

Review of digital transformation tools and paradigms for organisational impact

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Last updated 26 May 2022





Introduction

In Mingei, a key area of our impact evaluation work has been to assess the organisational impact experienced by our heritage crafts partners and technology partners alike. For a forward-reaching project in the digitisation and digital representation of heritage crafts, we can think of organisational impact as digital transformation.

In the heritage sector, digital transformation has been a buzzword now for many years. In parallel with attempts to define digital transformation, like the definition developed by Europeana relating to the discoverability of heritage collections, we have seen more and more practical tools emerge that aim to conceptualise, push forward and measure digital transformation. Yet there are few overviews of what was out there and what is designed for whom and when.

To push forward our thinking on organisational impact in Mingei we conducted a rapid review of what's out there at the moment. We can't claim that it's the most comprehensive, but we do hope that this collection helps to stimulate even more thinking about organisational impact and digital transformation, long after Mingei finishes in May 2022.

Methodology

Nine models were reviewed, most of which related to cultural heritage or culture. Other models were considered but evaluated as not being relevant to digital cultural heritage, but one model not relating to culture is evaluated - Forrester's Digital Maturity Model 5.0.

Resources reviewed in this document fall roughly into two categories of self-assessment tools and conceptual paradigms. When applicable, hypothetical information was inputted to test the tool and generate results that could be evaluated and presented below.

'Maturity modeling can help the organization to reflect on its practice, analyze its challenges, and contextualize its progress.'

Price and James (2018)





Overview

We present an overview of nine resources classified in two categories, as follows.

Digital self-assessment tools

1. Focus Model (DEN, Netherlands)
2. Self-evaluation tool - digital maturity (Meemoo and the Flanders Department of Culture, Youth and Media, Belgium)
3. Digital Culture Compass Tracker (multiple stakeholders, UK)
4. DASH Survey (multiple stakeholders, UK)
5. ENUMERATE Self-Assessment Tool (inDICES project)
6. Microsoft Education Transformation Assessment Tool for Libraries and Museums
7. Digital benchmarks for the culture sector (Collections Trust, UK)

Paradigms of digital transformation/digital maturity

8. Chicago History Museum seven perspectives (Ludden and Russick, 2020)
9. Forrester's Digital Maturity Model 5.0

Several other digital transformation/digital maturity paradigms are then referred to, after which point, a preliminary analysis of the main features of the reviewed resources are presented. The document ends with short conclusions and a bibliography.



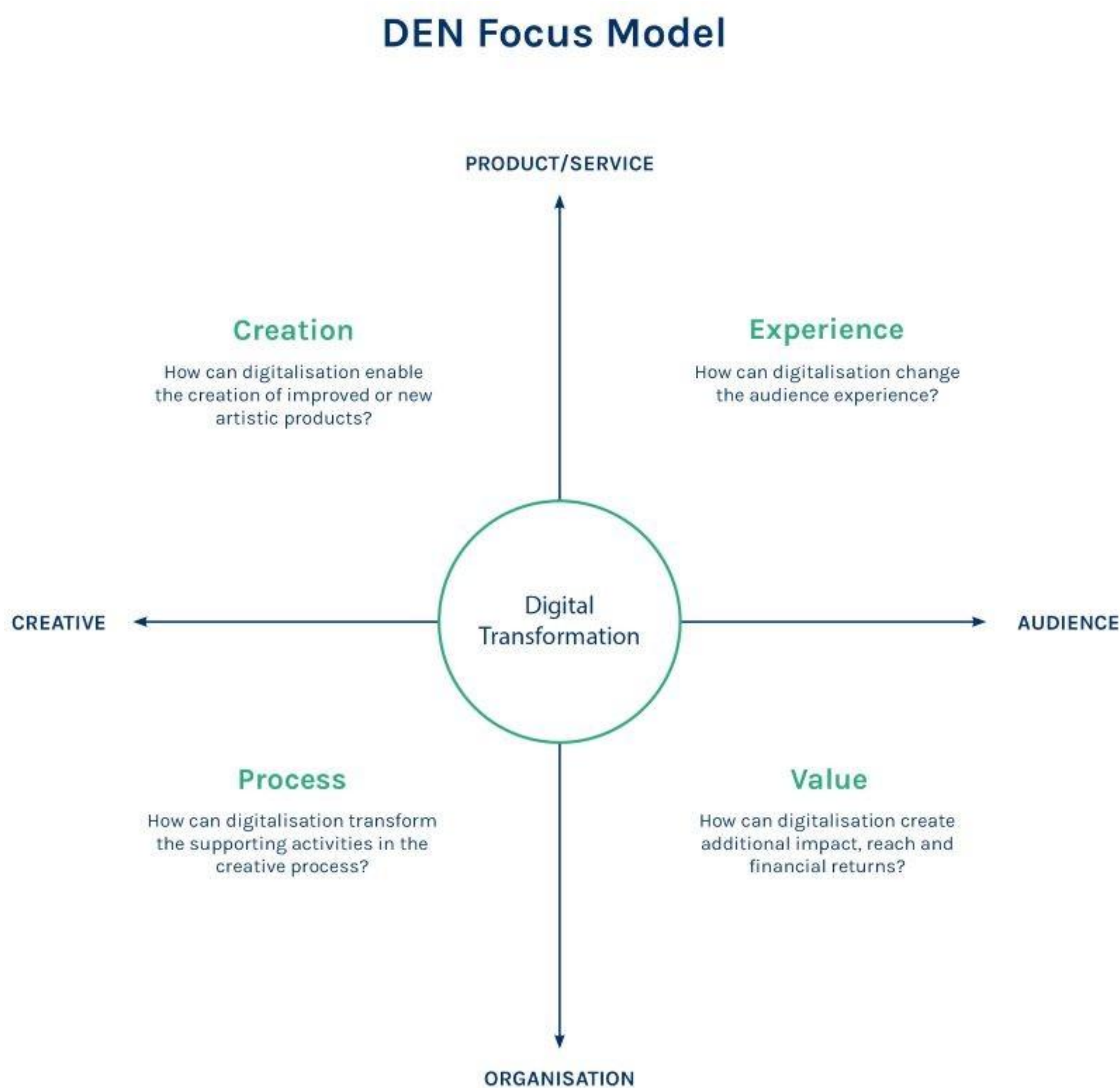
Focus Model (DEN, the Netherlands)

