The Power of Imagination

A Concept Design for Museum Catharijne Convent

Chang Liu
MSc Integrated Product Design
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Museum Catharijne Convent

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Master Thesis

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Museum Catharijne Convent

Abstract

This thesis report presents the research and design process for an interactive light installation developed for the Museum Catharijne Convent (MCC) in Utrecht, the Netherlands. The project aims to create an imaginative experience that connects visitors with the museum's collection and stories through light.

MCC houses a significant collection of medieval art and is dedicated to sharing the cultural and historical value of religious heritage. Between 2026 and 2028, the museum will undergo a renovation, during which its permanent ground-floor exhibition will be redesigned around the theme "The Power of Imagination." In collaboration with MCC's educational team, this project addresses the challenge of engaging younger audiences—particularly school groups—through immersive, light-based storytelling.

A user-centered design methodology was employed, guided by the Double Diamond model. Contextual research and user studies informed the redefinition of design goals and requirements. Several design concepts were developed and tested, including Light Collage and Unfolding Manuscript. Iterative evaluation and prototyping provided insights into interaction, spatial design, and narrative potential, which shaped the development of the final concept.

The resulting design is an interactive light installation that transforms exhibition windows into a stage for imaginative storytelling, inspired by manuscript objects. By integrating light, narrative, and participation, the installation invites school groups to unfold and experience stories that draw on diverse religious and cultural contexts. Recommendations are included to guide future development and ensure effective implementation based on evaluation findings.

Aknowledgement

Over the past six months, I was lucky to take part in a journey of museum design. As the final project of my two-year master's study, this experience has taught me many things I had not anticipated, and it has given me the courage to pursue my future career as a designer with greater confidence.

I would like to express my sincere gratitude to my two supervisors from TU Delft, Jeff and Arnold. For me, this was an entirely new topic, yet they consistently offered encouragement, valuable advice, and fresh perspectives. Each meeting with them not only brought me new insights but also, almost miraculously, eased some of the pressure I felt during the process.

My heartfelt thanks also go to Merith from the MCC educational team. Without her and the museum's generous support, this project would not have been possible. She made every trip I took to Utrecht feel bright and welcoming, also learnt a lot.

I am deeply grateful to my family in China, who continue to care for me from afar and provide me with warmth and strength while I live in the Netherlands.

To my friends all over the world, thank you for bringing me joy during this period and for always taking my questions seriously, offering thoughtful answers from different perspectives. I am especially thankful to Mia for hosting me in August—her unique dorm was crucial to the successful completion of my graduation project.

Lastly, I want to thank the music of Anpu, which kept me company during countless late nights of immersive work.
"To squander and to cherish are the same thing."

Best,
Chang Liu

Table of Content

Note on Use of AI

In this thesis, I used ChatGPT (OpenAI) as a supportive tool for language refinement, rephrasing, and translating notes, as well as for generating illustrative images to visualize design concepts. All outputs were reviewed and edited by me to ensure alignment with the research context and academic integrity. AI was not used to analyze research data or generate findings.

Part 1

Project Introduction

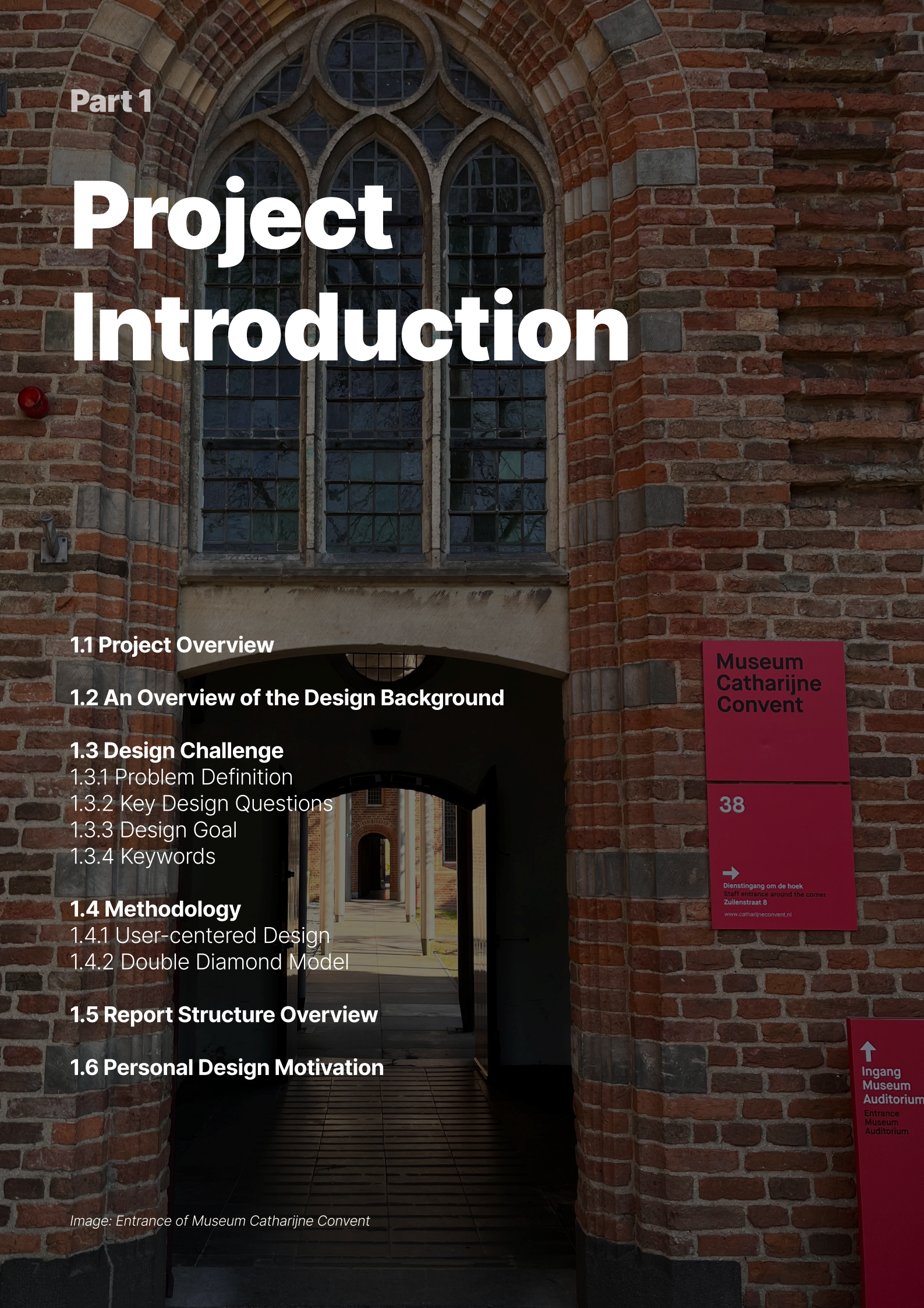


Image: Entrance of Museum Catharijne Convent

1.1 Project Overview

This graduation project explores how light can be used as a medium for symbolic storytelling and imaginative engagement within the context of Museum Catharijne Convent (MCC) in Utrecht. The project is developed in collaboration with MCC, as part of its upcoming renovation (2026–2028), and responds to the museum's renewed focus on creating immersive, meaningful experiences for school group visitors.

The central design task is to create an interactive light-based installation situated in one of the museum's ground-floor galleries. This installation aims to engage visitors—particularly students from primary to secondary education—by stimulating their imagination, allowing them to reflect on the unseen, the spiritual, and the symbolic dimensions of cultural heritage.

The theme of the exhibition space will be "The Power of Imagination", as defined by the museum's curatorial vision. Rather than communicating through text or traditional object displays, the installation will explore how gesture, light, and atmosphere can become narrative tools—inviting visitors to not only receive meaning, but to actively co-create it.

To realize this vision, the project combines design research, user observation, curatorial analysis, ideation, and prototyping. It draws inspiration from both the museum's physical space and its permanent collection, and is grounded in insights gathered from user research and a set of redefined design requirements. The final design underwent multiple iterations and tests, with user feedback collected throughout the process.

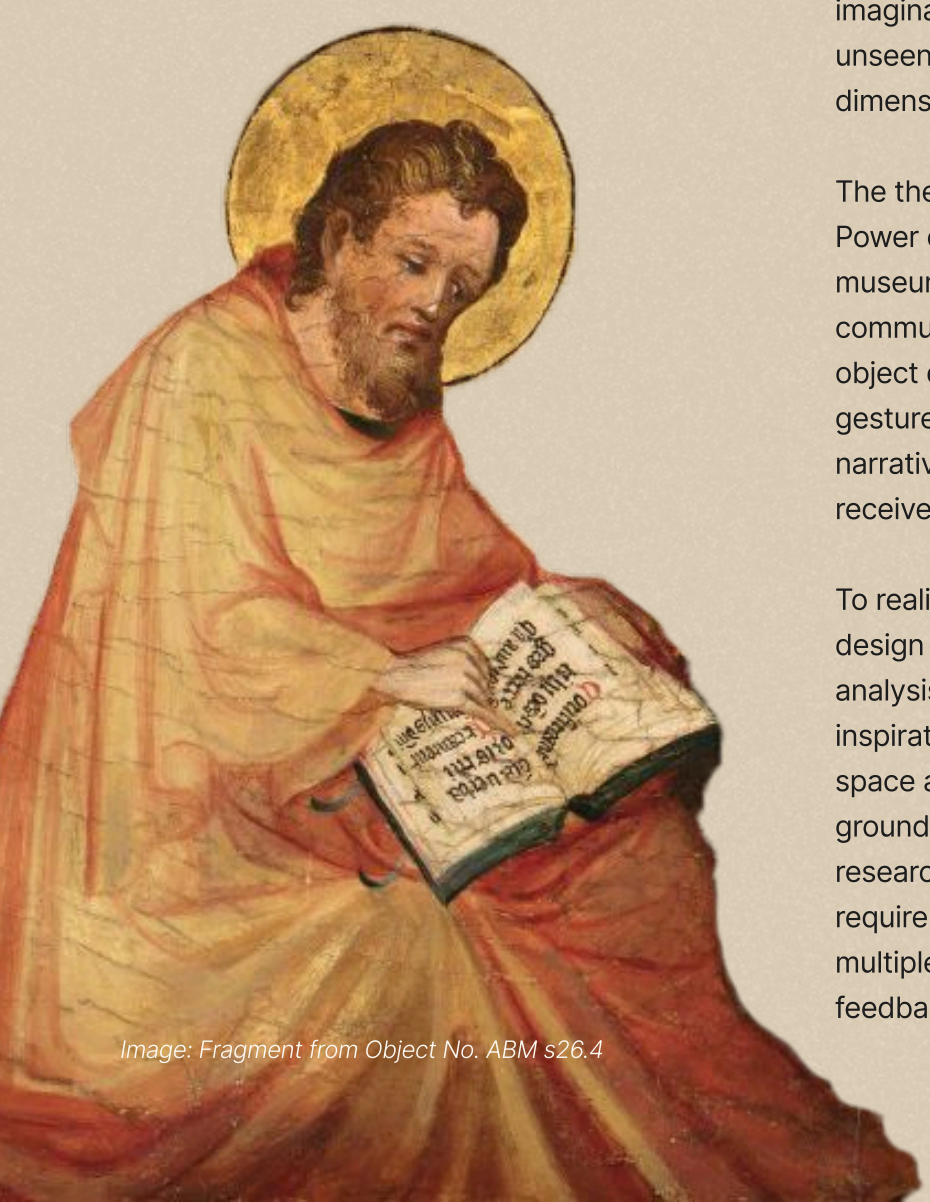


Image: Fragment from Object No. ABM s26.4

1.2 An Overview of the Design Background

Figure 1.1 Entrance of Museum Catharijne Convent

Museum Catharijne Convent (MCC) is a renowned museum in the Netherlands that houses a beautiful and extensive collection of medieval art. Located in Utrecht, the Netherlands, it is dedicated to exploring and sharing the aesthetic, cultural, and historical value of religious heritage (see Figure 1.1). In addition to its permanent collection, the museum regularly hosts temporary exhibitions that explore diverse topics related to religion, spirituality, and culture from both historical and modern perspectives (see Figure 1.2).

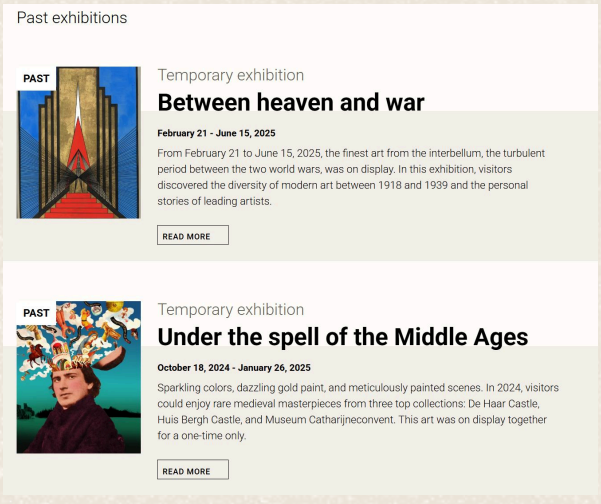


Figure 1.2 Past temporary exhibition in MCC

From 2026 until its reopening in 2028, MCC will undertake a comprehensive renovation of its permanent exhibition spaces, affecting most of the gallery areas. This renovation will not only transform the physical structure of the exhibitions but also redefine the visitor route, aiming to improve the overall flow and experience. The project also provides the curatorial team with an opportunity to reflect on and redesign how the museum's stories are presented. Therefore, a new curatorial theme, **"The Power of Imagination",** will become the theme of museum's permanent exhibition, and the design project discussed in this report will be part of this exhibition. This theme is further discussed in Chapter 2.3.

Figure 1.3 Utrecht, the city where MCC is located

Figure 1.4 Museum Catharijne Convent, Utrecht, photo by STUDIO LOUTER

1.3 Design Challenge

1.3.1 Problem Definition

The exhibition space of a museum is more than just a setting for history and art—it is a place where visitors engage in a dialogue with culture. The current exhibition space of MCC is set within an ancient convent, where artifacts are displayed alongside labels providing textual descriptions. The museum now needs to deepen and redesign the starting concept in order to give visitors an experience that evokes imagination. Visitors typically move through the space following the arrangement of the objects, reading the information, and observing the exhibits. **The question was whether there was a way to use light to tell a story that allowed people to experience more than the fixed and immobile exhibition and enjoy the power of imagination.**

Figure 1.5 Entering Museum Catharijne Convent

Figure 1.6 A view from the MCC courtyard, photo by MCC

1.3.2 Key Design Questions

In this project, I aimed to work around the concept 'Power of Imagination' and create an experience for museum visitors with light. Within the scope, key challenges included: How to stimulate people's imagination using light? How can the museum artefacts play a role in a light-based experience? What stories should be involved to create the experience? What should visitors be doing before, during, and after the journey? How can individual and group visitors enjoy the journey together? How can these elements fit in the Museum Catharijne Convent?

By understanding user needs and developing renovations based on them, the visitors can gain a new experience in the museum instead of the traditional way of static viewing. At the same time, the museum can improve visitor experience and convey information in an attractive way.

1.3.3 Design Goal

I aim to create an experience that stimulates people's imaginations using light, museum artifacts, and spiritual storytelling for individuals and groups visiting Museum Catharijne Convent.

1.3.4 Keywords

Imagination
Museum design
Museum school group
Light show
Interaction design

1.4 Methodology

1.4.1 User-centered Design

User-centred design (UCD) is an iterative design approach aimed at creating products through understanding the context of use, defining requirements, developing solutions, and evaluating them with user feedback (van Boeijen, Daalhuizen, van der Schoor, & Zijlstra, 2013). In this project, I applied the UCD process to identify and understand the target audience, establish design requirements, and guide the iterative development and testing of design solutions.

1.4.2 Double Diamond Model

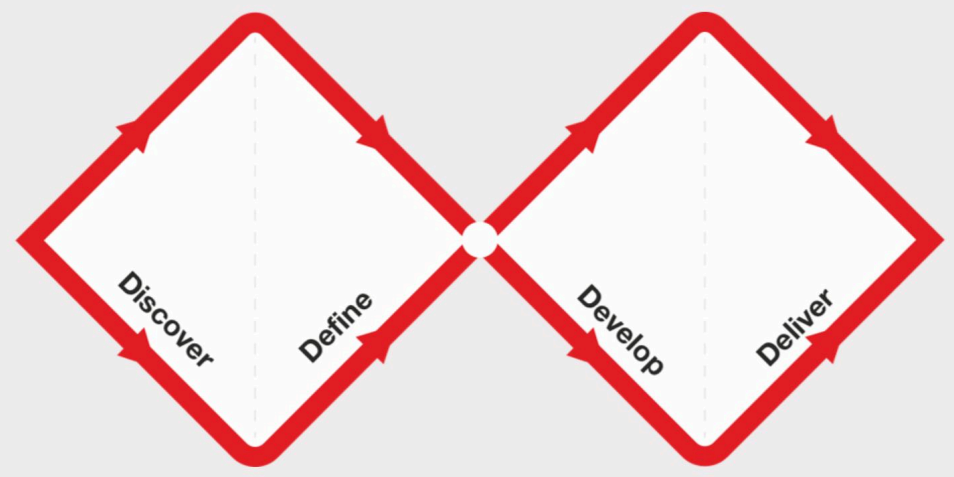
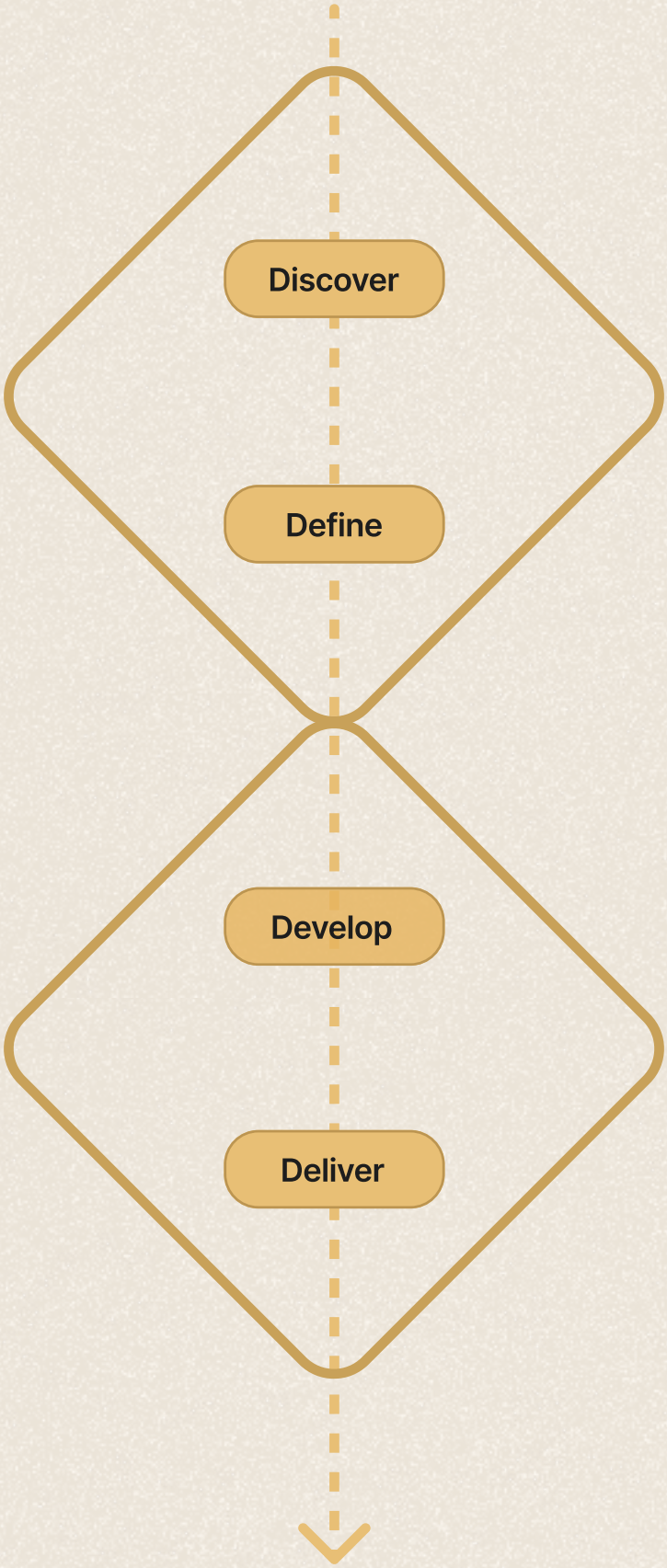


Figure 1.7 Model of the Double Diamond design process. Reproduced from The Double Diamond: A universally accepted depiction of the design process by Design Council, 2005, Design Council (https://www.designcouncil.org.uk/our-work/skills-learning/tools-frameworks/the-double-diamond/). Copyright 2005 by Design Council.

The project follows the Double Diamond design process model (Design Council, 2005; see Figure 1.7). In the first diamond, during the diverging and converging phases of research, I began by exploring the theme of "the power of imagination." This included investigating the spatial qualities of the museum, the role of light within museum environments, and conducting user research.
Based on the insights gathered, I moved into the second diamond by redefining the design goal and target audience. This led to an ideation phase in which I generated and evaluated multiple design directions. From these, two concepts were developed further. After testing and evaluation, one concept was selected for refinement, prototyping, and iterative improvement.

1.5 Report Structure Overview



Introduction — Part 1

Contextual Research — Part 2

User Research — Part 3

Insights

Redefine Design Goal — Part 4

Ideation — Part 5

Concept Development

Iteration — Part 6
Validation

Final Design — Part 7

Reflection — Part 8

Figure 1.8 The Report Structure Overview

Figure 1.9 The stained-glass windows in the staircase of the MCC add vitality to the space

1.6 Personal Motivation

As a museum lover, I have always been fascinated by how interactive design transforms museum visits into engaging and immersive journeys. Thoughtfully designed exhibits inspire me, making exploration both enjoyable and meaningful. However, I have also experienced moments of information overload, where excessive input left me feeling overwhelmed. These experiences motivate me to reflect on how museum storytelling and experience design can better guide and support visitors.

Through this project, I aim to deepen my understanding of museum design and to explore user experience research within the museum context. I am particularly interested in storytelling and experience creation, as they play a crucial role in making exhibitions more engaging and accessible. Additionally, this project provides an opportunity to gain insights into working within cultural and educational institutions, equipping me with valuable skills for my future career.

Figure 1.10 Me on the secret staircase of the MCC

Part 2

Contextual and Theoretical Background

Image: Glass corridor in Museum Catharijne Convent

2.1 Introduction

This chapter provides the contextual and theoretical foundation for the design of an interactive light installation for Museum Catharijne Convent (MCC). It begins by introducing the spatial characteristics and historical significance of the museum, establishing how its architectural atmosphere and curatorial approach influence visitor experience. The chapter then explores the thematic relevance of imagination within MCC's mission and the museum's intent. Finally, special attention is given to the role of light in the museum context. Drawing from case studies, I identify four key functions of light in exhibitions—ranging from emotional expression to interactive storytelling—which serve as a conceptual basis for the design.

Image: Decorative fragment from Object No. ABM h20, f. 34r

2.2 MCC and its Spatial Experience

2.2.1 History of MCC

Museum Catharijne Convent is housed in a centuries-old complex located in the heart of Utrecht's historic city centre. The site has a layered history that began in the 14th century, when it was used as a shelter for the homeless. In the 15th century, it was acquired by the Carmelite order and transformed into a convent, introducing a monastic presence that shaped the building's architectural form and spiritual atmosphere.

Museum Catharijne Convent

https://www.catharijneconvent.nl/

Over time, the complex took on new functions. It was later used by the Knights of St. John as a hospital—a role it continued to serve until the early 19th century. In the years that followed, the building underwent various other uses before being officially converted into a museum in 1979, focusing on Christian art and medieval heritage in the Netherlands (Museum Catharijne Convent, n.d.).

Today, Museum Catharijne Convent stands as a space where history, religion, and art intersect. Its long and varied past is not only reflected in the architecture, but also in the quiet, contemplative atmosphere that continues to influence how visitors move through and engage with the museum.

Figure 2.1 Main Entrance of MCC at Lange Nieuwstraat, Utrecht

Figure 2.2 Peaceful Atrium in MCC

2.2.2 Exhibition Space

The existing all-ages exhibition spaces at MCC are divided into the permanent exhibition and the temporary exhibition. The permanent exhibition is located on the ground floor and basement level of the main building complex, while the temporary exhibition is housed on the second floor of the former monastery. In addition, there is a dedicated exhibition space for children also located on the second floor (see Figure 2.5).

Although the museum focuses on medieval art, its curatorial approach embraces a sense of creativity and surprise. Throughout the museum, various design interventions aim to enrich visitor experience—for example, by projecting animated figures from artworks onto corridor walls or juxtaposing contemporary artworks with ancient relics (see Figure 2.3 and Figure 2.4). These contrasts not only enrich the visual experience but also invite visitors to reflect on the evolving meanings of faith, culture, and symbolism over time.

Figure 2.3 The projection on corridor roof

Figure 2.4 The contemporary artwork in MCC, Path and Puddle by Kasper Bosmans. Photo by Gunnar Meier

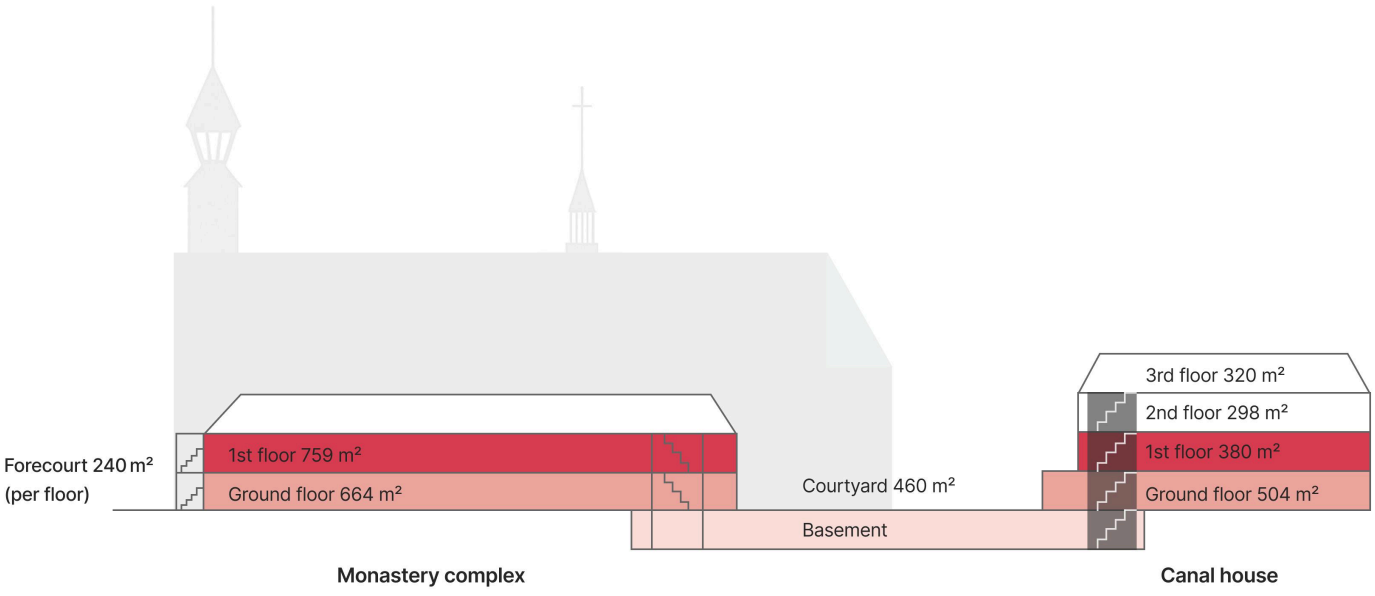


Figure 2.5 The sketch of Museum Catharijne Convent buildings

The exhibition space of interest for this project is located in the ground floor of Catharijne Convent Museum, which was originally part of a monastery building and carries heavy religious and historical memories. The exhibition space is an elongated rectangle, approximately 18.7 meters long and 7.7 meters wide (see Figure 2.6). Its monastic architectural form and restrained structure foster a quiet, contemplative atmosphere(see Figure 2.7).

