knowledge that Pinja and Tim prefer long-format material instead of quick and easily consumable content, or their wish to be surprised. Focusing on children and their questions about art emerged as an idea, imitating the popular concept of children's science questions at *Helsingin Sanomat*.

In the final session, the customer promise and the navigation of the platform were formulated. The development team voted for their favourite proposals at the end of the session. The customer promise was unanimously chosen as "EMMA Zone. Always open for art." (in Finnish "EMMA Zone. Aina auki taiteelle."). The navigation of the platform was not an easy task, and the proposals varied from a version similar to the current navigation to the metaphorical use of a restaurant menu ("Street kitchen/Full menu/Sunday tea" etc.), an idea based on the time an online visitor has to engage with the stories. The team voted for the restaurant metaphor as their favourite option and clearly expressed their discontent for the current navigation of EMMA's website. I ended up making a mistake by emphasising this discontent, asking the team to vote for an option they liked least, in addition to voting for their favourite option. In retrospect, this was a discouraging end for the workshop, and I took a lesson from the misste

The workshop resulted in good discussions and lots of ideation. The workshop was held face-to-face on the museum premises after a long break in face-to-face contacts due to the coronavirus pandemic, which certainly intensified and enlivened the session and possibly had a positive effect on the results too. In the feedback session at the end of the day, it was appreciated that we had gone through a wide range of assignments and that the team had generated new ideas very quickly in each session. One team member said that now that the project had kicked off with the workshop, they had made more progress in one day than during the past months altogether. For me as the facilitator, one of the day's biggest achievements was that the team was now on the same page about the direction the service should take. There were still plenty of unsolved issues, such as the final form of the platform navigation and whether game design elements should be implemented in the service (which was noted as costing more than the original service plan). There was also the large issue of extending the museum's curational programme online, a question requiring an organisational transformation, but the participants successfully launched a conversation about the issue in the workshop, and it will hopefully stay on their agenda until the digital museum becomes an integral part of the museum's operations.

The team discussed and formed an overall agreement about the following topics:

1) The team aims to build an engaging, intelligently fun, and educational platform that
2) offers a selection of polished, concepted stories that can take the form of a podcast, long article, or video, and
3) the museum's curatorial activities should extend to the online service, and
4) the service development should be rooted in user data, and
5) the service proposals should be tested all along the development process.

The final results of the research and development project, which answer to the purpose of the thesis, are presented Figure 13, which is a proposal for the service concept of EMMA Zone based on the service design process. The game design elements ideated in the workshop were left out of the proposal after the testing phase and are not included in the figure.