Country of origin: Netherlands

Tool status: published

Weblink: <https://focusmodel.den.nl/en/intro>

'The DEN Focus Model is a practical tool that provides insight into the digital needs and wishes of culture-producing institutions.' [DEN Focus Model](#)



Focus Model

Five digital maturity categories:

- **Passive (lowest)** - not exploring potential, not taking action
- **Occasional** - digital opportunism but no systematic or whole-organisation approach and little reflection/growth
- **Experimental** - systematic approach, growth/reflection
- **Partial** - strong in many ways, weak in others; strategy in place, not holistic
- **Integrated (highest)** - digital embedded in organisation, communication and whole organisational buy-in

How it works

Digital maturity is measured against a matrix with the following axes: product, company, public and maker. This creates four quadrants in which the organisation's activities are mapped according to creation (new offerings and creative engagement with the content), value (resulting impact on the organisation and society, e.g. relationships with stakeholders), experience (of the public with the content), process (organisational impact and improvements/innovation in processes).

Comments

- Available in Dutch and English
- Results can't be saved but can be downloaded as a PDF
- Different activities can be compared to each other, with different activity types then mapped across the four quadrants
- Users are from the broader cultural and creative sector, including heritage
- Works without registration but you must give your organisation's name
- Not time-consuming, quite a fast process
- Offers guidance and a link to find further support
- No option to compare progress over time

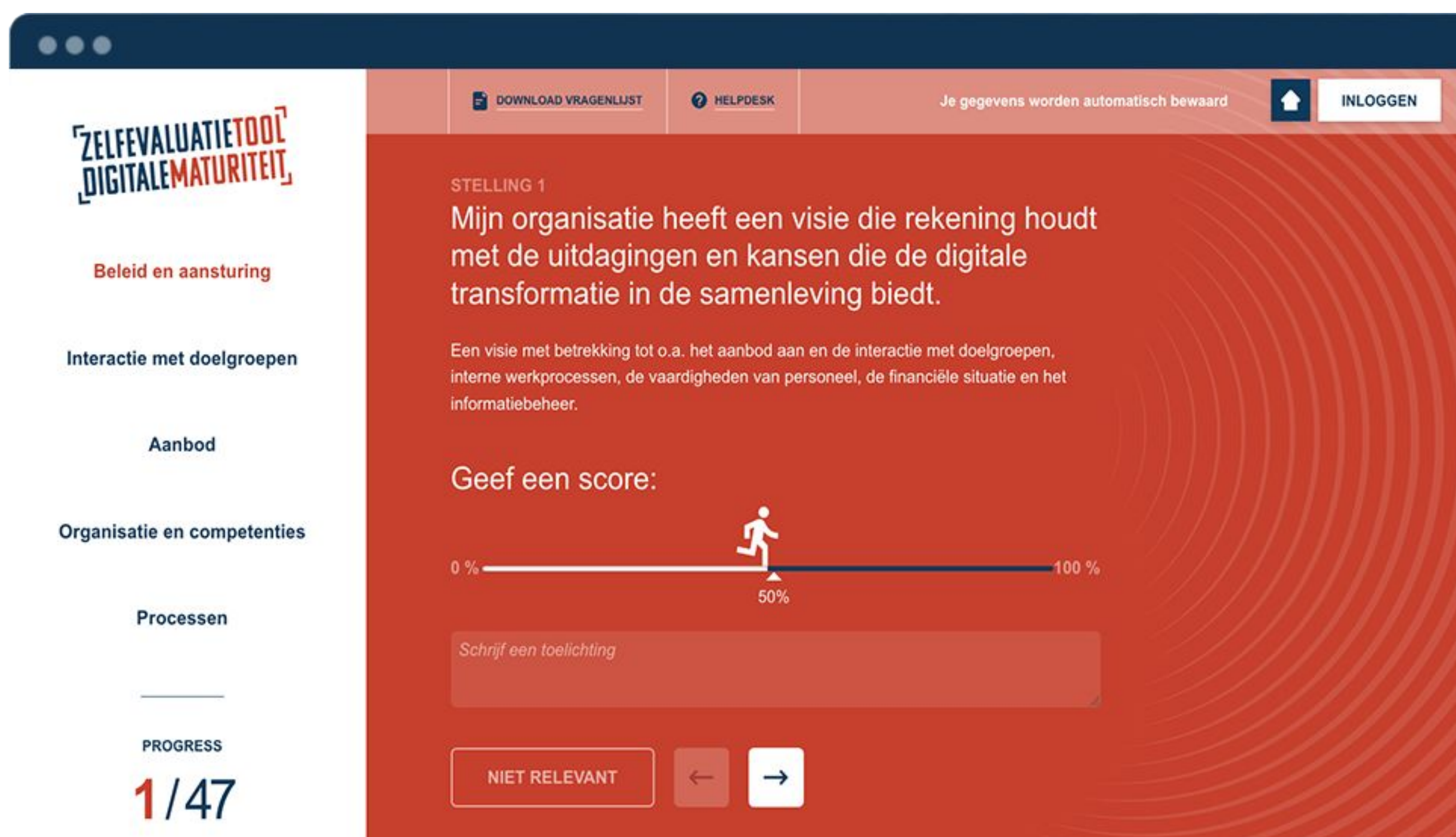


Self-evaluation tool - digital maturity (Meemoo and the Flanders Department of Culture, Youth and Media)

