The Museums Sector:
Be Digital to be Strategic

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Foreword

Digital is all around us. Its growth in the UK has practically doubled in under 20 years (see ONS data on internet usage) with many sectors finding opportunities to take advantage of the demand. Turns out that real people do use digital. In the same period, small pockets of museum people have been tinkering with digital, but little progress was made in bringing digital to the mainstream attention of the sector. Digital was often seen as a marketing tactic or bolt-on rather than a way to add value to communities through storytelling and engagement. It wasn't until COVID-19 and the closure of physical spaces that the forced experiment of all things digital finally saw digital being taken seriously and considered mission critical to meet user needs. Digital aligns to any museum mission and offers scale, scope and speed that you could only dream of in a physical environment.

It is never too late to start to grow your digital capacity.

Change often happens slowly than all at once. 2020 and the impact of COVID-19 was a 10-20yr acceleration all at once on many fronts. More than ever, we need to lead our organisations though the next change period and embrace the use of digital. It will be hard work but is essential to our audiences who are our future.

Go make a ruckus.

Zak Mensah
Co-CEO of Birmingham Museums Trust and former Coventry University Multimedia student

This piece of work is timely. The need for digital infrastructure – presupposing a digital strategy – was already a major driver of change in the cultural industries. Yet the opportunities opened up are set against the practical challenges for institutions, including substantial investment costs and organisational change to embrace the transfunctional nature of 'being digital'. COVID-19 has accentuated and accelerated both the need to digitally transform and the institutional challenges to achieving such transformation.

This work is timely also in demonstrating something close to my particular heart and which has been lost in recent decades – the civic role of universities as (very) major stakeholders in society and economy, and especially as anchor institutions in their localities and global communities. This research was funded by money only the university could access. Funding which is directed at working with external stakeholders and structures to address particular economic and social issues facing different local areas through the deployment of the intellectual and other assets of the university.

It would be remiss of me to mention one other aspect of timeliness for this piece of work supporting the future of the valued cultural institutions we call museums – welcome to Coventry UK City of Culture 2021!

Professor Nick Henry
Professor of Economic Geography,
Centre for Business in Society

Coventry University UK City of Culture 2021 Ambassador, Monitoring and Evaluation Lead

Digital strategies should represent the cornerstone of every organisation. The COVID-19 pandemic has demonstrated that digital strategies, digital infrastructure and digital activities are paramount to guarantee organisational survival, maintain operations and enable access. The creative sector, including museums, has the potential to build a powerful long-term blend of creativity and technology.

This project highlights the challenges to digital implementation and provides recommendations for museums to 'think outside of the box' in embracing digital. Digital strategies offer unparalleled opportunities for museums to thrive, remain resilient and engage with a broader audience. By gathering an exceptional group of strategic stakeholders representing museums' needs, this project has identified tools to support the creative sector in its development of digital strategies, to drive creative thinking, connect businesses, provide access, and to develop future activities.

Through understanding the impact of organisations' activities, behaviours and policies, the Centre for Business in Society (CBiS) at Coventry University seeks to promote responsibility, to change behaviours, and to achieve better outcomes for economies, societies and the individual. Promoting sustainable production and ethical consumption; shaping the use, privacy and security of data in organisations and society; challenging irresponsible finance and nurturing responsible personal finance; creating new models and policies for inclusive economic development. Much of CBiS's research focuses on the implications of digital and big data for businesses and society, to promote organisational responsibility, secure business resilience, improve decision making and to leverage the opportunities offered in a digital era.

Professor Lyndon Simkin
Executive Director,
Centre for Business in Society

Executive Summary

1. This pilot project provides a first step in identifying the main digital strategies that museums can adopt in order to remain resilient in turbulent times. It draws on a comprehensive survey of visitors and non-visitors to museums undertaken in 2021, in order to explore the need for, and barriers to, implementation of digital strategies in the sector. In addition, focus groups with directors of museums provide a rich picture of the current challenges and opportunities museums face when implementing digital strategies. Finally, strategic workshops provide a nuanced understanding of the most suitable digital strategies for museums to adopt in order to survive and remain resilient during and beyond the current pandemic, and beyond events such as Coventry City of Culture 2021.

2. A survey of over 2,100 respondents found that the majority of the audience is interested in online engagement with museums, regardless of their previous experiences (face-to-face or online) with museums. Museums therefore have opportunities to create new content or improve their existing offerings to attract a wider audience.

3. Focus groups attended by directors of museums indicated that museums realise that digital strategies cannot work well if they are restricted to 'functional silos'; for example, such activities are not the sole responsibility of particular departments such as IT or marketing. The organisational structure of a museum should be re-thought, so that digital strategies cut across all teams/departments.

4. Strategic workshops with museum directors found that the senior teams of museums should aim to build more external collaborations to improve their capabilities relating to digital strategies.

5. Digital strategies are not always seen as central to the activities of museums. Although the COVID-19 pandemic has encouraged museums to 'think outside the box' and 'think digitally', many museums still struggle to put forward enduring digital strategies.

6. Despite the promotion of digital strategies by parties such as DCMS and ACE UK, museums would benefit from further support in the implementation of such strategies. Museums are determined to learn from the challenges and the opportunities that the pandemic has presented. However, support is required from policy-makers, universities and think-tanks if museums are to expand and improve their portfolio of digital activities.

7. Future research will seek to develop the findings of this project to provide further support for museums in surviving and thriving after the pandemic.

Section 1:
Digital Strategies for Museums

Introduction: There is an urgent need for museums to find alternative strategies, to help them to survive and to remain resilient both during and after the coronavirus pandemic. Some UK museums are already under threat of closure[1]; many were financially struggling even before COVID-19 due to a decrease in the availability of public funding and a lack of appropriate digital strategies[2].

Digital strategies are vital for designing and delivering creative and cultural activity and content for audiences[3]; yet, museums are not currently maximising the benefits and the opportunities digital strategies can offer. ACE Let's Create (2020) calls for enhanced digital infrastructure and greater use of technology; hence, digital strategies to strengthen the museums sector.

In this project, we co-design digital strategies with and for museums at a time of COVID-19, developing policies to help museums survive and thrive during and beyond the current pandemic. The project also leverages and supports the unique opportunities provided by Coventry City of Culture 2021, as we explore and support digital strategies for local museums. The project therefore directly addresses the 2027 Goals set out by Coventry Cultural Strategy 2017-2027, namely partnerships, lifelong learning, diversity, health & wellbeing and economic growth.

Note: All data collected from the survey, focus groups and strategic workshops are treated as anonymous and confidential as per our Coventry University Ethics application.

Overview of the report

Section 2
Understanding uncertainties: the funding landscape

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Section 3
Understanding uncertainties: changing needs of visitors (survey)

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Section 4
Challenges for museums in relation to digital strategies (focus groups)

▼

Section 5
Possible responses to uncertainties and challenges (strategic workshops)

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Section 6
Final reflections and recommendations

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1. BBC Newsnight (2020). https://www.youtube.com/watch?v=Te-sA6HpcO0
2. https://www.enterpriseresearch.ac.uk/wp-content/uploads/2017/12/Digital-Creative-Sectors-in-Coventry-report_web-single-pages.pdf
3. AHRC (2015). The Ecology of Culture. https://ahrc.ukri.org/documents/project-reports-and-reviews/the-ecology-of-culture/

Section 2:
Supporting Digital Strategies

Introduction: The digital economy is transforming how organisations of all kinds, including museums, interact with customers, carry out operations or simply 'do business'. Digital transformation can strengthen the core business, making it difficult for other organisations to compete. However, digital transformation is also often complex, time-consuming and expensive, impacting upon every area of the organisation. As a result, some museums decide not to embark upon a complex digital transformation that could revitalise and improve their business. Yet, a clear digital strategy that takes into account digital technology is vital for the future of museums and their survival. Digital transformation is enabled through sound digital strategies.

Digital Strategies

Digital strategies are organisational strategies that are formulated and executed by leveraging digital resources to create differential value[4]. In the past, a digital strategy was often designed to be a strategy for the organisation's IT function, aligned with the company's business strategy. Today, digital strategy is more commonly viewed as 'transfunctional', because it seeks to integrate the organisation's IT, operations, marketing and finance functions. For this reason, digital strategy is often called 'digital business strategy' because it transcends and combines the traditional functional areas to combine the portfolio of products, services and projects carried out by an organisation such as a museum.

