TAL TECH

ETDM'S AUDIO EXPERIENCE: ENHANCING VISITORS' CONNECTION TO THE CREATED WORLD AROUND THEM

ETDM-I AUDIO KOGEMUS: VÕIMENDADES KÜLASTAJATE SUHET DISAINITUD MAAILMAGA NENDE ÜMBER

MASTER THESIS

Student:	Sofía Vega Anza
Student code:	177222MADM
Supervisor:	Janno Nõu

Tallinn 2024

AUTHOR'S DECLARATION

Hereby I declare that I have written this thesis independently.
No academic degree has been applied for based on this material. All works, major viewpoints and data of the other authors used in this thesis have been referenced.

18/ 05 /2024

Author: Sofía Vega Anza */digital signature /*

Thesis is in accordance with terms and requirements

"20 / 05 / 2024"

Supervisor: Janno Nõu /digital signature/

Accepted for defence

"......."...................20... .

Chairman of theses defence commission: ....
                                                        /name and signature/

Non-exclusive licence for reproduction and publication of a graduation thesis[1]

I, Sofía Vega Anza, hereby grant Tallinn University of Technology & Estonian Academy of Arts free licence (non-exclusive licence) for my thesis:

ETDM's audio experience: enhancing visitors' connection to the created world around them

supervised by Janno Nõu,

1.1 to be reproduced for the purposes of preservation and electronic publication of the graduation thesis, incl. to be entered in the digital collection of the library of Tallinn University of Technology until expiry of the term of copyright;

§ 7.

1.2 to be published via the web of Tallinn University of Technology, incl. to be entered in the digital collection of the library of Tallinn University of Technology until expiry of the term of copyright.

1. I am aware that the author also retains the rights specified in clause 1 of the non-exclusive licence.

2. I confirm that granting the non-exclusive licence does not infringe other persons' intellectual property rights, the rights arising from the Personal Data Protection Act or rights arising from other legislation.

20 / 05 / 2024

---

[1] *The non-exclusive licence is not valid during the validity of access restriction indicated in the student's application for restriction on access to the graduation thesis that has been signed by the school's dean, except in case of the university's right to reproduce the thesis for preservation purposes only. If a graduation thesis is based on the joint creative activity of two or more persons and the co-author(s) has/have not granted, by the set deadline, the student defending his/her graduation thesis consent to reproduce and publish the graduation thesis in compliance with clauses 1.1 and 1.2 of the non-exclusive licence, the non-exclusive license shall not be valid for the period.*

Department of Mechanical and Industrial Engineering

THESIS TASK

Student: Sofía Vega Anza, 177222MADM

Study programme: MADM10/14 - Design and Technology Futures

Main speciality: Design

Supervisor(s): Engineer, Janno Nõu, +372 56491761

Thesis topic:

English	ETDM's audio experience: enhancing visitors' connection to the created world around them
Estonian	ETDM-i audio kogemus: võimendades külastajate suhet disainitud maailmaga nende ümber

Thesis main objectives:

1. Develop a desirable and attractive concept for the audio experience of the museum based on user insights
2. Define a unique and medium-appropriate way to interact with the museum's content, collections and offer
3. Describe the museum outside of the museum space where the audio experience will take place

Thesis tasks and time schedule:

No	Task description	Deadline
1.	Theoretical framework, contextual research, and desktop research.	20/03/2024
2.	Fieldwork research. Observations, cultural probes, interviews.	22/04/2024
3.	Concept development	06/05/2024
4.	Finalisation of thesis	18/05/2024

Language: English   **Deadline for submission of thesis:** 20 / 05 / 2024

Student: Sofía Vega Anza	(Digital signature)	20/05/2024
Supervisor: Janno Nõu	(Digital signature)	20/05/2024
Head of study programme: Kätlin Kangur	(Digital signature)	20/05/2024

CONTENTS

PREFACE

The starting point for this master thesis came from a project from my professional work, where I became acquainted with the Estonian Applied Arts and Design Museum on a marketing training for foreign markets.

At this training, the Estonian Applied Arts and Design Museum (ETDM or ETDM from here on) shared their ambition and interest in developing a new type of audio-guide that could address several problems they faced that directly affected their visitor's experience and their attractiveness as a cultural institution. Their intention was to develop a guide that could also be used by visitors when the museum was closed.

The idea stayed with me. How interesting to bring the museum outside to meet the objects they have collected, instead of having the objects come to the museum! While an audio guide is an interesting project as a practicing designer, I believed the reframing of the museum space and interactions would provide a wide opportunity space to re-signify and explore the future of the museum and of museum experiences. The idea played in my mind and finally, I proposed to explore the concept of the museum outside of the museum, or the museum outside of its walls, supported by audio content to the ETDM team.

Generous and open as they are, they accepted, and the thesis work began.

I would like to thank the members of the Estonian Museum of Applied Arts and Design who actively supported this thesis work: Silvia Pärmann, Kristel Soidra, Kai Lobjakas, Sandra Nuut, and Sandra Sirp. Our conversations and discussions have widened my understanding of the culture sector and provided invaluable insight for this thesis. I would also like to acknowledge the support of my friends and colleagues who participated in the research process, shared their ideas, and provided new perspectives and motivation. A special thank you to Aleksander Meresaar, Carolina Maia Groisman, Kristiina Veerde, Klarika Mäeots-Uustal, Hanna-Stella Haaristo and Nele Volbrück.

Lastly, a heartfelt thank you to my tutors and professors who provided guidance, direction and at times, needed strong critique during the thesis project and throughout my studies: Janno Nõu, Martin Pärn and Ruth-Helene Melioranski. You all play an integral part on my story as a designer in Estonia.

ABBREVIATIONS

ICOM - International Council of Museums.

ETDM / ETDM - Eesti Tarbekunst- ja Disainimuuseum (Estonian Museum of Applied Arts and Design)

AD - Audio descriptions

KUMU - Kunstimuuseum / Art Museum from the Estonian Art Museum

ERM - Eesti Rahvamuuseum / Estonian National Museum

EKM - Eesti Kunstimuuseum / Estonian Art Museum

ELM - Eesti Loodusmuuseum / Estonian Nature History Museum

MuIS- Muuseumide infosüsteem / Museums' information system

1. INTRODUCTION

The world of museums is rapidly and fascinatingly evolving, with the concept of a museum as an institution constantly being redefined. Currently, museums are exploring ways to become more democratic, diverse, engaging, and flexible. They aim to exceed their traditional roles of collectors and educators by becoming partners in the cultural experience.

In Estonia, museums are recovering from the COVID-19 pandemic, which significantly reduced visits. They are exploring new ways to engage local and foreign visitors with their exhibitions and offerings. This thesis focuses on one such museum: the Estonian Museum of Applied Arts and Design.

In early 2024, ETDM aimed to create an innovative audio experience for their visitors to increase engagement and repeat visits. This desire arose from several complex issues. The first issue was the lack of personnel skilled in delivering tours in multiple languages and the difficulty of finding external guides available on demand. The second issue was the visitors' unmet expectations for an audio guide, which is now considered a basic offering of a national museum. The third issue was the mismatch between the museum's opening times and visitors' expectations. To address these issues, ETDM proposed creating an audio guide that could be used outside the museum building.

This thesis offers a solution to these problems by proposing a new audio experience that creates a valuable concept for users and advances the museum's application of technological solutions.

An experience design approach was used to create this concept, aligning with the museum's role as a facilitator of cultural experiences.

This thesis presents the work conducted to develop the new audio concept for the museum. The first chapter introduces the project space, the world of museums, and visitor experiences. This background helps readers understand the choices of methodology and approach presented in the second chapter.

The third chapter discusses research findings, presenting key insights from all research activities. Five subchapters guide the reader through the research findings,

covering trends in the museum sector, conceptualisations of the museum outside its physical boundaries, an analysis of ETDM's offerings, and research about the museum's visitors and their behaviours and attitudes. The final subchapter focuses on describing the current visitor experience, including its deficiencies and highlights.

The fourth chapter of this study carefully defines the opportunity space for the project. It presents a comprehensive design brief and provides a clear direction for ideation. This lays the groundwork for a thorough exploration of the project space and the conceptualisation of potential audio experiences.

The fifth chapter, on the other hand, introduces an innovative new concept: ETDM's audio-only experience. This concept is brought to life through detailed descriptions of its features and a variety of potential user scenarios that follow the user personas created as a result of user research.

Finally, the conclusions of this extensive work are thoughtfully presented in the last chapter of the thesis and described as significant shifts and contributions to the field.

Keywords: museum, audio experience, strategic design, experience design, museum outside of the museum

2. PROJECT SPACE AND SCOPE

2.1 Museums

Museums are dynamic institutions with varied understandings. The Museum Act in Estonia defines a museum as a legal entity with a collection that among other things, collects, preserves, and presents cultural or natural heritage, conducts research, and makes its findings accessible to the public (Museum Act, 2023). The Estonian Statistics Board further describes museums as preservers of local history and identity, serving as social and community centres (Statistikaamet, 2022). The ICOM offers a different definition, identifying a museum as a non-profit institution that serves society by safeguarding and exhibiting tangible and intangible heritage. It emphasizes museums' roles in fostering diversity, sustainability, and ethical operations (ICOM, 2023).

Despite these definitions being seemingly simple, reaching a consensus on what a museum is proves challenging due to their evolving roles and interpretations over centuries.

2.1.1   Evolution of museums

Designer and researcher Tiina Roppola (2013) outlines in her seminal work, "Designing for the Museum Visitor Experience", an evolution of museum conceptualisations across time, identifying seven eras. The first era was characterised by museums as "cabinets of curiosities" showcasing world's oddities. In the second era, public education, and democratic access to knowledge transformed museums. A "new (museum) order" (Roppola, 2013) appeared with the opening and presentation of private collections to the public. Museums sought to organise and classify diversity for public access.

Museums then became mediators of knowledge and education, albeit with a power imbalance as curators dictated the world view. The third era of exploration saw museums using replicas and reconstructed environments to transport visitors globally. This era marks a **turning point in regard to the understanding of the museum audience, as "the museum started to exist for someone rather than something"** (Roppola, 2013).

Awareness of diversity and representation in museums led to become a "socially responsible institution, with an inclusive and pluralistic world" (Roppola, 2013). In this era, equipped with more knowledge about their audiences, museums seek to empower visitors to create **personally meaningful connections**, rather than just showing or demonstrating.

A shift towards **experiential offerings** and immersive experiences ensued, with museums staging exhibitions as experiences. The latest era sees digitally connected museums with **two-way communication channels**, reflecting the interconnectedness of the world today.

2.1.2   Experiential paradigms in museums: reimagining the museums

Museums as organisations, spaces, and concepts are in a constant state of re-invention, looking to explore and re-script their role in their communities (Savage-Yamazaki et al., 2003), becoming sites of innovation, inspiration, play, and engagement (Cooper Hewitt Interaction Lab, n.d.). They seek new ways to engage audiences meaningfully, experiment with new operational models, and integrate technology to enhance visitor experiences.

Museums have moved beyond being mere "informal educational institutions" (Falk & Dierking, 2016) for collecting, preserving, and exhibiting cultural heritage. As visitor expectations have evolved, museums have diversified their offerings to include games, tours, and workshops, encouraging new forms of communication (McCall & Gray, 2013).

Rachel Ginsberg's "narrative frameworks" tool proposes new paradigms for museums: "museum as knowledge system", "museum as interface", "museum as platform", and "museum as prototype", which reframe museums as more than physical spaces (Cooper Hewitt Interaction Lab, n.d.). These paradigms open possibilities for new interactions and meanings that can be explored through the audio project. Framing museums as "an interface" and "a platform" raises questions for this thesis: *When the museum is an interface, what is it connecting, and how? What are the characteristics of these connections? When the museum is a platform, what are its elements and channels? How do they interact to deliver the best experience?*

Throughout the research process of this thesis, these questions remained on the background, not ignored or forgotten, but rather as a quiet foundation that informed the research, thought and creative process.

From the research about museums key points emerge for this thesis. First, the importance of **designing with an audience in mind**, seeking to generate an experience for specific members or an interest group. Second, the importance of the **openness, inclusive and accessible nature of the museum's collection** and other elements of the offer. It seems crucial to keep in mind that possible design work in this field needs to foster and support this openness, rather than curtail it. Thirdly, the mention and highlight of the **diverse experiential offer** that museums put forth to their audiences which points out to the importance of understanding and framing the audio project for the museum as an experience, rather than, for example, a product or a service. Lastly, the possibility to reimagine or **reframe the museum as something other than an institution**, changing the interactions between the audience and the organisation.

2.2 Museum experiences

The term "museum experience" refers to a visitor's entire journey with the museum, including interactions from initial awareness to post-visit reflection and ideally leading to positive memories and associations. A museum experience journey framed from the visitor's perspective is a concept proposed as early as 1992 by Falk and Dierking, and it views the experience prioritising the visitor, rather than the organisation, with an emphasis on emotional, cognitive, psychological, attitudinal, and aesthetic factors (Annechini et al., 2020).

2.2.1 Museum experience and cultural experience frameworks

This thesis explored various frameworks to structure research, ideation, and field understanding. Priority was given to practical models for concept development, the project's main aim.
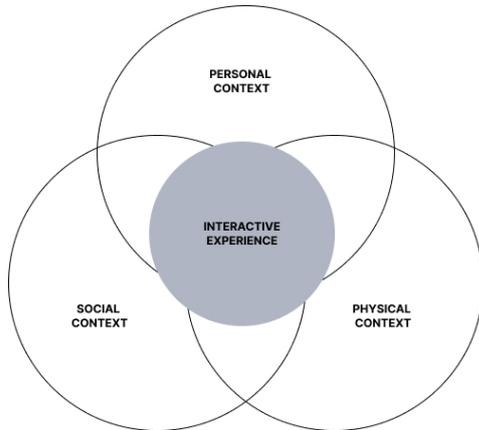
Interactive Experience Model

Figure 1.The Interactive-Experience Model. Visualisation by the author, based on Falk & Dierking, 2016

One cannot write about the museum experience without referring the ground-breaking work of Falk and Dierking (2016) the "Interactive Experience Model", which when published in 1992, radically reframed the visitors experience as the entirety of the museum experience rather than a subset of it, opening up the field to reimagine how museum professionals could conceptualise, plan and design for it.

Falk and Dierking (2016) conceptualise the museum visit as the interaction amongst three contexts: the personal context, the social context and the physical context. As they describe it, *whatever the visitor does attend to is filtered through the personal context, mediated by the social context, and embedded within the physical context".*
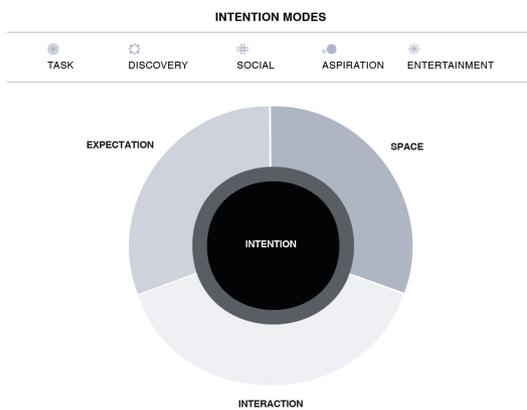
Museum Experience Index model

Figure 2. Gensler's Museum Experience Index model. Source: Author based on Gensler's framework

Gensler, the world's largest architectural studio proposes a similar framework to that of Falk and Dierking for designing and evaluating the museum visit experience. Their model (Savage-Yamazaki & Barber, 2019) proposes that at the core of the museum visit lies the intention mode of the visitor which they describe as: a task mode, social mode, entertainment mode, discovery mode and aspiration mode.

Similar to the Interactive Experience model, the intention mode will filter and assess the experience being had. Influencing the experience, Gensler's model describes 3 factors: The expectations of visitors, the interactions, and the space.

In these and other frameworks and models reviewed, certain patterns and elements emerge as shaping and influencing factors of the experience: the space; the interactions with people and technology; the visitors and their expectations, intentions, motivation, personal worlds, and emotions.

Museum experience journeys

The visitorjourney model, like Tessitura's cultural experience framework (Tessitura Network, 2020), helps understand cultural experiences as sequential actions that generate emotions, inform, and potentially transform the visitor. A journey is a simplified model illustrating a person's relationship with the cultural organization over time, used widely in marketing and design for its person-centric approach (Risdon & Quattlebaum, 2018, pp.88).

Visitor journeys, such as purchasing a museum ticket or planning a visit, occur in different contexts and scopes. While most journey frameworks include pre-visit, during visit, and post-visit stages, the Tessitura Network framework suggests an intrinsic goal to guide visitors to become "culturephiles", that is, constant users of cultural experiences.
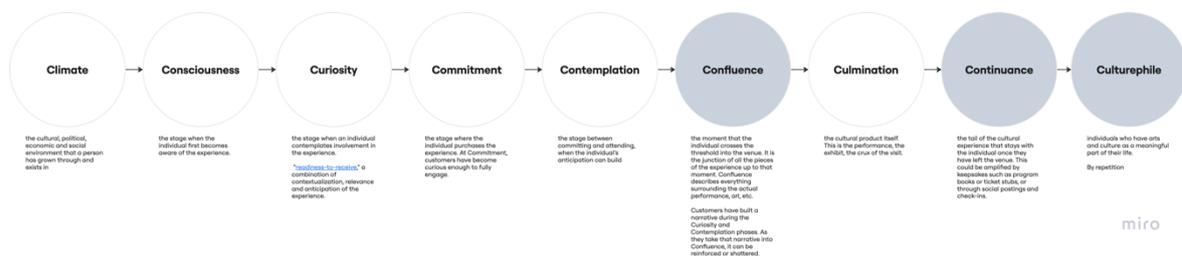
Figure 3 Source: Author with text and content from Tessitura Network's The Cultural Experience Framework

The visitor experience processes in exhibitions

Tiina Roppola (2013) suggests four visitor-centred processes in museum experiences that describe the relationships visitors create with the exhibition environment during their visit. These are: framing, resonating, channelling, and broadening. Framing is influenced by visitors' preconceptions of what a museum is, affecting their interaction with it. Resonating describes visitors' intuitive attractions to certain exhibits or narratives. Channelling involves navigating museum spaces and understanding its

content, possibly with assistance like wayfinding or guided tours. Broadening is the impact the museum has on the visitor, expanding their knowledge and worldview.

2.3 Designing for museum experiences

Based on these frameworks and with an understanding that museums offer cultural experiences, I decided to navigate the research questions through the lens of experience design, or more specifically, designing for experiences.

Experience design is a well-established field within the design discipline. It primarily centres its efforts on the orchestration of interactions between an individual and an organisation. The goal of this orchestration is to deliver a value proposition that is not merely transactional but also **emotionally resonant and personally meaningful** for the guest or visitor. Below are some considerations taken to design for experience in this thesis:

Designing for an experience, not an experience. As frameworks above show, the person is at the core of the experience, filtering and colouring it through their previous knowledge, intentions, expectations, emotional state, and mental models. As such, every experience will always be different, making it important to add flexibility in the design configurations and not designing an experience but for experiences.

Considering visitors' choices. Choice and decisions are part not only of the process of creating exhibitions or curating inside the museum, but also of the experience of visitors. Every visitor will make decisions on what they want to engage with, whether conscious or unconsciously and these in turn, will influence what they experience and remember. Designing an experience that is to be undergone in the same way by every visitor seems to be counterintuitive to the diversity of visitors themselves.

Understanding the visitors' expectations and intentions of visiting museums. The first step in understanding the museum visitor's experience is to understand the visitors' intentions, to ask why they choose to visit (Falk & Dierking, 2016). As intentions mediate the experience, it is imperative to understand how to plan and design for emotion, connection, meaning, and many other intention modes of visitors, so that the audio experience builds up to their expectations.

Engaging with and planning for emotions connected to the museum experience. While in earlier museums, emotions were seen as a distraction from facts, and as such, disturbing the learning in the museum, the new reframing of museums consider emotions as important elements in the experience. As Rachel Mackay (2023) states, there are benefits of engaging with emotions in the museum, as they can "help visitors experience greater impact, make deeper connections and ultimately, even create positive change".

Understanding the mental models or frames of museums. Understanding the mental models that visitors have of museum experiences or, as Tiina Roppola (2013) calls them, "frames", can serve as an inspiration and scoping activity for the design process, especially when part of the work is to create the museum outside of the museum. What will visitors understand as museum if it happens outside of the building? Detecting and deducing how far can the concept of museum space can be stretched to still be recognisable, but novel is key to creating the experience.

Aligning the audio experience to an overarching museum experience. When the audio project is understood and framed as a touchpoint of an overarching museum experience, it becomes imperative to understand what the museum experience is and how the audio can align to it to enable and enhance it.

Designing for the entire journey. When designing for museum experiences one must consider the entirety of the visitor's interactions with the museum, from awareness to remembering or returning, and not to limit the design to the in-museum visitor. This is a particularly interesting area for the audio project, which aims to take visitors outside of the museum.

3. METHODOLOGY

3.1. Research questions

The museum already gave a clear and starting point for this thesis project, asking for an **audio guide** that could be valuable for visitors and enable them to explore outside of the museum space, increasing the museum's accessibility. Rather early on during the exploratory research, it became evident that the research question really was **not how to create an audio guide** but rather that an audio guide already was one possible configuration/answer to the questions that became the research questions:

- What should the **purpose** of an audio experience outside of the museum be?
- How could the **content** of the audio project be to truly **engage visitors** and provide a valuable **quality experience**?
- What is the **"outside of the museum" space** where the audio experience will exist? How can we bring ETDM's museum outside of the museum and make it more accessible for visitors? How could audio be used outside of the museum to share the museum offer with visitors?

3.2 Methodology overview

As previously established, the core offering of museums is a **cultural experience**. While audio guides might be seen as a service or product, their creation is still linked to enhancing the experiential aspects of the visit. Therefore, I decided to investigate the research questions using a **human-centred experience-design approach** and a constructivist research design methodology. My research is conceptually influenced by phenomenological research, grounded theory, and change theory approaches. These influences are evident in my design process and the methods and tools used during my research, although they remain in the background and are not main approaches.

3.2.1   Methodology - Constructive Research Design

Like many other design projects, my research adopts a distinct constructivist perspective, often referred to as a **"meaning-making"** approach (Silverman, 1995). This viewpoint is evident in my intent to imbue meaning into the process of designing a museum experience.

Constructivist researchers value participant feedback to derive inductive interpretations. In constructivist research, it's recognized that multiple realities exist, rather than a static state; hence, all realities are deemed relevant and valid (Heit & Rotello, 2010; Highfield & Bisman, 2012). My project doesn't approach the task from a design thinking perspective that seeks to "problematise". Instead, **it centres on making sense, creating meaning, and reframing based on research findings**.

Phenomenological research is reflected in my fieldwork with museum visitors, where I explore their unique museum experiences, a defined phenomenon. I began my research with the assumption that **by illuminating and describing the distinctive aspects of ETDM's experience through visitors' eyes, this uniqueness could be extrapolated to configurations of the museum beyond its physical boundaries** and into the audio project. This shift allows for the exploration of alternative channels, artifacts, and mediums for delivering the museum experience.

Mixed research methods were employed based on the information needed. This thesis makes use of various experience design frameworks, museum visitor frameworks, museum frameworks, and theories. These were not used in their entirety but applied on an ad-hoc basis according to the research and creation requirements.

3.3 Research and sense-making activities, tools, and methods

The research activities carried out for this master thesis did not occur concurrently at an early project phase but rather they were dispersed through the project and utilised as required. They can be divided into four main categories based on the outcome that was expected of them: building a theoretical framework, understanding ETDM's context, understanding ETDM as an experience provider, understanding ETDM's visitors, understanding and visualising the current experience, and lastly, exploring possible configurations of the experience.

3.3.1 Building a theoretical framework, project space, and context

The research activities first involved developing a framework for the thesis, focusing on museums and ETDM. Context in this case is conceptualised with two different

meanings. The first is the sector's self-understanding, including museology theories, museum experience, best practices, current trends, and contemporary issues. This context was pivotal in building the theoretical framework. The second context is the physical and local setting, encompassing local museums, exhibition spaces, and the city of Tallinn.

Contextual understanding was gained through exploring museum experience frameworks, comprehensive research on museology themes, trend analysis, comparative studies of national and international museums, observations, and experience safaris.

Trend research. This thesis focuses on trends affecting visitor experiences. Through document review, five key trend dimensions were identified.

Observations. Observations, a descriptive research method, were used to document visitor interactions in museums. Six museum visits to ETDM and three visits to other museums provided insights into visitor behaviour and interactions.

Experience safaris. Experience safaris, a qualitative research tool, were conducted at the Estonian Health Museum, the Estonian Museum of Natural History, chosen due to their proximity to ETDM, and KUMU and ERM as they are the most well-known and present in museum visitors' minds (AS Kantar Emor, 2023). These explorations aimed to understand the use of technology in visitor experiences, whether the museums offer an "outside of the museum experience" and observe visitor interactions.

Additionally, as part of my professional work, I visited VABAMU KGB prison cells, Setomaa museums and Arvo Pärt Center. Although these were not structured research observations, they provided valuable insights and broadened my understanding of museum-visitor interactions and the influence of space in the experience.

