

Transforming Museums: The Role of Partnerships in the Digital Transformation of Museums

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MA. Cultural Economics and Entrepreneurship
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ABSTRACT

This thesis seeks to analyse the potential of partnerships in facilitating digital transformation in museums. In particular, this thesis examines how digital transformation can be applied in museums, with a focus on the dimensions of digital strategy, digital technology, and cultural innovation. It also considers the challenges museums face in this transformation, which is formulated in the following research question: "How can museums enhance digital transformation through collaborative partnerships?" Subsequently, this thesis analyses how partners could assist in overcoming these challenges. The analysis of these partnerships is conducted based on the dimensions of partner type, partner purpose, and partner involvement. Based on this, a model is developed. Although academic research provides sufficient evidence for the importance of digital transformation in museums, little explanation is found in how this process can best be approached in the cultural creative industries. Therefore, this study is conducted. An exploratory approach is adopted to investigate the potential of partnerships in transformation. For this reason, ten interviews were conducted with museum professionals and partners of museums. The analysis of these interviews indicates that museums recognize the importance of digital transformation, with each emphasising the importance of different dimensions. Which is aligned with the fact that everyone approaches digital transformation in their own way. However, challenges in finding sufficient human and financial resources are evident across all museums. It was acknowledged by participants that partners could assist in the provision of these resources in a variety of ways, including the transfer of knowledge, the initiation of joint developments, or the pooling of resources in other ways. Moreover, partners indicate great willingness to experiment and innovate together with museums towards digital transformation. Overall, three main types of partners were identified: Cultural, Public and Corporate partners. Each of these types may contribute to digital transformation in different ways and provide different resources. While it was thus confirmed that that partnerships can contribute to digital transformation by providing different resources needed for the various dimensions of digital transformation, insufficient information was available on how these different types of partners contribute specifically. Therefore, no specific relation between certain partners and resources are established, only a generic one. The thesis does however provide sufficient evidence and cases for museums to create a balance in partnerships that might work for them. Moreover, it offers academics new insights that can inform future, more detailed research.

KEYWORDS: *Museum Management, Digital Transformation, Digital Technologies, Digital Strategies, Partnerships*

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Acknowledgements

In the current climate, where there seems to be less space and appreciation for culture, it warms my heart to see the cultural community taking continuous effort to ensure that arts and culture remain accessible for all. It is my hope that this thesis can contribute to these efforts as well. However, that would not have been possible without the incredible support and feedback of my supervisor Lénia Marques. I would therefore like to extend my gratitude for her ideas and suggestions.

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Introduction

In these times of rapid change, the ability to innovate is a key source for transformation in the public sector (Piening, 2011). To meet the changing needs of its stakeholders, this sector is constantly striving to improve the efficiency and quality of its services. For the cultural industry, it seems that its growth and survival depend on continuous innovation as well (Brandellero & Kloosterman, 2010; Jones et al., 2016). Innovation works best when it is approached as a structured and collaborative process that can take on various forms (Jones et al., 2016), such as collaborative circles (Farrell, 2001), projects (DeFillippi, 2015; DeFillippi et al., 2007), art worlds (Becker, 1982) and movements (Byrkjeflot, et al., 2013; Crane, 1987; Rao, et al., 2003).

As a prominent part of the cultural creative industry, museums have observed drastic changes in the expectations of their visitor (Goulding, 2000), innovation throughout the whole organisation could be an effective way to achieve their goals and fulfil their role in society. Especially since it is believed that when applied correctly, “innovation is a great tool for museums to realize their missions more effectively and efficiently” (Haitham, 2016, p. 1).

The expected role of museums is included in the definition of a museum by the International Council of Museums (ICOM) as “*a not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets and exhibits tangible and intangible heritage. Open to the public, accessible and inclusive, museums foster diversity and sustainability. They operate and communicate ethically, professionally and with the participation of communities, offering varied experiences for education, enjoyment, reflection and knowledge sharing.*” (2022, p. 9).

At its core, innovation involves the introduction of new ideas, methods, products, or processes that create value or result in positive change. This is often based on accumulated knowledge from customers, competitors, and technology (Deshpande et al., 1993).

Collaboration is therefore important in order to share knowledge through direct communication with users and suppliers (Bureth et al., 1997; Martin & Moodysson, 2011).

However, innovation activities can happen in several dimensions and can be categorized in different types.

In this context, digital innovations are becoming increasingly important, as digital technologies continue to evolve and extend their reach into all aspects of our lives (Demirkhan et al., 2016). These technologies and digital innovations can offer opportunities for new products and business models or processes (Drechsler et al., 2020; Nambisan et al., 2017; Yoo et al., 2012). However, it is believed that digital technologies can do more than lead to digital innovations alone, they can alter mindset and behaviours of consumers and visitors (Gregory et al., 2018). In the cultural sector, this change is visible as well, as research on the Google Art Project (GAP) has shown that technology can augment the way viewers enjoy art (Neirotti et al., 2016).

To remain relevant, organisations, amongst which museums, must transform their business models to align with the changing expectations and experiences of visitors. Such a digital transformation typically includes fundamental changes to the organisation's structure, identity, and business strategy (Drechsler et al., 2020; Vial, 2019). Specifically, digital transformation is defined as "a process where digital technologies create disruptions triggering strategic responses from organizations that seek to alter their value creation paths while managing the structural changes and organizational barriers that affect the positive and negative outcomes of this process" (Vial, 2019, p. 1).

While innovation and digital transformation have been researched extensively (Drechsler et al., 2020; Hess et al., 2016; Kamariotou et al., 2021; Kraus et al., 2021; Matt et al., 2015), applying these more general economic theories on the cultural and creative sector has its limitations (Li & Coll-Serrano, 2019). These general economic theories will thus have

to be adjusted to fit the museum sector. This is first and foremost because of the size of the organizations, cultural institutions, such as museums are often small and medium-sized enterprises (SMEs) (UNCTAD, 2008). Smaller organisations may lack the ability to innovate due to a lower capacity to invest resources in innovation or collaborative projects (Li & Coll-Serrano, 2019). Thus, it is possible that museums may encounter greater difficulties in adopting digital transformation than other firms. Additionally, and as previously stated, innovation in the creative industries is dependent on organized activities through collaborative initiatives. While these collaborations typically take place between cultural organisations, this sector can learn from other industries by focusing on other's innovation drivers as well (Jones et al., 2016). Even more so, research suggests that museums who collaborate with other organisations outside the cultural industry, such as universities and high-tech firms, have higher rates of technological innovations (Camarero & Garrido 2012; Castro-Martinez & Fernández-Baca Casares, 2012; Castro-Martinez et al., 2013; Li & Ghirardi, 2019; Verbano et al., 2008). Although this validates the potential for collaborations with other organisations to facilitate the digital transformation of a museum, research on how these collaborations could take form is limited.

Moreover, museums and other cultural organisations are not just an enterprise focused on production, it is an experience site. Innovation is therefore implemented or experienced in different dimensions than innovation in other organisations would be (Stoneman, 2010; Sundbo, 2009). A dimension that could be investigated better is cultural innovation, which can be explained as “Concentrating on the generation of aesthetics, symbol or meaning, which are mostly embedded in cultural products and services, and characterised by ‘communication’ value rather than functional value” (Alcaide-Marzal & Tortajada-Esparza, 2007; Li & Ghirardi, 2019, p. 276). Existing literature on this topic primarily focuses on technological innovation, rather than cultural innovation. Meaning that there is an absence of

academic validation regarding the processes and dimensions that are needed for cultural institutions to innovate and transform digitally (Castañer, 2014).

Purpose of the Study

This thesis therefore aims to better identify the components of digital transformation in museums, amongst which cultural innovation. Moreover, this thesis will study how partnerships could help take away barriers to transform digitally. For this reason, it is important to gain a deeper understanding of digital transformation and the strategic changes it may bring to museums. Additionally, it is important to understand the dynamics of partnerships in this sector and how they can benefit museums. The thesis therefore identifies and explains various types of partnerships. The study is exploratory in nature, qualitative research is employed to explore the potential of digital transformation and partnerships, rather than to establish definitive evidence for the impact partnerships may have on the transformation of museums.

Based on this, a framework for collaboration towards digital transformation is developed, which is explained in the theoretical framework. Subsequently, this framework is verified and further enhanced through in-depth interviews with museum professionals in different roles, as can be read in the methodology. These interviews focus on the professional experience of these individuals with partnerships and the process of digital transformation within different types of museums. The insights gained from these conversations are analysed and described in the results, these insights allow the researcher to add practical experience to theoretical research and evaluate what types of partnerships work best for how certain museums define their digital transformation process and digital goals, based on this, a conclusion is drawn on what approach might work best for museums.

In conclusion, the goal of this research is to investigate how museums can use collaborative partnerships to enhance the process of digital transformation in an increasingly digitized world. This analysis hopes to provide valuable insights into how museums can navigate the new digital landscape and become more efficient. The thesis wants to provide museum professionals with the right knowledge and strategies to foster innovation and stay relevant. Therefore, the following research question is formulated:

How can museums enhance digital transformation through collaborative partnerships?

This question is broken down into two sub-questions (SQ):

SQ1. What resources do museums need for the process of digital transformation?

SQ2. What are the different types of partners that museums typically have, and how do the roles of these partners differ?

SQ1 aims to uncover how museums conceptualize digital transformation and integrate it into their strategies. It will investigate how museums see digital transformation and the level of importance of it to them, as well as how this is determined. Additionally, this question seeks to explore how museums might transition from reactive to proactive digital strategies. SQ2 is used to identify the various partners that museums collaborate with, including the roles and contributions of the partner. The question aims to distinguish the benefits and challenges of these partnerships and assess how different types of partnerships may enhance digital transformation in museums in different ways. When these sub-questions are answered, the research question can subsequently be answered as well.

Theoretical Framework

In this increasingly digital age, museums seem more willing to innovate and implement digital technologies. This is important, because innovation is considered a fundamental task for public organisations to improve responsiveness and efficiency (Mulgan & Albury, 2003). Although utilization of digital technologies and strategies can differ within contexts and sectors (Sebastian et al., 2017; Vial, 2019), the application of new technologies in museums seems to be most significant in the areas of promotion of culture, enjoyment on-site, and managerial organizational activities (Raimo et al., 2022). Where museums originally focused on their intrinsic value, there is now a more widespread belief that museums should actively engage visitors and broaden the scope of the content that is considered worthy of museum attention (Thompson, 1999), thus taking a more visitor-centred approach.

This theoretical framework will further explain digital transformation and its main components as well as apply existing frameworks to museums. Consequently, digital transformation strategies are formulated. Additionally, an overview of different museum partnerships will be developed to understand how partners could facilitate museum goals. It is theorized that museums may benefit from partnering with other organisations to facilitate digital transformation. An idea that even before the beginning of this century, has led to a degree of acceptance of the privatisation of certain services within museums (Kawashima, 1999). By combining the framework for digital transformation and partnerships in one model, this study aims to clarify how the concepts are connected and approached best.

Digital Transformation

This framework is needed, because digital technologies have influenced the way information is created, managed and consumed in museums. In taking a visitor-centred approach, museums must find new ways to stay relevant, going beyond digitalization, and

adapting to the changed consumption patterns and ‘new information market’ (Navarrete, 2013); a market where information is aggregated and distributed in new ways (Hanson, 2003). The development of new digital strategies, and digital transformation of the organisation, driven by innovation (Hinings et al., 2018) could help achieve this. Often, this process involves three stages: digitization, digitalization, and digital transformation. The latter altering consumer expectations and behaviours (Verhoef et al., 2021).

Conditions for Digital Transformation

For digital transformations to happen, it is prerequisite for organisations to go through the stages of digitization and digitalization first (Verhoef et al., 2021). Digitization is the process of converting analogue information into digital formats (Verhoef et al., 2021). In museums this can take form of digitization of libraries and collections (Navarrete & Mackenzie Owen, 2011). Digitalization is the subsequent step that intends to innovate and involves the use of digital technologies to modify existing business processes (Li et al., 2016). These changes require the use of digital technologies in the digitization phase, as the digital objects created are used to organize new sociotechnical structures (Verhoef et al., 2021). Meaning that the step of digitalization does not only involve cost saving but includes process improvements that possibly enhance customer experience as well, like digital curation of online exhibitions with the digitised collection (Ray, 2017). However, investments in digitization and digitalization can be costly. Which supports the notion that organizational change is an emergent process: Incumbent firms may begin with small changes – digitization or digitalization – and then gradually transform their strategy and business (Teece, 2010).

When an organisation moves from altering business processes to more structural changes with companywide implications, it has started the digital transformation process. Vial (2019) defined digital transformation based on the digital technologies that can cause

disruptions through the entire organisations, leading to strategic changes as well. Tekic and Koroteev (2019) posit that digital transformation is a multifaceted phenomenon, it therefore has different aspects and has different meaning to different types of companies. Where one organisation might focus more on adopting new technologies (Caro & Sadr, 2019). Another might focus more on using social media to engage customers or the use of new open channels (Kaplan & Haenlein, 2010). Others even use digital transformation to create whole new ways of doing business (Crittenden et al., 2019). Therefore, there is a difference between how others consider digital transformation to be beneficial to the organisation. On the one hand, it can be used as a method for the optimization of processes, such as cutting costs (Tekic & Koroteev, 2019). On the other hand, it can be seen as an opportunity to create new value through the offering of new products and services to the public or as a necessary tool to find and serve new customers (Matarazzo et al., 2021; Tekic & Koroteev, 2019). For museums as well, these views could all be valid reasons to employ digital transformation.

Despite sufficient research emphasizing that the value of digital transformation lies in the creation of a suitable strategy (Kane et al., 2015; Markus & Roey, 1988), Chesbrough, (2010) proposes that technology is the initial reason that the old business model becomes outdated and thus sees it as the primary factor of digital transformation. This study recognizes the value of both, where the strategy can be seen as the set of rules that governs digital transformation, digital technologies form the foundation upon which the strategy is built. Digital strategy and digital technology are therefore two main dimensions of digital transformation (Tekic & Koroteev, 2019). These two dimensions will first be explained, after which the use of these dimensions in museums is analysed.

Digital Technologies

Digital technologies are the driver of digitization, digitalization, as well as of business transformation, this, in turn enables digital transformation (Tekic & Koroteev, 2019). Museums can adopt these digital technologies in different ways, from online ticketing sites and chatbots, to virtual collections and digital ethnography, meaning that digital technologies are more often integrated throughout the entire organisation (Del Vecchio et al., 2018; Devine & Tarr, 2019; Navarrete, 2019). These and other implementations of digital technologies, such as the use of gamification, artificial intelligence and augmented and virtual reality in the development of exhibitions are examples of how digital technology enables digitalization (Wang et al., 2024).

Improvements in museum operations are mainly in the domains of digitizing collections, developing online exhibits and virtual tours, and engaging with audiences through digital platforms like websites (Navarrete, 2013; Bakhshi & Throsby, 2011). Which can be divided in the three areas of Raimo et al. (2022): promotion of culture, enjoyment on-site, and for managerial and organizational purposes. For instance, the digitization of collections not only preserves artifacts but also makes them accessible to a global audience through online databases and virtual exhibits. This enhances educational outreach and supports cultural promotion by allowing users to interact with and learn from the collections in innovative ways (Raimo et al., 2022). Collections management and preservation have improved through digital technologies that streamline documentation, tracking, and conservation processes (Renshaw & Liew, 2021). Digital databases and management systems enable more efficient handling of collections, ensuring better preservation and accessibility.

