



DASH SURVEY RESULTS 2021

How do people working in UK heritage use digital technologies, and how has this changed since the pandemic?

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Foreword

Welcome to the 2021 Digital Attitudes and Skills in Heritage (DASH) survey report, produced on behalf of the National Lottery Heritage Fund. The 2020 DASH survey began as the UK first went into lockdown in response to the coronavirus (COVID-19) pandemic, and this second report has been carried out at a time of continuing uncertainty. Huge thanks then are due to the research team and to the 4,514 volunteers, employees and board members who have given their time to create this unique and vital map of the UK heritage sector's digital skills.

I've been privileged to have seen the resilience of the sector as it meets the challenges of digital adoption and innovation over the last two years. Our wide-ranging Digital Skills for Heritage training initiative has worked with organisations across the UK throughout this time, shaped by and responding to what the sector has told us it needs.

The 2021 research demonstrates a positive link between the support we have provided and sector-wide skills development, attesting to the power of listening and working together. The Fund welcome this positive news and will continue to support the sector in 2022 through a new range Digital Skills for Heritage projects designed to develop digital business models and services, build digital leadership, and leverage the power of digital volunteers.

The report shows that over the last year organisations have adopted and focused on necessary digital skills. It also presents a sector that is full of ideas about how to develop and apply new digital practices, and is shifting towards a more strategic adoption of technologies. Although the changes that have taken place over the last two years have sometimes been difficult, they are enabling more people than ever before to actively engage with and benefit from heritage. We will continue to work with the sector to secure these gains and build on them for the longer term.

Josie Fraser, Head of Digital Policy

The National Lottery Heritage Fund

Key findings

The basics

DASH stands for the 'Digital Attitudes and Skills in Heritage' survey. It collects data about three things: individual attitudes towards digital, digital skills relevant to heritage activities, and organisational support to use digital technologies. We define 'digital technologies' to include software, apps and platforms, hardware such as computers, tablets and mobile devices, and networks including the internet and cloud services.

DASH is a national survey that provides everyone in heritage - regardless of role or seniority - with a voice, and it provides organisations with access to their resultant data. Organisations can compare themselves to the national dataset and reflect on specific feedback from their people, and so help them provide better support and improve their activities. The DASH survey was first carried out between April and July 2020, and the [2020 report](#) was published in October 2020. DASH was repeated 14 months later and ran between September and November 2021. This is the second DASH report.

A total of 4,514 individuals from 323 organisations took part in the 2021 survey, compared with 4,120 individuals from 281 organisations in 2020. While only 40 organisations used DASH in both years, the proportion of heritage types and organisation sizes were very similar across both survey years.

In this report we compare results between the two surveys to identify whether any changes can be observed. As well as presenting summary data per question, we have broken data down into five job role 'types': trustees, senior staff, all other staff, freelancers, and volunteers. The key findings from the DASH 2021 survey data set are summarised in the remainder of this section. The Heritage Alliance have also reflected on these and provide their response in Section 8.

Digital attitudes have not changed, but confidence has

Comparing data between the 2020 and 2021 DASH surveys suggests that people's attitudes towards using digital have not changed, with most respondents saying they are motivated to learn new digital skills only when they need to solve immediate tasks or problems. While attitudes have not altered noticeably between DASH surveys, when it comes to people's (self-reported) level of digital skills there are some changes.

In comparison with 2020 data, a higher proportion of respondents in 2021 report feeling confident about digital activities such as video conferencing and using virtual collaborative workspaces. On average, trustees and volunteers now rate their personal digital skills as higher than they did in 2020, although employed staff show no significant change. Those people who have participated in some of the Digital Skills for

Heritage initiatives showed higher confidence in digital skills including using social media to promote events (see Section 6 for details).

Organisational support has increased for staff

When it comes to organisational support to develop digital skills, the average rating was higher for senior staff and other staff in 2021 than in 2020; there was no such change for trustees and volunteers. These findings were supported by analysis of data from the 40 organisations that used DASH in both years. Their people now rate both their personal digital skills and the organisational support they receive to develop their digital skills more highly in 2021 than they did in 2020, suggesting that using DASH may have helped organisations to engage with issues relating to digital skills, and improve support.

Wider results suggest that organisational support was very much associated with immediate and business-critical issues. There was no significant shift in the proportion of people who said they were given training in systems or software relevant to their role, in how to make digital accessible, or open licensing issues. Similarly, there was no change between years in the proportion of people saying they were given access to a Digital Lead or knew about an organisational digital strategy.

People improved their business-critical digital skills

We can consider individuals to have three broad types of training need:

- Immediate (business-critical, just-in-time, problem-solving)
- Role-specific professional development
- Long-term/strategic (the future, transformational possibilities)

Data suggest that, unsurprisingly given the pandemic, most respondents have focussed on improving business-critical digital skills (i.e. 'just in time' learning in response to an immediate need). In 2021, the digital skills showing a notable increase in ability and confidence are those vital in order to maintain virtual working interactions with others.

This said, some of the Digital Skills for Heritage Initiatives focussed on strategic training and transformative leadership and were well attended and received by senior leaders. Clearly then, discussions about more transformational digital activities and outputs are underway across the heritage sector, and once the business-critical response to COVID-19 has stabilised there should be more time for these to come to fruition. There appears to be fertile ground for this from people working in heritage: many respondents told us that, given the time, they would be keen to get involved in using digital in new and transformative ways. Their comments reveal the importance of

engaging all job roles and contexts when considering digital developments, rather than considering digital innovation as a separate area that engages only a handful of 'tech-savvy' people.

Leaders are firefighting

The focus on functional digital activities over the past 14 months is not surprising given the impact of the pandemic: time is limited, and survival comes ahead of innovation. This is further supported by the feedback from those in leadership positions, many of whom say their time is being spent on keeping their organisation afloat. Senior leaders say they are currently concentrating mainly on accessing sufficient funding, carrying out business-critical workflows, ensuring effective communication across the organisation now they are working from home, and, in many cases, providing virtual alternatives to their normal real-world offering in order to stay relevant.

Innovation takes both time and opportunities for discussion, learning and reflection with others, both within and between organisations. Many of these interactions used to occur opportunistically, for example via informal discussions with colleagues, or by chatting with people at conferences. These kinds of face-to-face interactions are not happening at present because of the pandemic, and feedback suggests that an important form of information-sharing has been lost, despite the rise of 'digital working' and the availability of formal support materials such as those funded by Digital for Heritage.

To further support innovation, we suggest there is a need to promote the importance of informal interactions and relationships, both between people and between organisations. While it would be useful to consider how this might be facilitated virtually, it may well be the case that physical opportunistic interactions are preferred by some, in particular those who don't currently feel enthusiastic about using digital as a way to meet others (see Section 7 for examples of how different people view use of digital).

Individual and organisational needs

When comparing between 2020 and 2021, the needs of individuals and organisations remain very similar. Individuals want to know how to better use social media, create digital content and manage data. They continue to report a lack of time and insufficient face-to-face support as blockers to doing so.

Organisations want to get better at creating new online and hybrid experiences, improve engagement and outreach in digital spaces, upgrade IT systems and work processes in order to improve efficiencies, and better understand their audience in order to improve digital marketing activities.

We wanted to investigate how those in leadership roles perceived the issues and needs around digital in their organisation. We used a statistical technique to identify three types of digital persona: people who use digital when they have to, those who are used to digital being integrated throughout their life, and those who are digital enthusiasts. All three were present in people in leadership roles (i.e. senior staff and/or trustees). We use these personas to better understand the way that each group talks about their perceived strategic aims and needs, in the hope that this can help support agencies to better engage and communicate with leaders across heritage in the future.

1. Recommendations

Many of the conclusions made in the [DASH 2020 report](#) remain relevant today. We have separated recommendations into those for individuals, organisations and funders. We appreciate that individuals and organisations have limited capacity to carry out some of these activities, especially while the focus is on responding to the COVID-19 pandemic. Nonetheless it is important to identify all possibilities so that they can be considered when feasible and appropriate.