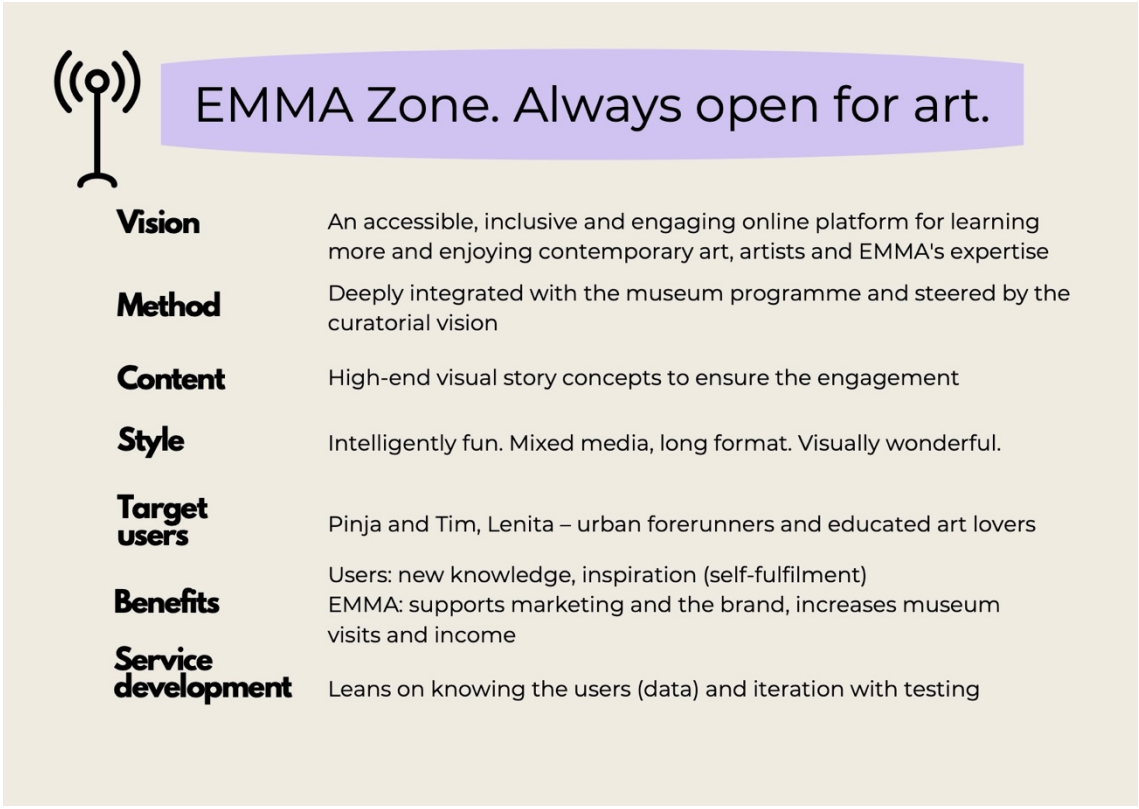

Figure 13. A proposal for the service concept of EMMA Zone.

5.4 The iteration of the concept with the test results

After the workshop, I generated a summary of the four workshop sessions with a documentation of some visualisations that were produced during the day. There were three types of ideas generated in the workshop:
1) ideas about how to gamify the service and make it entertaining and fun
2) ideas about the story concepts
3) proposals for platform navigation.

It felt necessary to test all the three thematic entities with the help of the prototype. The prototype was tested with four users who could be identified either as Pinja and Tim or Lenita, whom we assumed would be the second important persona to use the EMMA Zone. Although having had some doubts about whether four persons would be enough to obtain reliable feedback about the service proposals, it turned out that there were lots of similarities in the answers, which gave us a clear indication about which ideas worked and which should be abandoned or improved.

First, the testing results indicate that EMMA's development team made a correct assumption about its primary target user: it is the personas of Pinja and Tim. All four testers said that they liked the service proposal and the variety of ideas, but it was clearly the two Pinjas who saw themselves using the service, whereas the other Lenita said that the physical museum visit is now her priority instead of an online experience, especially after the coronavirus pandemic, and the other Lenita said that even though museums had always been important for her, she had filled her life with other activities during the pandemic and does not long to visit museums as much as before.

Second, the testers felt that the idea of conceptualised stories was much more interesting to them than the ideas related to the gamification of the service. However, although they said they would not be using the games themselves, they all considered games a relevant tool to attract younger audiences, such as school-aged children and teenagers, to the virtual museum service. They also liked the idea of receiving recommendations and tailored content with the help of game-design elements but had doubts about the planned proposals. For example, one tester said she does not think all the users know who the "curator" is, and having an option to get recommendations from the chosen curator would not probably work in real life. Another tester noted that choosing a "favourite" character based on just a character's face is not a pleasant and accepted way of generating recommendations, since it draws from the harmful typification of people, and instead more information about characters should be offered. Here, it must be admitted that the simplified versions of the proposals in the prototype probably worked against the original ideas to a certain extent.

Finally, the Pinjas liked the idea of a 3D exhibition very much, and they both interpreted the suggested format to be a more developed version of a 3D experience than a mere three-dimensional museum space. They assumed that the virtual museum could be experienced either with a virtual guide or with the user's own game character, and the museum would not necessarily imitate the actual museum space but differ from it as a unique online concept. An idea to use memes, jokes, and humour as part of the platform's activities was not considered necessary but on the contrary, even a little repulsive. "Although the memes are a big trend right now, it doesn't mean EMMA should start using them. EMMA is a museum!" said one tester. Again, the answers may have been more negative due to the way the idea of memes was presented in the prototype.

The most-liked proposals concerning the story concepts were the long-format features about emerging artists or the museum's unknown behind-the-scenes world. The idea of children's art questions was also widely supported. All interviewees said they do not expect the museum to publish stories too often, and for them, a pleasant rhythm for receiving stories would be every two months or even more rarely. They also unanimously said that they prefer a podcast format to a video, and visuality should play a strong role in long articles. Here, it must be

stressed that the results must be reflected with the fact that there were not more than four persons included in the test. Although some of the test group's answers can be taken as indicators for which direction the service proposal should be reformed, the low number of testers make some of the answers unreliable. For example, based on the answers, it cannot be taken for a fact that only a podcast format is the only appealing form for future users of the service.