The use of digital technologies can be beneficial to organisations as implementation can lead to higher visitor rates (Raimo et al., 2022). Moreover, these higher visitor rates, as well as other adoptions, such as the sale of additional audio guides, can be financially beneficial,

creating higher revenue for the organisations (Raimo et al., 2022). Implementation of technologies such as market analyses or changes in administration operations can help reduce costs as well (Raimo et al., 2022). The most important effect of these implementations might be on intangible effects such as value creation. Digital technologies can impact the image of a museum, as they increased the value of the brand and improved the reputation of the museum (Raimo et al., 2022). The use of digital technologies likely improves relations with stakeholders such as communities and sponsors, moreover it increases customer engagement (Roederer et al., 2020; Raimo et al., 2022). To achieve and retain these effects it is important apply the digital technologies effectively by employing a digital transformation strategy, such as with the goal of meeting demands of new audiences (Del Vecchio et al., 2018; Raimo et al., 2022). In research of Raimo et al. (2022), it became evident that organisations in the museum sector are increasingly oriented towards digitalization, changing their plans and strategies accordingly.

Digital Strategies

Digital transformation is an ongoing process for organisations. It is driven by the need for agility, which in turn allows organisations to transform their business model, collaborative approach, and ultimately their culture by applying new digital technologies (Warner & Wäger, 2019). To achieve an effective process, it is important that the organisation continuously identifies methods to enhance the value of the technologies in new ways (Bharadwaj et al., 2013; Mithas et al., 2013; Verhoef et al., 2021). Only then, can the organisation realize the full transformative potential of the digital technologies within the framework of digital transformation and meet new demands and opportunities as well as sustain their competitive advantage (Bharadwaj et al., 2013; Verhoef et al., 2021). To guide this process, organisations could adjust their strategy in accordance with the use of digital

technologies, as technologies are often most valuable within specific contexts (Markus & Robey, 1988).

Vial (2019), in his systematic review, recognised two strategic concepts regarding digital disruption in existing literature: *Digital Business Strategy* (DBS) and *Digital Transformation Strategy* (DTS). Mithas et al. (2013) defined DBS as “Organizational strategy formulated and executed by leveraging digital resources to create differential value” (p.472). A DBS on its own is not enough, as often a standalone strategy is needed to help businesses navigate the process of transformation (Hess et al., 2016; Tekic & Koroteev, 2019). Therefore, the Digital Business Strategy is complemented by the Digital Transformation Strategy of Matt et al. (2015), who defined it as a “focus on the transformation of products, processes and organizational aspects owing to new technologies” (p. 339). DTS can thus be seen as a plan for museums to integrate digital technologies in all aspects of their operations, that resulted from the integration of digital technologies following the DBS (Matt et al., 2015).

A DTS should be fitted to the organisational goals and strategies, therefore there is not one general strategy, however some key components of a DTS are the fact that it should have clear objectives and a well-defined vision that aligns with the broader objectives of the organisation (Hess et al., 2016). Moreover, a DTS catered to museums should have clear objectives focussed on creating value through digital culture, specifically they should aim: 1) To protect and promote cultural heritage and through digital channels, 2) To create conditions and infrastructure and to develop skills for the future sustainability of digital culture, and 3) For sustainable development of digital culture through connections with local communities, entrepreneurship and tourism (Kamariotou et al., 2021; Zhou et al., 2019).

A DTS should also foster a digital culture and manage change. By ensuring effective change management, employees will have better support and are engaged throughout the

process of digital transformation, meaning that the human aspects of digital transformation are addressed during the process (Westerman et al., 2014). With the human aspects of digital transformation, it is crucial to foster a dynamic environment where innovation and experimentation is encouraged. In this environment, testing for new ideas and digital solutions should be facilitated. Therefore, a DTS should have resources allocated to explore new technologies, business models, and consequently, to drive continuous improvement and innovation (Yoo et al., 2010). Besides, the strategy should take a customer-centric approach. The visitor experience can be enhanced through personalization, and it is important to focus on engagement. By utilizing digital technologies that analyse customer data, the organisations can better understand and meet visitors' needs, creating a bigger audience (Verhoef et al., 2021).

In the implementation of the DTS, leadership is essential to drive change. It is the museum management and supervisory board that allocate the resources. Only when the board is committed to digital transformation, will they allocate the required resources accordingly. Governance structures can help monitor the implementation and integration of the initiatives, thus ensuring that the efforts towards digital transformation are well-managed (Singh & Hess, 2017).

Typology in Digital Transformation

Based on these interconnected dimensions of digital strategy and digital technology, a typology of digital transformation strategies was created by Tekic and Koroteev (2019). The model displays four digital transformation strategies based on their levels of business model readiness – or digital transformation strategies – for digital operation and mastery of digital technologies relevant to their operations. Three of these typologies can be relevant for

museums: Disruptive digital transformation, business model led digital transformation, and organisations that remain proud to be analogue.

When both the level of business model readiness and the mastery of digital technologies are high, it is referred to as disruptive digital transformation, this is typically done by newcomers in the market (Tekic & Koroteev, 2019). Examples of organisations that would fit this type in the museum sector are immersive museums that have emerged the past years, such as Outernet in London, the Sphere in Las Vegas, or Amaze and Remastered in Amsterdam and Rotterdam. The novelty of such organisations can be an advantage as they are able to attract a broader demographic group of visitors. These new experiences signal the shift in the way visitors consume visual culture, they therefore might pose a challenge for current museums and galleries. Further analysis of this phenomenon and their actual level of disruptiveness would be outside the scope of this thesis, but these innovative, and technology-driven initiatives could be redefining expectations and setting new standards for visitors of museums.

The business model led digital transformation is characterized by lower levels of mastery of digital technologies but a high level of business model readiness for digital operation (Tekic & Koroteev, 2019). Organizations taking this approach often try to copy strategies and innovations from the disruptor in their field to explore and exploit new opportunities, as the disrupters force the other organisations to adapt and innovate (Tekic & Koroteev, 2019). For instance, museums have been known to adopt technologies comparable to those employed by museums known to be more advanced in their use of digital technologies, or alternatively, to devise innovative strategies for attracting visitors. Such as the Van Gogh Museum in Amsterdam, who has been able to consistently attract new visitors by aligning themselves with the latest consumer trends, including capitalising on the popularity of Pokémon and Marvel (Van Gogh Museum, 2024). Consequently, traditional

museums are advised to adopt this strategy to adapt to the evolving digital market, and to make efforts to identify new and existing enriching resources to develop new products and opportunities (Tekic & Koroteev, 2019).

For this strategy to work, strong leadership is important as strong communication of the new mission can empower employees. This is especially important as it is often challenging to create an internal willingness to shift business operation under employees, as they are often used to the initial business operations (Banutu-Gomez, 2015).

Organisations that do not partake in digital transformation, displaying a low level of business model readiness and a low level of mastery of relevant digital technologies, take a ‘proud to be analogue’ approach (Tekic & Koroteev, 2019). This decision to prioritize analogue products rather than adopting digital transformation strategies is often made because they are perceived as valuable, compared to digital counterparts. Paintings, and art in general, fall under this category, as they are valued through their uniqueness and the fact that they are hand-made. Therefore, some might argue that a museum – especially historic or cultural museums - should stay proud to be analogue as well. Meaning that they only apply digital technologies that do not jeopardize the core of the organisation (Tekic & Koroteev, 2019), merely focussing on innovation of communication channels and for operational efficiencies, such as digitization and digitalization. Research, however, found that even historical organizations can find ways to enhance the visitor experience by employing digital technologies (Hu te al., 2019). Historium Brugge in Belgium, for example, allows visitors to experience medieval Brugge and its architecture through a VR-experience. This added interactive element can create whole new experiences compared to just displaying and preserving rooms or architectural sites (*Historium*, n.d.).

Overall, the type and mission of the museum determine the type of digital transformation strategy that the organisation likely employs. It seems that the newer type of

museum – the immersive museum – that has gained popularity over the past years employs more of a disruptive digital transformation strategy. For the traditional museums, a business model-led digital transformation strategy fits best, although some museums will want to stay proud to be analogue. While research has well identified these types of digital transformation, there is a lack of comprehensive studies regarding the effectiveness of these approaches in the museum sector.

The Cultural Approach to Digital Transformation in Museums

Within the museum sector, digital transformation is focused on the use of digital input, such as technology, information databases, and trained staff, to advance output and museum operations (Navarrete, 2013). However, Tekic and Koroteev (2019) focussed their research on digital transformation in its entirety, rather than specifying the cultural sector, or museums. Moreover, it cannot be forgotten that museums are an experience site. Therefore, digital transformation in museums should not only include digital strategies and technologies, but focus on the new generation of aesthetics, symbol or meaning, characterised by communication value as well (Li & Ghirardi, 2019). Digital technologies allow for these cultural innovations, they have, for example, enabled museums to create new products and services and organize new distribution channels, significantly enhancing the visitor experience. For museums, cultural innovation should thus be incorporated into the model of digital transformation.

Other research defines cultural innovation as innovation in the goods and services offered by a cultural organisation, such as a focus on programming innovation and invention (Castañer, 2014; Neligan, 2006). For museums, these two definitions go hand in hand. A museum does not create their own goods as their main operations, their services on the other hand might innovate, but remain focused on the same goals and role. While museum services

can thus be innovated or reinvented, these innovations focus on aesthetic and symbolic changes and the meaning that is conveyed. This definition of cultural innovation can be compared to Stoneman's (2010) description of soft innovation.

In this way, museums can leverage digital technologies through cultural innovation to create new and enhanced experiences in museum visits through amongst others virtual tours and immersive or interactive experiences, which has been the subject of extensive research (Devine & Tarr, 2019; Kabassi et al., 2019 ; Mohd Noor Shah & Ghazili, 2018; Raimo et al., 2022; Resta et al., 2021; Stylianis, et al., 2009). Moreover, audience engagement and education have been transformed using digital marketing strategies. Social media platforms, mobile applications, and interactive websites facilitate interaction, promote events, provide educational content, and generate feedback (Raimo et al., 2022).

Overall, the digital transformation in museums can thus be characterized by a combination of technological adaptation and cultural innovation, enhancing the promotion of culture, on-site enjoyment, and organisational activities, driven by digital strategies. While digital strategies define the vision and mission, and guidance on how to attain them, and digital technologies are the means used to reach this mission, and cultural innovation explains the novel ways these technologies can be implemented in museums. The three components are thus mutually reinforcing, meaning that digital transformation will be best when all three components are sufficiently present. The main concepts regarding digital transformation and the different approaches relevant to digital transformation in museums are summarised in Table 1.

Table 1.*Relevant Concepts to Digital Transformation*

CONCEPT	DESCRIPTION	AUTHORS
Digital Transformation	A process where digital technologies create disruptions triggering strategic responses from organizations that seek to alter their value creation paths while managing the structural changes and organizational barriers that affect the positive and negative outcomes of this process. In museums, this is characterized by the dimensions of digital strategy, cultural innovation and digital technology.	Demirkan et al. (2016), Li & Ghirardi (2018), Tekic & Koroteev (2019), Vial (2019)
Digital Strategy	An organizational strategy formulated and executed by leveraging digital resources to create differential value and complemented by a focus on the transformation of products, processes and organizational aspects owing to new technologies.	Matt et al. (2015), Mithas et al. (2013)
Cultural Innovation	Innovation in the goods and services offered by a cultural organisation, focused on the generation of new aesthetics, symbolics or meaning. It is characterised by increased communication value.	Castañer (2014), Li & Ghirardi (2019), Stoneman (2010)
Digital Technology	The adoption of digital tools to enhance museum operations and visitor experiences, mainly in the areas of promotion of culture and enjoyment on-site, and for managerial and organizational purposes.	Tekic & Koroteev (2019), Raimo et al. (2022)
Disruptive Digital Transformation	Typology in digital transformation where organisations possess high levels of business model readiness and mastery of digital technologies relevant to the sector.	Tekic & Koroteev (2019)
Business Model-led Digital Transformation	Typology in digital transformation characterized by high business model readiness but lower levels of mastery of digital technology.	Tekic & Koroteev (2019)
Proud to be Analog	Typology in digital transformation for organizations that value the traditional, non-digital aspects of their operations and products, displaying both low levels of business model readiness and of mastery of digital technologies.	Tekic & Koroteev (2019)

The Need for Resources

The adaptation of a new business model and strategy, particularly in a more traditional industry, can present challenges. The introduction of new digital technologies further complicates this process, meaning that a cultural shift is often needed within the company (Rubino et al., 2020a). Such shifts often require changes across the entire organisation, including changes in the business models and management tools of the organisation. This is to maintain and enhance the organisation's performance (Rubino et al., 2019, 2020b).

Furthermore, research suggests that organisational changes can accommodate digital integration, including restructuring operational processes and embracing new management approaches (Raimo et al., 2022).

To facilitate the transition of business models, guided by a digital business and transformation strategy, resources are needed. The development of a strategy asks for sufficient financial as well human resources. Time and knowledge are needed for museums to create the right course, but also for acquisition and implementation of new digital technologies. Moreover, these technologies can be expensive, and employees need to feel they are encouraged to experiment and find novel ways for implementation of the technologies through cultural innovation. For this process, collaborative partnerships are essential, as they can provide financial support, resources or expertise to navigate the complexities of digitalisation and transformation (Raimo et al., 2022). Partnerships can help museums in leveraging collective resources and expertise, which fosters innovation and ensures a sustainable collaboration (Li & Ghirardi, 2019).

Collaborative Partnerships

Collaboration is an important factor in facilitating the innovation process in cultural and creative organisations (Li & Coll-Serrano, 2019). It not only promotes the development of innovative products and services, but enhances the overall innovation output of these organisations, amongst which museums (Castro-Martínez et al., 2013; Verbano et al., 2008). This collaboration between cultural organisations and knowledge providers, such as for-profit firms, universities, or other research institutions, is essential for innovation in these institutions.

Although partnerships are described as organisations that work together with high mutuality – or shared goals and of mutual benefit; being interdependent – and high

organisational identity – meaning consistency and commitment in their mission and comparative advantages – by Brinkerhoff (2002), collaborations typically involved working towards a mutual goal as well, albeit with less obligation towards each other. Nowadays, collaborations often are more substantial commitments, blurring the line between partnerships and collaborations from an academic perspective. Therefore, this thesis uses the concepts interchangeably, both referring to a relationship between multiple parties where all members contribute and engage in meaningful exchanges, such as the joint identification of important social needs, or relevant ways of addressing those (Scott, 2022). The dynamic of partnerships can be found in various stages of production, distribution, and consumption of the output (Li & Coll-Serrano, 2019).