Individuals

- There are high quality, free resources available to help people working in heritage to use digital in new and improved ways. We recommend looking at some of the [Digital Skills for Heritage](#) resources and bookmarking those that feel relevant or might be useful in future. Consider sharing your thoughts and signposting to them via your networks.
- The DASH questions remain available via the [DASH website](#). They offer a fast and free opportunity to self-reflect on personal digital attitudes, digital skills and organisational support. We recommend individuals consider using them as one way to support professional development.
- Heritage organisations have limited capacity to develop specialist digital skills inhouse, so this often needs to be developed at an individual level as and when required. Where relevant, people should consider listing their personal specialist digital skills via their online (e.g. LinkedIn) profiles, and consider whether they might mentor others to develop specialist digital skills.
- We recommend people look at the digital personas presented in Section 7. Do you feel you fit into any of the three personas presented there? If you consider yourself to be a 'digital enthusiast', does your organisation know? If you do consider yourself to be a digital enthusiast, you might want to ask for some of your role to include supporting others to improve their digital skills, or support the organisation by helping to identify opportunities to better meet strategic needs using digital technologies. Could you join a network of other digital enthusiasts in other organisations?
- For senior staff, feedback from DASH suggests that they need not focus too much on honing a wide variety of personal specialist digital skills. What organisations need from leadership is a clearly communicated outline of intended outcomes in terms of internal working practices (e.g. 'we need an area where we can all access digital documents safely'), external service delivery (e.g. 'we want to increase the number of people that provide feedback on their visitor experience'), and strategic aims (e.g. 'we need to make better use of digital to deliver our equality, diversity

and inclusion commitments’). The exact details of how this is done, and where different digital technologies can add value, can be shared with others. Using digital technologies should not be considered a goal in its own right.

Organisations

- Clarify what skills people are expected to have in their role. This can be supported by ensuring job descriptions and trustee requirements for new posts reference appropriate digital skills and awareness, and by embedding conversations about digital skills into recruitment and appraisal.
- Carry out skills audits (such as DASH) to help identify what skills are inhouse and promote internal discussions about job role expectations around digital. Crowdsourcing feedback also provides opportunities to identify better ways of working.
- Wherever possible, we recommend organisations provide people in all roles and at all levels with opportunities to consider what digital skills could support their role, and time to engage with, develop, practice, discuss and share new digital skills.
- Include a diversity of voices when considering what and how to improve current use of digital technologies for internal working practices and service delivery. Staff, freelancers, volunteers, and trustees all have different viewpoints that add value to the conversation by helping to identify the right solution, and ensuring that it remains focussed on organisational strategic aims.
- Organisational support to develop the digital skills of trustees and volunteers is low in comparison to employed staff. With the large scale move to working in digital spaces post-pandemic, it is important that trustees and volunteers are included in training, especially those relating with best-practice or legal digital issues such as handling data safely and securely, copyright and open licensing, and accessibility.
- Consider how to facilitate informal discussions about digital between people, both face to face and virtually. For example, organisations might want to consider running a once-a-month virtual skill-swap, or provide a way in which their people can ask ‘how do I do X with digital?’ and share that with the wider organisation.
- Signpost staff, trustees and volunteers to relevant online resources and communities that could provide them with useful information or support relating to effective use of digital, such as those supported via the Digital Skills for Heritage programme.
- Identify, engage and develop your digital enthusiasts. The persona findings suggest that they are out there! Many people prefer learning by watching others (virtually as well as face-to-face) and these individuals have the potential to make excellent advocates and facilitators for effective use of digital technologies.

Funders

- The Digital Skills for Heritage resources and training have been well received, but DASH confirmed that there are many people working across the heritage sector who have yet to hear about and access them. Those who have used them exhibit higher levels of confidence and ability in relation to various digital skills, and while we cannot imply causation through this data, it does suggest that the resources have had a level of positive impact. The Heritage Fund should continue to promote those resources across UK heritage, and signpost people to them at key touchpoints such as when people apply for funding or sign up for various events or initiatives. They should also collect and publish user feedback about the resources to identify and share the ways in which people find them helpful.
- When attempting to cascade knowledge and skills across the sector – whether related to digital or not – it is useful to consider heritage as an ecosystem rather than as a set of separate organisations. Most heritage organisations are very small, with limited capacity to develop specialist digital skills inhouse. DASH revealed that the sharing of specialist digital skills often occurs via informal discussions between people both inside and outside of an organisation, and/or via freelancers coming into organisations temporarily. Similarly, the fact that some people are clearly working and/or volunteering concurrently across different sectors (be they charity, heritage, education, public or private sector) suggests that there are opportunities for skills-swaps that have yet to take advantage of. We recommend funders consider creating some form of mentoring and/or match-making scheme that provides an opportunity for specialist digital skills to be shared across the ‘heritage ecosystem’. A similar short-term mentoring scheme is seen in other sectors such as between members of the Market Research Society.
- Many organisations are still beginning their digital journey. It is important to remember that we must support these organisations with the basics, and work with them to identify how digital technologies might add value in their specific circumstance.
- The analysis identified some ‘digital enthusiasts’ with particularly advanced specialist skills. These are the people most likely to identify potentially transformative ways to use digital technology for heritage aims, different to the more common practice on transactional and practical digital integration. It would be useful to consider how they could be brought together to discuss innovative new ways of using technology, as well as support them to act as digital advocates across the sector.
- Most heritage organisations are very small and have limited time and capacity. Funders can help them to consider how to use digital technologies by providing ‘light-touch’ ways for senior leaders to be introduced to new ways of working with digital, to think more strategically and to engage with possibilities. This could be via the provision of online resources or creating opportunities for senior leaders to

meet virtually in formal and informal settings to discuss their needs and describe how they have solved relevant problems internally.

- Young people continue to be underrepresented in the sector, with fewer than 4% of DASH respondents aged under 25. Funders should continue to consider how to better engage young people in heritage activities wherever possible.
- This year's sign-up process included a small number of questions that aimed to better describe heritage organisations in terms of type, activities, size, legal status, remit, location, and approach to digital ways of working. We recommend these questions are cascaded to other data collection methods in order to collect further data to describe the types of heritage organisation. By better understanding the diversity of heritage organisations, funders can better support their needs.
- The persona work carried out using DASH data was tested for rigour using the free text comments. We recommend it is tested further to investigate its validity (e.g. via interviews) outside of the DASH dataset. The leadership personas should also be investigated further as these offer a potentially useful framework to facilitate recruitment and as a way to actively build in positive digital personas into organisations and the sector overall. The leader support matrix was derived from the analysis, and also requires discussion and testing to see whether it rings true in practice, and to consider whether and how it might support funders and organisations.

2. Introducing DASH

Main aims

The DASH (Digital Attitudes and Skills for Heritage) survey was funded as part of the Heritage Fund's '[Digital Skills for Heritage](#)' initiative. 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.

In 2021 the main aims were to collect data about digital skills, digital attitudes and organisational support for digital that:

- Helps individuals working in the heritage sector to better understand their own digital skills and attitudes
- Empowers organisations by providing data for them to compare themselves with national trends, and collate feedback that can be used to identify useful, feasible and practical ways to support their people and improve their efficiency and/or effectiveness using digital technologies
- Provides The Heritage Fund (and other organisations that champion UK heritage) with data to better support the sector to harness digital technologies usefully and appropriately
- Compare attitudes, skills and organisational support between April-July 2020 (when DASH 2020 data were collected) and September-November 2021 (when DASH 2021 data were collected). Responding to COVID-19 was a leading focus for organisations at both of these points

The brief was to attract participation from organisations representing the full breadth of UK heritage (in terms of region, size and sub-sector), and we aimed to reflect the attitudes and skills of all types and levels of staff and volunteers working within them.

The survey

The 34-question survey ran for 11 weeks during September – November 2021. The question set was designed to be lightweight (to maximise response rates) and to feel relevant to individuals and provide actionable data for organisations. Questions focused on individual digital attitudes, individual digital skills (relevant to heritage), and organisational support for digital. Questions were based on extensive previous research regarding individual and organisational digital capabilities in the UK higher and further education sector, the UK health sector, and the European primary,

secondary and vocational schools' sector¹. All questions were optional. The questions relating to digital skills were shaped by a review of digital in the UK heritage sector, summarised in a separate blog post article on the [DASH website](#), and are available to download, together with other resources for participating organisations. Based on feedback from 2020 we made minor changes to DASH in 2021 to include ten more questions that provided further opportunity for people to identify issues and so help their organisations to identify strengths and opportunities for improvement.