Country of origin: Belgium (Flanders)

Tool status: published

Weblink: <https://www.digitalematuriteit.be/>



The screenshot shows the user interface of the 'Zelfevaluatie Tool Digitale Maturiteit'. The interface is primarily red and white. On the left, there is a navigation menu with the following items: 'Beleid en aansturing', 'Interactie met doelgroepen', 'Aanbod', 'Organisatie en competenties', and 'Processen'. Below the menu, a 'PROGRESS' indicator shows '1/47'. The main content area is titled 'STELLING 1' and contains the text: 'Mijn organisatie heeft een visie die rekening houdt met de uitdagingen en kansen die de digitale transformatie in de samenleving biedt.' Below this, there is a sub-heading 'Geef een score:' followed by a progress bar ranging from 0% to 100%, with a marker at 50%. A text input field labeled 'Schrijf een toelichting' is positioned below the progress bar. At the bottom of the main area, there are three buttons: 'NIET RELEVANT', a left arrow, and a right arrow. The top navigation bar includes links for 'DOWNLOAD VRAGENLIJST', 'HELPDESK', and 'INLOGGEN', along with the text 'Je gegevens worden automatisch bewaard'.

Self-evaluation tool - digital maturity

Digital maturity conceptualisation

The tool makes an assessment according to five question areas:

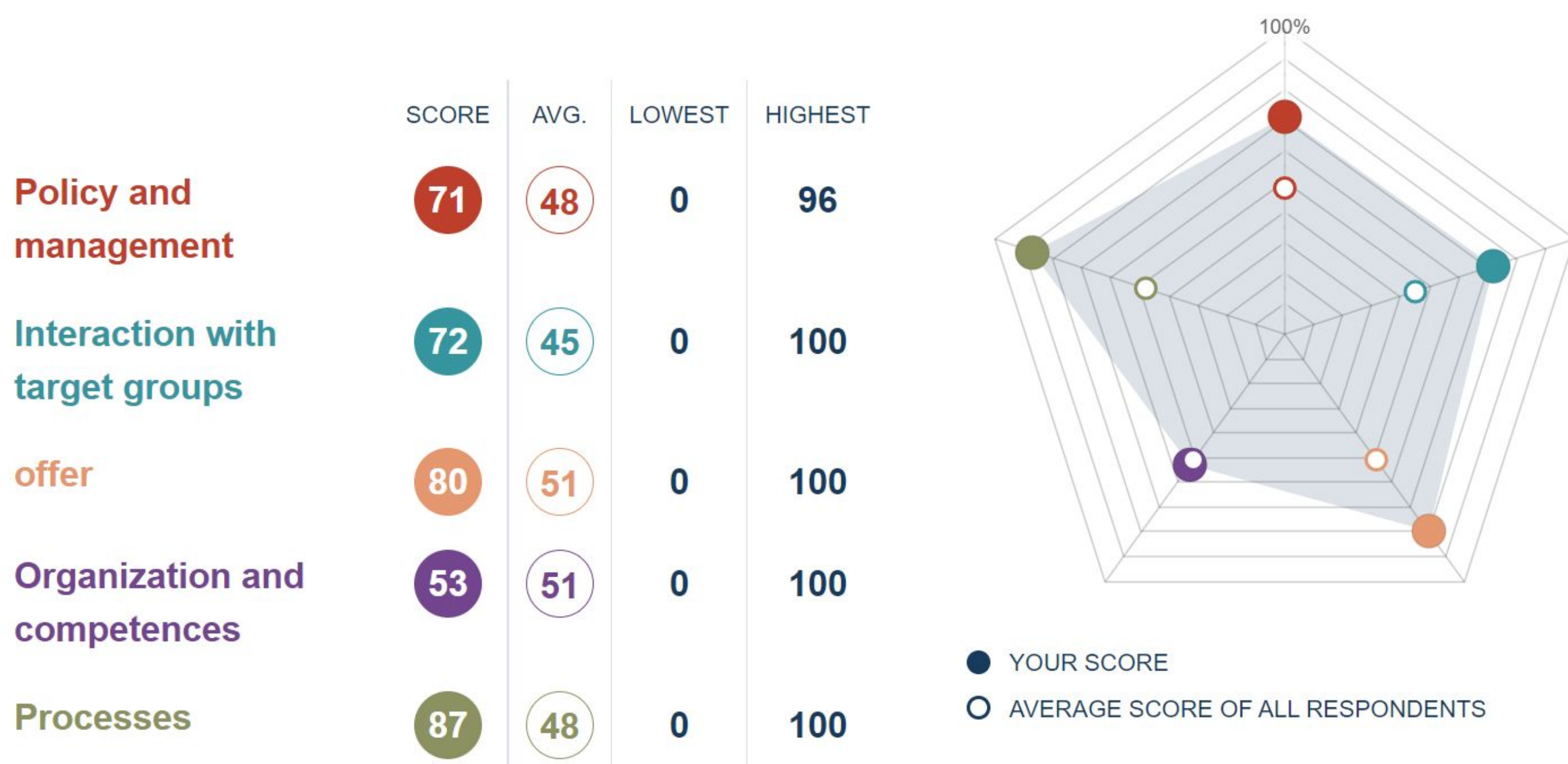
1. Policy/strategy and management
2. Interaction with target stakeholders
3. Offer and impact
4. Competences and organisation
5. Organisation of digital processes

How it works

There are 47 questions across these five areas that measure on a scale from 0 - 100 (later converted into percentages).