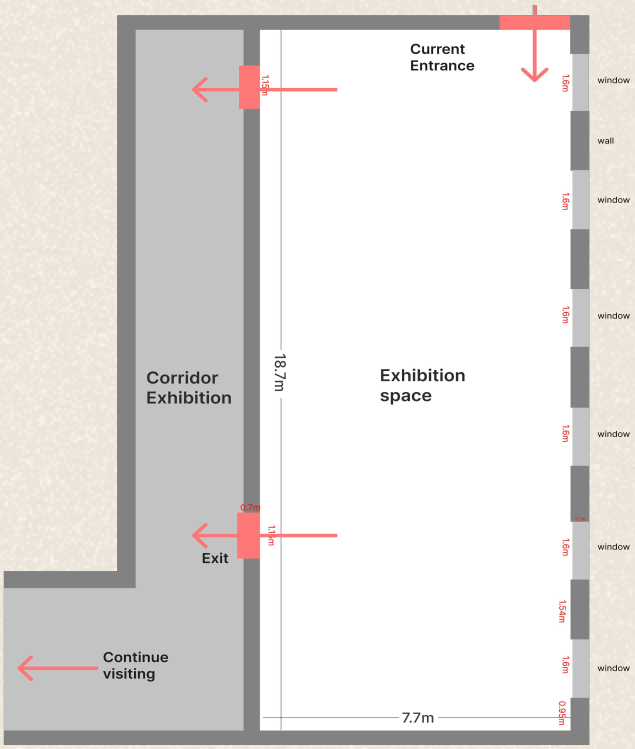


Figure 2.6 Current floor plan

Figure 2.7 Current exhibition space of the project 'The Power of Imagination'

Figure 2.8 Windows in the exhibition space

One side of the exhibition space is a solid wall with two small doorways functioning as entrances and exits. The opposite side features six large windows, each measuring 1.6 meters wide and 3.6 meters high, providing natural daylight to the space. The current exhibition in this room displays a selection of medieval statues and paintings from the museum's permanent collection, without a unifying thematic narrative. Visitors enter from a doorway at the far end of the space and exit through a side door that leads into the adjacent corridor gallery (see Figure 2.9), where the rest of the permanent exhibition continues.

Figure 2.9 Current corridor exhibition

2.2.3 Renovation Plan of MCC

As part of its upcoming renovation plan (scheduled for 2026–2028), MCC will undergo a significant reorganization of its spatial layout and visitor routing. The current main entrance will be relocated to the outer edge of the building complex, fundamentally changing how visitors enter and navigate the museum (see Figure 2.10).

The existing first gallery, which is currently located in a semi-basement level, will be repurposed as a cloakroom and restroom area. **In turn, the gallery relevant to this design project—located on the ground floor—is planned to become the new entry exhibition space.** It will introduce visitors to the museum through the thematic lens of **"The Power of Imagination"**, serving as the entry point to the overall museum narrative. This repositioning means that the exhibition space of interest to the program will no longer be located mid-exhibition, but will be the first permanent exhibition room encountered by all visitors upon entering the museum.

Figure 2.10 The new main entrance of Museum Catharijneconvent seen from the forecourt, KAAN Architecten

The renovation will also significantly reshape the visitor flow throughout the museum. In the updated design, the current corridor exhibition space will be transformed into an introduction zone for the exhibition, particularly tailored for school group visits. As illustrated in the new curatorial layout (see Figure 2.12), the revised visitor route is highlighted in red, indicating the redefined entry sequence and spatial rhythm of the exhibition experience.

Figure 2.11 Current exhibition space

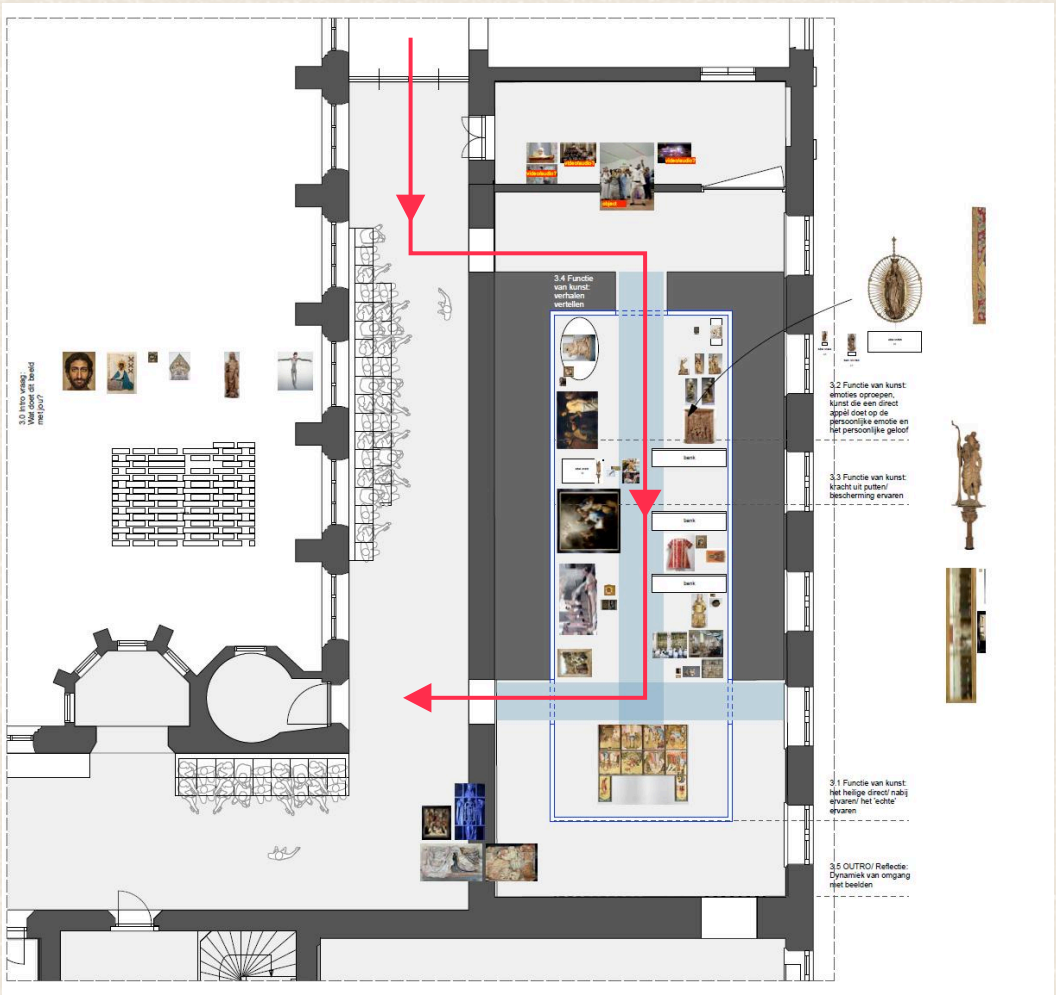


Figure 2.12 Curatorial plan for the exhibition 'The Power of Imagination', by STUDIO LOUTER

With six large windows, the gallery is now not exposed to direct sunlight, but the natural light is still abundant and soft, providing a good base of light for the current exhibits. This diffused natural light maintains a consistent, quiet light level throughout the space. In the future, if a light show is to be set up in the exhibition hall, it will be necessary to consider dimming the overall space and controlling the lighting.

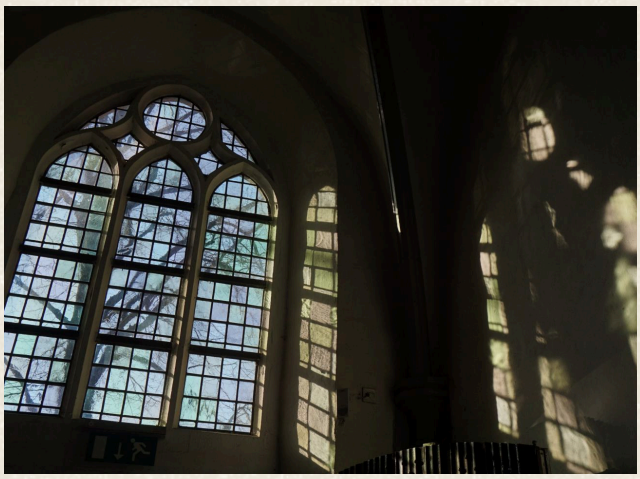


Figure 2.13 A Window in the Corridor of Museum Catharijne Convent

According to the museum, the renovated gallery will have full control over lighting conditions to support future light shows. This means the six windows will be fully covered or sealed off. When no light show is in progress, simulated natural lighting will be used to maintain an appropriate ambient light level in the space.

Figure 2.14 Window in the exhibition space

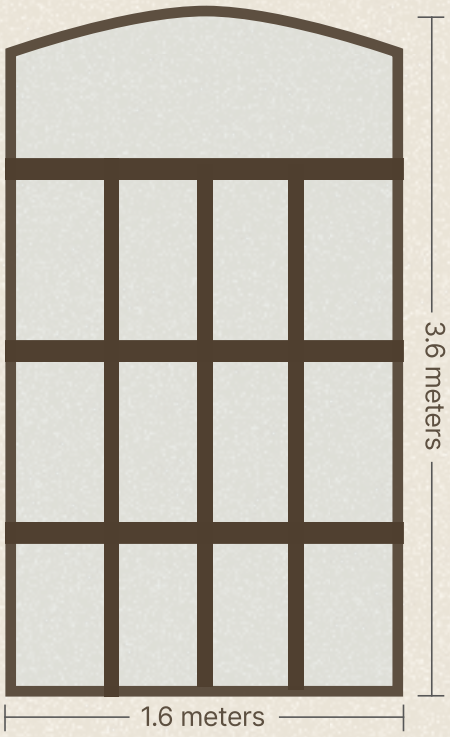


Figure 2.15 Window size

2.3 Imagination and Museum MCC

As part of the upcoming renovation, “The Power of Imagination” will become the central curatorial theme of the museum. Therefore, understanding the concept of imagination—and its relevance to MCC’s mission and historical context—forms a crucial foundation for the design of the light-based installation.

The concept of imagination plays a pivotal role in the development of human consciousness and experience. According to Enigma of Mind: A Theory of Evolution and Conscious Experience (Lin & Lomas, 2022), imagination is an evolved cognitive capacity that allows humans to create internal mental models, simulate alternative realities, and construct symbolic meaning. This evolutionary function of imagination suggests that it is not a luxury, but a survival mechanism—one that enables emotional abstraction, future planning, and spiritual projection.

Imagination plays a central role in how we engage with art. According to Sheppard (1991), imagination functions in two distinct but complementary ways: it allows us to "see and feel" as if we were within the artwork—enhancing empathy and immersion—and it helps us "go beyond" the artwork’s surface to interpret symbolic or philosophical meanings. These dual functions not only enrich aesthetic experience but also deepen our understanding of art and the human condition.

In religious contexts, imagination is often activated through the unseen, the doubtful, and the sacred. Stories such as Jesus casting out seven demons from Mary Magdalene (see Figure 2.16) demonstrate the importance of “seeing to believe,” where belief is catalyzed through personal visual/spiritual revelation. Among the exhibits in MCC's collection, the power of imagination is a source of art creation and an important link between visitors and the exhibits (see Chapter 2.5).

Figure 2.16 Demonenuitdrijving bij Maria Magdalena by Helen Verhoeven (2020). Photo by Museum Catharijne Convent.

The concept of liminal space offers a valuable theoretical lens for understanding how museum environments can spark imagination and foster transformative experiences. Liminal spaces in museums offer conditions for imagination and transformation—not through information overload, but through atmospheric ambiguity and sensory thresholds (Liedgren, Gaggioli, & Desmet, 2025). Such spaces invite visitors to actively interpret rather than passively receive. To evoke this state, exhibitions can spark narrative desire, use optimized abstraction to maintain mystery, and create immersive moments that suspend disbelief, encouraging deeper emotional and cognitive engagement.

2.4 The Roles of Light in Museum

The museum was expecting me to provide a light-based design proposal for the new curatorial programme. In sacred architecture such as churches, light has long been used to create a spiritual atmosphere, symbolizing transcendence and connecting visitors to an experience beyond the material space (see Figure 2.17). To explore the potential roles of light in museum exhibitions, I began by formulating a series of guiding questions: How does lighting affect the viewer's perception of the exhibition's atmosphere and space? Can lighting take on a narrative or symbolic function? How does interactive lighting design enhance the audience engagement experience?

These questions served as a starting point for my research into lighting design strategies and artistic installations. Through the case study process, I identified four functional roles of light in museum:

Light Evokes Emotion
Light Changes the Aura of a Space
Light as Part of a Storytelling
Light as a Medium of Interaction

These examples have inspired me to consider how light can be thoughtfully applied in museum design and also inspired my subsequent explorations of design using light.

Figure 2.17 Light in Sagrada Familía, phoyo by Joan Tomas

2.4.1 Light Evokes Emotion

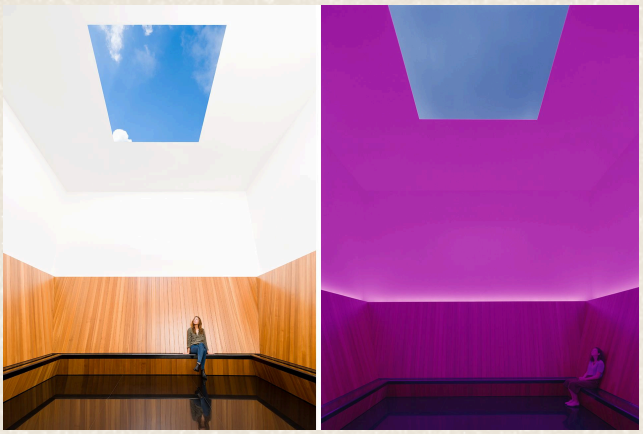


Figure 2.18 Skyspace by James Turrell, 2016

Figure 2.19 The weather project by Olafur Eliasson, 2003

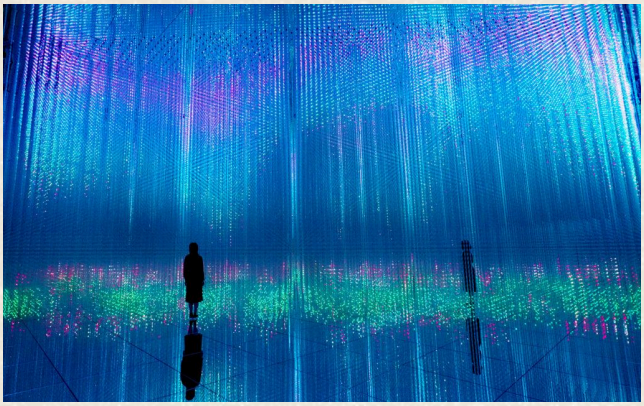


Figure 2.20 TeamLab Borderless TOKYO, 2024

In an artist's creation, light can be a powerful medium for evoking emotions and immersive experiences. For example, James Turrell's Skyspace (see Figure 2.18) manipulates natural and artificial light to alter perception. The changes in color create a meditative and contemplative environment that draws the viewer into a slow, introspective state. Olafur Eliasson's The Weather Project (see Figure 2.19) at Tate Modern used the monumental artificial sun and mist to simulate natural phenomena. Lying under the 'sun', the warm glow and collective experience evoked a sense of comfort, communal feeling and reflection. This artwork shows that light in Eliasson’s installations evokes strong emotional responses by challenging habitual perception and encouraging viewers to reflect on themselves within the environment (Wang, 2018).

Beyond artistic practices, research has demonstrated that projection-based installations can foster emotional immersion (Zhao, Qi, & Wang, 2025). TeamLab's digital installation in Tokyo (see Figure 2.20) immerses visitors in a dynamic, ever-changing light environment that responds to movement. These interactive spaces evoke feelings of awe, wonder and playfulness, highlighting how light can enhance engagement.

Together, these works demonstrate how light can transcend illumination to act as an emotional and narrative force in art and exhibition spaces.

2.4.2 Light Changes the Aura of a Space

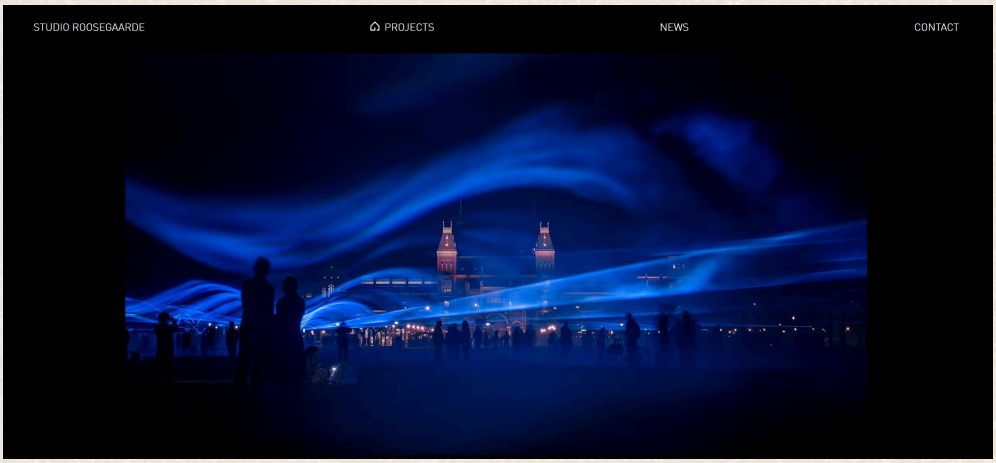


Figure 2.21 Waterlicht by Studio Roosegaarde, 2015

Light holds a powerful capacity to transform space—not only by illuminating it, but by reshaping how people perceive its atmosphere. Rahimi and Steen (2020) argues that changes in light can manipulate spatial perception, altering impressions and boundaries, and thus act as a key factor in shaping experience of space. In Studio Roosegaarde's Waterlicht (2015), blue beams of light interlace in the night sky to form flowing "waves," turning Museumplein into a dreamlike "underwater world" that evokes reflection on rising sea levels and the forces of nature (see Figure 2.21 and 2.22). In Lotus Dome (2012), light passes through an intricately structured dome installation, casting dynamic and sacred shadows inside a church (see Figure 2.23). This breaks the stillness of the historic architecture, infusing the solemn religious space with interactivity and vitality.

Figure 2.22 Waterlicht by Studio Roosegaarde, 2015

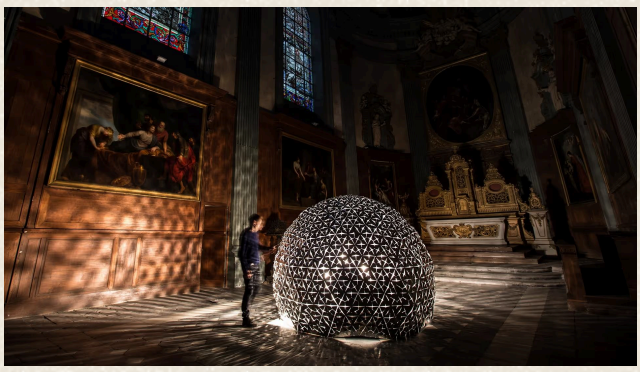


Figure 2.23 Lotus Dome by Studio Roosegaarde, 2012

These two light installations demonstrate how light can change the aura of a space, whether the space is an indoor historical venue or an outdoor public space, light has great potential to change the atmosphere of the space.

2.4.3 Light as Part of a Storytelling

Figure 2.24 Chinese shadow puppetry, UNESCO

Figure 2.25 Tree of Codes, Studio Olafur Eliasson, 2015

In animation practice, lighting usually functions as an essential storytelling device, shaping mood, directing attention, and conveying narrative meaning beyond dialogue or action (Katatikarn & Tanzillo, 2016). More broadly, light demonstrates unique expressive power and imaginative potential across different cultural and artistic practices. Chinese shadow puppetry (see Figure 2.24), with its long-standing history, projects silhouetted figures onto a screen, where light and shadow not only bring static images to life but also create spaces of “visual absence” that spark the audience’s imagination, allowing the story to extend beyond the visible.

In contemporary performing arts, Tree of Codes (2015), a collaboration between Olafur Eliasson and Wayne McGregor, further expands the narrative potential of light (see Figure 2.25). The dynamic lighting system interacts closely with the dancers' movements, continuously transforming the stage and acting not only as a mood-setting device but also as an "invisible narrator" that drives the progression of the plot.

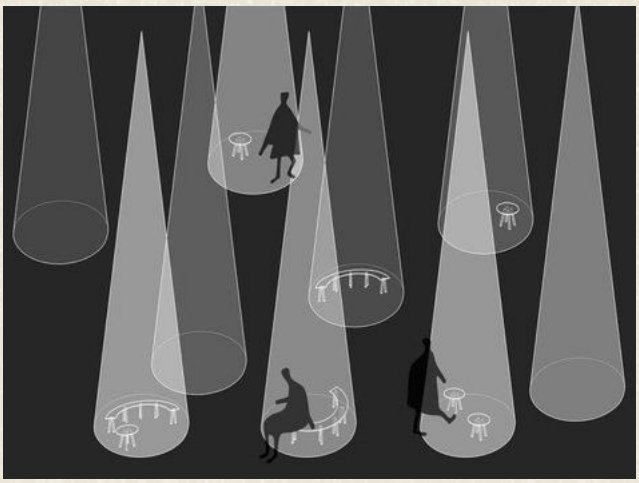


Figure 2.26 "Forest of Light" by Sou Fujimoto, 2016

Sou Fujimoto’s Forest of Light (2016) draws from the traditional stage spotlight, reinterpreting overhead lighting as a spatial language. By inviting audiences to move through cones of light, the work creates a dynamic narrative of human interaction within space (see Figure 2.26).

2.4.4 Light as a Medium of Interaction

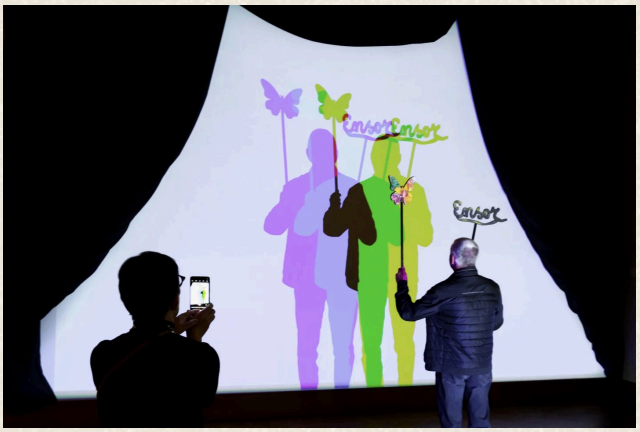


Figure 2.27 in your wildest dreams, Tinker Imagineers, 2024

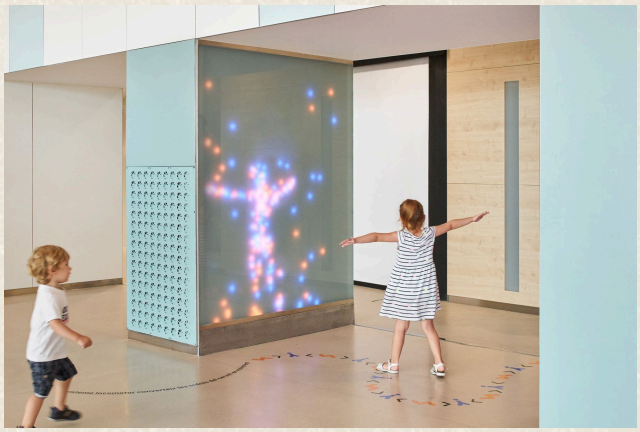


Figure 2.28 The Human Body, Rai Pinto Studio, 2025

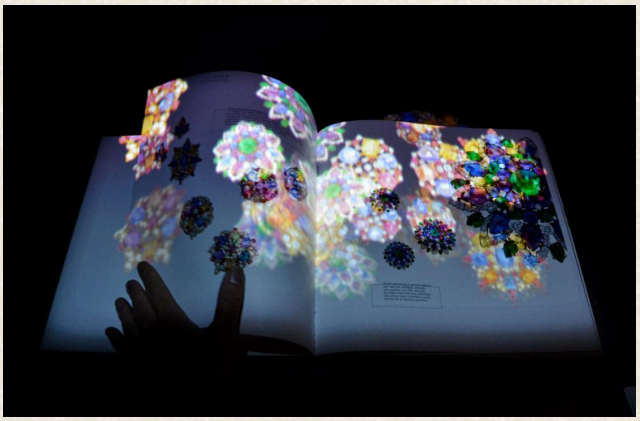


Figure 2.29 BVLGARI History Book, LUCENT Design, 2012

Light is not only a tool for illumination—it can also serve as a medium for interaction. For example, in one of the Tinker Imagineers' work (2024), projection and body movement interaction allow visitors' silhouettes to merge with dynamic images, creating a space for personalized expression (see Figure 2.27). Rai Pinto Studio (2025, Figure 2.28) uses sensors to capture children's movements, displaying point-based light patterns on the wall in real time, sparking curiosity and playful exploration. LUCENT Design's interactive book for BVLGARI (2012, Figure 2.29) transforms light in response to page turning, shifting from a flat surface to a three-dimensional experience, breathing digital life and surprise into printed content.

These cases demonstrate the diverse potential of light in interaction design—it can respond to visitors' behavior, stimulate sensory experiences, and enhance emotional connections between people, space, and information. Light becomes an "invisible interface," dynamically weaving together the visitor's movements, stories, and spatial experiences. These lighting-related design examples will serve as a starting point for me to explore various ideas

Figure 2.30 A light installation in the temporary exhibition North & South at the Museum Catharijne Convent, 2019, photo by MCC

2.5 Artifacts and Storytelling Potential

To move beyond an abstract notion of "imagination," this project attempts to build an understanding of the theme through the museum's own artifacts. Rather than relying on external theory alone, the meaning of imagination is here interpreted through the stories, symbols, and cultural references embedded in the permanent collection. Since the museum has already outlined a preliminary curatorial plan for the upcoming exhibition, I selected several artifacts to explore the storytelling potential.

Using a collage-based story mapping approach, I placed these objects and their stories side by side to see how they connect, differ, and echo one another. Together, they create a curatorial picture of what "imagination" can mean.

Object Number ABM
This manuscript show
can bring the sacred
making it feel immedi
and real, opening spa
imagine the nearness

Object Number ABM bh251
In the Catholic tradition, patron saints play an important role in travel and pilgrimage, and are often experienced as sources of spiritual power. Saint Christopher, the patron saint of pilgrims and travelers, embodies this protective presence for those "on the way."

Images sourced from the permanent collection of Museum Catharijne Convent.
All images © MCC, used with permission.

Figure 2.31 Collage of the stories in MCC artifacts

h2
s how art
closer—
ate, present,
ce to
of the holy.