None of the navigation proposals received full support. The metaphorical "restaurant menu" was disliked as a non-understandable, confusing symbolism, misleading the users. The conclusion was that the development team should produce a totally new version of the navigation as soon as they have decided on the story concepts for the platform. Finally, the name "EMMA Zone" was tested against another proposal, "EMMA Zine". "EMMA Zone" was considered a clear, unambiguous name that signifies a community, a museum territory, and interactivity. The fact that the name is in English did not seem to matter to the testers. "EMMA Zine", on the other hand, was not understood by Lenitas, and Pinjas said the name would refer wrongly to a cool, underground online publication produced by EMMA, and not to an interactive platform that EMMA aims to build.

Recommendations for the iteration of the service concept

The test results were collated in a document with my recommendations, which were based on analysis of the results. The recommendations were intended as my closing support for EMMA's development team, which was about to move to the next stage of the development process with the advertisement agency. As my consultancy in the project was concluding, we held a final meeting about the test results and discussed the future choices for EMMA Zone. In the meeting, EMMA's core team was able to decide on some priorities, and they decided that some issues would be discussed and decided on with all members of the development team.

First, it could be concluded that if the museum wanted to stick to its original plan and develop a truly participatory and interactive service, "EMMA Zone" was a completely suitable name for the service, as the testers had understood it exactly the way EMMA had intended. Another easy conclusion was that the navigation should be completely amended. None of the proposals produced in the workshop really worked well, according to the test results. My suggestion for the team was that it may be worth exploring whether the idea of the "zone" could be expanded extensively to the platform – in brief, all over the service. This way the subsections of the service could be named "zones", such as "Story Zone", "Game Zone", or "Learning Zone", and the idea of a zone could be spread to the visual identity, story concepts, and communications with users, for example.

As for the story concepts, I suggested that EMMA's team focus on producing only one or two concepts at maximum and start with the series about emerging artists. This idea was most appreciated among the testers, and it would be logical to handpick upcoming artists from EMMA's programme to be introduced to the audience. These long-format stories could be remodelled after the idea of long reads of Walker Reader by using video and high-quality photographs alongside text to create a complete online experience about a certain topic. These long-format stories could be edited to create shorter "teaser" versions for social media, especially for Instagram. Overall, EMMA would benefit from building a strong presence on Instagram, as it is the first choice of social media for Pinja and Tim.

I also proposed that EMMA start producing a series of the children's art questions, which could be submitted as video clips, and EMMA's staff would then respond to the videos. These videos can be edited into a set of three or four questions and answers, and they are easy to share on social media, especially on Facebook. These videos should mainly target two of EMMA's visitor personas: Lenita and Minna, the latter a parent taking their children to the museum to spend some time learning about art. The story concept about emerging artists is a high-end format that requires a large budget, as well as an editor who is able to find the right writers, photographers, and video makers.

All the customer insights indicated that the production of EMMA Zone should aim for a refined outcome, since the museum's programme and other activities are regarded as premium content, and online content cannot diverge from the ambitious mindset of the rest of the museum. Producing the children's art questions will probably be a more affordable project, as its role is secondary to the main series (emerging artists), and it will probably not work alone as relevant content for EMMA Zone's principal users.

An alternative approach for producing stories is a podcast, which again should be woven into the museum's programme, for example by following the museum's activities from a chosen angle or by focusing on a current theme of contemporary art. Each episode of a polished, professionally written and produced podcast should build a bridge to the next episode with the help of a storyteller who knows contemporary art well. The podcast lacks visuality, which is naturally an essential part of contemporary artworks, but as the boom of art and museum podcasts tells us, there are other benefits to audio stories, such as that they can be easily consumed while doing something else.