Comments

- Currently available in Dutch
- Compares digital transformation rating across time
- Evaluative functionality (saving and returning to view results) if you sign in; can also download as a PDF
- Not many completed self-assessments (75 results between January 2019 and May 2022)
- Offers 'tips' to improve position in each category
- Offers a link to find further support
- Data are anonymously aggregated for comparison purposes





Digital Culture Compass Tracker

Country of origin: United Kingdom (multiple stakeholders involved)

Tool status: published

Weblink: <https://digitalculturecompass.org.uk/using-the-tracker/>

Sometimes people working in the same or related areas will disagree on their assessment of your organisation's digital capabilities. Understanding the reasons for their different perspectives can provide really interesting insights that might help refine your strategy, planning and communications. [Digital Culture Compass Tracker](#).

AREAS	CURRENT	TARGET
Strategy & Governance	13%	15%



Digital Culture Compass Tracker

Digital maturity levels

There are five [maturity levels](#):

1. Level 1 - Initial (lowest) - digital used when necessary
2. Level 2 - Managed - siloed approach to digital; digital happening in a reflective and managed way
3. Level 3 - Integrated - digital helps achieve organisational objectives; strategically aligned across organisation
4. Level 4 - Optimising - reflective and improvement built into use of digital, digital evaluated in light of other options
5. Level 5 - Transforming (highest, difficult to achieve) - significant innovation and strategic change

How it works

The tool scores you against these criteria in twelve areas (strategy and governance; programmes; places and spaces; collections; marketing and communications; research and innovation; talent and sector development; fundraising and development; enterprise; HR; IT; finance and operations), noting you might be stronger according to the levels in some areas than others.

Questions are assessed according to a scale of 3 (not achieved, partially, fully achieved) and differentiation is given about the five levels of digital maturity (above).

Comments

- Only available in English
- PDF downloads are available, opportunity to share results via a unique link
- Log in necessary
- Data is anonymously aggregated for comparison purposes
- The toolsets targets 12 months at the same time as the initial assessment
- More extensive than models #1 and #2
- Designed for arts and heritage organisations
- Informed by the Audience Agency (UK) [Digital Maturity Index and Digital Culture Code](#)



DASH Survey

Country of origin: United Kingdom (multiple stakeholders involved)

Tool status: closed (time-limited initiative, reports published in 2020 and 2021)

Weblink: <https://www.timmuslimited.co.uk/dashsurvey/about-the-project/>

The aim of the DASH surveys is to better understand the digital attitudes and skills of people working in the UK heritage sector, and to learn more about the organisational support they felt they received in relation to using digital technologies. Newman et al. (2022)

Work in heritage?

Take part in DASH,
it's useful for:

Individuals
Organisations, and
The Heritage sector

Sign up now, closes 7th November



Reflect on your digital practice



Identify opportunities to improve digital ways of working



Guide strategic decision-making and plan future support



DASH survey

How it works

Organisations register and are shared a unique survey link that can then be cascaded to their staff to complete individually. There are 34 questions to assess attitudes towards digital and digital skills, organisational support for digital (not available as survey is closed).

Comments

- Data aggregated from across the organisation (staff and volunteers)
- Organisation representative can also have a copy of the data
- Accompanied by guidance and links to resources
- A comprehensive review of the results (2021) and comparison with 2020 results
- Heritage-specific



ENUMERATE

Self-Assessment Tool

Country of origin: Europe, InDICEs project, multiple stakeholders involved

Tool status: open at the time of writing (May 2022); improved version planned for Oct - Nov 2022


Weblink:

<https://pro.europeana.eu/post/the-enumerate-self-assessment-tool-gain-insight-into-your-institution-s-digital-transformation> (see also [Bocyte et al., 2021](#))

To fully reap the benefits of digitisation and sustainably create value for their audiences, cultural heritage institutions (CHI) need to implement and monitor digital, data-driven strategies that touch upon all aspects of how organisations operate. Bocyte, R., Oomen, J., Truyen, F. (2021).


ENUMERATE QUESTIONNAIRE

Key recommendations
Key Recommendations are resources and tools that have been prioritized or deemed most relevant in correspondence to the answers provided and are most up to date.




How to build a European Project

National and international funding schemes can be an effective way to support CHI operations. But where to start building an interdisciplinary consortium and how to write a successful bid? Use this toolkit to as a step-by-step guide to plan and prepare funding applications.

Effort: 


keywords: #financing

[Link ↗](#)




Policy Analysis of Value Chains

inDICEs research result for policy makers

Effort: 

keywords: #ValueChain

[Link ↗](#)



Mapping the Creative Value



ENUMERATE

Self-Assessment Tool

How it works

Organisations register and are invited to complete a 12-step questionnaire, after which point they are given recommendations of what are described as up-to-date and relevant resources, based on the answers given.

Comments

- Extensive resources were recommendation.
- No comparison available between your data and others (or aggregate).
- Questions are available in English and Italian (the latter available as a PDF) with more translations expected.
- The tool is both a data collection tool (extending the ENUMERATE data collection) and a recommendation tool.
- A report on the data collected is expected in June or summer 2022.