3.3.2   ETDM

Designing the museum's exterior experience requires the involvement and perspectives of the museum staff. In experience design, it's important to view the organization as a provider of the experience. There are several reasons to involve museum staff in research. Firstly, experiences are designed and orchestrated through deliberate decisions generated by the museum and perceived by visitors. The staff,

who are in a position to make these decisions, provide valuable insight into the experience and the overall role of museums in people's lives. Another reason to research with museums is to understand the constraints of the project, including resources, personnel, knowledge, and skills. This practical information can shape and define the proposed configurations.

To comprehend these factors, I used various qualitative research methods, including semi-structured interviews, informal conversations, and documental reviews.

Semi-structured interviews. In total I conducted **4 semi-structured interviews** with different members of the museum including:

- Kai Lobjakas - at the time of the research incoming museum director, at the time of publication, museum director
- Silvia Pärmann - marketing and communication department
- Kristel and Sandra - members of the education department
- Sandra Nuut - museum's curator

Informal conversations. Informal participatory conversations, as described by Swain & King (2022), are interactive dialogues between the researcher and others used for qualitative exploration. They differ from unstructured interviews as they aren't strictly organised, are not pre-arranged regarding time, place, and topic. In this study, over 6 such conversations occurred and developed organically, deviating from the "meeting agenda" with both ETDM and potential visitors.

Documental review. Reviews of relevant documents including Estonia's Museums Act, ETDM's statutes and their collection statute were conducted. All the documents reviewed are publicly available documents.

3.3.3   ETDM's visitors

Gaining insight into the museum's visitors presented a challenge due to the lack of an established visitor database or documentation system. With no specific information at hand from ETDM, I proactively sourced relevant visitor statistics and profiling data from museums in Estonia.

To grasp ETDM's visitor interactions, intentions, expectations, and content preferences, I used qualitative research techniques. Essential research tasks comprised of short visitor interviews (also dubbed 'tiny conversations'), cultural probes complemented by debriefing sessions, and a minimum of six on-site observations and informal conversations.

Tiny conversations (short interviews). These interviews are typically brief and structured, aimed at quickly identifying potential exploration areas. This method was ideal for understanding the museum experience due to its brevity and flexibility - participants could be interviewed on the spot without prior arrangements, allowing for a significant amount of data to be gathered in a short time.

In total, **20 mini-interviews** were conducted with museum visitors in the museum's shop over the course **of 2 days.** Among these, **7 were with foreign visitors** and **13 with Estonians**. Participants were selected based on their willingness to share their experiences, as no profiling information was available to me beforehand.

Design probes. Design probes, engage participants in an activity of self-documentation and generative research and that allow researchers to understand human phenomena (Mattelmäki, 2006). Probes were used to gather in-depth visitor experiences at the museum, minimizing researcher interference. Completed by eight participants, the study aimed not for statistical relevance but for purposive sampling (Fusch et al., 2017) to answer the research questions. Probes offered insights into participants' museum perceptions, emotions, experiences, and associations with research themes that emerged from tiny conversations. **Five** participants, who wished to share more and provided unique insights, were selected for follow-up interviews (Mattelmäki, 2006).

Sense-making and analysis tools relevant to experience design were also used in this stage and include visitor groups mapping, profile generation and personas creation.

Visitor mapping. Mapping is a visualisation technique used in service and experience design that reveals relationships between intangible elements. In this project, a preliminary user map was produced based on interviews with museum staff and desktop research. This map provided insight into the museum's visitor demographics, acting as a substitute for unavailable data on actual museum visitors. Consequently, it

doesn't accurately represent past museum visitors, but rather interprets groups of visitors believed to have a connection with the museum.

User profiling. This thesis utilised user profiling to analyse data and insights from user research activities. Although often confused and used interchangeably with personas, profiles are distinct. They are based on real information, grouping individuals by their behavioural, psychographic, or demographic characteristics but without humanising the result or creating an "avatar". For this project, profiles were created based on visitors' expectations of the museum and their visitation intentions. In total, **seven profiles** emerged from the research.

Personas. Personas are **humanised representations** of how a profile could express itself in an individual. They represent the profile they belong to but are made into "a lifelike depiction of an archetypical customer that includes attitudes, behaviours, context, pain points, and opportunities" (Burnette et al., 2017) so that they can **elicit empathy**, be more **memorable** and easier to understand. Still, personas are based in real insights and reflect the patters that the research uncovered. A total of **7 personas** were created for this thesis, one for every user profile.

3.3.4   ETDM experience

Experience design tools were used to both understand and visualise the current experience. The tools used include maps of the museum's experience channels, touchpoints, experiencescapes and current offer. Mapping and visualising are a key activity in experience and service design, practices that deal with a great deal of invisible or intangible interactions. Without visualising what is normally not seen, it can be difficult to take an inventory, audit or analyse the experience itself.

Experience channels mapping. Experiences are not limited to a single channel of interaction, but rather are formed through the interactions that occur across the different channels, at different moments in time. Channels are an important space of creation and exploration for designers and organisations alike who can explore channel relationships, as well as changes in structure and the creation of new channels (Staker, 2014). For this project, channels were analysed in a visualisation as well as in the experience journeys and the touchpoint mapping.

Touchpoints mapping. The term touchpoint is used to define the different ways in which customers interact with a brand (Risdon & Quattlebaum, 2018, pp. 22), although in museums, we would replace the term customer for visitor or guest. Touchpoints can be both tangible and intangible, planned or unplanned and designed or undesigned, analogue or digital, manufactured beforehand or in the moment, with even some research determining what are designable and undesignable touchpoints.

For this project, touchpoints and particularly, physical evidence of the experience were mapped across channels and following the visitors' journeys.

Experiencescapes mapping. As is with the rest of the maps and visualisations in this section, experiencescapes mapping is a visualisation tool used to understand in which spaces is the museum experience taking place. Similar to touchpoint mapping, the experiencescapes are mapped following the user journey.

Offer mapping. Mapping what the museum currently offers visitors became one of the most insightful tools, providing key insights particularly on the collection of ETDM.

The results of the research activities are examined more in depth in the following chapters of this thesis.

4. RESEARCH FINDINGS AND INSIGHTS

4.1. Trends in museum and culture sector

Expression of trends in the museum sector vary slightly by location due to local social dynamics, culture, and issues. However, research shows more commonalities than differences globally. By exploring various publications, news, podcasts, videos, reports, and communications for the sector and by museum professionals, five major trends emerged: Multi-layered, meaningful, and personal experiences; hybridisation and use of the digital space; an accessible and open museum; a plural and diverse museum; and community engagement and participation. Below are the main trends that form these dimensions.
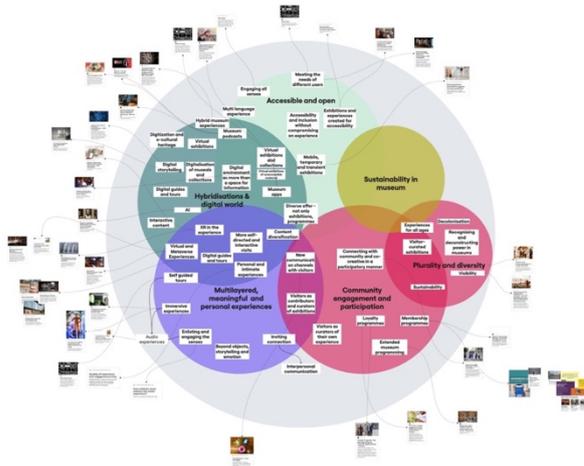

Figure 4. Trend map. Source: Author

Multi-layered experiences and offer digitalization

This trend involves expanding museum offerings across various channels and utilizing technology for diverse content, creating so-called "layers" to the experience, where the physical visit is not the only way to interact with the museum. Museums now have the possibility to digitally supercharge the transmission of information to visitors, either by layering digital content on the existing experience, or by cocreating open platforms of data that visitors can later engage with.

Meaningful and personal experiences

Meaningful and personal experiences in museums involves creating memorable encounters and giving visitors the freedom to explore exhibitions differently every time, as well as provoking thought and self-reflection through topics visitors personally value.

Diverse audio experiences

A variety of audio experiences are used by museums to address logistic challenges, increase accessibility, and create emotional and engaging experiences. Examples of audio include audio guides and self-guided tours, sound-enriched audio descriptions (AD) (Hutchinson & Eardley, 2023), engaging audioscapes, podcasts like the Estonian Museum of Natural History's "*Öökulli Akadeemia Podcast*" and AI-generated multilingual audio experiences.

Self-directed experiences

Self-directed experiences are experiences in which visitors navigate, explore, and transit the museum and its collection on their own and based on their interests, time, or expectations. Currently, they mostly take the form of self-guided tours, delivered though the visitors own mobile devices.

Enlisting and engaging the senses

A trend strongly connected to accessibility and contributing to the multi-layered aspect of this trend dimension is the engagement of all the senses in the museum visit. New practices suggest that engaging all the senses, rather than vision only, can generate better learning experiences and influence the emotional state or memorability of a moment in the museum.

Museum spaces extending into the digital space

Using the digital space to connect with audience looks different for every museum, with some offering completely digital collections, other creating augmented reality environments and others creating digital programs. The more creative use of the digital space is not the creation of a replica of the physical world, but rather using the medium with its limitations and characteristics. A very interesting example of a novel exploration of the digital space comes from the UNESCO's project: a virtual museum for stolen objects. The use of the digital space where is particularly fitting, given that the pieces themselves are not physically available for showing.

Immersive experiences, engaging the senses and extended reality (XR)

Extended reality (XR) and Metaverse environments, spaces where the physical and digital worlds meet, have potential to deliver immersive experiences in museums, creating compelling interactions and content. However, not all immersive experiences require full digital transformation; some use sound, scent, and texture to create engaging atmospheres that transport the visitors "out of the museum".

Physical and location- agnostic accessibility

Accessibility in museums is not only a trend, but as many consider it, a right and soon an imperative mandated by several country based and European-wide regulations. Accessibility in museums presents itself as the desire to be inclusive and generate opportunities for visitors with all different abilities to experience, interact and enjoy the museum, its exhibits, programmes, and offerings.
Museums, while in a process of reinvention, are typically still anchored to a specific geographic location. By using digital technologies, the museum can metaphorically, travel or expand itself into different spaces.

Plurality and diversity

Museums realise that to fulfil their role in the community, they need to attract a diverse audience, and speak to and represent a multicultural audience (Coates, 2021), as well as engage with interest groups with diverse forms of expertise (Bunning et al., 2023). Museums are still making and effort to move away from hegemony and reflect a diversity of perspectives and realities (Jahnsen, 2019).

Community engagement, participation, and co-creation

Community is one of the new tenets of museums, who seek to engage with their audiences not only as consumers of a cultural experience, but as key actors of the community. Specific manifestations of this trend include involving the audience as curators or collaborators in exhibitions.

4.1.1 Implications of these trends for the project

Trends point to the continued expansion of audio as a medium in museums, moving beyond simple audio guides to create more **engaging, personal, and emotional** experiences. This is a positive find that addresses my initial concerns that audio would

remain a relic of traditional museums. Audio can now add a distinct layer to the visitor experience through **storytelling**, enhance **accessibility** for those with different abilities, and expand the audience base with **multi-language options**.

Digitalisation trends also show promise, enabling museums to conceptualise and display collections in new ways. Participatory community engagement aligns with ETDM's goals to involve their designers' community and reach out to the public beyond Tallinn. The potential for audio to generate community engagement remains an open question for the project's goals.

4.2. Museums outside of themselves

One of the core questions that ETDM's project poses is, what constitutes the "outside of the museum"? While at first glance, the question seemed to have an obvious answer — anything that happens in the public space or private spaces of visitors —, after the trend research, that idea is less clear. Can "outside of the museum" also be considered the digital space? Wecker (2013, 2014) and Semper (1994) all explore the concept of extending the museum experience beyond the physical space, use of personalized technology to connect museum experiences to daily life, and the potential for multimedia and interactive media to enhance these experiences. How about conversations visitors have about the museum but outside the building? Or travelling exhibitions? Is there a clear answer to this question? Probably not, probably, like everything else in the museum sector at this point in time, what the museum space means is up for re-interpretation, and because of that, I sought out to explore what possible taxonomies of "outside of the museum" there could be.

Exhibitions or Museum Spaces in Digital Format

Digital replicas of exhibitions surged during the pandemic. Platforms like Google Arts & Culture allow visitors to explore 3D images of museum spaces, view specific exhibitions, and access detailed information about collections.

Digital Versions of Exhibitions and Archives

Museums share their physical exhibitions online, often on platforms like Google Arts & Culture. For example, the Art Museum of Estonia, the National Archives of Estonia, and Tallinn City Museum use this platform. Others, like the Vitra Design Museum and

Cooper Hewitt Museum, use their own websites to offer digital access to their collections.

Apps Engaging Visitors Outside the Museum

Museum apps typically help visitors navigate collections, provide audio guides, or sell tickets. The Australian Museum's FrogID app stands out by engaging the public in identifying frog species, showcasing the potential of apps to expand museum research activities.

Museum Podcasts

Podcasts extend the museum experience beyond physical visits. Museums like the British Museum host podcasts on their websites and platforms like SoundCloud. The "Meet Me at the Museum" podcast by the Art Fund UK and the Design Museum of London's podcast are other examples.

Taking the Museum Home

Some museums offer interactions that extend beyond the visit by giving a "piece" of the exhibition for the person to take with them or to keep. For instance, the National Museum of Estonia's permanent exhibition "Encounters" uses ticket proximity sensors to save texts for later review online.

Travelling and Visiting Exhibitions

Travelling exhibitions bring the museum to new locations, reaching a broader audience. Examples include the Estonian National Museum's travelling exhibitions and "exhibitions in a suitcase" for school visits.

Temporary Museum Experiences

Temporary or pop-up museums set up in new locations for limited periods. For example, the Centre Pompidou created a mini version of their museum in Málaga, Spain, set to be there for five years.

As can be seen by these examples, museums are no longer confined by their physical locations, enabling them to provide diverse experiences. The concept of a museum "outside of itself" can take various forms, ideally aligned with its specific goals. The Australian Museum's FrogID app provides a wonderful example of goal alignment by enabling frog identification in natural habitats, a task impossible within museum walls. This illustrates how certain activities are better suited to an outside-of-the-museum medium.

It appears there are more opportunities for museum experiences outside the traditional museum setting than I initially thought, suggesting the existence of many other potential "outside experiences" not covered in this research.

4.3. ETDM and its context

Estonia has the most museums per 100,000 inhabitants among European countries (Statistics Board, 2022), with 170 active museums and 227 places to visit in 2022. These museums have been rather active in terms of production and organisation of exhibitions, with 1109 exhibitions being shown in 2022, a 2.9% increase from the previous year (Eesti Statistikaamet, 2022). The most common type of museums in Estonia are location or place museums, followed by theme museums and archaeology and history museums (Eesti Statistikaamet, 2023). A significant number of these museums (71) are located in Harjumaa, particularly in Tallinn (53) (Eesti Statistikaamet, 2023), which makes the **competition for visitors' attention and engagement rather high.**

The most well-known museums in Estonia, according to the recent research by Kantar Emor (2023) are KUMU, ERM, the science centre AHHAA, Eesti Meremuuseum and ELM. ETDM, which collects and preserves cultural artifacts, ranked 34th in a survey of first recalled museums, with 4% of respondents visiting it in 2023, an increase from 2% in 2022 (AS Kantar Emor, 2023). The **museum is interested in engaging and attracting more local and foreign visitors**, as evidenced by their participation in the EAS programme "*Loodusturismi ettevõtjate ja muuseumite välisturu võimekuse tõstmise arenguprogramm*" (Development program for increasing the foreign market capacity of nature tourism entrepreneurs and museums) and their participation in the Museum Card Programme.

4.3.1   ETDM- Eesti Tarbekunsti ja Disaini Muuseum

The Estonian Museum of Applied Arts and Design is the national museum tasked with "collecting, preserving, researching and mediating Estonian applied art and design-related material for educational, scientific and experiential purposes" (Eesti Tarbekunsti- ja Disainimuuseumi põhimäärus, n.d.).

The museum's collection is described using various terms such as applied arts, unique consumer art, consumer goods, product, unique design, and design. This terminology causes confusion among the museum visitors, and it could be attributed to both the formation of the museum and its collections, and to the evolution within the design and applied arts disciplines.

This thesis does not intend to provide a comprehensive timeline of Estonian design and applied arts, but a brief overview seems relevant. Much like in many other parts of the world, applied arts in Estonia refers to the work created by trained craftspeople, who apply their skills to create everyday use objects that are not mass-produced. During the Soviet Union era, applied artists were employed in Estonia. Over time, it became evident that skilled workers who could understand and create across different materials were needed. As Kai Lobjakas explains in an interview for this thesis:

> *"And there was this distinction between these two. They tried to keep them together, but they became two different fields, the art field, and the industrial art field, which meant that the art exhibitions were in the art premises, the industrial art exhibitions were in the, you know, grounds for, uh, Like Expo, so it was kind of a contrast."* Kai Lobjakas interviewed by the author, 2024

These new skilled workers, "*industrial artists*", shaped and created the products that were produced *en masse* for the bloc. This involvement of the artists in the industrial world generated a new kind of skilled worker, one that, by use of craft, creativity and material understanding could apply itself to the industry. Later on, the branch evolved to what is known around the world as product or industrial design. Design as a field has kept changing and evolving, as has the applied arts field, with more distance and differences growing in their practices.

The museum originally started as a branch or collection of applied arts in the National Art Museum in 1919, and it was not until 2004 that the museum became independent

and officially included design products under its purview. The most recent change to the museum comes this year, when it became a foundation rather than a state-owned museum, a change that will mostly impact its internal processes.

ETDM currently uses two buildings to carry its operations. The office and exhibitions halls are located in Lai Street 17, a great location for the attraction of tourism, but not equipped enough for holding the entirety of the collection, which resides in a storage space together with other local museum collections.

4.3.2 ETDM's current offer

As is part of the experience design approach, I sought out to understand what the current offer the museum that it presents its audience is. This offer is described in the images and paragraphs below.
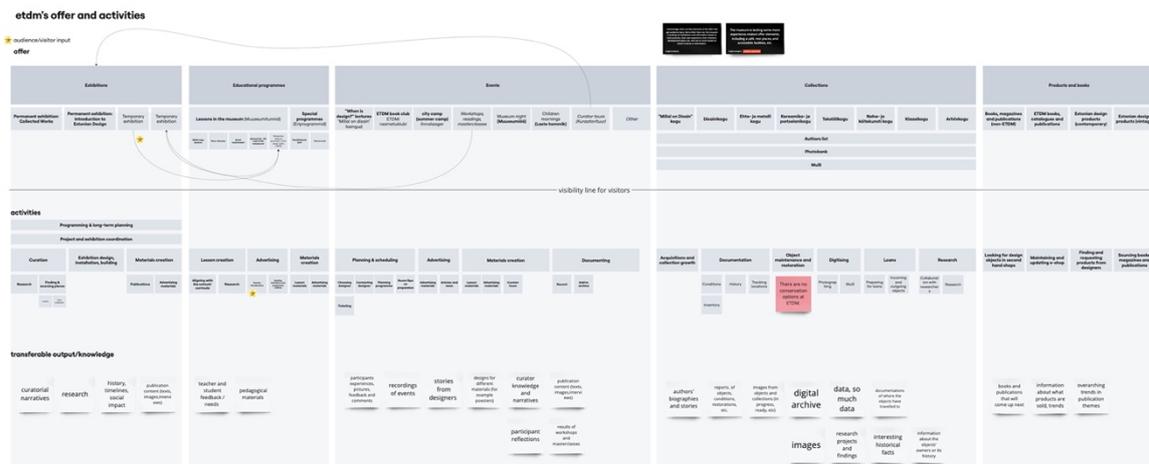
Figure 5. ETDM as-is offer. Source: Author

Figure 6. ETDM offer analysis visualisations. Source: Author

Collection

In 2022, the museum collections consisted of 17,500 items, 15,369 catalogued in the Museum Information System (MuIS). Collections include design, jewellery, metal, glass, ceramics, porcelain, leather, and textiles, plus an archive and auxiliary collections. To visitors, these are presented as design, jewellery and metalsmithing, glass, ceramics and porcelain, leather, and textile collections, and an additional lecture series available through the website. The largest collection is jewellery and metalsmithing (3300 items), followed by ceramics and porcelain (3200), glass (2600), leather (2100), and textiles (1250). The smallest is the design collection with 900 items. Most items have details in MuIS and Fotopank, though Fotopank hasn't been updated in about a decade.
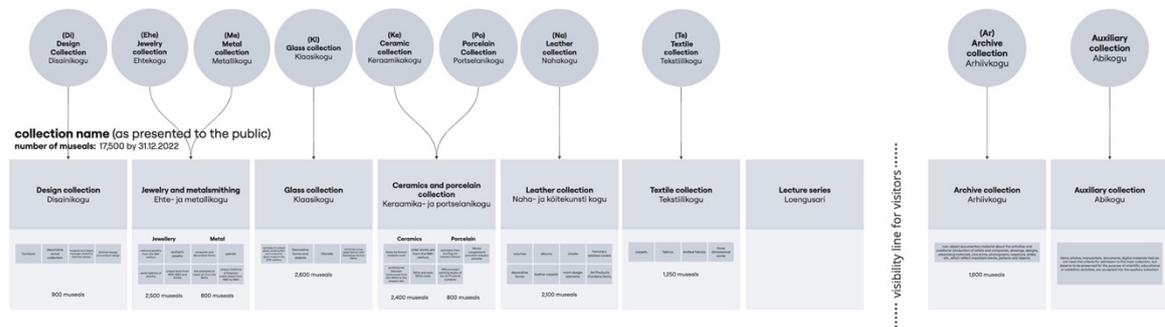

Figure 7. Visualisation of the collections. Source: author.

Exhibitions

The museum is host to **2 permanent exhibitions** located in the second and third floors of the building: Collected Works, a display of applied arts items, and Introduction to Estonian design. Additionally, the museum has a small "gallery" space and a larger hall on the first floor, both of used for temporary exhibitions. The museum plans 3 main exhibitions in a year for the 1st floor hall: retrospective personal exhibition, broader topic exhibition and international exhibition.

The gallery space is used to showcase designers and artists projects or smaller exhibitions, and the planning for those is more organic.

Educational programmes

The museum's educational programmes are targeted at **school children** who visit with their school. The museum offers **4 lessons** inside the museum: Mõtle nagu disainer, Teine võimalus, Kunst tarbimiseks? and Ajamustrid – 20. sajand läbi tarbekunsti. Additionally, lessons are created for the temporary exhibitions. Aside from museum lessons, ETDM offers **2 special programmes**: Parafiinikunst kotil and Tool on tool. Their purpose is to familiarise the children with the fields of the museum, enhance the learning of children based on their schools' curricula and raise awareness of the museum at a young age.

Events

Events are arguably the most diverse of the offer elements put forth by the museum. This category contains design talk and lectures, workshops, a recently founded book club, reading, city summer camp for children, children's mornings, curator tours, and more. Of these events, **only one is accessible online**, the **design lectures** series "Millal on disain?", which are held in **Estonian**.

Products

As do many other museums, ETDM has a museum shop where visitors can purchase Estonian design and applied arts products, from jewellery to ceramic cups, as well as other local products from different parts of the country, such as Olustvere. Additionally, the museum produces print materials in the form of collection books, exhibition catalogues and postcards that are available for purchase in the museum and online. The books offered by the museum are highly specialised and unique exemplars of the design and applied arts field.

4.3.3 Offer analysis

Part of the work of this thesis is to understand what the offer is as well as **what the offer might be missing** to provide a more well-rounded, satisfactory, and uplifting cultural experience to visitors.

Audience input

There are few elements of the offer that get direct audience input in the process of being developed. More often than not, the museum is putting out exhibitions and information based on best practices, their own experience, their intention, development plans, etc. and not so much based on visitor's trends or information. The places where the audience is more engaged is in the educational programmes, as teachers are invited to learn about future programmes and provide feedback, as well as in occasional experimental projects or exhibitions, like the *"Kas sul on see Kodus?"* an exhibition where the audience was invited to contribute with their own items. There seems to be an opportunity to engage visitors more as active participants and co-creators of their own experience than passive receptors of the museum's offer.

Missing key infrastructure for accessibility

As was found in this research project and known by the museum, key accessibility and resting infrastructure is missing to make the offer of the museum more complete. There is no café, cafeteria, or restaurant in the premises of the museum, which significantly impacts the time spent in it. Additionally, the museum lacks accessibility solutions for people with different abilities, texts are not written in braille, there is no audio guide, there are no lifts or accessible bathrooms in the space.

Transferable output / knowledge

In conversations with staff and through mapping internal activities of the museum, it became evident that a vast amount of research work is conducted "behind the scenes", outside of the public's view. This research work which results in rich exhibitions, well-maintained collections and a documented archive, publications, and other products like tours, generates a large volume of information. For this project, that amount of information presents and opportunity since it could be content or input for the audio project, creating a type of "closed" loop where the results of research efforts are not discarded or forgotten.

Finished pieces, not so much process

The exhibitions that were presented in the museum at the time of this thesis were the two permanent collections, the temporary collection UNEVERSUM and the Temporary

exhibition by Maryliis Teinfeldt-Grins. Most of these exhibitions **show finished pieces and not so much of the process**. There are of course, exceptions to these assertions, the two temporary ones give glimpses of certain pieces' creation process or the authors' intentions and work behind the scenes. Some interviews are displayed in the Introduction to Estonian design exhibition, but not much more. This is noted also by Kai Lobjakas, in her words:

> *"Maybe we're missing at some point things when we'd like to show something at the exhibitions, and, uh, and they're all, almost always just the ready solutions, but not this kind of … process of getting there? Like the experimentation?"* Kai Lobjakas in interview by the author, 2024

Opening up the "*behind the scenes*" world of the museum and its themes is a potential area of interest regarding this audio project.