Digital strategies can guide directors to create new propositions by combining an organisation's existing capabilities with new capabilities enabled by digital technologies. A sound digital strategy is vital for a museum in order to enable a digital transformation that will allow the team to 'think outside the box', be more creative and innovative, and explore new possibilities.

Funding and Resources/Policy-makers and Support

In recent years, policy-makers, think-tanks and museums associations have put forward policies, recommendations and guidelines related to digital strategies. Below we provide a list (intended to be indicative rather than exhaustive) of some official documents that policy-makers at national and local level have issued to promote digital strategies in the creative industries.

'Culture is Digital' is the flagship of the UK Governmental Department DCMS (the Department for Digital, Culture, Media and Sport). These recommendations are specific to the creative industries, as opposed to the 'Digital Strategy' launched in 2017 that addresses every industry in the UK. 'Culture is Digital' is shaped around three themes: a) Audiences – using technology to engage audiences; b) Skills and the digital capability of cultural organisations; and c) Future Strategy – unleashing the creative potential of technology. The release of the latest version of the UK's Digital Strategy has been postponed to COVID-19[5].

'Let's Create' is the latest strategy document for the period 2020-2030 released by the Arts Council of England (ACE). One of the current themes is 'digital and technology'; they point out that they aim to invest in *'physical and digital infrastructure and the use of technology to distribute cultural content into homes, cultural venues and community spaces'* (p. 38). They also note that the business model of public funding is not flexible, and that such funding often fails to address the challenges and opportunities stemming from the growth of technologies. The document highlights opportunities for the creative sector that arise due to new developments in the digital arena, and encourages partnerships between the technology sector, the creative industries and universities to support the adoption of new technologies.

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4. Bharadwaj et al. (2018). https://misq.org

5. https://www.itproportal.com/news/uk-government-delays-publishing-digital-strategy-for-2021/

The 'Strategy' of the Museums Association notes that one of their priorities is to develop a digital content strategy. Although their strategy does not delve into technology and digital, the Museums Association dedicates many articles and events to the importance of digital activities for museums to attract new audiences and continue to engage their existing visitors.

'Digital Pathways' is a resource bank provided by Culture24 to help museums with knowledge and tools to build their digital strategy or digital skills. Culture24 provides support for museums and heritage organisations to develop their digital portfolio of activities.

There are many excellent examples at local or regional level of how digital strategies in the creative industries are designed and implemented. For example, in the West Midlands, Coventry City of Culture 2021 and New Art West Midlands (see below).

'Coventry Culture Strategy 2017-2027', in relation to Coventry City of Culture 2021, promotes digital creativity for young people, and opportunities for all generations to learn through art. Digital is a way to promote diversity and inclusion in order to make art more accessible and encourage wider participation. A recurring theme is the creation of digital hubs, i.e. digital cultural spaces where individuals can unleash their creativity and engage with art and artists. Overall, the report affirms that strategies need to remain flexible and consultative to embrace and take advantages of new technologies.

'A Visual Arts Strategy for the West Midlands 2020 – 2025' is the strategic document published by New Art West Midlands in 2019. With the phrase 'NO LIMITS', they call for an effective and collaborative plan with museums, artists, curators, arts professionals, educators, audiences and stakeholders from businesses and local government. They encourage museums and the creative industries to explore the new frontiers that digital can offer, because '*Digital and culture sit at the heart of our regional regeneration*' (p. 15). They call for strategic partnerships with universities and other organisations, in order to develop digital activities and increase access to new technologies so that museums can add value to their business.

Summary

Although digital transformation and technologies can help museums to attract new audiences, engage differently with visitors and create new revenue streams, many museums do not yet appear to have fully embraced the opportunities that digital transformation and technologies can provide.

As summarised above, many policy-makers, think-tanks and museum associations at both national and local level have published guidelines and recommendations on the importance and the benefits of museums designing digital strategies and organising digital activities.

However, the funding landscape and the support that policy-makers, think-tanks and museums associations can provide to museums to help create or improve digital strategy still represents areas of uncertainty for museums. A paucity of funding or other forms of support in the digital area represent key challenges that museums face in their operating environments, as they typically continue to rely on local, regional or national funding to thrive and remain resilient.

Another external source of uncertainty for museums concerns the future needs, wants and behaviours of their visitors and potential visitors, in relation to digital activities. In order to address this issue, the next section provides a rich explanation of what the audience expects from museums, by presenting the results of an extensive survey.

Section 3:
Understanding the Audience

Introduction: With the support of Ipsos MORI, we conducted a survey of museum visitors and non-visitors (over 18 years old) in the UK, to map out the need for, and barriers to, the implementation of digital strategies. The survey was launched in early February 2021, and the questions asked referred to the period before and after the first coronavirus lockdown in the UK which began on 23rd March 2020.

The survey received over 2,100 responses where informants had the opportunity to explain whether and how they have digitally engaged with museums. The digital activities that informants were asked about are the following:

Possible digital museum activities include:

Visiting a museum's **website**

Reading museum **e-news or email** updates

Attending a **virtual museum** tour

Reading a museum's **social media post**

Watching an online **film, video or documentary** about museums (e.g. 30 minutes or more)

Attending an online **event organised** by a museum (e.g. quiz, concert, seminar, etc.)

Using an **app** (e.g. on a smartphone, tablet, etc.) to access museum content

Attending a **digital-only exhibit** (no physical equivalent)

Using a **voice assistant** – such as Alexa, Siri, Google Assistant – to listen to a museum tour (e.g. The Audio Museum of Art).

Key Results

The survey was divided into four main parts:

Part A: general information about the respondent's last traditional and digital museum experience

Part B: digital engagement

Part C: barriers to digital engagement

Part D: digital collaborations between museums and other businesses

We also collected data about the demographics of the respondents, and a summary is provided below. This indicates that the survey draws on a balanced sample of the UK population in terms of gender, age, geographic area, household size and employment.

Demographics

The sample varied in gender, age, geographic area, household size, education and employment, as outlined below.

The targeted sample was well balanced between male and female respondents (46% male, 54% female).

19% of the respondents were between 45 and 54 years old; 18% were 25-34 years old and the same proportion were 55-64 years old. Overall, all age groups are well represented in the sample.

Age

Age	Percentage
18-24	12%
25-34	18%
35-44	17%
45-54	19%
55-64	18%
65-75	15%
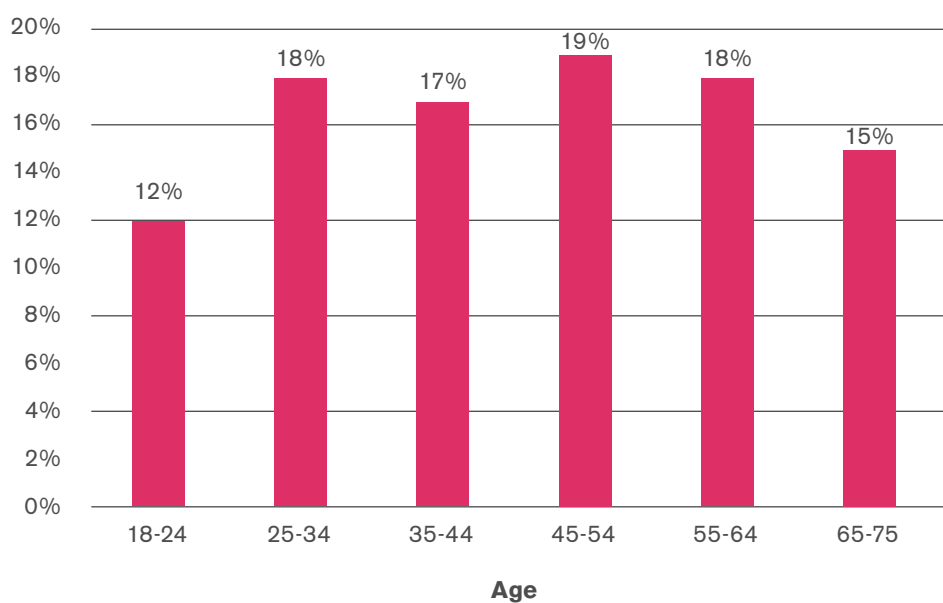
In terms of geographic area, 26% of respondents lived in Greater London and the South East of England; 11% lived in the North West of England, 10% in the West Midlands and 10% in the East of England. Scotland, Wales and North Ireland are represented by 9%, 5% and 3% respectively.

