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# Digital Leadership and Change Management in Cultural Heritage Organizations in Belgium

Eva Coudyzer and Céline Vermeire

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## Introduction

Every month the internet expands the pool of leisurely distractions with new digital tools. Today, more than half of the world's population has access to the internet. We use smartphones, tablets, laptops and social media to stay connected with each other and the world around us. Seeing and experiencing culture is now possible for everyone online.

Culture heritage organizations (referred to below as CHOs) are taking advantage of this evolution by experimenting with online exhibitions, virtual tours and interactive visualizations. Culture lovers can browse digital collections, view and download images, often in high resolution. Social media has become a vital part of customer engagement. Metadata and images are increasingly open and interoperable to allow creative reuse. Crowdsourcing initiatives encourage visitors to interact with the digital content, making them co-authors of new digital resources.

The Covid pandemic seems to have significantly increased the level of digital activity of CHOs. A survey carried out in the spring of 2020 by the Network of European Museum Organizations, answered by nearly a thousand professionals from forty-eight different countries, shows that almost 70% of museums increased their online presence since the closing of their museum<sup>1</sup>. During the pandemic, more than 40% of respondents noticed an increase in online visits to various digital services, including virtual exhibitions and

online collections<sup>2</sup>. Another survey carried out by Axiell echoes these findings: more than 60% of respondents affirmed that the pandemic has seen a rise in remote museum experiences and that the two main priorities for investment in 2020 were digitizing content and digital services<sup>3</sup>.

As a result, CHOs face continual technological innovation, changing customer expectations and new issues such as digital copyright. CHOs have been encouraged to redefine their mission statement and business strategy to focus more on digital technologies enabling stronger understanding of customers and deeper audience engagement<sup>4</sup>.

This paper examines how *digital transformation* has been incorporated in the organizational practices of Belgian CHOs. The questions we are interested in are:

- How is digital transformation managed in CHOs in Belgium (*leadership*)?
- How are the changes triggered by digital transformation dealt with in the organization (*change management*)?

In the first part of this paper we examine the concepts of digital transformation and digital strategy and how this can lead to new perspectives on business models in CHOs. We also explain the notion of change management, a process that comes into play when new technologies are implemented in an organization.

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1 NEMO 2020, p. 12.

2 NEMO 2020, p. 14.

3 Axiell 2020, p. 10.

4 Nash et al. 2016.

In the second part we present the results of a short survey enabling us to assess the digital maturity of CHOs in Belgium. The survey was conducted in 2020 with respondents from twenty-three CHOs in Flanders, Wallonia and Brussels. The survey contains questions about digital transformation, digital strategies and business models or organizational visions; project and change management; time and resources allocated to digital transformation; and management support.

## Part I - Digital Transformation and Strategy, Business Models and Change Management

### Digital Transformation

The concept of “digital transformation” was first coined in 2011 by Capgemini Consulting and the MIT Center for Digital Business. It referred to *the use of technology to radically improve performance or reach of enterprises*<sup>5</sup>. Since then, many new definitions have been proposed. Gregory Vial describes digital transformation 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<sup>6</sup>. In science and technology, digital transformation seeks to produce a better, faster and more innovative way of pursuing business as well as social and economic development<sup>7</sup>.

Digital transformation is also a key principle of Europeana’s strategic plan 2020-2025, focusing on the *empowerment of the cultural heritage sector in its digital transformation*. Priorities include strengthening infrastructure, improving data quality and building capacity<sup>8</sup>. Europeana proposes the following definition of digital transformation for the cultural and creative sectors:

*Digital transformation is both the process and the result of using digital technology to transform how an organization operates and delivers value. It helps an organization to thrive, fulfil its mission and meet the needs of its stakeholders. It enables cultural heritage institutions to contribute to the transformation of a sector powered by digital and a Europe powered by culture*<sup>9</sup>.

In short, digital transformation calls for CHOs to examine which digital technologies exist and how they

can be applied in various services of the organization to increase social and cultural value (for example, using digital technologies to attract new audiences or enhance user engagement). This also means that digital transformation is not a one-off activity or a checkbox that can be ticked off once and for all: digital transformation necessitates continual adaptation to a constantly changing environment<sup>10</sup>.

Digital transformation is also about how the organization successfully integrates digital tools and processes in *all the activities and departments of an organization*. De Coen, Van Hoed and Somers suggest that digital transformation has a direct impact on three levels<sup>11</sup>:

- **Strategy:** It is the board [of a CHO] that decides to what extent a digitization project will be implemented in the business strategy and how this will be organized. The board’s decisions will determine the digital transformation processes in the short, medium and long term.
- **Human Resources:** HR managers have a key role as managers of transformation and change.
- **Operational:** The integration of digital processes influences the business model of a CHO. As a result, the organizational structure and processes undergo changes as well.

Digital transformation should be considered a *mindset* for staff and management<sup>12</sup> or should become a *philosophy* for the entire organization<sup>13</sup>. Because of its impact on organizations, *leadership* and *change management* are important aspects of successful digital transformation.

### Digital Strategy

The specific digital activities of an organization can be written down in a *digital strategy*. A *digital strategy* determines which digital changes are needed in an organization and what steps are necessary to achieve such change<sup>14</sup>. Digital strategies can be established for one or more services in the organization, depending on the needs of specific stakeholders.

A digital strategy is not limited to an assessment of the technological tools to digitize and valorize collections: it is also about how collection management systems and other technical infrastructure are implemented and maintained, how collections are preserved on a short- and long-term basis, how digital literacy among staff is increased, what kinds of specific rights statements are applied to digital data, which open-access policy is put in place for the publication of scientific resources, how social media is used to

5 Westerman et al. 2011, p. 5.

6 Vial 2019.

7 Russo Spena and Bifulco 2021, p. 1.

8 <https://pro.europeana.eu/page/strategy-2020-2025-summary>.

9 McNeilly and Ter Burg 2021.

10 Kane 2017.

11 De Coen, Van Hoed and Somers 2019, p. 8.

12 Ludden and Russick 2020.

13 Van Oost 2017.

14 Beynon-Davies 2019, p. 26.

communicate with the public, and so on.