In the context of museums, it is apparent that they are increasingly recognizing the value of collaborations that span organisational boundaries as well (Tien, 2006). Partnerships can offer mutual benefits such as acquisition of new ideas and access to new markets and technologies (Bergquist et al., 1995; Thompson, 2001). These partnerships are encouraged by cultural authorities in amongst others the UK, which demonstrates an understanding that collaborations can help museums to adapt and thrive in a rapidly changing cultural and technological environments. Similarly, Camero and Garrido (2012) emphasise the importance of collaborations between museums to generate technological innovation. However, Li and Ghirardi (2019) note that the type of innovation and the collaborative arrangement can influence the outcomes of the innovation, highlighting the critical role of a suitable partnership in fostering innovation and transformation.

Although these insights demonstrate an overview of the benefits of collaboration within the cultural and creative sectors, and the impact of these partnerships on innovation, technological advances, and ultimately digital transformation, it is also important to better explore the context in which these collaborations should take place. Therefore, the nature of

these partnerships will be explored, focusing on which types are best suited for specific goals, and assessing the drivers, challenges, and benefits of digital transformation. According to McQuaid (2000), partnerships consist of five dimensions: What, who, when, where, and how. These dimensions address the purpose, partner type, development stage, spatial factors, and implementation method. For this analysis of digital transformation in cultural organizations, the focus will be on the ‘what,’ ‘who,’ and ‘how’ – or the purpose, type, and involvement of partners.

The Purpose of Museum Partnerships

In examining the purpose of museum partnerships, it is possible to distinguish between collaborations that are strategic and operational in nature. Strategic partnerships are characterized by long-term goals and alignment with the strategic visions of the organisations involved, it is a dynamic interplay where the partners tap into external resources, subsequently creating transforming these resources and creating new knowledge (Doz & Hamel, 1997; Hipkin & Naude, 2006). These partnerships often aim to foster cultural preservation, educational outreach, and innovation. For instance, universities that collaborate with museums to develop educational programs that enhance public knowledge and cultural appreciation. For strategic partnerships to be successful, both organisations should be compatible on a strategic, organisational, and cultural level (Baloh et al., 2008; Doz & Hamel, 1997).

Operational partnerships, on the other hand, are more project based. Typically, these partnerships have a more transactional nature, and have more formally divided the roles and responsibilities. In the context of museums, an operational partnership could be a partner that is tied to a specific exhibition. With exhibition partners, the museum is often in charge of the full development process, where (corporate) partners provide financial resources and promote

the exhibition to their audience. In most cases, these partnerships require coordination to ensure effective project execution, benefiting from the shared operational resources and expertise of the involved parties (*Een Effectieve Samenwerking Bouwen*, n.d.).

Similarly, collaborations can differentiate between being based on pre-determined requirements or research questions and being focused on experimentation, the generation of new ideas, or different visitor experiences (Arrigoni et al., 2019). For example, a museum that is creating a new exhibition can either ask their partner to deliver a specific product, such as relevant information on artworks, or the museum can involve this partner to not only deliver the information, but to research the best way to deliver this information to new audiences, involving the partner in design and storytelling of the exhibition. Therefore, product-based partnerships, like operational partners, are often less involved than process-based partners and strategic partners.

The types are, however, distinct in their goal and length. Product-based and process-based collaborations focus on how a project is executed and how a partner is involved, whereas strategic and operational partnerships are differentiated based on the level of the collaboration, focused on long-term goals or day-to-day operations. Consequently, when discussing the purpose of a partnership, a distinction can be made between collaborations with an emphasis on the process and experimentation, and those with an emphasis on the end-product as well, and between operational and strategic partners.

Partnership Involvement

In distinguishing between purposes of a partnership, the dimension of partnership involvement can be added. McQuaid (2000), explains this dimension as the implementation mechanisms of the partnership. Regarding the method of resource provision, McQuaid (2000) addresses the following questions: who is responsible for providing resources, and who is

responsible for controlling them. Literature regarding digital transformation in museums has shown that museums often lack human and financial resources, ideal partners would thus be providers of these resources, where a museum is then able to control them for experimentation of implementation. In this case, often a mutual benefit is needed for partners to agree with this structure, for example in joint research projects with shared benefits. These partnerships are often motivated by a shared commitment to advancement of knowledge and wanting to achieve common goals (Brinkerhoff & Brinkerhoff, 2011).

However, other types of involvement could include paid partnerships, or innovation through acquisition. Here, knowledge, ideas, or innovations are acquired from or in collaboration with partners in exchange for monetary payments (Baloh et al., 2008; Karim & Mitchell, 2004; Lichtenthaler, 2005).

Types of Museum Partners

When looking at who museums typically partner with, different types of museum partners are described. Museums today are increasingly involved in cross-organisation collaborations, both within their sector as beyond (Tien, 2006). However, interactions and collaboration with the technology and service sectors are still limited (Li & Ghirardi, 2019).

Types of partnerships that are most common in the museum sector are within-sector collaborations, partnerships with knowledge institutions, and partnerships with businesses.

Within sector partnerships

Within-sector partnerships among museums, often involve collaborations between museums or with other cultural institutions such as galleries and heritage sites. These partnerships can be helpful in the development of new cultural offerings or techniques as well as increase audience and engagement, they often take the form of joint exhibitions, shared

collections management, or collective research projects. For example, in 2023, there was a joint exhibition: ‘Mission Masterpiece’ in the Rijksmuseum in partnership with the NEMO Science Museum (*Mission Masterpiece, 2023*). Partnerships like these enable museums to pool their resources, resulting in better preservation, documentation, and digitalization of objects, especially smaller museums, or those with little resources could benefit from these partnerships. Moreover, these research projects can foster a culture of learning and innovation within the museums.

These cross-organisational collaborations are important facilitators for adoption of external innovations within the organisation (Castañer & Campos, 2002). Especially since similar organisations often share similar challenges and objectives, this can lead to more effective solutions and innovations when working together (Li & Ghirardi, 2019). The challenges inherent to these partnerships may be financial in nature or may arise from differing priorities and a lack of willingness to compromise between the various museums involved. Overall, within-sector collaborations among museums are typically marked by a spirit of cooperation and shared purpose. When successful, they lead to greater efficiencies, enhanced cultural offerings, and a bigger presence in the cultural landscape.

Knowledge Institutions

Partnerships between museums and knowledge institutions such as universities and research centres can offer benefits for public engagement, educational outcomes, as well as research and digital innovations (Camarero & Garrido, 2012; Castro-Martínez et al., 2013; Li & Ghirardi, 2019; Verbano et al., 2008). Often, these partnerships take form of joint research projects, where museums provide institutions with unique collections and primary data. In return, institutions can offer expertise and researchers. This interaction can thus improve research capabilities of both organisations. These collaborations can result in collaborative

educational programs, where future museum professionals, such as curators or conservators, might be educated.

Through these partnerships, expertise and equipment is exchanged that enrich the professional communities as well as educational experiences offered to visitors. Often, this involves efforts concerning the preservation of the collection. Exhibitions and programs for public engagement can benefit from these collaborations as well, through informed development of the exhibition through academic research and the accessibility and engagement of the museum itself. Furthermore, digital projects are often based on research-led initiatives that rely on the facilitation of academic partners (Ciolfi et al., 2016; Holdgaard & Klastrup, 2014; Li & Ghirardi, 2018). These collaborations facilitate the incorporation of technologies into museum exhibitions and services through a 'learning by doing process' (Verbano et al., 2008), thereby enhancing the organisations' technical proficiency.

Comparable to partnerships within the sector, financial constraints can become an issue with these partnerships, as both institutions are often non-profit, which can become a challenge in the allocation of resources. However, when handled well, these partnerships can be of significant value in advancing cultural education and research, which can fuel experimentation and new innovations.

Corporate partnerships

Corporate partnerships are often a strategic alliance between cultural institutions and businesses, their goal is mostly to leverage corporate support for mutual benefit. Originally these collaborations involved sponsorships, or marketing initiatives. More recently these partnerships also include partnering for technological enhancement or community engagement (Li & Ghirardi, 2019).

While partners in the form of sponsors are still indispensable to museums, they are not the focus of this research. But in their partnership, they can bring additional benefits as well. For example, NN Group – a big supporter of arts and culture in the Netherlands – partners with amongst others the Mauritshuis and the Kunsthuis with special, innovative concepts like ‘Maurits& avonden’ that increase international visibility and attracts newer audiences (NN Group, 2023). In enhancing a museums’ technological proficiency, corporations may provide technological support to museums in the form of equipment or expertise.

But it is not just the museum sector that has an increased need for partnerships, most partners as well have an increasing interest in working with museums. Corporate philanthropy, such as financial donations or donations In-Kind, used to be a common form of financing and support for museums. Often this contribution to public goods was motivated by a sense of civic duty or social responsibility (Otte, 2020). Over time, this expression of social responsibility has shifted towards the creation of collaborations, asking to be more involved and with public organisations like museums. Corporations more often look for organisations whose interests and strategies are aligned, to aim for mutual benefits beyond financial assistance. They thus desire to be more actively involved in projects and programs they support for them to create more value. But this also means that museums can receive higher support and create more value together. Even more so, it allows museums to actively look for and work with corporations that suit their needs. Especially technology companies are becoming more intertwined with collaborations and the concept of a joint problem-solving approach (Otte, 2020).

Furthermore, there are partnerships that solely aim to improve digital transformations within the museum, these are referred to as partnerships for digital transformation, or culture-technology partnerships (Arrigoni et al., 2019). Overall, corporate partnerships are valuable for museums in acquiring additional resources, enhancing technological capabilities,

expanding audience reach, and fulfilling educational and community-oriented missions.

These partnerships can not only increase the financial sustainability of museums, but they can enhance their cultural and educational role in society.

By understanding and leveraging these forms and characteristics of partnerships, cultural institutions can navigate collaborative efforts more effectively, maximizing their impact and achieving their strategic goals, these characteristics are summarized in Table 2.

Table 2.

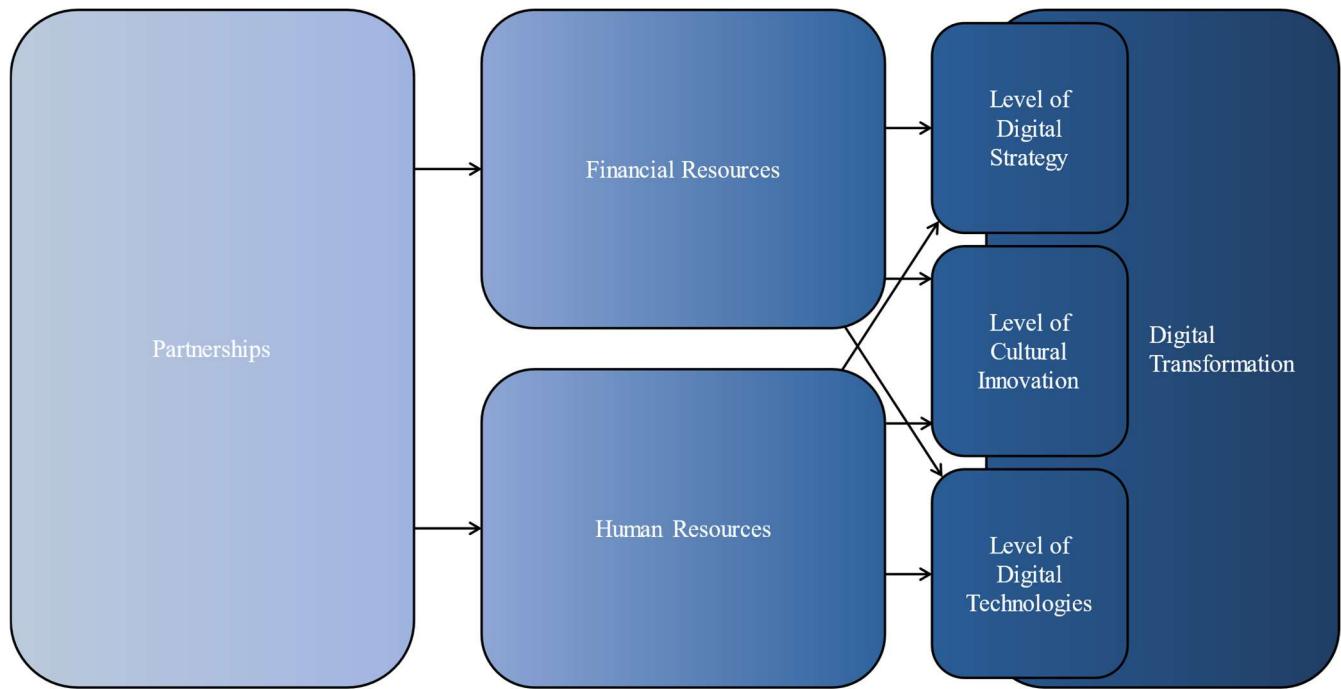
Relevant Concepts to Museum Partnerships

CONCEPT	DESCRIPTION	AUTHORS
Partnerships	A relationship between multiple parties where all members contribute and engage in meaningful exchanges, such as the joint identification of important social needs, or relevant ways of addressing those	Brinkerhoff (2002), Li & Ghirardi (2019), Scott (2022), Castro-Martínez et al. (2013)
Partnership Purpose	Explicit and implicit goals of the partnership, as well as the broader ambition, that motivates partnership, such as strategic or operational partnerships.	McQuaid (2000)
Partnership Involvement	The manner in which organisations are participate in the partnership, including the allocation of responsibilities, and the provision of resources needed	McQuaid (2000)
Type of Partnership	The key actors and organisations that are engaged in the partnership.	McQuaid (2000)
Within-Sector Collaborations	Partnerships within the cultural creative industries sector, often between museums. These collaborations are based on and facilitated by their shared goals and similar organizational structures.	Castañer & Campos (2002), Li & Ghirardi (2018)
Partnerships with Knowledge Institutions	Collaborations with universities, research institutions, and other educational organizations. These partnerships typically focus research, providing museums access to advanced knowledge, research findings, and innovative practices.	Arrigoni et al. (2020), Ciolfi et al. (2016), Holdgaard & Klastrup (2014), Li & Ghirardi (2018), Verbano et al. (2008)
Corporate Partnerships	Partnerships with for-profit organisations that are aimed to create mutual benefits. Partners often provide museums with funds or other resources in return for exposure,	Li & Ghirardi (2018)

Conceptual Framework: Partnerships for Digital Transformation

Although museums often focus on micro-innovations (Stoneman, 2010), it seems like more disruptive innovations could be beneficial for to keep up with higher visitor standards and upcoming disruptors in the museum sector. Traditional museum dynamics might make it difficult to achieve a digital transformation within the organisation, but partnerships could prove to be an opportunity to further enhance digital innovations and start the process of digital transformation.

Literature shows that there are certain conditions that need to be met for a museum to be able to transform digitally. A museum should have a digital business and transformation strategy and implement digital technologies throughout their museum and operations. In addition, museums must demonstrate a certain level of cultural innovation with the implementation of the digital technologies and possess sufficient human and financial resources. These conditions could result in the digital transformation of the museum that consequently help museums adapt to the new information market and their changing societal role. Furthermore, it is believed that partners can assist museums in realizing these conditions, thereby accelerating the process of digital transformation. At this stage, however, it is still unclear how the involvement, nature and purpose of a partnership can make a specific contribution. The process of digital transformation and the guidance provided by partners in the collection of resources are illustrated in Figure 1.