DASH 2021 was advertised using a wide variety of marketing methods and channels, led by The Heritage Alliance team and supported by The Heritage Fund communications team.

¹ See the [Timmus Research project portfolio](#)

3. Describing heritage organisations

Defining UK heritage organisations

There are tens of thousands of heritage sites in the UK. For example, English Heritage represents just over 430 historic places including palaces, houses, hill figures, statues, castles, abbeys, industrial sites, forts, bridges and agricultural sites, and manages a list of over 400,000 scheduled monuments, listed buildings, registered landscapes and battlefields, and protected wrecks. National Trust cares for over 500 historic houses, castles, parks and gardens, alongside 780 miles of coastline and 250,000 hectares of land. The Museums Association estimates there are about 2,500 UK museums. Historic Environment Scotland lists over 56,000 individual sites (described as either battlefields, gardens and designated landscapes, historic marine protected area, listed building or scheduled monuments), Cadw lists over 4,000 scheduled monuments in Wales, and the Northern Ireland Sites and Monuments Record holds information on over 16,000 different archaeological sites and historic monuments. So here alone we have six heritage organisations responsible in some way for just under half a million individual UK heritage sites. Thus, we start to gain a picture of the huge number of heritage sites, but these do not represent the extent of the UK heritage sector.

Beyond the built environment and heritage landscapes, many other areas emerge from industrial, maritime and transport heritage, traditional and specialist skills, archives and collections (physical or digital) and intangible heritage such as culture and memories. Precisely because of this complexity, The Heritage Fund does not define heritage and instead adopts a broad and inclusive approach. In its Strategic Funding Framework, it says:

“Heritage illuminates history. It includes buildings and landscapes, museums and memories, objects and species, but we do not define or limit its scope. While our work is informed by experts, we ask people to decide what they value from the past and wish to hand on to the future. That is the heritage we support.”

In addition, the heritage sector encompasses a wide range of organisations and structures. From tiny volunteer-run informal groups to large-scale national bodies. While charities are a common legal status, many historic properties are privately owned, and a lot of heritage is managed by local authorities.

From this overview we hope the reader can see how diverse UK heritage is, both in terms of types and sizes of organisation. Precisely because of this diversity, we felt it was extremely important to engage every person and include all points of view within a national survey about digital attitudes, skills and support. The DASH survey was

therefore designed to be completed by individuals and not as a 'one response per organisation' data collection model. The questions were carefully designed to feel as relevant as possible to every person working and volunteering in UK heritage, and to provide useful feedback to organisations of all types and sizes. Providing data back to organisations was an important component of DASH, and in return for organisational participation we provided anonymised data back both as a summary online visual dashboard (for those with 3 or more responses) and as a raw data file (for those with 6 or more responses).

The organisations that signed up to use DASH in 2021

A total of 416 organisations signed up to use DASH in 2021, of which 323 (78%) went on to collect at least one DASH survey response, and 63% collected at least two survey responses. Conversion from sign-up to DASH use was notably higher than in 2020 when 523 organisations signed up to use DASH in 2020 but only 281 went on to complete the survey. This section ('Describing Heritage Organisations') focuses on understanding the types and sizes of heritage organisation that make up the UK heritage sector, drawing on data from all 416 organisations that signed up.

We have provided a short summary of the findings below; detailed data tables and more detail from the free text analysis are shown in Appendix 1.

Heritage area

- Twenty-eight percent of organisations that signed up to use DASH in 2021 described their heritage area as 'collections (museums, libraries or archives)', 18% as 'community heritage', 17% as 'historic buildings and monuments', 11% as 'landscapes & nature', 10% as 'sector support', 8% as 'cultures and memories' and 8% as 'industrial, maritime and transport'
- Organisations describing themselves as 'industrial, maritime and transport' and 'cultures and memories' were most likely to sign up but then not use the DASH survey
- In 2021 we included a new heritage category, 'sector support' which was chosen by 10% of organisations signing up for DASH, illustrating the importance of these heritage umbrella organisations in supporting the UK heritage sector

Organisational aims, geographical remit and location

- When asked which of eight possible aims and activities best described their organisation's focus, by far the most popular were 'visitor and public engagement'

(chosen by 70% of organisations signing up) followed by 'conservation and preservation' (43%) and then 'education' (39%)

- 37% of organisations signing up to use DASH said their remit covered a region of the UK and 32% said their remit covered a single physical site. A total of 5% said their remit was overseas/global
- When asked where their head office was based (as an indicator of their UK location), 36% said 'England: South-East, South-West and London', 21% said 'England: Midlands and East', 19% said 'Northern England', 9% said Northern Ireland, 8% said Scotland and 7% said Wales; this is broadly similar to the 2020 survey

Legal status

- By far the most common answer when asked to describe organisational legal status was 'registered charity' (62%). A total of 11% of organisations were a heritage arm of a local authority, government organisation or public sector body. A total of 4% chose 'other, e.g. sole trader' and 2% chose 'private owner'.

Number of staff and volunteers

- We use the number of staff and volunteers as a way to describe organisation size because when it comes to considering digital technologies within an organisation, it is individuals who need to be given access to technology and/or trained to use it. Hence for DASH we consider organisation size to be best described in terms of the numbers of people (staff and volunteers) involved rather than income or footfall (which of itself has complications when considering e.g. community heritage groups or virtual heritage archives)
- 49% of organisations signing up to DASH had 1-10 staff members (either full- or part-time), 20% had 11-50 staff and 11% said more than 50 staff. A total of 19% said they had no paid staff and were completely volunteer run. This is strikingly similar to the proportions of organisations that signed up to DASH in 2020 – despite the fact that only 40 of the 416 organisations that signed up in 2021 had used DASH in 2020. This suggests that these staff proportions broadly represent UK heritage organisations more widely
- The mean average number of staff per organisation was 57 ± 514 SD people. In contrast, the median average was just five people. Clearly, the standard deviation of the mean and the large difference in these two averages illustrates the huge variation in staff number across heritage organisations, with the vast majority run by either a very small number of paid staff or solely volunteer-run

- The number of volunteers at each organisation was more unreliable in 2021 than in 2020 because several organisations explained to us that COVID-19 had prevented them from being able to use their volunteer staff, such that many were no longer considered 'active' volunteers
- Based on the data collected this year, the mean average number of volunteers per heritage organisation was $246 \pm 2,560$ SD people. In contrast, the median average was 20 volunteers. There is, quite clearly, a huge range in the number of volunteers associated with heritage organisations. Typically, the organisations with very large volunteer numbers are either those classifying their heritage area as 'landscapes and nature' or 'place of worship' (notably cathedrals)

Describing organisation's approach to digital

- When asked to describe their organisation's approach to digital ways of working, DASH Champions (the name we assigned to the person who signed up on behalf of their organisation) most commonly described their organisation as 'keeping up with the times' (48%). It was of interest to note that those organisations describing themselves as 'not engaged' with digital were more likely to sign up but then not use DASH.

Top digital priorities for the next three years

When they signed up for the survey, DASH Champions were asked about their organisation's digital priorities for the next three years. These fell into four broad themes.

1. Improve engagement and outreach

This involved activities such as developing online and social media communications, marketing, audience analysis, member engagement and community building

2. Improve digital practices at work

This involved activities such as upgrading IT systems, improving work process and efficiencies, training staff, making better use of data and systems

3. Develop innovative heritage materials

This involved activities such as developing content and interpretation materials, mapping and digitising, and improving access to collections

4. Offer digital events and learning opportunities

This involved activities such as online performances and educational events, developing innovative real-world/online experiences, and outreach events such as launches and promotions

Priorities are similar to [those identified in 2020](#). Looking below the headline findings to some of the quotes from strategic leaders, it seems that many organisations remain in 'pandemic response' mode, prioritising the use of digital for immediate needs (such as putting events online and moving to digital ways of working). The development of new heritage offers and experiences in response to the pandemic is emerging more slowly.