Geographic Areas

Greater London	13%
South East of England	13%
North West of England	11%
East of England	10%
West Midlands	10%
Scotland	9%
South West of England	9%
Yorkshire and The Humber	8%
East Midlands	7%
Wales	5%
North East of England	4%
Northern Ireland	3%
	100%

The household size for 36% of respondents is two; 17% live on their own and 21% of respondents live with two other people.

Household Size
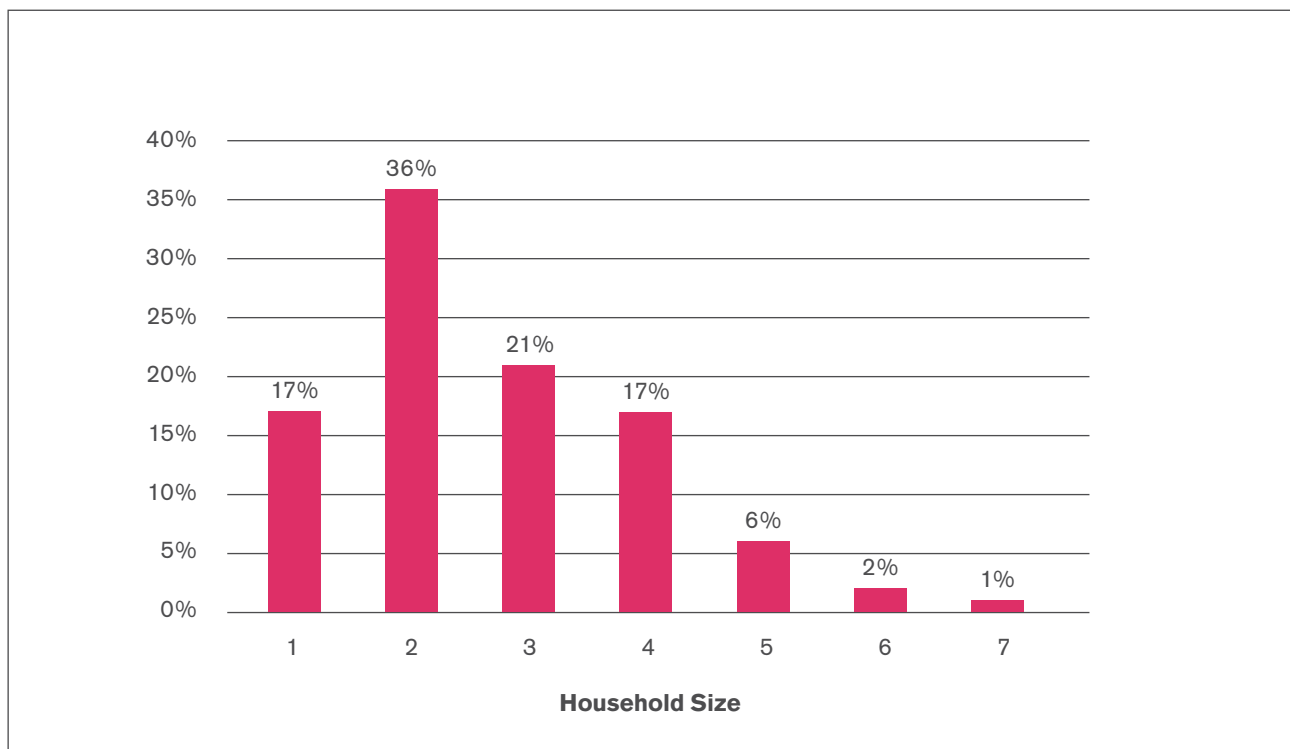
46% of respondents held a degree, compared to 54% who did not. The majority of the respondents were employed either full-time or part-time; 15% were retired, 7% self-employed and 3% currently unemployed.

Employment

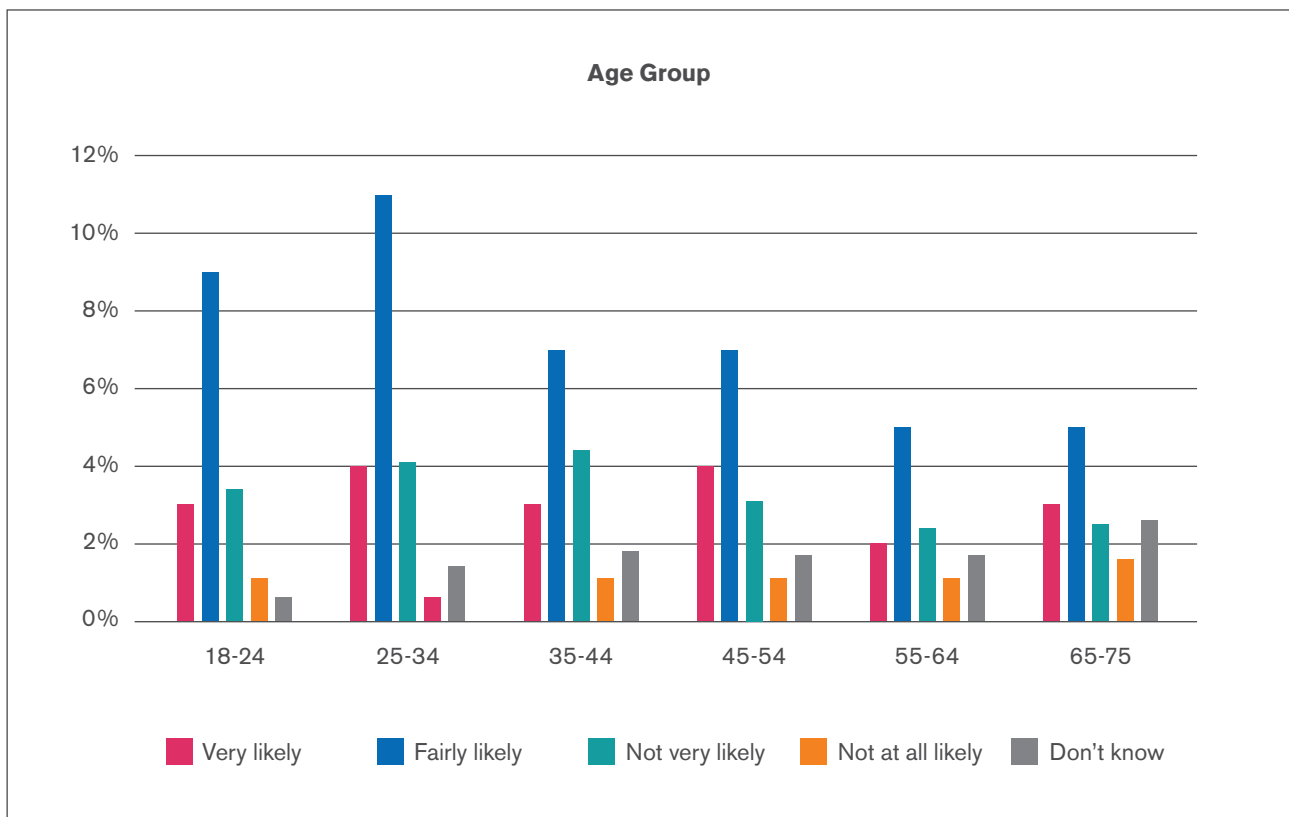|	
Employed full-time	46%
Employed part-time	15%
Self-employed	7%
Full-time parent, homemaker	6%
Unemployed but looking for a job	5%
Students over 18	3%
Unemployed and not looking for a job/ Long-term sick or disabled	3%
Retired	15%
	100%

Part A: General information: The Use of Museums

- 21% of respondents reported that they did not regularly visit museums before the lockdown in March 2020; 20% said that they typically visited a museum once a year. The rest said that they visited museums more than once a year before the lockdown in March 2020.

- In general, the majority (59%) enjoyed visiting museums in person; whereas only a few (16%) enjoyed it a little or not at all.

- Since the lockdown in March 2020, the majority (65%) reported that they had not visited a museum physically or virtually; whereas 6% had visited a museum once over the year since March 2020. The rest (29%) had visited more than once.

- When asked specifically whether they had visited online/digital activities organised by museums, almost 50% reported that they had never engaged virtually with museums, whereas 22% had done so over a year ago. The remaining 28% had engaged online with museums once or more than once this year.

- Among those who had attended a museum online/ virtually, 20% had spent between 30 minutes and 1 hour on their visit; 25% had spent between 1 and 2 hours; while 18% had spent 2 to 3 hours.