Microsoft Education Transformation Assessment Tool for Libraries and Museums

Country of origin: global

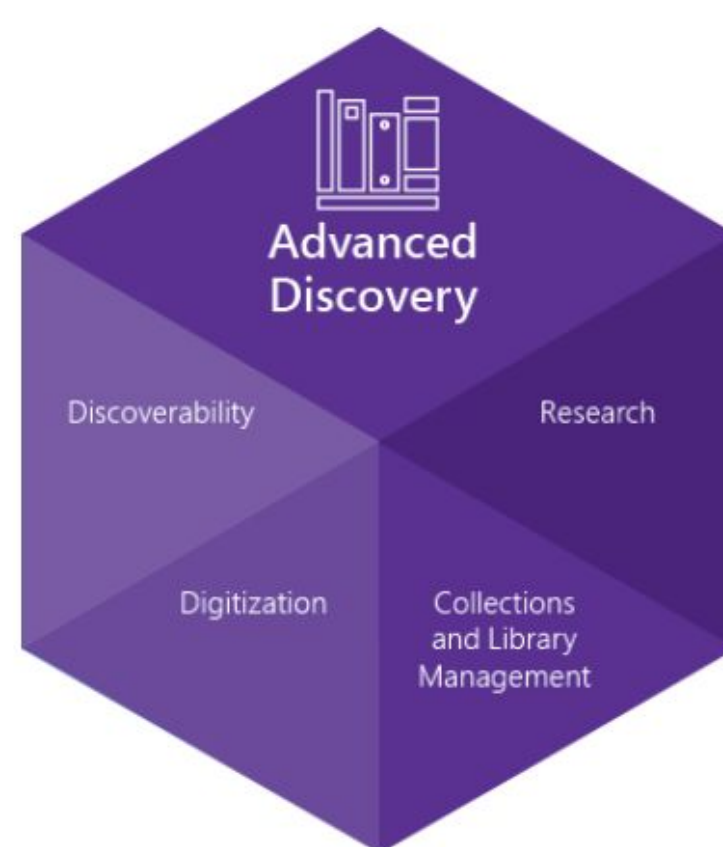
Tool status: published

Weblink: <https://edujourney.microsoft.com/lam/take-assessment/>

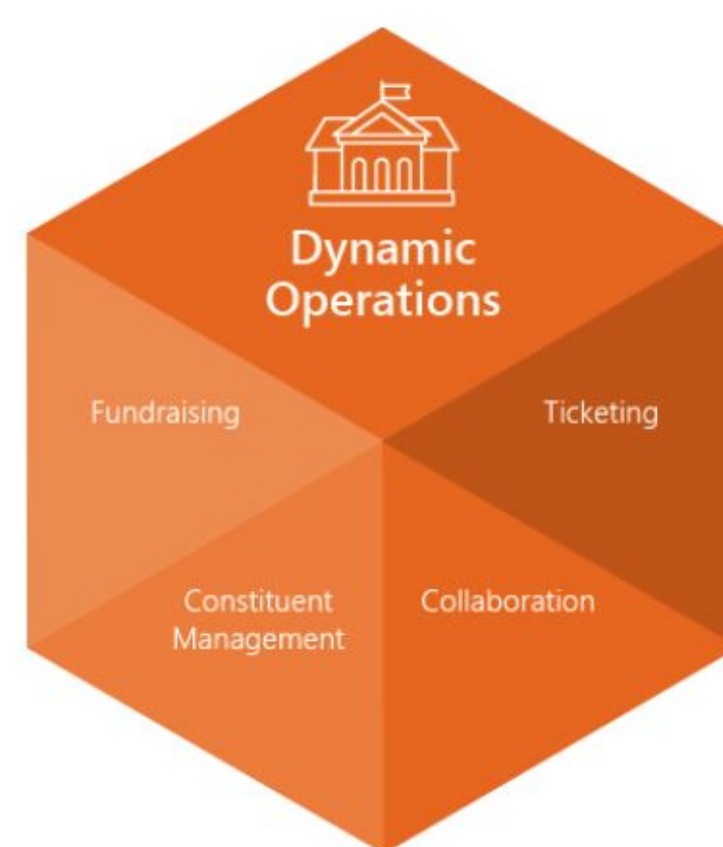
Advancements in technology have enabled industries around the world to transform by empowering employees and delighting their customers. The same opportunity exists for Libraries and Museums seeking to understand what is possible and looking to form their own unique digital transformation strategy. Microsoft Digital Transformation Framework for Libraries and Museums offers a holistic technology strategy for addressing critical areas and elements of digital transformation. [Microsoft Libraries and Museums Education Transformation Framework.](#)



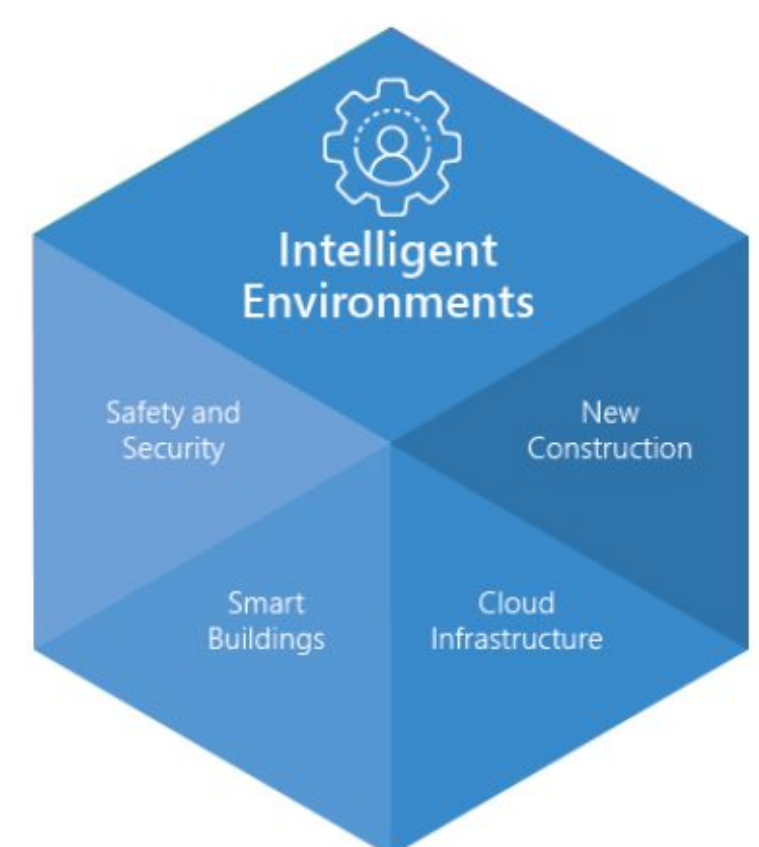
Enhanced Visitor Experience



Advanced Discovery



Dynamic Operations



Intelligent Environments

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 822336



Microsoft Education Transformation Assessment Tool for Libraries and Museums

Digital maturity levels

The [Education Transformation Framework](#) sets out four maturity levels:

1. Level 1 - Entry
2. Level 2 - Emerging
3. Level 3 - Advanced
4. Level 4 - Transformative

How it works

Four areas are considered in the Microsoft model. Intelligent environments; dynamic operations; enhanced visitor experience; advanced discovery. Each area has subcategories which are assessed against each of the digital maturity levels.