Object Number ABM s26
Through the life of Mary, this altarpiece unfolds key scenes from the story of Jesus. It shows what art can do: tell stories.

Object Number RMCC g337a
Jesus calms the storm; the disciples marvel that even the wind and sea obey him. Made in Indonesia. The artwork sparks the viewer's imagination of the story.

Object Number StCC h13
Prayer book for travel, Ethiopia. It invites the traveler to imagine God's presence along the way.

Part 3

Understanding School Group Visitors

Image: Hendrik Valkenburg, A Devotional Hour in the Achterhoek Region (1883), Museum Catharijne Convent

3.1 Introduction

MCC regularly receives educational groups as part of its public outreach and cultural education programs. These school visits range from playful, sensory-based explorations for young children (6-12 years old) to more serious experiences for teenagers(13-18 years old). School groups can book a one-hour guided tour through the museum's official website. Most of these school groups are from the Netherlands, but there are also study tour groups from other countries, so the tour guides may give the tour in Dutch or English. There is significant diversity in age, language background, and learning needs among the school groups. Designing the school team's visit experience is an important part of the MCC educational team's work.

Image: Decorative fragment from Object No. ABM h2 13

3.2 School Groups at MCC

MCC regularly receives educational groups as part of its public outreach and cultural education programs. These school visits range from playful, sensory-based explorations for young children (6-12 years old) to more serious experiences for teenagers(13-18 years old). School groups can book a one-hour guided tour through the museum's official website. Most of these school groups are from the Netherlands, but there are also study tour groups from other countries, so the tour guides may give the tour in Dutch or English. There is significant diversity in age, language background, and learning needs among the school groups. Designing the school team's visit experience is an important part of the MCC educational team's work.

Figure 3.1 School groups at MCC

Figure 3.2 Falk's (2016) identity-related visitor motivation framework

According to Falk's (2016) identity-related visitor motivation framework, individuals' motivations for visiting a museum and their expectations of the experience are shaped by their specific visitor identities. In the context of this project, the target student group can be primarily categorized as **Explorers**, driven by curiosity and a desire for discovery, and **Experience Seekers**, motivated by the appeal of the museum as a notable destination. The team teachers, on the other hand, align with the **Facilitator** identity, as their primary role is to support and enhance the learning and experience of the students in their group. With this framework, the user research can be directed to identify the distinct needs, behaviors, and engagement patterns of the MCC school groups.

3.3 Field Observation Setup

Understanding these visitor identities provides the foundation for designing an effective field observation, ensuring that the data collection focuses on behaviors and interactions most relevant to the motivations and needs of the MCC school groups. To capture these patterns, I conducted user research by observing two distinct audiences during their museum visit: three groups of Dutch elementary school students (ages 6–8) and one group of Spanish high school students (ages 16–17).

These observations focused on the activities and emotional changes experienced by students during three stages: **before, during, and after** the exhibition, and records them through photographs and text. I also observed how students interacted with each others, responded to guidance, and engaged with exhibits.

In addition, I mapped the museum journeys of all four groups as part of the record. A detailed record of this field observation is provided in Appendix A.

Figure 3.3 Two secondary school students in a cloister - Photo Lilian van Rooij

3.4 Tour Patterns by Age Group

Figure 3.4 Exhibition specially designed for children

Figure 3.5 Elementary school tour involve a lot of playful behaviors

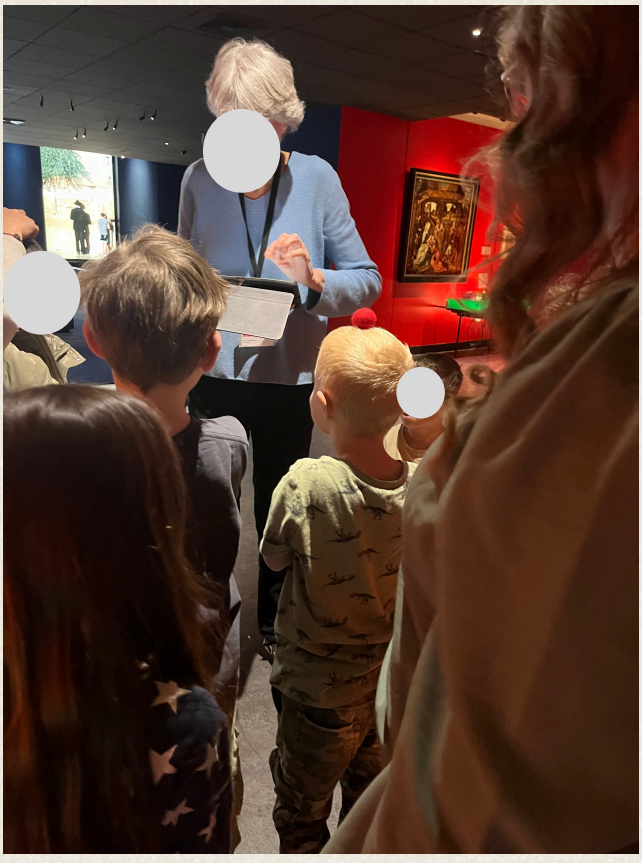


Figure 3.6 Elementary school tour involve a lot of game

Younger Students (6–8 years)

The elementary school group I followed visited the exhibition area on the first floor of the museum, which was specially designed for children (see Figure 3.4). They first entered a classroom to listen to a presentation by a museum teacher, and then entered the exhibition space. Young children school groups demonstrated high levels of energy and curiosity. Their tour route was specifically designed for interactive and multi-sensory exploration, including tactile exhibits, smell-based props, and role-play elements. With teacher guidance, they naturally engaged in playful behaviors like sitting, dancing, miming, and asking spontaneous questions (see Figure 3.5). They absorbed meaning through both doing and listening.

Older Students (16–17 years)

The high school student group I followed visited museum permanent exhibits that are open to all general audiences (see Figure 3.7). In this type of visit, they listened to the museum docent's introduction around an exhibit item, and the visit experience was more like a history lecture, with many visitors showing less excitement and thrill. When the docent asks open-ended, symbolic questions (e.g., “What would you do if you lived in a monastery?” or “Which painting would you most like to steal?”), their interest is aroused, and they are willing to express their imagination. Overall, however, the experience of visiting in the form of a single lecture does not fulfill the needs of this group. If certain exhibits catch their interest, they will take out their phones to take photos or take selfies with their companions.

Language was a key aspect influencing the students’ experience. The visitors were from Spain, while the guide teacher was Dutch, so both parties opted to use English as a compromise language. Despite this, the Spanish high school students experienced some communication barriers, which affected their overall understanding of the exhibition. Since all labels in the gallery were written in Dutch, some students resorted to using their phones to photograph and translate the texts.

Figure 3.7 School groups of high school students visiting the museum

3.5 Visitor Journey Comparison

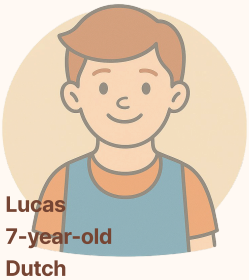
Persona	Visiting Stage		
	Before	During	After
 Lucas 7-year-old Dutch Primary school student	• Active participation (answering questions) • Excited • Curious to observe, eager to try out	• Active participation (answering questions), • playing with props, • interactive tools(smell/ touch/sound), • body movement expression • Laughter	• Active participation, • Leave with a lot of smile
Mood	🙂	🤩 😀	😀
 Sofia 17-year-old Spanish High school student	• Active with friends/ classmates • Calm facial expression • Not very high expectations	• Curious for the tour • Gradually drifting off, inattentive • Interest aroused by questions, begin to express and imagine	• Want to take photos • Make fun with friends
Mood	🙂 😐	😐 😯	😜

Figure 3.8 Visitor Journey Comparison

This Visitor Journey Comparison table (see Figure 3.8) compares the younger and older school groups of the museums. The differences between the school groups of different ages are obvious. Younger school visitors show stronger motivation to participate, preferring playful, physical, and multi-sensory guidance (e.g., smelling, touching tools); they are more active in the galleries, preferring to "sit, dance, and try"; older school visitors in general show less interest and tend to "wander off", but are significantly more interested when faced with interesting questions or spaces with selfie potential.

It is also worth noting that since the high school group was from Spain, and the text of the exhibition was only in Dutch, and the communication with the museum guide was in English, the language barrier constituted an obstacle to communication between the visitors and the museum. This also aroused the reflection of the author, a non-native English speaker, on how to transcend the limitations of language through the design of the exhibition so that visitors from different cultural backgrounds can understand and empathize with each other.

3.6 Insights from Visitor Research

Based on these observations, several key takeaways emerged for guiding the design of the interactive installation:

Support multiple modes of engagement
Younger students benefit from tangible, action-based experiences, while older students require reflective, story-based prompts. The design can blend physical interaction with storytelling.

Encourage collaborative activities
Both age groups are responsive to group activities, whether playful or interpretive. Designed for small group interaction (4-6 people) to make a visit to the museum more interesting.

Design beyond language
With one observed high school group being non-Dutch-speaking, language emerged as a clear barrier. Therefore, the installation should rely on visual, spatial, and emotional cues to ensure accessibility across cultures.

Emotional journey differences
Younger students stay consistently active and positive, while older students lose focus more easily and need specific triggers to re-engage. This implies that exhibition design should include clear “activation points” to capture and renew attention, especially for older visitors.

These insights serve as a foundation for defining the design goal and design requirements in the following chapters.

Image: Decorative fragment from Object No. ABM h35

Part 4

Redefined Design Goal

Image: Inner page of a manuscript, Museum Catharijne Convent

4.1 Introduction

After the preliminary desktop research, literature reading, case studies, and user research, in this chapter I will redefine my design goals, the main target audience of the design, and redefine the design requirements that will be the guiding criteria in the design process afterwards.

Image: Decorative fragment from Object No. BMH h14

4.2 Redefined Design Goal

The initial design goal focused broadly on stimulating visitors' imagination through light, artifacts, and spiritual storytelling within the MCC museum. However, as the project evolved through user research, discussions with museum, and concept prototyping, the goal became more refined and specific.

This project aims to design an interactive light-based experience—primarily for **school group visitors**—that stimulates imagination at Museum Catharijneconvent. Using **light** as the main medium, the installation tells stories of imagination drawn from multiple cultural traditions.

It is designed for school groups ranging from primary to high school, while also accommodating individual exploration. Furthermore, the installation must integrate seamlessly into the existing exhibition space and curatorial plan, taking into account the visitor flow and spatial rhythm of the museum.

Image: Fragment from Object No. ABM s26

4.3 Redefined Design Requirements

1. **Stimulate Imagination and Visualize the Invisible through Light**
   The design should evoke imagination by translating abstract or symbolic ideas—such as belief, emotion, or transformation—into visible, light-based experiences. This may involve either activating imagination through interpretation of existing narratives (1.1), or inviting visitors to co-create new stories (1.2).
2. **Communicate Beyond Words**
   The light show should convey meaning through non-verbal elements such as motion, rhythm, and symbolism. It must lower the threshold of understanding, especially for young and international visitors, and should not rely on text-heavy or information-driven formats.
3. **Group-Oriented, Individual-Friendly**
   The installation should primarily support collaborative engagement within school groups (3.1). It should also be accessible and engaging for individual exploration (3.2).
4. **Integrated with Spatial and Curatorial Context**
   The installation should fit seamlessly within the existing exhibition layout and future renovation plans, aligning with visitor flow, lighting conditions, and curatorial rhythm.
5. **Culturally Diverse and Inclusive**
   The experience must incorporate symbols, stories, and visual references from multiple cultural and religious traditions, allowing visitors to discover shared human themes and connect across worldviews.

Part 5

Ideation and Selection

Image: Asking for visitors' feedback, photo by Fan Jiayin

Image: Decorative fragment from Object No. ABM s26

5.1 Introduction

This chapter presents the ideation process and the selection of the design direction. Following the definition of the design criteria, this phase focused on generating and exploring a wide range of possible concepts that could address the project goals. Around the theme “The Power of Imagination”, I created a brainstorming ideation map that illustrated the process of generating several starting ideas. All of these starting ideas were evaluated, leading to the selection of two concepts — Light Collage and Manuscript — for further development, prototyping, iteration, and testing. The Harris Profile method was then used to evaluate these two concepts and determine the final design direction.

5.2 Ideation Process

5.2.1 Ideation Map

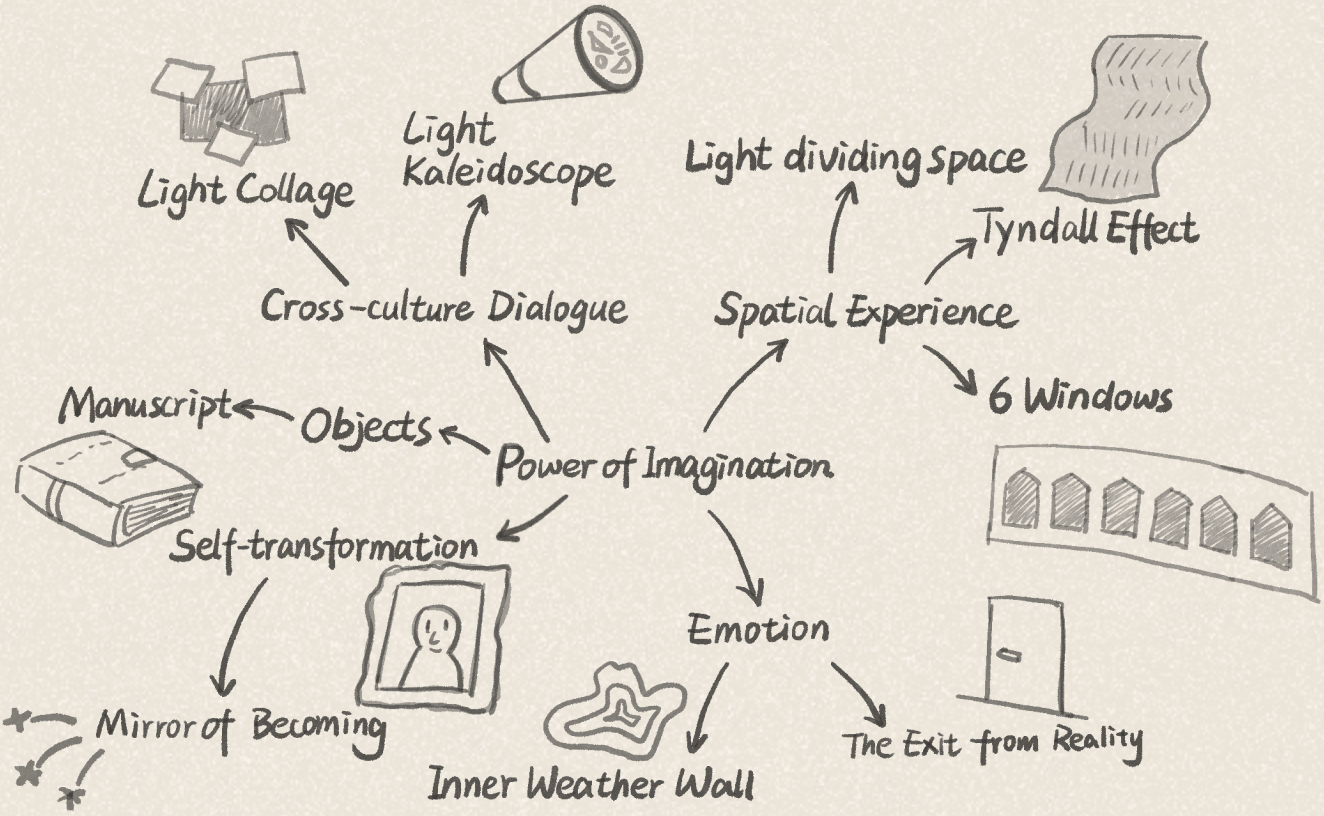


Figure 5.1 Ideation Map

After conducting case studies, contextual research, literature review, and visitor research at MCC, I entered the brainstorming phase and developed this ideation map (Figure 5.1).

The ideation map visualizes the early design thinking process, outlining the conceptual landscape shaped around the central theme of "Power of Imagination." From this core, the map extends into several key directions—museum objects, emotion, spatial experience, cross-cultural dialogue, and self-transformation—each branching further into more specific starting ideas for design exploration.

5.2.2 Starting Ideas

Figure 5.2 Starting ideas overview

The ideas generated through brainstorming were developed from initial keywords into conceptual sketches or simple storyboards (see Figure 5.2). These ideas explored different ways of combining light, storytelling, and spatial experience within the thematic framework of "The Power of Imagination".

The starting ideas included:

Light Strips: Light strips extending from ceiling to floor, blurring spatial boundaries and guiding visitors through the exhibition

Tyndall Light Walls: Using the Tyndall effect (Wikipedia contributors, 2024) to divide the space while maintaining openness

The Window of Inner Weather: A responsive wall visualises visitors' emotions through light and colour, fostering self-reflection and emotional connection.

Unfolding Manuscript – A projection inspired by illuminated manuscripts in the museum collection

Light Collage: An interactive installation based on light and shadow collage, blending diverse cultures

Light Kaleidoscope: Creating the light collage in a kaleidoscope style with museum

The Mirror of Becoming: Self-reconstruction, allowing visitors to dress up and experience the world in the artefacts

These starting ideas formed the basis for further evaluation and refinement. Full descriptions, sketches, and development notes for each concept are provided in Appendix B.

5.3 Evaluating Ideas

Selection Process

The initial ideas generated during the ideation phase were evaluated to determine which concepts should be developed further. The evaluation was based on the Three Lenses of Innovation framework — **desirability, feasibility, and viability** — as outlined in IDEO's Field Guide to Human-Centered Design (Ideo & Ideo.Org, 2015).

For this project, the three evaluation lenses are defined as follows:
Desirability – Alignment with the theme "The Power of Imagination" and potential to engage diverse audiences.
Feasibility – Technical and spatial implementability within the MCC environment.
Viability – Assesses adaptability for long-term use, cost-effectiveness, and potential for reuse in other exhibitions.
The evaluation table can be found in Appendix C.

It should be noted that these initial ideas are not fully developed; therefore, the concepts selected through this evaluation will require further refinement and design development to meet the design requirements outlined in Chapter 4.3.

Promising Directions

After comparing all the starting ideas, **Light Collage** and **Unfolding Manuscript** emerged as the most promising. Both demonstrated strong thematic relevance and the potential to balance clarity with imaginative engagement. These two starting ideas were therefore selected for further refinement in line with the design requirements, resulting in two more fully developed design concepts. The following section presents these refined concepts in detail.

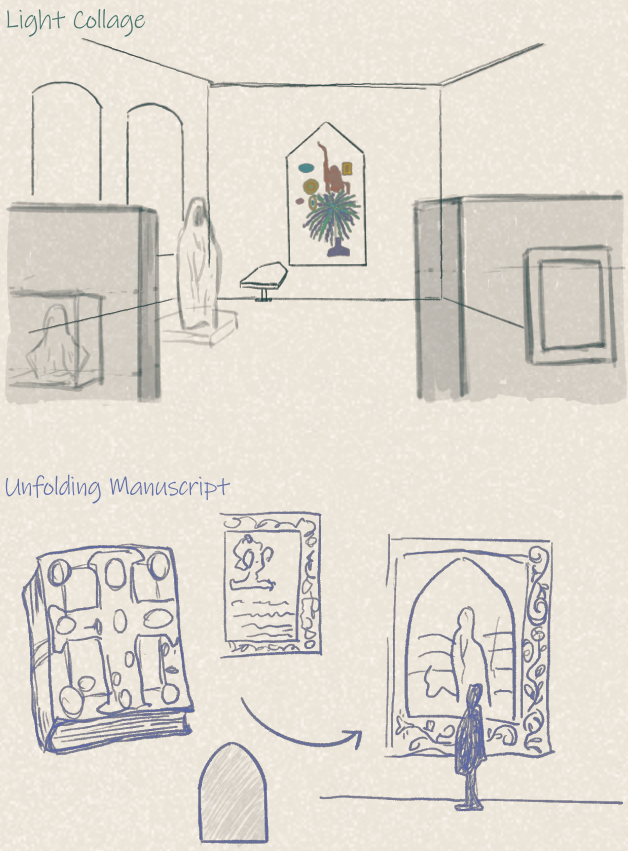


Figure 5.3 Two Promising Directions

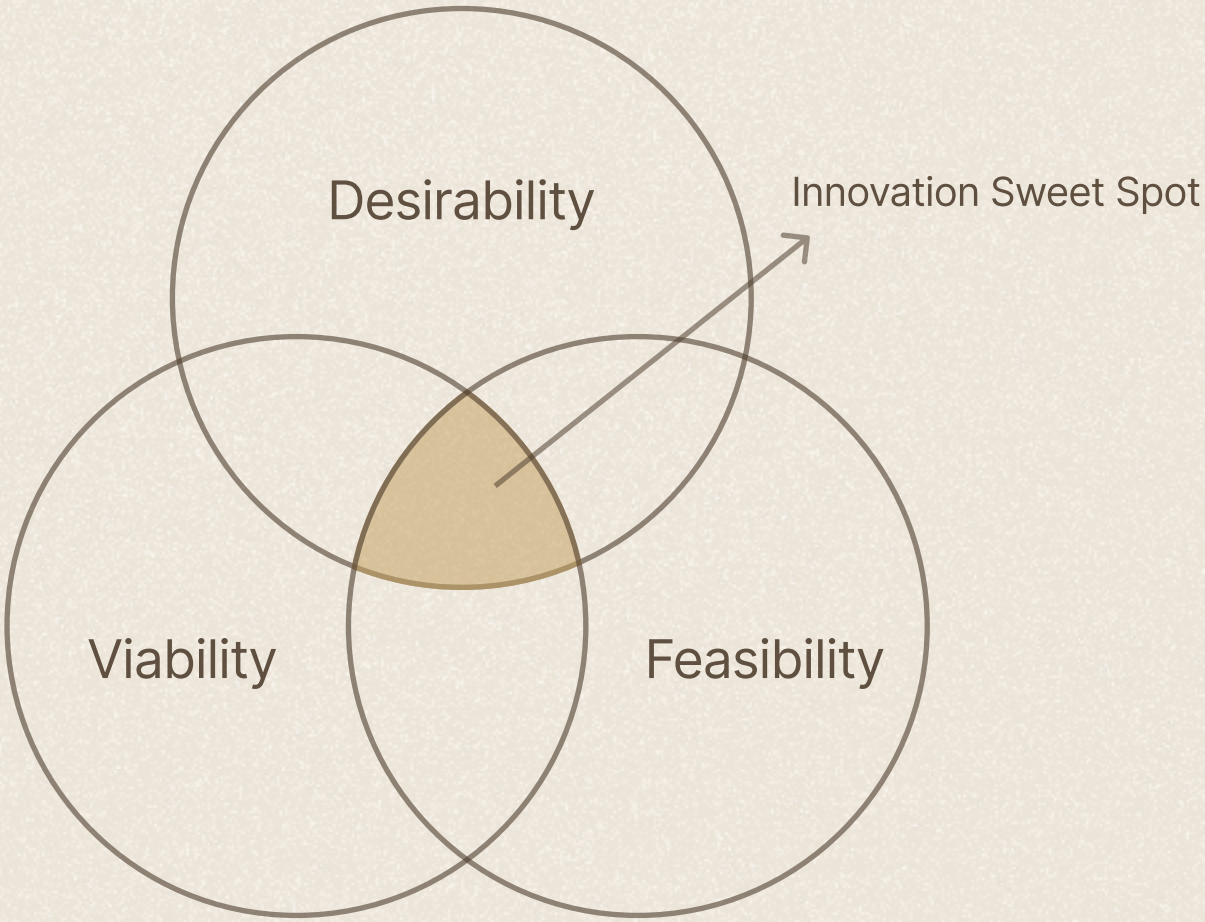


Figure 5.4 Three Lenses of Innovation adapted from IDEO, 2015

5.4 Concept 1--Light Collage

5.4.1 Initial Concept

The Light Collage installation is a participatory and symbolic experience that invites visitors to engage with museum artifacts in a new, imaginative way. As shown in the storyboard (Figure 5.6), the concept allows visitors to collect visual fragments—silhouettes—of selected religious and cultural objects with a stamp card (see Figure 5.5). Near some object in the exhibition there is a station offering stamp, for the visitor to collect silhouettes. At the end of the journey, visitors bring their collected silhouettes to a scanning machine, where the fragments are digitized and transformed into a dynamic light projection collage on the wall.

The different silhouettes come from cultural symbols and motifs from different cultures, allowing each viewer to co-create new visual narratives and imagine new stories from classic icons.

The generated collage changes every 30 minutes, encouraging repeated engagement. More than just a visual output, the collage becomes a souvenir of imagination for visitors, symbolizing the blending of perspectives and the ongoing reinterpretation of spiritual history through light.