No new design practices in the collection

Collecting design is one of the tasks of the museum, and as its statute and interviews with staff indicate. Through the collection, providing **a comprehensive view** of contemporary design is one of the museum priorities:

> *ETDM's priority is to **bring together materials related to Estonian applied art and design** (objective and documentary heritage related to phenomena and events), thereby **providing the most versatile and comprehensive picture of the developments in these fields**.* - Extract from the Statute of the Estonian Museum of Applied Art and Design

Yet, the collection of the museum seems to focus only on product or object design, with very few exceptions. The **materiality of the collection stands out**, as it **forgoes the inclusion of other design disciplines that have emerged in recent decades**. Noticeably absent are developments in the digital and graphic design fields. In the case of digital design, the lack is stark, considering the country's branding of itself in the export markets as e-Estonia. The graphic design collection on the other hand, is underworks and part of the purview of curator Sandra Nuut. But those are not the only design disciplines that one could consider missing from the collection and offer, intangible design is also not quite presented. Service design, interaction design, experience design, social innovation, are all missing from the collection, even though

they are fields that are even taught in the Estonian Academy of Arts. The absence is puzzling, considering Estonia no longer has a very strong production industry, and its creative work has moved into the service sector, yet those works are not shown or collected. The fact that there are these missing pieces is of course not on the museum or its director, who even stated in a public interview in ERR:

> *"I would say that Estonian design is very vibrant, and the picture is very colourful. And what is interesting is the expansion of practices and the addition of new ones to what has become traditional. It is fascinating how practices take root that we may not be too used to today or are not aware of. In a few years, we would like to make an exhibition about such so-called invisible design, that is, design that is not necessarily reflected in a physical object but is a part of our lives in a more perceptible, predictable way and how these processes are dealt with, and we are guided by it. It's a field where a lot is being done, but we don't know much about it at all."* Kai Lobjakas interviewed by Mari Peegel for ID ERR, 2024

4.3.4   ETDM's channels

Experiences are formed through interactions across different channels and moments. In an experience-oriented strategy, multi-channel research and an overall experience concept (Staker, 2014) are vital as customers engage with multiple channels simultaneously. Channels, defined by interaction, information, and context (Risdon & Quattlebaum, 2018, pp. 3–20), are key for designers and organisations to explore relationships and structural changes, and create new channels (Staker, 2014).

Museum visitors often switch between channels during their interaction. They may see a city poster, search online, buy tickets on-site, and follow the museum on social media post-visit. Despite visitors not necessarily noticing this switch, museums must understand and accommodate it for a seamless experience. Channels shouldn't be viewed merely as media, but as enablers of moments (Risdon & Quattlebaum, 2018, pp. 3–20) that collectively form the desired experience.

ETDM's channels

ETDM offers its experience through four main channels: in-person, physical space, digital, and communication. Visitor interactions mainly occur at ticket booths and with

invigilators. The physical channels include the museum building, exhibitions, graphics, signage, and wayfinding. The majority of the experiences take place at the Lai Street building. Communication and marketing primarily happen through social media and national news. The digital channel is the least utilised, the museum's website mainly provides information, allows users to purchase books and publications, and serves as a communication platform, but offers no more experience interaction moments.
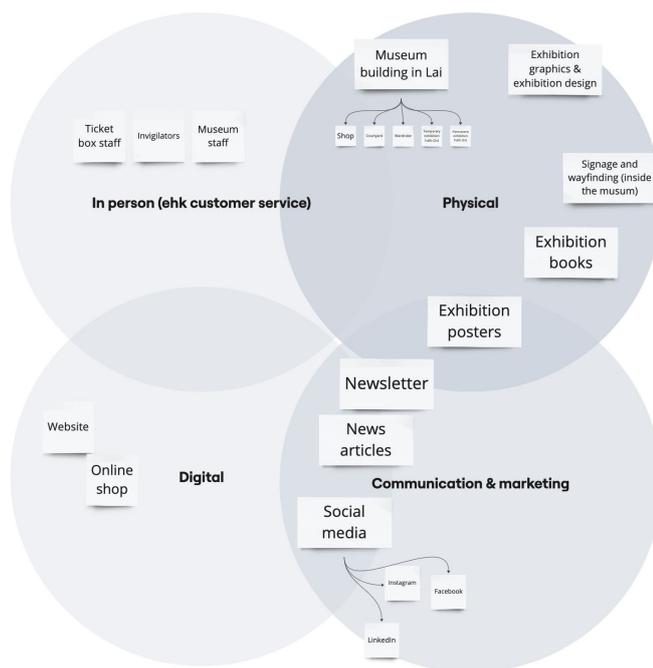
etdm's experience channels & touchpoints

Figure 8. ETDM's channels and touchpoints, capture from rich research space. Source: Author

Materiality in the museum

The topic of materiality, or the theme of the tangible is a recurring one throughout the research. The channels analysis reveals an over-reliance on the physical building and the material / built world to deliver the visiting experience. Even the objects in the exhibitions, whether temporary or permanent are shown only as originals, not in representations, such as drawing or digitally, though other technology.

Channels disconnected

At present, the channels of the museum have little interplay between them. That is, while information is promptly updated amongst all the channels, there are little moments when interacting through one channel and switch to another is beneficial for the visitors' experience. Simply said, the channels exist but the transitions between them as the visitors move through their visit have not been explored. An example of a possible thought transition could be the possibility for visitors to purchase their tickets online and them present them at the front desk or being able to use their mobile devices to interact with the exhibition space- **these moments of overlap have not been planned by the museum yet**.

4.3.5   Touchpoints

"Touchpoints" are various ways customers, or in the case of museums, visitors, interact with a brand (Risdon & Quattlebaum, 2018, pp. 22). These can be tangible or intangible, planned, or unplanned, and either designed or not. Regardless of their nature, all touchpoints influence visitors' behaviour and expectations. Viewing touchpoints as an interconnected set of interactions (Risdon & Quattlebaum, 2018, pp. 24) can meet visitors' needs across various contexts and channels. The effectiveness of a touchpoint depends on how well it fits into the overall experience as collectively, they shape the customer experience (Risdon & Quattlebaum, 2018, pp. 26).

The user journey, which includes stages and moments, is a useful framework for designing touchpoints. Another helpful tool is creating touchpoint inventories by channel and user journey stage, which was used for this analysis. Only designed and planned touchpoints were mapped, considering they represent the museum's intent regarding the visitors' experience.

The analysis of the touchpoints when placed across channels throughout the visitors' journeys in a visit to the museum revealed two important findings in the pre-visit and post-visit stages of the journey.

Pre-visit touchpoints

Pre-visit, there are not many touchpoints connected to enhancing the appreciation or deepening a relation with design/applied arts products, engaging with the theme or

even preparing the visitor for the experience. The touchpoints that exist are either: communication touchpoints, to attract visitors, or research touchpoints related to archival material which offer some basic information about the collection (MuIS and Fotopank).

Post- visit touchpoints

The post-visit stage of the museum, after the visitors have left the museum is the most unused. There are very few touchpoints that allow the visitors to continue their experience, whether by documenting, creating, or staying in active contact with the museum. These include a newsletter and social media but not much else.
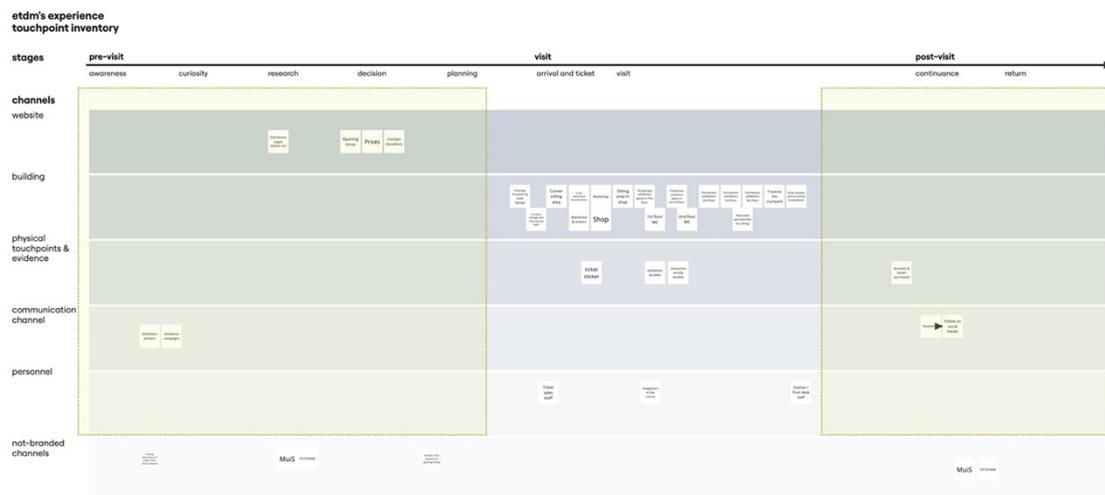

Figure 9. Touchpoints missing in the pre- and post- stages of journey. Source: Author

Additionally, it is evident that once the visitor arrives to the museum, most of the touchpoints and interactions are concentrated, as well as physical.
The pre- and post- spaces, as well as channels where no touchpoints are designed are great opportunities for re-design and design interventions.

Figure 10. Concentration of touchpoints in the physical channel and during the visit stage. Source: Author

4.3.6   ETDM's experiencescapes

Echoing the question style of ETDM's lecture series "Where does design happen?", for this research, "Where does the ETDM experience happen?", and the answer to that question is in the different experiencescapes. Experiencescapes are understood as the place where human interactions occur to create an experience, a designed, staged, and multi-sensorial experience (Tresidder and Deakin 2019). After it became evident that most of the experience happens in the physical building, I decided to look deeper into the nature of experiencescapes. To do so, another map, also structured following the user journey was created.
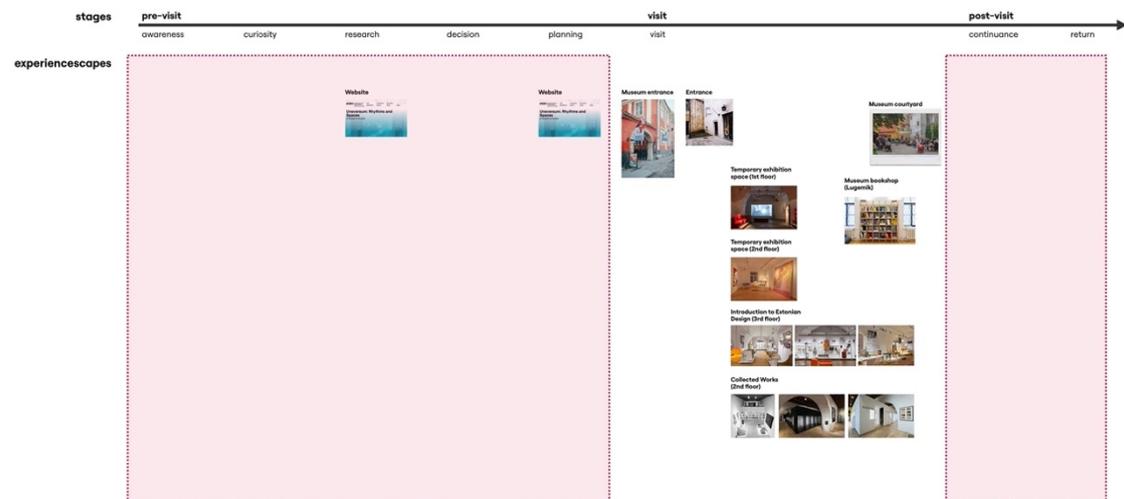
Figure 11. Experiencescapes in the visitors' journeys. Source: Author

Tallinn-based

There are no experience and visit touchpoints outside of the museum in Tallinn, making the collection less accessible for visitors and potential visitors located in the rest of the country. Yet, Estonian design and applied arts are located and created all around the country, which could present an interesting opportunity for the project to engage potential audiences.

A historic location

The location of the museum plays a role in the sensorial experience that visitors will encounter when inside. The space is mentioned by interviewees and participants, almost as another "*actor*" that plays a role in the play that is the visiting experience. The location's physical qualities, the creaky floors, the wooden smells, the cold temperatures inside the old structure all play a role, making visitors feel "*cosiness*" (see experience and visitors). The aesthetic characteristics of the museum's building stands in contrast with the fields that it represents, which are constantly evolving and expanding.

The analysis of touchpoints, channels and experiencescapes revealed fertile ground for design intervention. Channels seems to be rather minimally exploited, especially

digital ones, where the audio project would live. There seems to be opportunities to connect these channels and create a multi-layered and multi-channel experience that is thought through and intentional.

However, the most striking finding is the lack of interaction the museum has with visitors and audience before and after the visit, especially when considering that visitors might be planning or thinking already about visiting the museum, they might more primed, or feel an openness to connect.

4.3.7   ETDM's brand and identity

In designing experiences, the organisation's brand and identity play an important role. While brand is by many, traditionally understood as a distinctive identity transmitted through words or visuals (Newbery & Farnham, 2013), the reality is that a brand is more than its outward facing expressions. The brand essence or core concept of the brand can give direction to the experience, functioning as a guide to deliver value Newbery & Farnham, 2013). Brand attributes on the other hand, give guidance as to how the interactions with visitors, partners, staff, and the audience should be.

Brand is important in experience design not only because of the carriers that need to be developed with the same visual identity, but also because a **brand can give guidance about the values the experience should observe, the messages that are sought to be shared with visitors, the tone of voice of the organisation and more**. For the audio project it is especially important to understand what qualities or attributes to take into consideration so that the result would feel truly ETDM and not a generic project from any other museum or organisation.

ETDM's brand is not as thoroughly developed, right now it consists mostly of brand carriers: a logo, colours, a website, and some examples of graphic application like posters and postcards. However, something already can be said and understood about the museum and how it wants to be perceived.

Minimal and unobtrusive

The ETDM brand has only 3 colours, a minimal font and basically no other carriers. The colours are black, blueish-grey, and white. Images of objects and photography tend to contrast with the brand and demand more attention from observers. This

decision, although I cannot be sure of it, seems intentional. The brand is essentially acting as a platform for the objects, designers, and people to shine and take visual priority. In the physical space this is also observed. The wayfinding is simple and paired back, the tickets and the products sold by the museum are presented in clean and minimal shelves, almost without mixing materials.

Well-crafted and quiet

I would also call the brand well-crafted although not loud. There is an attention to detail in the composition of the photography, the placing of objects in the space, the organisation of the museum's shop products. All around the museum there's harmony and order that does not scream "*look at me*" but leaves items to take center stage. The staff in the space are wearing elegant but minimal and understated clothing, which, of course, is from Estonian designers. Altogether, the brand in the space feels clearly crafted and thought through, but minimal enough that it does not become the centre of attention.

4.4. Museum visitors

Understanding who are the visitors and potential visitors of the museum is a first step to define who could be the potential users of the audio experience project. Who the visitors are can give direction to the research as well as to the characteristics of the audio project.

4.4.1   Local visitors

Luckily for ETDM, mseum visits are a popular pastime in Estonia. From 2008 to 2019, the number of museum visits increased steadily amongst Estonians until the global pandemic put a halt to this trend. Notably, 2017 was a record-setting year with over 3.5 million visits, marking the first time this milestone was reached (Statistikaamet, 2018). Remarkably, only 35% of these visits were by foreign tourists, meaning that 2.2 million visits were from locals.

Before the pandemic, both Estonians and tourists visited museums frequently, with about 60% of the population over the age of 15 having visited a museum in the previous 12 months in 2018 (AS Emor, 2018). Unfortunately, the years 2020 and 2021 saw a significant drop in museum visits, reaching a low even worse than 2008.

Despite not yet reaching pre-pandemic levels, there has been an upward trend since 2022, with the Estonian Statistics Board recording 1796 visits per 1000 inhabitants in 2023 (2023). **Approximately 2.5 million visits were reported in 2022**, a significant increase of 46.5% from the previous year (Eesti Statistikaamet, 2022).

As previously mentioned, Harjumaa, specifically Tallinn, has a high concentration of museums, with 53 in 2022. However, Saaremaa and Läänemaa have a higher engagement rate, with the highest number of museum visits per 1000 inhabitants (Eesti Statistikaamet, 2023). These two counties recorded an average of 3-4 museum visits per person annually (Eesti Statistikaamet, 2023). To rekindle interest in museum visits, two national programs have been implemented: the Museum Night and the Museum Card program.

Launched in April 2023, the Museum Card program was embraced by at least 5200 individuals who collectively visited museums 11246 times by April 28th (Eesti Päevaleht, 2023). The program has resulted in an increase in museum visits, a promising sign for participating institutions. According to the project lead, Kert Kask, museums are seeing an average of 3700 visitors per month (Eesti Päevaleht, 2023).

Who are the local visitors and non-visitors?

Statistically, museum visitors are significantly more **women**, **Estonian speakers**, **residents of Tallinn and Tartu** regions, people with **higher** education and higher income, students, wage workers and families with 1-2 children that are museum visitors in Estonia. Museums are visited by significantly more people aged 15-19 and 30-44 than average. (AS Emor, 2018)

In contrast, non-visitors are statistically more men, Russian Speakers, residents of South Estonia and Virumaa, people with primary and secondary education, lower income households and households without children. There are significantly more pensioners aged 75 and more among non-visitors. (AS Emor, 2018)

Both visitors and non-visitors, however, can have the interest and intention to visit museums or not, as the figure below shows, the reasons vary.
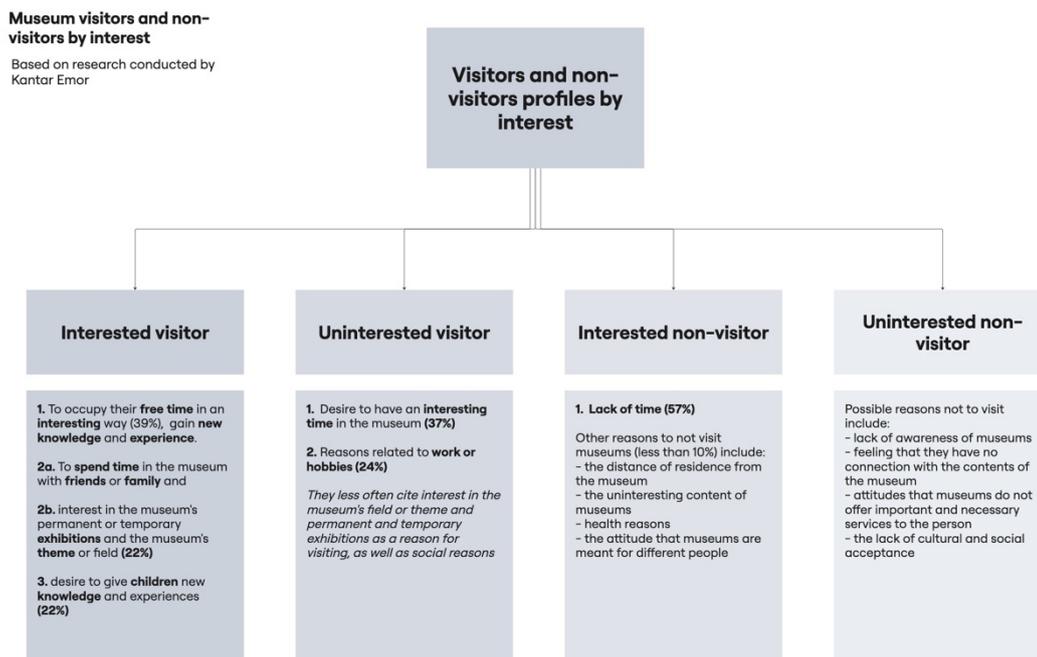
Museum visitors and non-visitors by interest

Based on research conducted by Kantar Emor

Visitors and non-visitors profiles by interest

Interested visitor

1. To occupy their **free time** in an **interesting** way (39%), gain **new knowledge** and **experience**.

2a. To **spend time** in the museum with **friends** or **family** and

2b. interest in the museum's permanent or temporary **exhibitions** and the museum's **theme** or **field (22%)**

3. desire to give **children** new **knowledge** and experiences **(22%)**

Uninterested visitor

1. Desire to have an **interesting time** in the museum **(37%)**

2. Reasons related to **work or hobbies (24%)**

They less often cite interest in the museum's field or theme and permanent and temporary exhibitions as a reason for visiting, as well as social reasons

Interested non-visitor

1. **Lack of time (57%)**

Other reasons to not visit museums (less than 10%) include:
– the distance of residence from the museum
– the uninteresting content of museums
– health reasons
– the attitude that museums are meant for different people

Uninterested non-visitor

Possible reasons not to visit include:
– lack of awareness of museums
– feeling that they have no connection with the contents of the museum
– attitudes that museums do not offer important and necessary services to the person
– the lack of cultural and social acceptance

Figure 12. Visitors and non-visitors. Source: Author with research from Kantar Emor

As can be seen from the diagram above**, interested non-visitors might want to visit or have a museum experience, yet are limited by challenges and obstacles such as the distance from their residence to the museum**, uninteresting content of museums, health reasons and the impression that museums are not meant for them. These challenges can be seen an opportunity for the audio project in two ways. First, an audio project could minimise the geographical barriers, bringing people closer to the museum by removing the need to visit the building. Second, the museum audio experience can address a variety of people whose needs and stories are diverse, and as such, getting them closer to the feeling that the museum is also for them.

4.4.2 Tourists

Locals are not the only visitors of the museum, in fact, one of the main target groups of Estonia's Tourism Strategy for the years 2022-2025 are the "culture scouts" - "people with an interest in architecture, art, design, music, heritage sites who are inspired by the local cultural scene and cultural lifestyle." (MKM, 2022)

Foreign tourism declined during the pandemic but is now showing signs of recovery. Visits to museums have also increased, indicating a growing interest in Estonia's cultural institutions. In 2021, foreign tourists visiting museums numbered just below 240,000. However, in 2022, this figure rose to an estimated 670,000, accounting for 27% of all visitors (Eesti Statistikaamet, 2023).

The most recent research suggests that the majority of foreign visitors travel to Estonia with a partner (41%). Moreover, 28% of these visitors explore museums or exhibitions, making it the fifth most popular cultural activity. The primary focus of Estonia's tourism strategy is on attracting Germans, Brits, Finns, and Latvians. Research indicates that the primary reason Germans, Brits, and Latvians visit Estonia is the desire to explore a new location. Conversely, Finns are more influenced by previous visits to the country and the desire to experience local restaurants and gastronomy (Visit Tallinn, 2024).

Foreign visitors overall are spending on average 316€ in their visit, with culture being one of the smallest expenses, averaging 5€ per night spent. For the audio project, this might indicate that **paid audio experiences might not be so accessible or desirable, or that designing them will require extra value**.

The statistics and numbers suggest a need to engage both local and foreign tourists to visit the museum. This could be achieved by offering attractive and meaningful experiences that visitors would enjoy, would like to return to, share via word-of-, and connect with.

4.4.3   ETDM's visitor groups

The preliminary research to understand who the museum visitors in Estonia are provided good context, yet it does not give insight into ETDM's specific visitors, their needs, and expectations. To profile the ETDM visitors, several activities were conducted.

Mapping the user groups is a key activity to understand not only who the visitors of museums are in Estonia, but who, specifically, are ETDM's visitors. As simple as the tasks seems, the lack of databases and specific statistics for the museum visitors presented an important challenge to understand this diverse group. As Kai Lobjakas put it in our interview "it's a, it's a very, very wide field that we're looking at". Still, I

persevered and through interviews and informal conversations with staff, a map of the visitors started to emerge.