- 27% of those who attended a museum online/virtually did so with a partner, 24% on their own and 20% with children. On average there were usually two people attending the online museum activity.

- Among those who had attended a museum online/ virtually, the majority (63%) reported that they would very strongly or fairly strongly recommend it. This suggests that digital 'word of mouth', i.e. online recommendations, is a pivotal means of referral to attract and reach possible new audiences. Visitors tend to trust their peers for museum recommendations and feedback. People aged 18 to 34 are more likely to recommend online content than other age groups.

Age Group

	18-24	25-34	35-44	45-54	55-64	65-75
Very likely						
Fairly likely						
Not very likely						
Not at all likely						
Don't know						

In summary, since the first lockdown in March 2020, the majority of respondents had not visited a museum physically. Most respondents had not engaged virtually with a museum either; however, those who had engaged typically did so with a partner or children, and tended to spend less than an hour on their digital engagement. Younger people are more likely to recommend their museum digital experiences to their peers.

Part B Digital Engagement

In the last year, almost 40% of the respondents had at least three times:
• visited a museum's website
• read a museum's social media post, or
• watched a film/documentary/video about museums.

How often have you done each of the following digital activities in the last 12 months?
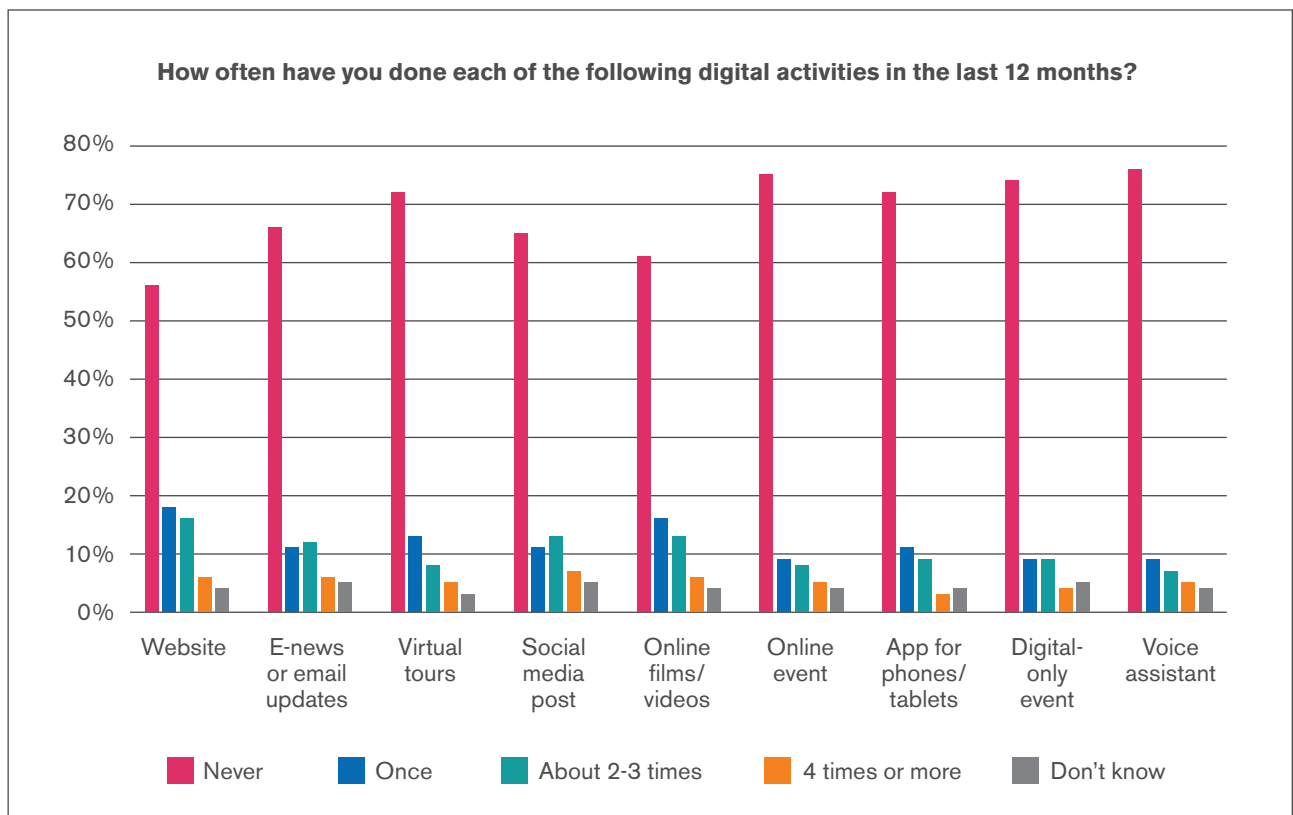
The top five reasons why people engaged with a digital activity in the last 12 months are:
1. Entertainment (10%)
2. Education (8%)
3. Checking the opening times of the museum (7.5%)
4. Finding out more about an event (7.5%)
5. Visiting the museum virtually (7.5%)

The majority of respondents who had attended online activities were very or fairly satisfied with the activities they had experienced. This suggests that museums are 'on the right track', but that there is room for improvement. The three online activities that were the least appreciated, because they were felt to be insufficiently engaging, were: virtual tours, phone apps and online events.

The three main reasons why respondents are not interested in online events or activities related to museums are: they do not like online events in general, they are not interested in online events that museums offer, and/or they are not interested in museums in general. The COVID-19 pandemic has offered an unparalleled opportunity for museums to re-think their business model, integrating their physical exhibitions with digital activities. However, the latter is at times perceived as weak or not sufficiently engaging by the audiences who have experienced it thus far.

Which following are the main reasons why you would not be interested in online events or activities related to museums?

Category	Percentage
Not interested in online events in general	26%
Not interested in any online events by museums	22%
Not interested in museums	19%
Don't like online events by museums	10%
No time to take part in such events	7%
It is too expensive	6%
Other	10%
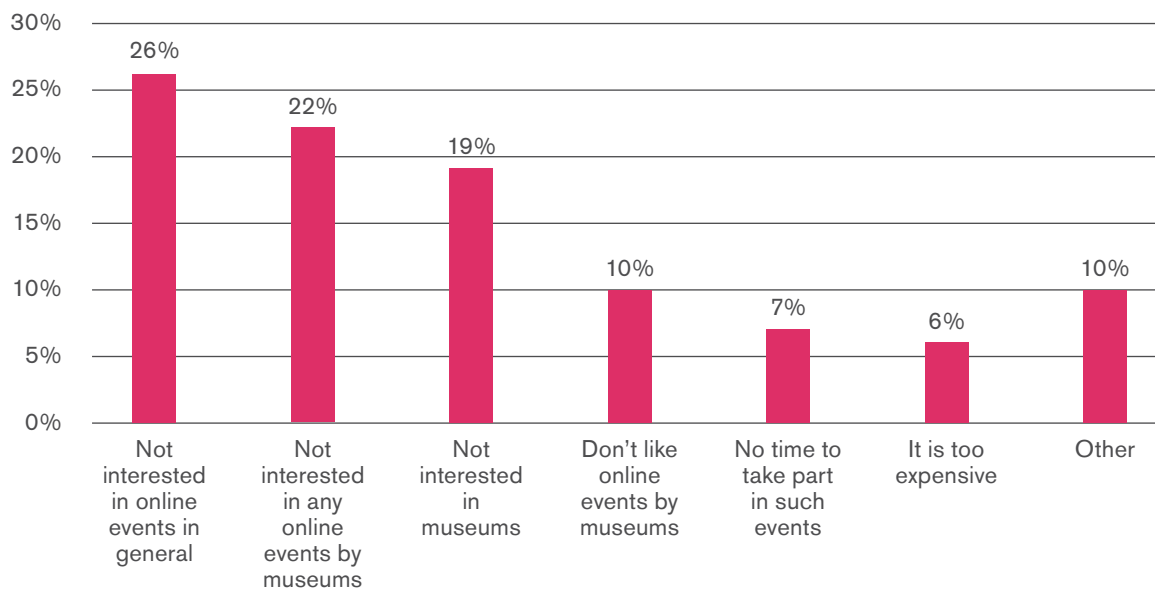
For those who did <u>not attend</u> digital museum activities, 23% of respondents were not interested in engaging in any online activities with museums; 28% said that they would appreciate receiving regular online magazine or emails; 10% would like to interact directly with the staff of museums or be involved in social activities or projects. Some (6%) would appreciate virtual tours.