The inDICEs project<sup>15</sup> measures the impact of digital culture with tools and guidelines. It stresses the importance of developing a comprehensive digital strategy at the institutional level that involves all aspects of the operations, from preservation to audience development and user engagement<sup>16</sup>. A digital strategy should include a *digitalization workflow* and a *participatory workflow*. Some of the guidelines describe an assessment of the needs of different departments in CHOs, alignment with regional or national requirements, the publication of a summary of the strategy in order to document the digital maturity of the organization, a capacity-building framework, and strong online community management<sup>17</sup>.

There is often some confusion in CHOs regarding the concepts of *digitization* and *digitalization* and the respective activities involved. In theory, “digitization is the process of converting continuous, analogue information into a discrete, digital and machine-readable format, [which] reached broad popularity with the first “mass digitization” projects”<sup>18</sup>. Digitalization is the exploitation of digital technologies to change business processes and workflows *to improve business models*<sup>19</sup>. Digitization and digitalization are both important aspects of a digital strategy.

### Business Models and Value Chains

De Coen, Van Hoed and Somers define digital transformation as an evolutionary process that leverages

digital capabilities and technologies to enable business models, operational processes and customer experiences to create value<sup>20</sup>. In CHOs, a business model can also be a *vision* or *policy plan*, for example.

Alshawaaf and Lee suggest that museums can innovate business models through digitization because digitization can create new revenue streams by combining trade and social activities. It can also deliver greater social value to a larger audience for a lower cost (for example, by providing a virtual experience)<sup>21</sup>.

The business models of commercial organizations differ strongly from those of CHOs. In the economic sector, a business model describes how a company – through digital activities – can potentially generate profit. Profit is not the main purpose of a CHO. The value in business models in CHOs is defined by how a cultural and social impact can be created or enhanced. Incorporating “the digital” in an organization should therefore not be seen as an end goal, but as a way to achieve the objectives of the CHO.

The inDICEs project claims that since the Covid pandemic, heritage institutions have felt more than ever before the impact they can have on society. By analyzing eighty-two cases of digital cultural heritage reuse – examples include showcasing cultural heritage in an online database, creating an online exhibition, reuse for educational purposes – the project wants to understand how digital cultural heritage value chains are created and sustained in CHOs. Below are some interesting findings<sup>22</sup>:

Survey results	Explanation
Almost 30% of reuse cases were developed by CHOs and 21% were produced by other institutions, mostly universities and local authorities.	CHOs are the main actors of cultural heritage data (probably because they are the owners of the objects). Only 1/5 <sup>th</sup> of reuse is carried out by others.
80% of reuse cases can be attributed to museums.	Museums are more active in the reuse of digital cultural content.
Only 16% of fully developed products or services whose specific purpose is to interact with users are developed by private companies, communities or individuals. Among those 16%, individuals are the main actors for reuse of digital cultural heritage.	A minority of interactive products and services is developed by the private sector. Individuals create more reuse cases than private groups or communities.
Sectoral divisions: 50% of reuse cases were created by some sort of public investment, 17% by non-governmental actors and 26% by private actors.	Most value created by reuse applications is the outcome of some sort of public investment.
Less than 1/3 <sup>rd</sup> of CHOs (GLAM sector) employ cross-sectoral collaboration in the process of developing reuse projects.	It is rare for CHOs to work with other sectors to develop reuse applications for digital cultural heritage.
33% of reuse cases concern providing access to digitized heritage, 22% entertainment and 20% education. Only 11% of reuse targets economic, community or political impacts.	Most CHOs invest in digital tools to showcase their collections, for instance in an online catalogue. Only a minority reuses digital content to influence community building, knowledge sharing and political decision-making or to rescue specific heritage at risk of disappearing.

15 <https://indices-culture.eu/>.

16 Truyen and Bocyte 2021, p. 35-38.

17 Truyen and Bocyte 2021, p. 38.

18 De Mauro, Grimaldi and Greco 2014.

19 Bogush 2021.

20 De Coen, Van Hoed and Somers 2019, p. 6.

21 Alshawaaf and Lee 2021, p. 597.

22 Drabczyk et al. 2021, p. 5-11.

Based on this analysis, the inDICES project proposes a *value creation framework* built around connecting with the audience and market linkages. It also suggests that CHOs should be more aware of their role in society and should do more than just make collections available online. CHOs are encouraged to collaborate in innovative projects that generate substantial added value, for example through interactive and engaging storytelling or by clearing copyright restrictions to stimulate reuse. The ambition should be to enable full use of cultural heritage data in various contexts and by different stakeholder groups<sup>23</sup>.

### Change management

Implementing digital tools and activities in an organization is not without risk. The implementation process might not be managed properly or the new technology may not have all the functionalities anticipated originally. Staff may not want to use a new tool because the technology is not user-friendly or they lack the skills to deal with them. The way in which organizations manage processes and activities that come with digital change is referred to in the literature as *change management*.

Digital changes in organizations, such as the implementation of a new tool or digital technology, often encounter resistance from staff. The literature suggests that the success of IT projects largely depends on staff attitude. Investment in information system implementation may prove to be futile if staff do not have the right attitude towards it<sup>24</sup>.

Several types of employee resistance have been documented<sup>25</sup>:

- **Opposition or revolt** comes with counter-arguments, accusations and even threats.
- **Discomposure** is predominantly non-verbal resistance. The initiators of change only sense that something is wrong in terms of the atmosphere but are not verbally informed by those affected.
- **Evasion**: If verbal resistance occurs but relates only indirectly to the object of the dispute, this is called “evasion”. Typical phenomena of this category are all forms of ridiculing or trivializing things.
- **Listlessness or withdrawal**: the least directly visible variant of resistance is listlessness, as it combines non-verbal expression with passivity. General inattentiveness, fatigue, inner emigration or actual absence from work indicate that there are problems of acceptance. This kind

of resistance can be related to burnouts, for example.

- “Discreet resistance”: the change is accepted by staff but only appearances and organizational forms change, not the substance.

If an organization encounters resistance, strategies exist to overcome them. Some of these are:<sup>26</sup>

- **Encouraging communication**: Communication is one of the decisive success factors of change management.
- **Participation**: By involving as many staff members as possible in the process of change, their motivation usually increases and resistance decreases. This includes workshops and surveys.
- **Integration with the goal to overcome differences**: The goal is always to ensure a harmonious and cooperative togetherness that accelerates change and increases productivity. This includes team-building activities.
- **Reintegration or targeted personal development**. Reeducation generally covers all personnel development measures that are implemented as proactively as possible within the framework of a planned corporate change. Depending on the nature of the change, staff are given new knowledge and additional skills, and are encouraged to adopt a different attitude. This occurs through mentoring, coaching and training.
- **Professional project management** to manage complexity successfully and involve project team members.