Below, the map showing the possible visitor groups the museum has from the museum's perspective.
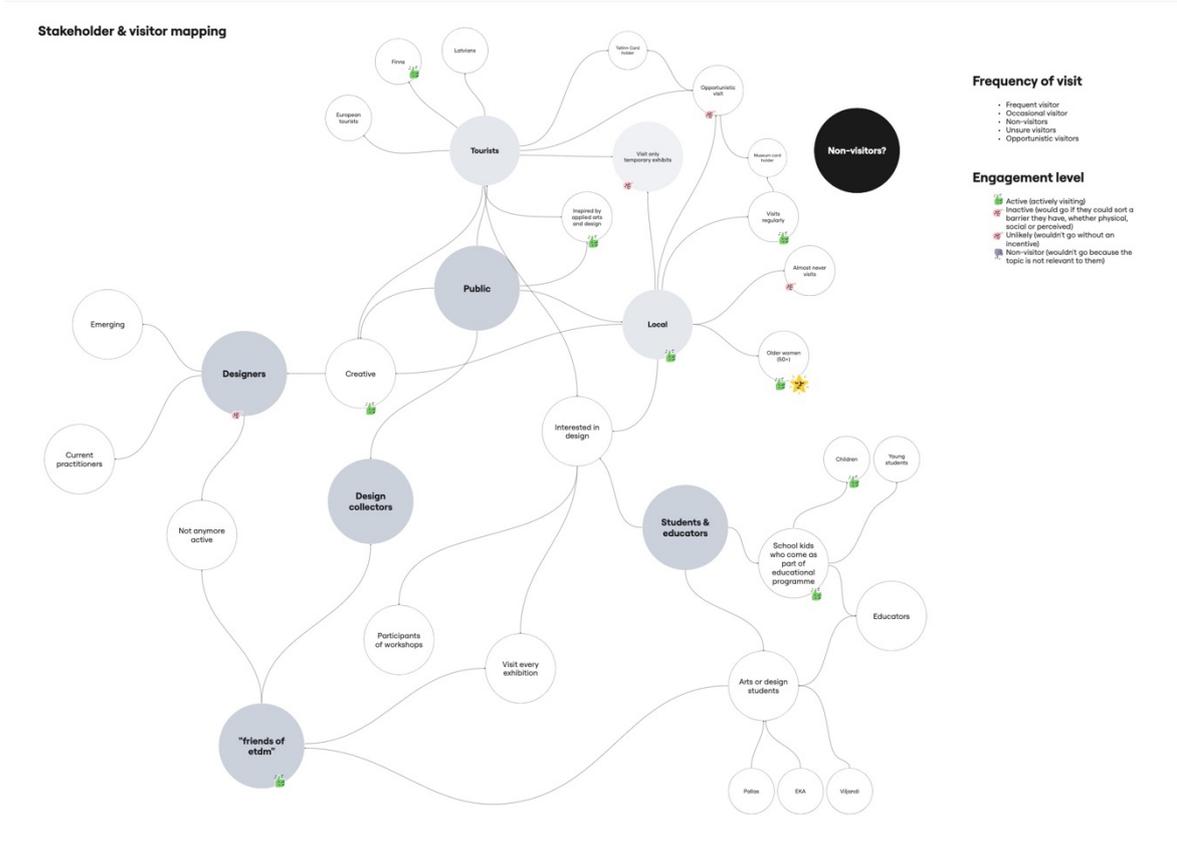

Figure 13.ETDM visitors' map. Source: Author

The public

The term "*public*" refers to the majority of visitors who are neither designers nor creatives, and do not visit as part of an educational program or for educational purposes. This group is the most diverse and challenging to characterise for the museum. While it is likely that this group predominantly consists of Estonian women in their 50s-60s, this profile does not encompass the entire group's diversity. This group also includes both locals and tourists, further broadening the range of profiles.

Students and educators

This group includes school children who participate in museum lessons and university students invited to special projects. Despite its strategic relevance—given research indicating that museum exposure in childhood significantly influences continued visits in adulthood—the group's specific needs are already addressed by the museum's education department and other staff members. Therefore, the decision was made to not focus on them from the research for this audio project.

Designers and artists

The designers group represents both authors of the pieces that exist in the collection as well as practitioners in these fields, whether local or foreign. In the interview with Sandra Nuut, she mentioned the importance of the museum becoming a platform for young talents

> *"It is important to […] feature and push the careers of contemporary designers and artists. I very much feel that this is my role to support them."* - Sandra Nuut interview, 2024

and in her interview, Kai Lobjakas reflected on the need to involve the professional designers especially more in museum activities

> *"We should […] be able to provide more possibilities for the designers to […] work so that it [work] wouldn't come only from the […] market, […] to make it possible for designers […] to think, um, about other things than, than these that come from the market to the table of the company."* - Kai Lobjakas interview, 2024

Design collectors

Design collectors or hobbyists are those who either donate or seek to collect new items to their own collection. As the museum staff puts it, they are well known individuals to the museum and their relationship seems well established.

> *"We have done [a lot] ourselves to kind of build the, uh, the field of collectors."* - Kai Lobjakas interview, 2024

Friends of ETDM

The last large group is that comprised of friends of the staff, workers from other museums, professionals in exhibition or design who regularly visit, curators, art historians and so on. These are people who by their connection to the sector or the staff repeatedly visit the museum or attend all of the exhibitions that it offers.

> *"You can't, forget your colleagues, art historians, you can't go too generic, or at least, one exhibition a year must be in depth, researched properly, with a catalogue and so on."* Kai Lobjakas interview, 2024

Focus on the public

This **thesis strategically focuses on the public,** a relatively unknown group that holds significant potential. The decision to focus on this group was influenced by the fact that other well-defined visitor groups already have offerings from the museum that suit their needs. Designers have lectures, workshops, seminars, and events; students and educators have programs and school lessons, and collectors are engaged through special events and publications. However, the undefined "public" required further definition regarding the museum's offerings and what a meaningful audio project could mean for them.

The following pages will detail the findings from all research activities –mini-interviews, cultural probes, informal conversations, and observations– to understand the public, their intentions, and motivations to visit, their expectations and mental models, their interaction with the museum and its offer, and the profiles that emerged from the data analysis.

The importance of qualitative visitor research is justified not only by the current lack of clarity in the museum, the visitor-centred approach to experience and the diverse frameworks reviewed in this project, but also by the influence that the individual's experience, as established in this thesis's first chapter and highlighted by Kantar Emor's 2018 research:

> *Although museums often focus on the content of the museum when designing their communication, when ranking the main reasons for visiting, it turned out that the interest in a specific area or main theme of the museum remained in*

*the group of secondary factors among the reasons for visiting, and reasons related to the person came first. - **Kantar Emor***

4.4.4   ETDM's public visitors' profiles and personas

Research findings from tiny conversations, interviews, and probes are fairly consistent with Falk's taxonomy of museum learners (J. Falk, n.d.) and Gensler's intention modes in museum visitors regarding intentions and visit modes. However, no framework perfectly mirrors reality. The main difference between the profiles detected by this research and the aforementioned frameworks is that the profiles do not reflect necessarily a "social visitor" as many of the profiles could also include a social inclination or element to it. Additionally, while Gensler's framework proposes that almost no task-modes are found in museums, interview findings disputed this claim, with several participants reporting looking for something specific from the exhibition or the museum for work or hobbies.

Figure 14. Analysis of user research in Rich Research Space, working materials. Source: Author

The process of creating visitor profiles started by the coding of findings from tiny interviews, probes, and interviews. After findings were coded, I conducted an analysis of visitor characteristics and aspects of their visits: reason for visit or intention mode, expectations, social and interaction preferences, content preferences, engagement with museums, impressions of museums, relationship to design, demographic factors, and insights related to time and navigation.

The most insightful categories of analysis include intention of the visit, expectations of the visit, and visitors' content preferences.

Intention of the visit

Visitors often frequent the museum for a multitude of reasons. The most commonly cited motivations include seeking **inspiration**, **proximity to the museum**, **free access**, **curiosity about an exhibition** - particularly temporary ones -, **a desire for quiet reflection**, **expanding their worldview**, **seeking a connection to another person or history**, **enjoyable use of free time**, and **viewing a specific item in the collection**.

Different levels of intention

As it emerged in the profile analysis, some visitors are very intentional in their visit to ETDM, while others are just looking to go to "*a museum*" or any other entertainment venue or cultural space. This difference is important to consider for the audio project, as it sets the scene for visitor expectations, their openness and interest to interact with it.
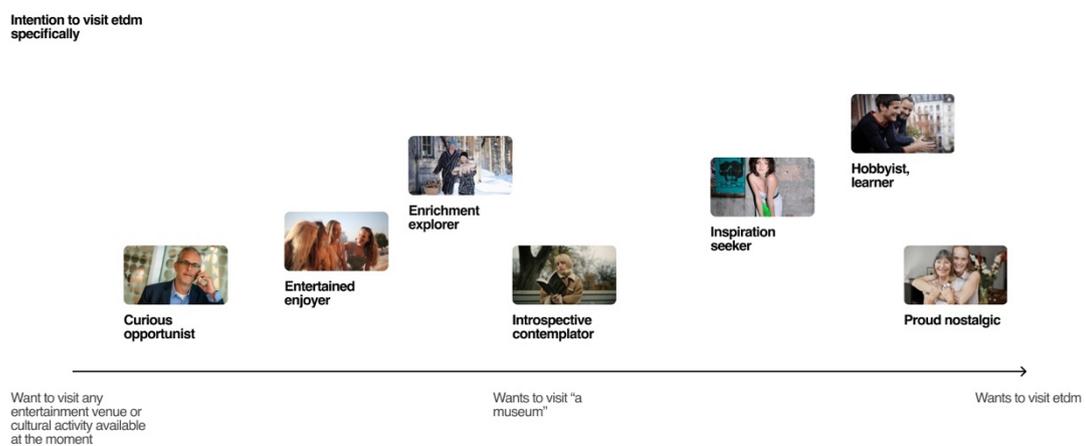
Figure 15. Intention to visit ETDM specifically. Source: Author

Expectations of the visit

Expectations of the visit, which often align with the intention, were generally positive among all research participants, possibly as they were either at the museum or had visited it for the research The theme of beauty carried throughout most of the conversations, influencing the reasons to visit, the memories made and expectations,

as well as the emotions in the space – **beauty**, **aesthetics**, **inspiration**, and **tranquillity** frequently mentioned as reasons to visit or impressions of the experience.

"I expect: To see something truly beautiful" Probe 2

However, expectations were not solely aesthetic or inspirational. The research revealed that visitors still expect to "**learn**" during their visit, an expectation likely linked to society's framing of museums as educational institutions.

The figure below outlines the main intention and expectations patterns observed, which include finding inspiration, being positively surprised, having a personal introspective moment, expanding one's worldview, connecting to others, being entertained, and learning something specific.

Intentions and Expectations for the experience

Inspiration	**Surprise**	**Personal moment**	**Expanding one's world**	**Connecting to others**	**Entertainment**	**Learning something**
Finding inspiration in aesthetics and in the creativity and craft of designers and artists, specifically inspiration for new ideas and for themselves to create.	Being positively surprised after having no expectations, learning about Estonian culture.	Having a personal moment with themselves, an experience that is emotionally resonant, to learn more about themselves and have me-time.	Expanding their world-view, ways of understanding and making sense of the world, challenging their own ideas and learning more about the world around them.	Connecting to each other through history, remembering together, recognising themselves in the objects and history	Using their free to entertain themselves in an enjoyable way, seeing something that interest them.	Seeing or learning something specific related to their schoolwork, to their work, their interest or hobbies. To find information about a specific object or time period.

Figure 16. Visitors' intentions and expectations. Source: Author

Content preferences

For this thesis, it was particularly interesting to note the emergence of certain types of information or presentation styles, especially from interviews, conversations, and probes. These content preferences are illustrated in the figure below. Some visitors expected historical information, others sought more interactive and sensory experiences. Some visitors wanted to learn more about the individuals who used or created the objects, while others were interested in the manufacturing or creative process.

The intellectual content preference refers to visitors wanting their ideas, mental models, and frameworks to be challenged, while the personal preference relates to emotional and memory connections. Lastly, the global preference, more prevalent among foreigners and well-travelled Estonians, was to connect the museum's content with the global landscape.
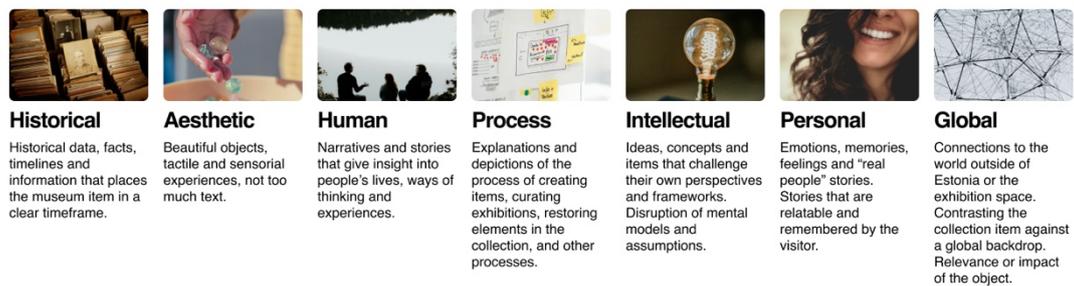
Content preferences

Historical	Aesthetic	Human	Process	Intellectual	Personal	Global
Historical data, facts, timelines and information that places the museum item in a clear timeframe.	Beautiful objects, tactile and sensorial experiences, not too much text.	Narratives and stories that give insight into people's lives, ways of thinking and experiences.	Explanations and depictions of the process of creating items, curating exhibitions, restoring elements in the collection, and other processes.	Ideas, concepts and items that challenge their own perspectives and frameworks. Disruption of mental models and assumptions.	Emotions, memories, feelings and "real people" stories. Stories that are relatable and remembered by the visitor.	Connections to the world outside of Estonia or the exhibition space. Contrasting the collection item against a global backdrop. Relevance or impact of the object.

Figure 17. Visitors' content preferences detected by the research. Source: Author

After analysing these criteria, proto- profiles were created, a process that can be seen in the diagram below, a screen capture of the Rich Research Space.
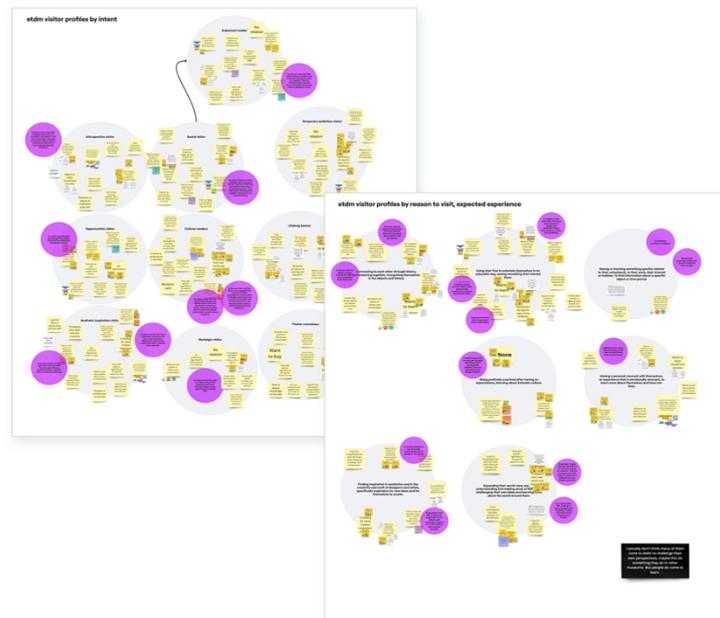
Figure 18. Screen capture of the rich research space for versions 1 and 2 of visitor profiles. Source: Author

Profiles

As a result of the user research analysis work, 7 profiles of visitors emerged. They were named: Inspiration Seekers, Curious Opportunists, Introspective Contemplators, Enrichment Explorers, Proud Nostalgics, Entertained Enjoyers, and Hobbyist or Learner.

Figure 19. Visitor profiles with quotes. Source: Author.

To humanise these profiles and make them more actionable and useful tools for the project and the museum, 7 personas were developed, one for every profile. This process of course reduced the complexity of diversity in favour of a manageable amount of information to work with, and as such, personas should not be seen as the entire source of truth regarding the visitors, but a representation of how profiles can present themselves in a person visiting ETDM.

Profile 1: Inspiration seeker

Intention

Inspiration seekers are those who are looking to find inspiration in aesthetics and in the creativity and craft of designers and artists, and even more specifically, inspiration **for their own creative practice.** Individuals in the research who would form part of this profile described themselves as artists, creatives, or designers. A specific

behaviour of this group as detected from observations is the sketching or documenting of the pieces, forms, and shapes they see, as well as noting and writing ideas or reflections.

> "*I kind of enjoy the aesthetics of those, um, um, sometimes quite small design objects. Because I'm, I'm, uh, studying ceramics.*" Tiny conversation #19

They visit the museum with the intent to find inspiration and broaden their aesthetic language and repertoire. As reported in the interviewees, they find this inspiration for their own practice, meaning they most likely have either a project or overall creative practice that they seek to inform. They are more open to find inspiration in the exhibitions, collections, and museum, not focusing specifically on a designer, artist, item, or material.

The interviewees who fall into this profile reported being interested in art, particularly contemporary art museums, galleries, and institutions. At least 2 reported visiting ETDM due to Tallinn's Art Hall in Freedom square being closed. Others reported specifically visiting ETDM as they know there are many objects that can be aesthetically inspiring.

Expectations

As it can be deduced by the intentions, they expect to feel inspired after the visit and to be exposed to different languages, approaches, and creative practices than their own. The people in this profile expect the space and the entirety of the museum to offer an aesthetic experience.

Content preferences

An interesting finding for this profile was the interest in process and "behind the scenes" content. Content preferences in this group gravitated towards just the **aesthetic** content, the **process of the creatives** and the **intellectual**. Particularly, several interviewees and respondents of tiny conversations mentioned being engaged and moved by the process video shown as part of the Maryliis Teinfeldt-Grins exhibition "Most in Memories", which depicts the author explaining her process and inspiration for the pieces. However, the items themselves are also of interest as they provide formal inspiration

"I really liked it because, uh, there was also this […] video, where you could see how she made those and how she was thinking about those, pictures, her technique and so on"- Tiny conversation #16
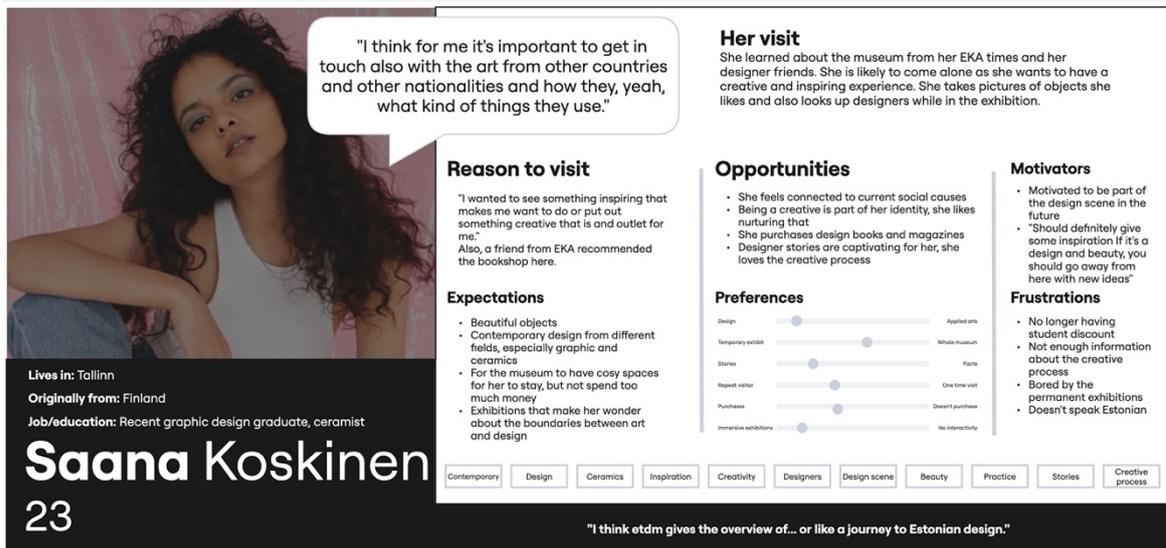
Figure 20. Persona 1: Inspiration seeker profile. Source: Author

Profile 2: Curious opportunist

Intention

The curious opportunist has no specific plan to visit the museum but does so because the opportunity presents itself.

> "*Actually, we're just strolling around the city and visiting whatever comes by*" Tiny Conversation #20

However, that does not mean that they have no expectations of the museum. This profile sees museums as places of learning and discovery of a culture or timeframe. As such, they intend to learn something new but are still open to being surprised.

> P1: "*It's more about knowledge what we've got here.*" P2: "*Yes. Not about the feeling.*" Tiny conversation #3

As expected, many tourists (foreigners) went to the museum because they had **randomly** found it, or because the weather wasn't great. This is what I have called the **"opportunistic" intention**. Or in other words, because **why not** visit the museum? As such, this profile does not have strong ties to the museum's theme.

Expectations

When deciding to visit, they want to be **positively surprised** and, since the profile strongly reflects tourists, they want to learn about Estonian culture, of which they believe design can give a good overview form a human and relatable perspective.

Content preferences

The individuals that can be characterised under this profile were interested in learning **new, interesting facts about Estonian history, particularly if they were tourists.** Content preferences in this group gravitated towards the **historic** information.
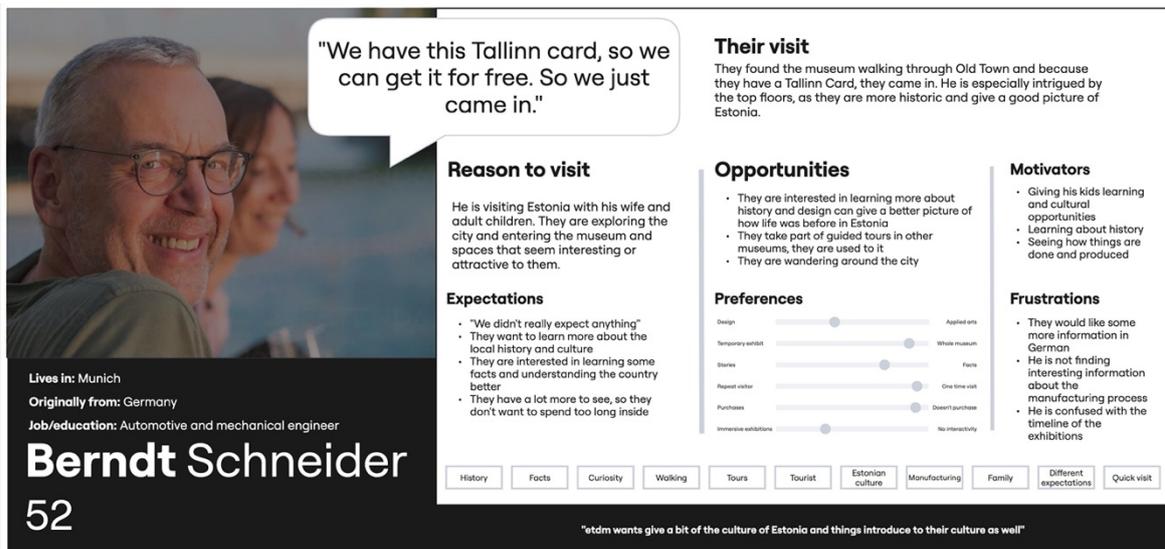
Figure 21. Persona 2: Curious opportunist profile. Source: Author

Profile 3: Introspective contemplator

Intention

Introspective contemplators are looking to have a personal moment with themselves, an experience that is emotionally resonant, to learn more about themselves and to have "me-time". Most of the visitors that fell under this category were young women who preferred visiting the museum alone, to have a moment to self-reflect.

Expectations

While many people referred looking for inspiration or being curious to discover the museum, respondents who fall into this profile talked about a **sensation of calmness, being grounded, and the museum visit being meditative and a time with oneself**.

People in this profile want and expect to go through a reflective and introspective profile that gives them new ideas and **emotions**. They want to feel calm and connected to themselves. This is a profile that talked more about their own emotions in general.

> "I like the quietness and, uh, and you know, it's, it's calming me. *Maybe it's a form of disappearing from your real problems in the real world, like, uh, in any art form, you know?"* Tiny conversation #11

Content preferences

Introspective visitors had a sensorial experience, but they rather expected spaces of calm and quiet or where they could peacefully reflect, or a **designed sensorial experience**. They believed this was something the museum offered them.
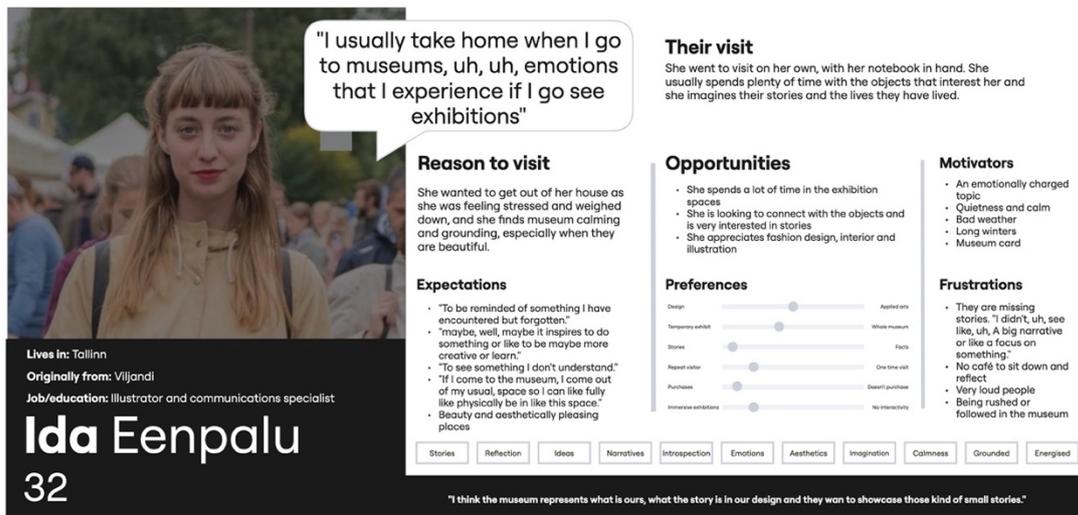
Figure 22. Persona 3: Introspective contemplator profile. Source: Author

Profile 4: Enrichment explorer

Intention

Expanding their world-view, ways of understanding and making sense of it, challenging their own ideas, and learning more about the world around them are some of the characteristics people in this profile share. What this research uncovered is that many of the visitors went to the museum **out of a desire to expand their worlds**.

> *"I just, I am curious about all kinds of, you know, human experience, all facets of that."* – Interview 1

Expectations

The people under this profile were open to almost any experience, as long as it could offer n**ew ideas and challenging perspectives.** They were interested in **discovering something** and had some information beforehand about the museum. These visitors had a general **desire to expand their world view and experiences.** Not only did they have the desire to uncover something new, but to **purposefully enrich one's knowledge and understanding about the world**.