Regarding the games and the gamification of the service, I ended up suggesting crowdsourcing (or co-production) of games as a method to publish art-related DIY games on EMMA Zone. This would mean that with the games section, EMMA would focus on appealing to schoolchildren and teenagers. Benefiting from the trend of do-it-yourself Scratch programming games, for example, EMMA could attract young developers to create their own games for the platform by

potentially publishing the games if they obey certain preconditions, such as that the game must be related to EMMA or EMMA's activities in contemporary art in one way or another. This way EMMA could build up interaction with the platform and use games as a pedagogical tool to create a relationship with new audiences. However, in the final meeting with the museum's core team, this idea was abandoned. The team said that given that the primary target-users of EMMA Zone are adults (who can afford to pay for museum services and thus are financially important to the museum, compared to school groups, for example), the museum team would probably stray too far from their original focus if they started seeking younger audiences for EMMA Zone. They also concluded that using game elements or the concepts of "fun" and "entertainment" can result in much smaller implementations on the platform than full-scale games. I fully agreed with the team and felt that this was an important revelation. Lastly, I spoke on behalf of an all-round museum service, meaning that all the activity on EMMA Zone should stem from the museum's programme and curatorial strategy, and every investment in the platform should be evaluated by considering how it helps to achieve the museum's strategic goals.

6 Reflections and conclusions

In this Chapter, I will discuss the results of the development project in the context of the theoretical framework presented in Chapters 2 and 3. The aim of the thesis, which was the research of a digital museum experience, is reflected from the three angles of theories discussed above – customer-dominant logic, the METUX model, and new museology. The fourth angle for the reflection introduces an idea of a digital strategy that may help museums to steer their digital visions.

6.1 Customer-centricity fuels customer value

A central theory chosen for this thesis is customer-dominant logic, in which service providers seek profound understanding of customer activities and especially the patterns and logic their actions form (Strandvik & Heinonen 2015). Based on the development process described above, it can be argued that EMMA's new digital platform has been designed based on customer-dominant logic, as the genuine goal has been to recognise customers' needs and expectations. Gaining customer insights was a relatively large part of the process and understanding obtained from the interviews strongly guided the ideation phase.

EMMA's team has invested time and resources in continuous and systematic audience development for years, and as a result, they know the museum's visitors well. Several design thinking methods have been applied on audience development, such as developing personas and the customer journeys of museum visitors. Strandvik and Heinonen (2015, 122) urge organisations applying customer-dominant logic to let customer-centricity lead the operations instead of the letting products, service, costs, and growth dominate. Here I believe many customer-oriented organisations face an ultimate challenge: does customer-centricity mean sacrificing the organisation's own vision, or can they be seamlessly knit into each other? In the strategy, EMMA has put the museum visitor in the centre of its mission: "EMMA is a responsibly operating art museum of strong experiences and spatial impressions" (EMMA 2021). Interaction with audiences is one of the museum's core values, and digital EMMA is mentioned as one of the success factors of the museum (in addition to leaning on the impressive architecture of the physical museum space).

Based on the collaboration, I believe EMMA has the honest intention to following customer-dominant logic in all its operations. If there is a conflict of interests between the museum and visitors, it probably can be found in the fact that customers very rarely recognise the limited resources of the museum when they present their ideas and aspirations for its development. The customer insights gained in this project are an excellent example of such: only the sky was the limit when interviewees were asked to dream up their ideal museum experience. It is the museum's task to make the difficult decisions about which ideas can be taken further and

how they can be realised. When operating with a limited budget, there is a risk that an original idea gets slimmed down to a skeleton, which target customers do not recognise as their dream service. I argue that understanding the division between the CDL's ideal aspiration and the organisations' real-life possibilities is essential for any organisation, as it demands good decision-making skills from the organisational leaders to operate in a truly customer-centric way with limited resources.

One of the central pillars of customer-dominant logic is the perception that a customer's value is formed during a long timeframe that extends beyond the service process (Heinonen et al. 2015, 539). How can EMMA prolong the digital service experience to fuel strong customer value? Ideally, EMMA Zone will have the capability to create value for the customer both as an independent service and as a supporting structure for the physical museum visit. A museumgoer can visit the digital service several times between physical museum visits by consuming stories online or by following the content offered by the museum on social media. Optimally, online visits, with their active creation of new emotional impact and memories in the digital world, will enhance the visitor's appetite for visiting the physical museum venue more often. This means that a digital service can lengthen the timeframe when customer value is being created and thus strengthen the customer's commitment to the museum.