4. DASH survey key findings

DASH Champions were asked to circulate their unique survey link to all people working or volunteering in their organisation. DASH 2021 collected 4,514 individual survey responses from 323 organisations. Each organisation collected between one and 249 responses; the mean was 14 ± 26 SD and the median was six.

A third of organisations collected at least 10 responses and 12% of organisations collected 30 or more responses. We have provided a short summary of the findings below; detailed data tables broken down by job role, and more detail from the free text analysis are shown in Appendix 2.

Much of the following summary is discussed by comparing average answers between the five possible job roles, these being: trustee/board members, CEO/director/senior leaders, all other staff, freelancers, and volunteers. For ease, we have shortened the naming of the first two categories to 'trustees' and 'senior staff'.

Where we have investigated the data from those in leadership positions, we have grouped the first two job roles (i.e. trustee/board members, and CEO/director/senior leaders) and have called these people 'senior leaders'.

Section 5 of this report focuses on a detailed comparison of differences and similarities between the 2020 and 2021 DASH data. In this section we focus predominantly on describing this year's results in question order.

DASH respondents

- We asked individuals to describe their job role as one of five possible options. 51% of respondents were staff, 28% were volunteers, 11% were trustees (also typically unpaid), 8% were senior staff and 1% were freelancers. This is broadly similar to the data collected in 2020, suggesting that these proportions are largely correct across the UK heritage sector
- 47% of respondents were on permanent contracts and 38% were in unpaid roles; 7% were on fixed term contracts, 4% on project-based fixed term contracts, and 2% were either on zero hours contracts or 2% as freelancers
- 20% of respondents had been in post for five to six years and 14% had been in post for seven or more years
- When asked to describe their area of work, the two most commonly chosen options for trustees were strategic management and fundraising and development. Senior staff most often chose strategic management and project management, staff and freelancers chose engagement and visitor operations, and professional/technical, and volunteers overwhelmingly chose engagement and visitor operations

- Half of respondents had worked in another organisation in the past three years, often in several different sectors; 19% said they had worked in the charity sector, 18% in heritage, 12% in the commercial sector, 11% in education/academic and 10% in the public sector. This suggests that there is the opportunity for people to work across different organisations/sectors and share (digital) skills and information in different contexts. Interestingly, 10% said they had worked in two different sectors in the past three years, and 4% said they had worked in three or more different sectors, suggesting that some people may have portfolio careers spanning several sectors
- Nearly half of all respondents were aged 55 or older; 27% were over the age of 64 illustrating the importance of older and retired individuals in supporting and running the UK heritage sector. Only 4% of respondents were under the age of 25
- As per last year, about 60% respondents were female, 39% were male, and 1% were other/non-binary. Trustees were more likely to be men whereas senior staff, staff, freelancers, and volunteers were more likely to be women
- A total of 3% of respondents said they used assistive technologies such as screen readers or text magnifiers on a day-to-day basis; this is similar to last year's results

Attitudes and motivation to use digital

- These questions were designed to ask people about their general attitude towards digital technologies in life generally
- 20% of respondents said they often help other people use digital technologies; this was higher for freelancers and staff and lower for volunteers
- 24% said they often share advice and information on social media; this was higher for freelancers and trustees and lower for volunteers
- 42% said they often find their own solution to IT problems; this was higher for freelancers and senior staff
- 39% said they often looked after their health as a digital user by taking screen breaks etc. This was highest in volunteers and trustees
- When asked to rate their interest in learning new digital skills, senior staff, staff and freelancers were on average more interested than trustees and volunteers
- The main motivation to develop digital skills was to solve immediate tasks or problems. Some respondents provided additional comments to this question, with several commenting that they felt it was important to keep up-to-date with digital development and to maximise effective and efficient working
- Senior staff were, on average, likely to expect to find learning new digital skills easier than volunteers or trustees

- Respondents were asked to give an example of a digital tool or app they found really useful. Common themes were mobile apps (notably banking or Google maps), Microsoft software, emails, calendars, and social media
- When asked what new digital skills they have developed in the past 12 months, common themes related to virtual meetings, manipulating data (notably in Excel), editing images or videos, and creating website and social media content. This result is very similar to 2020's findings

Digital skills

- On average, volunteers rated their digital skills lower than those in other roles. Having a higher interest in learning new digital skills and respondents rating their role as requiring higher digital skills were the two key drivers of higher digital skills rating scores. Gender, age, and organisational heritage area were not important in predicting higher digital skills rating scores.
- 71% of respondents said they were able and confident when it came to using video conferencing for virtual meetings; this was notably higher than in 2020
- 46% felt able and confident in using social media to promote an event; this was similar to last year
- 63% felt able and confident in recording an activity, place or object digitally; this was slightly higher than results from 2020
- 47% felt able and confident in using collaborative digital workspaces; this was much higher for trustees and staff when compared with data from 2020, but similar for volunteers. This clearly illustrates the necessity in moving to working digitally during the pandemic
- 53% felt able and confident in analysing data from a spreadsheet or database; this was broadly similar to 2020 data, although volunteers in 2020 felt a little more confident in this activity than those involved in DASH 2021
- When asked what level of digital skills their role required, on average senior staff, staff and freelancers said they needed higher digital skills than trustees. Trustees, on average, said they needed higher digital skills than volunteers. Volunteers reported needing the lowest level of digital skills in their role, which is unsurprising given how many said their main role was to support physical, on-site visitor operations
- Across all roles, the most common digital skills were 'carry out online research' and 'write relevant digital copy'. Nearly half of staff and 38% of volunteers said they trained others (formally or informally) to use digital systems

- Data confirmed that many volunteers are adept at using digital: 20% said they managed a digital collection or archive, and the proportion was not that much higher for staff, senior staff or trustees (30%, 27% and 27% respectively)
- Freelancers reported the highest levels of proficiency in digital skills including publishing digital content with open licensing, designing infographics, assessing digital risks and opportunities for an organisation, designing online surveys, managing digital collections, and developing a social media strategy. This illustrates there is a good supply of digital expertise and support available to heritage organisations from freelancers, allowing senior leaders to focus on strategic aims without necessarily having to providing digital specialist skills inhouse
- Respondents had developed their digital skills either via informal learning in their current organisation – 42% chose the option ‘picking up skills from colleagues’ - or by ‘bringing skills from a previous organisation’ (31% those that option). Much of this has been hampered by COVID-19 and the need to work from home, plus the lack of opportunities to meet, interact informally, or learn from peers in virtual spaces. This issue is clearly shown by the following quote:

“It is very difficult to access effective training, particularly with the loss of shared physical working office space post covid in my organisation. There are some useful webinar or online resources which can be helpful but there is no way to learn together and support each other to develop. In reality, much of the most effective learning in the past with new and developing technologies and digital skills was a shared beginning - maybe a workshop or presentation - and then 'in practice' development and skill building. We were all able to help each other but now everyone is in different places in terms of knowledge, many feel left behind, or we all work separately and therefore have lost consistency.”