Figure 1.*A Model for Digital Transformation through Partnerships*

Methodology

Within this paper, qualitative research is utilized to better explore the different partnerships in museums and understand how they can aid in the process of digital transformation. Specifically, to answer the question, “*How can museums enhance digital transformation through collaborative partnerships?*” and the sub questions 1) “*How do museums define digital transformation, and how is this reflected in their long-term vision?*” and 2) “*What are the different types of partners that museums typically have, and how do the roles of these partners differ?*” To research this, a method is needed that allows gathering rich insights into the decisions and perspectives of stakeholders, qualitative research could offer these insights (Bryman, 2012).

Qualitative research focuses on understanding of behaviours and experiences and is essential to better recognize underlying dynamics and challenges (Fossey et al., 2002; Seers, 2012). In the context of collaborative partnerships with museums, this means that qualitative research can help identify how these partnerships work, how effective they are in contributing to digital transformation and what challenges they face. Primary data is gathered through semi-structured interviews with professionals in the Dutch museum sector that have experience with partnerships and are working towards a digital transformation. These interviews facilitate in-depth conversations that allow for discussion of the ideas, experiences, and perceptions of the professionals.

Operationalisation of Main Concepts

The semi-structured interviews were structured based on the main concepts of the research: digital transformation and collaborative partnerships. Based on the relevant concepts of the theoretical framework, as displayed in Tables 1 and 2, an operationalisation of digital transformation and collaborative partnerships was developed, as described in Table 3.

Digital transformation is operationalised using digital technologies and the use of digital strategies and policies. Based on these two measures, the type of digital transformation strategy, as developed Tekic and Koroteev (2019), the museum uses can be decided as well. In asking these questions, the concept of innovation – technological as well as cultural – was referred to as well in the interviews. Although its meaning differs from digital transformation, it was used as it is a relatively known and well-understood concept that could help clarify the extent to which the museum is adapting to and integrating new technologies and practices in their daily operations.

Collaborative partnerships are operationalised through its creation and the involvement of the partner. Based on the theoretical framework, different types of partnerships were identified in Table 2. Where partnership creation, amongst which ‘Type of partner’ mainly refers to the types mentioned in this table, such as corporate, or within-sector partnerships. Partner involvement refers to the way the partner is involved, as discussed in Table 2 as well. The partner could for example be engaged with a specific project, meaning that influence could be less compared to a strategic partner. Moreover, attention is paid to what the museums believes to have learned from the partnerships, as this can demonstrate the extent to which the partnerships has been helpful and is appreciated by the museum.

Based on the operationalisation of digital transformation and collaborative partnerships, indicators were created. These indicators form the basis of the questions in the interview guide (see Appendix A). For example, an indicator of digital transformation, through the ‘use of digital technologies’ theme is the museum’s digital presence (Table 3). This is reflected in question three of the interview guide “How would you describe the digital presence in the museum?”

Table 3.
Operationalisation of Main Concepts

CONCEPT	INDICATOR	QUESTION
Digital Transformation		
Use of digital technologies	Digital presence in the museum in different areas	2-I, 3
	Perceived role of digital technologies in museum.	2,3
	Alignment of technological presence with strategies.	4-I
Level of Cultural innovation	Utilisation of digital technologies in novel manners	3-I
Use of digital strategies	Existing policies on digital innovation.	2, 4
	Plans for future digital policies and strategies.	4-II
	Perceived challenges and benefits of implementation.	5
	Metrics for assessing the impact.	5-I
Collaborative Partnerships		
Partnership creation	Type and duration of current partnerships.	8, 9
	Criteria for selecting partners; Partnership purpose	7
	Areas of collaboration.	6-II
	Existing policies on partnerships.	7-I, 11-II
Partner involvement	Use of partnerships for digital transformation challenges.	6-I
	The level of partner involvement.	8, 9
	Lessons learned from partnerships.	11
	Perceived challenges and benefits of partnerships.	10

Sample and Units of Analysis

In selecting a sample group, attention was paid to the types of museums interviewees are affiliated with. Generally, different types of museums may generate different combinations of knowledge and technologies, which may affect the extent to which a museum is able to innovate and use technologies (De-Miguel-Molina et al., 2019). However, other research suggests that the type of museum merely impacts the economic performance of museums, and not necessarily the innovation outcomes (Camarero et al., 2011). Therefore, no participants were excluded from this research based on the type of museums they work for, as long as the museums were involved in collaborative partnerships. The various types of

museums were however documented to identify any insightful differences in the implementation of technological innovations or use of partnerships.

Participants were required to have been involvement in the partnerships and collaborative initiatives, as well as some role in the museum's digital strategy. Positions of the participants are museum directors and administrators, curators that have experience in digital projects, (digital) strategy, or innovation officers and senior communication employees. Table 4 displays the research sample, including the role of the participants, and the museum they are affiliated with, this information is included with explicit approval of all participants through the consent form that was sent to them (see Appendix B).

Table 4.
Research Sample

	PSEUDONYMISED ORGANISATION	ROLE OF PARTICIPANT	ORGANISATION CHARACTERISTIC
1	Museum Alpha	Online and Digital	Medium-sized Museum
2	Museum Beta	Corporate Communications	Large Museum
3	Museum Beta	Information Manager	Large Museum
4	Museum Gamma	Managing Director	Medium-sized Museum
5	Museum Delta	Marketing, Communications & Development	Medium-sized Museum
6	Museum Epsilon	Curator Education	Large Museum
7	Museum Zeta	Managing Director	Medium-sized Museum
8	Museum Eta	Managing Director	Medium-sized Museum
9	Museum Theta*	Head Digital	Large Museum
10	Organisation Kappa	Senior Advisor	Knowledge Institute
11	Organisation Lambda	Brand Content Marketer (Corporate Relations)	Museum Partner

* Response provided via email

The sample group for this study was found through convenience sampling, meaning that participants were included based on their availability and accessibility (Emerson, 2015). As a result, only participants affiliated with Dutch museums in de Randstad region were

interviewed, since they were most accessible, while avoiding language- and other practical barriers such as distance or different time zones. Although this limits external validity, or generalisability (Emerson, 2015; Sedgwick, 2013), these interviews can still explore how digital transformation can be managed, and how partnerships may be used to do so. As this thesis aims to explore, rather than generalise findings, this lack of generalisation is therefore not a major concern.

However, this type of sampling might lead to selection or sampling biases, such as a survivorship bias and the risk of under coverage. Meaning that successful observations are more likely to be represented in the sample than unsuccessful ones, and that some types of museums within the population are inadequately represented in the sample. To minimize these biases and their impact on the validity and reliability of the research, efforts were made to include a diverse range of museum sizes and types within the Randstad region. In addition, employees with different roles were interviewed to obtain a range of perspectives. Furthermore, the interview guide was followed to ensure the reliability and comparability of the data. As can be seen in Table 4, established and large or medium-sized museums are still overrepresented in the sample, meaning that the results of this research might be more reflective of those types of museums in the Randstad.

Still, the results can prove to be valuable in giving an insight into the digital transformation processes of the museums in the sample. They could underline the procedures and challenges, that can inform practical applications for other museums as well. Further studies can build on this by focussing on smaller museums as well.

Data Collection

In total, 10 interviews were conducted in the span of 12 weeks, from May 13 to July 31, 2024. The interviewees were contacted directly via mail, through the museum or organisation

that facilitated the communication with the right candidate (see Appendix C). The interviews lasted between 44 and 64 minutes, resulting in a total of 8:52 hours of recorded interview material. The interviews were conducted in Dutch – the native language of the participants – to foster authenticity and stimulate more detailed responses. It was expected that this approach would yield to more insightful answers. Furthermore, the questions posed in the interviews resembled the questions of the interview guide as close as possible (Appendix A). This approach guaranteed that all questions were answered, only adding additional questions to provide more in-depth answers. This was done to ensure the internal validity, reproducibility, and replicability of the research (Bryman, 2012; National Academies of Sciences et al., 2019; Sedgwick, 2013).

Although it is generally believed that in-person interviews facilitate a more productive exchange of ideas as an optimal atmosphere for participants can then be created (Opdenakker, 2006). All interviews were conducted via Microsoft Teams, as this allowed the interviews to be planned more flexibly due to the demanding schedules of the participants. All interviews were recorded with the permission of the participants (see appendix B). These recordings were used to transcribe all interviews verbatim. It is believed that this method of transcription can help guide the analysis and may reveal themes the researcher had not thought of before. Moreover, it is considered the best method for small sample sizes, such is the case in this thesis (Gilbert, 2008). The transcription process was facilitated through the use automatic transcription software of Microsoft Teams and Word, which was subsequently reviewed by the researcher.

The data obtained from the interviews was processed with care, using appropriate and secure data management tools. Moreover, participants were informed of potential risks of participating in the study. It was explained that, although the topics are relatively low in sensitivity, there is a risk of exposure. For this reason, all participants were explicitly asked

whether they consented to having the museum and their role mentioned, aware that this could lead to indirect identification of participants. All participants consented to this, still this thesis employs pseudonyms only. Furthermore, the details of projects under discussion in this thesis are purposely kept vague as to not identify museums, protecting the privacy of participants. Nevertheless, it is acknowledged that readers with a comprehensive understanding of Dutch museum sector might be able to identify the organisations and participants through the information provided. The implementation of these measures has, however, resulted in a greater difficulty in discussing the differences between various types of museums. This is because the categorisation of the museums might be used to identify museums.

Data Analysis

To analyse the data that was collected and answer the research questions, a thematic analysis of the interview transcripts was carried out using software programme Atlas.ti (Muhr, 1991). A thematic analysis can help break down the data of the interviews in smaller, manageable subsets, which aids in the comprehension and interpretation of the data (Bailey, 2007; Boeije, 2010). The thematic analysis offers flexibility and has the potential to find detailed insights from the data, which is essential in understanding the nuances of using partnerships to enable digital transformation.

In this thematic analysis, a type of hybrid coding was carried out, meaning that codes are created with an inductive approach, where the researcher develops the codes during the analysis of the data (Babbie, 2015). Still, to ensure consistency and transparency in interpreting the data, an initial codebook was developed before analysing (Yadav, 2022). This codebook contained *a priori* themes that were based on the concepts of the literature portrayed in Tables 1 and 2, such as ‘digital technologies’ and ‘within-sector collaboration.’ The iterative process of hybrid coding allowed for addition of new codes, and the

modification or removal of existing codes to reflect insights gained while analysing the transcripts. The codes created were validated against the established themes using visual aids, such as the use of colour coding (Boeije, 2010).

Atlas.ti was used to facilitate the process of grouping the data and codes. Patterns were then identified by looking at similarities, differences, frequencies, and correspondences in the data, which ensured a thorough understanding of the outcomes and partnerships for digital transformation, the finalised codebook is included in Appendix D. This codebook was then used to interpret the interviews in a structured manner, based on the themes of the research question and main concepts of the literature. The next chapter, in which the results are discussed, therefore follows the same structure as the codebook and includes similar themes.

Results and Discussion

Based on the literature and thematic analysis of the interviews with museum professionals and partners, themes were developed that will help determine the role of partnerships in the digital transformation of museums. However, to allow for a more comprehensive understanding of the museum landscape and the need for digital transformation, it is important to understand the participants' views of a museum, prior to reporting on the themes.

The role of museums is described by participants as multifaceted, covering several domains such as education, social responsibility and artistic programming, which is in accordance with the role of museums according to the museum definition of the ICOM (2022, p.9). Within this definition, the curator education noted that the traditional function of a museum – the preservation and management of artworks – remains a large portion of the activities of the Museum Epsilon. He did, however, suggest that a museum could be about more than just the physical object:

“Art should not only be about the object, but about the experience with creativity ... for me it is about programming: music or other forms of art fit just as well in a museum for me, and I try to connect this.”

In trying to connect this, the participant is thus looking into cultural innovations. Overall, participants described museums as playing a crucial role in society by promoting diversity, inclusivity, innovation and societal value. To further develop the social impact of museums, museums should focus on looking outward, know themselves and what they stand for, work with partners, and focus on results (Scott, 2022). However, in this changing landscape, with new visions, missions and policies, museums deal with more and more challenges, amongst which financial and organizational matters and challenges in programming and audience reach.

Implementation of Digital Transformation in Museums

The interviews suggest that museums realize that digital transformation can be a solution to reach new audiences and to address these museums challenges, this view is supported by literature on the subject as well. Moreover, the representative of Organisation Kappa, noted that it is crucial to at least do something when it comes to digital transformation and strategies. To do so, museums should focus on how digital implementations can help them: *“There is no one way to transform digitally. Because you just don't appeal to the new audience anymore if you don't do anything digital.”*

Current use of Digital Strategies

The interviews have shown that not all museums have developed a digital strategy, between those who did, differences between the levels of advancement are visible. On the one hand these differences are to be expected, as there is not one way of transformation that works best for all museums due to their different goals and missions, as highlighted by Organisation Kappa (Parry, 2010). On the other hand, there are some constraints as to why some museums might be less advanced than others, even if they might have wanted to be more advanced, like a representative of Museum Beta explained:

“Those museums all have varying degrees [of technological development] ... They are a bit more advanced in their marketing strategy ... so you can often see that you have a different pace.”

This degree of technological development has to do with the digital maturity of a museum, with each museum being in a different stage. While some institutions are more advanced, being able to focus on creating unique applications and integrations, some other organisations might still have to focus on establishing a digital baseline first (Tallon & Walker, 2008). The Managing Director of Museum Gamma added to this idea by noting that their museum does not have a digital business strategy and does not prioritize the development of one, due to the

high costs that are associated with it. Costs they cannot cover with the revenue of their daily operations:

“It is expected that you can just have it [a digital strategy] out of your ordinary operation funds, but if you see our budget ... There is absolutely no room for that ... Very much to my regret, because I absolutely see the importance of it.”

Indeed, it can be a struggle for organisations to develop a digital strategy, not only because of the high costs involved (Kamariotou et al., 2021), but also because of its complexity and the fact that the strategy should be in line with the organisation's mission and requires a high level of flexibility and adaptation from employees (Hess et al., 2016). The latter, because in many cases, the creation and implementation of a digital transformation strategy involves a change in organisational culture (Kamariotou et al., 2021; Westerman et al., 2014). Literature indicates that, organisations must first undergo the stages of digitisation and digitalisation (Verhoef et al., 2021). For some museums, such as Museum Gamma, it might therefore be better to start implementing small changes first, using these soft innovations to prepare employees for a full digital transformation, that is accompanied by bigger, organisational changes. Thus, keeping a more ‘proud to be analogue’ attitude for now.

Moreover, it is the human side that seems to be a crucial factor in the success of digital transformation in museums. Which is emphasized by the representative of Organisation Kappa who said:

“Digital transformation is 90% the work of people, and 10% technology,”

and is supported by the managing director of Museum Zeta, who noted:

“The speed of those loose projects clashes with the slowness with which you can change an organization ... It is difficult to motivate like; ‘we really have to go this way’... and take [employees] with us.”

It thus appears that the ‘human aspect’ is of greater importance than has been theorised previously in this thesis. This focus on human resources can, however, be found in most

change management models (By, 2005). The ADKAR model of Hiatt (2006) and Kotter's eight-stage process for organisational transformation (1996), for example, both focus on getting on board the organisations' employees for a successful transformation. Amongst others through establishing a sense of urgency or awareness of the situation, guiding the employees through the change, and providing positive reinforcements to keep following the process (Hiatt, 2006; Kotter, 1996).