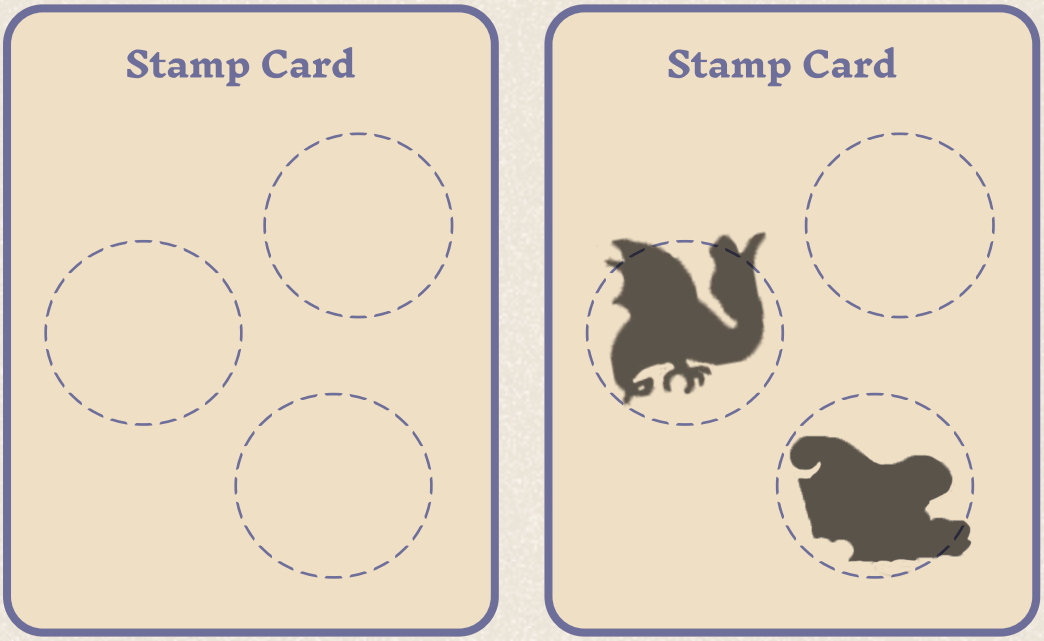


Figure 5.5 An example of the silhouette stamp card

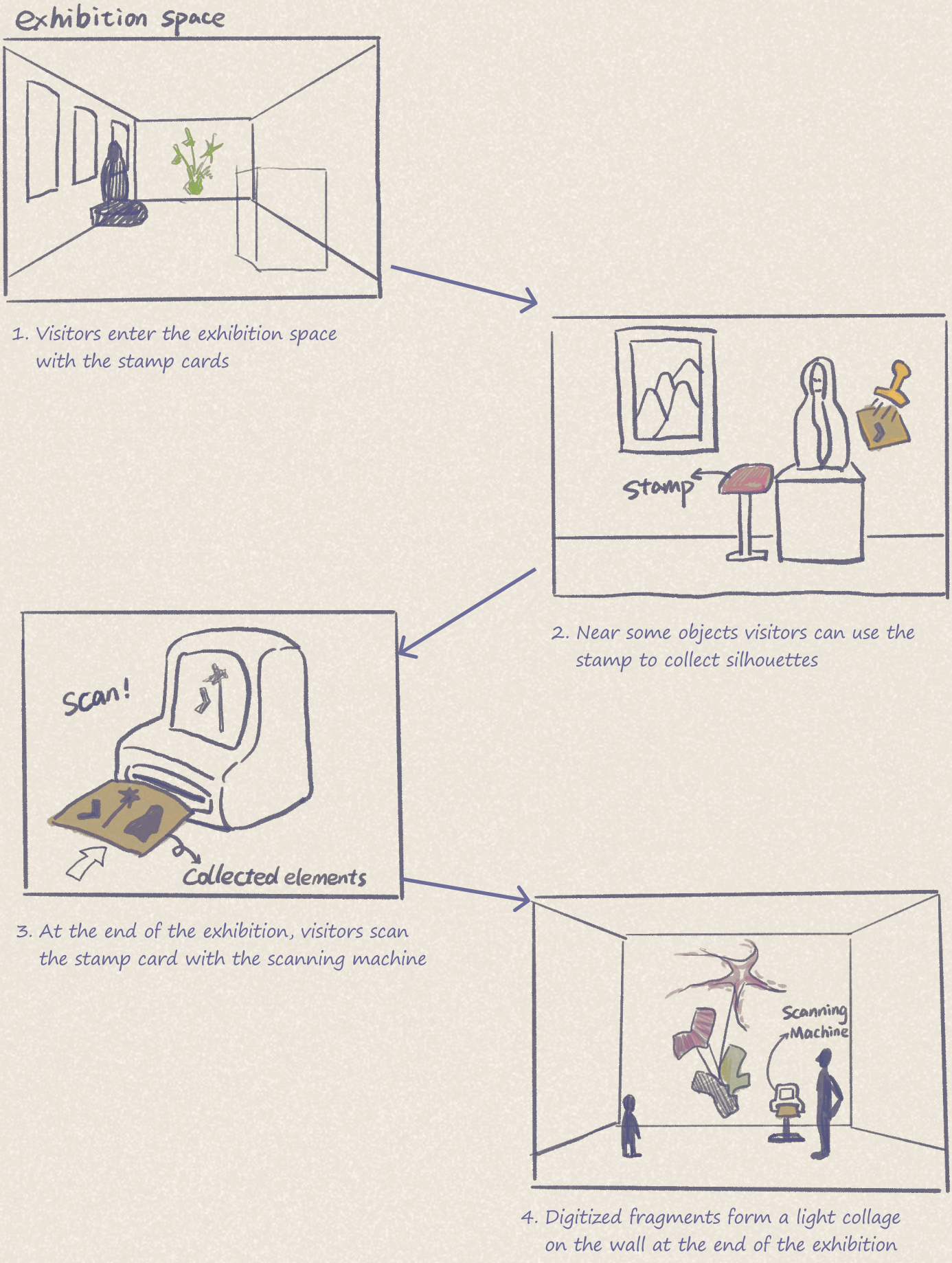


Figure 5.6 Storyboard for light collage concept

5.4.2 Visitor Feedback from MCC

1.An individual visitor in the exhibition space
2.Light collage elements made from plastic sheet
3.4. Asking for visitors' opinion for the concept
Figure 5.7 Visitor research for the light collage concept

To test visitor responses, I presented sketches and physical collage elements (see Figure 5.7) in the exhibition space and conducted brief interviews with two visitor pairs—one in their twenties and another in their fifties. While not the primary school group target, their feedback was relevant given the installation's accessibility for individual visitors.

These interviews provided valuable insights: One visitor from Ethiopia emphasized the value of **linking the exhibits to personal and cultural references**. International visitors highlighted the language barrier of Dutch-only labels, stressing the need to **reduce text dependency**. Others suggested providing **clearer guidance**, such as an introductory card, which resonates with the museum's existing school group tour structure and may inform future iterations of the concept. Further details are provided in the Appendix D.

5.4.3 Iteration of Design Concept

Based on early feedback and curatorial discussions, the Light Collage concept was further developed into a more structured, multi-user experience. The updated design is intended for small groups of 2–5 visitors, encouraging collaboration, exploration, and collective storytelling. Figure 5.8 shows the iteration as a step-by-step journey:

Step 1: Each group get one card for collecting elements from the exhibition space. These visual elements, inspired by artifacts from various religious or cultural backgrounds, are retrieved by following a guided path.

Step 2: When the team finds a stamped spot on a card, they can stamp and collect elements.

Step 3: Finally, at the end of the gallery at the wall, each group can scan their collected elements through the machine and generate a collage, which will be projected on the wall of the gallery.

Step 4: The resulting image remains on the wall temporarily and changes with each new card scanned.

Following this guided path, the visitor collects silhouettes of specific elements, without knowing what these silhouettes are, triggering a first imagination; after scanning the silhouettes and projecting them on the wall to create a collage of light and shadow, the newly created story triggers a second level of imagination.

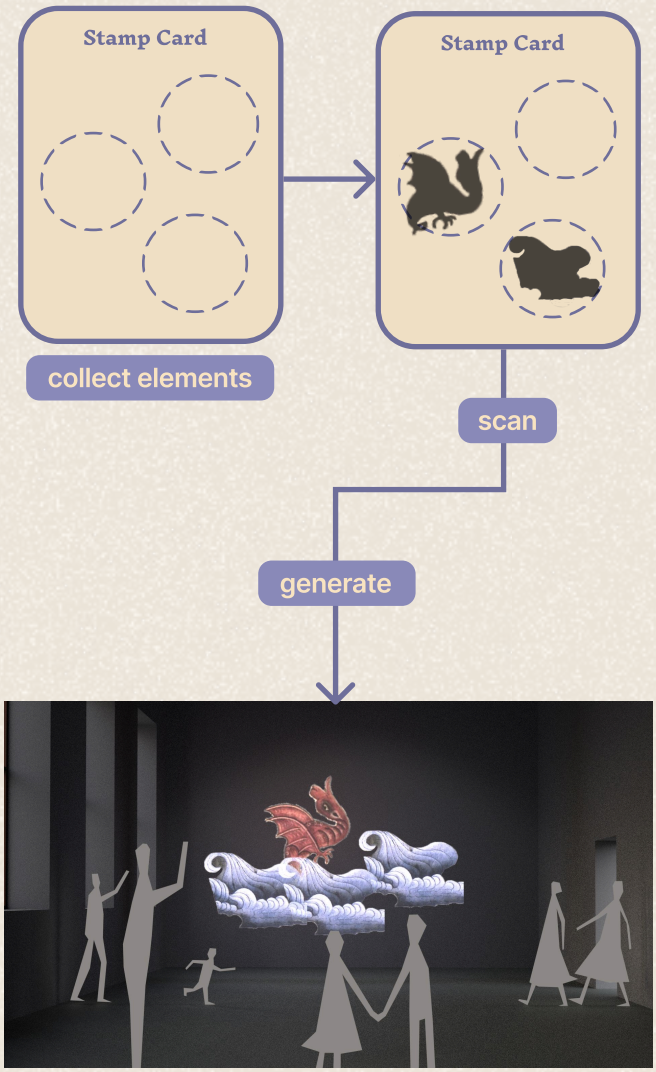


Figure 5.8 Light collage--A new story generate

The initial design goal was to use light as a medium to spark visitors' imagination, with a particular focus on student groups. As the Light Collage concept evolved, the integration of multicultural elements emerged as a key design intention. This concept activates the imagination by inviting visitors to co-create light-based collages. Rather than passively viewing, visitors are now encouraged to become co-creators—collecting stamps in groups and generating visual collages. This shift from viewer to participant deepens emotional and imaginative engagement. The theme of the exhibition 'The Power of Imagination' is reinforced by the reorganisation and fusion of different elements into new stories.

5.5 Concept 2--Unfolding Manuscript

Figure 5.9 Windows in the exhibition space

Figure 5.10 Manuscript No.ABM h2, Photo by Museum Catharijne Convent

5.5.1 The Initial Concept

The initial brief from the museum suggested using the six large windows in the exhibition space as the primary projection surfaces. This prompted me to re-focus my attention on these windows as a storytelling medium (see Figure 5.9).

During my first visit to the museum, I was particularly drawn to a beautiful gem-encrusted manuscript displayed in the Treasury Room (see Figure 5.10). The exterior of the book evoked mystery and reverence, making me wonder what its inner pages contained. Upon further exploration through the museum's digital archive, I discovered that each page was intricately decorated with illuminated borders.

Yet, most museum visitors never get to see these inner pages, which I found to be a missed opportunity. This observation led to the idea of merging the experience of reading the manuscript with the architectural language of the stained-glass windows. Instead of static light projections, each "page turn" of a large interactive manuscript would dynamically change the story projected onto the ‘window’—making the architecture itself come alive with light and narrative.

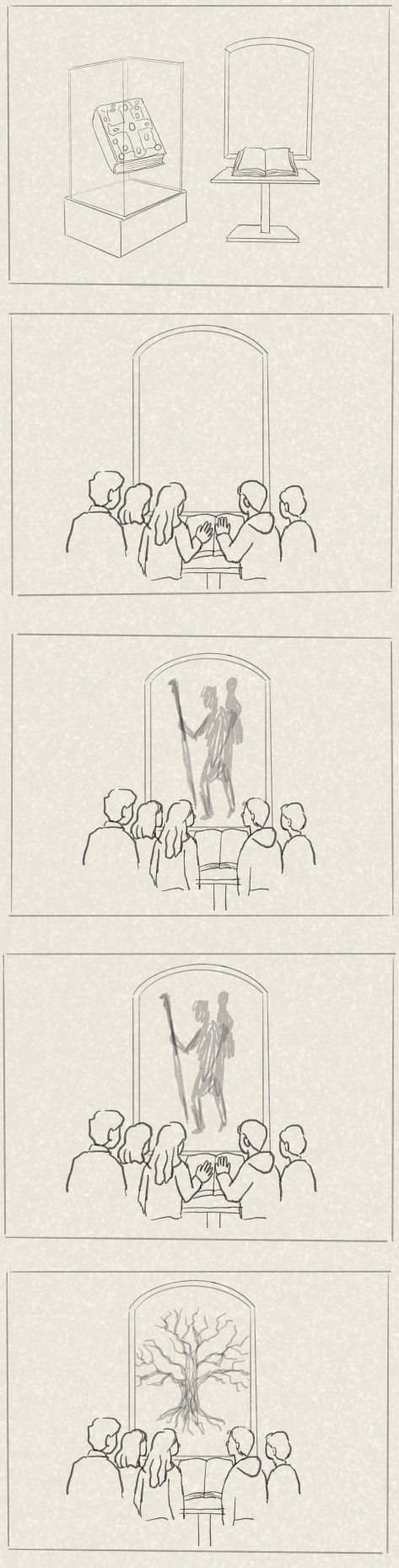
Figure 5.11 Unfolding a Manuscript (No. ABM h24, f. 13v-14r), Photo by Museum Catharijne Convent, Ruben de Heer

The original design idea was to use light projections to simulate the effect of a window, with an interactive manuscript interface located near the original medieval book at the heart of the installation.

Visitors are invited to collaboratively “turn the pages” of this illuminated manuscript by placing their hands on the page corners. Each page turn triggers a new story projection on the window—unfolding visual scenes inspired by imaginative stories from around the world.

The projected ‘window’ becomes a luminous frame, echoing both stained-glass tradition and the unseen inner beauty of the medieval manuscript. As stories change with each page, visitors experience a layered sense of culture, and imagination, where physical gesture and symbolic imagery are interwoven.

The Storyboard of the manuscript concept



Here is the storyboard of this design concept:

1. A medieval manuscript is displayed in a glass showcase. Next to it stands an open interactive “book” device, placed in front of one of the exhibition's windows.

2. A group of visitors approaches the installation and places their hands together on the pages of the book.

3. A story slowly begins to appear on the window through light projection. The visitors pause and watch.

4. The visitors place their hands on the pages again, simulating the gesture of turning the page.

5. A new story projection appears on the window. By repeating this step, visitors can see imaginative stories from various cultures.

Figure 5.12 Storyboard of Manuscript Concept

5.5.2 Imaginative Stories

Each “page” of the interactive manuscript reveals a new light projection across the arched windows of the gallery. I selected a few imaginative stories from around the world as initial samples. The first 6 stories draw from diverse religious and spiritual traditions around the world, transforming the space into a canvas of cross-cultural imagination. In future development, more stories may be introduced.

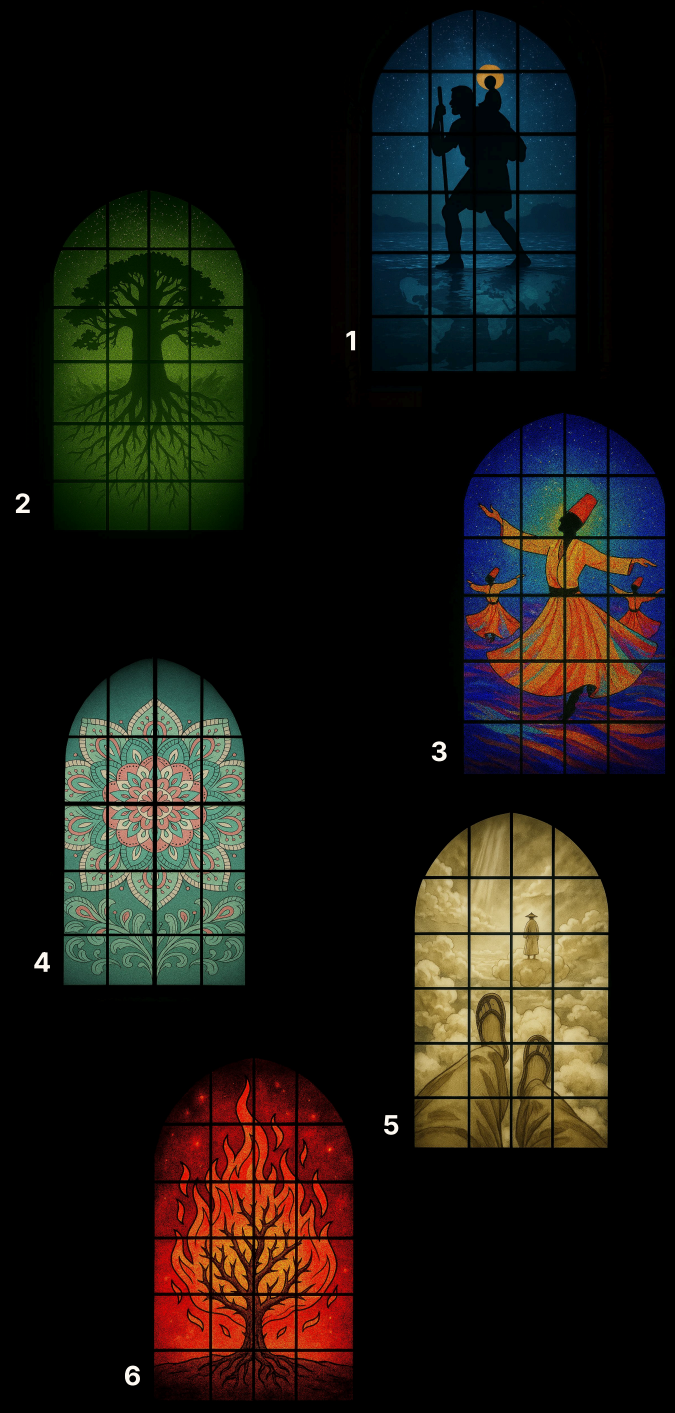


Figure 5.13 Six Imaginative Stories

The projected stories include:

1. **St. Christopher**, the patron saint of pilgrims and travelers, shown carrying a child across a river—symbolizing guidance, strength, and protection during life’s journeys.
2. **Yggdrasill**, the sacred world tree in Norse cosmology, whose roots and branches connect the realms of gods, humans, and the underworld—representing interconnectedness and cyclical renewal.
3. **Sufi Whirling**, a form of physically active meditation in Islamic mysticism, expressing spiritual transcendence through rhythm and continuous movement.
4. **Mandala** image from Eastern religions such as Hinduism, Buddhism, and Jainism—used as symbolic maps of the universe and tools for meditation and inner harmony.
5. **Daoist Clouds**, inspired by classical Chinese paintings and philosophy, where walking on clouds evokes the ideal of spiritual elevation, freedom, and harmony with nature.
6. **The Burning Bush**, a story from Judeo-Christian scripture, representing divine revelation, transformation, and sacred mystery.

These stories are not narrated with text but revealed through light, color, and rhythm—encouraging visitors to interpret and emotionally connect in their own way. The windows become living pages of light, bridging ancient symbols and modern imagination.

The visualisations in this section were created using ChatGPT-4o. I provided custom text prompts describing the desired lighting mood, window shapes, and audience interaction. The AI outputs were then refined through adjustments in Adobe Illustrator and Photoshop to match the design intent.

5.6 Concepts Comparison

Concept 1 Light Collage

Concept 2 Unfolding Manuscript

Figure 5.14 Harris Profile

These two design concepts were evaluated using the Harris Profile tool (Van Boeijen et al., 2013). The evaluation criteria were based on the previously defined design requirements (see Chapter 4.3), and the corresponding sub-requirements are listed for more detailed analysis. From the comparison chart, it is evident that the two concepts approach imagination through different narrative modes:
Concept 1 (Light Collage) encourages visitors to co-create new stories based on fragments they collect, whereas
Concept 2 (Unfolding Manuscript) focuses on conveying existing stories embedded in the museum's collection.

However, Concept 1 involves a more complex sequence of interactions, requiring additional explanation and potentially verbal instruction. As a result, it scored lower on "2. Communicate Beyond Words", as it may present challenges for non-verbal or intuitive understanding.

Its lower score in "Individual-Friendly" is due to its heavy reliance on group-based tools like the stamp card, which limits spontaneous or solo participation.

After further discussion with the museum team, I concluded that it would be more meaningful to build on the museum's existing artifacts and narratives rather than asking visitors to construct entirely new ones. MCC emphasized educational value over interactive novelty, and sought a design that could reveal symbolic meaning through light without relying heavily on user-generated content.

Therefore, Concept 2 Unfolding Manuscript—which links illuminated manuscripts with window projections—was selected for further development.

5.7 Conclusion

Both concepts offered distinct ways of engaging with imagination, but their suitability differed in relation to MCC's context. The comparison of the two concepts demonstrates that Light Collage is more exploratory and relies heavily on co-created visitor input, while Unfolding Manuscript builds directly on the museum's collection and narratives. Given the project's design requirements and MCC's emphasis on meaningful integration with existing artifacts, Unfolding Manuscript was considered the more appropriate direction. This conclusion provided the foundation for the final concept development described in the following chapter.

Figure 5.15 The manuscript lies quietly in a glass case in the museum

Part 6

Developing Final Concept

Image: Exhibition space, photo by Fan Jiayin

6.1 Introduction

This chapter presents the iteration process of the Unfolding Manuscript design concept. The development began with testing user interaction patterns, specifically simulating the behaviour of multiple visitors turning pages simultaneously. Insights from this test informed the final interaction design for the installation. Subsequently, spatial design considerations were explored, focusing on the placement of the light show within the exhibition environment. Three potential placement scenarios were proposed and compared, leading to the selection of the most suitable option.
In addition, a pacing test for the light show was conducted to determine the rhythm that best evokes a sense of immersion for visitors. Together, these steps shaped the final design direction for the Unfolding Manuscript.

Image: Decorative fragment from Object No. ABM h20, f. 34r

6.2 Iteration of Interaction

In the design concept of Unfolding Manuscript, the act of collectively controlling the simulation of “unfolding the story” is a key element. It not only marks the beginning of the light show but also enriches the visitor’s experience. Therefore, the question of how to design this interaction becomes a crucial consideration. To explore how the page-turning interaction would function within a small group setting, I conducted a quick prototype test.

6.2.1 Test of Page-Turning Interaction

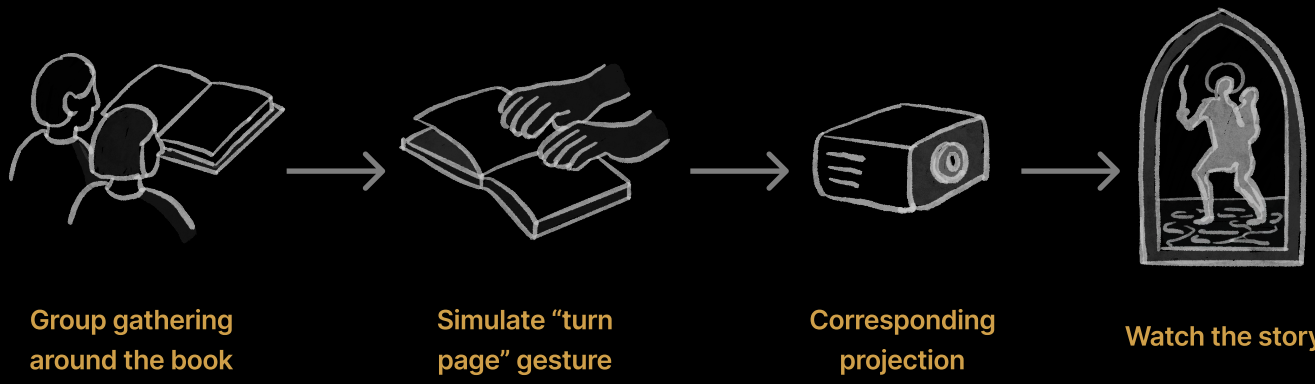


Figure 6.1 Interaction flow

Test Objective
The test aimed to explore the feasibility and experiential qualities of collective interaction, and to examine how such gestures could mark the opening of the light show.

Participants
4 students from the Industrial Design faculty

Setup
Projector + Laptop + Manuscript prototype; projection on wall to simulate museum installation (smaller scale)

Interaction Modes
1. Collective page-turning (participants jointly perform the gesture of turning a page)
2. Collective hand placement (participants place their hands on the manuscript surface)

Procedure
Participants engaged with the two interaction modes. Each action triggered a projection on the wall corresponding to the selected content (see Figure 6.1). After the session, short interviews gathered feedback on usability, engagement, and group dynamics.

Figure 6.2 Prototype test setup

6.2.2 Result of Interaction Test

The user test revealed several key observations. First, when participants attempted to turn the pages using a traditional book-like motion (Interaction Mode 1), the interaction quickly became chaotic and uncoordinated (see Figure 6.3). This highlighted the need to design a more intuitive, collaborative gesture system that clearly defines how a group can start, pause, or continue the storytelling together. In contrast, during Interaction Mode 2 (collective hand placement), the experience became more orderly and easier to control, suggesting that this mode offers greater potential for group coordination (see Figure 6.4).

Second, participants noted a difference in attention focus between the two modes. In Interaction Mode 2, their attention was drawn primarily to the projection rather than the book interface—an outcome that aligned well with the original design intent. Conversely, in Interaction Mode 1, participants' focus tended to remain on the manuscript page itself, leading to reduced engagement with the projected content. This reinforced the idea that the manuscript should serve merely as a subtle trigger, not as a visual centerpiece. The primary focus should remain on the unfolding light-based narratives across the windows, rather than on the physical control object.

In summary, the test results indicate that **Interaction Mode 2** better supports both group coordination and the intended design goal of keeping the audience's attention on the light show, making it a more promising direction for further development.

Figure 6.3 Interaction Mode 1-Turning bookpages

Figure 6.4 Interaction Mode 2-Touching for control

6.3 Iteration of Spatial Design

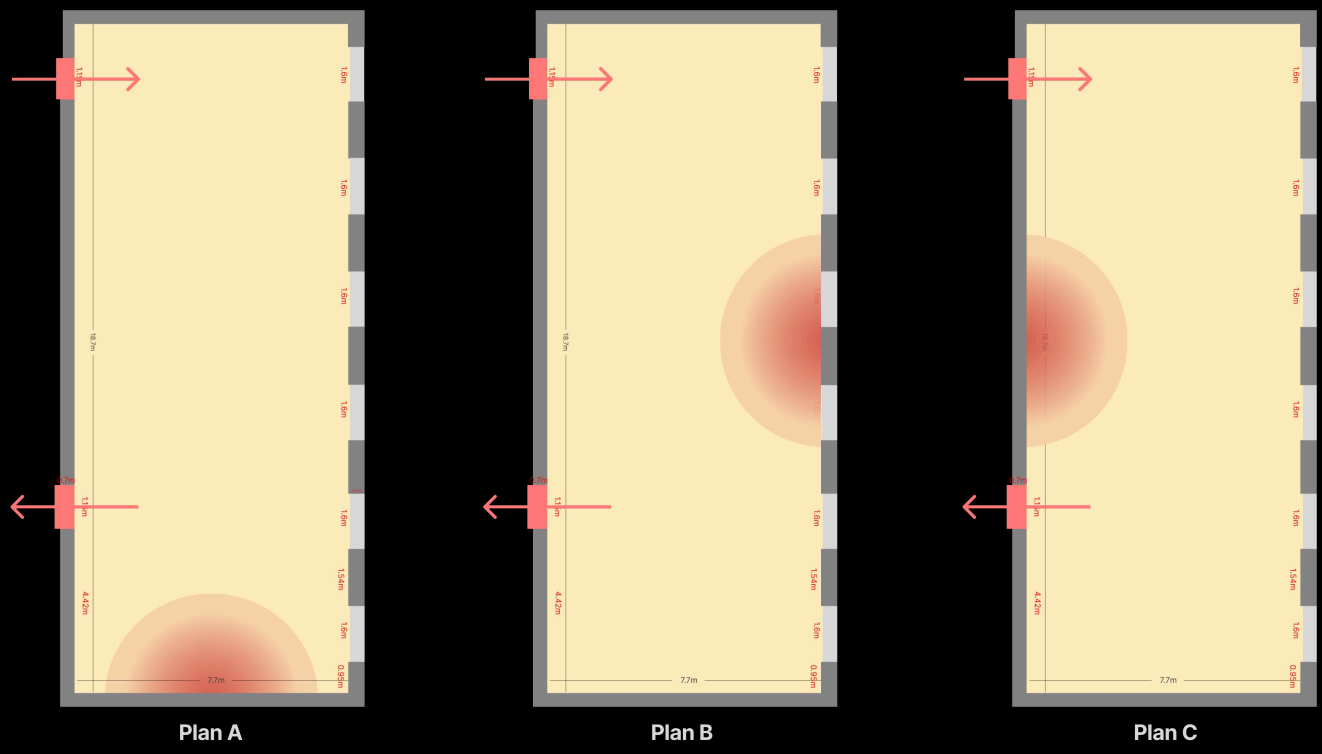


Figure 6.5 Three spatial plans

Three spatial plans (Figure 6.5) were proposed to determine the optimal placement of the interactive installation in the exhibition space. Each layout considered visitor flow, group interaction dynamics, and the spatial rhythm of the overall exhibition. The red zones in each plan indicate a 3-meter interaction radius, which is sufficient to accommodate about five students and one teacher. This scale was informed by visitor research, where group activities during school tours commonly occurred in subgroups of 4–6 participants.