Organisations enter their assessment of their current level of maturity stage in each category, then set out a desired or target level. A report maps the difference and recommends products or solutions to help address this.

Comments

- Advice is given with each rating alongside an offer of support from Microsoft (if using software).
- No comparison against other organisations.
- No longer-term comparison (data are not saved).
- No login is necessary.
- Short and intuitive.
- Similar assessment tools are available for formal education stages.



Digital benchmarks for the culture sector (Collections Trust, UK)

Country of origin: United Kingdom

Tool status: published

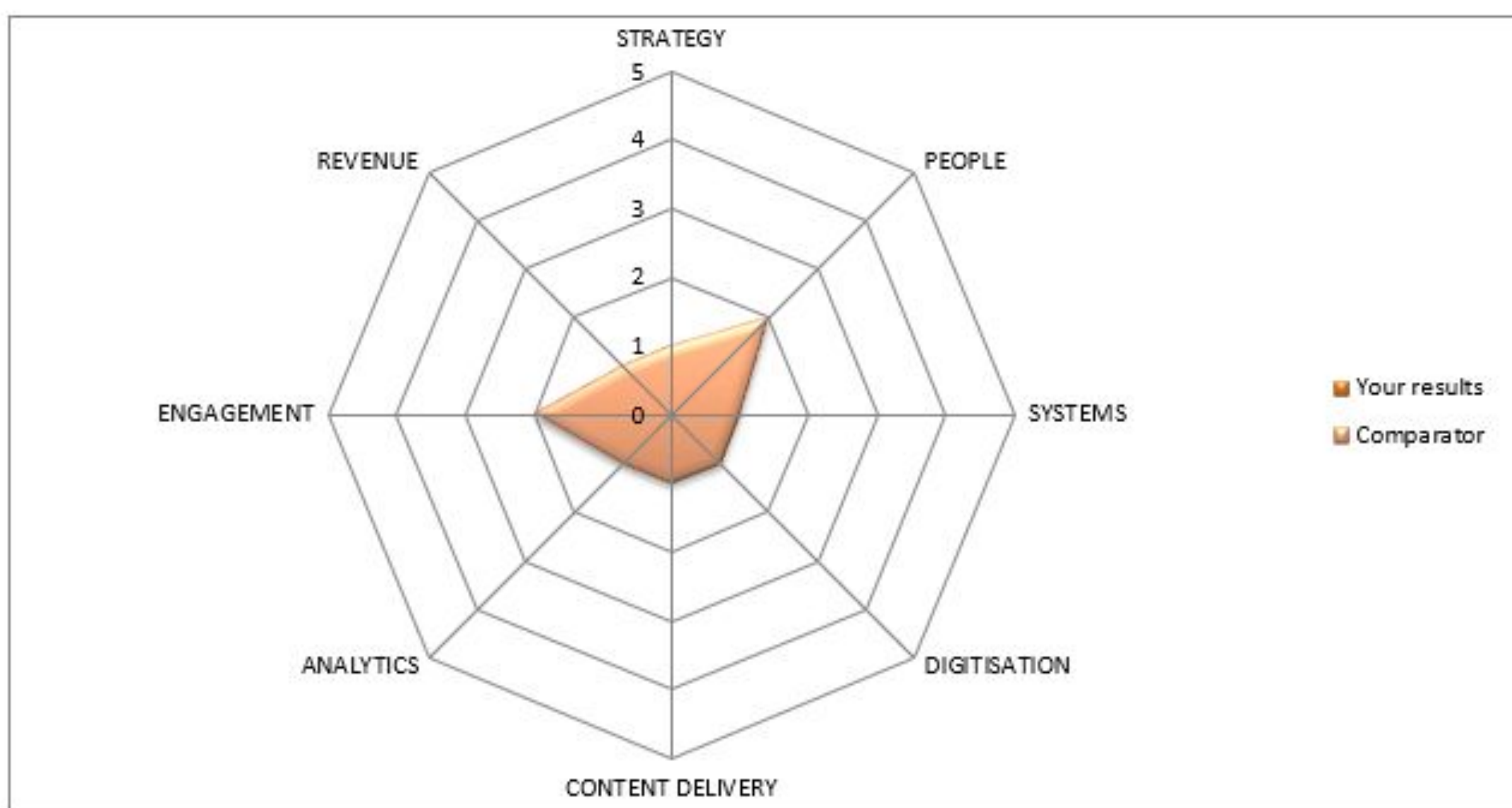
Weblink:

<https://collectionstrust.org.uk/resource/digital-benchmarks-for-the-culture-sector/>

There is a lot of activity in museums about 'going digital' that it can make it confusing to know where to start. Our digital benchmarking toolkit is a free, easy to use tool for auditing your museums digital skills, equipment, activity and needs. It is available as a free download and based on a simple excel spreadsheet making it accessible for everybody from technicians to beginners. [Digital Benchmarks for the culture sector.](#)

Comparators

Comparator 1. Small volunteer-run museum with no previous digital projects



	Your results	Comparator
STRATEGY	0	1
PEOPLE	0	2
SYSTEMS	0	1
DIGITISATION	0	1
CONTENT DELIVERY	0	1
ANALYTICS	0	1
ENGAGEMENT	0	2
REVENUE	0	1



Digital benchmarks for the culture sector (Collections Trust, UK)

Digital maturity levels

Digital maturity is set out in 6 levels (0-6) for each of the core areas (below) assessed:

1. Strategy
2. People
3. Systems
4. Digitisation
5. Content
6. Delivery
7. Analytics
8. Engagement
9. Revenue

How it works

Organisations are asked to assess different statements according to a scale. The results are mapped on to a spider-diagram, with a comparison being presented as well.