Content preferences

Content preferences in this group reflect their desire to see a more connected world (**global**), exploring new ideas (**intellectual**) and beauty.
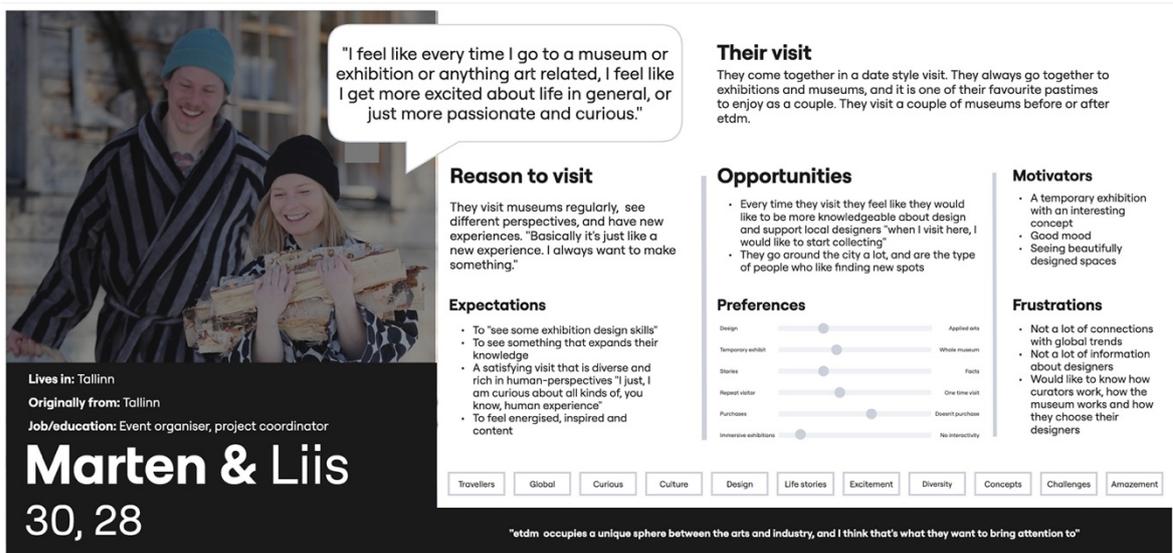
Figure 23. Persona 4: Enrichment explorer profile. Source: Author

Profile 5: Proud nostalgic

Intention

The proud nostalgic is a uniquely Estonian or at least, ex-Soviet profile. It is a profile that reflects the visitors who come to the collection with the intention to take a journey in to the past, and they usually do so in the company of a loved or close one, such as a mother or friends. Their intention is to connect to each other through history, remember together, and they expect to see themselves in the objects and history.

> *"Everyone comes because perhaps maybe they know about these objects and they want to know more or have a like personal connections with objects."* Tiny conversation #20

It is difficult to always assess one's own intentions, and many times when I asked people about the reasons for their visit, they revealed not the intention but factors that influenced their decision to come. This is how themes of **nostalgia and personal history connection** started to emerge. It is clear that **self-identification with the collection and connection to the history were attractive themes.**

Expectations

The expectations of this profile are clearly to find objects and items that are part of their personal lives or history, and to be able to either journey into the past through an emotional and remembrance journey, or to learn about these. Additionally, this profile expects to find commonalities between them and the people who accompany them in the visit through the objects.

> *"This knowledge of, this little part of history that I'm now certain that we had this, common history in the past and we didn't realize that back then how closely intertwined we were, uh, at that time and, and now we are intertwined in different ways."* Tiny conversation #13

Content preferences

A unique preference to this profile however was the feeling of national pride. **National pride** emerged as a feeling that these visitors had in the exhibitions, particularly in the permanent ones. The feeling of being presented with creative works from other Estonians was moving and one of the main takeaways of their visit.

> *"We have in Estonia lots of very talented designers."* Tiny conversation #5
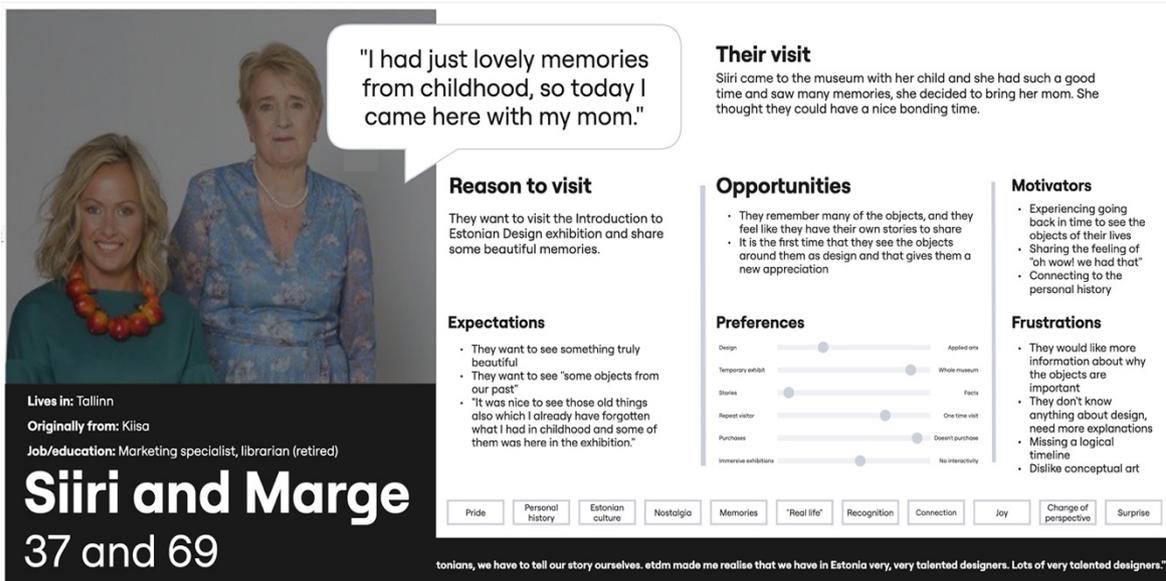
Figure 24. Persona 5: Proud Nostalgic. Source: Author

Profile 6: Entertainment enjoyer

Intention

This profile groups individuals who are more interested in spending time in a valuable and enjoyable way than specifically engaging with the museum or an exhibition. They want to use their free to entertain themselves in an enjoyable way, seeing something that interests them.

> *"I think the most important part is that I'm not tired."* Tiny conversation #17

Yet, they might be attracted by a specific exhibition, as many of the interviewees reported visiting due to the Uneversum exhibition. Interestingly, many came with **friends or family as a social visit** and were looking for an **enjoyable experience** to **share**, which I consider a social and entertaining mode.

Expectations

What this profile of visitors especially referred to when describing their expectations was to see variety of objects and beauty. They referred less often to learning something new, or necessarily wanting inspiration. Feelings of being happily surprised, being able to enjoy and feel energised were shared in this group.

Content preferences

This profile tended to look less at the texts, and to spend more time with the objects. IT was also the profile that reported being more interested in manipulating, touching, and interacting physically with the exhibition items.
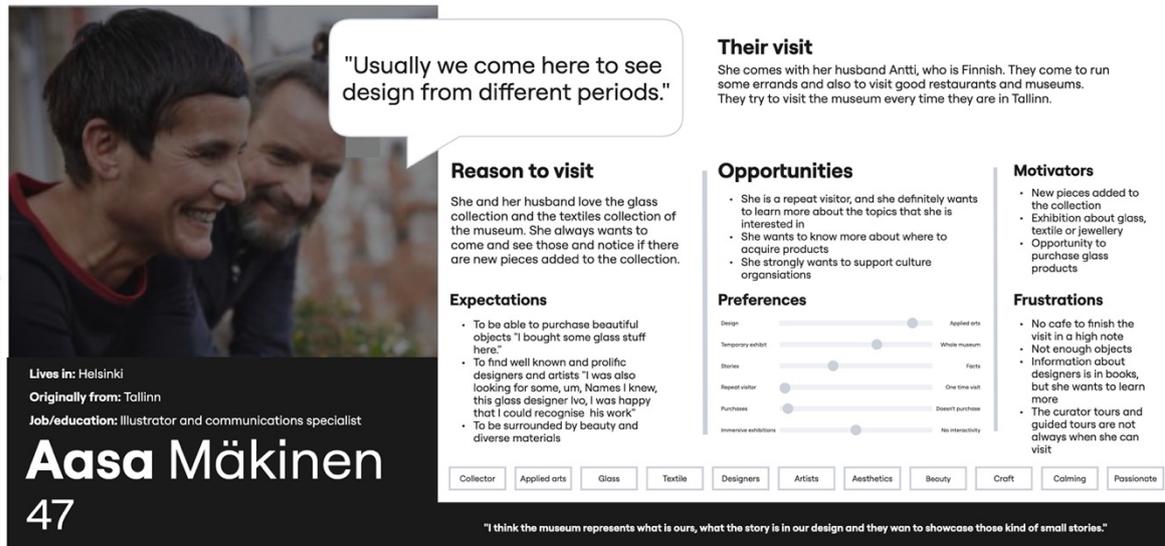
Figure 26. Persona 7: Hobbyist or learner profile. Source: Author

Profile 7: Hobbyist or learner

Intention

A surprising find from the research which stands in contrast with Gensler's work was that visitors of the design museum did visit with a **task in hand**, whether to find a specific object, learn about a time period or work-related reasons.

Expectations

The expectations of this group are targeted towards a specific item, timeframe, designer, or artist. They are normally expecting a vast amount of material and information related to the topic they have at hand, as well as access to the information. They are more likely to use the digital platforms where the museum shares extra information about the collection, particularly MuIS.

One thing must be said about the profiles and personas before moving on to other topics. While the profiles seem clear cut and straight to the point, the reality is that an ETDM visitor can have a variety of motives and expectations for the visit. A person can simultaneously want to expand their worldview and visit with their mother to deepen

their connection through objects. Expectations can also change at any step of the journey. While an opportunist might have few expectations as they discover the museum, that might change the moment they set foot in the experiencescapes and are surrounded by contextual clues about the content of the exhibitions or the qualities of the experience.

Because of the diversity and complexity of experiences and people, it needs to be understood that these profiles and personas represent some ways in which visitors of ETDM have conceptualised the experience, but these profiles are by no means exclusive or prescriptive.

Because of the **diversity and complexity of experiences and people**, it needs to be understood that these profiles represent some ways in which visitors of ETDM have conceptualised the experience, but these profiles are by no means exclusive or prescriptive.

4.5. the ETDM experience

4.5.1   What does the museum want visitors to experience?

A crucial question arises in the analysis work: What do the museum and its staff hope to inspire, generate, or instil in visitors through their interactions? The effectiveness of the offerings can only be genuinely assessed in relation to their intended outcomes and objectives. Insights emerge from discussions with museum staff, who believe in the importance of democratising access to information, nurturing "awareness and appreciation," and fostering deeper connections that go beyond mere recognition.

> *" Through the way we communicate or make heritage more understandable, we are sure to create awareness and appreciation." -* Kai Lobjakas interviewed by Mari Peegel for ID, ERR, 2024 (translated from Estonian)

> *"[…] to be able to understand where the designer actually is in your life"- Kai* Lobjakas in interview with the author

> *"Design is everywhere. […] I think it's a correct thing to say that design is everywhere. Just, you know, usually you don't […] analyse not […] even the city, you don't think about it. You use it and, and, and you don't have to think*

about it. But sometimes, I mean, to give an opportunity to understand maybe what's behind it or what is what is, I think it's nice."- Kai Lobjakas in interview with the author

"I guess our role is to, uh, uh, show why, why these things are important or why they have been important or what has basically been our, uh, design, uh, culture and, or applied arts culture."- curator Sandra Nuut reflecting on the role of the museum in interview with the author, 2024

as she clarified in her interview, while it's good that visitors recognize objects, the museum's role should be to encourage them to deepen those relationships further.

"I mean if it's only about "oh I have this this", well this becomes perhaps too little and too simplistic. It's like a re appreciation or re valorisation of the items that you have at home, or even not that you have, but that surrounded you at some point."- curator Sandra Nuut reflecting on the role of the museum in interview with the author, 2024

More hints as to the purpose of the museum comes from Silvia Pärmann, who works in communication of the museum who clearly states, *"Design is not (only) for designers"* and *"Design affects us all, it's all around us, it's part of everybody's life"* (Interview with Silvia Pärmann, 2024). So, is the museum delivering an experience that allows people to connect with objects, appreciate design around them and deepen their relationship to the created world around them?

4.5.2   Visitors' perspective on the offer and experience

When asked about the museum's offerings, many visitors highlighted the historical overview and learning experience. This slightly contrasts with the museum's goal, which is to provide a deeper connection, not only showcasing "the past", but also illustrating how design and applied arts influence our lives today.

History

Visitors closely associate the history of design with the history of Estonian design, viewing it as a local, rather than universal or global, history. It is also frequently linked with Estonian culture and, at times, with Soviet history. Moreover, participants

in the research believed that the museum aimed to provide them with knowledge in the form of history, facts, and a timeline.

> *"I would think that maybe they would like to offer, uh, a little bit of history and a little bit of future and some inspiration"* Tiny conversation #12

The **visitors' perception of the museum offer stands in stark contrast to the museum's intent when referring to their offer**, a gap that can be considered an opportunity space for the audio project.

4.5.3   Visitors' experiences of ETDM

Understanding the current perception of the visit is vital before making changes like creating touchpoints or artifacts to promote a certain experience. The next sections detail the experiential findings, especially focusing on the visit moment with most touchpoints.

General findings

An aesthetic, inspiring and surprising experience

Primarily, visitors described their experience as more aesthetic than purely entertaining or educational. This sentiment was expressed in brief discussions, interviews, and casual conversations, depicting the experience as aesthetically

An aesthetic, inspiring and surprising experience

"Surprise in general, because as I said, I was not, um, I never thought that Estonia had so much to show"
Tiny conversation #8

"I tried to see it for myself and put my imagination to it. I don't know. It was very inspirational."
Tiny conversation #9

"I feel like every time I go to a museum or exhibition or anything art related, I feel like I get more excited about it. Life in general, or just more passionate and curious."
Tiny conversation #14

"Well, yeah, this is what gives you a feeling. You get the beautiful knowledge and then, the understanding"
Tiny conversation #3

Figure 27.Aesthetic, inspiring, and surprising experience quotes. Source: Author

67

pleasing. Visitors used words like **beautiful**, **surprising**, **inspiring**, and **creative** to describe both the museum's offerings and their personal experience.

Cosiness and warmth, inviting experience

From all the museum experience frameworks analysed in this thesis, it's clear that person-to-person interactions significantly impact our museum visits. This was evident from the cultural probes by participants, where they highly praised the warmth and friendliness of the invigilators and registration staff.

Cosiness and warmth, an inviting experience

"It is comfortable to be around here"
Tiny conversation #13

"Very cozy because it was like a sleep themed exhibition. That was very comfy and nice."
Tiny conversation #2

"I remember that there was this music playing. It was so cool, I think, that the music was playing so it made it so much more human to walk around and not feel like I shouldn't be making any noise or something"
Interview #1

"Warm... not physically!"
Tiny conversation #3

Figure 28. Quotes related to comfort in the museum. Source: Author

I want to be a collector!

When talking about what people took away from the museum visit, many of them talked about being interested in purchasing or collecting design, although only 1 person had actually purchased from the shop. Still, many of them felt compelled to fill their lives with beauty after the museum visit.

I want to be a collector!

"When I visit here, I would like to start collecting. And also, I have a feeling that I would like to buy some of these items."

Tiny conversation #1

"I bought some glass stuff here."

Tiny conversation #17

"I think seeing those things in here, I want to be in the future, like invest things that are like timeless, like buy one, which one is like very, like quality, quality, quality is great."

Tiny conversation #18

Figure 29. Quotes indicating interest in collecting. Source: Author

I want to be a creative!

Another takeaway were the new ideas and urge to create or to produce creative work. One person even mentioned that had she had access to drawing materials, she would've liked to explore that urge already in the museum.

I want to be a creative!

"I got much more, um, excited for the furniture design."

Tiny conversation #14

"I think it's, it was very, if I had paper and like I could draw, I guess it was very like motivational"

Tiny conversation #9

"What I'm taking home, still inspiration. I think I'm now, I want to go home now and you know, try some shapes and stuff."

Tiny conversation #17

Figure 30. Quotes about desire to create. Source: Author

Missed opportunities

Permanent exhibitions: a hit and a miss

The permanent exhibitions seem to engage visitors least emotionally and in terms of self-reflection or introspection. While there is an appreciation for the craftsmanship and objects triggering nostalgia, many visitors simply "walk through" these exhibitions.

"Yeah, I wasn't there as long and for the main exhibitions I just walked through them because I was already, I felt that I had already, like, got into the whole thing and I didn't have it in me to do it all over again."

Interview #2

Figure 31.Quotes about tiredness. Source: Author

This behaviour could be attributed to two factors. First, these exhibitions are often the last ones visited as visitors tend to explore the museum one floor at a time, beginning from the first floor. Second, these exhibitions undergo little change over time. Consequently, if visitors have seen them before, they may not feel the need to spend more time or revisit them in depth. Many visitors didn't go beyond the surface level with the permanent collections, whether because they missed context, information, or they were tired.

Missed connections and depth

"I think there's definitely potential to that, to give more space for that kind of relatable experiences to set in. But right now I think it was just like, ah, I know that"

Interview #3

"Overview...it's exactly the sense I get because I see very many pieces, but I don't really know much about them or the design or the trends or the brief or the process. Like what's the context?"

Interview #2

Figure 32. Quotes about missed connections and depth. Source: Author

House and exhibition navigation

While the museum's navigation may seem simple at first glance - a single staircase leading up and down - many visitors have reported confusion about the layout. Some were not even aware of the additional floors available for exploration. The absence of a clear timeline or structure for navigating the permanent collections frustrated several visitors. These individuals were keen to experience the museum's exhibitions "the right way".

House and exhibition navigation

"I would say that it was a bit overwhelmed. the guidance here was not that great, in my opinion."

Tiny conversation #8

"What the hell is this timeline? Need structure and guidance. Where should I start? OK, so I just focus on the objects?"

Extract from probe 2

Figure 33.Quotes related to navigation. Source: Author

Storytelling

Visitors miss a narrative, stories, and the personal and human touch to many objects that they are interested in. Sharing information about the process of object restoration, curating, the creative process, and the brief designers had, and the life of the object were wanted and mentioned by participants.

"I like to dive into people's stories and experiences"

Extract from probe 4

"etdm is lack of stories"

Extract from probe 3

"Less about, yeah, this is the exhibition and museum, but more about, yeah, did you know about this object? And it looks so cool. And it was like made whatever, and the designer was like this crazy person. And then you have it for like your own, yeah, inspiration or something."

Interview #1

Figure 34. Quotes related to storytelling. Source: Author

Visitors often long for a personal and human connection to the objects they admire, seeking narratives and stories. Research participants expressed an interest in understanding the restoration and curation process, the creative briefs given to designers, and the object's life outside the museum.

"Adding some kind of layers of cool information that I'm not reading myself, or maybe some whatever interesting facts about that, did you know that this designer did this…."

Interview #1

Figure 35. Quote about extra information. Source: Author

Visitors are intrigued by the creators of the objects they interact with. They want to know the person behind the item. As Sandra Nuut pointed out during her interview, **"when you get to know the people, you feel more connected to the topic".**

Spaces to rest, sit, reflect

The exhibitions can be intense in their diversity and vastness, and there are not many spaces or moments for the visitors to rest their minds and bodies, inviting reflection. While they are not necessarily tired or exhausted, they did talk about wanting a moment to take it all in.

Highlights of the experience

Temporary exhibitions

Temporary exhibitions elicited memories, connected visitors and audience to emotions, and made them self-reflect or explore ideas and concepts that they had not before.

Temporary exhibitions

"I'm thinking: What would life be like if I didn't know about time at all. Not experience obligations that... What would I want to do?"

Probe 4

"I'm thinking: What do you do when you don't have the luxury of "right timing"?"

Probe 6

"Time exhibition was also a bit, uh, a bit disturbing. I would say in a, in a, in a, in a inspiring, uh, and giving a kick way, yeah."

Tiny conversation #19

Figure 36. Quotes about the temporary exhibitions. Source: Author

Vastness, diversity, and variety but not depth

The vastness and variety of the collection was also named by visitors, mostly in an appreciative and positively surprised way. Several mentioned the "compactness" of the collection, referring to the fact that while the museum is not very big, it managed to present a very comprehensive view of Estonian design history.

73

Vastness, diversity and variety but not depth

"It's, uh, it's quite, uh, there's actually a lot here if you have, uh, patience to, to look those, those small things"

Tiny conversation #19

"The space is small, small, but there is, like, so much to see."

Tiny conversation #18

"I think it is very concentrated, well concentrated and a good selection."

Tiny conversation #17

"I think it's it's very comprehensive. I think it's the word comprehensive."

Tiny conversation #17

"Different types of art, like furniture, textile, glass, ceramics, everything was covered"

Tiny conversation #16

"I mean, the museum wants to give as much as possible."

Tiny conversation #7

"Compared with some museums of contemporary art, there are really huge number of exhibits to see"

Tiny conversation #1

"I did not expect from the communication of the museum, uh, for the exhibition show to be so fast and so vast."

Tiny conversation #6

Figure 37.Quotes from Tiny conversations where the person is talking about the comprehensive or vastness of the exhibition. Source: Author

On the other hand, interviewees also highlight the feeling of being given an overview or a basic understanding, which points out to a lack of depth or further engagement with themes or topics.

Vastness, diversity and variety but not depth

"Kompaktne it's a very, um, it's a good overview. Of different areas of different, uh, art styles or types of art."

Tiny conversation #15

"Like a basic understanding."

Tiny conversation #14

"Not too tiring for this one visit actually. You get quite a good overview."

Tiny conversation #8

"The permanent exhibition upstairs showed me, like, the basic design from Estonia"

Tiny conversation #4

"It seems like, uh, give like, uh, overview, uh, of, of what's been done."

Tiny conversation #6

Figure 38. Quotes from Tiny conversations where the person is talking about the exhibition being an overview or basic introduction. Source: Author

Recognition and nostalgia

Strong feelings of recognition of one's personal history and Estonia's history were experienced by Estonian visitors. Together with nostalgia, these seem to trigger a desire to revisit.

Recognition and
nostalgia

"I had just lovely memories from childhood, when I came here with my mom."

Tiny conversation #15

"So it was like a recognition of, uh, like what I had as a child."

Tiny conversation #7

"It was just interesting and new perspectives and, and, and things I haven't seen and, and things it was nice to see those old things also which I already have forgotten what I had in childhood and some of them was here in the exhibition."

Tiny conversation #18

Figure 39. Quotes referring to recognition and nostalgia. Source: Author

Immersive experiences

Immersive experiences, sensory experiences, colours, textures, materials, and sound were brought up often by visitors. The visitors referred to the want and desire to take part of those experiences, being bothered if something disturbed them. The more interactive and immersive experiences were understood as a novel and modern way of "museum".

It needs to be said that the immersive installation in Uneversum "Circadian Dreams" was the most mentioned piece in tiny conversations and probes. This points out to a surprise element and immersive element that is positively received by visitors.

Contrary to the permanent collections, where objects cannot be manipulated, touched or interacted with, the temporary collections provided a good source of interactive stimuli and opportunities.

75

Takeaways

The museum aims to inspire visitors to appreciate design and deepen their connections with objects, however, visitors primarily view the museum for beauty and inspiration or as a historical learning experience, focusing on Estonian and Soviet design history. The museum experience is described as aesthetic, inspiring, and surprising, yet participants shared the unmet desire for interaction and immersion. Certainly, many visitors and particularly Estonians, feel a personal connection to the objects which can be deepened and further explored by the audio project, as currently storytelling is a missing layer that visitors notice and perceive in the experience. The museum's vast and diverse collection is appreciated and admired, it leaves visitors energised rather than tired, which is extremely positive for the memories and associations they will form. On the other hand, beauty and aesthetics don't seem to warrant a second or third visit to the museum if the need to depth and more engaging interactions with the objects don't offer any other or novel experiences to the visitor.

5. OPPORTUNITY SPACE

Opportunities are not solutions, but rather circumstances in which a new configuration, idea, interaction, or touchpoint could positively impact and advance an organisation's or visitor's goals. The determination of an opportunity often refers to characteristics such as viability, feasibility, and desirability. These characteristics are typically discussed in product and business development realms, and in experiences where multiple possible futures, value alignment, and the ability to change converge (Risdon & Quattlebaum, 2018, pp. 172).

The subsequent paragraphs will detail the specific opportunities that the audio project can address and the potential spaces in which the audio project can exist.