Plan A The installation is set up at the end of the exhibition hall. It offers an experience with a sense of closure and ritual without interfering with other viewing routes, allowing visitors to enter a relatively immersive “final chapter” after completing their tour. Visitors will be left with a strong impression after the experience.

Plan B utilizes the existing windows in the exhibition space to create a more natural interactive experience. The installation is embedded in the middle section, allowing visitors to pause during their tour, flip through the manuscripts, and watch the shadow play projected on the windows.

Plan C makes use of the physical walls of the space and puts light installation as decorative elements along the walls, allowing visitors to decide for themselves whether to participate as they pass by, without disrupting the overall flow.

The museum has confirmed that as part of the future renovation plan, all six windows will be fully shielded to support light projection. During non-show hours, artificial lighting will simulate daylight, enabling consistent visual control across different installation zones.

After further discussions with the museum, **Plan B** was identified as the most suitable option. It makes full use of the existing window structure and allows visitors to face the six arched windows directly while engaging with the light stories. This orientation supports a natural flow of movement, where interaction, viewing, and spatial alignment are all intuitively integrated. Visitors can participate in the experience without needing to turn around (comparing with Plan C)—ensuring smoother engagement.

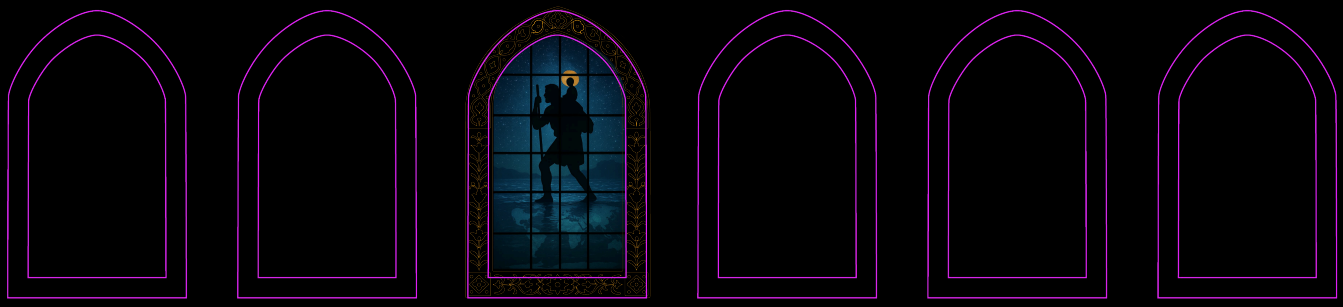


Figure 6.6 Six windows in the exhibition space

Including All the Six Windows

After discussions with the museum, it was decided that all six windows in the gallery should be included in the new light show, which would change the atmosphere of the whole space and create a more immersive effect (see Figure 6.6). The interactive installation and the original manuscript artefact, will remain near the third window in the centre of the exhibition space. This means that it is necessary to consider the narrative rhythm and appearing sequence of the light show on all the six windows, which will be discussed in Chapter 6.5.

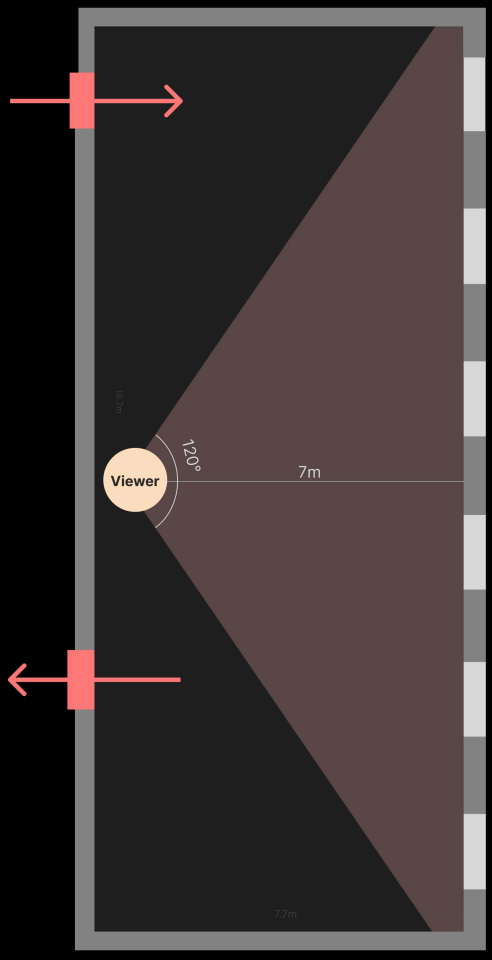


Figure 6.7 Visitor field of view

Consideration for Viewing Experience

The placement of the installation within the space will significantly shape visitors' viewing experience. Given the elongated proportions of the exhibition hall, the farther the audience stands from the window wall, the wider the field of view they can perceive. Based on the human binocular field of view of 120°, a visitor positioned approximately 7 meters from the windows would have a maximum visible width of around 24 meters—sufficient to encompass all six window frames and their animations within a single view. Therefore, the latest iteration of the spatial layout positions the manuscript interaction installation along the wall, with a coordinated light show presented across the six window frames (see Figure 6.7).

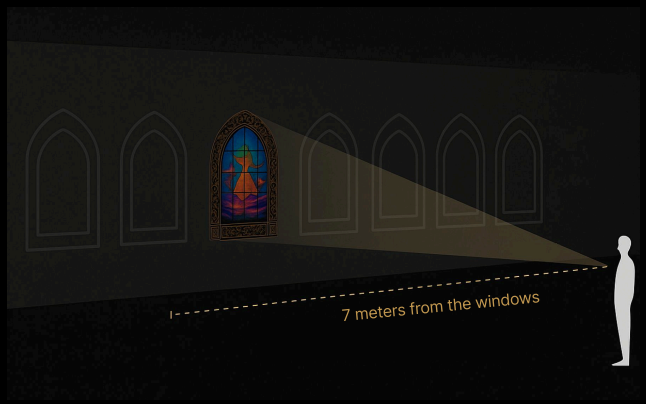


Figure 6.8 Optimal viewing distance

6.4 Iteration on Imaginative Stories

Figure 6.9 Inner page of the Manuscript(No. ABM h20), Photo by Museum Catharijne Convent

In order to simulate the visual style of the beautiful page borders in the manuscript and to better integrate with the window elements in the gallery, the final light show visual will be a combination of window frames and imaginative storytelling from different cultures (see Figure 6.10). In the storytelling sequence, the window frames will gradually appear first, forming the outline of a window, and then the imaginative story will gradually unfold.

The visualisations in this section were created using ChatGPT-4o. I provided custom text prompts describing the desired lighting mood, window shapes, and audience interaction. The AI outputs were then refined through adjustments in Adobe Illustrator and Photoshop to match the design intent.

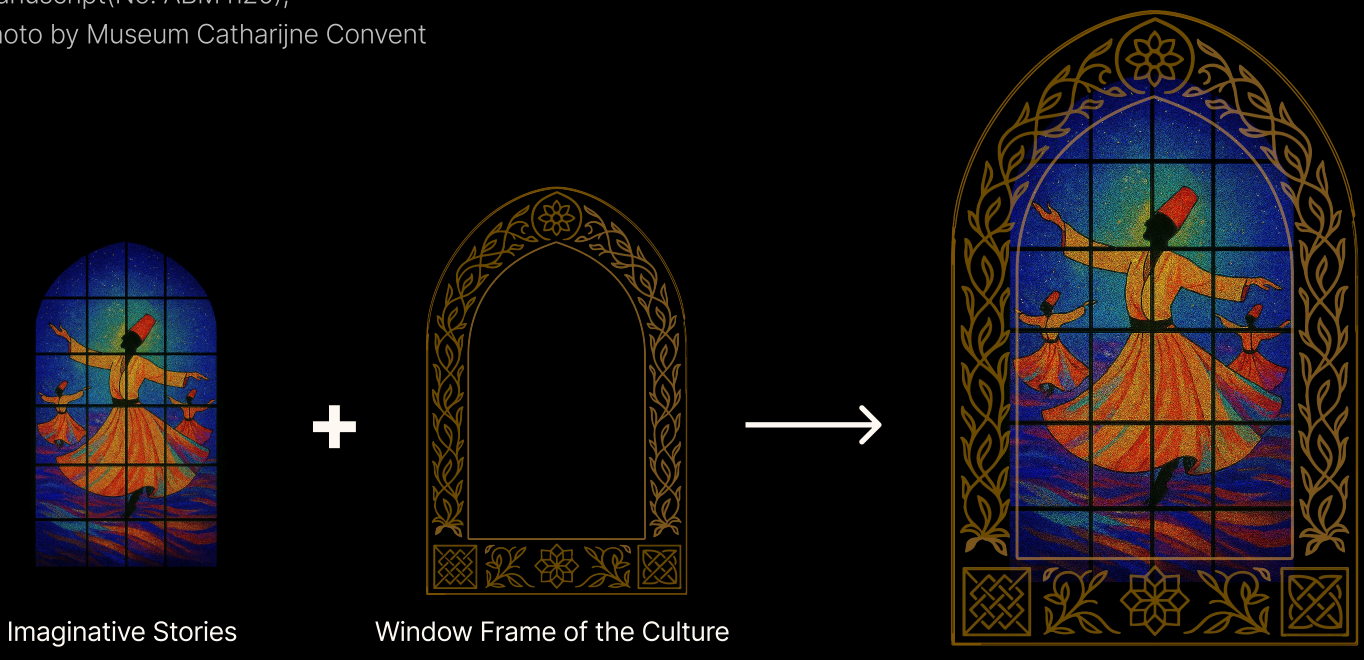


Figure 6.10 Combination of window frame and story

An Overview of the Imaginative Stories

1. St. Christopher
2. Yggdrasill
3. Sufi Whirling
4. Mandala
5. Daoist Clouds
6. The Burning Bush


1


2


3


4


5


6

Figure 6.11 An Overview of the Imaginative Stories

6.5 Appearing Sequence of Six Windows

a. Linear Sequence

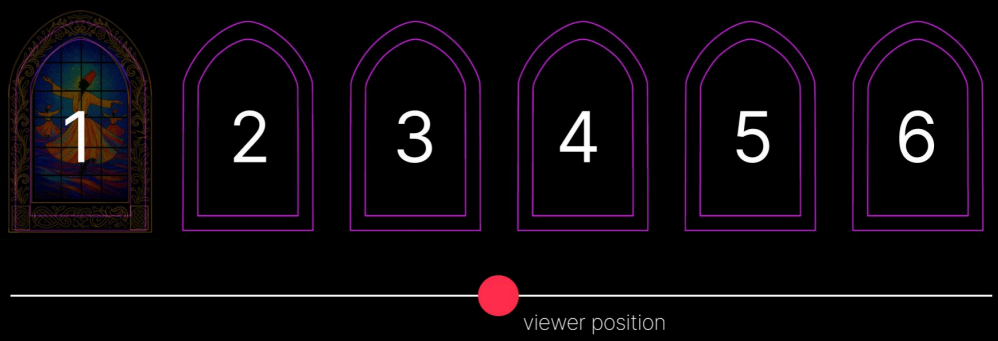


Figure 6.12 Scenario a. Linear Sequence

b. Central Expansion

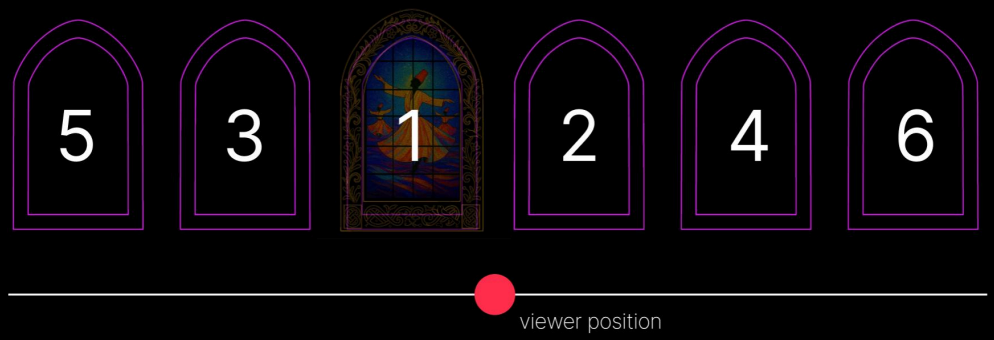


Figure 6.13 Scenario b. Central Expansion

In order to decide the order in which the stories of the six windows would appear, three scenarios were compared and analysed, supported by three video prototypes for visual testing. The numbers in the figures indicate the sequence in which the stories appear.

a. Linear Sequence: Stories appear sequentially from left to right, following the general reading habit (see Figure 6.12).
b. Central Expansion: The sequence begins with the middle window; stories gradually appear there and then expand outward to the surrounding windows (see Figure 6.13).
c. Shifting Window Sequence: Of the six windows, only the third window displays a new story each time a visitor interacts with it. Previously displayed stories automatically shift to the adjacent window (see Appendix E).

During an initial informal test, ***Scenario c. Shifting Window Sequence*** was found to create a disorienting viewing experience; participants reported that their attention was easily diverted, so this option was discarded. ***Scenario a. Linear Sequence***, while simple and easy to understand, positioned the first story too far from the interaction point, making the experience less intuitive.

Scenario b. Central Expansion was therefore selected for its balance between intuitiveness and dramatic reveal. Based on this, new video prototypes were produced to test the effects of Image Duration and Layering Strategy — Accumulate vs. Disappear — on audience engagement. The following section presents the processes and results of this study.

6.6 Evaluation

6.6.1 Test Objectives

The duration and pacing of the light show can significantly affect visitors' viewing experience. Meanwhile, the presence or absence of image accumulation across the six windows may influence how the stories are understood. To determine the most suitable presentation approach, an evaluation was conducted to investigate how two visual presentation variables influence audience comprehension and preference in the context of the museum light installation.

Two independent variables were tested:

1. **Image Duration** – Fast (4 seconds per image) vs. Slow (10 seconds per image)
2. **Layering Strategy** – Accumulate (images remain and build up) vs. Disappear (each image fades out before the next appears)

6.6.2 Test Setup

Environment: darkened indoor setting
Display: laptop, projector
Participants: 4 students from the design faculty

Figure 6.14 Testing session in a darkened indoor environment

Stimuli: Four video clips as illustrated in Figure 6.15 were created as stimuli in a 2×2 design, combining image duration (4s vs. 10s) and layering strategy (accumulate vs. disappear). Each video presented six window panels, each corresponding to a different story. In every story sequence, the window frame first appeared, followed by the emergence of the image within the window, accompanied by the corresponding story soundtrack.

	Fast 4s / Image	Slow 10s / Image
Accumulate (Images remain)	A1	A2
Disappear (Images fade out)	B1	B2

Figure 6.15 The 2×2 experimental design combining two presentation variables

A1 Fast (4s/image), images accumulate

A2 Slow (10s/image), images accumulate

B1 Fast (4s/image), images disappear one by one

B2 Slow (10s/image), images disappear one by one

Procedure: Each participant watches 4 videos. After viewing each video, they completed a questionnaire (see Appendix F) assessing perceived pace, clarity, memorability, and overall interest. Upon completion of all four videos, a brief interview (see Appendix G) was conducted to gather comparative preferences, deeper reflections on the viewing experience, and suggestions for improvement.

6.6.3 Key Findings and Preferences

The combined findings from the questionnaires and follow-up interviews revealed a clear preference among participants for Version B2 — the slow-paced (10s per image) and disappearing format.

Two primary reasons emerged:

1. Avoiding Misleading Narrative Links – As the six story images are not directly connected, the accumulate format sometimes gave the false impression of a continuous comic strip or a single unfolding storyline. The disappearing format presented each story as a distinct, self-contained scene, which participants found clearer.
2. Facilitating Deeper Engagement through Longer Exposure – In feedback on the fast, disappearing version (B1), most participants stated that 4 seconds per image felt "too fast." The longer display time of B2 allowed viewers to observe more details and engage more deeply with each image.

Participants also expressed uncertainty about the accuracy of their own interpretations, with many describing their understanding as partial or tentative. While the visual effects were engaging, the underlying meanings of these purely light-based stories were not always clear. This suggests that incorporating additional elements — for example, providing follow-up contextual information after viewing — could help visitors further explore or interpret the narratives, thereby enhancing both comprehension and overall engagement.

These insights form the basis for several design recommendations, which are further elaborated in Chapter 8.3 to inform future applications of the light installation concept.

6.7 Conclusion

This chapter documented the iterative development of the Unfolding Manuscript concept, covering refinements in interaction design, spatial placement, narrative sequencing, and pacing of the light show. Through user testing, **Interaction Mode 2 — collective hand placement** — was identified as more intuitive and collaborative than the traditional page-turning gesture, effectively maintaining audience focus on the projected stories rather than the control interface.

Spatial design comparisons led to the selection of the **Central Expansion** sequence for its balance of intuitiveness and dramatic reveal.

The pacing and layering test further revealed a clear preference for the **slow-paced (10s/ image)** disappearing format, which helped avoid misleading narrative links and allowed deeper engagement with each story.

Participants also expressed a need for additional contextual cues to support narrative comprehension, suggesting opportunities for future enhancement.

The outcomes of these iterations informed the final design direction, which will be presented in the next chapters alongside targeted recommendations for future development of the installation.

Image: Decorative fragment from Object No. ABM h2

Part 7

Final Design Concept

Image: Inner page of a manuscript, Museum Catharijne Convent

7.1 Introduction

This chapter presents the final concept design for the proposed interactive light show installation. Building upon the research insights, design iterations, and evaluations conducted in earlier stages, it consolidates the creative vision and technical considerations into a coherent proposal. The chapter begins with an introduction to the design concept and a formal design statement, followed by a description of its key features and interactive mechanisms. It then outlines the intended visitor experience journey, spatial layout, and flow within the museum context. Finally, the chapter addresses the technical requirements and provides an initial cost estimation, offering a comprehensive overview of how the design will be realised in practice.

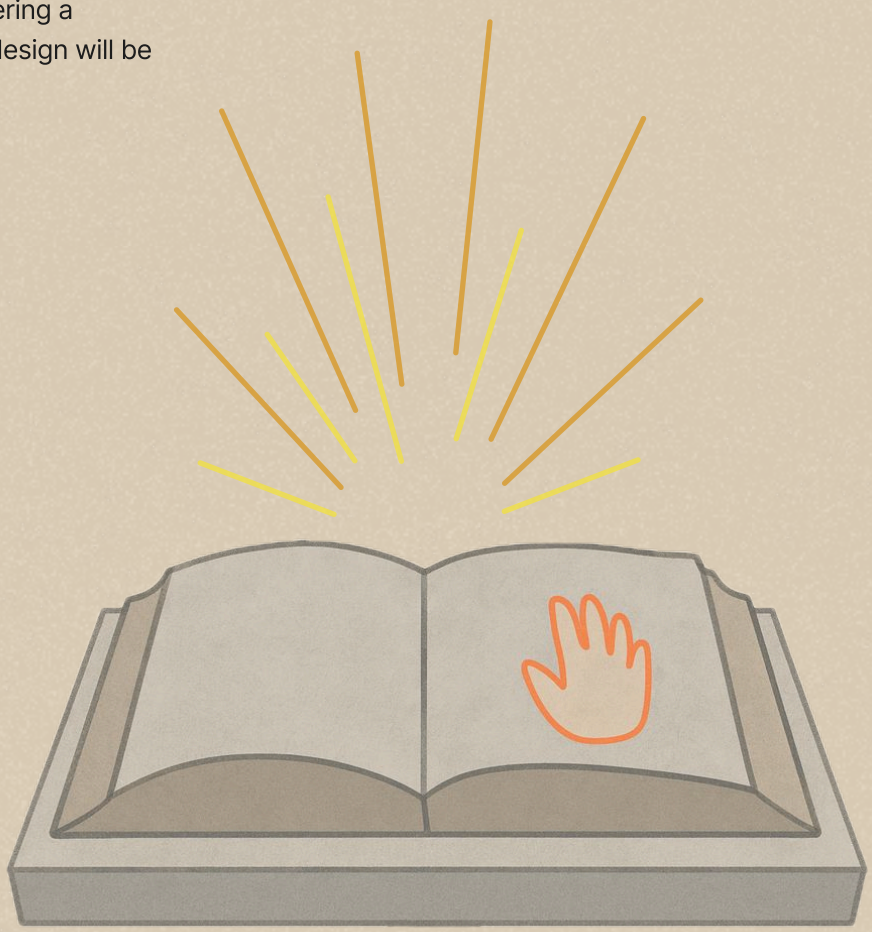


Image: Simulated manuscript

7.2 Design Statement

As part of the renovation plan of Museum Catharijne Convent, this design concept explores the curatorial theme “The Power of Imagination” through an interactive light show. Inspired by a manuscript artifact from the museum’s collection, the installation is based on the six existing windows of the museum and transforms them into storytelling portals, inviting visitors to engage with the space in new and imaginative ways. The installation is primarily aimed at student groups visiting MCC, encouraging them to engage in shared activities that transcend language barriers.

At the centre of the elongated gallery space, an interactive device resembling the manuscript is placed, inviting visitors to collaboratively “unfold” the hidden stories (see Figure 7.1). When a visitor places their hands on the book, the projected light stories gradually appear on the windows—first revealing the window frame, followed by the story content. These light stories are drawn from imaginative narratives originating from diverse cultures around the world (see Figure 7.2). The design of this light show aims to integrate multicultural elements and spark visitors’ imagination, transforming the museum space into a dynamic and ever-changing environment.

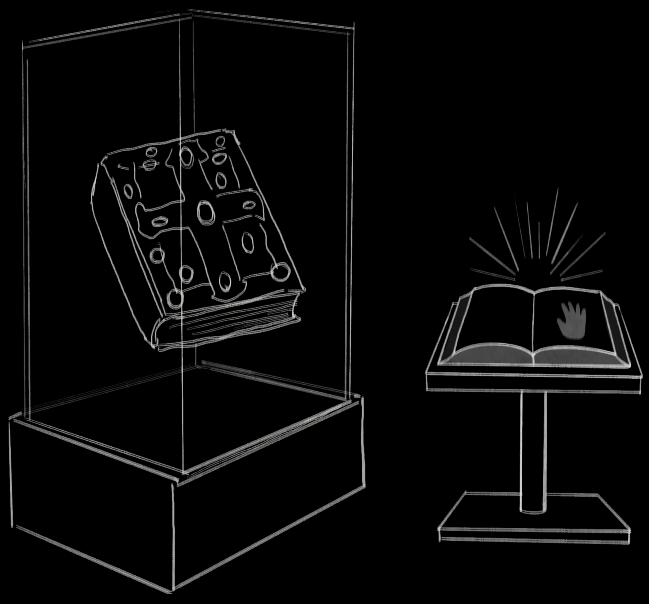


Figure 7.1 The manuscript and the interactive device

Figure 7.2 Imaginative stories from around the world

7.3 Key Features

7.3.1 Functional Features

This interactive light show design consists of a touch-activated manuscript console and a projection system controlling the museum's six existing windows. The console is designed to encourage multiple visitors to interact simultaneously, simulating the sensation of turning a page and evoking the feeling of "opening an unknown storybook." The installation transforms the windows into storytelling portals, with each projection beginning by illuminating the window frame, followed by the appearance of animated story content.

7.3.2 Storytelling Features

Diverse Cultural Narratives
The projected stories are drawn from imaginative narratives originating from a variety of world cultures. This multicultural content reflects the curatorial theme "The Power of Imagination", offering visitors a chance to encounter and appreciate stories beyond their own cultural background.

Sequential Story Unfolding
The light show is designed to reveal stories sequentially. Each interaction unlocks a new story on a different window, gradually building a layered narrative experience. This progression offers visitors a sense of gradual discovery and engagement.

7.4 Interactive Mechanisms

The interactive experience begins with a single collective gesture. A pressure-sensitive manuscript replica is placed next to the original exhibit, embedded with a large-area force sensor beneath the surface.

When a group of students places their hands on the surface together, the combined pressure exceeds the activation threshold, triggering the entire light show sequence. This single input launches a timed, automated projection across six windows.

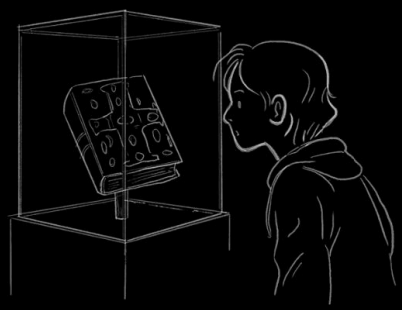
Each story lasts 10 seconds, appearing and disappearing in sequence, without the need for further user input. The design emphasizes a symbolic gesture of shared activation, rather than continuous control, reinforcing group participation and collective imagination.

A glowing handprint with sound guides the touch. The system is centrally controlled so that projection, lighting, and audio stay in sync.

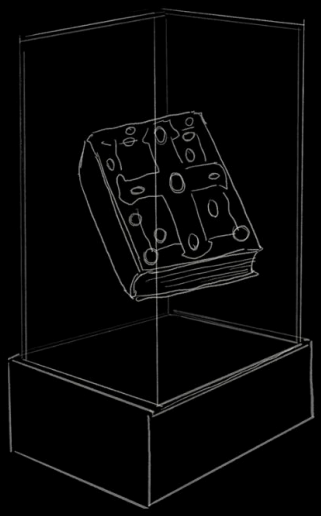
7.5 Experience Journey Overview

The diagram below illustrates the experience journey overview of a student group

1
A group of students come into the exhibition



2
One of them catches sight of the manuscript in the cabinet and walks over for a closer look.

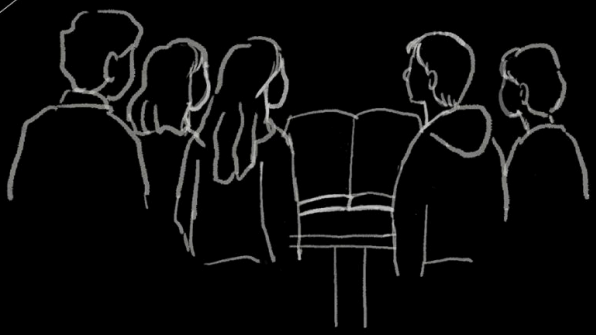


3
Next to the original manuscript, a simulated version emits the glow of a hand-shaped light, silently inviting visitors: “Place your hand here.”

Figure 7.3 Experience Journey Overview

One by one, the window frames illuminate—each followed by a vivid story projection that lasts for 10 seconds.During this time, visitors are immersed in a sequence of imaginative stories, each rooted in a different religious and cultural context from around the world. After 10 seconds, each image gently fades away before the next one appears, creating a rhythm of emergence and disappearance.

4
The visitors gather around and place their hands together on the simulated version, ready to begin the story.



5
The lights in the exhibition hall gradually dimmed, music began to play, and then the lights in the window frames lit up one by one. After the light show ended, the lights in the exhibition hall came back on, and visitors continued their tour.

7.6 Spatial Layout and Visitor Flow

Figure 7.4 Light show begins

Figure 7.5 Visitor watching light show

Figure 7.6 Light Show Rendering, created by ChatCPT-4o and Photoshop

Note: Light show renderings in this chapter were created with ChatGPT-4o and refined in Photoshop for illustrative purposes.

Visitors enter the exhibition from one side of the gallery and begin by viewing the displayed artifacts and medieval artworks. As they move toward the center of the space, they encounter the interactive installation, where they can trigger the light show. After the light show concludes and the lighting returns to normal, visitors continue their journey through the remaining part of the exhibition (see Figure 7.7).