The cultural and creative sectors have also adopted the notion of *capacity building* or *capacity development* as a way to overcome user resistance or obstacles that obstruct digital change in CHOs. The main goal of capacity building is to empower staff and management in the process of digital transformation (cf. Europeana’s strategy baseline) in order to reach sustainable change. This can be done by improving digital skills through, for instance, cross-sectoral collaboration, community building and training sessions. Europeana’s strategy for building and implementing a capacity-building framework for supporting digital transformation is centered around 3 pillars, each providing specific tools and activities: empowering cultural heritage professionals, motivating cultural heritage professionals and driving sustainable change<sup>27</sup>.

<sup>23</sup> Drabczyk et al. 2021, p. 14-16.

<sup>24</sup> Chaudhry 2018, p. 77.

<sup>25</sup> Laudon and Laudon 2020, p. 576; Fronza and Moriceau 2008, p. 589.

<sup>26</sup> Lauer 2020, p. 119, 145, 163 and 173.

<sup>27</sup> Fallon and Ter Burg 2021, p. 6.



## Part II – Digital Transformation in CHOs in Belgium: A Survey

### Methodology

The research questions in this paper are linked to a short survey carried out in the fall of 2020. The survey focused on *change management* and *leadership* in the process of digital transformation of CHOs.

The survey questions are taken from the digital maturity assessment tool developed by PACKED (now *meemoo*), the Flemish Institute for Archives<sup>28</sup>. The tool was developed at the request of the Flemish Department of Culture, Youth and Media and was launched in 2019<sup>29</sup>. With the tool, CHOs can measure their digital maturity and compare it with other organizations in the sector. The tool is intended for a wide range of CHOs such as museums, libraries, sociocultural organizations and performing arts organizations.

The tool uses forty-seven statements in five categories to help organizations assess the digital maturity within the organization.

- **Strategy and leadership:** Do you think strategically about digital aspects in your organization? Is this embedded in the business model?
- **Interaction with target groups:** How do you use digital tools to interact with target groups?
- **Supply and services:** Can a digital service provide added value to your organization?
- **Organization and talent:** Do you manage to attract the right person to achieve your digital goals?
- **Digital processes:** Do you deal with digital evolutions in a well-considered way?

Our survey contained ten questions from the digital maturity tool and was sent to a number of federal, regional and local CHOs. The anonymous survey was completed by digital professionals from twenty-three organizations located in Flanders, Wallonia and Brussels. The questions and results of the survey can be found in Annex I.

The number of respondents can be divided in the following sectors: four libraries and archives, two research institutes, sixteen museums/galleries and one cultural heritage site. Nine respondents were situated in the Brussels-Capital Region, eleven in Flanders and three in Wallonia.

The results are analyzed according to different sections: *digital transformation and digital strategies, busi-*

*ness models and value chains, change management, project management, time and resources and management support.* The results are complemented with examples and use cases from other surveys and literature.

### Survey Results

#### — Digital Transformation and Digital Strategies

We asked the CHOs whether they *take into account the challenges and opportunities offered by digital transformation*. The results were as follows: 70% answered “yes”, 26% “not yet” and 4% “no”. This means that most CHOs understand the meaning of digital transformation and are aware of the challenges and opportunities it is creating in society.

The concept of digital transformation has been picked up by regional policymakers and expertise centers in Belgium. Reinforcement of digital transformation is mentioned as a key activity in *meemoo*'s strategic plan. In collaboration with the expertise centers *Cultuurconnect*<sup>30</sup> and *publiq*<sup>31</sup>, they want to take a leading role in developing a policy strategy for digital transformation in Flanders<sup>32</sup>. In Wallonia, the association *Musées et Société en Wallonie* recently launched a call for participation in a new program that helps museums kickstart digital transformation<sup>33</sup>.

However, CHOs in Belgium do not always inscribe an openness to digital changes in their own policy documents: 65% *formulate openness towards digital changes in their policy documents*, 26% have not yet done so, and almost one in ten have not inscribed digital changes in their policy documents and have no immediate plans to do so.

We also asked whether CHOs *adapt their digital strategy to new technologies, trends and changing legislations and the way in which they can have an impact on its digital operations*: 56% of respondents answered “yes”, 22% “no” and another 22% “not yet”. This means that a majority of CHOs take – or plan to take – an agile approach towards digital transformation and they understand that digital transformation is a continuous process.

The survey included a question about preservation strategy, which is a complementary part of a digital strategy: *does your organization have an active digital preservation strategy to preserve and make accessible important documents on a long-term basis?* No fewer than 61% of respondents have such a preservation strategy while 26% plan to implement one. More than one in ten CHOs do not have a preservation strategy for

<sup>28</sup> <https://meemoo.be/en/tools/digital-maturity-self-assessment-tool>.

<sup>29</sup> <https://www.vlaanderen.be/cjm/nl/cultuur/digitale-cultuur/zelfevaluatietool-digitaal-maturiteit>.

<sup>30</sup> <https://www.cultuurconnect.be/>.

<sup>31</sup> <https://www.publiq.be/>.

<sup>32</sup> <https://meemoo.be/en/news/the-meemoo-strategic-plan-in-summary>.

<sup>33</sup> <http://msw.be/2022/01/24/appeel-a-participation-un-nouveau-programme-aide-les-musees-a-lancer-la-transformation-numerique/>.

important documents and do not plan to develop one.

In a broader context, results from a study by Axiell – drawing on views of 120 decision-makers from the GLAM sector – show that 58% of respondents have described their institution’s digital strategies as either “still in development” or “still to come”<sup>34</sup>.

#### — Business Models and Value Chains

We asked whether respondents have *formulated a clear vision and strategy on the role that digital tools and processes play in achieving its objectives*. Only 44% of organizations answered “yes”, 26% “no” and 30% that they plan to do so. This means that currently less than half of CHOs in Belgium describe the role of digital tools and processes in a vision or a strategy with a clear link to the specific goals they want to achieve.