6.2 Digital customer experience supporting basic psychological needs

It was the objective of this thesis to find out what Pinja's and Tim's ideal digital museum experience would look like. The proposal about the couple persona's ideal experience, based on the analysis of interviews and observation, was summarised in a diagram (Figure 12) adapted from the "four dimensions of experience" diagram by Pine & Gilmore (1999). The preferences, wishes, aspirations and motives of Pinjas and Tims, which had emerged in the interviews, fit easily into the dimensions of Entertainment, Education, (A)Esthetics and Escapism. The findings fully supported both the academic research and professional surveys about art lovers' motives for visiting museums (Villaespesa 2014; Navarrete 2020; Falk & Dierking 2016a). The goals of self-education and search for knowledge were equally met with the goals of finding inspiration, intelligently fun entertainment, and a place for relaxation – all of which could potentially be found in the digital service.

If we compare the ideal digital museum experience of Pinja and Tim with the METUX model to find out whether the basic psychological needs determined by SDT are met in the proposal for the ideal experience, the needs of autonomy and competence can be found from the wishes for easy usability and content that is easy to consume alongside other tasks (enhancing autonomy), as well from the wishes for new knowledge and tailor-made content (enhancing competence). Whether the proposal responds to the basic need of relatedness is more

difficult to decide. In the interviews, Pinjas and Tims proposed building interactivity into the service through gamification, but in general, interaction with the museum, artists, and other museumgoers did not emerge as an essential requirement for the service. In fact, an ideal digital service was regarded as a place of solitary self-development and individual entertainment. Another perspective of the basic need of relatedness is to understand it as an engagement with art and the museum brand (and not as an interaction with other users or museum professionals). A successful digital service will encourage and strengthen this sense of belonging to the art world and the museum with a genuinely produced content, for example.

The final service proposal of EMMA Zone (Figure 13) should also be compared to the METUX model, and it is worth pondering whether the service proposal covers all spheres of experience: Adoption, Interface, Tasks, Behaviour, Life, and Society (Peters et al. 2018; Figure 7). Alternatively, the service proposal can be compared with the experience triangle model by LEO by asking whether it permeates all levels of the pyramid: motivational, physical, intellectual, emotional, and spiritual (Tarssanen & Kylänen 2009; Figure 8).

Whether EMMA Zone succeeds in the first *sphere of adoption* (motivational level), may simply depend on the museum team's ability to engage users with the online platform. The customer insights gave us a clear signal that the museum should create a steady, active presence on social media (especially on Instagram) to attract Pinja's and Tim's attention and thus tempt them to visit the web service. Without investing resources in social media marketing, it is unlikely they will visit the service regularly. On the *sphere of interface* (physical level), service properties such as easy usability and visual pleasantness will support the fulfilment of the basic needs. These first spheres (or levels) of experience can be solved with clever marketing and intuitive UX design. However, it might be useful to go through the service proposal once again with the help of the METUX model and see how the higher *spheres of tasks and behaviour* can be supported with the service. What kind of tasks will users complete on the website (e.g., read, watch, or listen to stories) and what kind of behavioural change will the service support (e.g., more onsite visits)? Is there a chance to reach *the sphere of life-changing experience*, not to mention the sphere of *societal change*? In Figure 7, a suggestion about the adaptation of the METUX model in the digital museum service is proposed, but it will naturally take much more development to fully implement the model in the design practice of the service.

When comparing the service proposal of EMMA Zone with the higher levels of the experience triangle model by LEO, it can be noted that the current service proposal will likely succeed in providing a satisfying experience on the intellectual level with educational, informative stories, but reaching the emotional level of experience may be a much more demanding task. Here the power of stories (in all formats) may be crucial (Kalliomäki 2016). In retrospect, it

would have probably benefited the design process if the METUX model and the experience triangle model had been in use as a theoretical framework right after the ideation phase. Besides testing the prototype, we could have evaluated service ideas internally with the METUX and experience triangle models and examined whether the service proposal passes through all spheres/levels of experience and thus succeeds at fulfilling the basic psychological needs of users.