Staff member, large heritage organisation with 50+ staff

Organisational support

- When asked when they discussed digital skills at their organisation, most respondents (55%) said they did so informally with colleagues or peers. Only 29% of senior staff said they discussed their digital skills during formal meetings such as appraisals; this was higher for staff (36%). A total of 32% of staff, 21% of senior staff, 20% of freelancers, 9% of volunteers and 8% of trustees said they had discussed their digital skills during recruitment
- 52% of respondents (mainly staff) provided further information about the kinds of digital skills they were keen to develop. The most common themes were video editing and content creation, social media skills (especially in relation to marketing) and data analysis

- 45% of respondents said they found it hard to develop digital skills due to a lack of time, 24% said they didn't have enough personal face-to-face support for learning new digital skills, 17% said they didn't have enough access to online training and resources, and 16% said there was a lack of access to reliable devices and/or software. 17% said they didn't have any difficulties in developing new digital skills
- Respondents were asked whether current organisational systems or processes made it hard for them to use digital in the ways they would like. This was a new question for 2021. 19% said yes, and 33% were unsure, and 48% said no). Staff were most likely of all five job roles to say they were encountering some form of blocker. When asked to elaborate on the issues that made things hard, common themes were:
 - Poor functionality or reliability of infrastructure and out-of-date equipment
 - Staff not being sufficiently involved in choosing software or designing digital processes
 - Lack of awareness at a senior level of what is possible or necessary
 - Lack of time and resources for staff development
 - Inefficient working practices
- Like last year, the most common response when asked how their organisation could improve digital ways of working was to ask for more training. However, this year there were a wider range of alternative suggestions, mainly in relation to organisational practices and systems. Respondents also provided feedback about the aspects of their organisation that could be improved with new or better digital ways of working. Almost all could see opportunities for their organisation to use digital technologies more effectively. Common themes related to better online access to their organisation's offer, and improving internal project, process and workflow management. These are summarised in more detail in Q25 and Q27 in Appendix 2
- When asked to describe their organisation's approach to digital ways of working, most (46%) respondents said they organisation was 'keeping up with the times'
- 63% of senior staff and 57% of staff said they were given help from their organisation to set up their own digital devices in comparison with just 15% of trustees and 6% of volunteers, reflecting the different nature of their role expectations and requirements
- 22% of senior staff and 16% of staff said they have access to a digital lead they can contact for support. 17% of senior staff and 16% of staff say they are aware of an organisational digital strategy
- 20% of senior staff and 17% of staff said they receive recognition for the digital skills they bring to their role

- 67% of senior staff and 59% of staff said their organisation makes them aware of how to handle data securely and within the law in comparison with 36% of trustees and 17% of volunteers
- On average, senior staff, staff and freelancers rate their organisation's support to develop their digital skills more highly than trustees. Volunteers report the lowest average support rating
- We asked respondents whether they had used any of the Digital Skills for Heritage initiatives funded by The Heritage Fund. One in four senior staff had experience of at least one of five named resources or projects. The most popular of these were [Heritage Digital](#) (a support project providing free digital skills training and support, led by The Heritage Alliance) and The Heritage Fund's [Digital Guides](#), which had both been used by about 12% of senior staff and 6% of trustees.

Feedback from free text comments

Digital issues and concerns

Senior staff (managers and trustees) often describe funding and resource constraints as barriers to implementing digital plans and strategies. Staff who report that they want to develop their digital skills express a number of frustrations, some of them also resource-based, but some of them cultural e.g. access to software being restricted to specialist users, and digital projects that employ experts rather than upskilling members of the organisation.

Working during the pandemic

It was not possible to identify developments since DASH 2020 through direct comparison of the free text data year-on-year, as the organisations and participants were different in each year group, and the methods not directly comparable. However, a word search of the whole free text corpus from 2021 using 'pandemic' and 'covid' came up with the following issues that participants identified this year, relating to the experience of working during the pandemic

- Digital is now embedded into day-to-day working practices: "the pandemic has placed digital (video meetings) at the heart of working life"; "Continue the covid-imposed practice of virtual meetings"; "the pandemic made [digital] a necessity, so I couldn't avoid it!"
- Working from home is the new normal: "a lot of work shifted to MS Teams"; "since covid we have been spending a lot of time working from home"; "necessity of remote communications during lockdowns". There were some comments about the need for new policies to support staff WFH.

- There is an awareness of funding issues associated with the pandemic, and related difficulties recruiting and retaining staff: “it is difficult to recruit in the middle of pandemic uncertainty”; “money is tight.”
- The pandemic was also associated with a lack of access to physical locations, collections, and materials, with sometimes a loss of relevant skills: “As covid has prevented access to the offices, the internal databases are not available”; “In the last 12 months (covid restrictions) I haven’t had the need or indeed an opportunity to learn any new [skills]”

Digital skills through a leadership lens

Within some of the free text comments, there was some criticism for strategic leaders by other members of an organisation for a lack of vision. Leaders seemed to these respondents to be too oriented toward internal system and process improvements, rather than developing new services, reaching out to new audiences, or making long-term plans. Certainly, aspects of the organisation that leaders hoped could be ‘better’ through digital were most often systems and processes. However, leaders’ own feedback suggests that they have focused on working practices and business-critical priorities as part of their organisation’s response to the pandemic.

Comments from senior staff (CEOs and Trustees) often focused on training as the solution to digital skills development. Respondents in other roles, and employed staff in particular, highlight more systemic issues such as the quality of infrastructure (software, hardware and networks), and time and reward issues.

The pandemic has pushed organisations towards digital ways of working at a speed that would not have been possible in other circumstances. A few senior leaders seem to feel that this has been a painful episode that will eventually pass:

“Systems that previously functioned well were inappropriate for the new styles of working. So, they could be improved. But if we all go back to the office, do they need to be?”

However, most are taking a more positive approach. As highlighted, many welcome the opportunity to improve day-to-day working. Others see an opportunity to transform the organisation and what it offers:

“We just need to accelerate our digital transformation”

“Innovative events and projects could attract new audiences”

“New ways of delivery and new options for funding and development of our programmes”

“[We look forward to] creating digital-specific roles in the future, or up-skilling members of the existing team.”

5. Comparing DASH 2020 v 2021 results

Comparing between the two samples

Forty organisations (13% of the 2021 organisations) used DASH in both 2020 and 2021. Feedback from 2020 users who didn't participate in 2021 was that many had not yet had time to reflect on their results from the first year, and they didn't anticipate much had changed. The proportions of both the size and heritage type of organisation and the role types of individuals were similar across the two datasets, as follows.

Organisations

In both 2020 and 2021, about 19% of organisations were run only by volunteers, 49% had 1-10 employed staff, about 20% had 11-50 staff and 11% had 51+ staff; Figure 1 illustrates how similar both samples were.