A study about the implementation of digital strategies and business models in Austrian galleries shows that many galleries still use digital tools merely to create “digital business cards” and do not consider changing their business models by incorporating a digital strategy and selling art online<sup>35</sup>.

As stated before, the primary goal of CHOs is not to generate profit, but to create social and cultural value (for instance, by engaging with stakeholders in a meaningful way). CHOs should identify the value that they want to create and, through the use of digital tools, map them to digital activities.

J. Russick, Senior Vice President of the Chicago History Museum, and J. Ludden, Head of Digital Experience and New Media Development at the Getty, point to another issue: CHOs are not listening to the visitors and are not balancing visitors’ needs with the needs of the organization. To combat these pitfalls, they have encouraged CHOs to collect visitor data as often as possible. Online surveys, in-person interviews and on-site kiosk questionnaires are all ways to gather feedback from the audience<sup>36</sup>.

Writing a digital vision or strategy can be a “trial-and-error” process, sometimes resulting in a change of course during the implementation phase. In Annex II, Alexander Soetaert, Digital Development Officer of the city of Bruges, shares the digital vision of the Culture cluster department. A global, all-encompassing strategy for all departments proved unworkable and eventually resulted in a vision around four core principles (Annex II).

#### — Change Management

We asked respondents whether there was *a lot of internal resistance to implementing or using new digital tools in the organization*: 70% answered “sometimes”, 22% “no” and 8% “yes”. This means that a large majority of organizations encounter at some point internal resistance to digital change in the organization. But what are the causes behind this resistance?

Since digitization often requires specific IT tools and knowledge, we can look at the literature specifically related to the implementation of IT projects in organizations. Some of the reasons encountered for resistance are: the systems are not easy to use (non-friendly interface design, for instance); the system does not meet the staff’s needs; the system is unstable, too slow or crashes regularly; users were not involved in the development or design of the new system; users lack experience working with the system or there has been a lack of communication about the new technologies or systems; staff have had bad experiences in the past; and no planning or project management exists<sup>37</sup>.

Two surveys can help us to better understand other obstacles that staff and management from CHOs encounter when developing digital activities and tools in an organization. One is a survey of 158 European organizations about the challenges and opportunities of digitalization in the tourism sector<sup>38</sup>; another is a round-table discussion with sixty-four participants from twenty-two countries, organized by the Europeana Foundation, which took place in the framework of a sense-making activity<sup>39</sup>. Below is a summary of the most important obstacles and causes of resistance mentioned by participants / survey respondents:

<sup>34</sup> Axiell 2020, p. 4.

<sup>35</sup> Habelsberger and Bhansing 2021, p. 2.

<sup>36</sup> Ludden and Russick 2020.

<sup>37</sup> Mahmood et al. 2016, p. 37-40.

<sup>38</sup> Dredge et al. 2018, p. 22-24.

<sup>39</sup> Edson and Visser 2020, p. 9-32.

Domain	Obstacles or causes of resistance mentioned by participants / survey respondents
<b>Knowledge and data</b>	Lack of data, stories and case studies about digitalization to make informed choices about new digital technologies and impact to reach people and deliver value.
	Difficulties to assess the desirable level of digitalization.
	Staff do not have the technical skills.
<b>Technology / Infrastructure</b>	Technical problems and maintenance difficulties.
	Hard to keep up with technological evolution.
<b>Value and impact</b>	Lack of examples of digital business models that work and deliver value and the tools to develop them.
	Sense of failure to make a coherent, convincing case for our work, in terms of social value, climate action and diversity.
	Not discussing enough with diverse voices to challenge our values and culture, lack of diversity among staff.
	<i>"The sector was a failure after Covid-19, a huge amount of digital content was pushed to the public without really targeting, for who, for what, why."</i>
<b>Time and resources (staff/money)</b>	Overall lack of time and resources.
	Impossible for CHOs to attract talent from other sectors.
	A "catch-22" (a paradoxical puzzle) regarding the relation between digital transformation initiatives and the funding needed to create them (during pandemic).
<b>Change management and capacity building</b>	Sense of imbalance between traditional ways and digitalization (should be complementary).
	The smaller the organization, the harder it is to implement digital tools.
	Intra-organizational divide between digitally literate and illiterate staff.
	Reevaluation of the way we work: <i>"In many ways, we are working in an analog way with digital tools."</i>
	Need for training and support and life-long learning.
	Lack of collaboration between organizations; networks are often too late to respond, not agile enough.
	Need for space for experiment and innovation.
<b>Leadership</b>	Unable to prove [to leaders] the impact of digital innovation.
	Shortage of people who want to experiment and take risks.
	Organizations need to be managed more strategically.
	Funders and executives often need evidence of successful digital transformation projects before they commit to supporting new digital projects.
	Following Covid-19, CEOs are more careful with spending money, middle management does not want to take risks.
	Bureaucracy does not allow an agile, fast way of working.
	[Digital] staff is not in a position to make decisions except for the projects they directly manage.

The above table shows that user resistance and/or obstacles can occur in CHOs because of a lack of technical and/or digital knowledge and training, because there is not enough time and/or money to manage the digital changes, and because CHO management has not developed a clear vision or strategy regarding digital transformation.

Our survey also contains an indicator about the level of communication towards staff in CHOs in Belgium: we asked whether *everyone who works at the*

*organization understands the vision and strategy around digital tools.* The results show that more than half of staff (52%) do not think all staff understand the vision and strategy, 39% say that staff do not understand yet, so we imagine that the organization will communicate or organize capacity-building activities about the vision and strategy in the future. Only 9% say that all staff are well informed about the vision and strategy around digital tools used in the organization.

In addition to these results, the Axiell survey



mentions that only 10% of respondents claim the digital strategy is referenced regularly by digital and other practitioners or staff<sup>40</sup>.

### — Project Management

Research suggests that there is a high failure rate among information systems projects. In nearly every organization, such projects take much more time and money to implement than originally anticipated, or else the completed system does not work properly. The development of a new system must be carefully managed and orchestrated, and the way a project is executed is likely to be the most important factor influencing its outcome<sup>41</sup>.

The survey includes a question that can be linked to the way digital tools and processes are managed in the organization. We asked whether the organization *works actively with new ideas about digital transformation: does the organization prioritize new ideas, and works out certain ideas from concept to implementation?* No fewer than 61% of respondents answered “yes”, 22% “no” and 17% that the organization is not prioritizing ideas yet but plans to do so in the future. This result implies that most organizations are integrating new tools and processes in the organization in a project-management sense.