Based on the responses, the top five activities that museums could organise to digitally engage with the audience are the following:

• Having an engaging website

• Organising online events or tutorials for education purposes (e.g. for children, schools, adults, etc.)

• Appearing on TV, radio shows or podcasts

• Being present across different social media platforms (e.g. Facebook, Instagram, Tik Tok, YouTube, Twitter)

• Using museums' premises for filming or broadcasting events.

Which of the following activities do you think museums could organise?
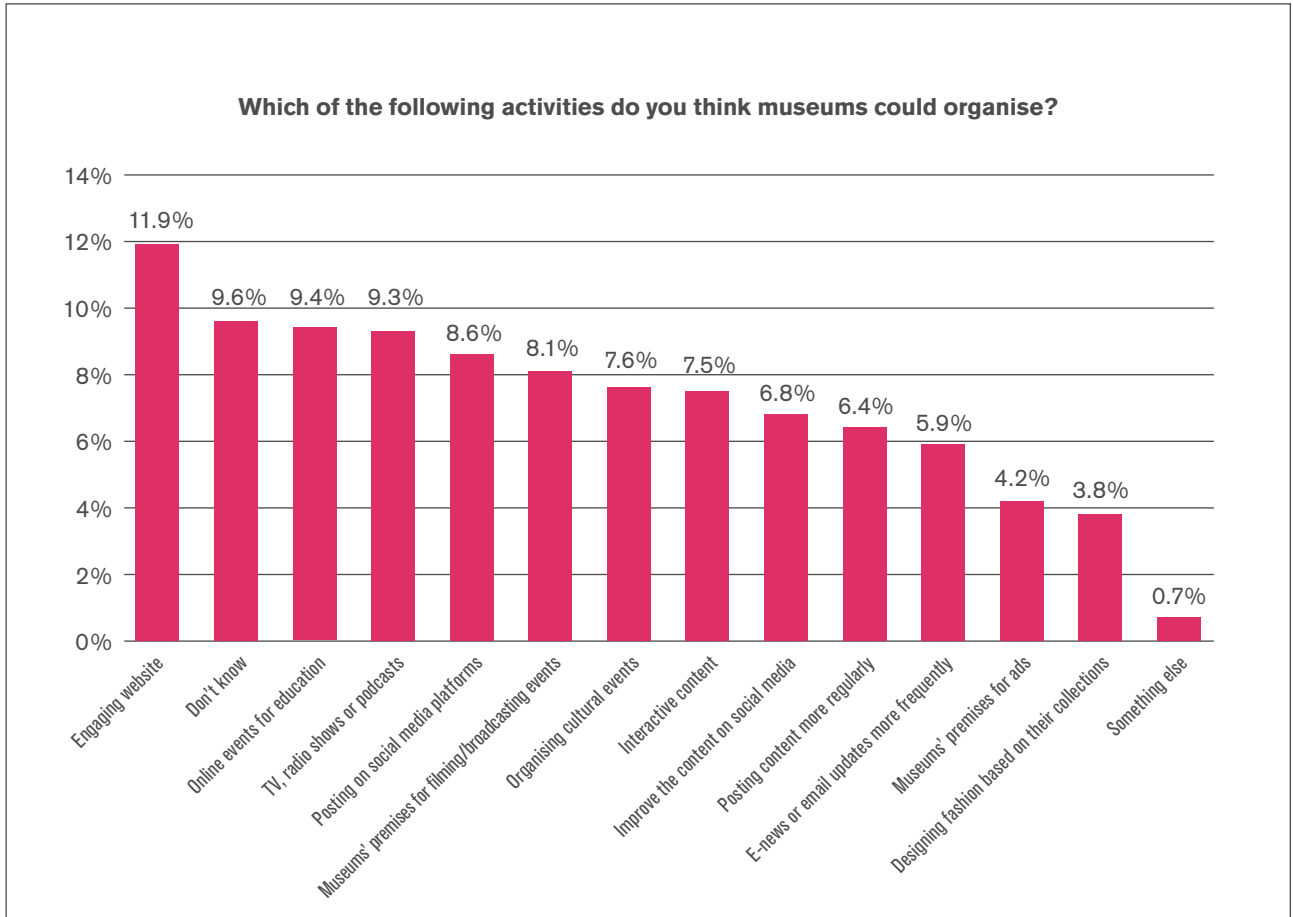
Interestingly, 9.6% of respondents said that they do not know what museums could do to engage more with their audience. This suggests that there is still scope for museums to think creatively about how to engage virtually with audiences and attract new online visitors.

Part C: Barriers to digital engagement

Although the main reason for engaging in digital activity is reported to be entertainment, respondents also felt that digital activities could be useful for a range of different reasons relating to education, skills and well-being. The majority believe that:

• Online activities/events promoted by museums could be useful for **formal or informal education** support, including home-schooling (63%)

• Online activities/events promoted by museums could be useful for **learning new skills** (58%)

• Online activities/events promoted by museums could be useful for **increasing my knowledge** (58%)

• Online activities/events promoted by museums could be useful for **mental or emotional well-being** (53%)

The majority think that *some* online activities organised by museums should be free of charge; 32% think that *all* online activities should be free of charge. This implies that museums could charge a fee for certain online events/activities. 52% of respondents would be willing to pay to attend a digital exhibit or an online event, or to watch an online film/documentary/virtual tour. Other respondents would be willing to donate some money to attend online/virtual activities.

Part D: Digital collaborations

20% of respondents were not aware of any collaboration between museums and other industries. 15% were aware of the use of museums' premises for filming or broadcasting; 12% were aware of online events/tutorial with schools.

18% of informants would like to see more events/tutorial for schools; 13% would like to see museums appearing on TV or radio shows or podcasts. 14% of informants would like museums to use their premises for filming or broadcasting events.

Summary

• Many people are not yet engaging with museums online, and yet the majority of those who are doing so are very positive about their virtual museum experiences. This represents an opportunity for museums to create new content and/or improve their existing content to attract a wider audience.

• Some people are reluctant to engage with museums online; this is typically people who rarely make use of the internet or other online activities.

• Online and virtual activities can be run in parallel with physical exhibitions, but museums should not underestimate the power of digital activities to increase their visibility and potentially generate income.

• Museums can consider charging a fee for some online or virtual activities.

• Online collaborations with other companies and organisations could help museums to attract new audiences.

• Visitors tend to trust their peers for museum recommendations, especially comments on social media where younger people are more likely to recommend online content than other age groups.

• Our survey responses suggest that the main digital activities that museums should focus on in order to engage and attract visitors are: having an engaging website; organising online events or tutorials for education purposes; appearing on TV, radio shows or podcasts; utilising different social media platforms; and using museums' premises for filming of broadcasting.

• The majority of respondents believe that online activities/events promoted by museums could be useful for education purposes, learning new skills, increasing knowledge and improving mental well-being.

50%

Almost 50% **never engaged virtually** with museums in the last year

63%

For those who attended a museum online/virtually, the majority (63%) would **very strongly or fairly strongly recommend** a museum online/virtually

3+ 40%

Almost 40% of respondents have at **least three times**: visited a museum's website, read museums' social media posts and watched a film / documentary / video about museums

20%

20% of respondents were **not aware of any collaboration** between museums and other industries

18%

18% of informants would like to see **more events / tutorials for schools**

13%

13% would like to see museums appearing on **TV or radio shows or podcasts**

14%

14% of informants would like museums to use their premises for **filming or broadcasting events**

Respondents believe that digital activities are widely useful for **education purposes, learning new skills, increasing knowledge and improving mental well-being**.

Section 4:
Understanding Museums

Introduction: Building upon the issues raised in the survey, we conducted two online focus groups with 15 participants ranging in senior job functions from Head of Digital to COO to CEO from nine different institutions based in the West Midlands. They met virtually to explore the survey results and discuss the opportunities and challenges museums face when implementing digital strategies.

Key Results

In the focus groups, the following five important themes emerged:

- Digital is about people

- Digital presents challenges for existing content and curatorial values

- Digital is about experimentation

- Digital is not free

- Digital as a 'golden thread'

Digital is about people

- There is a need for museums to constantly update their understanding of the needs and behaviours of audiences and potential visitors. It is also vital to understand the differences that exist between various group of visitors and potential visitors. The participants also acknowledged that a museum cannot be 'all things to all people'.