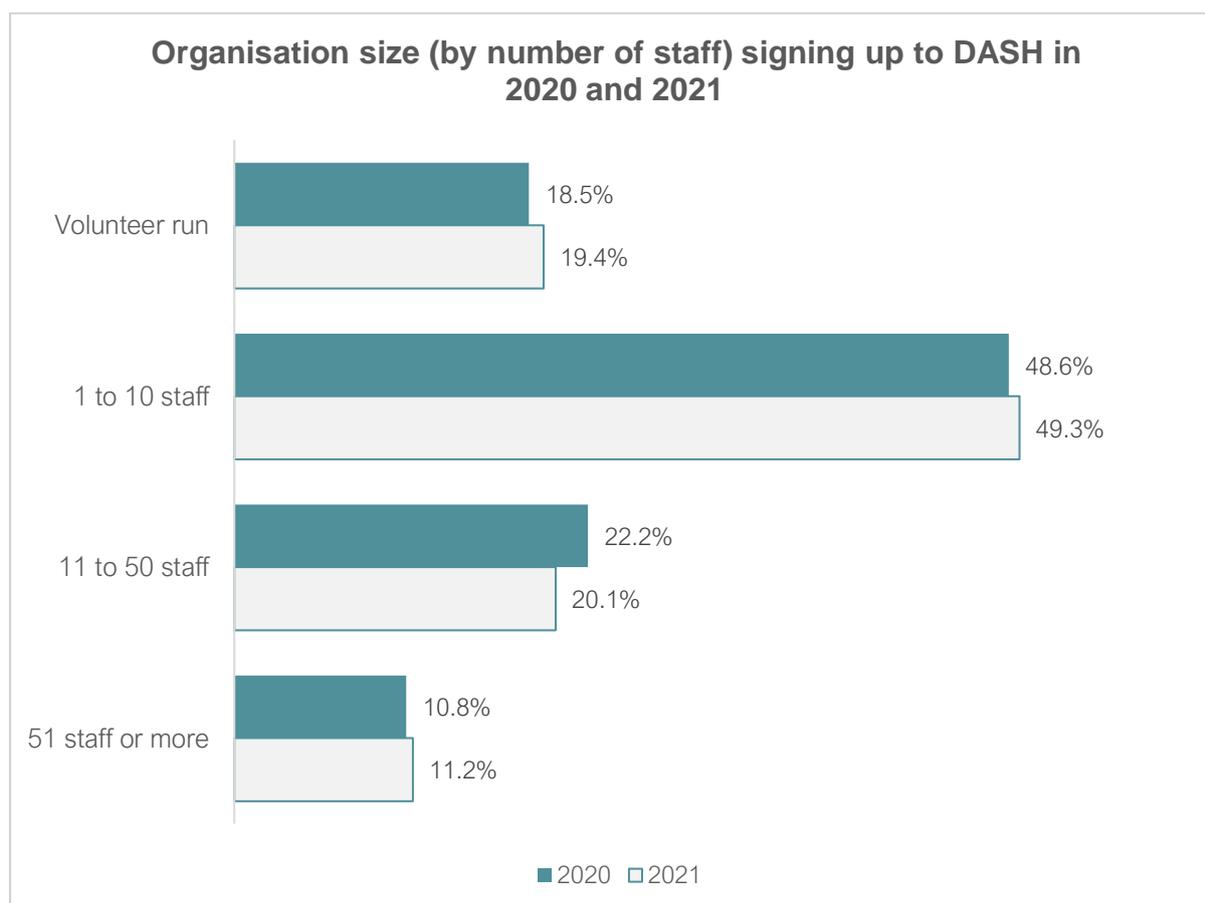


Figure 1. The proportion of each heritage organisation size (defined as the number of employed staff, whether full or part time) that signed up to use DASH in 2020 and 2021.

In both years, the most common two types of heritage organisation that participated in DASH identified as 'collections (museums, libraries and archives)' and 'community heritage' (see Figure 2). We need to be cautious about making direct comparisons on heritage area between years because (a) in 2021 we added a new group, 'sector support', and (b) in 2020 organisations were asked to tick all heritage types they felt applied to them whereas in 2021 we asked them to choose the single most relevant. Nonetheless, the proportional representation of heritage types are broadly similar across the two years.

This suggests that when it comes to both heritage type and organisation size, the two DASH data samples may provide an approximate representation of the size and scope of UK heritage organisations.

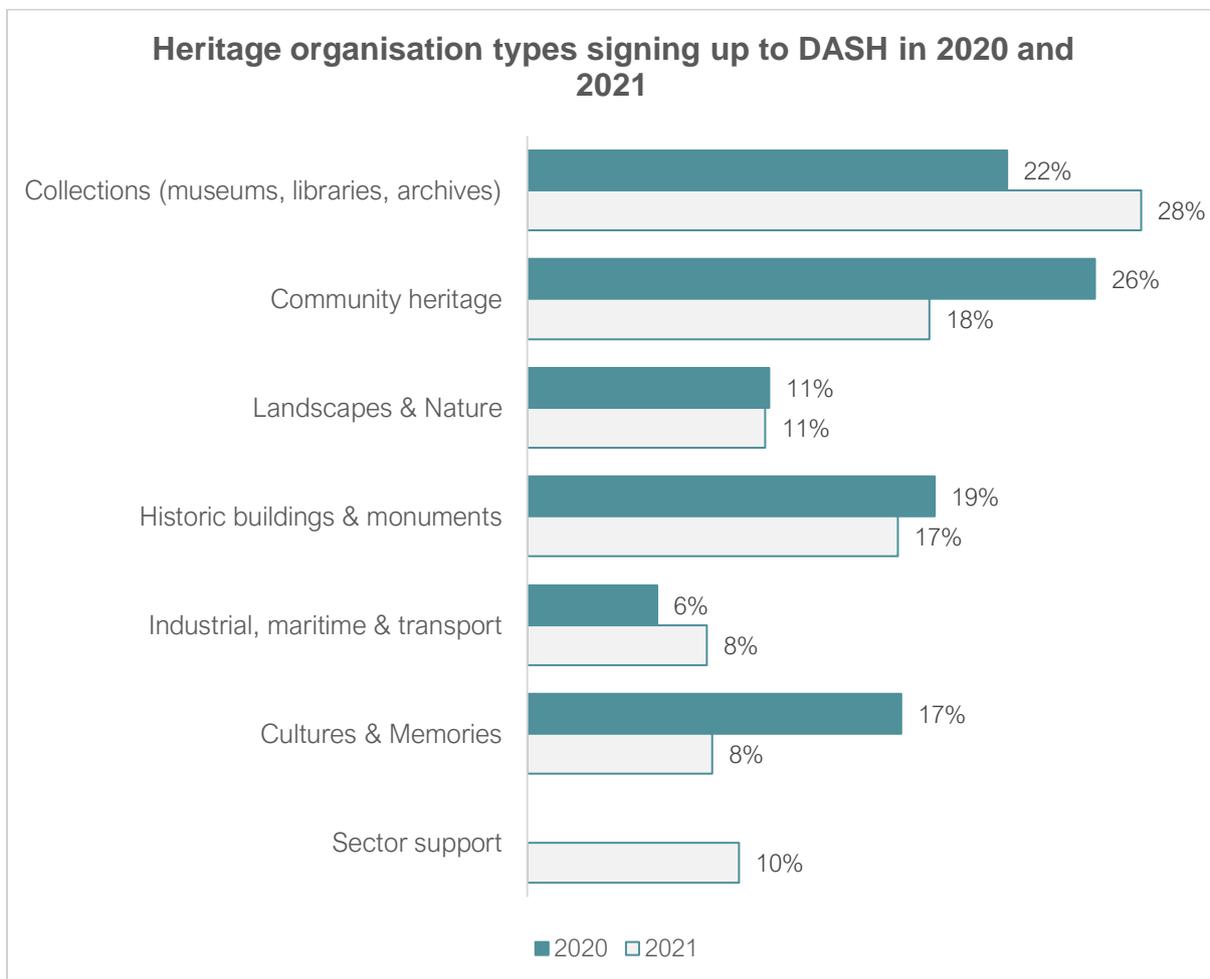


Figure 2. The proportion of each heritage organisation type that signed up to use DASH in 2020 and 2021. Note that in 2021 we added 'sector support' as an option. Also, in 2020 organisations could 'tick all that apply' whereas in 2021 organisations were asked to select the single most relevant option

Individuals

In 2020 a total of 56% of DASH data came from employed staff, 33% from volunteers and 11% from trustees. This is very similar to data collected in 2021, where 61% of data came from employed staff, 28% from volunteers, and 11% from trustees². Again, from this we can infer that the two DASH samples may provide proportional representations of volunteers, trustees and employed staff working across UK heritage.

In terms of personal attributes, respondents in both cohorts were also very similar. We can summarise this by role as follows:

Employed staff: There was a roughly equal spread of people in the four age categories that spanned those aged between 25 and 64 years. In both DASH surveys, two thirds of staff were female.

Trustees: Half of trustees were over 65 years of age. Trustees were more likely to be male than female (about a 60:40 ratio in both DASH surveys).

Volunteers: Most (about 60%) volunteers were over 65 years of age, and only around 10% were under the age of 45. There were slightly more female than male volunteers (about 55:45 in both years).

In summary then, the results from both the sign-up form (organisational attributes) and from the DASH survey (individual responses to the survey) were in many cases very similar in 2020 and 2021. This suggests that the two large DASH survey samples, collected 14 months apart, act as a reliable representation of the attitudes and skills of the wider population of heritage organisations and individuals, and that where notable differences between years are seen, these are likely to be real and not due to chance variation.

Organisational support needs remain similar

At an organisational level, the digital support needs identified in 2020 and 2021 were very similar and related to:

- Creating content, developing, or extending digital collections and archives
- Improving access (online resources, events, exhibitions)
- Improving audience engagement and outreach (often involving social media)
- Upgrading IT and data systems

² In 2020 data were summarised in three job role categories: employed staff, trustees and volunteers. To allow direct comparison with 2020 data, we have combined data from senior, non-senior and freelancer staff roles to create the 'employed staff' group.

The 2021 results are summarised in more detail at the end of Appendix 1, and can be compared to findings on pages 17-19 of the 2020 DASH report.

Attitudes towards digital have changed very little

In terms of attitudes towards using digital technologies, the data between the two years was very similar. For example, in 2020 21% of employed staff, 18% of trustees and 14% of volunteers said they **often** helped others to use digital technologies. In 2021 the proportions were 26% of employed staff, 20% of trustees and 14% of volunteers.