Professional project management includes the use of planning tools, such as a GANTT or PERT chart and a risk assessment tool, but also the implication of several teams within the organization. Based on the organizational structure as suggested by Laudon and Laudon<sup>42</sup>, we propose the following project management structure for the professional execution of digital projects in CHOs:

- **A corporate strategic planning group** that develops the digital strategy and business plan of the organization. In CHOs, this group may consist of the organizational director, vice director, financial director and principal advisers of the organization (such as the board of directors).
- **An information systems steering committee**, responsible for the development of the system (for instance, selecting the specific information systems to be implemented) and supervising the operation. It is composed of department heads and senior advisers of the organization.
- **The project team**, supervised by a project manager, responsible for the project execution. In CHOs, this team may consist of (inhouse or external) systems analysts and programmers from the IT department, database and collection

management specialists, and end-user specialists such as staff from the education department.

- **A change agent** who acts as the catalyst for the entire change process and ensures that all the parties involved accept the changes generated by the new system. The change agent should be an expert in management and communication skills.
- **End-users team:** A team of external stakeholders, volunteers or staff from all levels of the CHO. User participation in the design and operation of information systems has several positive results: for instance, they have more opportunities to mold the system according to their priorities and to control the outcome, or they are more likely to react positively to the completed system because they have been active participants in the change process.

### — Time and Resources

We asked CHOs in Belgium whether the organization *provides its employees with time and resources to develop new ideas about digital transformation that can improve its operations or certain work processes:* 61% answered “yes”, 22% “no” and 17% that the organization does not yet provide staff with time and resources but plans to do so in the future. Many CHOs understand that it is important to involve staff in the process of digital transformation: staff can develop new ideas and propose them to the management, who takes the ideas to a next level.

We also asked whether the *organization is making the necessary time and resources available to manage digital changes within the organization:* 65% of respondents answered “no” and 35% “yes”. Most organizations are thus not allocating – or are unable to allocate – sufficient staff and money to manage the integration of new or the updating of existing information systems or technological tools in the organization.

The issue of financial constraint is well known and is an issue not only in Belgium. The Axiell study found that almost 50% of respondents agreed or strongly agreed that their organization only supported allocating resources to new initiatives if the project was grant funded. Also, 50% of respondents agreed that they are in a constant state of flux with unpredictable resources<sup>43</sup>. Many survey respondents cited the *ad hoc* nature of their digital effort. They note that the content for their collection is “created in bursts and driven by short-term projects”, dependent on cyclical funding rather than part of a structural, strategic embrace of digital transformation at their institution<sup>44</sup>.

CHOs in Belgium have been able to set up many

<sup>40</sup> Axiell 2020, p. 20.

<sup>41</sup> Laudon and Laudon 2020, p. 559.

<sup>42</sup> Laudon and Laudon 2020, p. 569-570.

<sup>43</sup> Axiell 2020, p. 20.

<sup>44</sup> Axiell 2020, p. 6.

successful cross-sectoral long- and short-term projects to digitize and valorize heritage stored in museums, libraries, archives and research institutes. National funding schemes include the DIGIT program<sup>45</sup> and the BRAIN research projects<sup>46</sup> of the Belgian Science Policy and projects granted by the Flemish Government, such as the *Inhaalbeweging Digitale Collectiedata*<sup>47</sup> and the *Culturele Erfgoedprojecten op landelijk en international niveau*<sup>48</sup>.

Many of these projects relate to (basic) digitization activities, namely creating digital content from physical collections. However, it is only after this work has been completed and data (images, metadata and documents) are clean, qualitative and standardized that innovative reuse cases and applications are possible.

There also seem to be obstacles when CHOs are partners in advanced (research) projects: CHOs are restrained because they cannot deliver “big data”, the quality of the data is not high enough (image resolution, for instance), the infrastructure is too complicated to implement in-house, the project results cannot be translated to non-researchers, or financing is not foreseen after the end of the project to guarantee sustainability of the project results. Project results rarely form the basis of a digital strategy or a new approach to a business model, vision or policy plan.

### SMEs

It should also be noted that there is a “technological and managerial” divide between large and small CHOs. Within the creative and cultural sectors (CCSs) in the EU, around 90% of the enterprises are small and medium-sized (SMEs). It is often these CCSs that struggle with implementing innovative activities because of financial constraints<sup>49</sup>. It has also been observed that SMEs are generally not equipped to cope with business requirements on a technological and managerial level. As stated by Pelletier and Cloutier, a successful and consistent digital transformation requires investing not only in IT artifacts and infrastructure (such as hardware, software and networks), but also in strategic, intellectual, structural, formal and informal, social and cultural dimensions<sup>50</sup>.

Europeana suggests that there are solutions for CHOs that do not have the budget to innovate, such as prototyping, partnerships, crowdfunding, resource reallocation, strategic planning and execution: “think big, start small, move fast approaches, and good-old-fashioned leadership and persuasion can be used to

spark the process of investment and experimentation when both funds and experience are in short supply”<sup>51</sup>. It has also been suggested that more cooperation between (digital) start-ups and SMEs can offer possibilities for digital transformation and innovation of SMEs<sup>52</sup>.

### — Skills and Expertise

Embracing digital strategy comes with new challenges and successes. Determining how to use digital technologies and integrate them into the digital ecosystem is one of the biggest challenges. The merging of the technological industry with the humanist community has led to new professions in the field of heritage. At the moment, there is a lack of qualified personnel in CHOs. A new generation of heritage specialists trained to lead the digital transformation is needed. This can work in different directions. It is crucial that management supports the recruitment of new experts and professionals who combine art historical and technical background or experience, for instance. For staff, on the other hand, it will be crucial to maintain a flexible attitude and update work and digital skills to achieve common goals<sup>53</sup>. Communication, content production, big data analysis and user experience are some of the skills that have grown in importance in digital strategies.