Moreover, research suggests that employee involvement – in passive as well as active manners – can significantly increase understanding and reduce feelings of organizational change cynicism (OCC) (Brown & Cregan, 2008). Involving employees in an active manner – meaning involvement in responsibilities such as decision making, rather than passive involvement such as information sharing – not only reduces OCC, but it can foster innovation as well (Kesting & Ulhøi, 2010). When looking at the resources in the model at Figure 1 from the theoretical framework, this should thus include 'employee involvement' as part of the human resource for digital transformation. This resource may increase levels of cultural innovation and technological adaptation, as well as increase the level of acceptance of new (digital) strategies.

Strategic Guidance

These strategies, as found in the theoretical framework, can guide the organisation to enhance the value of the digital technologies and cultural innovations employed. Organisations such as Kappa provide tools to aid the development of a digital transformation strategy, for example it guides organisations in finding new ways of looking at impact:

"In the end it is about the number of tickets you sell and amount of people that come to the museum ... You can ask yourself whether that is your only pillar of success ... But how many people were online with you, and what did you do with your website? You are obliged to look at it in a different

way, because ultimately it is about the impact you make, and that is broader than just people entering through the door.”

However, the organisation also provides more tangible guidance, such as a free module on how to write a digital strategy, focusing on the museum's target audience, goals, activities, and necessary resources (*Zelfstudie Module: Hoe Schrijf Ik Een Digitale Strategie?*, 2023). When participants discussed their digital transformation strategies in the interviews, the strategies were, just as advised in the module, often based on wider museum policies and strategies, as also advised by academics (Hess et al., 2016; Matt et al., 2015). Specifically, interviewees noted that the goal is not to implement digital technologies ‘just for the sake of digital.’ Rather, they align the investments they make with their strategies. The representative of Museum Delta notes:

“Within the museum, we are really digitalising more and digitalising more complex in the transmission of things. The aim of that is not just to make everything digital for sake of digital. ... But it is more of a natural translation between the physical and the digital in the exhibition.”

Meaning that the museum aimed for a translation and connection of the physical and online dimensions in their exhibitions, and kept this in mind while developing their newest children's exhibition. This is in line with what the Information Manager of Museum Beta explained when he said: “[The museum] wants to get to know its audience better, so what we do is we employ digital resources to do so, but we, of course, also do audience surveys.” Stating that their digital strategies are supplementary to their operations.

Digital strategies are primarily focussed on digital participation (Museum Alpha, Museum Epsilon), and to bring the physical and online world together (Museum Beta and Museum Delta). Besides enhancing visitor engagement, it also aims to increase operational efficiency. Primary digital transformation strategy objectives in museums are to improve accessibility of collections, to align business operations with the museum's ICT for integration of the different online systems that are often used, which is in accordance with

what Kamariotou et al. (2021) and Zhou et al. (2019) identified as important strategy components.

In addition, a digital transformation strategy, as identified in the theoretical framework, should foster a digital culture and manage change, enhance employee engagement, encourage experimentation, have a fitting resource allocation, and take a customer centric approach (Verhoef et al., 2021; Westerman et al., 2014; Yoo et al., 2010). To facilitate this, some museums have separate ‘online & digital’ departments, such as Museum Theta, and Museum Alpha, these departments can make recommendations to the management, and contribute to a general understanding that ‘digital’ is not the responsibility of a single department, but should be done by integrating it throughout the entire organisation, according to the interview with Museum Alpha.

This perspective is noticeable amongst some employees in other museums as well. Because, especially with limited resources, it can prove to be challenging to, for example, encourage experimentation as a manager. But when employees are engaged and possess sufficient knowledge of innovation, they can push senior management to facilitate experiments as well. As evidenced by Museum Epsilon, who stated:

“As a museum we are extremely critical ... It was very difficult to convince the board of the museum of [an investment in a digital project], they could not imagine it. They did not know if it would be worth it ... So, it really is a lot of pushing and standing your ground ... And that now translates to [a new, long-term more experimental project].”

Showing that although strong leadership is important, it are the employees that can bring innovativeness and transformation when they are in the right environment.

Although the process of digital transformation and innovation is important, it is also important to have some guidance during the development, as mentioned by the employee of Museum Alpha. For guidance, this museum gathers data and develops specific goals, or Key Performance Indicators (KPIs):

“The most important thing is to keep your priorities straight ... What I try for my projects is to create insight into how things are developing, so by keeping track of data, but also by linking it to objectives.”

These KPIs, according to the interviewee, not only provide guidance during the project, but they can help inspire new projects and help measure the impact of the projects. A KPI of such a project could, for example be the number of visitors of a new mobile application. Research as well, has shown that KPIs, when applied correctly, can help measure the impact of digital transformation efforts and can support in monitoring and evaluating the overall progress that is made (Parmenter, 2015). Moreover, KPIs can keep projects aligned with the strategic goals of the organisation.

Current use of Digital Technologies

But even in the absence of a Digital Transformation strategy, digital technologies are frequently present in museums, even if it is just “*common-or-garden implementations*” as the Managing Director of Museum Gamma describes it. In most participating museums, digital technologies are implemented throughout the whole organisation, from museum collection and programming to facilities and marketing. These correspond with the three areas that Raimo et al. (2022) distinguished, where museum marketing resembles the area ‘promotion of culture’, museum programming and collection equal ‘enjoyment on-site’, and ‘managerial and organizational activities’ parallel museum facilities, as well as part of the implementations in the museum collection, as this too requires some organizational capacities.

Digital technologies that are implemented in these museums range from relatively common technologies, such as the use of a website and audio tours, to more distinctive implementations, that require larger or structural investments. An overview of the different uses of digital technology in the museum is included in Table 5, this table matches the

technology to the goal based on which it is implemented, as well as the area of implementation, according to Raimo et al. (2022).

Table 5.
Implementation of Digital Technologies in Museums

AREA OF IMPLEMENTATION	MUSEUM GOAL	DIGITAL TECHNOLOGIES
Promotion of Culture	Community building and attracting new visitors	AI, AR, Customer Relations Management (CRM), Gamification, linked data, recommendation systems, social media, VR
	Impact assessment	Digital metrics, Collection Management Systems (CMS), CRM, recommendation systems
	Online accessibility and information	3D-Scans, CMS, digital stories, narrowcasting, streaming service, website
Enjoyment on Site	A diverse programme and transfer of knowledge	AI, AR, digital displays, digital tools, NFT's, video installations, VR
	Visitor engagement and giving visitors agency	AI, AR, audio fragments, apps, digital displays and storytelling, holograms, immersive spaces, robots, specialized search engine, video installations, VR
	Inclusivity and accessibility	AI, AR, apps, (research towards a) digital museum, NFT's, website
Managerial and Organisational Activities	Information and collection management	3D-scans, AI, apps, AR, art storage systems, CMS, databases, digital catalogues, e-depot, recommendation systems, robots, servers, ticketing systems, VR
	Museum organisation and efficiency	Clocking system, CMS, CRM, databases, financial systems, ICT systems, Linked Data, specialized systems for museums, ticketing system, website
	Adoption and acceptance of digital initiatives by employees: Employee engagement	Collaboration tools (SharePoint), E-learning platforms, Storytelling platforms, Visualization tools (AR, VR)

Upon analysing this table, it is evident that the technologies in museums are utilised to achieve multiple goals. Large investments are, for example, done in CRM and ticketing systems. While these technologies and implementations are initially meant mainly to increase organisational efficiency, they can also play a big role in the promotion of culture through

attracting new visitors and impact assessment, as well as help in partner-management,

Museum Beta is for example trying to integrate multiple systems:

“We also try to integrate our [museum collection website] and the corporate website ... And give a more central place to CRM ... So, for example, our CRM also includes all our relations ... and business club member; and what you want is, you want to get to know these people better ... and make them aware of certain programmes [of the collection website]. You need to make sure you can facilitate all of that with your systems.”

Generally, the more a technology can help achieve certain objectives, the greater should be the importance of implementation. While some museums indeed have already implemented these organisational systems, some are still in the development phase, or must postpone projects like implementing CRM systems and building websites because of the high costs associated with it, for example in Museum Delta:

“It is a lot of money ... So, then the threshold to start is often just too high ... there is a wish to, for example replace our cash register system, but for now we are breaking this down some more manageable chunks.”

It seems that in the implementation of digital technologies, equally to the development of a digital strategy, a main obstacle is funding (Raimo, et al, 2022).

The representative of Organisation Kappa does however note that this is a matter of prioritization as well. Research, too, has identified lack of urgency and competing priorities as important barriers to digital transformation (Fitzgerald et al., 2014). Moreover, the managing director of Museum Eta prioritizes these organisational implementations rather than implementations in programming. Mainly because Museum Eta is an organisation that, due to its historical building, leans towards being ‘proud to be analogue’ when it comes to their programming (Tekic & Koroteev, 2019). This museum therefore tries to find ways to intrigue visitors using smaller digital tools, but mainly focusses on maintaining the authentic atmosphere of their museum.

“That, yes, we would like to add new technologies again. Especially in the background [on an organisational level], but I think in the exhibitions, that's really something we're discussing with each other now: ‘in what way?’ ... Such that we keep the rooms themselves historic.”

This question on how to achieve a balance between authentic art and the use of new digital technologies remains a point of discussion for some museums. On the one hand, interactive elements in exhibitions are known to stimulate engagement and understanding, meaning that technologies can significantly influence the experience in a museum (Courvoisier et al. 2010; Jarrier & Bourgeon-Renault 2012; Roederer et al., 2020). On the other hand, it could be argued that artworks or historical buildings possess a certain “aura” which, according to Benjamin (1935/ 1969), refers to the distinctive characteristics of the work of art. As Benjamin found that replication of works of art could reduce their aura, it might be that authentic exhibitions are similarly impacted in their perceived value, or aura, when digital technologies are applied (Roederer et al., 2020).

Likewise, Museum Alpha started researching this phenomenon three years ago, with the objective of assessing how digital applications can be introduced in a manner that would attract new audiences, while identifying the optimal balance between “looking on your phone” and “experiencing the exhibition without screens.” Currently, the research is also exploring alternative methods of digital content presentation, with a focus on how digital technologies can facilitate the creation of personalised museum services (Kosmopoulos & Styliaras, 2018), such as personalised tours.

Conversely, interviews reveal that other museums are struggling in other ways with balance. This could be due to the different natures of the museums that were interviewed. In these museums, the largest digital projects are related to museum programming and the accessibility of works of art. The managing director of Museum Zeta reasoned that this is because they have limited funds for the implementation of digital technologies, so when they

do invest in it, they rather have it be visible for the public. This however does not mean that they do not value organisational innovations:

“I have great ambitions, indeed, for marketing research on the back end, the whole ticketing system everything ... [Museum Zeta] has to turn every dime, and then you often make the choice for more visible things.”

Museum Zeta, as well as other museums, recognize the importance of not just receiving money for specific digital projects, but having structural money available to invest in digital implementations and strategies. The information manager of Museum Beta explained this phenomenon as well, by adding that funding is often project-based too, whereas structural money is needed to maintain the project and further invest in sustainable developments:

“[This project] was made possible by a large funder ... But afterwards you do need to find ways to obtain structural money to do it on your own. So, that is often the problem ... it is difficult to use these funds for things that are structurally important to your organisation.”

Cultural Innovations in Museums

In discussing the digital technologies implemented in the areas of promotion of culture and enjoyment on site with participants, a trend in how the technology is utilised can be discovered. Most of the digital technologies are applied such that they can provide innovative ways of visualising, expanding, and enriching the story that museums want to tell. When done properly, the digital technologies are thus used to implement cultural innovations according to the digital strategy that is developed.

Moreover, Table 5 summarizes these technologies in this area well, but fails to highlight the uniqueness and innovativeness of some of these projects where technologies are implemented. Museum Zeta and Museum Epsilon are both researching and investing in the development of a Digital or Metaverse Museum, albeit with a different approach and goal. Interesting developments that are already out there are for example in Museum Epsilon, who

introduced an integration that connects their collections system to their mobile application, accessible for the public:

“The collection system is quite an interesting one, in which it is also connected to our app. I think that with the new Depot, that this has been our biggest investment thus far. With this, visitors can go through the art collection based on the location of objects.”

Museum Delta and Museum Etas as well, are investing in, and investigating the possibilities of the integration of interactive and immersive elements in their exhibitions.

Museum Beta has found another innovative way of allowing visitors to access their collection more easily with the creation of an image-based search engine that has access to the entire collection. It is aimed to let visitors discover new subjects, as the Corporate Communications Employee explains:

“We really want to bring [information] that you do not know yet, so we developed a search mechanism, where each item is rated by keywords, so you can now search by colour ... Or for a clock, or where the sea is shown. And then you see all the fragments on the wall, and you can choose one and watch it further on the tablet that is in same space.”

This suggests that it is not just digital technologies that inform cultural innovations. The cultural innovation, and idea that the collection should be made available in a different, more interactive way, has led to the development of the digital technology, rather than the other way around. Cultural innovation and digital technologies can thus stimulate each other.

Last, throughout all museums, digital technologies are used for information transfer, in internal as well as external communication. Internally, these technologies can help the organisations to get their employees on board with new plans regarding digital transformation of the museum. Organisations like Kappa and consultants can help museums use these technologies to visualize plans. In the external communication of museums, digital technologies can aid to provide general information, as well as provide depth for those who seek more information on the subjects.

“... We look at where digital applications fit into our information flows. So, we always have four layers of information. Where the first layer is information that everyone takes in ... the second as well, and that's then some more detailed information. In the third layer, there might be information in there for if you feel like it and you want more, and the fourth layer is things you might still do at home.”

In such cases, tools such as the website, digital displays, audio fragments or tours are utilized to provide information on different levels and provide visitors with an experience that they can tailor to their own needs.

The Process of Digital Transformation in Museums

In the process of digital transformation in museums, several challenges become apparent, such as the need for financial resources, lack of prioritisation and employee involvement, as well as not having enough manpower and knowledge. As stressed by the employee of Museum Alpha:

It is also about resources, because for some projects we received funding ... But it is about bringing in knowledge as well, in support of or for the execution of these plans.

Therefore, the model of Figure 1 should be adjusted, such that human resources not only include employee involvement, but FTEs and knowledge as well. Here, FTEs and funding allow for change, while knowledge and involvement can enhance the its quality.

Yet the benefits, as evidenced in other research, are significant enough to justify the effort and investments in digital transformation (Arrigoni et al., 2019; Lazzeretti et al., 2022; Massi et al., 2021). A lot of research has been done on the impact of digital transformation in the cultural sector, mostly on the impact of it on engagement and attraction of visitors (Adair, 2011; Kidd, 2011; Roederer et al., 2020). Immersive elements, as previously stated can stimulate engagement and attract new audiences. It seems that most of this research focuses on the cultural innovation of digital transformation.

To address these challenges, collaboration with partners emerges as a key solution. By leveraging partnerships, museums can pool resources, share knowledge, and implement digital transformation more effectively, as was found in the theoretical framework.