Comments

- The tool is a downloadable XLS file
- Two general comparisons given to assist benchmarking
- Heritage-specific



Chicago History Museum seven perspectives (Ludden and Russick, 2020)

Country of origin: United States of America

Tool status: N/A

Weblink:

<https://mw20.museweb.net/paper/digital-transformation-its-a-process-and-you-can-start-now/>

How it works

Seven categories for museums to consider:

1. Accessibility (online and offline, reviewing past content too)
2. Capacity (developing necessary skill sets)
3. Collaboration (removing silos, cross-departmental working)
4. Creation (digital interpretation of collections by museum)
5. Data (collecting and learning from data)
6. Infrastructure (strategies to maintain and improve digital infrastructure, data security)
7. Preservation (policies and plans for now and growth of collections and born-digital content)

Comments

- Heritage-specific
- Not a tool that can be applied, but written to help museums think about and kick-start digital transformation



Forrester's Digital Maturity Model 5.0

Country of origin: United States of America

Tool status: N/A

Weblink:

<https://www.forrester.com/report/The-Digital-Maturity-Model-50/RES136841>
(restricted across, behind a paywall)

How it works

There are four levels of digital transformation:

1. Level 1 - skeptics (lowest)
2. Level 2 - adopters
3. Level 3 - collaborators
4. Level 4 - differentiators (highest)

These are assessed according to four broad areas of work (applicable to different sectors): culture (employee empowerment); technology (adoption and adaption of tech); organisation (alignment in terms of digital strategy across the organisation); and insights (use of business insights to further develop strategy).

Comments

- Described in Price and James (2018)
- Restricted access - unable to evaluate first hand
- Not heritage-specific

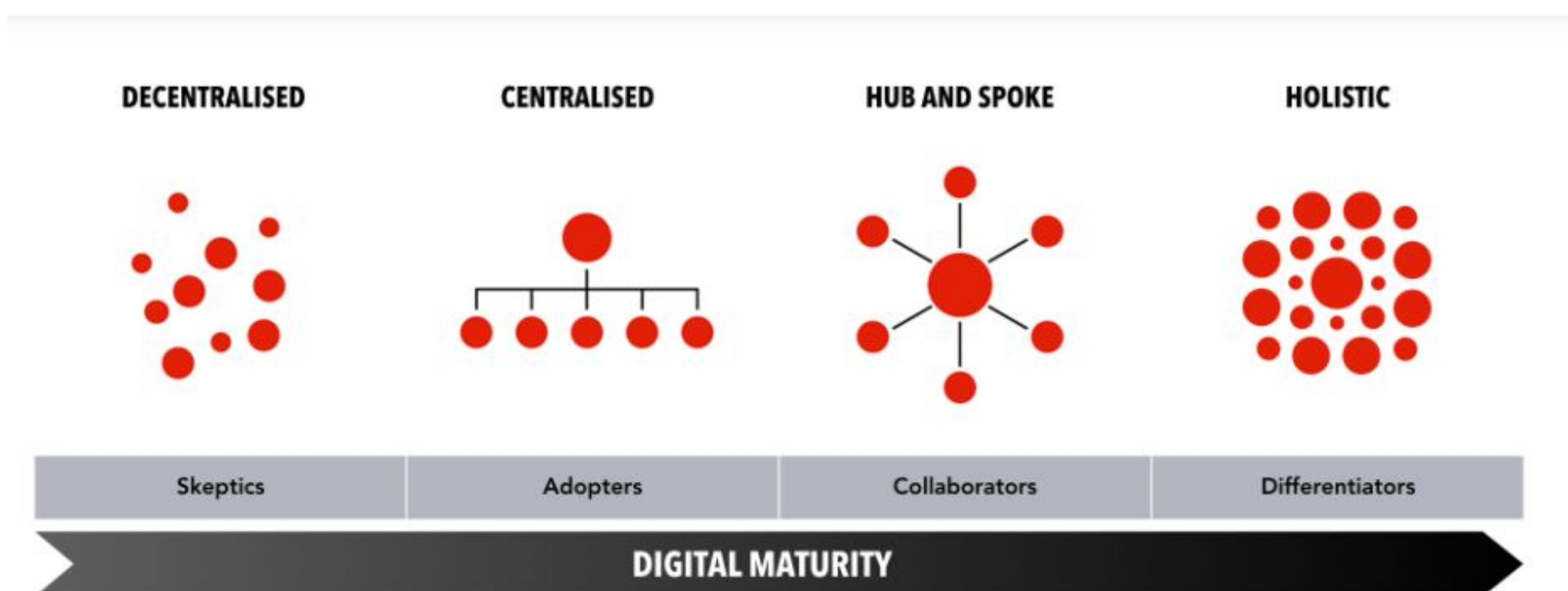


Figure 16: digital team models mapped to the four segments of digital maturity in Forrester Research's Digital Maturity Model 5.0

Image from Price and James (2018) building further on Forrester's Digital Maturity Model 5.0.

Analysis

About other paradigms of digital transformation not reviewed here

Other models have been referenced and evaluated in the wider literature. In Price and James (2018), Kane et al. (2017) and Vicars-Harris (2016) are described as each having a three-part model (as shown in the table below). Similarly, a three-part understanding of organisational digital maturity is used in Europeana's impact assessment of a participatory heritage project (McNeilly, 2020).