- Storytelling is at the heart of museums' experiences and visitor engagement. Many museums showcase the story of a given historic era or character to enrich visitors' experience. Digital technologies can enhance storytelling, as they can be highly interactive and shaped to meet visitors' needs. Digital strategies and activities can transform the audience from a passive observer to an active contributor or participant.

- Dialogues with communities and under-represented groups are fundamental if a museum wishes to attract more and different visitors. Therefore, social inclusion

and the values of equality and diversity are fundamental dimensions of digital strategies. Digital technologies can reach under-represented groups and assist museums in widening access.

- Another important aspect of digital strategy relates to the potential for co-production, and the desire of many museums to adopt an approach that is democratising. Co-production is linked to co-creation of digital strategies and content, reflecting mutually beneficial relationships between museums and visitors. In other words, it is about creating a product or a service that everyone had played an active role in developing. This has important implications. First, every department or team within the museum can input to the creation of digital activities. Second, in the relationship between museums and audiences (including potential visitors), every party can contribute to the generation of a new digital product or service that they can feel proud of.

- Museums stressed the importance of adopting a human-centred approach, i.e. creating something new driven by the needs and motivations of visitors and potential audiences. If co-production means working with people, human-centred means starting with people and their interests. The human-centred approach focuses on being personal, authentic and 'real'. This implies that when designing digital strategies, museums listen to, understand and reflect upon the needs, desires and ideas of visitors and potential audiences. By starting with people, museums ensure that their digital products or services are meaningful and relevant.

- Although museums cannot predict the extent to which the needs and behaviours of the audience have changed during the pandemic, we can assume that the pandemic has accelerated greater daily use of the internet/online activities. Museums need to think ahead and 'outside the box', and cannot assume that once the pandemic is over, visitors will want to return to all of the experiences and activities that were on offer before COVID-19.

Digital presents challenges for existing content and curatorial values

- The role of 'content' and curatorial values in a digital context is paramount, as digital curation entails employing the museum's expertise to gather information on a particular theme and present the content in an innovative way[6]. The content and curatorial values applied for physical content should also guide the creation of digital strategies and activities. Although there is a tendency to separate digital from physical content, the curatorial values that drive digital content should help the audience to discover, learn and understand something (digital) they were not already familiar with.

- Digital content is not a 'carbon copy' of physical content. Digital is about inventing something new, discovering something novel, adapting something already existing to create something innovative that grabs the attention of existing and new visitors.

- Digital can be 'playful' rather than 'serious'. If some visitors view museums as rather 'academic' or 'stern', then digital activities can help museums to adopt a style that is more experimental and playful. The curation of digital content can reflect this more playful role, helping to attract new audiences – especially younger visitors – that may not engage with museums otherwise.

Digital is about experimentation

- An important emerging theme concerns being experimental, ambitious and learning with digital by 'trial and error'.

- As an example, digital can offer opportunities for online monetization. Online monetization represents another example of audience penetration where digital activities can attract new or under-represented groups. Considerable effort may be required to determine audience needs and how best to meet them. Some museums are ambitious in their experimentation with digital strategies and online activities. However, others tend to experiment less, largely due to constraints in resources and capabilities.

- Although experimentation is felt to be key to the development of engaging digital activities, participants pointed to a major barrier, i.e. fear of failure. Concerns around the dangers of 'making mistakes' or 'getting it wrong' seem to play a crucial role in limiting experimentation with digital activities. Participants called for museums to develop and improve their digital strategies through experimentation, and record the impact of their experiments with digital activities.

Digital is not free

- Participants noted that 'digital is not new', museums are 'doing it already' in different ways and in different capacities. Museums are at different stages of digital adoption. Some museums use their website only for ticketing purposes; others use it to drive visitors towards digital activities; others have launched a membership for digital content. Regardless of the level of digital adoption or sophistication, digital is also not a 'nice to have', i.e. it is not optional. It is very much part of 'what you do' – it isn't a choice, and it's about some difficult decisions about 'what to drop' as well as what to do.

- A concern related to digital strategies regards funding accessibility, as digital can be expensive. Museums (especially the smaller ones) feel that they cannot afford to put forward digital strategies or organise digital activities because of financial constraints.

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6. Hatch Leishman (2013). https://socialmediahub.mit.edu/blog/curated-content-about-curated-content

- Participants expressed their concern about changes in the funding landscape, and whether the future priorities of funders will continue to be based on physical presence (such as numbers of 'traditional' visitors) or become more focussed on digital activity. An increased focus on digital would provide museums with opportunities to experiment and accommodate new audience needs.

Digital as a 'golden thread'

- Digital strategies and activities cannot work well in silos; for instance, they are not the sole preserve of IT or marketing departments. The organisational structure of a museum should be re-thought to accommodate the fact that digital cuts across all teams or department. Developing comprehensive digital strategies is everyone's responsibility. A museum needs input to digital strategy from across the organisation – including the teams responsible for operations, collections and curation, education, marketing, IT and finance.

- Above all, there is a clear need for a senior management team – with representation from all areas of the organisation – that is fully engaged in the design and implementation of digital strategies.

- Digital strategies are not separate from 'business' strategies. Some museums noted that a digital strategy is often a stand-alone document, detached from other organisational strategies, possibly due to a lack of resources or skills; this situation can undermine the development and implementation of successful digital strategies.

Summary

The focus groups highlighted the key challenges that museums face with regard to digital strategies, whose challenges are summed up in the figure below.
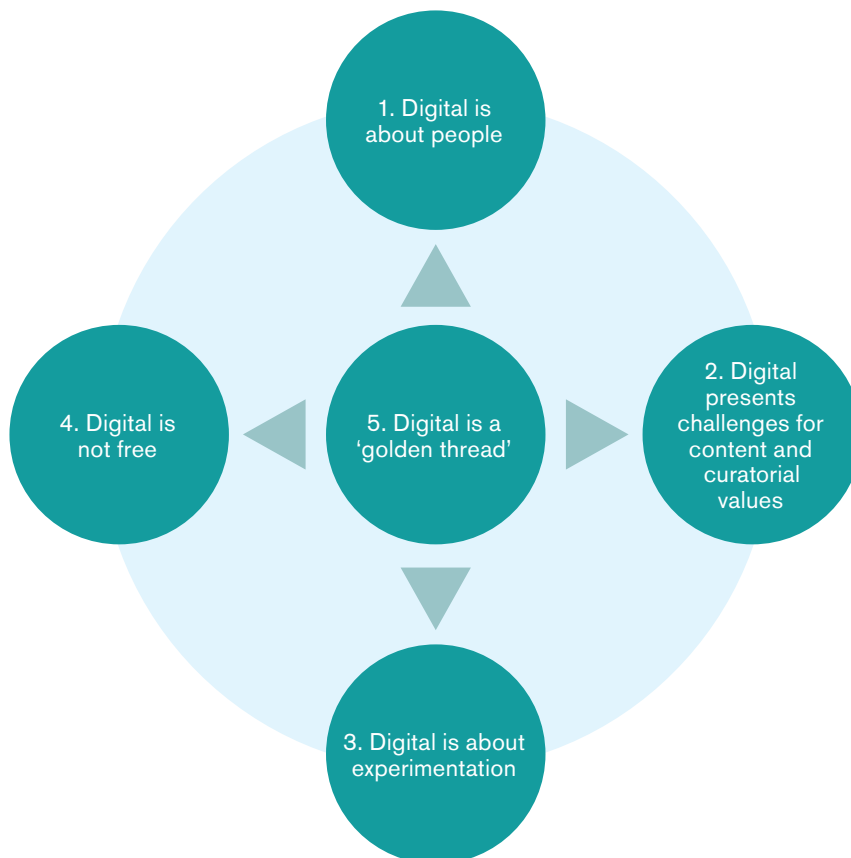
Section 5:
Understanding Digital Strategies

Introduction: This section explores the museums' responses to these challenges, based on two online strategic workshops with eight museum decision-makers. Using scenario planning techniques, we explored what are the most suitable digital strategies to survive and remain resilient during and beyond the current pandemic.

Key Results

From the strategic workshops it emerged that, in order to remain resilient by adopting digital strategies, museums should focus on four areas of strategic action:

• Developing digital literacy

• Developing approaches to experimentation and partnerships

• Developing organisational structures

• Building investments in digital.