Museum Partnerships

Partnerships could provide a source to the resources required for museum development. In addition, participating museums, recognise the value of partners and seek to make many connections in different layers of the organisation. A striking similarity between the different museums is that all museums have included the goal of establishing connections in their objectives. Creating connections with the city in which they are located, with their visitors, with local and online communities, and with other museums, businesses and knowledge institutions. Museums recognise that these connections, in the form of communities as well as of partnerships can greatly benefit their own organisation. However, they are now also considering how their contributions could benefit other parties. As the representative of Museum Gamma described it:

“That is the modern interpretation of partnerships now, right? You are not talking about sponsorships anymore, but about partnerships. It has to have added value for both parties.”

This is consistent with the partners' perception of collaborations. For instance, the representative of Organisation Lambda recommended that museums consider the perspective of their partners more often, thinking about how the museum could contribute to their goals as well, her advice was:

“Try to think from the company you are approaching. What could the cooperation mean for that organisation? ... Start with your own strengths, you do not just have to hold your hand up, you can also have a strong approach to such a company, because you possess all kinds of things that are very valuable.”

Compared to sponsorships, collaborations in which both organisations provide value to each other, often lead to stronger relations, providing a base for a more successful, more innovative partnership (Castro-Martinez et al., 2013; Dyer & Singh, 1998).

Through literature, it was found that museums often collaborate with other cultural institutions, knowledge institutions, communities and municipalities and for-profit businesses. Interviews suggest three main categories of museum partners: Cultural, public and corporate partners. These partners can facilitate the digital transformation of museums in different ways, through a variety of purposes and levels of involvement that were discussed in the theoretical framework.

Cultural Partners

Cultural partners include other museums as well as cultural organisations, these types of partnerships are accessible for museums, because of the similarity of the organisational structures and goals (Arrigoni et al., 2019; Li & Coll-Serrano, 2019), making it easier to work together when it comes to difficult subjects such as digital transformation. However, as the interview with Museum Epsilon recommended, this should also include (young) individual or digital creators rather than institutions.

Young creators could be great partners for experimenting towards sustainable solutions to improve, amongst others, internal workflows or the relation with the public. These creators can provide benefits for the museum, as freelancers are often cheaper than bigger agencies - who might have ambitions that go beyond what is feasible - mitigating the risks of the experiment. The curator education of Museum Epsilon therefore advised:

“Don't be afraid to use a young creator for that [achieving museum goals]. I think it is a bit of giving back and investing in your local audience. ... For a relatively okay budget, you can hire a freelancer to work on it [museum goals] and find out for you what it could be. Which in my experience have always been nicer collaborations.”

Literature indicates that freelancers can facilitate organisational agility (Solomon & Blumberg, 2021), because they can be assigned to tasks of exploration and experimentation without the need for an entire team from within the organisation. Additionally, they can contribute knowledge of amongst others digital technologies or processes that the organisation may lack (Kozica et al., 2013).

The Purpose and Involvement of Cultural Partners

It depends on the project whether hiring a cultural freelancer is a fitting solution, or that it is better to go with an established agency. Indeed, for some projects, such as the development of a website, museums amongst which the Museum Eta, opt for an agency instead. However, as such big projects with agencies are costly, the managing director therefore noted that they decided to opt for a joint development with other museums, building a specialised back-end tailored to the needs of a museum:

“We [Museum Eta and a few other museums] created a website platform in which we developed a CMS system, which all museums will soon be able to use to build a new website ...”

“... We all need the same things from a website, but we all spend money on developers separately ... So, we pooled the money which gave us more to spend and allowed us to develop a really good system, very specific to the museum sector.”

Initiatives such as this joint development are strategic process-focused partnerships. The development of the back end offers a sustainable solution that creates a significant infrastructure, allowing these museums to expand their digital presence.

In other interviews, some participants discussed the potential benefits of pooling human resources as well, such as for HR or IT, between cultural organisations. As some museums struggle with the continuity of knowledge internal of the museums in these departments due to outsourcing of these tasks. They did, however, highlight concerns regarding regulations,

privacy and practicalities of implementation. Despite their reservations, they acknowledged could help the museums in generating expertise and continuity in these domains, such as the managing director of Museum Gamma that said:

“What you could do is that in a city, you know, you have a pool of, I am just saying, ICT experts, that you lend to each other, or share for an X amount per year. That could also be interesting.”

Some museums already have taken similar steps. The Rijksmuseum, Van Gogh Museum, and The Stedelijk Museum Amsterdam created a subsidiary: PP10, a central security post for Museumplein Amsterdam to coordinate and for surveillance (PP10 B.V., n.d.). PP10 is unique to security in the museum sector, and it could set an example for pooling human resources in other areas, amongst which IT or towards digital transformation.

In addition to joint developments and the pooling of resources, exchange of knowledge is an important reason for museums to collaborate with cultural partners. Knowledge exchange allows museums to share insights, strategies and expertise, which benefits all involved (Hess et al., 2018).

All participants mentioned knowledge exchange with cultural partners to some degree, therefore, it is likely this information exchange happens in all levels of the organization. The exchange of knowledge, while being mostly process-oriented can happen on a strategic as well as on an operational level. Moreover, knowledge exchange happens both in formalized manners as well as informal, as the information manager of Museum Beta mentioned when discussing knowledge exchange for a specific project:

“You want to benchmark those things [new technological implementations]. You want to say, how did you do it and what did it cost? ... I asked around about: “What did you spend on a new website?” And they had spent more than we had budgeted, so I went to the managing board.”

Informal ways of knowledge exchange like contacting a network about experiences can help increase understanding and awareness of the potential of the implementation. This

allows for spontaneous and organic interactions that can lead to innovative solutions, or more realistic expectations. Some museum professionals appreciate this informal approach, as it encourages open dialogues and creates an environment of continuous learning, where collaboration happens naturally. Other professionals, however, note they believe that by now there is so much information online that this manner of exchanging information is overused in the cultural sector, as there is so much information available already, such as the managing director of Museum Zeta:

“Often, I am approached, ‘You are doing so well, can you tell me something about it?’ And then I think yes ... But my time is limited ... And that is what the cultural sector does ... We are going to drink a cup of coffee and drain each other of information ... If I may suggest, there is so much information available by now, if you want digital transformation.”

Indeed, there is a lot of information available online and through other channels, but not everyone is able to find this information. Formalized networks for collaborations like this could therefore help industry professionals stay abreast of technological or strategical developments (Bathelt et al., 2004; Hess et al., 2018). PublicSpaces, for example is a network of public, mainly cultural, partners, that works together towards the independence of big tech companies (*Het PublicSpaces Manifest*, n.d.).

The informal exchange of knowledge with cultural partners is usually based on the practical application of their experiences in addressing challenges. In contrast, formalized exchange of knowledge with cultural partners, like public partners who also function as knowledge providers, are more focused on inspiring cultural organisations to adapt and connect with others. Combining both formal and informal ways of knowledge exchange can help museums to build trust, ensure comprehensive knowledge sharing, and enables institutions to be responsive to change (Hess et al., 2018). This, in turn, helps organisations to build knowledge and involvement amongst employees.

Public partners

Public partners, like formalized cultural network partners, can be seen as facilitators, they include governmental as well as semi-governmental, or subsidized organisations that operate locally, nationally or internationally. One of these public partners is Organisation Kappa, the advisor of Kappa explained that as facilitator they have multiple tasks, from providing information to creating networks:

“We work on different subjects of digital transformation for the Dutch cultural sector ... In which we do research, push the sector to get started with it [digital transformation], and to try to create mutual connections.”

Other public partners, such as municipalities, often take up a role as subsidizer as well.

The Purpose and Involvement of Public Partners

Besides the fact that such organisations can provide tools to come up with solutions for challenges museums face, they do a lot of research that is published online. Contributing to the general awareness and knowledge of digital transformation in the industry. The senior advisor from Organisation Kappa did, however, note that while digital transformation should involve the entire organisation, it is easiest to start at the top:

“[Digital Leadership] is where we notice that we are closest to it, and that this is where we can do the most. Yes, those things we can easily change.”

Which is in line with findings of the strategic guidance of museums. Still, other departments of the organisation should be involved too, to have a greater impact. Therefore, community platforms are facilitated by public organisations on local and international levels to further increase formal communications between cultural organisations with the goal to inspire each other and bring them together for knowledge exchange or as partners. Museums in Rotterdam, for instance, may join the Rotterdam Cultural Network of Rotterdam Festivals, focused on increasing public reach, which more and more includes the use of digital tools.

Most public partners can therefore be categorized as strategic, process-oriented partners, taking on a role as enabler for museums.

Educational Institutions

Other public partners include educational institutions, these institutions can take up roles similar to those of other public organisations, as knowledge provider, and receiving access to archives and collections in return. However, to some museums, educational institutions can take up a bigger role. Museums such as Museum Beta and Museum Zeta are actively involved in a university master's programme and more practical, vocational schools. These museums have the unique opportunity to train possible future employees, by being involved in the programmes that these students follow, and by incorporating digital projects to learn and experiment with them. As the managing director of Museum Zeta described:

"[At vocational schools] there is so much creativity, it is really fun to see. We have a lot of pilot projects as well, asking: 'What if we reproduce [objects] digitally, how would you do that?' ... Some incredibly cool things come out of that, so that collaboration is really good."

This illustrates that strategic partnerships can take different forms. However, the objective of the museum goes beyond this, aiming to include business in this partnership as well. This partnership could lead to the creation of unique apprenticeship programmes that can facilitate training and specialisations of these students. Nevertheless, there are other ways museums can work with corporate partners.

Corporate partners

Corporate partners, or public-private partnerships (PPP's) can increase the market's capacity for critical thinking and innovation (Liu et al., 2023). Therefore, these partnerships could be valuable for museums. However, interviews suggest that there is often little interest

from businesses to work with museums. The interviewee from Museum Delta Rotterdam mentioned:

"I miss the acquisition of the commercial sector in the cultural sector ... In the charity sector, I was often invited by commercial parties to join knowledge sessions and work sessions in the form of an acquisition session ... then there were just consultants who had time and money from the company to invest in the uptake of their platform, or their technology within our organization. As well as the sharing of knowledge between our organization and other prospects, and I hardly see that in the cultural sector."

Indeed, these acquisitions are more common amongst charities, as more money is involved in those types of organisations than there is in museums. Companies are therefore less likely to support museums. If they do, this is often because corporate citizenship is important for their mission, and it positively impacts their brand awareness (Walters & Chadwick, 2009). However, the Dutch museum sector differs significantly from museums in other countries, in for example, the US and UK, national as well as organisational structures differ. Meaning that this observation does not necessarily hold true for other countries.

The Purpose and Involvement of Corporate Partnerships

Corporate partners can be involved in different ways, in some cases partnerships are collaborations with barter deals. Meaning that a non-monetary exchange is done complementary to, or as substitute for a paid collaboration (Humphrey, 1985). These partners often receive active exposure for their work in return. Barter deals can assist museums in cost savings, money that can then be invested in other projects. The purpose of such projects is often operational and product-based, as for example in Museum Gamma:

"So you have ... commercial partners and barter partners, often partners say: 'okay it will cost [this amount] and for you we do it for [half], but then we want exposure.'"

In other cases, project-based partnerships are more process-oriented projects. In Museum Alpha, for example, the development process of the product, a personalised tour, is more important than actual product. Where the museum collaborates in product design, storytelling and enjoys new knowledge. In return, the partner can use the developed product as showcase for other organizations.

Moreover, corporate partnerships are associated with bigger budgets compared to the other partner types. Therefore, projects that emerge from these collaborations are often more unique and impactful, but also allow room for development and growth. These benefits become clear from an example of Organisation Lambda:

“Last year ... We had already sponsored an exhibition, but then the museum called us and said: ‘Listen, we have the opportunity to purchase two [unique pieces that fit the exhibition] to add to the collection, but we do not have budget for it. Do you maybe still have budget?’ And well, that is perfect ... It is nice to have, but it also has amazing PR opportunities, which helps us as well.”

In knowing what opportunities can help partner organisations as well, museums can find keep finding ways to collaborate and create mutual benefits, especially cultural innovation and storytelling is something museums tend to be good at. These qualities are what can attract corporate partners and sparks enthusiasm amongst (potential) partners.

Especially long-term partners can lead to unexpected collaborations, because when Organisation Lambda was asked what they thought of not only supporting museums in visible outings such as exhibitions, but also providing guidance or resources in the operational side of digital transformation in museums, they seemed open to the idea:

“I think it is a super interesting idea. I also think that for our employees on data or innovation, it can be a lot of fun to look into completely different sectors.”

Apart from the feasibility of this specific idea, the openness of partners to new proposals can may foster stronger partnerships, and could lead to enhanced collaborative approaches and

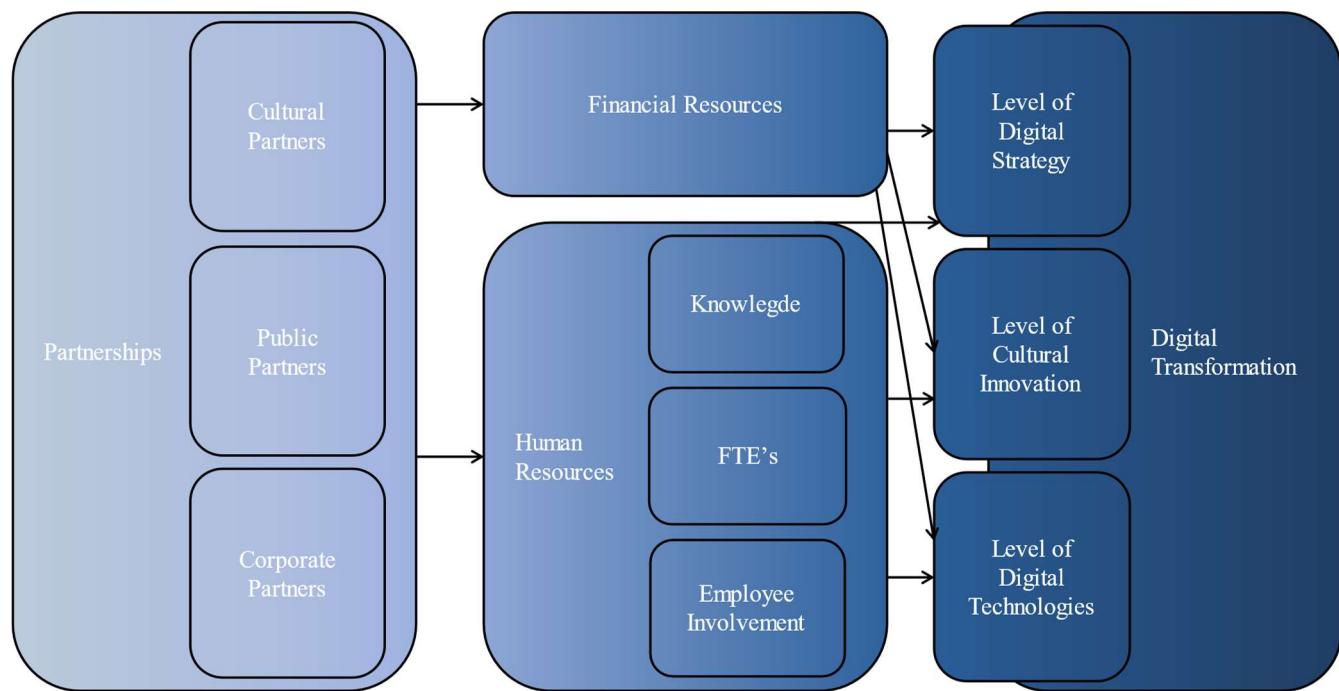
better results towards digital transformation. In turn, partners do request that museums also consider potential benefits these partnerships could offer the firms, and to adopt a somewhat more result-oriented stance during the development and experimental phases of collaborations.