The manuscript installation is placed at the center as a clear interaction point, encouraging visitors to pause and engage before the light show begins. This moment of anticipation enhances the gradual unfolding of the feeling of imagination. The windows serve as the main focal point during the show, while the surrounding space allows for collective viewing without overcrowding. The layout ensures that the installation can accommodate both individual visitors and school groups by providing sufficient space for gatherings.

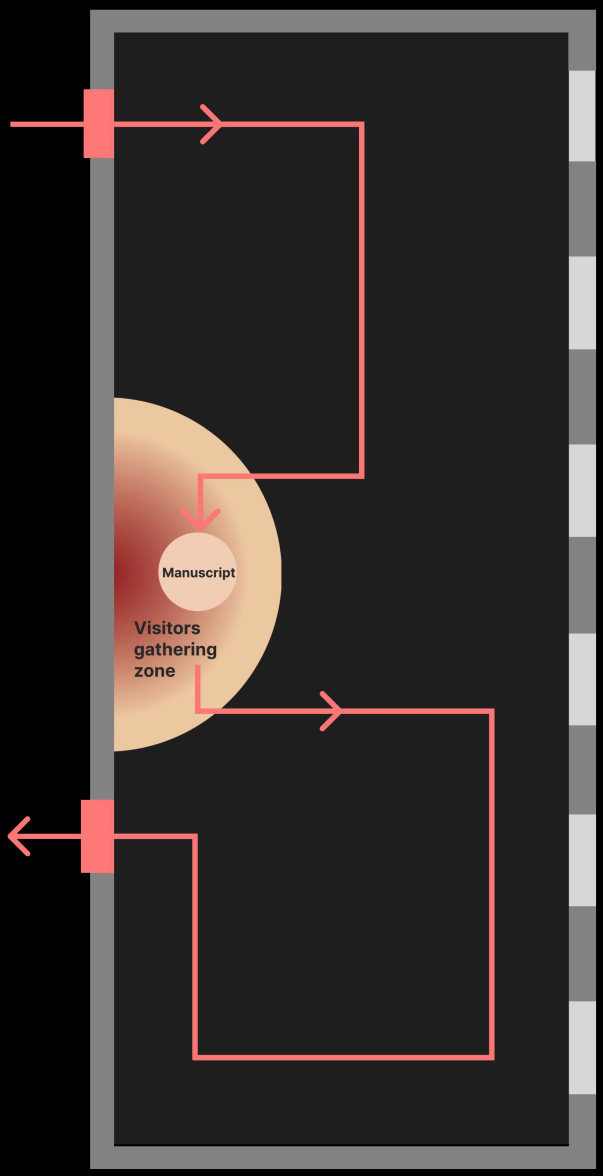


Figure 7.7 Visitor flow in the exhibition space

7.7 Trigger Interval Design

Since the light show darkens the entire gallery, it will naturally attract the attention of all visitors, including those who are viewing other exhibits. To balance this immersive effect with the need to see the artifacts under normal lighting, the system is programmed to run the light show once every 15 minutes. A sign placed next to the manuscript clearly informs visitors: “The light show is presented every 15 minutes.” This allows them to plan their visit accordingly.

This interval gives visitors enough time to enjoy the medieval artworks and displays without disturbance, while still ensuring that each group has the chance to experience the show. To create anticipation, subtle signals appear a few minutes before the sequence begins: the manuscript installation gradually glows with a soft light, accompanied by the gentle sound of turning pages. These cues quietly let visitors know that the next performance is about to start.

The Power of Imagination Light Show

Figure 7.8 Light show rendering

Part 8

Conclusion

8.1 Reflection on the Process

8.2 Discussion
8.2.1 Discussion of the Design Requirements
8.2.2 Discussion of the Limitation

8.3 Recommendations
8.3.1 Recommendations for Desirability
8.3.2 Recommendations for Viability
8.3.3 Recommendations for Feasibility

Image: Rendering of the light show

8.1 Reflection on the Process

Overall, I am satisfied with the final design outcome. The research and design process has been successful and has provided many valuable lessons. This graduation project delivers meaningful results for both the Museum Catharijneconvent (MCC) and TU Delft. I am proud of the final concept and believe it will enhance the visitor experience. More importantly, I have developed skills in research, design, project management, and self-reflection.

Museum design was a completely new topic for me, and medieval religious artifacts were also unfamiliar. Nevertheless, I embraced the challenge. Over the past six months, I have gained insights into the operations of MCC and learned that a museum is not only a place for displaying knowledge but also for conducting research. Working in a new context surrounded by medieval objects and talking with different visitors allowed me to rediscover the joy of being a designer.

My two years of study at TU Delft have added new dimensions to how I approach problems. When working on this project, I was able to define design goals and construct evaluation criteria with greater clarity and systematic thinking. In applying design methods, I generally followed the Double Diamond model, but during the ideation phase I adopted an approach where thinking and making happened simultaneously. By creating quick, simple prototypes and gathering feedback from others, I received continuous positive reinforcement and fresh energy that kept driving the process forward.

Through this project, I have also broadened my cultural understanding. Exploring stories of imagination alongside the museum's collection introduced me to knowledge far beyond my original background. This experience highlighted the benefits of integrating diverse cultural perspectives in a museum setting, and it has made me more open-minded.

In terms of project management, I have learned the importance of establishing a consistent daily routine and maintaining a clear work–life balance. Managing the project independently for six months required continuous self-adjustment and communication with others to identify new approaches. While there were moments when I lost focus, I maintained my enthusiasm and curiosity for the work. This process also strengthened my ability to cope with challenges and pressure.

Image: A letter O from Object No. BMH h14

8.2 Discussion

8.2.1 Discussion of the Design Requirements

To begin with, it is important to evaluate whether this design concept met the design requirements outlined in Chapter 4.3. Overall, insights from iterative testing and user interviews indicate that the concept has, to some extent, fulfilled its intended goal of telling stories through a light show and sparking visitors' imagination and curiosity.

With regard to Requirement 1: Stimulate Imagination and Visualize the Invisible through Light, the feedback revealed mixed responses. Several participants described moments where the visuals and sound indeed triggered imaginative associations and curiosity about the underlying stories. Others, however, expressed a need for more narrative explanation or contextual information to fully engage with the imagery.

In relation to Requirement 2: Communicate Beyond Words, visitors were able to perceive that the light show conveyed religious and cultural narratives without relying on text. At the same time, some participants noted uncertainty in fully understanding the stories, suggesting a need for complementary explanation to strengthen comprehension.

Through the interaction test (see Chapter 6.2), the design also largely achieved Requirement 3: Group-Oriented, Individual-Friendly, as the installation could be activated both collaboratively by groups and independently by individual visitors.

Regarding Requirement 4: Integrated with Spatial and Curatorial Context, the design process has taken the physical characteristics of the museum space into account and has been iteratively optimized to fit the exhibition environment. Nevertheless, its effectiveness in reality still requires validation through full-scale prototyping and on-site testing within the actual exhibition setting.

Finally, feedback further indicated that visitors generally recognized the stories as originating from multiple cultural backgrounds, thereby fulfilling Requirement 5: Culturally Diverse and Inclusive to a preliminary extent.

8.2.2 Discussion of the Limitation

There are several limitations in this project that may have influenced the design process and its evaluation.

First, the projection tests were not conducted at full scale and were not tested inside the actual museum space. As a result, the final lighting effects, visibility, and audience interaction in the real environment may differ from what was observed in the prototype tests.

Second, the user testing was conducted with a group of young adults aged 22–25, rather than the intended target audience of primary and middle school students. While their feedback provided useful insights, it may not fully reflect the experiences, needs, or engagement patterns of the younger visitors the design aims to serve.

Third, the designer does not belong to a religious tradition, and knowledge of the imagination-based stories in the museum's collection was developed through external research. This may have limited the depth of interpretation and cultural sensitivity in storytelling. Additionally, some of the AI-generated images used in the design process may have contained inaccuracies or unintentional misinterpretations of religious symbols or narratives.

Image: Fragment from Object No. ABM s26.4

8.3 Recommendations

8.3.1 Recommendations for Desirability

Based on the iterative testing and evaluation interviews presented in Chapter 6, several recommendations can be made to enhance the desirability of the installation. One key suggestion is to provide visitors further explanation and interpretation after the light show ends. This could take the form of textual introduction cards, printed brochures, or scannable QR codes that link to a multilingual system, supporting readers from multiple backgrounds (see Figure 8.1).

Such additions would allow visitors to gain a deeper understanding of the cultural meanings embedded in the imaginative stories, thereby extending the impact of the light show beyond the immediate visual experience.

Figure 8.1 Further explanation

8.3.2 Recommendations for Viability

To further enhance the viability of the installation, two recommendations are proposed:

Expanding story content

Instead of limiting the projection to the current set of six stories, the system could introduce a rotating selection of narratives. By incorporating cultural and religious traditions from diverse regions—such as the Inca civilization in South America or ancient Egyptian beliefs—the installation can present "The Power of Imagination" across multiple cultural contexts, thereby enriching its scope and resonance.

Adaptable technique for future themes

The technical setup of this design should be developed with flexibility in mind, enabling it to be reused for different curatorial themes in the future. By allowing the projections to be updated with new content, the system can continue to serve as a versatile storytelling platform that remains relevant across changing exhibitions.

Figure 8.2 Simulated Manuscript

8.3.3 Recommendations for Feasibility

The technical setup of this installation needs to achieve an effective balance between immersive visual quality and practical constraints such as hardware quantity, budget, and spatial limitations. The core of the design lies in sequentially projecting animated content onto six windows—each approximately 3.6 meters high and 1.6 meters wide—to create a light-show storytelling experience.

Compared with the conventional one-projector-per-window approach, it is recommended to use two high-performance projectors, each responsible for the output across three adjacent windows. This integrated system not only reduces the number of devices and the complexity of cabling but also simplifies maintenance, making it more suitable for the spatially constrained conditions of the exhibition space.

The system is centrally controlled. Interaction begins when visitors place their hands on the glowing handprint of the simulated manuscript, which activates the entire sequence through a pressure sensor (see Figure 8.3). The projections and lighting are then triggered in order, with each window automatically displaying visual content for about 10 seconds before fading out, without requiring any further user input.

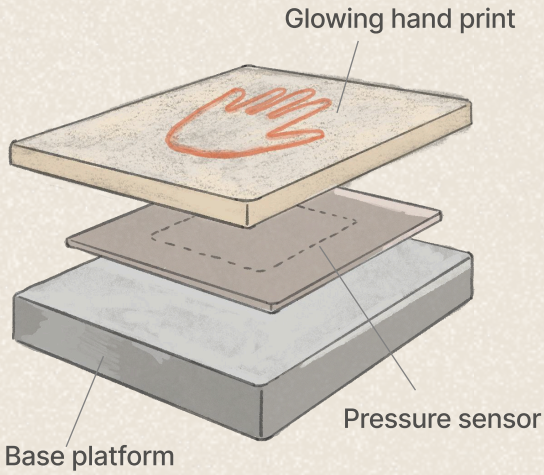


Figure 8.3 Interaction technique

To ensure long-term operational stability and presentation quality, the following technical conditions are recommended:

- Securely install the projectors to prevent image misalignment caused by vibrations or structural movement.
- Ventilation and heat management for projection equipment, preventing overheating during prolonged operation of high-brightness devices.
- Regular calibration and maintenance during the exhibition period, especially in historical buildings where minor structural shifts may occur, ensuring that the projected images remain aligned with the window frames.

Together, these recommendations strengthen the feasibility of the proposed design.

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Appendices

Appendix A-- Field Observation

Group1

Age: 7
Number: 16 students, 3 teachers

01-04-2025

User Journey Map

Stage	Before the tour	During the tour	After the tour
Activities	• upstairs from a certain staircase • put down clothes and belongings • introduction period& asking questions in one special room	• looking at the Jerusalem city model (excited for the light) • divide into two groups • asking questions and answering • sitting in circles, smell, touch, look • hug & kiss & shake hands & play	• gathering in the speical room again • asking&answeing questions • pack up and leave
Emotion	• excited • curious • active	• excited • active 😀	• a bit calmer • quiet • a girl cried(accident happens,,,)
Touch Point	• the courtyard/corridor • the entrance of the museum • the special room for preparation(chairs+tables)	• the exhibition table • the models in the exhibit • the objects from the teacher	• the special class room for questions • (chairs+tables+decorations) • the staircase • the festival calendar (as a gift)

Group 2

Age: 17-18
Number: 17 students, 2 teachers

01-04-2025

User Journey Map

Stage	Before the tour	During the tour	After the tour
Activities	• gathering in the entrance hall • put things in lockers • a bit messy	• lokking at paintings, listening to stories telling • taking pictures of interested things • sitting in circles (sitting on others knees, seems have very good relationship with classmates) • task: searching for the most related objects and do small presentation	• taking pictures with the glass window • go back to the hall from basement • pack up and leave
Emotion	• active (very talktive)	• curious • plain • gradually becoming a bit bored • quiet 😐	• happy • quiet • tired
Touch Point	• the courtyard/corridor • the entrance of the museum • the lockers • the staircase	• the exhibition space • the light/sound/environment • the objects tags • phones/taking photos	• the exhibition space • the light/sound/environment • the objects tags • phones/taking photos

Appendix A-- Field Observation

Group3

Age: 7
Number: 16 students, 3 teachers

03-04-2025

User Journey Map

Stage	Before the tour	During the tour	After the tour
Activities	• gathering in the courtyard • introduction period& asking questions in sunshine, warming up • upstairs from a certain staircase • put down clothes and belongings • What will you do in the museum?	• looking at the Jerusalem city model from 150 years ago(excited for the light) • divide into two groups • asking questions and answering • sitting in circle on the ground	• the whole class make up a train and leave the room • gathering in the speical room again • asking&answeing questions • pack up and say goodbye
Emotion	• excited • curious (looking around) • active	• focused/look around • excited • active • teacher: enthusiastic, active, in high mood 😆	• in happy and high mood • calm down a bit after questioning • happy goodbye
Touch Point	• the courtyard/corridor • the entrance of the museum • the special room for preparation(chairs+tables)	• the exhibition table • the models in the exhibit • the objects from the teacher	• the special class room for questions • (chairs+tables+decorations) • the staircase • the festival calendar (as a gift)

Group4

Age: 8
Number: 28 students, 3 teachers

13:00-14:00
0304-2025

User Journey Map

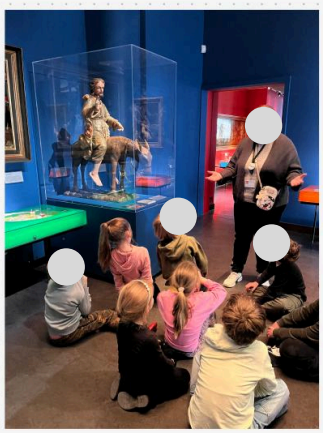
Stage	Before the tour	During the tour	After the tour
Activities	• in special blue vest from the school • upstairs from a certain staircase • introduction period& asking questions in one special room	• looking at the Utrecht city model (excited for the light) • divide into two groups • asking questions and answering • sitting in circles, listening to stories • finding names in the namehall • play	• gathering in the speical room again • asking&answeing questions • pack up and leave
Emotion	• excited • curious • active	• excited • active • focused 😀	• happy • excited
Touch Point	• the courtyard/corridor • the entrance of the museum • the special room for preparation(chairs+tables)	• the exhibition table • the models in the exhibit • the objects from the teacher	• the special class room for questions • (chairs+tables+decorations) • the staircase • the festival calendar (as a gift)

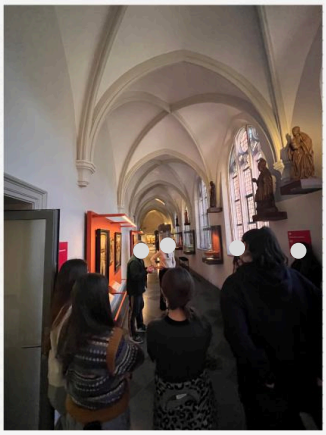
Appendix A-- Field Observation


going to the preparing classroom first

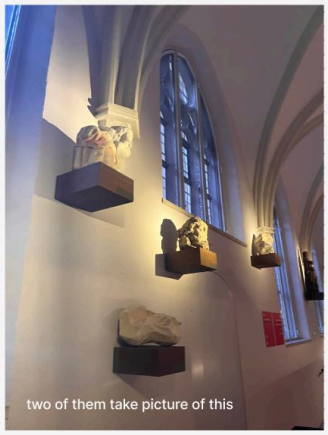
namehall finding names

multi sensory experience

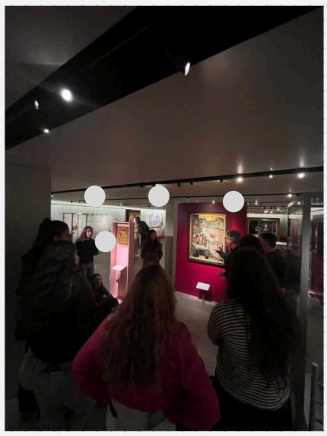


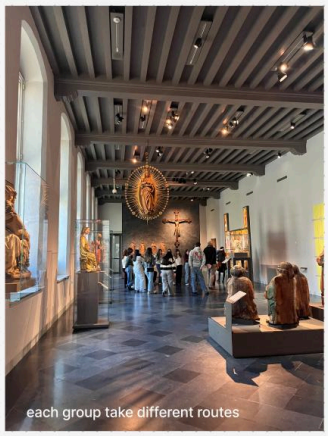



tell a imagined story for this painting


two of them take picture of this


the object which was stolen




each group take different routes

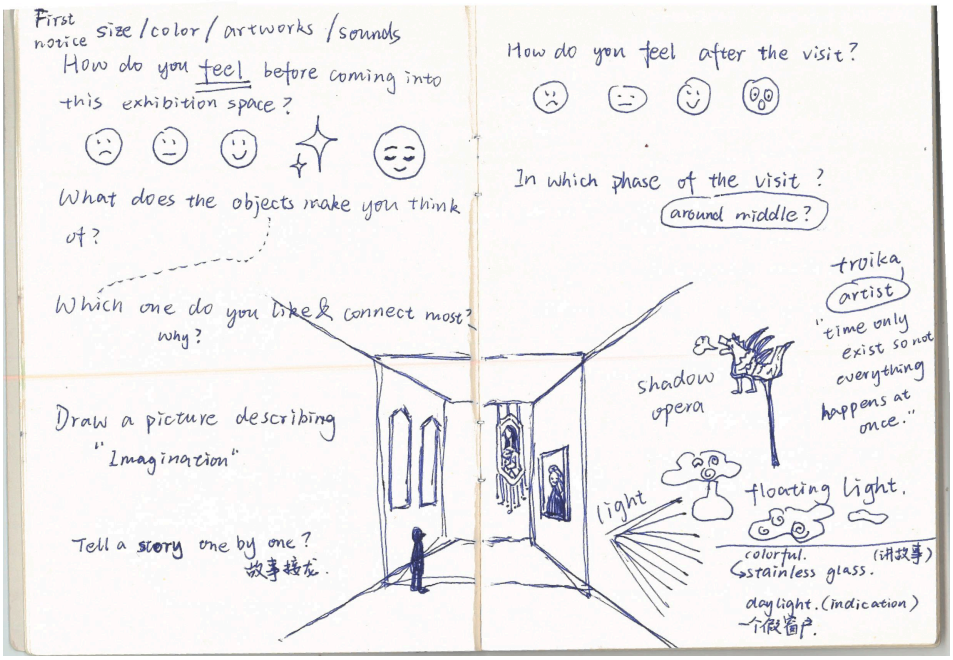
Appendix A-- Field Observation

insights from younger group observation

- active, energetic, a lot of playful and more interested in the tour
- a lot of sitting/dancing/game elements involved
- the facilitator toolkit including smelling/touching/multi sensory things
- nice to involve play elements and makes the tour more involved

insights from older group observation

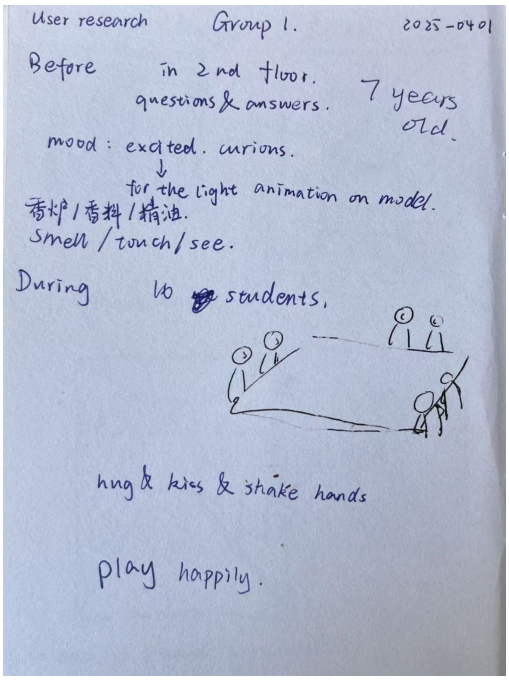
- The group seems calm, not focused and bored(slowly zooming out)
- The tour is a bit like listening to a history lecture, easily distracted
- Related questions can rise discussion: What would you imagine if you live in the monastry? Which painting would you steal? These questions makes them feel more interested
- Maybe more engaging and fun experience should be involved, not like a classroom but a playground/a cool place for a social media photo?
- What can go beyond language and achieve understanding?



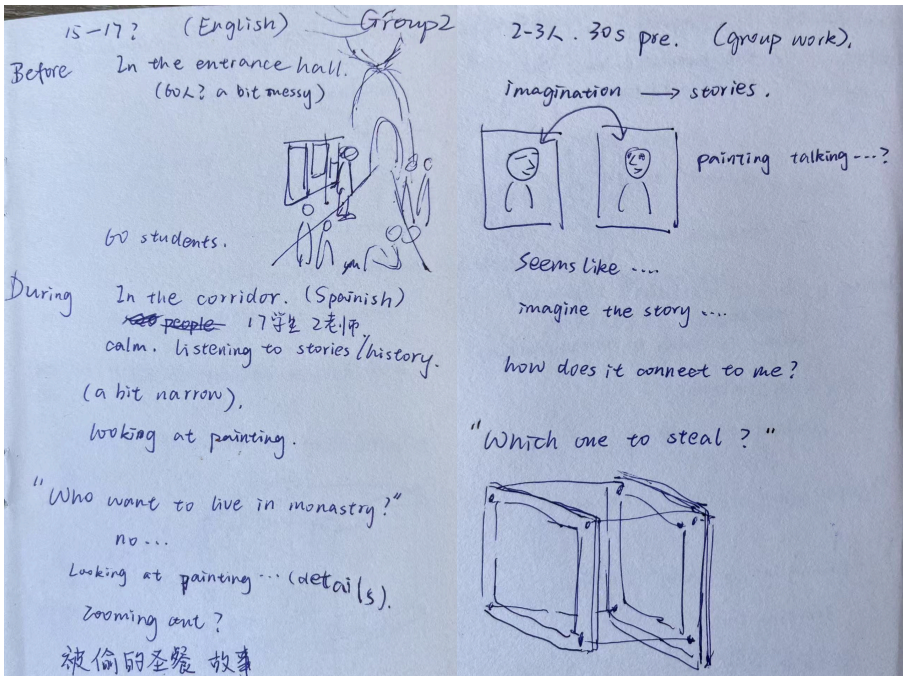
Appendix A-- Field Observation

Notes from the filed observation

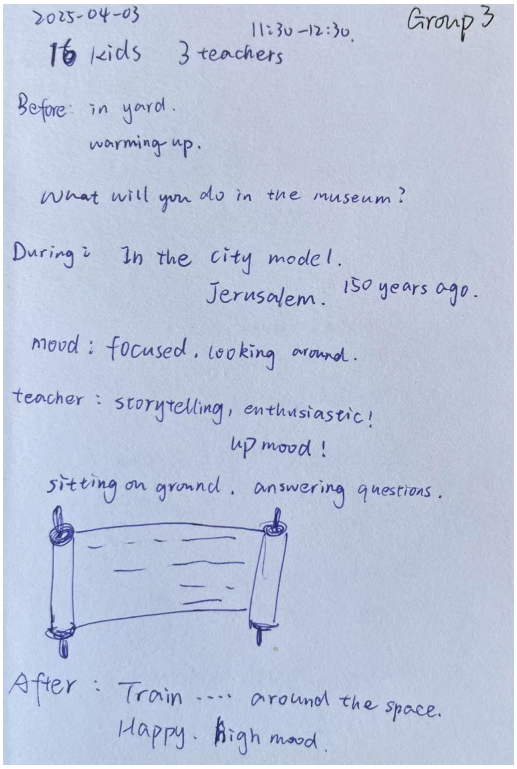
Group 1



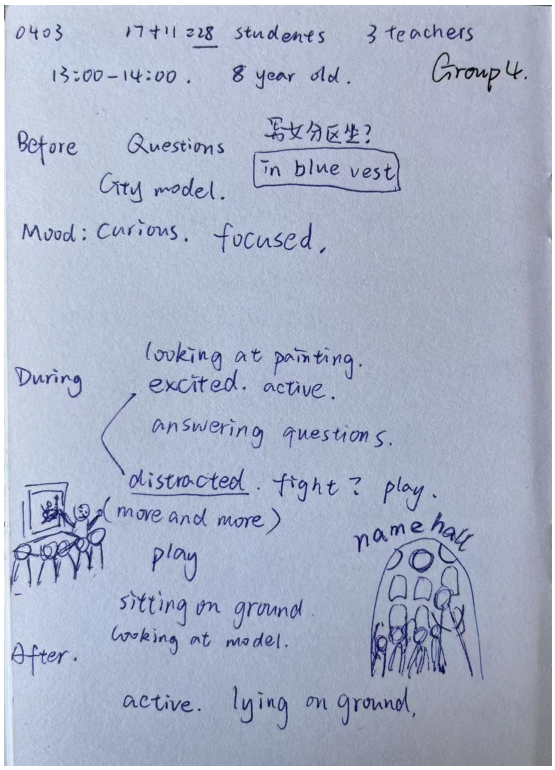
Group 2



Group 3

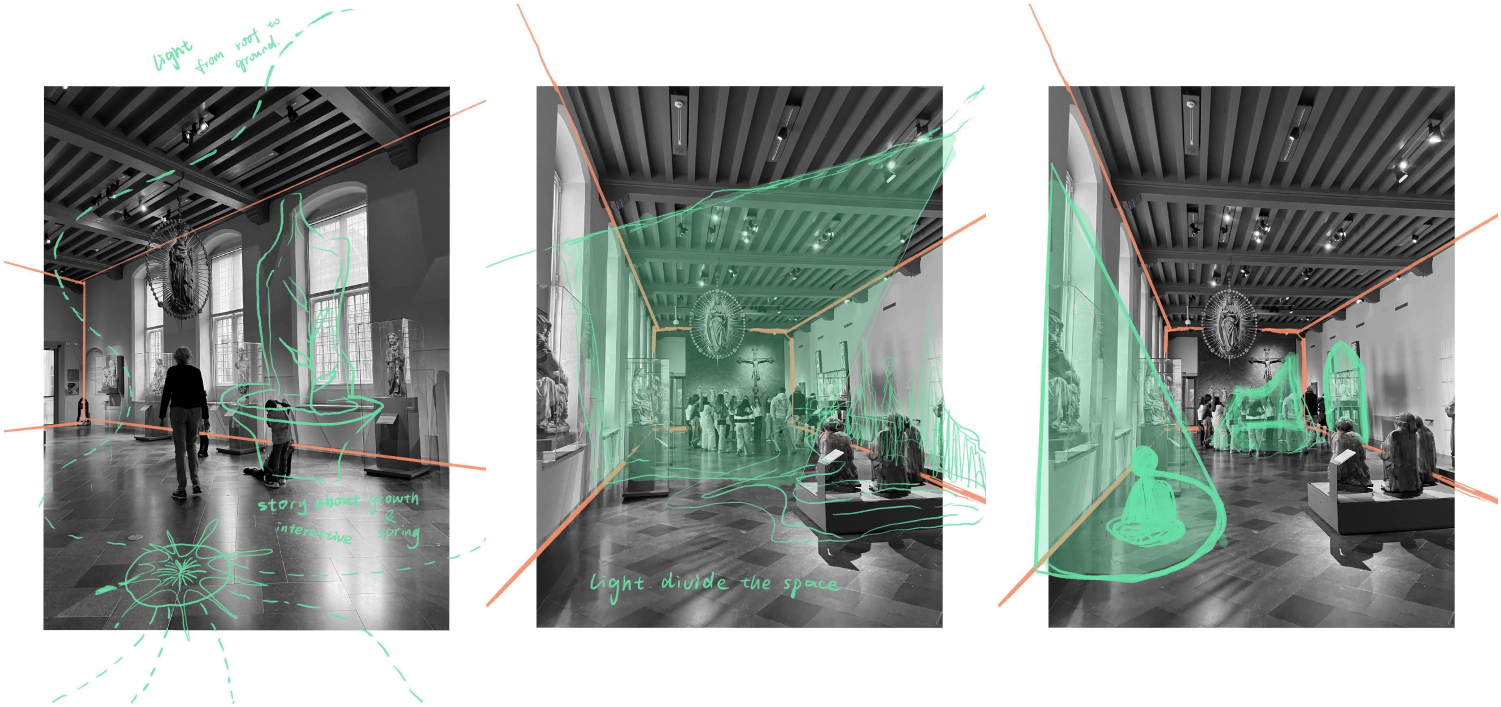


Group 4



Appendix B--Starting Ideas

Starting Idea --*Light Strips & Tyndall Light Walls*



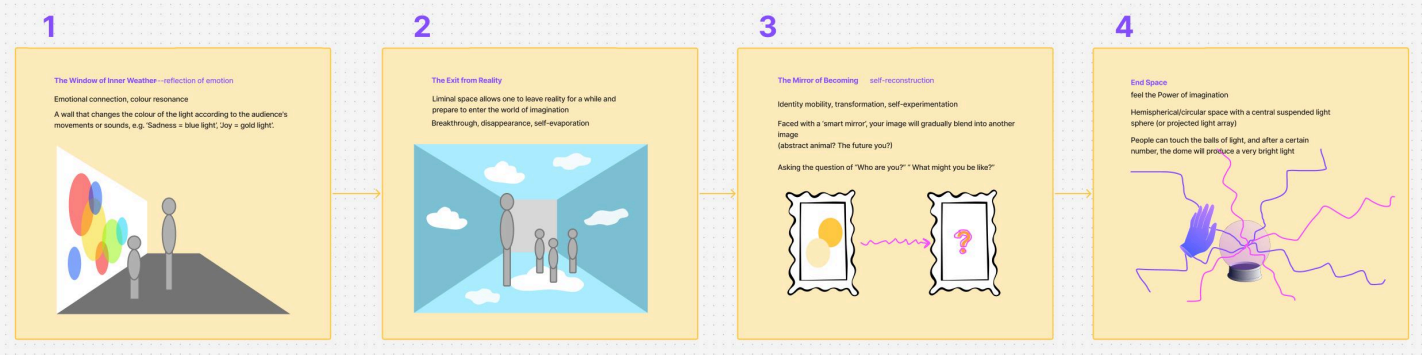
To explore the concept for this exhibition space, I started with the idea of using light as a storytelling element in the exhibition space, exploring its multiple possibilities within spatial design.