Fortunately, it is not too late to implement these models into the ongoing development of EMMA Zone. A practical view of the digital servicescape can be taken, too. The digital servicescape is born in the continuous co-creation process between the museum and users (Ballantyne and Nilsson 2017, 10), and increasing transparency between the boundaries of the service-provider and users will help the service-provider understand how users perceive the digital servicescape. A user visits the service from their unique position, and in the end, the way they perceive and use the service will determine the customer value of EMMA Zone. When the service has been launched, it will help the museum measure customer value and iterate the service further if there are opportunities for direct interaction with users, as interaction will make the value creation processes more visible. Therefore, my suggestion for the museum team is to consider the forms that interaction can take in the service. Another dimension of the servicespace takes place on social media as the key extension of the actual service and should be included in the realm of interaction.

6.3 New museology calls for diverse audiences

The field of museology offered this thesis project a set of contemporary museum theories, especially the concepts of *new museology* and *the platformisation* of museums. Rodney (2019) distinguished three ongoing transformations of museums and summarised them as new museology. These transformations are: 1) the shift of focus from collections to customers, 2) museums recognising their role in increasing democratic inclusion, and 3) museum focusing increasingly on visitor experience. Wilson Barnao (2021) examined museums' platformisation through the concepts of *access, participation*, and *interaction*, seeing the museums' role essentially as a "third place" (Oldenburg 1999; Wilson-Barnao 2021), an environment between home and work and public and private, where people come together both physically and digitally. Wilson-Barnao argues that museums are part of the public sphere that is accessible to all members of the public, creating a space for forming and managing public opinion (Habermas 1989). Digital platforms are becoming highly important, as museums aim to fulfil their goals of accessibility and inclusion, but with the digitalisation, museums are simultaneously meeting the new challenge of datafication and the concerns related to data privacy and the maintenance of a genuinely open public sphere (Wilson-Barnao 2021).

It can be argued that Rodney's distinction about the new role of the museums recognises adequately the emerging role of the customer in cultural heritage organisations, as presented in the theories of customer-dominant logic of service and of digital servicescape. The third aspect about museums acting for stronger inclusion is an issue that deserves to be pondered in the context of the development project. For Rodney, museums' aspiration for inclusion and accessibility is related to the political movement of decolonisation and equality and should be especially targeted at neglected minorities. It must be noted that this aspiration was not included in the leading principles of the service development of EMMA Zone, as the project consciously focused on the personas of Pinja and Tim, which can undoubtedly be considered as a privileged group of visitors. The other persona important to the service, Lenita, also represents an entitled person with steady income and social status. For the museum, the two personas are valuable, since they pay for the museum visit and extra services by visiting the café or the museum shop. In addition, it should be mentioned that one of the focus areas of EMMA's education team is their work with school groups and underprivileged groups to promote equal opportunities and inclusion with social initiatives such as the Kaiku Card and the KULPS! school programme, and EMMA is a member in the Helsinki Art Institutions for Equality initiative. The museum has published an agenda for working towards becoming a more equal and inclusive museum organisation (Helsinki Art Institutions for Equality 2017).

However, working as a fundamentally inclusive and accessible museum organisation takes time and resources, requiring constant revision of deeply rooted traditions, hegemonies, and old thinking patterns. To achieve the museum's strategic goal of physical, intellectual, economic, cultural, and social accessibility (EMMA 2021), special attention in the development of the online platform should be paid to aspects such as: 1) inclusive and diverse representations of art and artists in the content of EMMA Zone, 2) use of gender-neutral language, 3) inclusive and diverse choices of freelancers and other professionals hired for the production, and 4) inclusive marketing and audience development for finding diverse audiences (Arts Council England 2017).

6.4 A need for a digital strategy

At the end of the project, there was good reason for the development team be satisfied with the process and its progression within the given timeframe. The service design model by the Hasso-Plattner Institute had been faithfully implemented, and the process offered useful insights for developing the service concept to the stage that it was almost ready for the next phase, software development. On the other hand, when reflecting on the process, it can be asked whether the preconditions set for the development project limited digital innovation too much. In the funding application for the Finnish Heritage Agency, EMMA had defined the starting point for the new service by stating that the "*service will offer users art-related*

stories to read, listen to, watch and experience in customer-centric ways". This definition excluded a whole entity of digital services, such as a digital art collection or virtual museum exhibitions. It is likely that the service proposal would have been different had there been a wide-open sea of possibilities, letting us freely ideate the digital service based on customer insights (and budget limitations, of course).