The Museum Sector Alliance (Mu.SA) organized a three-year research project to determine the current gap between training and education in CHOs, with a specific focus on how to face digital transformation successfully. The goal of this research was to formulate new European job profiles within museums. Through a thorough analysis of current needs in museums in Greece, Italy and Portugal and with the help of both quantitative and qualitative research, four new profiles were suggested<sup>54</sup>:

- digital strategy manager
- digital collections curator
- digital interactive experience developer
- online community manager

In our survey we also polled the technical skills and expertise present in CHOs. We asked whether organizations *guarantee that there is sufficient expertise (in-house or via external partners) to manage digital tools or changes within the organization*. As mentioned above, the lack of technical expertise in CHOs has long been an issue, mainly because public service organizations fail to attract computer scientists as they cannot

45 [https://www.belspo.be/belspo/digit/about\\_en.stm](https://www.belspo.be/belspo/digit/about_en.stm).

46 <https://www.belspo.be/brain-be/>.

47 <https://www.vlaanderen.be/cjm/nl/cultuur/cultureel-erfgoed/subsidies/projects/subsidies/projecten-inhaalbeweging-digitale-collectiedata>.

48 <https://www.vlaanderen.be/cjm/nl/cultuur/cultureel-erfgoed/subsidies/projects/subsidies/cultureel-erfgoedprojecten-op-landelijk-en-internationaal-niveau>.

49 Dümcke, Jaurová and Inkei 2014, p. 4.

50 Pelletier and Cloutier 2019, p. 4974.

51 Edson and Visser 2020, p. 31.

52 Röhl and Engels 2021, p. 381.

53 Dibitonto et al. 2020, p. 232.

54 <http://www.project-musa.eu/blog/2020/04/07/mu-sa-online-conference-the-future-of-museum-professionals-in-the-digital-era-april-15-2020-1000-am-200-pm-cest/>.

offer the same salaries as the private sector: 65% of respondents answered “no”, 35% “yes”. A majority of institutions thus struggle to attract skilled IT staff or acquire technical skills themselves that come with digital transformation.

Federal, regional and local organizations continue to establish frameworks to attract skilled ICT personnel. The Flemish Government provides specific framework contracts so that entities can recruit ICT profiles for the execution of specific projects at market-conform prices<sup>55</sup>. The Federal Government launched the Egov Select recruitment agency in 2001 to fill in vacancies for IT staff in Federal Government institutions<sup>56</sup>. However, the survey suggests that there is still progress to be made on this front.

For staff and management, many interest and expertise centers in Belgium offer capacity-building activities, such as the training courses around digital strategy for cultural heritage cells organized by *meemoo* and the projects to enhance digital competences organized by *Digital Wallonia.be*. Knowledge hubs have been created at the Royal Library (Digital Research Lab)<sup>57</sup> and in the City of Mons (the MuseumLab<sup>58</sup>). The Europeana Foundation recently set up a framework and organized specific activities to enhance capacity building in the cultural heritage sector<sup>59</sup>.

### — Management Support

Finally, it is important to emphasize the support and commitment of CHO management when it comes to digital changes in CHOs. For instance, information systems or a new technology may not be used or implemented successfully in an organization because the directors or department heads are not making enough effort to support or commit to new systems. Research suggests that, if an information systems project has the backing and commitment of management at various levels, it is more likely to be perceived positively by both users and the technical information services staff. If a manager considers a new system a priority, the system will more likely be treated that way by staff<sup>60</sup>. It has even been suggested that actively engaged executive sponsors are the leading factor in the success of the project<sup>61</sup>.

The issue of strong leadership has been lucidly articulated by J. Luddon (Getty) and J. Russick (Chicago History Museum):

“The first imperative to advance digital transformation is to provide both strong senior leadership and inspire and support staff engagement with digital technology. It is essential that an institution-wide digital strategy be woven into the fabric of the entire organization. Ultimately, digital transformation must start at the top. This may be frustrating for some to hear. Motivated staff may initiate the change but significant budget reallocation and comprehensive commitment to organizational change is necessary. This type of systematic, DNA-level organizational transformation needs to come from the CEO/Director’s office. Senior leadership must do more than just support change. They need to be a part of the change. Clearly a strong partnership with the staff is essential so that everyone is ready to take risks, forge new working relationships, and embrace new ideas and new ways of working. Digital transformation is about more than just creating a new website, an AR experience, or even a sophisticated metadata management system. It’s building the capacity and commitment to work in new ways, embrace new goals, and leave some old ways of thinking, behaving, and producing behind in an effort to be a relevant and successful museum in the 21st century”.<sup>62</sup>

## Conclusion

This paper investigates how digital changes, induced by digital transformation, are managed in CHOs in Belgium. Digital transformation in CHOs is the process of continuously adapting digital activities and tools with the goal to create social and cultural value for end-users. Digital transformation has an impact on the business model, vision or policy documents of a CHO, with digital activities and tools being mapped to specific objectives set out by the CHO. The practical and managerial requirements of digital tools and activities can be written down in a digital strategy.

The literary research is supported by a survey with questions taken from the digital maturity assessment tool developed by *meemoo*. A total of twenty-three CHOs from Flanders, Brussels and Wallonia participated in the survey. Although more indicators are needed to fully analyze the results, the survey is a starting point to assess the current state of digital transformation in CHOs in Belgium.

A majority of the participating CHOs take into account the challenges and opportunities offered by digital transformation and formulate an openness towards digital changes in their policy documents. One in four mention that this is something the organization

55 <https://overheid.vlaanderen.be/ict/ict-diensten/raamcontract-voor-technische-ondersteuning-door-ict-profielen>.

56 <https://egovselect.be/nl>.

57 <https://www.kbr.be/en/projects/digital-research-lab/>.

58 <http://polemuseal.mons.be/fr/museum-lab/>.

59 Fallon and Ter Burg 2021, p. 6.

60 Laudon and Laudon 2020, p. 578.

61 Project Management Institute 2017.

62 Ludden and Russick 2020.

wants to do in the future. While 56% of CHOs take an agile approach towards digital transformation and adapt their digital strategy based on new technologies, trends and changing legislations, 61% have a digital strategy for the preservation and accessibility of important documents on a long-term basis.

Only 44% of respondents declare that they have a clear vision and strategy of the role that digital tools and processes play in achieving the objectives of the CHO and 30% plan to do this in the future. No fewer than 61% say that management works actively with future digital ideas from staff, prioritizes them and works ideas out from concept to implementation.