For the spatial layout, first idea is about light strips extending from the ceiling all the way down to the floor, blurring the boundaries between the ceiling, walls, and ground. This creates a continuous and immersive visual experience. These lines of light could outline shapes like fountains or religious symbols, acting as guiding threads that lead visitors deeper into the exhibition. The second idea is using light to divide the space, Tyndall effect (Wikipedia contributors, 2024) can be used for allowing light to function as a soft, flexible “wall” that divides the space without interrupting its openness. The third idea is to use interactive light installations along the exhibition route—small stations where visitors can pause, engage, play, and think. For me, light is more than just illumination; it becomes a silent narrator guiding the journey through the space.

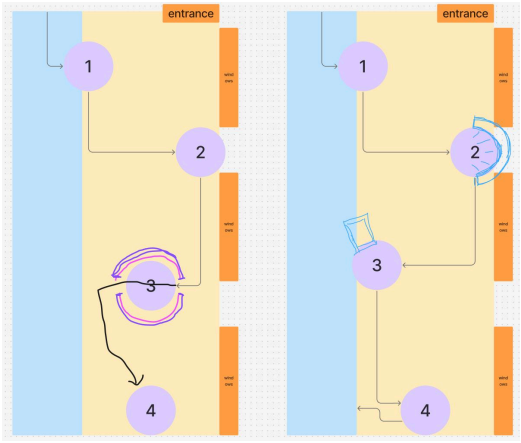
Appendix B--Starting Ideas

A Narrative Design: Journey Through Imagination

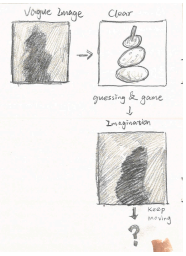
Journey Through Imagination



This concept proposes a narrative-based spatial journey, guiding visitors step by step through a layered experience of emotion, transformation, and imagination. The design consists of four interactive steps, each representing a stage in the visitor's personal and imaginative progression.



The possible visiting route of visitors



1 The Window of Inner Weather – reflection of emotion

First, visitors are invited to look into themselves and self reflect. A responsive wall that visualizes visitors' emotions through light and color: for example, sadness may trigger blue hues, while joy brings golden light. This space initiates an emotional connection and invites self-awareness through visual resonance.

2 The Exit from Reality – a liminal passage

Step 2 is a transitional zone designed to "let go" of the outside world. In this specially designed small space, visitors enter a threshold state—a pause between reality and imagination. It evokes themes of disappearance, breakthrough, and quiet transformation.

3 The Mirror of Becoming – self-reconstruction

In this step, visitors encounter a "smart mirror" that gradually transforms their reflection into something new—an abstract form, an imagined creature, or their possible future self. This moment invites visitors to reconstruct themselves: "Who are you?" "What might you become?"

4 The End Space – the power of imagination

At the end, visitors see a circular or hemispherical space centered around a glowing sphere of light. By touching the light orb, the space gradually grows brighter. This collective act symbolizes the sparkling of imagination.

Appendix B--Starting Ideas

The Window of Inner Weather

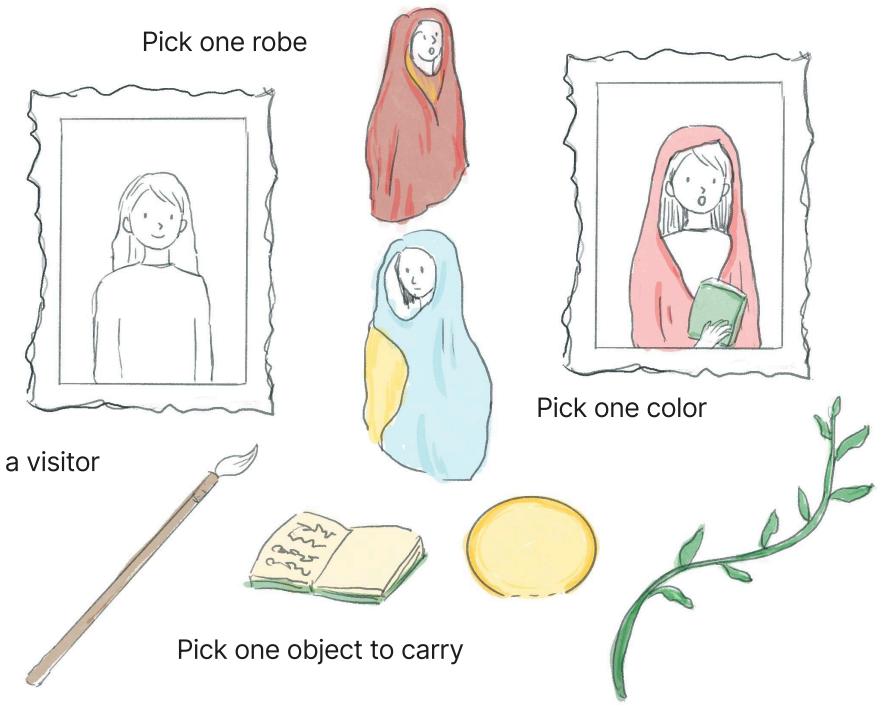
As the viewer approaches the window area, a piece of the projected pattern slowly emerges as a colour graphic

Refined story board for The Window of Inner Weather

The visitors can choose a colors that represent their inner emotion by touching on the color circle, long press and release.

Appendix B--Starting Ideas

The Mirror of Becoming – Self-reconstruction



Refined story board for The Mirror of Becoming

Middelrijns altaar, sterfbed van Maria. Tempera on panel (75.5 × 58.5 cm), ca. 1405–1414, unknown artist (possibly from Cologne). Museum Catharijneconvent, Utrecht, Netherlands. https://adlib.catharijneconvent.nl/Details/collect/7869

A participatory transformation inspired by museum collections
In this interactive experience, visitors are invited to step into a symbolic "mirror" where they gradually reconstruct their identity by selecting elements drawn from the museum's religious collection.

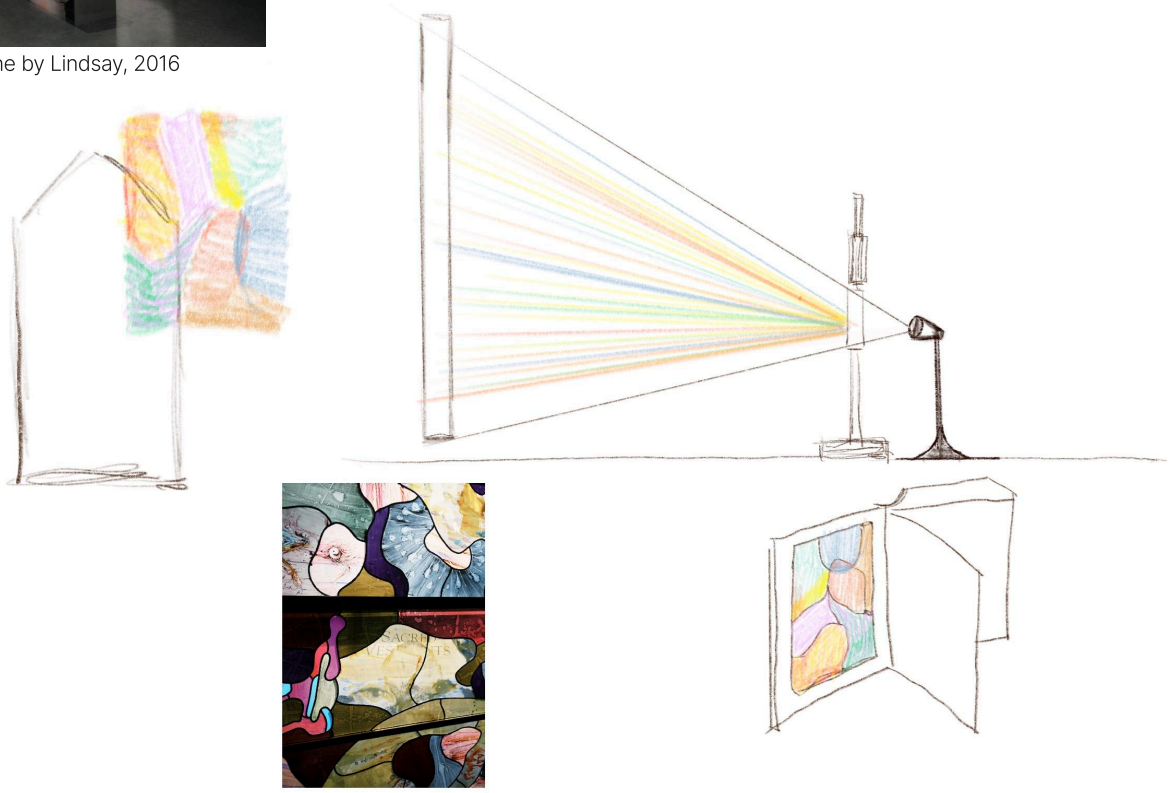
Participants can choose a robe, a color, and one object to carry—such as a book, a halo, a leaf, or a brush —each referencing motifs commonly found in religious art. Through this process, the visitor's image transforms into a personalized figure, echoing saints or symbolic characters.
By blending personal choice with historical elements, the installation explores themes of identity, imagination, and self-invention, prompting the question:
"If you were a sacred figure—who might you become?"

This concept not only activates engagement with the museum's collection but also invites visitors to reflect on how imagination shapes how we see ourselves and others.

Appendix B--Starting Ideas

Light Collage: Cross-Cultural Imagination

Lumigraphe by Lindsay, 2016



Starting idea -light collage

Inspired by the design of the MCC stairwell window, it adopts an abstract design language and uses a collage of elements (e.g. newspaper and magazine illustrations) to achieve a combination of the figurative and the abstract.

What happens when elements from different cultures and religions are brought together in one luminous frame?

This project proposes an interactive light collage installation, where visitors can freely combine images, patterns, and symbols drawn from a variety of global cultural and religious sources. These selected objects—ranging from Christian sculptures to Buddhist manuscripts, Islamic geometry to modern mystical artworks—are projected as overlapping layers of light. Visitors are invited not only to create visual compositions, but also to invent new stories:

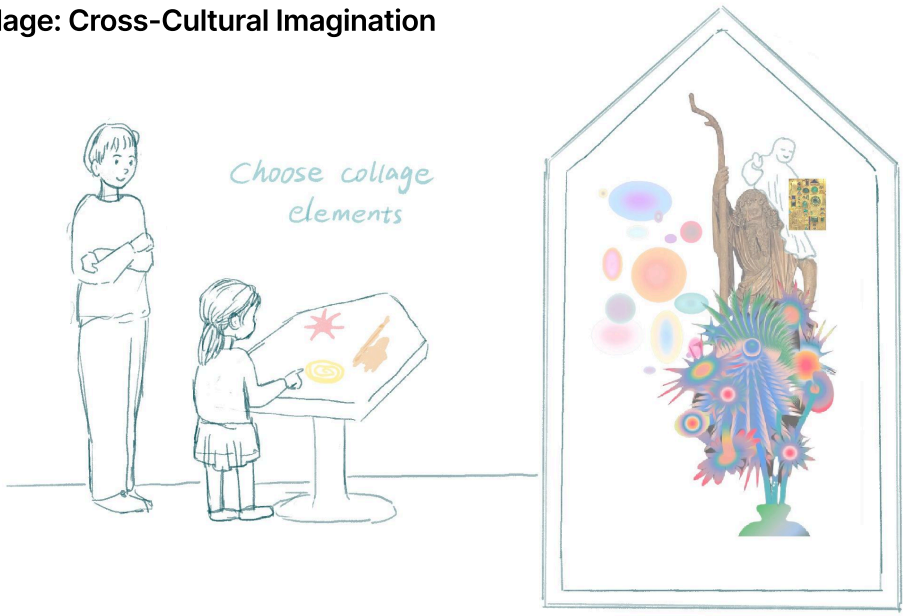
“What would happen if these symbols met?”

“What kind of world could they create together?”

Appendix B--Starting Ideas

A Refined Storyboard

Light Collage: Cross-Cultural Imagination



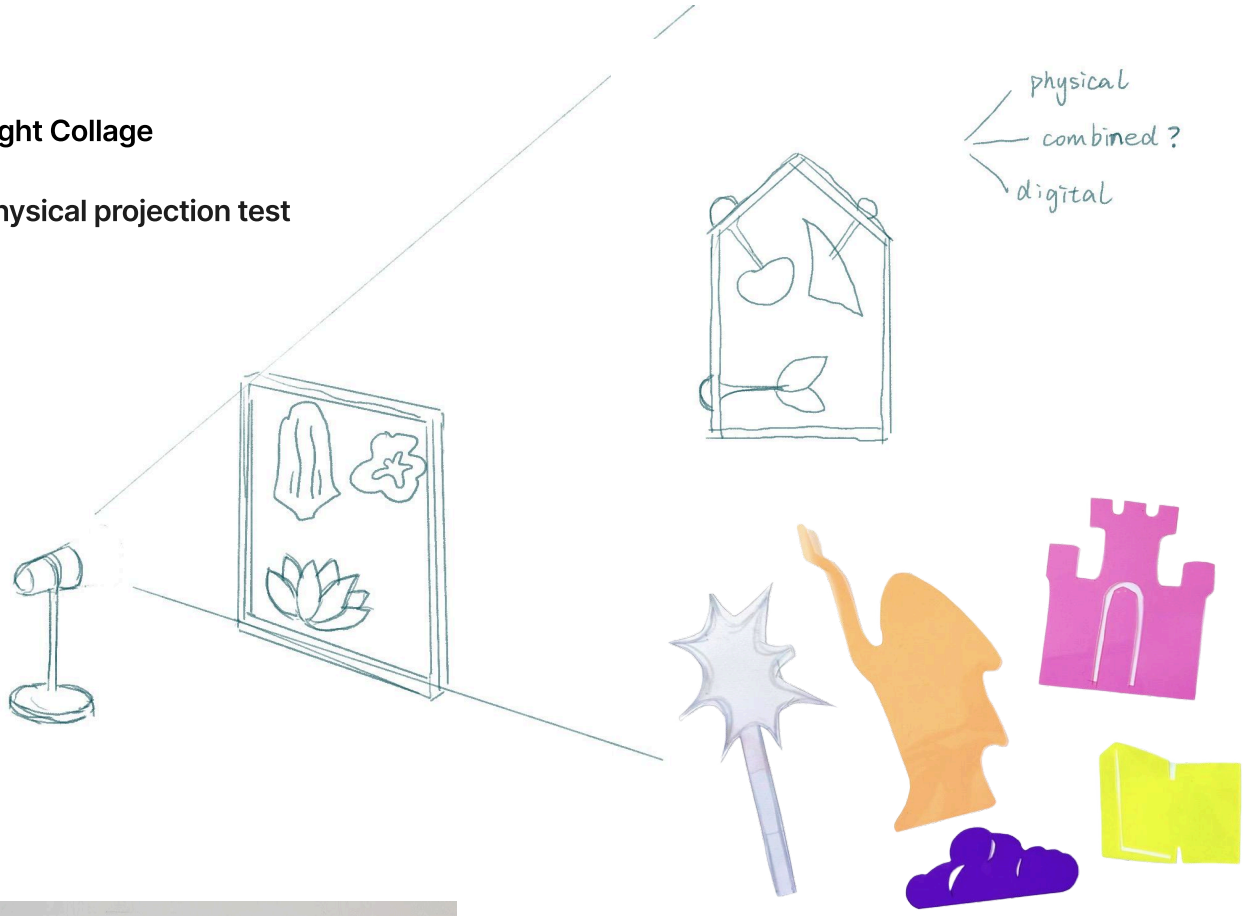
The possibilities of physical collage and e-collage are shown in the figures. The installation uses “collage” as a medium, combining light, shadow, and participatory interaction to encourage visitors to co-create and reimagine within a cross-cultural context.

The space is designed to update periodically (e.g., every 30 minutes), presenting a new “window” composed of artworks collaboratively created by visitors during that timeframe. This dynamic update mechanism highlights the processual and temporal nature of collective creation, turning the exhibition into a living, ever-evolving spatial installation.

Appendix B--Starting Ideas

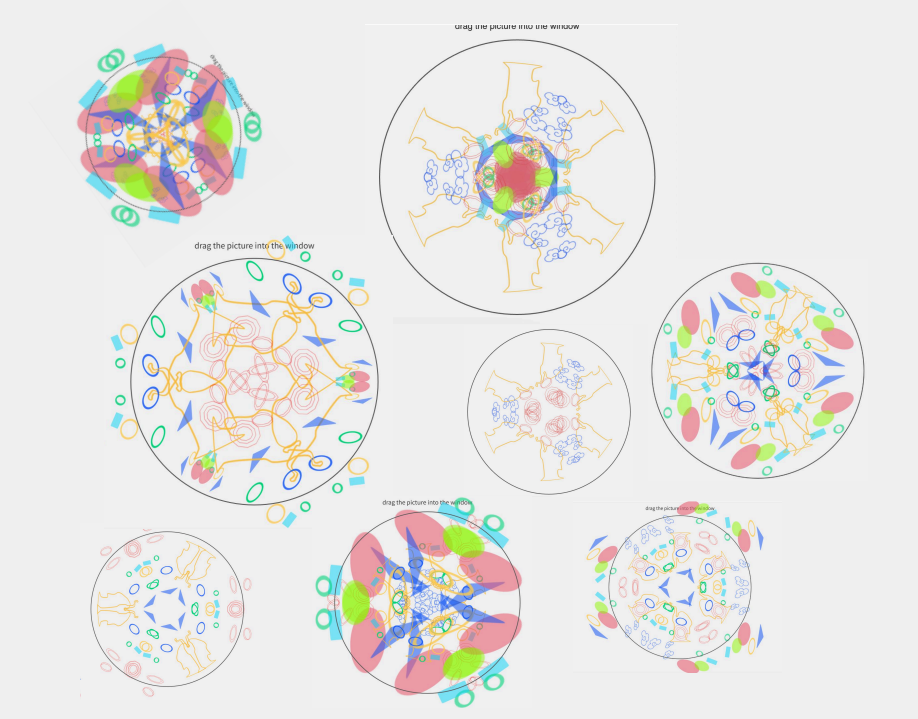
Light Collage

Physical projection test

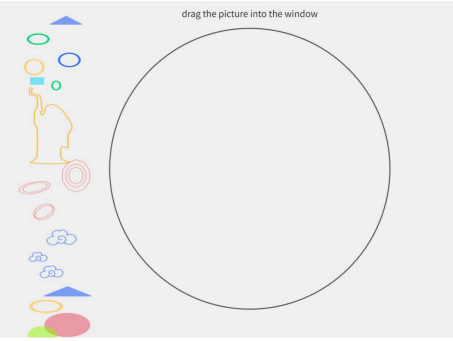


Appendix B--Starting Ideas

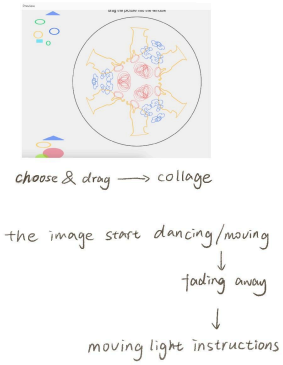
Light Collage: Kaleidoscope



Collection of use test results



The interaction is dragging the images in the circle, controling the position and size.



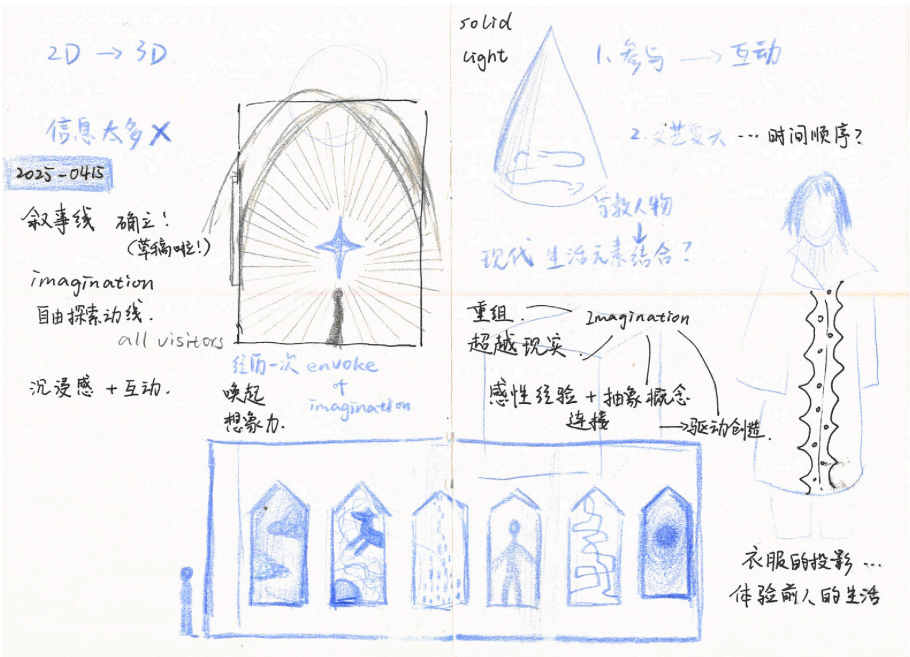
This improved design solution changes the normal collage to a kaleidoscopic form of collage by creating a p5.js program for a quick and easy test. The main purpose of this test was to get people's opinions on the different collage forms. Users are asked to drag the images into the circle(window space) and creating the collage in a kaleidoscope style. A number of participants indicated that the output of this form was interesting and triggered the imagination, but did not understand what the collage graphic meant and triggered confusion.

The question that also needs to be considered is how can this collage tell a story after the visitors have made their collage creation? Consideration also needs to be given to how group visitors can co-create.

Appendix B--Starting Ideas

Unfolding Manuscript

This concept takes inspiration from the decorative patterns of medieval manuscripts and combines them with the window frames of the gallery.

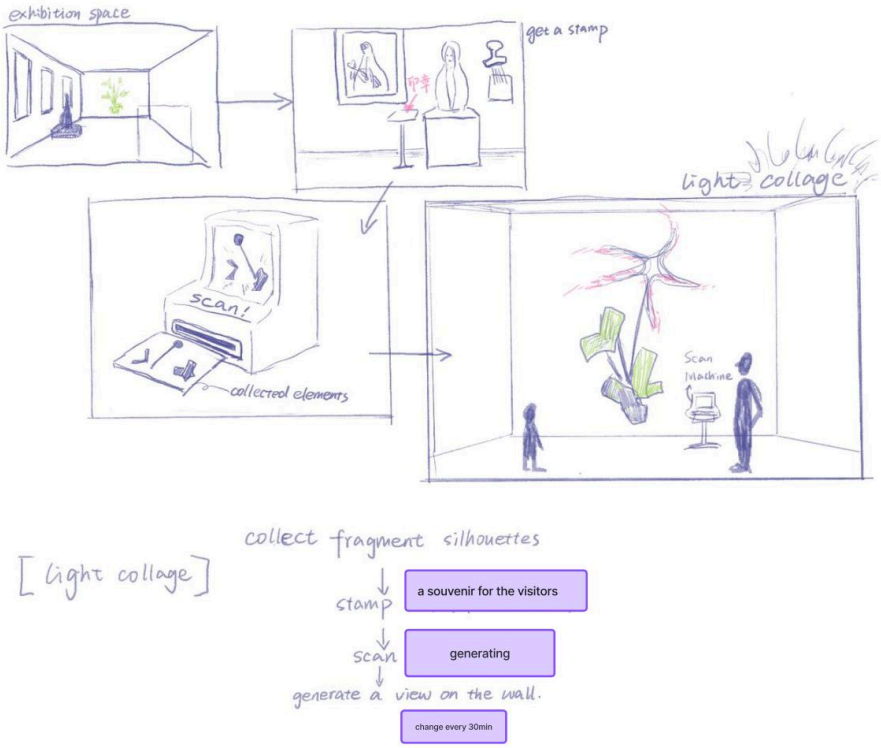


Appendix C-- Evaluating Starting Ideas

- Desirability – Alignment with the theme "The Power of Imagination" and potential to engage diverse audiences.
- Feasibility – Technical and spatial implementability within the MCC environment.
- Viability – Assesses adaptability for long-term use, cost-effectiveness, and potential for reuse in other exhibitions.