5.1. Detected opportunities

5.1.1   Opportunities from visitors' profiles

The user research conducted for this thesis points to a series of opportunities for the purpose of the experience, many of them based on user insights. Below are some of the ways how different profiles could find value in the audio project:

- Understanding why the items are considered to be worthy of being in a museum, what their cultural value is
- Exploring the overlap, differences and commonalities between design and applied arts
- Revisiting the permanent exhibitions and having a different experience every time
- Exploring in-depth the history of the object, its maker, its times, etc.
- Encountering even more ideas, concepts and thoughts that can help them go deeper into themselves
- Deepening their understanding of Estonian culture
- Connecting to Estonian history, having a sensation of pride, and belonging

5.1.2 A space for the audio project

Since the initial chapters of this thesis, we have explored and expanded the concepts of space and location beyond their physical or geographical aspects. By now, it should be clear that space and location can also be virtual, facilitated by digital technologies. Another concept for the "place" of the audio project derives from the perspective of time. When is the audio project most valuable and appropriate? Below are potential spaces for the audio project to inhabit. This thesis has extended the concepts of space and location beyond mere geography to include virtual aspects through digital technologies. Another dimension of "place" for the audio project is time, exploring when it is most valuable. Here are potential spaces for the audio project.

Undeveloped Stages

The pre-visit and post-visit stages of the visitor experience are currently underdeveloped. Research participants mentioned a lack of interaction and contact with the museum during these stages, despite being mentally ready for such interactions. There is a clear opportunity to extend the museum experience to include these stages, rather than limiting it to the in-museum and in-exhibit experience. This becomes particularly interesting when considering that many items from the museum's "Introduction to Estonian Design collection" are public pieces that can be experienced by anyone.

Visitors' Mobile Devices

All visitors bring mobile devices to the museum, and many utilize them during their visit, especially for taking pictures. It's socially acceptable to use these devices in the museum, provided it doesn't disturb others. However, the museum is currently missing an opportunity to connect with visitors through one of the most prevalent channels today: mobile/digital. The use of digital channels is predominantly for informational purposes, indicating that this channel is underutilized.

5.1.3 Gaps in the experience the audio project can address

The second type of opportunity spaces refers to the moments in the experience where users feel something is missing. These are known as "gaps" - instances where the

museum does not meet visitor expectations. Gaps can also exist within the museum's main offerings.

Layered Visit

An opportunity exists to enhance the permanent exhibitions by addressing their missing touchpoints. Participants in the research expressed interest in learning and identified learning about history as a crucial offering of the museum. However, when they explored the second and third floor exhibitions, they found that the information provided was neither as deep nor as extensive as the collection itself and the emotional impact of the information presented in these exhibitions was lacking.

A Novel Experience Every Time

The permanent exhibitions are frequently visited and no longer attract many visitors due to a sense of familiarity. However, there's an opportunity to offer different perspectives and ways of engaging with the exhibition without making any changes to the physicality of it. The Museum Card will make it more accessible for people to visit, yet visitors are usually seeking varied experiences, so they are unlikely to repeat the exact same visit every month, unless they are avid fans, which is rare.

Interaction with Real Objects

Despite the museum's strict policies prohibiting physical interaction with the displayed objects, many visitors express a strong desire to touch and feel these historical artifacts. This is understandable, as tactile experiences can provide a more intimate understanding of the objects' historical contexts. Fortunately, the museum also features certain objects that are available in public spaces, outside the confines of the main exhibit. These public space objects, unlike their counterparts in the main exhibit, are not restricted from touch. As such, visitors are indeed allowed, and could be encouraged, to interact with these items.

Missing collections: new design

Design has evolved, leading to new types that generate intangible outputs or complex systems of tangible outputs. These are challenging, if not impossible, for museums to

collect in the traditional sense. Despite this, these practices exist and shape the world just as much as physical products do, influencing the daily lives of Estonians. There's an opportunity to connect both visitors and non-visitors to these practices, offering them an immersive experience.

Stories and the desire to connect

As was noted earlier in user research insights, there is a noticeable absence of stories which if addressed, could potentially enhance the visitor experience. Harnessing the power of storytelling could make the museum experience more emotionally resonant and deeply meaningful for visitors.

The pattern of referring to stories and narratives started to emerge not only in user research btu the museum activities as well. In the interview with Sandra Nuut, curator at the museum, she shares her curating process is like writing where "*writing does not mean only, uh, writing on paper, writing can be even, doing shows or something [else]*" (Sandra Nuut interview, 2024). This points out to a narrative line or series of narratives that at presented to the visitor in her curatorial work through exhibitions. Kai Lobjakas also referred to stories in her interview, talking especially about capturing the artists' stories, when design was called industrial arts:

> *"There was these […] artists who were actually, had never been approached. And they were just completely surprised that we had these questions of "what were you doing?". [they considered their work] normal* things *for the every day. And it was nice to see that some of them really […] explain how they enjoyed the work."* Kai Lobjakas in interview by the author, 2024

But, as she explains, it is not only the stories of the people who created the objects that are relevant to capture and share, it is also the objects' stories

> *"Because the, the, the objects usually or the material heritage is usually so much related to the memories and it could just, um, you know, it's a, it's a usual, just regular glass, but maybe with this actually it was the wedding present. It was the, I don't know, the anniversary present, something."* Kai Lobjakas in interview by the author, 2024

This gap in storytelling presents an opportunity for this thesis project. Stories, in their varied forms, can serve as an intriguing and engaging format for the audio project. They could allow us to weave a rich tapestry of narratives around the exhibits, transforming every visit into a memorable journey through history and an intimate experience with objects.

5.2. Design brief

It is clear that the audio project has a viable opportunity in the pre-and post-visit spaces where the museum can't follow the visitor and is currently not interacting with them. The audio project can also serve as an added and constantly evolving layer to the visitor's experience within the museum, making the in-museum visit more attractive and interesting.

5.2.2   The purpose of the audio experience

The audio project's goal is to engage and inspire museum visitors and non-visitors, connecting them to tangible and intangible Estonian design both inside and outside the museum. Outside of the museum it seeks to connect people with design in its "natural habitat" and inside, to create a rich layer that improves and adds meaning to the visit. The audio project seeks to enrich the experience of encountering design and provide opportunities for visitors to deepen their connection to design objects, history, and impact.

The intent of the audio experience is not to share all the facts, information and data about the design items being observed, but rather to direct the person's attention to the build world around them and refine their recognition of it.

5.3.3   How might we…? question

In a how might we question, the goal becomes: **How might we enable visitors and non-visitors to establish a deeper connection to the created world around them so they can notice, recognise, and appreciate it?**

5.3. Experience principles

Rooted in fieldwork research and visitor insights, these principles indicate how the experience will influence visitors' emotions, behaviours, and memories. Though each principle is unique, they form a system that should be complementary Risdon & Quattlebaum, 2018, pp. 157).

In creating these principles, I organized key insights from prior research, aligning museum objectives with those of the visitors. The process resulted in eight distinct principles, each aiming to connect visitors with the design and applied arts world that surrounds them.

Their experience in their hands

Make it a choice for people to have more information and knowledge at their pace, let them experience the object first.

Keep the focus on the item

Bring the attention to the object and its story, not to the museum and its story.

Don't demand the audience to give too much attention to the solution, the solution should be almost imperceptible.

Real people, real stories

Offer stories told from a human perspective that can be more emotionally resonant.

Surprising discoveries

Surprise the visitor and user with unexpected beauty they might not have noticed before

Connection beyond recognition

Support people to build a deeper relationship and understanding of the object, not stay in the surface.

Harmonious and minimalist

The experience should feel balanced, not too demanding of people's time and attention.

Introspection and personal reflection

Support users to have their own critical perspective and feel confident to explore the commonalities and differences between the two.

Peel the layers

Offer opportunities to explore the topic more in depth, show the layers of the created world, evidence the impact of design and applied arts in the person's context.

Figure 40. Experience principles. Source: Author

6. DESIGN CONCEPT - ETDM'S AUDIO-ENHANCED EXPERIENCE INSIDE AND OUTSIDE OF THE MUSEUM

The proposal of this thesis is the creation of a unique audio concept for ETDM. The purpose of ETDM's audio-enhanced experience is to **deepen** the visitor's **connection to the designed world** around them, **fostering a relationship that goes beyond mere recognition**.

ETDM's audio concept provides an enhanced museum experience that **accompanies the visitors in their exploration of the museum and the created world**, **invites self-reflection and critical thinking through reflection spaces, reveals collectible and non-collectible collections around the person, collects the audiences' stories, emotions and experiences** and narrates **stories and tale**s about the collection items, effectively extending the duration of the visit and the connection to the collection.

Visitors can access the audio experience through their own **mobile devices**. However, unlike other museum mobile platforms, this one does not rely heavily on visuals; instead, it emphasises audio. This is a deliberate choice. Being **audio-first** encourages visitors to observe and interact with the collection item without the distraction of a screen. While images of items may be shared, audio remains the primary mode of experiencing the platform's content.
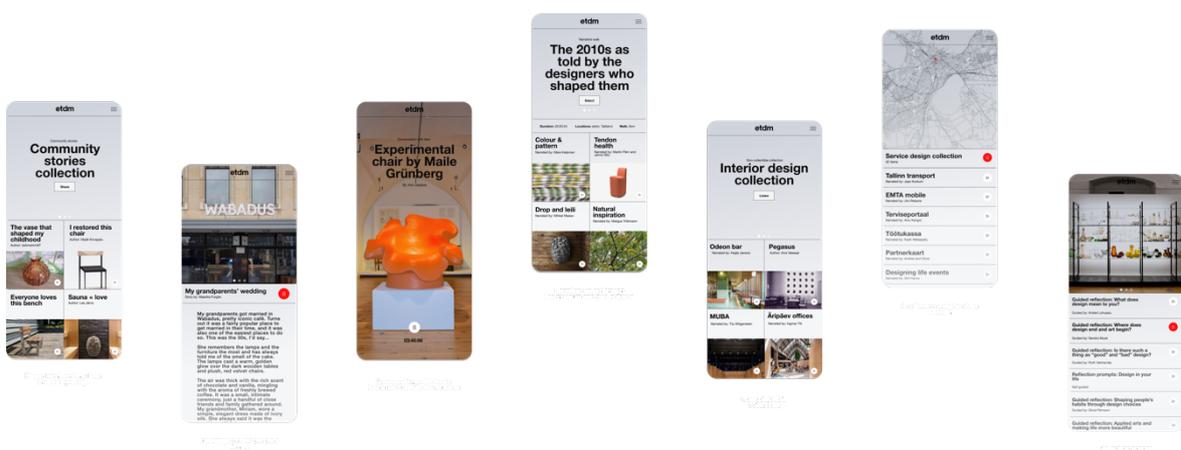
Figure 41. Conceptual visualisations of the audio experience platform. Source: Author

83

6.1. Components

The concept is based on **5 components** that collectively add substantial value to the museum. They aim to help visitors recognise, appreciate, and understand the built world around them.

The first component is a **new audio channel for the museum**. This channel enhances both the in-museum and remote museum visit by letting visitors connect with the design objects and their stories from anywhere. It guides them through all of the museum's collections.

The second component involves an **entirely new addition to the museum's offerings: non-collectible design collections**. Non-collectible items are those that by their size or composition simply cannot be kept in the museum's vault or exhibited in its halls. The non-collectible collections proposed are: Interior design collection, service design collection, digital design collection, and public space furnishing collection. They represent new ways of designing and allow users to interact with design.

The third component involves using **real stories narrated by the people who experienced them**. This helps visitors develop a more intimate relationship with the collection items. These stories are sourced from those involved in the item's creation, development, production, inception, restoration, and more. They provide a relatable and approachable way of connecting to museum collections and items.

The concept also emphasizes **community engagement**. It encourages visitors to **share their own stories** and contribute to the audio collection, turning them into active participants in their own museum experience.

The final component involves creating **spaces and moments for self-reflection**. These help visitors consolidate concepts and ideas in their memories, as well as develop the ability to interpret design and applied arts. This addresses the issue identified by research where visitors were unclear about the nature and significance of design and applied arts.

etdm's audio experience concept

Audio channel	Non-collectible collections	Real stories	Community engagement	Self-reflection
Location-agnostic experience that can be accessed within the museum or outside of it by visitors and non-visitors.	"Virtual" collections of items that due to their location, size or nature cannot be physically collected or exhibited in the museum.	Real and human stories narrated by the people who lived them help visitors build a more intimate relation with the collection items.	User generated content in the form of community stories enables two-way communication and encourages action, turning visitors into active participants in their experience.	User generated content in the form of community stories enables two-way communication and encourages action, turning visitors into active participants in their experience.

Figure 42. Components: grounding elements of the concept. Source: Author

This thesis work proposes more than just an audio guide or an audio experience. It suggests an audio-enhanced museum journey that accompanies the visitor both inside and outside the museum, virtually extending the visit duration and the time for connecting to the collection. This concept offers two novel and unique elements to the museum.

The first element of the concept is a new channel for the museum: an audio channel. This new channel works as a layer to the current museum experience, one that enhances both the in-museum visit and remote museum visit. It allows visitors and non-visitors to connect with the design objects and their stories from anywhere, guiding them to navigate all of the museum's collections.

The second element of the concept consists of an entirely new addition to the museum's offer, the creation of non-collectible design collections, intangible or difficult to collect design items that exist beyond the museum's physical boundaries.

The audio experience connects both concepts, inviting visitors to learn and interact with these collections regardless of their location. The new concept opens opportunities too for continuous, two-way communication, collecting the stories and memories of people who interact with the items in the collections.

6.2. The functions

ETDM's audio-enhanced experience's purpose is to **deepen the connection that the person has with the designed world around them, helping them build a relationship that goes beyond simple recognition**. The concept has four main functions to support this goal:

Accompany the visitor in their exploration of the museum

The visitor can tap their phone to an NFC tag located close to the object that they are interested in, which triggers the audio stories. They can choose to listen more or stay with the shorter initial audio.

Invite self-reflection and critical thinking through narrative walks

The visitor can choose one of the curated reflection walks for their visit when they start. The narrative guides them through the collection of the museum, deepening their understanding, perception, and appreciation of the items.

Reveal collectible and non-collectible collections around the person

Non-collectible items are those that by their size or composition simply cannot be kept in the museum's vault or exhibited in its halls. The non-collectible collections proposed are: Interior design collection, service design collection, digital design collection, and public space furnishing collection. The new experience shows the person where items of these collections are around them.

Collect the audiences' stories, emotions, and experiences

The audience is invited to participate in the knowledge creation and the deepening of other people's connections to items by sharing their own stories, memories, and knowledge about specific design items. By doing so, they are no longer only the audience, but active participants in theirs and others' museum experiences.

6.3. Stories: the core of the concept

This concept is rooted in the idea that items, whether they are part of a design or applied arts collection, are not merely passive exhibits but the key players and anchors of the overall experience. The stories attached to these items are not just fragments of a broader narrative. Instead, they serve as a medium to convey the uniqueness, importance, and idiosyncrasies inherent to each item. This philosophy ensures that these items are always at the forefront of the museum experience, irrespective of whether they are located within the confines of the museum or outside its physical boundaries.

Items within the sphere of design and applied arts play a multifaceted role in our lives. They are not just functional or aesthetic elements that shape our lives, they are also silent companions on our journey through life. In a broader sense, these items bear silent witness to the passage of time, societal shifts, and cultural evolution. By acknowledging and exploring this aspect, we can deepen our appreciation for these items and the stories they hold.

6.4. Moments in the experience

The main content of the experience are stories that can be encountered "in conversation" with objects, as part of a "narrative walks" or as shares community stories. Since stories are relatable and understandable and they help us make sense of the world and build a sense of connection, they are the main content form used in the experience. Stories feel both familiar and immersive, allowing us to see life from another's perspective. Rich in detail, they also leave room for our own interpretations and emotions. The museum is already full of stories, the stories of objects, the stories of the people who loved and used them, of the artists and designers who made them, of the staff who cared for them and knows them. This concept is looking to bring those stories to the surface, where they can be encountered by a visitor ready to listen. As Faherty (2023) writes, "museums habitually use objects as a starting point, but the most affecting stories are all about people".

Stories appear in different moments and forms throughout the visitor's audio-enhanced experience, they appear when the visitor looks to connect to a specific object, they appear in the form of narrative walks that guide the visitor through a

collection, they appear as personal stories being formed during the experience and they appear as the community's stories, the stories of others.

Types of stories

As research for this project revealed, visitors are interested in different types of content, most of which can still be relayed through stories. As such, the concept proposes to cater to different user preferences and share stories related to historical aspects, the aesthetic aspects of the items, the stories of the people behind the objects, tales of processes, ideas and concepts that are behind the item, emotions and lives shaped by the item and stories connecting the item to the global context.
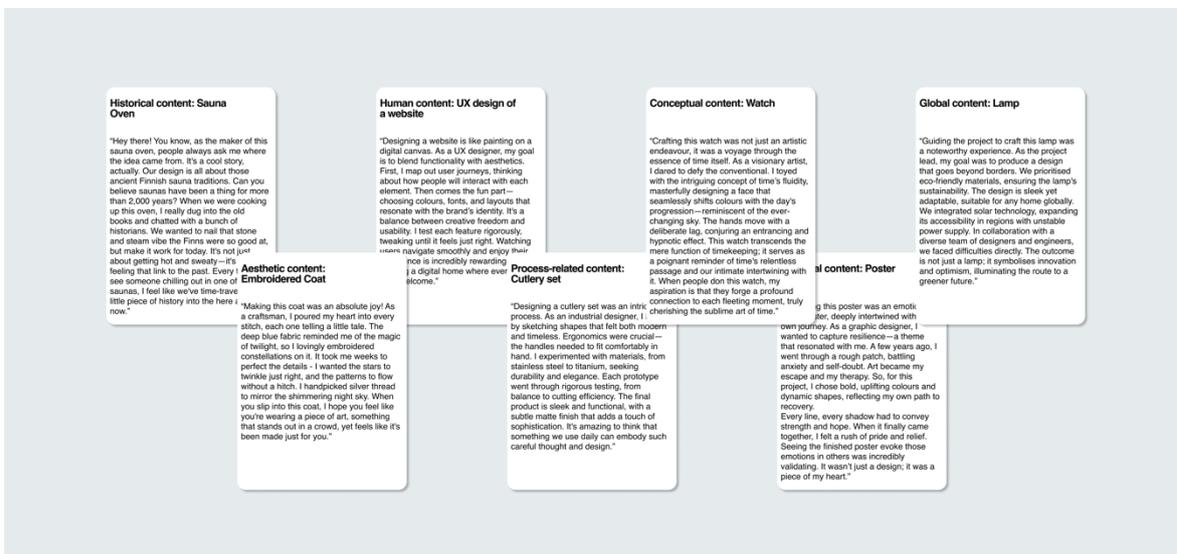
Figure 43. Story examples following the visitors' content preferences. Source: Author

All stories can be listened to from any location, but for the best experience, it's recommended to listen while in situ. The ability to listen to the stories anywhere enhances accessibility, extending the experience beyond Tallinn. This potentially expands the non-collectible collections throughout all of Estonia. Due to the importance of the in-person experience, notifications are used to draw attention to the surrounding design or applied arts items.

6.4.1   Conversation with collection items - short stories

"Conversations with Items" are a way of engaging with and understanding the deeper narratives associated with specific items in a collection, be it a vase, a piece of textile,

an antique chair, a historical sign, or even a service touchpoint. These conversations are framed as first-person narratives that provide a human perspective, making the object or the item more relatable and interesting for the listener. Each narrative is crafted to be concise and engaging, typically kept under three minutes in length. This is done to ensure the narratives are easily digestible and do not become overwhelming.

If visitors are intrigued and wish to learn more, they have the option to delve into the next three-minute story related to the item, if available. The goal is to stimulate interest and curiosity while providing valuable information in a digestible manner.

The beauty of this concept is its universal applicability. This engagement with collection items can happen with any item from any collection, regardless of its origin or purpose. A person could learn just as much about a lamp exhibited in the museum as they could about the public transport system, they use on their commute home. This allows for a continuous learning experience that extends beyond the confines of a museum or a specific collection, integrating knowledge and curiosity into everyday life.

How can a visitor encounter these stories?

- In the museum, visitors can tap their phones to an NFC tag near an object they're interested in, triggering the corresponding audio stories.
- Outside the museum, visitors can select an audio via a geographical map or collection menu or opt to receive notifications when collection items with stories are nearby.
- If a collection item can be visited or found in a public space, both the item and its story are displayed on a map.
- Stories for items that cannot be experienced in public spaces can be found within the collection's stories.
- Visitors have the option to listen to extended versions or stick with the shorter initial audio.
- Collection items' stories can be saved for later re-listening.
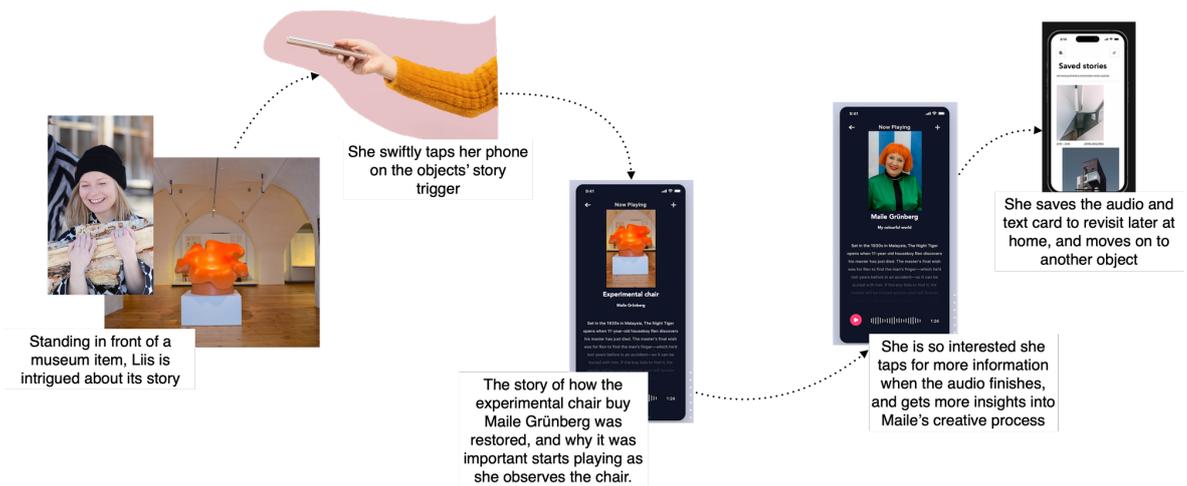
Figure 44. Preliminary visualisation of a conversation with the item. Source: Author

6.4.2   Narrative walks through the collections - longer stories

Narrative walks are comprehensive auditory journeys that cover several topics, much like meticulously curated exhibitions in a museum. These walks are centred around a primary concept, which can range from a specific era, intriguing idea, or even an influential designer, and they seamlessly intertwine a series of engaging shorter tales and thought-provoking discussions.

Unlike the often-restricted scope of traditional museum exhibitions and audio guides, the beauty of narrative walks is that they extend far beyond the museum's physical space. This unique approach facilitates a sense of exploration and curiosity that isn't limited to what lies within the museum's walls, but also encourages visitors to delve into the world outside the museum, thus offering a broader perspective.

Each narrative walk is designed to narrate a story voiced by individuals who have a close association with the items. These may include the designers who brought these items to life, artists who added their unique touches, and even historians with a deep understanding of the item's cultural and historical significance. This aspect makes these walks stand apart from standard curator tours or audio tours, which are often limited in scope and diversity.

The narrative walks are characterized by their diverse themes, the variety of locations they encompass, their unique storytelling approach which combines factual information with compelling narratives and the possibility to visit the item in "the wild"

90

where it can be interacted with. This provides visitors with a more immersive and personal experience.

Visitors are provided with a variety of options to select from a range of walks, each with its unique theme and narrative. These walks are regularly updated to ensure a novel experience each time. Importantly, the themes of these walks are not necessarily linked to the exhibition's themes, adding another layer of intrigue and variety to the museum visit.
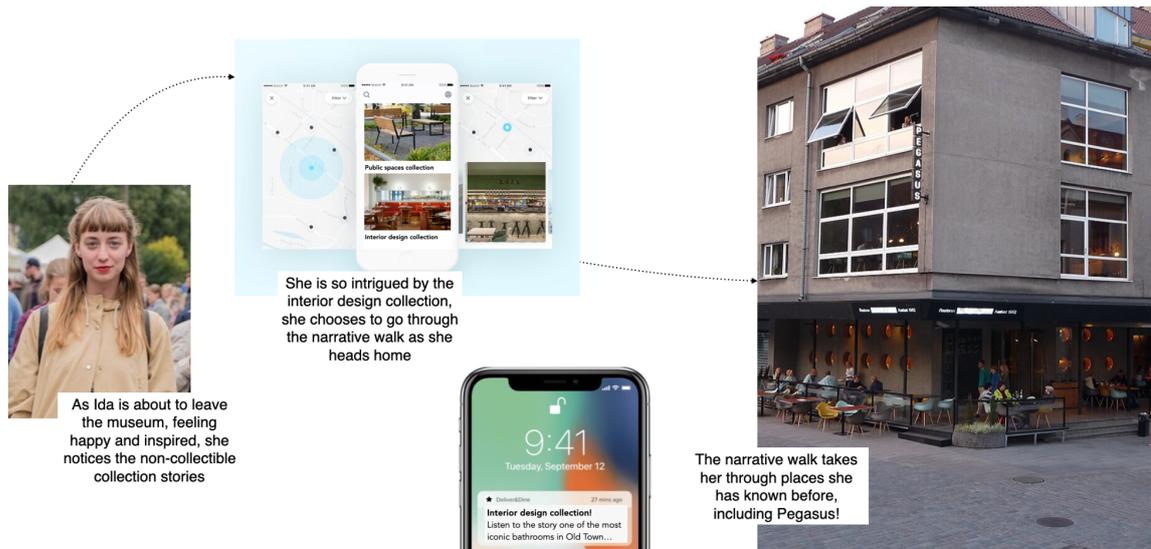
Figure 45. Preliminary visualisation of a narrative walk for interior design. Source: Author

How can a visitor take part of narrative walks?