In both 2020 and 2021, DASH respondents were asked to rate their attitude to learning new digital skills on a scale of 0 to 10, from expecting to find it 'very difficult' to 'very easy'. Staff averaged a score of seven in both years, in comparison with trustees and volunteers who averaged a score of six in both years.

In terms of motivation to develop digital skills, in both years respondents said they were mainly driven by the need to solve immediate tasks or problems (chosen by about 80% of employed staff, 78% of trustees and 67% of volunteers across both years). When it came to digital tools that were used regularly, respondents in both years spoke of video conferencing software, social media and mobile apps, and general desktop software (MS Office Excel, Word etc).

Some – but not all – digital skills have improved

Data suggest that some digital skills have improved between Spring 2020 and Autumn 2021, while others remain the same. Those that have improved tend to be the skills associated with remote communication and which were probably mastered in response to having to work virtually during the COVID-19 pandemic.

For example, in both years we asked DASH respondents whether they felt able to use video conferencing, collaborative digital workspaces, and social media to promote events. The former two skills showed an improvement in mastery, whereas the latter did not:

- In 2020 75% of staff, 67% of trustees and 49% of volunteers felt able and confident in using video conferencing. In 2021 this had increased to 80% of staff³, 76% of trustees and 57% of volunteers.

³ In 2020 data were summarised in three job role categories: employed staff, trustees and volunteers. To allow direct comparison with 2020 data, we have combined data from senior, non-senior and freelancer staff roles to create the 'employed staff' group.

- In 2020 34% of staff, 25% of trustees and 25% of volunteers felt able and confident in using collaborative digital workspaces such as Google Docs or Slack. In 2021 this had increased to 56% of staff, 42% of trustees and 29% of volunteers.
- In 2020 53% of staff, 38% of trustees and 28% of volunteers felt able and confident in using social media to promote an event. In 2021 this had changed very little, with 54% of staff, 43% of trustees and 25% of volunteers reporting that they felt able and confident.

Staff self-report the same level of digital skills across both years, whereas trustees and volunteers report an increase in their digital skills:

- In both 2020 and 2021, DASH respondents were asked to rate the digital skills they brought to their role (on a scale of 0 to 10). This remained the same for employed staff (averaging a score of 6.1) but increased slightly for trustees (from 5.4 to 5.9) and more obviously for volunteers (from 4.4 to 5.6).

When respondents were asked whether they had any of a list of digital skills relevant to working in the heritage sector, the top three were the same in both 2020 and 2021, and were: carrying out online research, writing relevant digital copy, and designing a survey for online/mobile delivery. Similarly, when asked what digital skills they would like to develop in role, in both 2020 and 2021 DASH respondents spoke of wanting to better use social media, improve digital content creation skills, and learn how to analyse and manage data better. A lack of time and/or insufficient face-to-face support remained the main reasons for not developing digital skills for respondents in all roles, in both 2020 and 2021.

Organisational support has focussed on vital digital activities for staff

When comparing between Spring 2020 and August 2021, we find an increase in the amount of support that organisations provided to develop the digital skills of their staff:

- DASH respondents were asked to rate the level of organisational support they receive to develop their digital skills on a scale of 0 to 10. This increased for employed staff (increasing from an average of 4.5 to 5.5) but remained similar for trustees and volunteers (trustees: 4.0 to 4.4; volunteers: 3.5 to 3.7).

When it came to support for specific digital activities, there was little change between years (although see the next section, below, for results from those organisations that used DASH in both years). For example, results were very similar when it came to the proportion of staff, trustees and volunteers who said they received support for issues including help to set up digital devices, training in systems or software relevant to role, access to a digital lead/champion, recognition for digital skills brought to role, making

digital media accessible, and digital open licensing issues (see Appendix 2 Q28 and Q29 for detailed data tables).

There was also no change in the proportion of people discussing their digital skills in their organisation. In both 2020 and 2021, a quarter of respondents said they never discussed their digital skills and when it came to recruitment, in both 2020 and 2021 only about 30% of staff, 7% of trustees and 9% of volunteers said that their digital skills were discussed.

Overall, these results suggest that over the last 14 months organisational digital support has focussed on providing employed staff with the necessary digital skills and support required for them to work remotely on core business activities, but that there has been little spare time to focus on other 'nice to have' digitally relevant issues, or on supporting trustees or volunteers. This seems entirely reasonable: most organisations are small with very limited capacity to provide specialist digital skills support, thus it is likely that individuals would need to look to external experts and resources for support to develop specialist knowledge.

Organisations that used DASH in both years showed some improvements

While the data trends collected in 2020 and 2021 suggest that both DASH survey samples are an accurate reflection of the attitudes and opinions of those in the heritage sector, we wanted to carry out detailed statistical analysis to identify whether organisations that had used DASH in both years showed any significant changes between DASH surveys.

Forty organisations collected sufficient DASH data in 2020 and 2021 to allow comparison between years. We looked at the average opinions of people working at each organisation between the two years⁴ via a matched pairs design, and found that:

- Attitude to learning new digital skills had not changed between years
- The level of digital skills that people felt they had at each organisation showed a statistically significant increase between years
- The level of digital skills that their role required had not changed significantly at an organisational level between years, although there was a trend for this to increase slightly

⁴ A matched pairs design was used to compare data in each organisation in 2020 v 2021. Wilcoxon Signed Rank Tests were carried out for all tests as data were not normally distributed. Attitude to learning new skills: N=38, Z=244.5, p=0.07. Level of digital skills you feel you have: N=39, Z=595.0, p=0.004. Level of skills your role requires: N=39, Z=497.0, p=0.07. Level of organisational support: N=38, Z=520.0, p=0.03.

- The level of organisational support people received in each organisation had **increased** between years

When we only included data in 2021 from **individuals** who had participated in DASH in 2020 (rather than all the people who responded within **organisations** that participated in both years), we found the same results as above with one interesting difference⁵:

- Individuals that used DASH in both years reported that the level of digital skills required in their role had increased, with the average rating moving from 5.4 to 6.4.

These results suggest that improvements in both individual digital skills and in organisational support have occurred within organisations that participated in DASH in 2020 and in 2021.

⁵ A matched pairs statistical test was used to compare data in each organisation collected in 2020 v 2021, where 2021 data only included people who completed DASH in both years. Wilcoxon Signed Rank Tests were carried out for all tests as data were not normally distributed. Attitude to learning new skills: N=36, Z=272.5, p=0.34. Level of digital skills you feel you have: N=37, Z=529.5, p=0.007. Level of skills your role requires: N=37, Z=517.0, p=0.01. Level of organisational support: N=35, Z=480.5, p=0.07.

6. Digital Skills for Heritage users

A total of 445 people (10% of DASH 2021 respondents) from 181 (56% of participating DASH 2021 organisations) had used at least one of five [Digital Skills for Heritage](#) resources and projects listed in Q34 (see Appendix 2). When we look by job role, we see that this equates to 23% of senior staff, 20% of freelancers, 12% of trustees, 11% of staff, and 2% of volunteers who had experienced using at least one the listed Digital Skills for Heritage resources. The most commonly used was [Heritage Digital](#), followed by the [Heritage Fund Digital Guides](#).

Users had experienced an average of 1.4 ± 0.7 of the Digital Skills for Heritage resources. Those respondents reported higher digital confidence in comparison to people who had not used any of the Digital Skills for Heritage resources. This was the case across all job roles and all digital skills listed. For example, a higher percentage of individuals who used versus not used the Digital Skills for Heritage resources reported being able and confident when it came to:

- Using video conferencing (85% v 70%)
- Digitally recording an activity, place or object (72% v 62%)
- Using a collaborative workspace (63% v 45%)
- Analysing data from a spreadsheet or database (62% v 52%)

The data reveal that Digital Skills for Heritage users also rated themselves as being more interested in learning new digital skills than non-users⁶.