Concept \ Criteria	Desirability	Feasibility	Viability
Light Strips	Strong visual presence; symbolic shapes can enrich thematic link	Technically feasible with LED strips; installation may require ceiling modifications	Hardly adaptable to different shapes and content
Tyndall Light Walls	Visually engaging; supports contemplative experience.	Requires controlled lighting; Tyndall effect achievable with basic equipment and haze machines	Reusable in different spaces; adaptable to various themes
The Window of Inner Weather	Highly personal and emotional; promotes self-reflection; not relate to the theme	Needs emotion-detection or input system; higher technical complexity	Adaptable by changing emotion-to-colour mapping; hardware maintenance required
Unfolding Manuscript	Strong connection to museum heritage; authentic cultural appeal; clear narrative potential	Simple projection setup; minimal space changes needed	Easily updated visuals; fits multiple narratives
Light Collage	Visually rich and dynamic; blends diverse cultures; encourages visitor interaction	Technically achievable with projection mapping; requires regular maintenance	Highly adaptable by changing images; reusable projection setup
Light Kaleidoscope	Unique and stimulating; adds playful motion to Light Collage concept	Technically feasible with software (e.g., p5.js); may cause clarity issues	Adaptable but meaning may need explanation; reusable setup
The Mirror of Becoming	Strong interactive element; immersive role-play; connects visitors to artefacts	Requires facial recognition technology; additional space for visitor interaction	Must update system when thematic content changes; higher maintenance for both hardware and software

Appendix D--Informal Visitor Interviews for Concept 1 – Light Collage



Date & Context: 15 June 2025 (Saturday afternoon), permanent exhibition, Museum Catharijne Convent, Utrecht. The gallery was relatively quiet, with most visitors being middle-aged or elderly.
Method: Brought sketches and physical collage elements into the exhibition space and conducted short, informal interviews with passing visitors.

Participants:

- Pair A: visitors in their twenties
- Pair B: visitors in their fifties

Sample Questions Asked:
“If you received this card, how would you go about collecting patterns?”
“Would you be curious about the final collage projection?”
“How does this design trigger your imagination?”

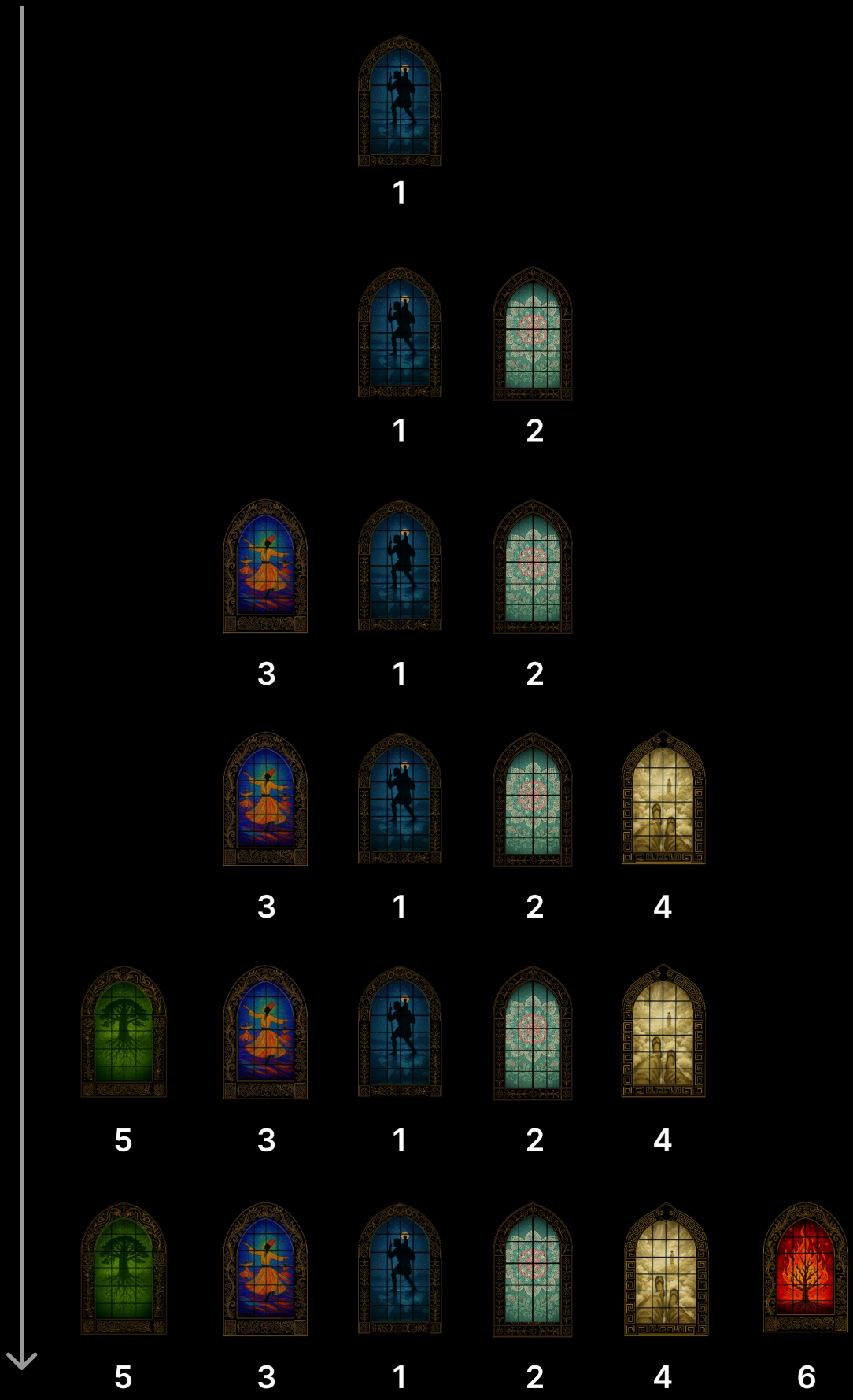
Key Insights: One visitor from Ethiopia remarked that some of the museum’s religious objects reminded him of cultural elements from his home country. He suggested that an interactive system supporting such connections would enhance the experience. Visitors from abroad noted that the Dutch-only labels created a significant language barrier. The absence of English descriptions made it difficult to fully understand the collection, underlining the need to minimize language dependency. Participants questioned how the design would support multi-people engagement. One suggestion was to provide a short introductory card to guide participants, an idea aligning with the museum’s school group tour practice.

Appendix E

Appearing Sequence of Light Show on Six Windows--*a. Linear Sequence*

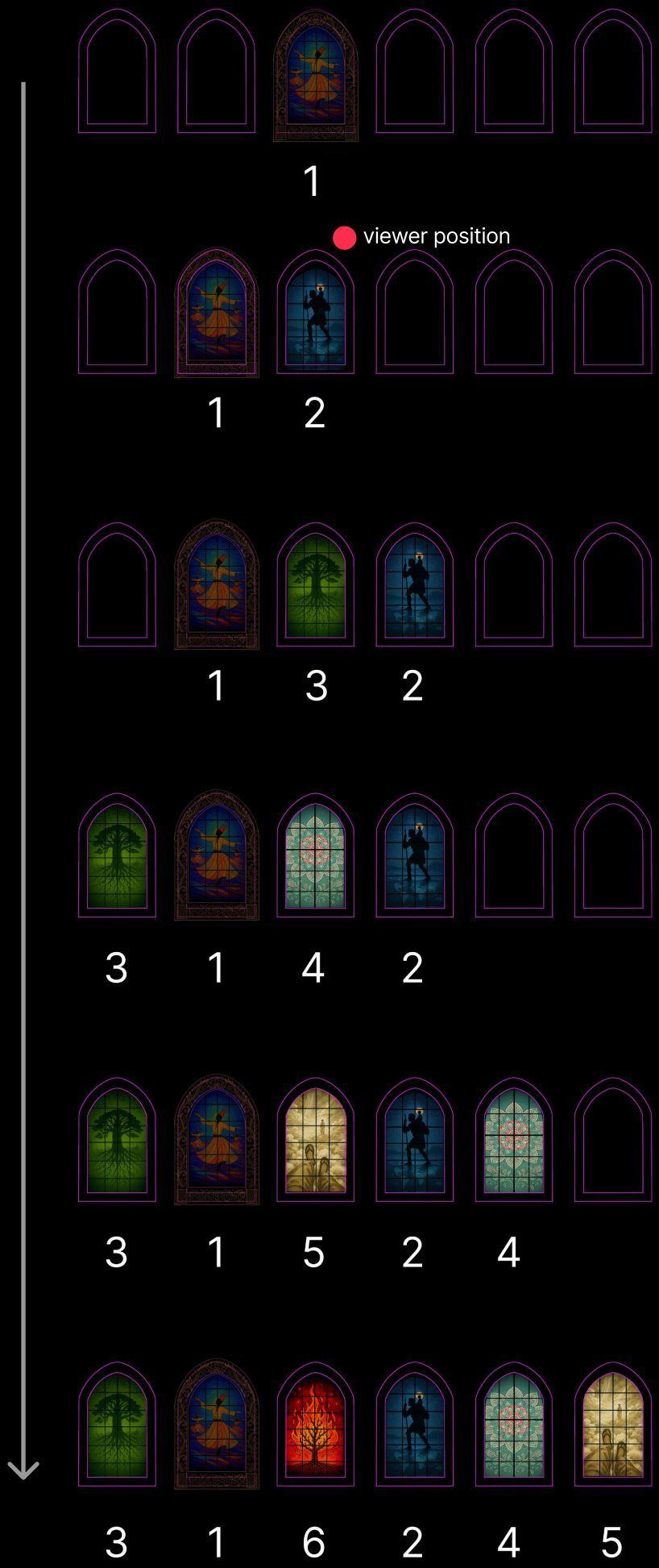
Appendix-E

Appearing Sequence of Light Show on Six Windows--*b. Central Expansion*



Appendix-E

Appearing Sequence of Light Show on Six Windows



c. Shifting Window Sequence

Of the six windows, only the third window displays a new story each time a visitor interacts with it. Previously displayed stories automatically shift to the adjacent window

Appendix F--Questionnaire

Test for the light show

This test aims to evaluate how different visual narrative forms affect user engagement, perception, and preferences.
Two variables are tested:
1. Image duration: fast (4 seconds per image) vs. slow (10 seconds per image)
2. Layering strategy: disappearing vs. accumulating images

◯ OK!

A1-
The image does not fade away after appearing-4s

Have you watched the entire video?

◯ yes

◯ no

How would you describe this rhythm?

◯ too fast

◯ too slow

◯ just fine

Do you feel that you understand the content of the image?

◯ Yes

◯ No

◯ Maybe

A2-
The image does not fade away after appearing-10s

Have you watched the entire video?

◯ yes

◯ no

How would you describe this rhythm?

◯ too fast

◯ too slow

◯ just fine

Do you feel that you understand the content of the image?

◯ Yes

◯ No

◯ Maybe

Appendix F--Questionnaire

B1-The image fade away after appearing-4s

Have you watched the entire video?

- ◯ yes
- ◯ no

How would you describe this rhythm?

- ◯ too fast
- ◯ too slow
- ◯ just fine

Do you feel that you understand the content of the image?

- ◯ Yes
- ◯ No
- ◯ Maybe

B2-The image fade away after appearing-10s

Have you watched the entire video?

- ◯ yes
- ◯ no

How would you describe this rhythm?

- ◯ too fast
- ◯ too slow
- ◯ just fine

Do you feel that you understand the content of the image?

- ◯ Yes
- ◯ No
- ◯ Maybe

General Questions

Was there a particular moment or image that left a lasting impression on you?

_____

What do you think this video is trying to convey?

_____

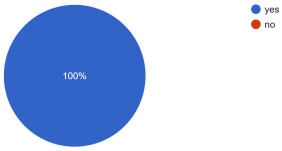
Do you have something to add on?

_____

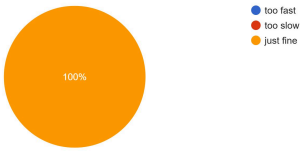
Appendix F--Questionnaire

A1-
The image does not fade away after appearing-4s

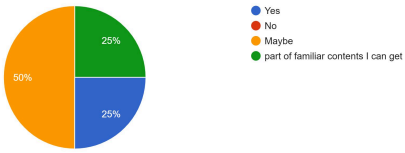
Have you watched the entire video?
（4 条回复）



How would you describe this rhythm?
（4 条回复）

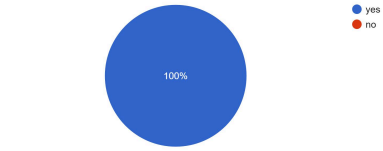


Do you feel that you understand the content of the image?
（4 条回复）

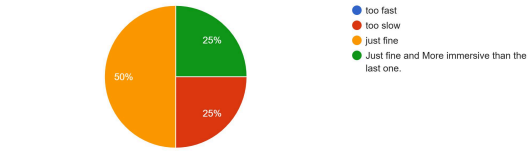


A2-
The image does not fade away after appearing-10s

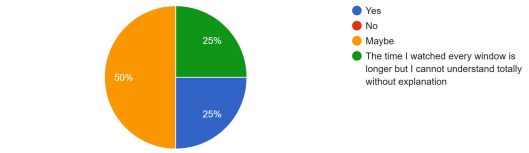
Have you watched the entire video?
（4 条回复）



How would you describe this rhythm?
（4 条回复）

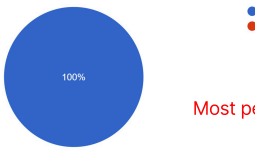


Do you feel that you understand the content of the image?
（4 条回复）



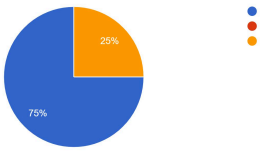
B1-The image fade away after appearing-4s

Have you watched the entire video?
（4 条回复）

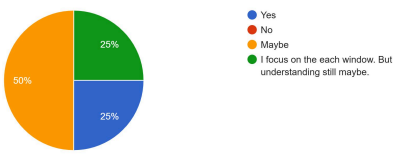


Most people report this version too fast

How would you describe this rhythm?
（4 条回复）

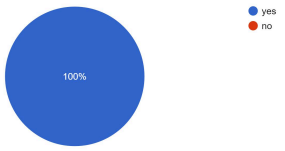


Do you feel that you understand the content of the image?
（4 条回复）

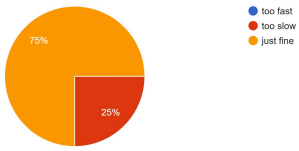


B2-The image fade away after appearing-10s

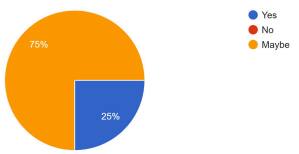
Have you watched the entire video?
（4 条回复）



How would you describe this rhythm?
（4 条回复）



Do you feel that you understand the content of the image?
（4 条回复）



Appendix F--Questionnaire

Was there a particular moment or image that left a lasting impression on you?

The music with the pattern
The last image of all the window frames appeals together
跳舞小人那张(The dancing little people picture)
Dancing people. The sound is really impressive

What do you think this video is trying to convey?

Different stories
A journey of discovering something, maybe a religion or a traditional myth

Religious interesting stories

Appendix G--Evaluation Interview

07-08-2025

Do you think this light show sparked your imagination?

Answers A–D are from participants who took part in the test: 4 students from the design faculty.
Answers E–G are from two other students from the design faculty who watched the video-B2.

A. I think it did spark my curiosity about faith and the rest of the exhibition. For example, the dance and the accompanying sound reminded me of certain cultural traditions, and it made me wonder about the stories behind the images. Some pictures also stimulated my imagination. For instance, the “Riding the Wind” image showed a person lying on a cloud—interesting even without knowing the background. The glowing giant carrying a small figure at night made me think of mythical stories like the giant’s land or the tale of the magic beanstalk, which added a sense of mystery and imagination.
B. I feel there should be more explanation about the story or meaning behind each image. Just showing the slideshow alone didn’t feel particularly imaginative to me. It made me curious about what the images meant, but it didn’t really expand my imagination much.
C. Through the design of each image, I felt there was room for imagination. I wanted to know more about how these stories unfold and about the cultures they come from.
D. It made me think of mysterious religious rituals and history. I even tried to connect the five stories together, though I didn’t succeed. The sound, however, gave me deeper associations with the images. It definitely triggered many ideas, but for someone without historical background knowledge, it might still be confusing.
E. It raised questions for me about the coherence between the stories. At first glance, I couldn’t see much of an internal connection.
F. I think it did spark imagination, because the images and related patterns gave me space to associate freely. It made me curious about the stories behind them and how they might continue.
G. When I watched this video:

1. At the beginning, when I was asked to touch the book and the windows started to faintly appear, I really felt as if imagination was slowly emerging.
2. But later, when the patterns appeared all at once, I felt a bit confused, because I wasn’t sure what the specific background or context was.
3. I also noticed that the music and the visuals seemed slightly out of sync? The feeling at the start—being in darkness, first hearing the music, and then gradually seeing the patterns emerge—was really nice!

Summary of Visitor Feedback

Overall, the light show did spark imagination for many visitors, especially through its imagery and sound, which prompted associations with myths, cultural traditions, and mysterious rituals. Some visitors, however, felt that the lack of background explanation limited their ability to fully engage or connect the stories. Several participants expressed curiosity about the meaning and continuity of the images, suggesting that additional context could further support imaginative engagement.

Appendix G--Evaluation Interview

Do you have some suggestions for this design?

The design of the visual elements can be spaced out a bit, so that the window frame designs of different cultures have more distinction.

Give me more background introduction about these stories, which would let me understand them more deeply.

The existing window frames can serve as the visual focus for the audience, while their background could perhaps include some video elements to introduce this culture.

It may be better to choose more widely recognized stories, such as Moses parting the Red Sea or the Nine-Colored Deer.

It would be better for each story to appear separately rather than overlapping, since these stories are not sequential like a comic strip and lack strong continuity. However, at the end, all the windows could be shown together once.

The 10s version makes me feel more immersed.

Do you have some suggestions for the sound?

The sound experience was very pleasant. The sound of the dancing figure stood out clearly and was especially memorable.

he sound design could be improved by adding more differentiation for each story.

Appendix H--Project Brief

DESIGN FOR our future

TUDelft

Personal Project Brief – IDE Master Graduation Project

Name student	Chang Liu	**Student number**	6,007,775

PROJECT TITLE, INTRODUCTION, PROBLEM DEFINITION and ASSIGNMENT
Complete all fields, keep information clear, specific and concise

Project title Evoking Imagination in Museum Catharijneconvent Storytelling

Please state the title of your graduation project (above). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

Introduction

Describe the context of your project here; What is the domain in which your project takes place? Who are the main stakeholders and what interests are at stake? Describe the opportunities (and limitations) in this domain to better serve the stakeholder interests. (max 250 words)

The exhibition space of a museum is more than just a setting for history and art—it is a place where visitors engage in a dialogue with culture. The Museum Catharijneconvent (MCC) in Utrecht is currently exploring the theme 'Power of Imagination', aiming to innovate exhibition experiences by 'visualizing the invisible' through immersive storytelling and interactive design. As part of its upcoming renovation, scheduled to begin in 2026 with a reopening in 2028, MCC is developing an concept for visitor experience in one of the exhibition space. One starting idea is using light projected on the large windows in the exhibition space to add dynamism, However, the concept may extend beyond the window, integrating with the entire exhibition space and incorporating interactive elements to deepen engagement. This renovation aims for both group visitors (primarily school groups) and individual guests.

The museum now needs to deepen and redesign the starting concept in order to give visitors an experience that envokes imagination. The current exhibition space is set within an ancient convent, where artifacts are displayed alongside labels providing textual descriptions. Visitors typically move through the space following the arrangement of the objects, reading the information and observing the exhibits. So, is there a way to use light to tell a story in a way that allows people to experience more than the fixed and immobile exhibition and enjoy the power of imagination?

→ *space available for images / figures on next page*

Appendix H--Project Brief

introduction (continued): space for images

image / figure 1 Innovation area in Museum Catharijneconvent

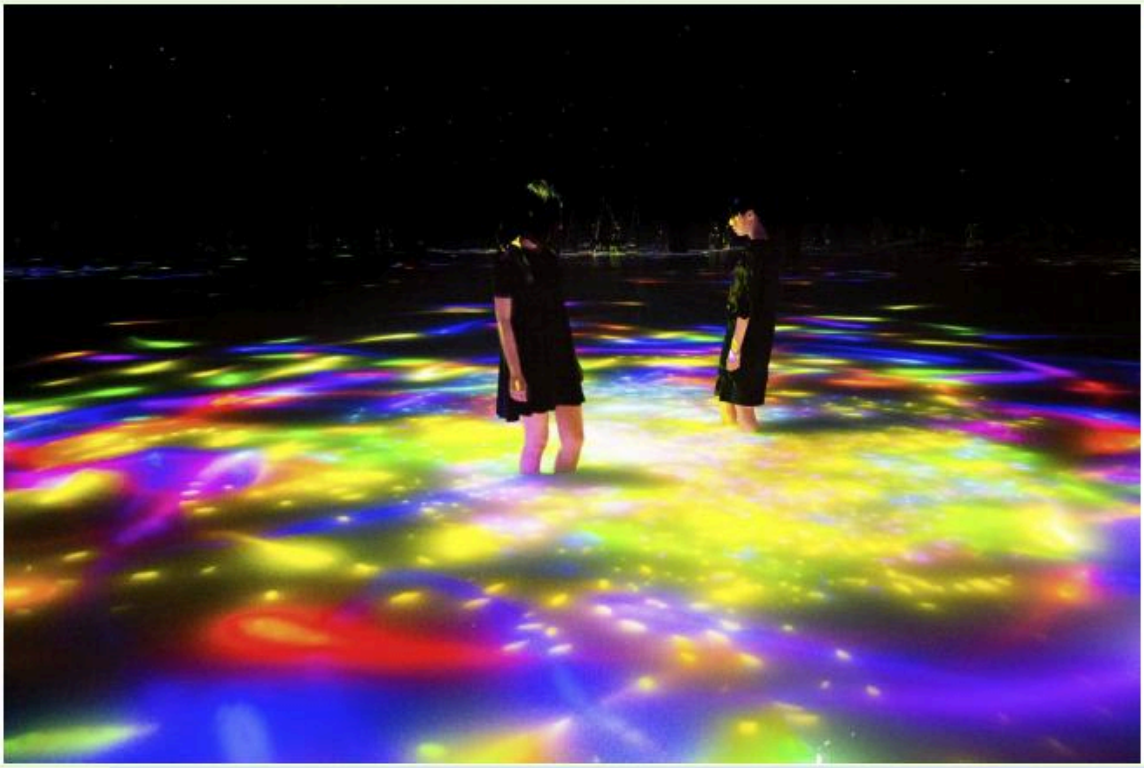


image / figure 2 teamLab, Installation view of teamLab Planets TOKYO, 2018, Toyosu, Tokyo

Appendix H--Project Brief

Problem Definition

What problem do you want to solve in the context described in the introduction, and within the available time frame of 100 working days? (= Master Graduation Project of 30 EC). What opportunities do you see to create added value for the described stakeholders? Substantiate your choice.
(max 200 words)

In this project I aim to work around the concept 'Power of Imagination' and creating experience for museum visitors with light. Within the scope, key challenges include: How to stimulate people's imagination using light? How can the museum artefacts play a role in a light-based experience? What stories should be involved to create the experience? What should visitors be doing before, during and after the journey? How can individual and group visitors enjoy the journey together? How can these elements fit in the Museum Catharijneconvent?

By understanding user needs and developing renovation base on it, the visitors can gain new experience in the museum instead of the traditional way of static viewing. At the same time, the museum can improve visitor experience and convey information in an attractive way.

Assignment

This is the most important part of the project brief because it will give a clear direction of what you are heading for. Formulate an assignment to yourself regarding what you expect to deliver as result at the end of your project. (1 sentence) As you graduate as an industrial design engineer, your assignment will start with a verb (Design/Investigate/Validate/Create), and you may use the green text format:

Create an experience which stimulates peoples' imaginations using light, museum artifacts and spiritual storytelling for individuals and groups visiting Museum Catharijneconvent.

Then explain your project approach to carrying out your graduation project and what research and design methods you plan to use to generate your design solution (max 150 words)

The project is conducted following the double-diamond design process model. In the user research phase, I will combine observation and interviews to understand visitor needs, behaviors, and emotional responses. Based on these insights, I will create a user journey map and classify emotional changes using the Emotion Typology design tool to identify key moments for engagement. To refine the journey further, I will incorporate small-scale visitor studies, using draft user journeys depicted through storyboards or other visual tools. Collaborating with museum staff, I will determine which content and narratives can be integrated into the innovation. For the design phase, I will apply the Design for Happiness Deck tool to explore how visitors can experience the journey of 'imagination' in a meaningful way. The project will integrate both the technical and aesthetical elements of lighting design to make the concept practical.

Appendix H--Project Brief

Project planning and key moments

To make visible how you plan to spend your time, you must make a planning for the full project. You are advised to use a Gantt chart format to show the different phases of your project, deliverables you have in mind, meetings and in-between deadlines. Keep in mind that all activities should fit within the given run time of 100 working days. Your planning should include a ***kick-off meeting, mid-term evaluation meeting, green light meeting*** *and* ***graduation ceremony****. Please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any (for instance because of holidays or parallel course activities).*

Make sure to attach the full plan to this project brief.
The four key moment dates must be filled in below

Kick off meeting	6 3 月 2025
Mid-term evaluation	28 4 月 2025
Green light meeting	23 6 月 2025
Graduation ceremony	4 8 月 2025

In exceptional cases (part of) the Graduation Project may need to be scheduled part-time. Indicate here if such applies to your project

Part of project scheduled part-time	
For how many project weeks	
Number of project days per week	

Comments:

Motivation and personal ambitions

Explain why you wish to start this project, what competencies you want to prove or develop (e.g. competencies acquired in your MSc programme, electives, extra-curricular activities or other).

Optionally, describe whether you have some personal learning ambitions which you explicitly want to address in this project, on top of the learning objectives of the Graduation Project itself. You might think of e.g. acquiring in depth knowledge on a specific subject, broadening your competencies or experimenting with a specific tool or methodology. Personal learning ambitions are limited to a maximum number of five.
(200 words max)

As a museum lover, I have always been fascinated by how interactive design transforms museum visits into engaging and immersive journeys. Thoughtfully designed exhibits inspire me, making exploration enjoyable and meaningful. However, I have also experienced moments of information overload, where excessive input left me feeling overwhelmed. These experiences have led me to reflect on how museum storytelling and experience design can better guide and support visitors.
Through this project, I aim to deepen my understanding of museum design and explore user experience research within the museum context. I am particularly interested in storytelling and experience creation, as they play a crucial role in making exhibitions more engaging and accessible. Additionally, this project provides an opportunity to gain insights into working within cultural and educational institutions, equipping me with valuable skills for my future career.