- If at home or elsewhere, the visitor can start the narrative walk outside of the museum and choose to visit the museum space if they want
- If in the museum, the visitor can choose one of the narrative walks for their visit when they start

6.4.3   Reflection spaces - Moments to converse with yourself

Reflection spaces are integral to the ETDM's audio-enhanced experience. These areas foster introspection through audio-guided reflections or questions, encouraging visitors to explore exhibition themes more deeply.

Acting as catalysts, these spaces stimulate exploration of design and applied arts. They prompt visitors to consider how design choices affect daily life, aesthetic preferences, and interactions with our surroundings.

Guided reflections do more than just present facts or theories. They offer various perspectives, promoting a comprehensive understanding of the topic. A strong emphasis is placed on eliciting visitors' emotional responses, ensuring an informative yet deeply personal and emotionally engaging experience.

Figure 46. Preliminary visualisation of a reflection space in the museum. Source: Author

6.4.4   Shared stories - Stories from community members

Shared stories form the basis of a communal narrative, they revolve around the reflections and inspirations of the community members as they interact with items in the collection. This innovative concept encourages not only the visitors to the museum but also those who are unable to visit in person to engage in this process of shared storytelling by recording voice notes that are related to these items. These notes, rich with personal perspectives and insights, are then uploaded to a common platform and shared with the wider community.

Apart from fostering a sense of relatability and intimacy among community members, shared stories serve other multifaceted purposes. They assist in the process of cataloguing and locating design items that might be found outside the traditional

confines of museum walls, thus expanding the scope of the collection. Moreover, they offer a unique and creative method to "conserve" or preserve these items.

By documenting interactions with non-collectible items, shared stories provide a snapshot of the item's relevance and significance at a certain point in time. This not only enriches our understanding of these items but also, in a way, immortalizes them in the public consciousness. In essence, shared stories transform ordinary objects into significant artefacts, each with a unique story to tell.

6.5. Access to the stories and the experience

All stories can be listened to regardless of location through a mobile device, although it is preferred and recommended to the visitor to listen to them while in situ. The possibility to listen to the stories anywhere makes the experience more accessible, including locations outside of Tallinn to the map. This has the potential of extending the experience and the non-collectible collections throughout the whole Estonia.

Because of the relevance of the in-person experience, notifications are used as a prompt to bring the person's attention to the design or applied arts items that surround them.

6.6. Scenarios

To explore and describe the use of the audio experience several scenarios were developed. Scenarios as a tool were chosen instead of journeys as they beautifully mirror the concept of storytelling proposed for the audio concept. Below are 5 scenarios that describe the audio experience as it could be interacted with by the different personas.

6.6.1   Conversation with item within the museum

Siiri and her mom, Marge, are planning a visit to the design museum this weekend. Siiri is eager to take her mom there because she remembers seeing many design items that evoked nostalgic memories of her childhood. She hopes her mom will feel the same joy and that they can reminisce together.

Being the organised one, Siiri checks the museum's opening times and ticket prices online. She discovers that the museum now offers a new audio experience, allowing visitors to delve deeper into the stories behind the collection items. Excited, she downloads the platform, thinking her mom might enjoy it too.

On Sunday morning, Siiri picks Marge up, and they arrive at the museum early, planning to have lunch afterward. They quickly browse through the temporary exhibitions, appreciating their beauty but eager to see the main collection. Marge feels more comfortable and happier on the second floor, where the applied arts objects resonate with her style. Siiri, not as connected to this style, decides to use the audio guide to learn more about the objects her mom likes. She listens to different stories. First, about a vase made of glass and the difficult process of blowing it, then about a jewellery piece that is so intricate it took more than 120 hours to make, about textiles and how the artist is depicting her view of motherhood. The stories are good, and she finds herself sharing them with Marge. Eventually, Marge takes over the phone to listen for herself, she is intrigued by the stories that the artists are sharing.

The audio stories are brief and don't interrupt their connection and conversation. When they reach the third floor, Marge is puzzled by some items that look like ordinary objects from their past. She asks Siiri about their significance. Through the audio guide, they learn the stories behind the lamps and chairs in the collection.

Listening to these stories, Marge gains a clearer understanding of why these items are in the museum, while Siiri feels emotional hearing about a designer who created a stool, she remembers from her kindergarten years. She saves that story, something in her makes her feel like she wants to remember it.

As they leave, they're surprised by how much they learned about the objects and their stories. They promise to return, eager to discover more.

6.6.2   Conversation with item outside of the museum

Marten and Liis visited the museum two weekends ago, on a Saturday. It was one of the many they visited that day, EKKM, Kunstihoone and ETDM. They hadn't planned to visit ETDM, but since they had lunch close by and they have the museum card, it seemed like a no-brainer. When they entered the museum, they were told by the cashier that a new audio experience was available. They were polite but shared their

disinterest, audio guides feel old-fashioned to them. The cashier corrected them: "this is not an average audio guide! It is not about facts, it is not boring, it tells you stories as experienced by the people behind the objects". Aha! Marten's interest was piqued. He likes when new ideas are presented to him, and he particularly likes the "behind the scenes" content the cashier is offering. He downloaded the platform and as promised, got a peek into the behind the scenes, enjoying the stories told.

When in the museum, he explored the different functions of the platform and discovered the non-collectible collection and the collection items outside of the museum, what a treasure! Before even leaving the museum, he had already activated his notifications, eager to be told about the design world around him. Since that day, he has been notified twice about design in his regular pathways. The first notification was about the design of Pegasus, the iconic restaurant in Old Town. He actually got the notification as he was commuting to work, so he paused his podcast and listened to the story, happy to have more information about a restaurant he passes every day and still, didn't know much about. The three minutes go by fairly fast, and he can still continue on his way without being late.

The second notification he got when he was on his way to a dinner. While they were driving, Liis and Marten listened to the story behind the exterior furniture in the new plaza in Balti Jaam. Liis liked the story too, and decided to explore other design stories, she discovers several in Tartu, and as they are going this weekend to visit friends, they decide to visit some of those locations as well.

6.6.3   Narrative walks inside and outside of the museum

Berndt and his family are visiting Tallinn from Germany. They are what one can consider nature and culture tourists, they are not interested in shopping but in learning and experiencing a different culture. If they can sneak a hike in the plan, even better.

They walk through Old Town, observing the buildings and the people. They didn't book a tour, but they are starting to feel that they want to understand the culture and history of Estonia a bit more. They stumble upon ETDM, and since the courtyard seems so inviting, they step in. Inside the museum, they show their Tallinn Card and get their tickets. Then they notice a poster "narrative walks", maybe they can take part of it. They ask about the tour. The cashier explains to them, that it is not a tour,

but an audio experience that can unveil design inside and outside of the museum. Laura, Berndt's 19-year-old daughter likes the idea, being outside also sounds like a good plan, the day is beautiful! They check the platform and notice several narrative walks; one catches Berndt's eye: a narrative walk about design for public spaces. Everyone in the family seems to like it, and they agree to undertake it. Before they start, they decide to check out the temporary exhibitions, as these ones are not included in the walk. When on the second floor, they all take their phones and listen to the first stories. This is totally not what they thought it would be! The stories are much more relatable and easier to follow than they expected, what a relief! After all, they are two exhibitions in in their experience and not as energetic as in the beginning. They follow the narrative walk, which takes them to a couple of textile items designed for public offices, some leather bind books that are actually legal documents, then the third floor where they learn about a couple of street signs and benches. While mostly audio, it is good that they can see in their phones an image of the item that is being described and a brief description of its location, in case they can't find it. The narrative walks also show them a suggested route in a map, it seems you can add and skip stories as you wish.

When they have visited the three objects on the third floor, they are invited to collect their belongings and start their journey outside. The narrative walk takes them to Kalamaja, where they learn about the streetlamps, the Extery benches and the design of Tallinn's City Identity. Since the walk shares story by story, they take breaks in between, stopping to get a snack, take pictures or enter a shop they find interesting. They can modify some parts of the walk as they choose, so they skip going all the way to Kopli, it seems far away. Yet, the narrative walk is engaging and shares a new side of Estonia they didn't know. Berndt is particularly happy to hear some historical and production related stories, those are his favourite. The narrative walk has truly revealed not only a new neighbourhood in Tallinn they didn't know, but the Estonian design and arts that are around them. They decide to keep the platform, they still have some days left in their trip, and they might find something valuable to explore.

6.6.4 Reflection space outside of the museum

Ida has visited the museum several times in the past, she normally goes on her own when she needs time and space to think. Today she is feeling like she would like to visit somewhere but it's a rainy day and she doesn't feel like leaving her home. She remembers she has ETDM's audio experience, and that it offers some reflection walks,

she is in a more contemplative and reflective mood, so she decides to play one as she tidies her home, makes her coffee, and starts her day. The one she chooses is called "Reflection space - what do you expect from design in your life?". As she listens to a designer explain her process and how objects around her influence her mood, Ida starts thinking about her own home and the objects around her. There is that awful bottle she can never open and always puts her in a bad mood, the beautiful fountain pen that she very much enjoys writing with, the rug that is so soft all of her friends prefer sitting on to the couch. She realises objects around her also affect her. The guided reflection invites her to recognise and appreciate her objects, to get creative with them, to sketch them or to play around with their placement around the home. Hearing from a designer, she has gotten a different perspective on her seemingly common objects and has started her morning with a calming and grateful note.

6.6.5   Sharing a community story

Saana is in her apartment listening to music and on her phone. She browses ETDM's audio collection, looking for something that peaks her interest. She finds the community stories and starts listening to some, skips others. It's so interesting to hear other people talk about their favourite objects: clothes racks, mugs, chairs… but also about memories they have with them. Saana is somewhat of a design collector, buying pieces second hand from Facebook Marketplace and other shops. The sofa she is sitting on is one of those pieces. She found this sofa some months ago and is very proud as it is truly a design gem. Then she decides, why not share my story? She clicks "share story" and is prompted to take a picture of the item and start her voice recording. The recording takes a few tries, she is a bit nervous, and the time limit of 15 minutes seems to fly by. By the third try, she has it, a beautiful story of searching for this sofa, findings it, assembling a group of 5 friends to help with pick up and setting it up at home. She is proud as well that she has some information about the designer and can share about him. Also, she managed to describe the feel of the fabric, the sensation when sitting. All and all, a good story. As she uploads it, the platform thanks her and offers her some tags based on her audio description, the designers' name, the type of furniture. She selects some and then hits publish.

7. CONCLUSIONS

7.1. Shifts brought by the concept, discussion, and strengths

The proposed audio concept, despite its seemingly straightforward and simple interface, implies a multitude of paradigm shifts that fundamentally alter how the ETDM interacts with its audience, the nature of the visitor experience, the progression of a museum visit and the collections the museum hosts and cares for.

from	To
An experience with no digital touchpoints in the museum	→ An added digital audio layer that enhances the visitors' experiences
A material only collection	→ A material and intangible collection
An experience that is limited to the museum building	→ An experience that can continue at home, in the public space, anywhere
A simple appreciation of beauty	→ An engagement with the item's history, impact and stories

Figure 47. Figure 48. Shifts brought by the proposed concept. Source: Author

The new audio concept addresses the need for **inter-channel interactions** and creates a moment of **interplay between channels** where the digtal and physical worlds become more interconnected to deliver the visitor's experience. This new layer significantly **enriches the visitors' experiences by adding a depth of interaction and engagement** that was previously unavailable. While the concept might seem a simple layer, it signifies **the first step towards a multi-layered and multi-channel experience** in the museum.

The creation of the new channel also opens a new **opportunity to connect with the audience via the collection items**, collecting people's stories, memories, and experiences with the design world. Agency of the visitors who are understood and engaged as **co-creators of theirs's and others' experiences,** is strengthened. Additionally, opening a new digital channel gives the museum the possibility to learn what users interact with and what their preferences are to improve their offer or create better strategies for audience engagement.

When discussing the **collection**, the concept proposes a shift from what was once a purely tangible, material-mostly collection to an innovative combination of both material and intangible elements that reflect the evolution of contemporary design practices and approaches. This results in the creation of the **non-collectible collections**, which transcend the physical limitations of the museum, enhance interactivity, and bring a **more comprehensive picture of the design and creative work in Estonia**. The creation of non-collectible collection puts forth an entirely **new way of understanding and conceptualising collections** for the museum and visitors, positioning the museum as an **innovative and dynamic** institution that seeks to reinvent itself where valuable to deliver the **next generation museum experience.**

The **visitor's experience** itself undergoes a transformation in many ways. No longer confined to the walls of the museum, the experience evolves into a **more immersive, flexible, and personalised** one that can be extended b**eyond the museum's building** and enjoyed at home, in public spaces, or virtually anywhere the visitor desires. This shift **brings the museum closer to its audience**, not only in Tallinn but across Estonia and potentially worldwide, providing an opportunity for potential visitors who might have seen the geographical location as an obstacle to visit a way to connect to the museum.

Gaps in the experience expectations and reality encountered also find a solution in this audio concept, particularly **desire for interaction and immersivity**, expressed by research participants. By **engaging with design in the real world**, they are significantly more immersed than in the contained and regulated museum environment.

Regarding the visitors' journeys, the concept re-frames the visit from the traditional linear understanding (pre-, during, post-) offering an "**ever present" experience** that **can be encountered at any time**.

Through the concept, the impact of the museum visit is elevated from a **simple appreciation of aesthetic beauty** to a much deeper, **more meaningful engagement.** This engagement is with the history, impact, and narrative intricacies associated with each item. It provides a richer understanding of the items, prompting visitors to delve deeper into the cultural and historical significance of each piece.

Besides its seeming simplicity **which allows items to take the centre of attention** and is in-line with the museum's brand, the concept has other strengths, including building on the museum's expertise and current activities, particularly in regard to storytelling. Museums already are repositories of stories, and storytelling is one of the main tasks of curations, the **concept builds on these strengths** but with an **unexpected and surprising twist** informed by visitors' preferences in the form of first-person narrative that feels **fresher, and more dynamic.**

Lastly, as the audio experience generates a novel experience of the same exhibitions every time, visitors might feel more compelled to re-visit and explore different experiential journeys, potentially increasing return visits.

7.2. Limitations and further development

7.2.1   Concept limitations and further development

Fully developed technological platform

The concept does not currently provide a detailed explanation of the technological aspects behind its functioning. This is not due to oversight but rather a deliberate decision by the designer. Developing a technical proposal needs certain requirement being met: the interaction, content, and form of the experience has been meticulously designed and user-validated, meaning there is proof of concept and desirability. It also assumes there is a set budget and resources available for the project and a clear governance system within the organisation to manage and develop it.

Presenting a technical proposal at this stage would be too superficial to provide meaningful information for the client's decision-making process. Nonetheless, some technical research was conducted, albeit not exhaustive. This preliminary research suggests several technological solutions where the concept could be implemented, from ready-made platforms that provide audio services to museums for €2000 annually, to custom-made solutions that use geo-positioning, geotagging, or NFC sensors to deliver information. Technically, the concept appears feasible. However, the budget and management for the experience will ultimately define the technical aspects.

Accessibility

An audio-only experience can be challenging for deaf individuals or those who are hard of hearing. The author acknowledges this. One potential solution is to add closed captions to each story, making them more accessible for individuals of various abilities. Although this feature is not yet fully developed in the concept, it has not been ruled out and is considered as a possible way to make the experience more inclusive.

Lack of control over non-collectible collections

Non-collectible collections are not part of the museum's official collection, making them more susceptible to modifications and the erasure of their unique design qualities. When the museum has no ownership or guardianship of an item, it cannot intervene. This is a significant departure from the museum's usual operations and its role in preserving items. However, this is not as problematic as it at first appears. The purpose of having these collections is not to preserve the interiors, services, and public spaces exactly as they are, but to reveal the designed world around the user. Therefore, the museum does not need to be responsible for the items. Instead, it can act as a champion for them, a representative that highlights and appreciates them.

Collecting stories

As previously mentioned, stories are the primary source for the concept. These stories are told by individuals who have experienced them and have a connection to the object. Initially, sourcing and curating these stories can require significant effort from the museum. They would need to organise, coordinate, and record the stories in a high-quality, engaging manner that suits the users well.

Language Considerations

Making museum experiences accessible for people with different languages is an essential aspect. While Estonian may be the main language for many stories, this could potentially exclude foreign visitors and Russian-speaking locals. While some story authors might be comfortable recording in other languages, many might not have the skills or the interest to do so. Fortunately, technology can provide some

solutions. Current advancements in AI could translate the stories into selected languages, considering the visitors' preferences and skills. This would eliminate the need to record several versions of a story. Instead, an original story would be recorded, and AI could be used to translate it into any necessary language.

Business model development

Designing the concept further could also consider a design of its business model which could explore ways to charge for parts of the experience, generating income for the museum and enabling a more regular regeneration of content from the museum. This Will be of even more importance as the museum transitions into its new life chapter as a foundation.

7.2.1 Procedural limitations and further development

User validation of the concept

Adequate time and opportunity were not available to recruit participants to validate and test the concept. The first step for further development would be to assess the concept of stories, conversations with items, and the narrative walk with real users, both local and foreign. This would confirm or refute the concept, providing the ETDM team with a clearer direction to move forward with the concept or change course.

User validation of the concept

Despite the author's interest, there was not enough time and resources to engage the museum audience and museum personnel in the concept creation. Using co-creative techniques to create the new experience could significantly enhance the results of the audio project, as it would offer varied perspectives that shape and delimit the concept and would increase the sense of ownership amongst both groups. However, since the concept is still being developed, that opportunity is not lost, it is still possible to conduct co-creative sessions that enhance and build on the work proposed by this thesis.

Defining scope through budget

Developing the concept by setting clear project budgets is also essential. To support the concept development, it would be useful to set a clear budget that indicates what technological solutions the project can afford. This would allow for adaptation to those limitations or solutions without losing the core elements of the experience.

7.3. Contributions

The first and most notable contribution of this thesis lies in its **redefinition of the experiential landscapes that shape the museum experience**. This work diverges from the conventional linear approach to understanding user journeys, bringing in a new perspective that intentionally blurs the clear-cut boundaries of the "pre," "during," and "post" visit stages. This innovative approach doesn't just break down the walls of the traditional museum experience—it reconstructs them in an entirely new light. It opens up a whole new realm of possibilities where the museum visit can unfold in a multitude of rhythms and patterns, essentially extending the museum experience far beyond the physical confines of the institution itself. This extension of the museum experience transcends geographical and temporal boundaries, allowing for a more inclusive, accessible, and engaging visitor experience. The reimagining of the museum journey proposed in this thesis sets a new precedent, challenging traditional notions of what a museum experience can be and how it should be designed.

The second major contribution is the creation of an **immersive audio experience that deviates from the traditional narrative methods typically used by museums**. Instead of relying on curators or historians to assemble robust, fact-filled information to "educate" the museum-goer, the aim is to create an emotional connection. This is a significant and notable shift from the typical way exhibition materials are conceptualised. This thesis places emphasis not on the items themselves, but on the visitors and their emotional responses to the items. This essentially reverses the typical museum dynamic where the item is considered first and the visitor's emotions second, if at all. It also suggests a new question for the museum to consider: "how can we elicit emotions in the visitor by sharing about this item?" and "will this story help people connect and appreciate the item more?"

The introduction of the concept of **non-collectible collections also signifies a dramatic shift away from the conventional models of museums**, proposing an interpretation that is more hybrid in nature, dynamic in its execution, and flexible in

its understanding of the very essence of what a museum is and the potential of what it could become. As suggested in the initial chapters of this thesis, museums are undergoing a process of self-reconceptualization, evolving from mere physical repositories to becoming platforms of knowledge, intricate information networks, connectors of cultural threads, and highly interactive community spaces.

This thesis presents a thorough **exploration of the modern museum, positioning it not merely as a static repository of items, but as an active interface**. This interface serves in some ways as a conduit, revealing and presenting the built world around the user, not through cold facts or sterile exhibits, but through the warmth and complexity of human narratives. It's a new perspective that fundamentally alters the way we interact with and understand the museum experience, ultimately transforming it into a more engaging, immersive, and personal journey of discovery.

8. SUMMARY

8.1. English summary

This thesis aimed to provide ETDM with a novel audio experience concept for both inside and outside the museum building. This concept could enhance the museum's visibility and availability and improve the visitor experience.

The design challenge was approached from an experience design perspective, considering the sector's context and the organization and visitors' perspectives. Research into the context and trends in the cultural sector revealed a dynamic and evolving museum world. Here, institutions are seeking to reinvent themselves, not as static repositories of items, but as more engaging, democratic, and diverse institutions.

Research into ETDM as an institution revealed potential in underutilised channels, primarily digital and audio. The museum's research revealed a lack of contemporary intangible design practices, complicating their collection due to their nature. A meaningful goal for the experience was uncovered: aiding visitors in connecting to the designed world around them, promoting appreciation beyond recognition.

Interviews, probes, and observations with visitors revealed opportunities for the experience to leverage first-person storytelling, an underused but potent tool for the audio experience. Visitors expressed interest in learning more about not only the items but also the people involved in their creation and usage, such as designers, researchers, producers, critics, or other users. There was also a latent need for spaces of reflection where visitors could absorb everything and explore their feelings and stances.

This thesis identified an opportunity in the evolving landscape of museums, changing audience relationships, new design disciplines, visitor preferences, and emotions. The proposed concept is an audio-first experience that connects the museum's interior and exterior through first-person storytelling. This takes the form of conversations with items, narrative walks, reflection spaces, and community stories. Being an audio-first experience is based on the belief that individuals should encounter the item and be attentive in its presence, rather than having their attention drawn to a screen.

Supporting the inside-outside integration are the non-collectible collections. These collections present visitors with new ways of designing that cannot be confined to the museum. Lastly, to integrate community elements and participatory approaches to audience engagement, the audio experience allows visitors to share their own stories with design and created world items, fostering a deeper recognition and identification with history. The new audio experience seeks to engage visitors to the built world around them, deepening their connections to it and building a path towards their appreciation.

8.2. Kokkuvõtte

Antud magistritöö eesmärgiks on pakkuda ETDM-ile uudne audio kogemuse idee, nii muuseumis sees kui ka hoonest väljas. Idee täiendaks muuseumi nähtavust ja kättesaadavust ning parendaks külastuskogemust.

Disaini väljakutsele läheneti kogemuse disaini perspektiivist, arvestades valdkonna konteksti, asutust ja külastajate perspektiivi. Konteksti ja trendide uuring avas dünaamilise ja areneva muuseumi maailma. Kus, asutused otsivad viise, kuidas ennast taasluua, saamaks avatuks, kaasavaks ja demokraatlikuks ja mitte jäädes staatiliseks esemete hoidlaks.

Uurides ETDM-i kui institutsiooni, leiti palju potentsiaali vähekasutatud kanalites, peamiselt digitaal ja audio kanalites. Lisaks tuli uuringus välja ka, et hetkel muuseum ei kogu kaasaegset mittemateriaalset disaini, lähtudes selle keerulisest ainesest. Läbi uuringu leiti kogemusele tähendusrikas eesmärk – toetada külastajaid ühendades neid ümbritseva disainitud maailmaga, soosides hindamist, mis edastab äratundmise.

Külastajatega läbiviidud intervjuud, vaatlused ja sondid tõid esile võimalused kogemuse mõjutamiseks läbi minavormis jutustuse, vähe kasutatud, kuid suure potentsiaaliga tööriist audio kogemuse loomiseks. Külastajad väljendasid oma huvi saamaks teada mitte ainult esemete vaid ja ka inimeste kohta, kes olid nende loomise juures: disainerid, uurijad, produtsendid, kriitikud või kasutajad. Olemas oli ka latentne vajadus enesepeegelduse kohale, kus külastajad saaksid haarata endasse kõike ja uurida oma tundeid ja seisukohti.

Antud magistritöö tuvastas võimalusi arenevas muuseumi maastikus, haarates kaasa uue disaini valdkonnad koos külastajate eelistuste ja emotsioonidega. Välja pakutud kontsept on audio kogemus, mis ühendab muuseumi interjööri ja eksterjööri läbi minavormis jutustuse. See võtab kuju läbi vestluste esemetega, jutustatud jalutuskäikude, enesepeegelduse kohale ja kogukonna lugude. Olles eelkõige audio kogemus tugineb põhimõttel, et külastajale tuleb anda võimalus kogeda eset viisil, et keskmes on ese, ilma tõmbamata nende tähelepanu ekraanile.

Toetamaks sees-väljas lõimumist on mitte-kogutav kogu. See kogu avab külastajale uued viisid disainis, mida ei saa köita muuseumisse. Lõpetuseks, sidumaks kogukondlike ja kaasavaid elemente publiku kaasatusega, pakub audio kogemus külastajatel lisada oma lugusid disaini ja loodud esemetega, tugevdades sügavamat äratundmist ja tuvastamist ajalooga. Uus audio kogemus seab eesmärgiks kaasata külastajad mõtestama loodud maailma nende ümber, tugevdades sidemeid sellega ja luues viise, kuidas seda hinnata.