Developing Digital Literacy

Workshop participants flagged the importance of digital literacy at all levels of the organisation, i.e. a set of knowledge, skills, attitudes and mindset needed to operate in digital environments[7]. Digital literacy allows for creative, critical, and safe ways to use technology with information, skills, and understanding[8]. Museums, regardless of their size, recognise the need to improve their digital capabilities in order to seize new opportunities. Digital capabilities include acquiring new knowledge and skills on particular pieces of software, how to create engaging online materials, and how to constantly invent online materials and events that can attract new audience. Museum directors also need to build their knowledge and capabilities in relation to digital.

Finally, some museum directors favour the idea of creating a team with digital talent, able to inspire the organisation with digital strategies, digital content and digital activities. However, identifying an organisational capability in digital talent management does not mean an abdication of responsibility or accountability for developing digital talent at the individual level – building digital expertise throughout the organisation.

Developing approaches to Experimentation and Partnerships

As noted above, informants stated that one of the barriers to implementing digital strategies is 'fear of failure', i.e. their digital strategies might not be 'good enough' or were simply 'wrong'. This suggests that some museums are missing out on the opportunities that digital strategies can offer, because of a fear of making mistakes.

Museum directors propose two approaches (or a combination):

a) A 'trial and error' approach

b) Partnerships.

A 'trial and error' approach indicates that museums should put forward digital strategies and implement them by experimenting and learning from their mistakes. This approach to digital is characterised by continued and varied attempts at digital activities which are repeated and modified until they are successful, perhaps in an adapted form. For instance, some museums have chosen to offer a digital membership service, where they provide exclusive digital content for subscribers in return for a

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7. Porat et al. (2018) https://www.sciencedirect.com/science/article/pii/S0360131518301738#bib39

8. Hague & Payton, 2010. Digital literacy across the curriculum. Futurelab, Bristol (2010),
   http://www2.futurelab.org.uk/resources/documents/handbooks/digital_literacy.pdf
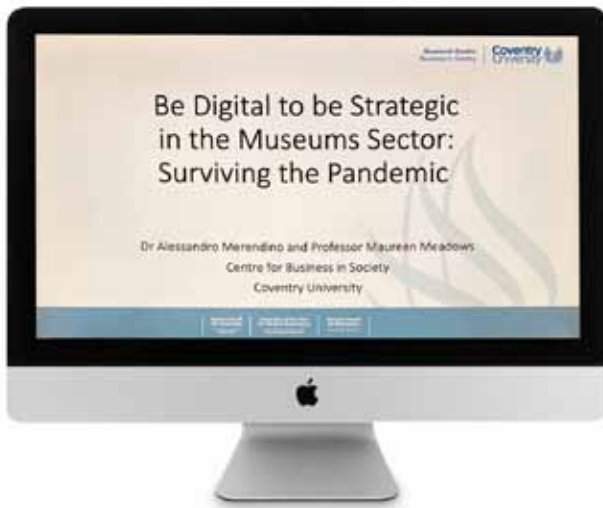
regular membership fee. In this example, a museum can apply 'trial and error' regarding the type and price of membership, the content provided and any other benefits to offer. This approach, which could also be described as 'test and learn', is a successful way for museums to experiment with novel digital strategies and innovative digital activities. Testing an idea and learning from mistakes appear to be a fruitful way to reach a higher level of digital maturity.

A wider use of partnerships indicates that museums should aim to collaborate with other museums and/or other organisations, including those outside the creative industries, to build novel digital ways to attract new audiences. For example, if a museum wants to expand its digital activities that make use of a virtual reality suite, it can seek to collaborate with universities or other consulting companies to create cost-effective and value-for-money digital products and services. To implement certain digital strategies, museums cannot work in isolation; they have to seek new collaborations and partnerships within and outside their industry.

A combination of these two approaches ('trial and error' and partnerships) can help museum directors to learn from their mistakes and from other organisations, in order to achieve long-term success. Museum directors and managers must be willing to engage, learn and make mistakes in order to build their own knowledge, capability and digital literacy.

Developing Organisational Structures

The traditional model of museums suggests that physical and digital activities are often separated, i.e. there is a dichotomy between the two. Our informants argued that a digital future requires museums to achieve greater integration between physical and digital activities. They noted that the COVID-19 pandemic has accelerated the digitalisation of museums' core business; yet the organisational structure of many museums is not ready to fully accommodate digital strategies and activities, as it is predominantly focused on physical exhibitions – which are still the main or the only income stream for many museums. A new organisational structure should break down silos to ensure that the different teams or functional areas are interconnected. Although silos can create a sense of structure capable to address complexity, silos can also be counterproductive. Breaking down silos means that functional teams can easily communicate with each other and co-create an innovative product or service which is more likely to succeed.

A new organisational structure could help museums to undertake a fuller evaluation of the impact of the digital strategies. This has a two-fold objective. First, it will help a museum to 're-visit' their digital activities in the short-term, and their digital strategies in the medium or long-term. Evaluating the impact of their digital strategies and activities will allow museums to redesign, rethink and improve some of their previous digital activities. Second, a rigorous approach to evaluation and impact assessment will limit the risk that museums are using digital merely as a 'box-ticking exercise' for reporting purposes. For instance, some museums could be inclined to launch some digital content as a one-off activity. By measuring the impact, museums will be forced to think ahead and move their digital strategies forward.

Museum directors noted that the level of maturity of an organisation is a key consideration when putting forward and executing digital strategies. Smaller museums typically struggle more to create innovative and engaging digital strategies and content due to resource constraints, as opposed to larger and mature museums. The size of a museum is likely to be proportional to the risk an organisation is willing to take with respect to digital strategies. Larger museums may be better placed to embark on riskier and more elaborate digital strategies and activities, due to a stronger and more stable resource base.

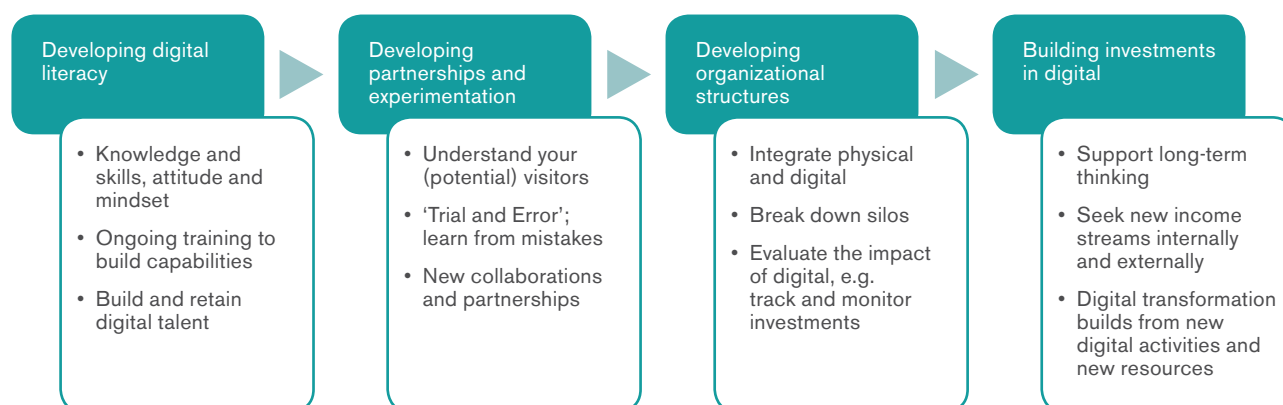**Building Investments in Digital**

Museum directors call for long-term investments in digital infrastructure. Investment in digital has become essential if a museum is to remain resilient. They believe that these investments can be both internal and external, where internal funds come from the museum's assets and revenue streams, and external funds come from outside sources such as policy-makers, grants, banks and donations. This means that the finance department – when preparing the budget – should account for internal or external funding to invest in digital activities. Meanwhile, staff with PR/marketing skills can continuously seek external support for digital investment. Our informants stressed that digital strategies are a team effort, even when securing investments.

Museums should monitor their digital investments, i.e. each element of an investment should be tracked and measured in order to understand the impact of the digital activities through KPIs (Key Performance Indicators). They key priorities in digital investments that emerged during the strategic workshops concern investments in digital literacy, online platforms and software.

Summary

For museums to remain resilient, they must have a digital strategy. However, the key enablers for digital strategies that our informants identified concern the further development of existing digital activities and plans, boosting partnerships and a 'trial and error' approach to digital activities, re-designing the museum's organisational structure and investing in digital capacity. These actions can assist museums in becoming more accessible, reaching new audiences, making new content that is more engaging and interactive, and improving the visitor experience.