Partnerships for Digital Transformation

Based on the findings that were discussed, some alterations can be made to the model for digital transformation that was developed after analysis of the literature. Human resources as resource for the components of digital transformation can be expanded, as it is of higher importance than financial resources are. Moreover, human resources can be explained as obtaining sufficient knowledge, FTEs, and employee involvement.

Partners, as providers of these resources were already included in the model already, given that this is a specific focus of the research question. However, literature was not able to distinguish how different partners can guide the process of digital transformation. After analysis of the findings, three main partner types emerged: Cultural, public and corporate partners, these should thus be included in the adjusted model, as displayed in Figure 2.

Figure 2.
Adjusted Model for Digital Transformation through Partnerships



Conclusion

The purpose of this study was to explore how partnerships could support museums with the process of digital transformation. In the theoretical framework, a model was developed on how partners could aid museums in providing the tools and resources needed to transform their organisation digitally. Through interviews with Dutch industry professionals, the current way of working was discussed, and new opportunities were explored. Upon analysis of the results, discussed in the past chapter, the model was readjusted. Based on this adjusted model, the research question can be answered:

How can museums enhance digital transformation through collaborative partnerships?

To address this, an analysis of the necessary resources and types of partners that a museum has was provided in the results and discussion which helps answering the sub questions.

Throughout the thesis, three main components of digital transformation have been identified: a digital strategy, digital technologies, and cultural innovation. When answering the first sub question (SQ1): “*What resources do museums need for the process of digital transformation?*” these components should thus be kept in mind. It is evident that financial and human resources are essential for the successful implementation of these components of digital transformation, where human resources are divided in FTEs, knowledge, and employee involvement. Out of these resources, financial resources and sufficient FTEs are seen to be prerequisites, while resources such as sufficient knowledge and employee involvement are more likely to enhance the quality of the implementations and should be focused on more.

Nevertheless, the prioritisation of digital transformation remains a challenge: While some museums possess sufficient resources, they might not be utilising them effectively, or might be directing them towards other initiatives. It is in the context of such challenges that

involvement of partners in the upper levels of museums, supported by employees that steer them in the right direction, may prove to be most beneficial.

By analysing these partnerships, SQ2 can be answered: *What are the different types of partners that museums typically have, and how do the roles of these partners differ?* The analysis suggested three categories of partners: Cultural, Public, and Corporate Partners, all adding value in different ways, based on their purpose and involvement. Cultural and public partners focus on the transfer of knowledge and expertise, both in their own way. While corporate partnerships may result in more unique projects by contributing with financial resources and through creative collaborations. However, a new development is that an increasing number of cultural partners are opting to pool their resources to create mutually beneficial and sustainable solutions. This, along with more extensive collaboration with corporate partners, represents a significant opportunity for museum partnerships in the future.

To conclude, a review of the adjusted model (Figure 2) sheds light on how collaborative partnerships can enhance digital transformation in museums, by indicating that different partners can have a positive influence on financial and human resources. Partners can provide guidance on the optimal utilisation of resources in the context of digital transformation, amongst others by investing the resources in a digital strategy, cultural innovation, and digital technologies. Moreover, as demonstrated in the answer of SQ1, it should be the senior management of a museum that initiates or fully supports the initial stages of digital transformation, given their role in defining the mission of the organisation and in the allocation of resources. While not always feasible, it would be optimal if partners were able to communicate directly with top-level management to help improve this process.

Nevertheless, the entire organisation should undergo digital transformation eventually. Subsequently, the greater the degree of involvement of the remainder of the organisation, the higher the quality and efficiency of the transformation. SQ2 indicated that different partners

can help in different ways. While all partners are valuable in achieving organisational goals, there is no universal solution that can be applied to all museums given the diversity of the organisations in the sector. Therefore, the adjusted model in Figure 2 does not differentiate between how the different partners might contribute to the resources needed for the digital transformation of museums. At this time, it is thus up to the museum to identify the optimal balance between working with their partners and utilizing internal resources.

Practical and Theoretical Implications

Future research and impact assessments could provide more detailed guidance for museums and organisations engaged in the process of digital transformation, particularly regarding the utilisation of partners. Nevertheless, this thesis has evaluated the potential benefits and challenges of collaborating with external partners in the context of digital transformation.

Moreover, the thesis identified three principal dimensions of digital transformation specific to museums and possibly to the cultural sector. Meaning that if these dimensions are validated, academics no longer have to be constrained by the limitations associated with the applications of general theories to the cultural sector. These components can be employed in practice to guide museums in their digital transformation efforts, as well as in theoretical and academic research, where they can be further analysed and used to develop more insights.

Limitations and Future Research

As the study conducted in this thesis was exploratory in nature, many new opportunities were explored, as such, new questions surfaced that were outside the scope of this thesis. Key uncertainties remain regarding optimal strategies for museums implementing digital transformation, such as: “Which technologies are most impactful?” And “What are the

optimal methodologies for the creation and implementation of new strategies?" Furthermore, further research is necessary to understand which partners can help achieve which goals.

Additionally, while this thesis sought to map out potential ways in which museums could collaborate with partners, it did not evaluate the effectiveness of these partnerships. Future research could focus on identifying which types of partners work best in specific situations, offering more practical guidance for museums. Finally, the study observed significant differences in how various museums approach digital transformation, taking a disruptive, business-model-led or proud to be analogue approach. This raises the question: "What accounts for these differences?" Further research is needed to understand the underlying factors driving these variations, which could, in turn, inform more tailored approaches and more effective digital strategies for museums.

Finally, a limitation of this study is the fact that the research sample was limited to nine Dutch museums situated in the Randstad area, with only two museum partners to offer an alternate perspective. Consequently, the findings are not fully representative of the wider museum sector. Moreover, the goal of this thesis was to explore the possibilities of digital transformation and partnerships, therefore the sample group primarily included museums that already actively pursue, or want to pursue, digital initiatives. Resulting in an analysis that does not include perspectives of museums that have yet to embrace digital transformation. This could have yielded new insights, future research could therefore focus on creating a bigger, more diverse sample, which is more representative of the overall museum sector and its partners.

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Appendix A

Interview Guide

English Interview Guide

Background information

1. Could you introduce yourself?
 - I. What is your professional background?
 - II. What museum do you work in? What is your role?
2. Can you tell me something about the museum?
 - I. What is the museum about, what is your mission/ vision, who are your visitors?

Strategies for digital transformation

3. How would you describe the digital presence in the museum?
 - I. In which ways are digital technologies and innovations mainly used in the museum?
4. What is the museum's policy on digital innovations?
 - I. Does this also correspond with the described presence?
 - II. How do you see this changing/remaining the same within the museum sector in the future?

Challenges and benefits of innovation

5. What are the main benefits and challenges you notice when implementing new digital technologies in the museum?
 - I. How do you measure/ notice these results?
 - II. How do you overcome these challenges?

6. Are efforts also being made to address these challenges through collaborations?

- I. For which challenges do you mainly do this, or why don't you do this?
- II. If applicable, which companies are these, and how do they help?

Museum partnerships

7. What do you look for in a new partner [in digital technologies/digital transformation projects]?

- I. Are you considering any future partnerships related to digital innovation?

8. What types of partnerships are common in your museum?

9. I just asked about collaborations regarding addressing challenges, are there any other collaborations with companies that are relevant?

- I. For example, do you have specific collaborations with technology companies, educational institutions, or other cultural organizations?

Challenges and benefits of partnerships

10. What are the benefits and challenges of [digital innovation] collaborations?

- I. What was the role of the partner in this collaboration?
- II. How were these challenges addressed?

General insights about digital transformation and collaborations

11. What have you learned from working with these organizations?

- I. Has this influenced the museum's approach to future digital projects/strategy?
If so, how?

II. Given a similar challenge, would you again opt for collaboration or a different solution, or would you be able to tackle it yourself?

Advice on strategies

12. Based on your experience, what advice would you give to other museums looking to leverage partnerships for digital transformation?

I. Are there any strategies that have worked particularly well for your museum?

13. Are there any other insights you would like to share that have not yet been mentioned?

Dutch Interview Guide

Achtergrondinformatie

1. Kunt u zichzelf voorstellen?
 - a. Wat is uw professionele achtergrond?
 - b. In welk museum werkt u? Welke rol heeft u daar?
2. Kunt u iets vertellen over het museum?
 - a. Waar gaat het over, wat is de visie/missie, wie is jullie publiek?

Strategieën voor digitale transformatie

3. Hoe zou u de digitale aanwezigheid in dit museum beschrijven?
 - a. Op welke manieren worden digitale technologieën en innovaties nu voornamelijk gebruikt in het museum?
4. Wat zijn de beleidsmaatregelen van uw museum met betrekking tot digitale innovaties?
 - a. Komt dit ook overeen met de beschreven aanwezigheid?
 - b. Hoe ziet u dit in de toekomst veranderen/ gelijk blijven binnen de museumsector?

Uitdagingen en voordelen van innovatie

5. Wat zijn de belangrijkste winstpunten en uitdagingen die u ziet bij de implementatie van nieuwe digitale technologieën in het museum?
 - a. Hoe 'meet' / merkt u dit resultaat vooral?
 - b. Hoe overwint u deze uitdagingen?
6. Wordt er ook geprobeerd deze uitdagingen aan te pakken door middel van samenwerkingen?
 - a. Bij welke uitdagingen doet u dit vooral, of waarom doet u dit niet?
 - b. Indien van toepassing, welke bedrijven zijn dit, en hoe helpen ze?

Museumpartnerschappen

7. Waar zoekt u naar in een nieuwe partner [op het gebied van digitale technologieën/ digitale transformatieprojecten]?
 - a. Overweegt u eventuele toekomstige partnerschappen met betrekking tot digitale innovatie?
8. Welk type partnerschappen komen veel voor in het museum?
9. Zojuist vroeg ik naar samenwerkingen met betrekking van het aankaarten van uitdagingen, zijn er nog andere samenwerkingen met bedrijven die relevant zijn?
 - a. Heeft u bijvoorbeeld specifieke samenwerkingen met technologiebedrijven, onderwijsinstellingen, of andere culturele organisaties?

Uitdagingen en voordelen van samenwerkingen

10. Wat zijn de voordelen en uitdagingen van samenwerkingen [op het gebied van digitale innovatie]?

- a. Wat was in dit geval de rol van de partner in deze samenwerking?
- b. Hoe werden deze uitdagingen aangepakt?

Algemene inzichten over digitale transformatie en samenwerkingen

11. Wat heeft u geleerd van het samenwerken met deze organisaties?
 - I. Heeft dit de aanpak van het museum van toekomstige digitale projecten/ de strategie beïnvloed? En hoe?
 - II. Bij een soortgelijke uitdaging, zou je dan nog eens kiezen voor een samenwerking, of andere oplossing, of het zelf aankunnen?

Advies over strategieën

12. Op basis van uw ervaring, welk advies zou u andere musea geven die partnerschappen willen benutten voor digitale transformatie?
 - a. Zijn er strategieën die bijzonder goed hebben gewerkt voor uw museum?
13. Zijn er nog andere inzichten die u zou willen delen die nog niet zijn benoemd?

Appendix B

Consent Request for Participation in Research

Thesis MA Cultural Economics and Entrepreneurship 2024:

Transforming museums: The role of partnerships in the digital transformation of museums

For Questions about the Study, Contact:

Yvonne van Santen, e-mail: 526905ys@student.eur.nl

Purpose of the Study

You are invited to take part in research that aims to examine the potential of partnerships contributing to digital innovations within museums.

The objective of the study is to gain a deeper understanding of the various digital strategies employed by museums and to identify the ways in which different types of partnerships contribute to these types of strategies. The aim is to gain insights into the most effective partnerships in achieving these digital strategies.

Description

Your acceptance to participate in this study means that you accept to be interviewed. You will participate in an interview lasting *approximately 45 minutes*, that can take place in Dutch. You may interrupt your participation at any time. You will be asked questions about current digital innovations and strategies and partnerships towards these digital innovations.

Unless you prefer that no recordings are made, I will make *a recording of the interview*. I will use the material from the interviews and my observation exclusively for academic work, such as further research, academic meetings and publications.

Risks and Benefits

I understand that identifying participants in this study could lead to exposure risks. The disclosure of sensitive information may affect how you are perceived, potentially impacting your career or social standing. Therefore, you might have concerns about privacy and confidentiality. However, the topics discussed are relatively low in sensitivity.

Still—unless you prefer to be identified fully (first name, last name, occupation, name of museum)—I will not keep any information that may lead to the identification of those involved in the study. I will only pseudonyms to identify participants.

You are always free not to answer any question, and/or stop participating at any point.

Payments

There will be no monetary compensation for your participation.

Participants' Rights

If you have decided to accept to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty. You have the right to refuse to answer particular questions. If you prefer, your identity will be made known in all written data resulting from

the study. Otherwise, your individual privacy will be maintained in all published and written data resulting from the study.

Contacts and Questions

If you have questions about your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact –anonymously, if you wish— Yvonne van Santen, or Thesis Supervisor Lenia Marques, marques@eshcc.eur.nl.

Signing The Consent Form

If you sign this consent form, your signature will be the only documentation of your identity. Thus, you DO NOT NEED to sign this form. In order to minimize risks and protect your identity, you may prefer to consent orally. Your oral consent is sufficient.

Audio Recording

I consent to have my interview audio recorded.

- Yes
- No

Identification

I consent to have my name, role, and/ or the museum I work for mentioned in the Thesis.

- Yes, my full name can be mentioned.
- Yes, my role within the museum can be mentioned.
- Yes, the name of the museum can be mentioned.
- No, use anonymised information only.

Signature and Date

Signature Participant

Name:

Date:

Signature

Name: Yvonne van Santen

Date: 12/05/2024

This copy of the consent form is for you to keep.

Appendix C

Dutch personal interview invitation

Beste [name]

Ik ben Yvonne, op dit moment ben ik bezig met de afronding van mijn master culturele economie aan de EUR. Hiervoor schrijf ik mijn masterscriptie over hoe musea hun digitale innovatie en transformatie kunnen verbeteren door samen te werken met externe partijen.

Ik heb onderzoek gedaan naar de verschillende strategieën en samenwerkingen voor digitale innovatie, mijn tweede stap is om medewerkers van musea te interviewen over deze onderwerpen om inzichten uit de praktijk te kunnen verwerken in mijn onderzoek.

Juist omdat jullie als [museum] [reason why museum ideals fit in thesis profile], denk ik dat jullie inzichten over de digitale strategie of het gebruik van digitale innovaties in jullie museum een heel waardevolle toevoeging kunnen zijn aan mijn scriptie. Zeker door het feit dat samenwerkingen door jullie als erg waardevol worden gezien. Hopelijk kan ik jullie daarbij ook gelijk aan het denken zetten over dit onderwerp!