9. REFERENCES

1. Alger, J., & Redding, N. (2024, February 6). *The Near Future of Experience Design, with Neil Redding* (episode 28). C&G Partners. https://open.spotify.com/episode/0ASjhABxDekVF45XThJ33r?si=240ae09246d64f9e

2. Annechini, C., Menardo, E., Hall, R., & Pasini, M. (2020). Aesthetic Attributes of Museum Environmental Experience: A pilot study with children as visitors. *Frontiers in Psychology*, *11*. https://doi.org/10.3389/fpsyg.2020.508300

3. Art Fund. (2024, March 13). *Meet me at the Museum on Apple podcasts*. Apple Podcasts. https://podcasts.apple.com/gb/podcast/meet-me-at-the-museum/id1439186876

4. AS Emor. (2018). *Muuseumide ja raamatukogude külastajate ja mittekülastajate uuring: Uuringu lõpparuanne*. https://www.eas.ee/wp-content/uploads/2018/09/Muuseumide-ja-raamatukogude-külastajate-ja-mittekülastajate-uuringu-lõpp. . ..pdf

5. AS KANTAR EMOR. (2020). *Eesti muuseumite külastamine ning külastuste ajendid*. https://static.visitestonia.com/docs/3618642_muueumite-kylastamine-ajendid-muuseumikaart-2020-eas.pdf

6. AS Kantar Emor. (2023). Muuseumide ja elamuskeskuste tuntus ja maine. In *Muinsuskaitseamet*. https://www.muinsuskaitseamet.ee/sites/default/files/documents/2024-02/Muuseumide ja elamuskeskuste tuntus ja maine uuringu aruanne.pdf

7. Australian Museum. (n.d.). *Homepage*. Australian Museum FrogID Project. https://www.frogid.net.au/

8. British Museum. (n.d.). *British Museum Podcast.* SoundCloud. https://soundcloud.com/britishmuseum

9. Bunning, K., Kavanagh, J., McSweeney, K., & Sandell, R. (2023). Embedding plurality: exploring participatory practice in the development of a new permanent gallery. *Science Museum Group Journal*, *3*(3). https://doi.org/10.15180/150305

10. Campbell, E., & Lani, S. (2021). Public Spaces and Potential Places. *Exhibition. A Journal of Exhibition Theory & Practice for Museum Professionals*, *40*(2), 30–39. https://static1.squarespace.com/static/58fa260a725e25c4f30020f3/t/616f30f83e0225214a21b252/1634676997066/09_Exhibition_21FA_PublicSpacesPotentialPlaces.pdf

11. Charr, M. (2023, November 10). *What can we learn from Pop-Up Museums? Best practice and ideas from Instagram friendly experiences*. MuseumNext. https://www.museumnext.com/article/what-we-can-learn-from-pop-up-museums-best-practice-and-ideas-from-instagram-friendly-experiences/

12. Cigainero, J. (2022, August 22). The Pompidou pops up: Málaga adds the Parisian leviathan to its roster of visiting galleries. *wallpaper.com*. https://www.wallpaper.com/art/the-pompidou-pops-up-mlaga-adds-the-parisian-leviathan-to-its-roster-of-visiting-galleries

13. Coates, C. (2021, March 3). *Culture for all – museum attendance in an age of diversity*. Blooloop. https://blooloop.com/museum/in-depth/museum-attendance-diverse-audience/

14. Constantin, M., Genovese, G., Munawar, K., & Stone, R. (2023, May 4). *Tourism in the metaverse: Can travel go virtual?* McKinsey & Company. https://www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/tourism-in-the-metaverse-can-travel-go-virtual

15. Cooper Hewitt Interaction Lab. (n.d.). Tools and Approaches for Transforming Museum Experience. In *cooperhewitt.org*. https://www.cooperhewitt.org/interaction-lab/tools-and-approaches-for-transforming-museum-experience/

16. Cooper Hewitt Museum. (2023, July 7). *Digital Exhibition. A Dark, A Light, A Bright: The Designs of Dorothy Liebes*. https://exhibitions.cooperhewitt.org/dorothy-liebes/

17. Cooper Hewitt, Smithsonian Design Museum. (2022, October 18). *Cooper Hewitt, Smithsonian Design Museum | 2 East 91st St New York NY 10128*. Cooper Hewitt Smithsonian Design Museum. https://www.cooperhewitt.org/

18. Cooper Hewitt, Smithsonian Design Museum. (2024, March 15). *Digital Exhibitions | Cooper Hewitt, Smithsonian Design Museum*. Cooper Hewitt Smithsonian Design Museum. https://www.cooperhewitt.org/exhibitions/digital/

19. CUSEUM. (2022a). THE HYBRID REPORT VOLUME 2: VIRTUAL & HYBRID PROGRAMS. In *CUSEUM*. https://9055727.fs1.hubspotusercontent-na1.net/hubfs/9055727/Hybrid Report ebooks/Cuseum_VOL2_The_Hybrid_Museum_Report.pdf?__hstc=113141595.be24facba38109fd3e41772f05869f5b.1714230619449.1714230619449.1714230619449.1&__hssc=113141595.15.1714230619449&__hsfp=326891867

20. CUSEUM. (2022b). The State of Virtual & Hybrid Offerings at Culture Organizations. Volume 1: The future of the visitor experience. In *CUSEUM*. https://9055727.fs1.hubspotusercontent-

na1.net/hubfs/9055727/Hybrid Report
ebooks/Cuseum_VOL1_The_Hybrid_Museum_final book
20220707.pdf?__hstc=113141595.be24facba38109fd3e41772f05869f5b.1714230
619449.1714230619449.1714230619449.1&__hssc=113141595.5.171423061944
9&__hsfp=326891867

21. Cuseum [Cuseum]. (2022, January 24). *What top 2022 tech trends mean for museums & cultural organizations — CUSEUM*.
Cuseum. https://cuseum.com/blog/2022/1/20/top-technology-trends-in-2022-and-what-they-mean-for-museums-amp-cultural-organizations

22. Duke, L. (2018, February 5). *Aesthetic Thought and Experience: The Museum of Wonder - Museum-ID*. Museum-iD. https://museum-id.com/aesthetic-thought-experience-museum-wonder-linda-duke/

23. Eesti Loodusmuuseum [ELM]. (n.d.-a). *EESTI LOODUSMUUSEUM : tulevikuvisioon ja külastuskogemus* [Slide show]. https://www.loodusmuuseum.ee/sites/default/files/2024-02/Uue Eesti Loodusmuuseumi visioon.pdf

24. Eesti Loodusmuuseum [ELM]. (n.d.-b). *Öökulli akadeemia podcast | Eesti Loodusmuuseum*. https://www.loodusmuuseum.ee/et/ookulli-akadeemia-podcast

25. *Eesti muuseumide veebivärav - Otsing: Eesti tarbekunsti ja disaini muuseum*. (n.d.). Museums Public Portal. https://www.muis.ee/search

26. Eesti Päevaleht. (2023, July 12). Muuseumikaart toob muuseumidesse keskmiselt 3700 inimest kuus. *Eesti Päevaleht*. https://epl.delfi.ee/artikkel/120216180/muuseumikaart-toob-muuseumidesse-keskmiselt-3700-inimest-kuus

27. Eesti Rahva Muuseum. (n.d.). *Eesti rahva muuseum*. https://www.erm.ee/en/näitused/rändnäitused

28. Eesti Statistikaamet. (2022). *Muuseumid | Statistikaamet*. https://www.stat.ee/et/avasta-statistikat/valdkonnad/kultuur/muuseumid

29. Eesti Statistikaamet. (2023, May 23). *Muuseumide külastamine on hoogustunud (parandatud 23.05.2023) | Statistikaamet*. https://www.stat.ee/et/uudised/muuseumide-kulastamine-hoogustunud-parandatud-23052023

30. Eesti Tarbekunsti- ja Disainimuuseum. (2023a, June 29). Keraamik Ingrid Alliku näitus „Sekret" rändab Tartusse - Eesti Tarbekunsti- ja Disainimuuseum. *Eesti Tarbekunsti- Ja Disainimuuseum*. https://www.ETDM.ee/uudised/keraamik-ingrid-alliku-naitus-sekret-randab-tartusse

31. Eesti Tarbekunsti- ja Disainimuuseum. (2023b, July 4). Vilniuses avaneb Eesti disaini tutvustav näitus - Eesti Tarbekunsti- ja Disainimuuseum. *Eesti Tarbekunsti-Ja Disainimuuseum*. https://www.ETDM.ee/uudised/vilniuses-avaneb-eesti-disaini-tutvustav-naitus

32. *Encounters*. (2022, April 22). Eesti Rahva Muuseum. https://www.erm.ee/en/content/encounters

33. ETDM. (n.d.). *ETDM FOTO*. FOTOPANK. https://foto.ETDM.ee/

34. ETDM. (2023). *EESTI TARBEKUNSTI- JA DISAINIMUUSEUMI KOGUDE KORRALDUSE PÕHIMÕTTED*. https://admin.ETDM.ee/wp-content/uploads/2023/02/ETDM_kogude_korralduse_pohimotted_2023.pdf

35. *Exhibitions*. (2024, April 19). Eesti Rahva Muuseum. https://www.erm.ee/en/näitused/exhibitions

36. *Experience Map - your guide to experience mapping*. (n.d.). https://www.experiencemap.com/

37. Faherty, A. (2023, August 23). Why do stories matter to museums and how can museums become better storytellers? *MuseumNext*. https://www.museumnext.com/article/why-do-stories-matter-to-museums-and-how-can-museums-become-better-storytellers/

38. Falk, J. (n.d.). Motivation and learning styles. In *Understanding Museum Visitors' Motivations and Learning* (pp. 106–130). https://slks.dk/fileadmin/user_upload/dokumenter/KS/institutioner/museer/Indsatsomraader/Brugerundersoegelse/Artikler/John_Falk_Understanding_museum_visitors__motivations_and_learning.pdf

39. Falk, J. H., & Dierking, L. D. (2016). The museum experience revisited. In *Routledge eBooks*. https://doi.org/10.4324/9781315417851

40. Fusch, P. I., Fusch, G. E., & Ness, L. R. (2017). How to Conduct a Mini-Ethnographic Case Study: a guide for novice researchers. *the Qualitative Report*. https://doi.org/10.46743/2160-3715/2017.2580

41. Gellatly, K. (2021, July 20). *Embracing diversity, inclusion, and 'diffability' in our art museums — Art et al. | Expanding the scope, role, and definition of contemporary art.* Art Et Al. | Expanding the Scope, Role, and Definition of Contemporary Art. https://artetal.org/writing-reviews/editorial-kelly-gellatly

42. Harms, G. (2018, September 6). Modern Museums: Digital experiences within exhibition design. *Medium*. https://medium.com/@grace_84732/modern-museums-digital-experiences-within-exhibition-design-342c94d8e8a7

43. Hooper-Greenhill, E. (2007). Studying visitors. In *Blackwell Publishing Ltd eBooks* (pp. 362–376). https://doi.org/10.1002/9780470996836.ch22

44. Hudson, K. (1987). *Museums of influence*. http://ci.nii.ac.jp/ncid/BA01383226

45. Hutchinson, R., & Eardley, A. F. (2023). 'I felt I was right there with them': the impact of sound-enriched audio description on experiencing and remembering artworks, for blind and sighted museum audiences. *Museum Management and Curatorship*, 1–18. https://doi.org/10.1080/09647775.2023.2188482

46. *Installatsioon „Kas sul on see kodus?" tutvustab Eesti kodudes olevaid disainiikoone - Eesti Tarbekunsti- ja Disainimuuseum*. (2023, April 10). Eesti Tarbekunsti- Ja Disainimuuseum. https://www.ETDM.ee/uudised/installatsioon-kas-sul-on-see-kodus-tutvustab-eesti-kodudes-olevaid-disainiikoone

47. International Council of Museums [ICOM]. (2021). The Museum: Report on the ICOM Member Feedback for a new museum definition Independent analysis & report elaborated for the ICOM Define Committee. In *International Council of Museums*. ICOM. https://icom.museum/wp-content/uploads/2021/09/ICOM-Define-Consultation-2-Results-Report-vf-ENGLISH-180821OK.pdf

48. International Council of Museums [ICOM]. (2023, June 5). *Museum Definition - International Council of Museums*. International Council of Museums. https://icom.museum/en/resources/standards-guidelines/museum-definition/

49. Jahnsen, S. S. (2019). The balancing act. Museums as spaces for democratic debate: a case study from Oslo, Norway. *Museums & Social Issues*, *14*(1–2), 4–22. https://doi.org/10.1080/15596893.2021.1970901

50. Janhagen, V., Leitch, J., & Judelson, M. (2020). *In search of signature moments* (1.0). Idean Publishing.

51. Kahneman, D. (2000). Evaluation by moments: past and future. In *Cambridge University Press eBooks* (pp. 693–708). https://doi.org/10.1017/cbo9780511803475.039

52. Kavakava arhitektuuribüroo. (n.d.). *Keskkonnamaja*. Kavakava Arhitektuuribüroo. https://www.kavakava.ee/project/keskkonnamaja/

53. Konsa, K. (2020). Postdigitaalse maailma muuseumid. *EMÜ Veebiajakiri*. https://ajakiri.muuseum.ee/postdigitaalse-maailma-muuseumid/

54. Kultuuriministeerium. (2023, April 28). Muuseumikaardil on juba 1000 omanikku! | Kultuuriministeerium. *Kultuuriministeerium*. https://kul.ee/uudised/muuseumikaardil-juba-1000-omanikku

55. LaBreck, A. (2022, March 28). *The rise of Virtual Reality Tourism/Digitization of Culture in the time of COVID-19*. Harvard International Review. https://hir.harvard.edu/the-rise-of-virtual-reality-tourism-digitization-of-culture-in-the-time-of-covid-19/

56. Lachance, T., & Rao, S. (2021). Bringing it Home: Experimenting with a Nontraditional Exhibition Space. *Exhibition. A Journal of Exhibition Theory & Practice for Museum Professionals*, *40*(2), 86– 95. https://static1.squarespace.com/static/58fa260a725e25c4f30020f3/t/635a912 0bf6485031ad020d2/1666879776907/14_Exhibition_21FA_BringItHome.pdf

57. *Loodusmaja | Eesti Loodusmuuseum*. (n.d.). https://loodusmuuseum.ee/index.php/et/uus-muuseum/loodusmaja

58. M, A., Rupert, A. V., & Wolford, G. (2008). Evaluations of pleasurable experiences: The peak-end rule. *Psychonomic Bulletin & Review*, *15*(1), 96– 98. https://doi.org/10.3758/pbr.15.1.96

59. Mackay, R. (2023). *Delivering the visitor experience: How to Create, Manage and Develop an Unforgettable Visitor Experience at Your Museum*.

60. Majandus- ja Kommunikatsiooniministeerium. (2022). Turismistrateegia 2022- 2025: it's about time. In *https://www.mkm.ee/ettevotlus-ja- innovatsioon/turism/turismistrateegia*. https://static.visitestonia.com/docs/38140 60_turismistrateegia2022-202531.03

61. Mattelmäki, T. (2006). *Design Probes*. Gummerus Printing. https://aaltodoc.aalto.fi/server/api/core/bitstreams/5008f2fd-32a0-4bb4- b50e-8a12d5526db2/content

62. McCall, V., & Gray, C. (2013). Museums and the 'new museology': theory, practice, and organisational change. *Museum Management and Curatorship*, *29*(1), 19–35. https://doi.org/10.1080/09647775.2013.869852

63. Museums Association. (2023, October 12). *Unesco unveils plans for virtual museum of stolen objects - Museums Association*. https://www.museumsassociation.org/museums- journal/news/2023/10/unesco-unveils-plans-for-virtual-museum-of-stolen-objects/

64. Museums Association, & Stephens, S. (2023, October 12). UNESCO unveils plans for virtual Museum of Stolen Objects. *Museums Association*. https://www.museumsassociation.org/museums- journal/news/2023/10/unesco-unveils-plans-for-virtual-museum-of-stolen-objects/

65. *Näitus "Retrotopia" tutvustab Berliinis Eesti ja teiste endise idabloki maade külma sõja aegset disaini - Eesti Tarbekunsti- ja Disainimuuseum*. (2023, March 16). Eesti Tarbekunsti- Ja Disainimuuseum. https://www.ETDM.ee/uudised/naitus- retrotopia-tutvustab-berliinis-eesti-ja-teiste-endise-idabloki-maade-kulma-soja- aegset-disaini

66. Newbery, P., & Farnham, K. (2013). *Experience Design: A Framework for Integrating Brand, Experience, and Value*. https://ci.nii.ac.jp/ncid/BB15346010

67. Nguyen, T., Lee, A., Verma, A., & Gartner. (2022, April 8). *Metaverse opportunities for tech product leaders*. Gartner. https://www.gartner.com/en/articles/metaverse-evolution-will-be-phased-here-s-what-it-means-for-tech-product-strategy

68. Norris, L., & Tisdale, R. (2017, season-01). Nuts & Bolts: Developing a Toolkit for Emotion in Museums. *Exhibiton. A Journal of Exhibition Theory & Practice for Museum Professionals*. https://www.name-aam.org/exhibition_spring2017

69. *Öökulli akadeemia podcast | Eesti Loodusmuuseum*. (n.d.). https://www.loodusmuuseum.ee/et/ookulli-akadeemia-podcast

70. Öömuuseum. (2024, April 18). *Muuseumiöö I Rahvusvaheline kultuurisündmus*. Muuseumiöö. https://muuseumioo.muuseum.ee/

71. Pai, C., Liu, Y., Kang, S., & Dai, A. (2020). The role of perceived smart tourism technology experience for tourist satisfaction, happiness, and revisit intention. *Sustainability*, *12*(16), 6592. https://doi.org/10.3390/su12166592

72. Pastor, E., & VanPatter, G. (2021, March 28). ReAppreciating SiD Parnes. *Humantific*. https://www.humantific.com/post/who-owns-how-might-we

73. Peegel, M. (2024, January 21). Lobjakas: riigi loobumine muuseumite ühendamisest oli erakordselt sümpaatne. *ERR*. https://kultuur.err.ee/1609228374/lobjakas-riigi-loobumine-muuseumite-uhendamisest-oli-erakordselt-sumpaatne

74. Prikk, B. (2023, season-01). Minevikust metaversumisse. *EMÜ Veebiajakiri*. https://ajakiri.muuseum.ee/minevikust-metaversumisse/

75. Recupero, A., Talamo, A., Triberti, S., & Modesti, C. (2019). Bridging museum mission to visitors' experience: activity, meanings, interactions, technology. *Frontiers in Psychology*, *10*. https://doi.org/10.3389/fpsyg.2019.02092

76. Riches, S., Steer, N., Vasile, R., Lyles, S., O'Reilly, L., Guiotto, M., Hughes, T., McKay, M., Westhead, M., Latham, R. M., Newbury, J., Murray, A., Goneni, A., Orehova, A., Temple, R., Thompson, R., Houston, F., & Fisher, H. L. (2022). Impact on public attitudes of a mental health audio tour of the National Gallery in London. *Early Intervention in Psychiatry*, *16*(11), 1192–1201. https://doi.org/10.1111/eip.13268

77. Riigi Teataja. (n.d.). *Eesti Tarbekunsti- ja Disainimuuseumi põhimäärus*. https://www.riigiteataja.ee/akt/110072013050#

78. Risdon, C., & Quattlebaum, P. (2018). *Orchestrating Experiences: Collaborative design for complexity* (1st ed.) [Print]. Louis Rosenfeld.

79. Roppola, T. (2013). *Designing for the museum visitor experience*. https://doi.org/10.4324/9780203070284

80. Runnel, P., & Aljas, A. (2022, May 22). *Exploring the engagement practices of museum visitors with digital heritage* [Slide show]. ICOM CIDOC, Tallinn, Estonia. https://media.voog.com/0000/0030/4552/files/Runnel_Aljas.pdf

81. Savage-Yamazaki, B., & Barber, C. (2019). Museum Experience Index: Research report. In *Gensler*. Gensler Research Institute. https://www.gensler.com/doc/research-museum-experience-index.pdf

82. Savage-Yamazaki, B., Murrell, N., & Gensler. (2003). Museum futures: Exploring the current state of museums and what leaders see coming next. In *Gensler*. Gensler. https://www.gensler.com/gri/museum-futures

83. *Service Safari | Service Design Tools*. (n.d.). https://servicedesigntools.org/tools/service-safari

84. Silverman, L. (1995). Visitor Meaning-Making in museums for a new age. *Curator*, *38*(3), 161–170. https://doi.org/10.1111/j.2151-6952.1995.tb01052.x

85. *Smartify | A world of art and culture, just for you*. (n.d.). Smartify. https://smartify.org/

86. Statistikaamet. (2018, May 18). Muuseumikülastuste arv püstitas mullu uue rekordi | Statistikaamet. *Statistikaamet*. https://www.stat.ee/et/uudised/pressiteade-2018-055

87. Stefano, M. L. (2022). Renewing museum meanings and action with intangible cultural heritage. *International Journal of Intangible Heritage*, *17*.

88. Sticken, A. & Voicearchive US. (2023, March 30). *Museum Audio: From narrating stories to creating emotional experiences. *Voice archive US. https://www.voicearchive.com/museum-audio-from-narrating-stories-to-creating-emotional-experiences/

89. *STQRY Museums, Galleries & Libraries - Tour apps & Guides*. (n.d.). STQRY. https://stqry.com/our-customers/museums-galleries-libraries/

90. Straker, K., Garrett, A., Dunn, M., & Wrigley, C. (2014a). Designing channels for brand value: four meta-models. In *Conference: 19th DMI: Academic Design Management ConferenceAt: London, U.K*. Academic%Design%Management%Conferenc. https://eprints.qut.edu.au/74811/

91. Straker, K., Garrett, A., Dunn, M., & Wrigley, C. (2014b). Designing channels for brand value: four meta-models. In *19th DMI: Academic Design Management Conference*. https://eprints.qut.edu.au/74811/

92. Swain, J., & King, B. (2022). Using informal conversations in qualitative research. *International Journal of Qualitative Methods*, *21*, 160940692210850. https://doi.org/10.1177/16094069221085056

93. Technology Strategy Board & Design Council. (2015). Design methods for developing services: An introduction to service design and a selection of service design tools. In *Design Council*. https://www.designcouncil.org.uk/fileadmin/uploads/dc/Documents/DesignCouncil_Design%2520methods%2520for%2520developing%2520services.pdf

94. Tessitura Network. (2020, February 26). *The cultural Experience framework*. Retrieved February 24, 2024, from https://www.tessitura.com/Items/Articles/Andrew-Recinos/2020/Cultural-Experience-Framework

95. The Australian Museum. (n.d.). *FrogID*. https://australian.museum/get-involved/citizen-science/frogid/

96. *the Design Museum Podcast*. (n.d.). Hosted by the Design Museum. https://shows.acast.com/the-design-museum-podcast

97. *The future of travel and tourism in 2024: A look ahead | STQRY*. (n.d.). STQRY. https://stqry.com/blog/the-future-of-travel-and-tourism-in-2024/

98. The Liminal Space. (2020, August). *Mindsets for Museums of the Future*. Mindsets for Museums of the Future. https://museumofthefuture.the-liminal-space.com/16/

99. The Royal Academy of Arts Museum. (n.d.). *Collecting contemporary art tour: Keeper's House | Event | Royal Academy of Arts*. https://www.royalacademy.org.uk/event/members-month-keepers-house-tour-16-may-24

100. *#TiSDD Method: Creating personas* (n.d.). https://www.thisisservicedesigndoing.com/methods/creating-personas-2

101. Tresidder, R., & Deakin, E. L. (2019). Historic buildings and the creation of experiencescapes: looking to the past for future success. *Journal of Tourism Futures*, *5*(2), 193–201. https://doi.org/10.1108/jtf-04-2019-0034

102. UpVisit. (2023, July 26). Unveiling The Future: 5 Dynamic Trends Reshaping The Museum Industry • UpVisit. *UpVisit*. https://upvisit.io/blog/unveiling-the-future-5-dynamic-trends-reshaping-the-museum-industry/

103. Visit Tallinn - Medieval city by the sea! (2024, April 5). *Infoveebinar "Eesti ja Tallinna väliskülastaja: kes ta on ja milline on tema külastuskogemus"* [Video]. YouTube. https://www.youtube.com/watch?v=NEN5tRMEgbE

104. Visit Tallinn [Visit Tallinn]. (2024, April 22). *"Eesti ja Tallinna väliskülastaja: kes ta on ja milline on tema külastuskogemus"* [Slide show].

YouTube. https://www.youtube.com/watch?v=NEN5tRMEgbE Online webinar for research results presentation.

105. Vitra Design Museum. (n.d.). *Homepage*. https://www.design-museum.de/en/information.html

106. *Vitra Design Museum: Collection*. (n.d.). Vitra Design Museum. https://collection.design-museum.de/#/en/?_k=9r90t1

107. Webmedia. (n.d.). *Muuseumiseadus–Riigi teataja*. https://www.riigiteataja.ee/akt/111032023047

108. Wecker, A. J. (2014). Personalized Cultural Heritage Experience Outside the Museum: Connecting the Museum Experience to the Outside World. In *Lecture notes in computer science* (pp. 496–501). https://doi.org/10.1007/978-3-319-08786-3_46

109. Zeidan, J., & ElHassan, A. (2024, March 7). Transformative experience through storytelling. *MuseumNext*. https://www.museumnext.com/article/transformative-experience-through-storytelling/

10. LIST OF FIGURES

11. APPENDICES

Appendix 1: Tiny interviews guiding questions

Appendix 2: Cultural probe kit