The customer insights revealed that although Pinja and Tim are keen to follow and learn more about contemporary art, they have limited time available for such content and the competition for their time is fierce. They are also difficult to please, and the content provided by the museum should be of very high quality to attract Pinja's and Tim's attention. With the new service concept, the museum aims to create a media platform, which requires a professional approach to content production (which in a way is the core of the museum work in the form of exhibitions), and involves new collaborators, such as critics, writers, editors, photographers, and video makers. All these professionals are already involved with the museum's operations, but now the focus shifts from exhibitions and exhibition marketing to the content production of the digital service. Additionally, the users expect the museum's curatorial vision to come alive in the digital service as well.

In short, the new service concept is an ambitious approach to digitalisation. I am confident that EMMA will succeed in managing the digital platform, and it will strengthen the museum's core operations if it is implemented with the same cutting-edge ethos as the rest of the museum operations. The only requirement is that the concept cannot be reduced to a marketing concept but must be considered an integrated part of the museum programme. This brings us to the question of the museum's digital strategy and how EMMA would benefit from it in the future.

What are museums' unique selling propositions? This is a question proposed by Bernadine Bröcker Wieder in a reflection that was published a year after the coronavirus pandemic had fundamentally transformed the museum sector, driving most museums to build an online presence at an escalated speed (2021). Bröcker Wieder ends up proposing that collections and expertise are the two assets the museums have in comparison to other operators in the cultural field. Exhibitions are the primary gateway for making these unique assets useful, but a physical museum space is not the only location in which a museum can act and benefit from its possessions. Bröcker Wieder suggests that there would be "hope for the sector" if the museums invested in their online collections and digital expertise with the implementation of online business models, Web 3.0 technologies, micropayments, and augmented reality (2021).

Recommending that museums consider their digitalisation strategically is not a new initiative. Back in 2014, Harvard Business School lecturer Jill Avery urged museums to think about digitalisation as a strategic priority with the stated objectives and measures of success."

(Gallery Systems 2014). Similarly, Tijana Tasich (2014) compared museums' digital strategies and summarised her findings in a set of recommendations. She argues that whether a museum will succeed in its digital presence depends on its ability to create an organizational structure based on networks. (Kotter, 2011; Tasich 2014). In a networked organisation, teams work together in a flexible, multidisciplinary system to achieve their shared goals. Museum organisations must move from siloed, hierarchical processes to new, more modern structures to survive and flourish in the interconnected and omnipresent digital environments. (Tasich 2014). Similarly, the Gallery Systems staff writers urge museums to implement a digital strategy that involves the entire institution. In the digital strategy of the Andy Warhol Museum, it is stated, "If the museum is to thrive in the digital age, it is important that all staff become comfortable and proficient with the new tools and workflows emerging technologies afford." (Andy Warhol Museum 2015).

In the strategy, the Warhol Museum identified four intense focus areas for digital and emerging media in the coming years. These focus areas are aligned with the museum's broader strategic goals and are designed to complement them. They are:

- Experiences and Engagement
- Narratives and Access
- Organisational Adaptation
- Financial Solvency (2015).

A museum team should keep in mind that the ultimate purpose for their digital strategy is always the audience. Service design methods are useful in understanding the museum visitors' digital habits. When the museum understands how the visitors consume the museum offerings digitally, it can decide what technologies it should invest in. Like all the other museum strategies, the digital strategy should serve the museum user. (Gallery Systems 2021). Bones et al. (2018, ch. 1) also recognise the failure to establish the customer as the primary stakeholder as one of the reasons why organisations' digital strategies flop. Bones et al. urge leaders to ensure that the whole organisation thinks with a customer-centric mindset, as it will be the factor that transforms performance (2018, ch. 1). A successful organisation should make a clear strategic choice to drive their decision-making from a deep understanding of their customers (Bones et al. 2015, ch. 3). The customer voice has to be present at key decisions of service development, delivery, and communication, and this can be ensured by adopting straightforward processes such as developing analytical capabilities and using online presence as a means to gain customer insight, thus benefiting from direct communication with customers in all available (sales) channels or customer touchpoints with interaction (2015, ch. 3).