Daarom vroeg ik mij af of er binnen de organisatie iemand tijd heeft om deze periode een kort interview met mij in te plannen van 45 minuten tot een uur. Ik ben hiervoor per mail bereikbaar maar even bellen mag natuurlijk ook altijd: [phone number]

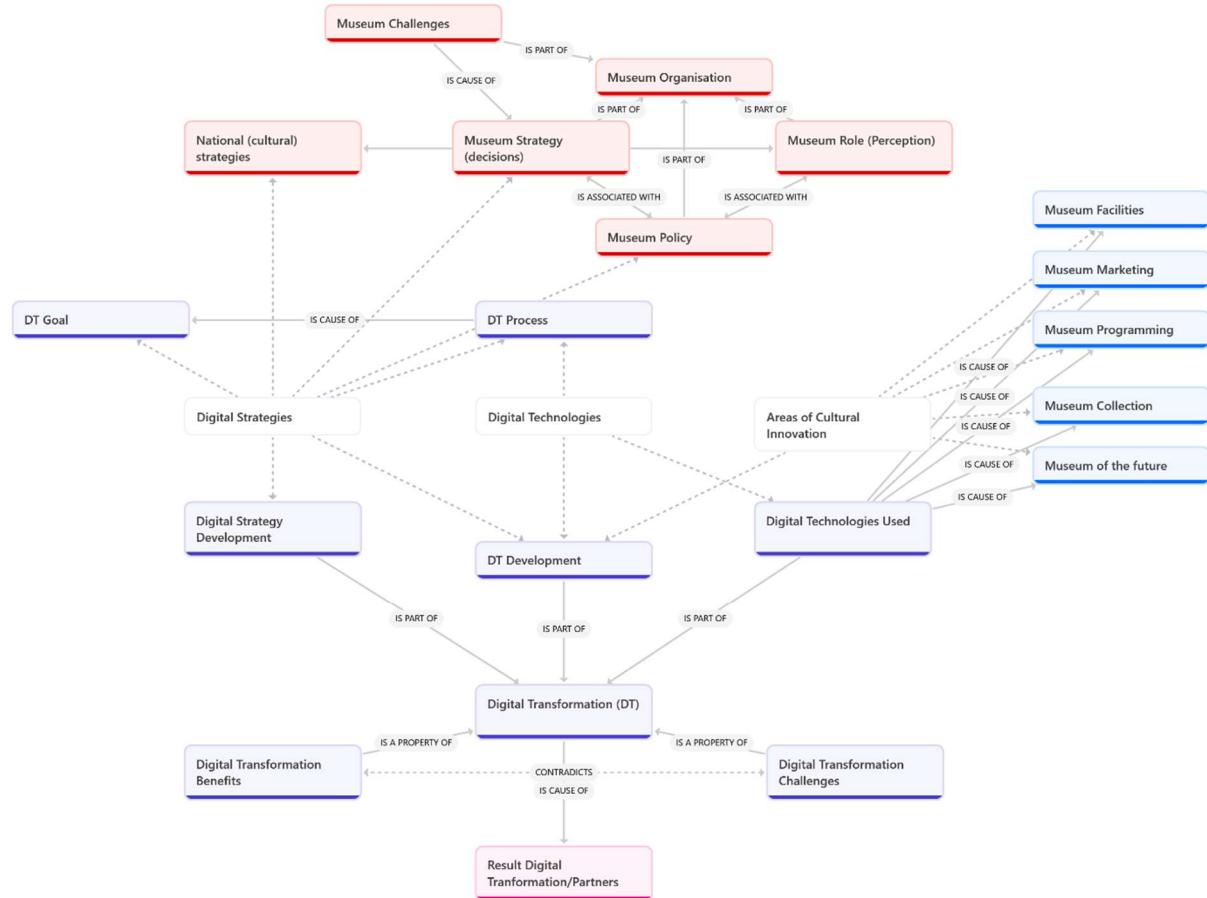
Met vriendelijke groet,

Yvonne van Santen

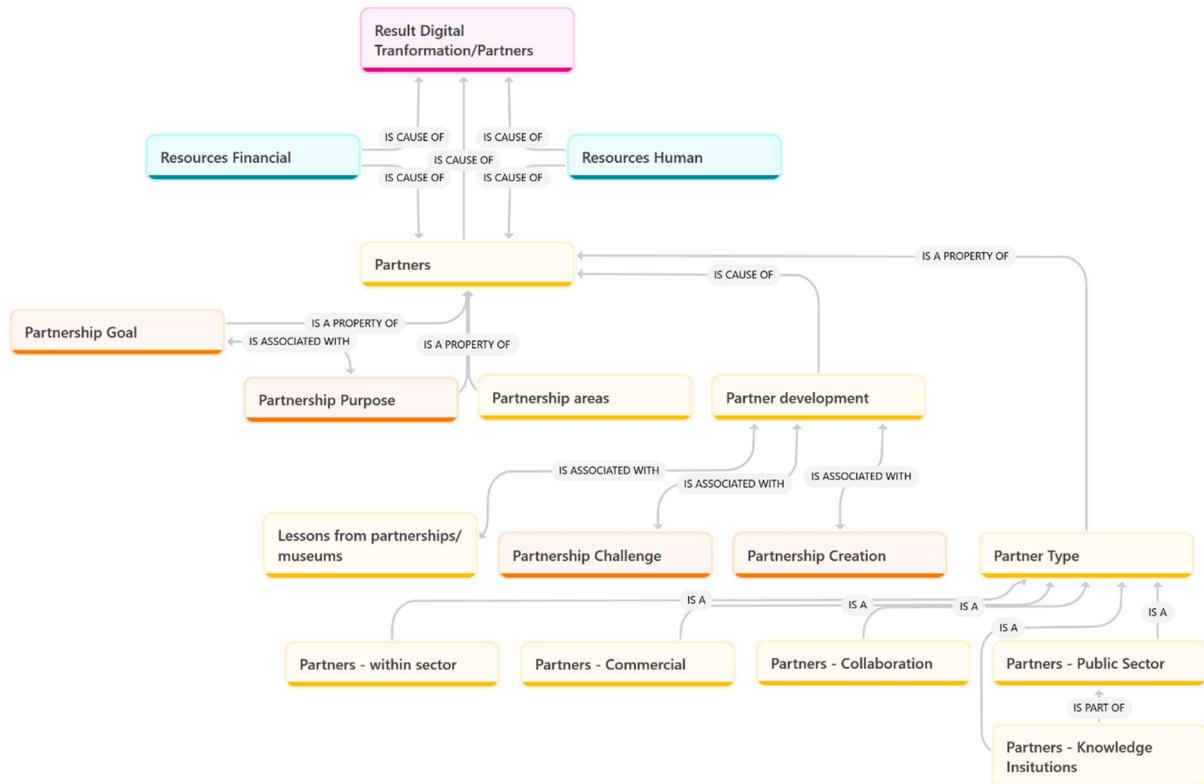
Appendix D

Codebook and Code Relationships

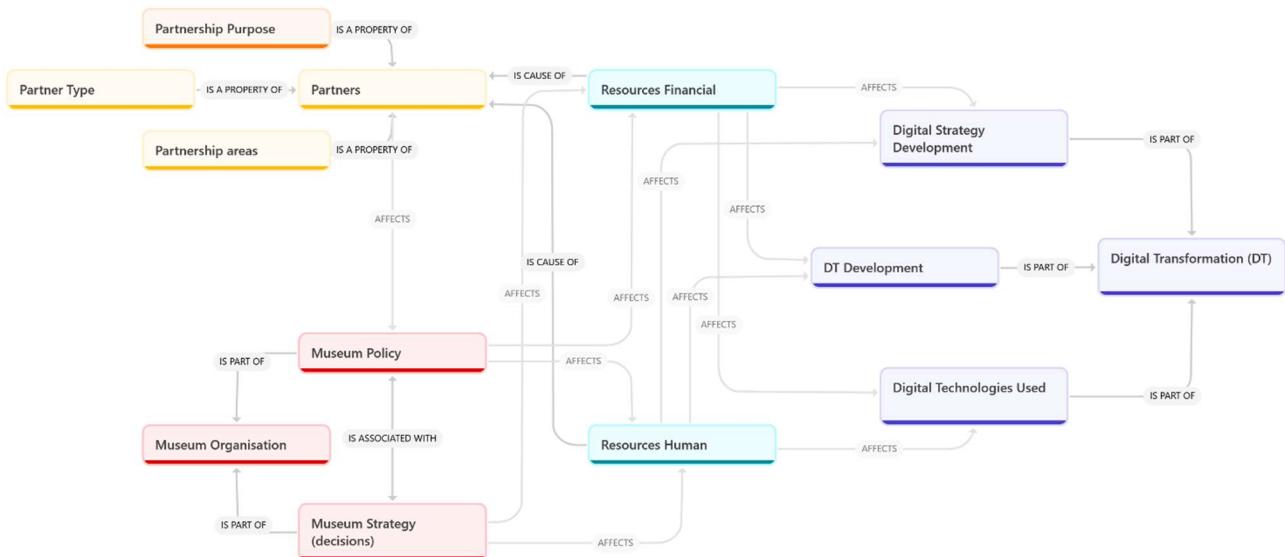
Appendix Figure 1.
Digital Transformation Network



Appendix Figure 2.
Partnership Network



Appendix Figure 3.
Network of Partners towards Digital Transformation



Appendix Table 1.
Codebook Atlas.ti

Code Group	Code	Associated with
Digital Transformation	Digital Transformation (DT)	
	Digital Transformation Benefits	
	Cost-efficient	Lot has been done
	End-user in mind	Uniqueness
	Informatieoverdracht groter	Verdieping op kunnen zoeken
	Knowledge	
	Digital Transformation Challenges	
	Expensive	object importance
	Experiments	Online translation
	Extensive knowledge required	Planning
Areas of Cultural Innovation	Lack of Human resources	Push to get what you want
	Lack vision	Regulations
	Many divisions involved	Role museum
	Needs prioritization	Takes time
	Needs training	Work with lack of Data
	Proudest achievement	
	Result Digital Transformation/Partners	
	Accessible, sharable data	Knowledg sharing
	Creating space for digital makers	Looking for what could be
	Differences between museums	Museum Programming
Digital Strategies	Going viral	Process oriented
	Museum Collection	
	Accessibility of Collection	Increase accessibility
	Digitalisation collection	Online archive
	Digitised collection	Other applied technologies
	Expand collection	Research
	Museum Facilities	
	Behind in Ticketing	Small innovations
	Bookkeeping	Successful innovation
	Covid	
Digital Technologies	Museum Marketing	
	Community-building	Online integration
	Digital Visitor Journey	Specific Focus
	More money invested	Visitor Data / CRM
	Move to online marketing	Website Development
	Museum of the future	
	Museum Programming	
	Creation of immersive space	Rapid digital changes
	Film Catcher	
	Interactive elements	Translation to website
	Mix of analogue and digital	Use of technologies
	New technology outdated	
	Digital Strategy advice	
	Develop a shared vision (in museum)	Translate vision to concrete steps
	Start small	
	Digital Strategy Development	
	DT Development	
	Big step	More insights
	Doorvertaling fysiek naar digitaal	Technologies more accepted and known
	External Factors	Time for development
	Involve marketers	Use of Product
	Maatschappelijke verandering	Visitor content online
	DT Goal	
	Accessibility collection	Experience from home
	Alignment Business and ICT	Increase accessibility
	Ambitions	Increase worth
	Bring people together	Increasing efficiency
	Combine marketing methods	Independence
	Create workflow	Integrate different systems
	Data driven methods	Integrate digital
	Deepen knowledge (visitor)	Marketing efforts
	Digital as Tool	Serve public good
	Digital Participation	Use DT to achieve Goals
	Enhance not replace analogue	
	Digital Technologies Used	
	3D Scans	Digital Displays
	AI	Digital Projects
	App	Exhibition
	Applying DTech in museum	Gamification
	AR/VR	Linked Data
	Archival system	Museum Education
	Art Storage	NFT
	Audio Tour	Recommendation system
	CRM / Track visitor history	Streaming service
	Digital Catalogue	Website
	Basics	Involement of public
	Biggest Project	Sustainable (Long-term) implementations
	Early adapter	
	DT Process	
	Assess different needs	Persuasion of others
	Connect systems	Research
	Coordinating role	Speed up process
	Experimenting	Stimulation Government
	Importance of communication	Technological Familiarity Visitors
	Long term project	Viral Social media

Code Group	Code	Associated with
Museum Organisation	Museum Challenges (Not) Dealing with challenges Ageing visitors Competition	Inclusivity Museums not innovative Unclear whether Knowledge transfer to visitors works
	Museum Organisation About museum About Participant Collection Facilitair Forerunner Innovations during covid Marketing	Museum Archive Museum Education Museum Programming Overarching digitalisation Renovation / Closure Visitor Registration
	Museum Policy Community Digital Policy Financial Policies	Giving back Inclusivity Vision/ Mision
	Museum Role (Perception)	
	Museum Strategy (decisions) (Advanced) marketing strategy Art experience is central Get to know public	In-house vs. external knowledge Increase accessibility What is it you want to achieve
	National (cultural) strategies	
	Resources Financial Financial Resources Financing = partnering	Money from Foundation Not interesting for commercial
	Resources Human External resources with expertise Human Resources for Digitalisation	Volunteers
	Lessons from partnerships/ museums	
	Sector Tasks	
	Partner development A necessity Ambitious projects Approachable Benchmarking Government Stimulated Informal communication Invest in local public Joint initiatives Knowledge sessions Linked data	Long term partnerships Open to experiment Positive view Program development Project Providing space Research Similar Values Strength of makers/ professionals
	Partner Type Mandatory partnership Paid collaboration	Paid partnership (Tender procedures)
	Partners - Collaboration	
Partners	Partners - Commercial Charity Consulting	Little Acquisition
	Partners - Knowledge Institutions Developed Master's Programme	
	Partners - Public Sector Knowledge sharing sessions	Rotterdam Festivals
	Partners - within sector Cultural institutions Museum networks	Partnering with museums
	Partners Archives - Internal Affairs Commercial Organisation Cultural Institutions Experiment Foundations Guest curators International	non-profit organisation Non-profit service providers Other museums Paid Partnership Partners Public Institutions Young Cultural Professionals
	Partnership areas Archival Collaboration Collaboration for Exhibition	Knowledge sharing sessions Visitor analysis
	Partnership Challenge Commercial = scary Dependency Different needs Different priorities Difficult to coordinate Difficult to find partners Funding = short term Lack flexibility	Lack of expertise Lack of trust Little acquisition No joint developments No joint project funding Not profitable enough Separate Back-end
	Partnership Creation Different reasons Financed areas	Funder - Quality Assurance
	Partnership Goal Accessibility Audience reach Bringing art to the Public Diverse Audience Exhibition development Inclusivity Knowledge exchange	New insights Product Development Share expertise Software as a Service Talent development Use of other depot
	Partnership Purpose Share experience Share Knowledge & Expertise Shared Budget	Shared database Sharing Resources