Kane et al. (2017) (<i>not heritage-specific</i>)	Vicars-Harris (2016)	Europeana Sport impact assessment (2020)
Early	Digital infancy - moving towards better embracing digital	Low - Little or no experience with digital collections, e.g. do not have digitised collections or if these exist, they are not published for reuse
Developing	Digital maturity - understanding the importance of digital	Medium - Some experience with digital collections, e.g. may have a digital collection
Maturing	Post-digital - where digital is embedded across the organisation	High - Experienced with digital collections, e.g. providing content to Europeana, actively doing something with their digital collections

Preliminary analysis

- Digital transformation is understood as inherently positive. Few resources are up to date enough to assess the advantages, opportunities and disadvantages of the rapid digital acceleration brought on by the Covid-19 pandemic.
- Self-assessment tools are often visually compelling and visualise self-assessment data in an easy-to-understand manner which demonstrate gaps or areas for attention.
- Paradigms assessing digital maturity usually range from between three to five levels.
- Some self-assessment tools offer sophisticated options to save data and compare this at a later date to track progress.
- Some self-assessment tools offer the option to project a vision of where the organisation wants to be, thus offering an opportunity to direct the respondent towards relevant information to help make this happen.
- Where this information was available, we learn that self-assessment tools have not been extensively used. This ranges from, for example, fewer than 100 applications (Digital Maturity, Meemoo) to over 400 (DASH survey).



Analysis

Preliminary analysis (continued from the previous page)

- In most cases (but not all), self-assessment involves one response per organisation (noting, however, that an organisational response may be collaboratively developed).
- Some resources are relevant across the cultural sector and others are heritage-specific. It is assumed that heritage-specific tools may be most valuable but this could vary by organisational context, e.g. size of budget, main income source, number of volunteers or staff.
- Most resources (excluding one) are available in English.
- Most resources come from Northern Europe (UK, Belgium, Netherlands) and the United States.



Conclusions

There is a clear drive to support heritage organisations in their digital transformation through self-assessment and a better understanding of what digital transformation can be understood to be. This is led by both practice and by academia, and often in partnership. Yet there are continued criticisms (Weisberg, 2022) of jargon and a lack of clarity of what digital transformation means.

Nonetheless, should an organisation wish to strengthen their digital maturity, this review has illuminated the wealth of conceptual and self-assessment tools to help them on its way. It is not clear to what extent standardising a digital transformation paradigm would be useful considering the great diversity in heritage organisations in Europe (demonstrated on a small scale by the Mingei heritage partners), let alone in the rest of the world.

With this in mind, a key gap in the literature is an evaluation of how and to what extent these resources are helping organisations to digitally transform, and if the self-assessment mechanism (coupled with guidance) catalyses digital changes, either in terms of mindset or technology. In addition, case studies of the experience of diverse and differently-sized (e.g. from volunteer-led to national) heritage organisations that are applying and testing the tools would be helpful in this evaluation. Such an analysis would help to answer outstanding research questions and drive the development of valuable resources that would help organisations of any size thrive in a digital context.

Recommendations and next steps

Though there was no capacity in the Mingei project for the heritage organisations to be coached to use and apply (one or more of) these tools, these findings have been published on the Mingei website to support the heritage craft partners (and many more heritage organisations) to choose the tools that might best help their future digital planning (and digital transformation) processes and impact for their stakeholders.



Bibliography

Bocyte, R., Oomen, J., Truyen, F. (2021). Self-assessment and Monitoring of CHI Performance in Digital Transformation. In: Berget, G., Hall, M.M., Brenn, D., Kumpulainen, S. (eds) Linking Theory and Practice of Digital Libraries. TPDL 2021. Lecture Notes in Computer Science(), vol 12866. Springer, Cham. https://doi.org/10.1007/978-3-030-86324-1_16

Kane G. C., D. Palmer, A.N. Phillips, D. Kiron, & N. Buckley. (2017). "Achieving Digital Maturity." MIT Sloan Management Review and Deloitte University Press. Published July 2017. Available <http://marketing.mitsmr.com/offers/DL2017/59180-MITSMR-Deloitte-Digital-Report-2017.pdf> Accessed 3 May 2022.

Ludden, Jack and Russick, John (2020). "[Digital Transformation: It's a Process and You Can Start Now.](#)" MW20: MW 2020. Published January 21, 2020. Consulted May 3, 2022.

McNeilly, N. (2020). Europeana. *Impact Assessment Report: Europe at Work*. Available from: <https://pro.europeana.eu/post/impact-assessment-report-europe-at-work> Consulted 2 May 2022.

Newman, T., Helen Beetham, H., and Church, S. (2022) DASH survey results 2021. Timmus Limited for The National Lottery Heritage Fund. CC BY 4.0. Available from: <https://www.heritagefund.org.uk/sites/default/files/media/attachments/DASH%202021%20REPORT-v2-accessible.pdf> Accessed 3 May 2022.

Price, Kati and James, Dafydd. (2018) "[Structuring for digital success: A global survey of how museums and other cultural organizations resource, fund, and structure their digital teams and activity.](#)" MW18: MW 2018. Published January 31, 2018. Consulted November 22, 2021.

Vicars-Harris, O. (2016). "Digital Positioning & Resourcing in Museums." Unpublished report described in Price, Kati and James, Dafydd. "[Structuring for digital success: A global survey of how museums and other cultural organizations resource, fund, and structure their digital teams and activity.](#)" (2018) MW18: MW 2018. Published January 31, 2018. Consulted November 22, 2021.

Weisberg, R. J. (2022). The Trouble with Defining "Digital Transformation" in Museums. Museum Human. Available from: <https://www.museumhuman.com/the-trouble-with-defining-digital-transformation-in-museums/> Accessed 3 May 2022.