The organisation should not assume that digital transformation programmes have an endpoint, as, in fact, digital services must be improved and innovated continuously, since the technologies develop continuously and customers' expectations change and adapt to novelties introduced by competitors or by completely different operators in other fields of business (Bones et al. 2018, ch. 1). Bones et al. remind organisational leaders that especially top management should themselves engage in constant learning and accept their vulnerability and non-expertise. They have to recognise that they cannot succeed without questioning everything and building their own knowledge and insight in digital development. Finally, it must be said that digital processes are born through learning-by-doing. Services need testing, and there must be courage to accept short-term failures as a means to achieve long-term success (2018, ch. 1).

Catherine Devine, who leads Microsoft's charge to digitise museums, has outlined a vision for the future of the museums, which can certainly raise eyebrows among museum professionals, with its ignorance about the visitors' data privacy and the lack of understanding about museums' missions in a historical perspective (Whiddington 2021). Her vision is, in fact, so outrageous, that I believe it is worth presenting it here to demonstrate all the possibilities available when thinking about strategic digital transformations in the museum field. For example, compulsory online bookings caused by the coronavirus pandemic have opened museums to the world of visitor data and collecting more data could continue when the visitor arrives onsite, Devine argues (Whiddington 2021). For example, a museum can better understand visitor preferences and behaviour and provide tailored offerings by installing mobile sensors throughout a museum building and analysing visitors with the data they produce. Watching a certain artwork longer than another could in future help the museum conclude what art pleases a visitor and modify the experience to a visitor's preferences (2021).

Devine also argues that museums should collect and connect the visitor data from their digital services and onsite customer services in the same way that retailers have learned to do during the pandemic. Earlier, companies operated their brick-and-mortar stores and online services separately. Today, the two are often meshed to identify visitor profiles with sensors deployed in stores and cookies operating on the website. Devine wants to revolutionise the composition of museum staffs, which are over-reliant on art historians and lack professionals with technological and data-analysis skills. Museums should hire in new directions, as they need to increase data collection capabilities. Devine encourages museums to plan and implement digital roadmaps with a pathway to introduce digital technologies in the institutions. "Museums have realised they are reaching more people with digital experiences, and in ten years, I see the digital and physical museum as equal partners in this world, in the same way as retail," she argues. (Whiddington 2021.)

Leaving Devine's thoughts aside, adopting a comprehensive, customer-centric digital strategy at EMMA would very likely help the museum profoundly transform its activities and construct a strong future that relies on serving customers with the museum's unique selling propositions – collections and curatorial expertise – both in the physical and digital museum environment. A digital strategy with a long-term vision for achieving the museum's strategic goals through digitalisation would support the whole organisation and let it fully benefit from te digital development. For example, a digital strategy would help the museum experts determine whether the museum should make their collection available online or whether and when they should deepen the physical museum experience with 3D exhibitions – or act as a media platform, as the current plan proposes.

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Figures

Appendices

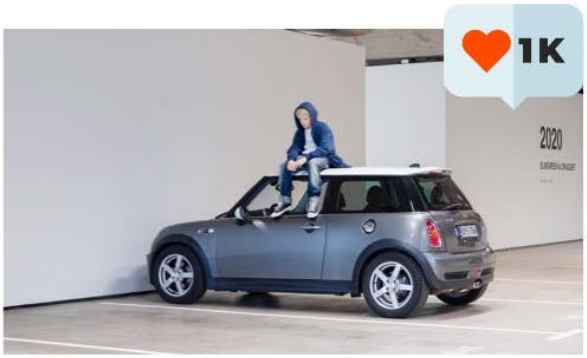
Appendix 1: Sample of prototype views (in Finnish)

Pelillistäminen, idea 3

Valitse oma kuraattorisi.
Hän johdattaa sinut matkalle
EMMA Zoneen.

Pelillistäminen, idea 5

Kerro meille, mitä tunteita EMMAn näyttelyt sinussa herättävät.
Seuraa näyttelyiden suosiota tunnemittarista!




Pelillistäminen, idea 6
Koe EMMAn kokoelmat nyt kotisohvaltasi. Ensimmäisen 3D-näyttelymme teemana on *Kosketus*.
EMMA Zone.
Aina aikaa taiteelle.
3D


EMMA
ESPOO MUSEUM OF MODERN ART
Pelillistäminen, idea 7
Meemimaanantai – EMMA Reality
EMMA ZONEN MEEMI-GENERAATTORI
VUODEN MEEMITOHTORI