Most participating CHOs encounter internal resistance when digital tools are implemented in the organization (70% sometimes and 8% always). Also, more than half of participating CHOs think that staff do not understand the vision and strategy around digital tools, 39% say that staff do not understand yet, and only 9% say that staff understand the vision and strategy around digital tools.

Most CHOs provide staff with time and resources to develop new ideas that can improve operations and work processes or plan to do so in the future, but almost one in four do not. However, 65% of respondents say that the organization does not provide the time and resources necessary to manage digital changes within the organization, claiming that there is not sufficient expertise in-house or via external partners to manage digital tools or changes within the organization.

Based on this survey, we can conclude that CHOs in Belgium are aware of the opportunities of digital transformation and are willing to implement digital tools and activities to reach their objectives. However, this willingness does not always translate into a clear strategy and is not always aligned with the objectives of the CHO. Digital transformation does not mean replacing all “analog” activities with digital ones or offering as many virtual tools as possible. Digitization of cultural content should not be the end-goal. Digital transformation in CHOs is a process to create social and cultural value, depending on the mission of the CHO, for example: How can we use digital tools to increase the online experience of our users? To disseminate scientific knowledge about Belgian cultural heritage? To increase user involvement and create a sustainable relationship? In that sense, it is important to know who your end-users are and what they need.

Digital change can create disruption, division and resistance in the organization. CHOs are often unable to handle digital changes in a professional manner because of budget restrictions, lack of digital or technical knowledge, complex organizational structure or missing digital strategies or vision. Some of these obstacles can be overcome, for example by imposing a project management structure when new digital tools are implemented, so that staff are more involved and

willing to support the change. Staff and management can benefit from capacity-building activities, such as training sessions organized by national or international interest groups and expertise centers, networking events and cross-sectoral collaborations. Finally, research shows that digital transformation is only successful – and digital maturity can only be achieved – when CHO leaders fully understand and support digital changes in their organization. They are the first stakeholders that need to be convinced of the opportunities that lie ahead for CHOs in this digital age.

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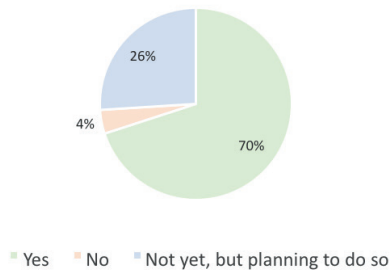
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## ANNEX I SURVEY RESULTS

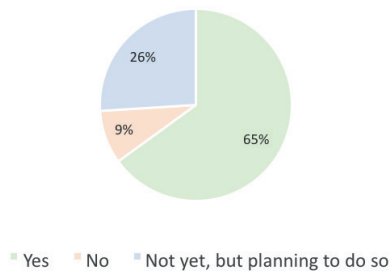
1. My organization has a vision that takes into account the challenges and opportunities offered by the digital transformation in society.

Vision, challenges and opportunities



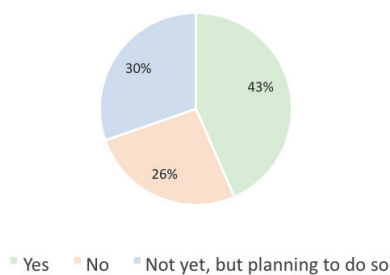
2. My organization makes it clear in its policy documents that it is open to digital changes.

Open to digital changes in policy



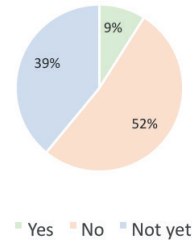
3. In its policy documents, my organization has formulated a clear vision and strategy on the role that digital tools and processes play in achieving its objectives.

Vision and strategy in policy documents



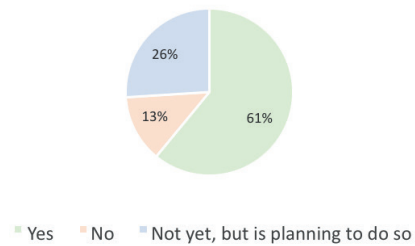
4. In my organization, everyone who works there professionally understands the vision and strategy around the digital tools of the organization.

Employees understand vision and strategy around digital tools



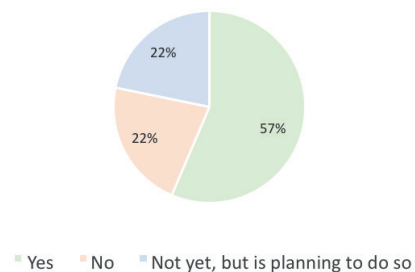
5. My organization has an active digital preservation strategy that has been translated into actions to preserve and make accessible important electronic documents on a long-term basis.

Active digital preservation strategy for documents



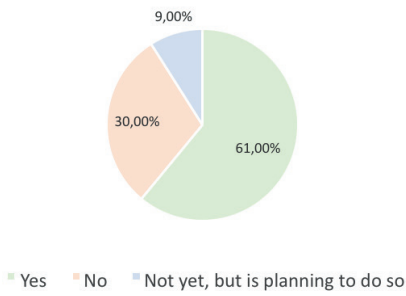
6. My organization adapts its digital strategy to new technologies, trends and changing legislation and to the way in which they can have an impact on its digital operations.

Adapting to trends, technologies and legislation



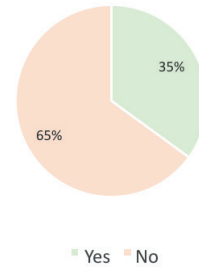
7. My organization provides its employees with time and resources to develop new ideas about digital transformation that can improve its operations or certain work processes.

Time and resources to develop new ideas



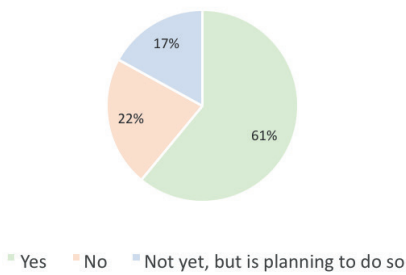
10. My organization makes the necessary time and resources available to manage digital changes within the organization.

Time and resources to manage digital change



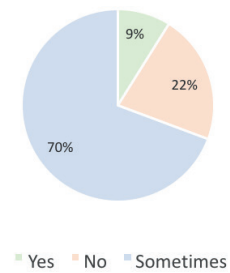
8. My organization works actively with new ideas about digital transformation. It prioritizes them and works out certain ideas from concept to implementation.