The figure below summarises the key enablers that emerged from the strategic workshops.

Developing digital literacy	Developing partnerships and experimentation	Developing organizational structures	Building investments in digital
• Knowledge and skills, attitude and mindset • Ongoing training to build capabilities • Build and retain digital talent	• Understand your (potential) visitors • 'Trial and Error'; learn from mistakes • New collaborations and partnerships	• Integrate physical and digital • Break down silos • Evaluate the impact of digital, e.g. track and monitor investments	• Support long-term thinking • Seek new income streams internally and externally • Digital transformation builds from new digital activities and new resources

Section 6:
Conclusions and Recommendations

In this section we summarise the key findings and provide recommendations for museum directors and managers, as well as policy-makers working in the museums sector, to help them to put forward digital strategies that will allow museums to survive and thrive during and beyond the COVID-19 pandemic.

Conclusions

Two key areas of uncertainty identified in this study concern the funding landscape (Section 2) and visitors' needs (Section 3). Sections 2 and 3 therefore help to build a better understanding of the opportunities and challenges that museums face in navigating their external environments. Building upon such uncertainties, findings from two focus groups (Section 4) highlight the challenges that museums face in relation to digital strategies. Finally, findings from two strategic workshops (Section 5) explore the possible responses that museums can adopt, in the face of uncertainties identified and the challenges that the sector faces. The findings presented in Sections 4 and 5 can therefore help museums to explore their internal environment, i.e. the resources and capabilities that they require for success.

Policy-makers, think-tanks and museum associations (Section 2) provide a range of resources and guidelines to improve digital strategies and activities. However, the availability of funding and other forms of support is a matter of concern for museums, as they rely on policy-makers to shape their operating environment in a favourable manner.

The survey (Section 3) points to the needs that visitors have with regard to digital activities. Many potential visitors are not yet engaging virtually with museums; this creates opportunities to develop new digital content and improve existing offerings. An important finding is that the respondents who are already engaging with digital activities offered by museums are typically satisfied with the experience, and many are likely to make word-of-mouth recommendations. Online/virtual activities can be run in parallel with physical exhibits, but museums should not underestimate the power of digital content to engage visitors. Online collaborations with other organisation can also help museums to attract audiences. People

recognise the value of museums for entertainment and they also commend museums for their online/virtual activities useful for education purposes, learning new skills and improving well-being.

The focus groups (Section 4) highlight five key challenges that museums face when adopting digital strategies, namely digital is about people, digital is not free, digital impacts upon content and curatorial values, digital is about experimentation, and digital as a 'golden thread'.

The strategic workshops (Section 5) explore the organisational responses to such challenges. In order to remain resilient, museums should develop digital literacy, set up new partnerships, re-think the organisational structure and proactively look for investment in digital resources.

Finally, the project directly addresses the 2027 Goals set out by Coventry Cultural Strategy 2017-2027. The strategic goals of Coventry City of Culture show that institutions are moving in the direction of improving and implementing digital strategies to attract and engage with audiences. Coventry Cultural Strategy 2017-2027 demonstrates that institutions are cognisant of, and responding to the challenges that national documents, like DCMS and ACE strategies, pose. This project shows that museums need to continue to look for online collaborations to maximise resources, capabilities and technology infrastructure. This report demonstrates the key role that museums can play in promoting online learning. Finally, museums' digital strategies have the potential to maximise the culture and heritage of a city or town by promoting online activities that will attract tourists and contribute to the local economy.

The following image sums up the keywords that emerged during our project, including the survey of visitors and potential visitors, the focus groups and strategic workshops with museum directors.

Recommendations for museums' directors and managers

DIGITAL LITERACY

1. **Digital requires ongoing training.** It is vital for museums to provide training for staff members, including senior management team members and strategic decision-makers, around digital strategies, digital content, digital activities and the technologies that support them.

2. **Digital is about capabilities.** Essential capabilities in a digital era include the skills and experience to create added value via digital; and the ability to work together within and across functions to deliver digital strategies where technology is employed to improve a museum's performance.

3. **Digital Talent management.** A museum could identify, or seek to hire, a digital 'lead/expert' who will be responsible for leveraging the benefits of digital transformation within the organisation. In order to retain or attract digital talent, museums could offer a competitive work-life balance, professional development and an attractive career path. Digital talent can drive higher levels of innovation, creativity and productivity resulting in higher revenues and lower costs.

EXPERIMENTATION AND PARTNERSHIPS

4. **Digital is about people.** Digital strategies are about understanding, responding to and engaging with people, i.e. visitors and potential visitors. Digital is an opportunity for museums to become more inclusive and accessible by reaching people who cannot access physical exhibitions. Digital strategies and activities are also best co-produced with visitors in order to grasp and address their needs.

5. **Digital is about learning from mistakes.** For our participants, a key message was that 'It is ok to get it wrong'. A 'trial-and-error' or 'test and learn' approach illustrates that learning from mistakes can be valuable, if an organisation such as a museum is to build successful digital activities. Digital strategies may be areas of concern for some museums, because of their novelty or a lack of resources. However, by testing and learning, museums can leverage digital strategies and benefit from them.

6. **Digital is about collaborations.** Partnerships with other museums and organisations from different industries are vital to develop and maximise the benefits of digital strategy. Museums should create digital business ecosystems where individuals (including artists and members of the public) from a range of organisations collaborate around the opportunities presented by digital technologies to co-create value through shared digital platforms.

ORGANISATIONAL STRUCTURE

7. **Digital does not work well in silos.** Digital is not a task for a single person or a single team. Digital is a 'golden thread' that should run though the whole organisation. If a museum has a strongly siloed structure, it is at risk of missing many of the benefits and opportunities resulting from digital strategies. It may also result in a disjointed and confusing digital experience for visitors. A museum should strive to create a system of synergies between its various teams (such as marketing, IT, finance, curatorial and operational). The planning, delivery and evaluation of digital strategies and activities require teamwork. Digital hinges on collaborative teams and coordinated efforts.

8. **Digital integration is the new frontier.** Museums should integrate physical and digital content to attract new audiences and retain existing ones. Digital integration brings teams or functional areas together, requiring them to think and deliver collaboratively. Furthermore, by integrating digital and physical content, museums will be better able to provide novel experiences and tailored/customised products or services.

9. **Digital is the strategy.** Digital strategy is not an IT or a marketing strategy. It is part of the business strategy as a whole. Museum directors may need to re-think and re-design the business strategy, firmly embedding digital within the strategy. Museums should periodically evaluate the impact of their strategy, including digital, by identifying key performance indicators. Such metrics should, for instance, include audience performance metrics, audience engagement metrics, digital channel metrics, digital content success metrics, and digital and physical integration metrics.

INVESTMENTS IN DIGITAL

10. **Digital is long-term.** Any digital or online activity needs to be related to a long-term digital strategy. Museums should avoid the pursuit of one-off digital activities that do not create sustainable or enduring benefits for the organisation.

11. **Using internal and external resources.** Museums already have valuable resources in-house that can be used to maximise the benefits of their digital strategies. Where necessary, museums should re-think and redeploy their current assets and resources to foster digital activities in order to build new income streams. However, museums also need external resources to boost their digital activities; the responsibility for seeking new resources should be shared across the organisation. Hence, the finance team should account for external funding to invest in digital activities; the marketing team should continuously seek new external resources to support digital investments; and so on.

12. **Successful digital transformation relies on digital strategies.** Digital strategies are frequently about making wise investments to increase visitor numbers, hence the possibility of growth, new revenue streams and competitive advantage.

Recommendations for policy-makers

1. **DIGITAL LITERACY.** Provide continuous support for digital strategies, as opposed to 'one-off' activities or opportunities. Take a long-term view of the development of digital capabilities and digital talent in the museums sector.

2. **EXPERIMENTATION AND PARTNERSHIPS.** Encourage collaborations amongst museums to create online synergies which everyone can benefit from. In addition, support collaborations between museums and other organisations outside the sector, in order to develop digital activities, events or content that attract more visitors.

3. **ORGANISATIONAL STRUCTURE.** Support museums as they re-think their organisational structure and culture to accommodate a long-term strategy and plan regarding digital activities.

4. **INVESTMENTS IN DIGITAL.** Support museums to develop digital activities through long-term funding and long-term support.

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