Prioritizing ideas



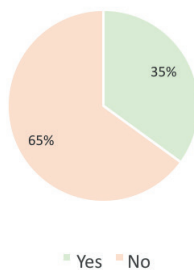
11. There is a lot of internal resistance to implementing or using new digital tools in our organization.

Internal resistance



9. My organization guarantees that it has sufficient expertise (in-house or via external partners) to manage digital tools or changes within the organization.

Sufficient expertise



## ANNEX II

### DIGITAL VISION OF THE CULTURE CLUSTER CITY OF BRUGES

#### Explanatory Note on the Digital Vision of the Culture Cluster – City of Bruges

By Alexander Soetaert, Digital Development Officer (Cultural Policy Cell)

A few years ago, the city of Bruges grouped the cultural and cultural heritage departments under the Culture cluster. This new organizational structure stimulated the desire to consult and collaborate more widely on digital challenges.

After the needs were identified, an initial joint strategy was drafted. Part of this was the start of some new work groups to encourage knowledge sharing and contacts between the departments. Within the work groups, it appeared that the digital functioning, priorities and available resources of the departments differed greatly. The Culture cluster includes museums, the public library, the city archives, the cultural center and the archaeological department. Converting the existing needs into concrete action points for all departments together ultimately proved to be unfeasible.

As an alternative, all departments aligned themselves around a shared vision of digitization. That vision was built around four core principles: customer orientation, sustainability, feasibility and openness. They are not intended as concrete goals or action items, but rather as recommendations and good practices. Customer orientation is the main principle and ensures that we keep the goal of digital development in mind: to offer the best possible department to end-users. Thanks to a monthly “digital strategy” work group, the experts from the various departments keep in close contact with each other.

In addition to the shared digital vision, each department has, or will soon have, its own digital strategy. This strategy takes into account the four core principles and defines objectives and action points for each department. When drawing up the strategy, the departments can count on the help of the digital development officer. In this way, each department can develop a realistic digitization policy tailored to its own needs and resources.

#### Digital Vision of the Culture Cluster of the City of Bruges

The digital vision of the Culture cluster aligns with the two key points of the citywide digital strategy within the framework of the 2019-2024 policy program: (1) customer orientation is central and (2) digital first, not

digital only.

In its vision, the Culture cluster also sets its own emphases for the domains of culture and heritage, based on current challenges and experience with digital developments.

#### — Customer-oriented

- We digitize to strengthen our customer-oriented service, to meet the needs of customers, visitors or users and to better reach certain target groups.
- We strive to engage with end-users before, during and after the development of digital applications and provide tools to monitor their experiences.
- We work with different departments when there are opportunities and when there is willingness, but independently when there are specific needs or when it enhances user-friendliness. Both separate systems per department and shared systems can therefore be the right choice.

#### — Sustainable

- We strive to minimize the number of systems, applications, platforms, websites and apps. We give priority to basic digital infrastructure.
- We approach connections between systems in a critical way: are they necessary, efficient and sustainable?
- In the contracts with suppliers, we pay sufficient attention to maintenance and support and provide for the possibility of evaluating the customer-related services and extending them if necessary.
- At the start of new digitization projects, we provide a standard solution for the sustainable preservation of the digital files.
- We are committed to broad internal knowledge-sharing through various work groups and organize an annual network event around digitization.
- For each product or system, we document key processes, internal responsibilities and supplier contact information.

#### — Feasible

- Technical: we make maximum use of existing systems and applications. New developments or customizations are expensive and labor-intensive and often prove less sustainable.
- Financial: the departments within the cluster provide budget for maintenance, support and further development of their existing systems. In addition, a budget is available at the cluster level to support one-off digital developments. The digital strategy work group is looking at how best to use this budget.
- Staff: we pay attention not only to the effort

required in dealing with new developments but also to product management. We align our digital ambitions accordingly.

— Open

- We share our data and images by default with an open license (for instance, CC-BY or CC0), unless copyright restrictions apply. We pay attention to documenting and registering these copyrights (for instance, with new photography and digitization assignments, in volunteer contracts).
- We follow the legal regulations on data protection (GDPR) and privacy and pay due attention to this when developing new applications.
- We keep in close contact with organizations such as *meemoo*, *publiq*, *Flemish Art Collection*, *Cultuurconnect* and *Digitaal Vlaanderen*. We actively share our knowledge and expertise within these networks, but also closely monitor whether solutions developed at the Flemish level can also be rolled out in Bruges.





## Samenvatting – Résumé – Abstract

**NL ::** In deze paper wordt onderzocht hoe Belgische erfgoedinstellingen omgaan met digitaal leiderschap, digitale strategie en veranderingsmanagement als gevolg van de digitale transformatie. Dit onderzoek is gebaseerd op een literatuuronderzoek en een bevraging gericht aan personeel werkzaam in Belgische culturele erfgoedinstellingen. Op basis van onze bevraging stellen we vast dat, hoewel digitale transformatie voor iedereen een grote prioriteit heeft, er op verschillende vlakken nog vooruitgang nodig is om van een volledige digitale maturiteit te spreken.

**Trefwoorden:** digitale maturiteit; digitale transformatie; digitale strategie; veranderingsmanagement; culturele erfgoedinstellingen.

**FR ::** Cet article envisage la manière dont les organisations du patrimoine culturel en Belgique abordent les questions de leadership numérique, de stratégie numérique et de gestion du changement soulevées par la transformation numérique. Cette recherche est basée sur une révision systématique de la littérature et sur une petite enquête menée auprès des professionnels du numérique de ces institutions. Sur la base de notre enquête, nous avons constaté que, bien que la transformation numérique soit une priorité pour tous, il reste du chemin à faire pour atteindre une pleine maturité numérique.

**Mots-clés:** maturité numérique ; transformation numérique ; stratégie numérique ; gestion du changement ; institutions du patrimoine culturel.

**EN ::** This paper examines how cultural heritage organizations in Belgium are tackling the issues of digital leadership, digital strategy and change management raised by digital transformation. This research is based on a systematic literature review and on a small survey conducted among digital professionals from these institutions. Based on our survey, we found that, although digital transformation is a priority for everyone, there is still progress to be made for full digital maturity to be achieved.

**Keywords:** digital maturity; digital transformation; digital strategy; change management; cultural heritage institutions.