A notable proportion of the Digital Skills for Heritage resources focus on effective use of social media, because this had been a key theme that came from DASH respondents in 2020. At that time, only 53% of staff, 38% of trustees and 28% of volunteers reported feeling able and confident in using social media to promote an event. In 2021, when we look at data from all respondents this had changed very little, with comparable figures being 54% of staff, of 43% of trustees and 25% of volunteers. However, when we look at the subset of respondents in 2021 who had used at least one Digital Skills for Heritage resource, significantly more of them felt able and confident in using social media:

- 62% of Digital Skills for Heritage users said they felt able and confident to use social media to promote an event, 29% felt able but not confident, and just 9% felt unable. This compares with only 43% of non-users who reported feeling able and confident to use social media, 32% who felt able but not confident, and 25% who reported being unable to do so.

⁶ Mean rating score for users of Digital Skills for Heritage users versus non-users for 'interest in learning new digital skills (Q11) were 8.4 ± 1.7 versus 7.2 ± 2.3

It is of interest to see that exposure to the Digital Skills for Heritage training is associated with raised ability and confidence around this skill, because it is so frequently mentioned as a digital skill that those working in heritage want to learn.

We cannot assume causation here, especially because individuals using Digital Skills for Heritage training were more motivated to use digital than the general sample. That said, this targeted support - provided in response to needs identified by DASH in 2020 - have been used by those in the sector and appears to have played some part in improving confidence and ability.

While the individuals that used the Digital Skills for Heritage resources are in the minority in terms of a proportion of DASH 2021 respondents, they work or volunteer in over half of the organisations that participated in DASH in 2021. Given the importance of informal skills sharing, as seen in other areas of this report, the hope is that these individuals have the inclination and opportunity to share their learning and signpost others to the Digital Skills for Heritage resources, wherever relevant and possible.

7. Digital personas

What are digital personas?

This analysis is new for 2021 and aims to investigate whether the survey data can be used to identify different individual digital persona types. Several personal and organisational variables were run through a multivariate statistical clustering analysis⁷ to investigate whether and how they grouped together into potential 'digital personas'. The resultant groups were then investigated and validated by reading all free text comments to better understand each set of individuals.

Each persona should not be considered as forever fixed to an individual; people can change as they e.g. work within different contexts or organisations. Nonetheless it is useful to use these personas as a way to better understand how people working across the sector consider the use of digital within their roles, and so better support them.

As well as looking across all respondents, we separately analysed data from those in leadership roles (i.e. CEOs/senior leaders/directors/trustees/board members) and found that the three personas identified in the wider dataset persist within these people as well, suggesting they are generally robust across those working or volunteering in the heritage sector. The three personas are described in the following section.

We identified the following additional trends from leader persona data:

- The three persona types were not related to organisational attributes such as organisation size (measured as number of employed staff) or heritage type. From this we can conclude that these personas exist across all organisational contexts
- There is an association between how people in leadership roles rate their personal engagement with digital and how they rate their organisation's approach to digital ways of working (see Appendix 2, Q26). Leaders who have more positive personal attitudes towards digital tend to work in organisations that they feel value digital ways of working highly. Therefore we might also suggest that organisations that value digital, go on to employ leaders who are more digitally engaged)

⁷ We used multiple correspondence analysis; further detail on the methodology is provided in Appendix 3. One of the authors, Dr Church, has also published an [open-access article](#) on this technique.

Respondents fall into three broad digital persona types

When we investigate the attitudes and opinions of all DASH respondents, they fall into three broad persona types:

The digitally indifferent: 'Digital when I have to'

This is the largest group of people in the DASH data set. They tend to be the eldest (65+, hence likely to be retired) and working in unpaid, voluntary positions. They do not need (or want) to use digital technologies very much in the context of their role.

However, this does not mean they are unable to use it. These people are pragmatic digital users, regularly using a variety of digital technologies where and when it adds clear benefit to them, and/or where it is necessary. These people use digital in their personal lives (such as banking apps, or video calls with family) and some of them may have used digital at a more advanced level in their professional lives, but they are unlikely to get excited about using it in their voluntary heritage roles. Digital is a means to an end for them and within this organisational context. They want it to work reliably, be easy to use, and be secondary to the main part of their voluntary role.

Those in leadership roles with this persona type typically:

- Can't think of any digital skills they have developed or want to develop: "I have all I need and can think of nothing extra"; "open to suggestions as to what digital skills would best aid our group"
- Tend to have only basic ideas about how the organisation could develop digitally: "Remind people of basic email etiquette"; "provision of basic training"; "why work digitally?"
- Are typically male and over 55

The generalist: 'Digital is embedded into my life'

This is the second largest group of people in the data set and tend to be employed (staff, senior leaders, or freelancers). Many are considering the relevance of digital to their immediate role, to their wider organisation and to their organisation's audience. Some feel unsure about their digital skills, yet are proficient at articulating strategic aims, which are vital in ensuring that digital technologies are used when they add clear value, rather than using digital for its own sake.

Those in leadership roles with this persona type:

- Say they have learned new digital skills, but rarely mention any that are specialised for heritage: "increased digital meeting skills on zoom and teams"; "using apps on my phone"; "live streaming"; "expanding Word use"
- Are open to developing new digital skills, and do include more specialist skills among their personal aspirations, e.g. "social media advertising / marketing /

promotion”; “do more with infographics and videos as promotional tools”; “Web development, basic coding, content management system”

- Have a strong strategic focus on training, especially general training to ‘level up’ digital skills across the organisation: “enable everyone to feel informed and up to date”; “instil confidence”; “get all staff and trustees up to the same level of understanding”
- Are keen to improve digital communication and engagement: “communication with members, potential members and stakeholders”; “better interaction and engagement”
- Are gender-balanced

The enthusiast: ‘Use more and better digital’

This is a very small group of people across all job roles who are very keen to use digital and can see clear benefits. They are often specialists who may not know (or be interested in) how best to support people with more basic skills. They can sometimes get frustrated with the organisation as a whole, and with a lack of resources or wider organisational buy-in to invest in or focus on better use of digital. They would make good digital champions where they are willing to act as digital advocates. Such a role would help harness their enthusiasm and expertise and focus these on specific projects. They have the potential to ‘lead from the front’ with digital skills, and support others to find resources or develop specialist knowledge.

Those in leadership roles with this persona type:

- Have strong digital skills, often specialist, and want to continue developing them: “further skills in visually presenting information”; “Video editing to create digital resources for our website and social media”; “Anything that’s new to the digital scene in future [are skills I would like to develop]”
- Tend to focus strategically on infrastructure: “Robust digital preservation infrastructure”; “invest in systems integrations”; “improve wifi”; “improve storage capacity”; “Software to manage the process from enquiry to booking to invoice to re-marketing”
- Also mention training, and the resources to invest in training (seen as a limiting factor: “I am keen to make sure we have more advanced skills as a whole organisation”; “we need more financial resources to support digital learning and growth”
- Are more likely to be female than male

Leadership support matrix

Within the context of persona analysis of those in leadership roles, we noted that comments relating to digital aims and strategies tended to focus either on the need to transform digital systems and processes, or to improve the digital skills of people and digital ways of working within the organisation. With this in mind, we mapped comments from each persona type to each of these aims. We suggest this is used as a way to investigate how each persona engages with and values the available sector support services. The matrix is shown in Table 1.

This persona work requires further testing (e.g. via interviews) to further validate the persona outside of using the DASH dataset. The proposed leadership support matrix should also be tested to see whether it rings true in practice, and whether and how it can support funders and organisations going forwards.

	The typical attitude and outlook of each leadership persona type		
Strategic improvement focus	Digitally disinclined persona	Digital generalist persona	Digital enthusiast persona
Digital systems and processes	<p>These people feel that digital should 'just work' – simple solutions; reliable, practical, accessible IT.</p> <p>They feel that devices and apps can integrate digital into day-to-day practice.</p> <p>They aim to remove clear barriers and workarounds; finding the low-hanging fruit.</p>	<p>These people are looking to find organisational efficiencies through integrating systems and standard processes.</p> <p>They aim for steady progress, keeping up with other heritage organisations, incremental change.</p>	<p>These people consider digital systems to be core to what their organisation is and does.</p> <p>Their investment in platforms and data is likely to be ahead of other organisations.</p>
People's digital skills, organisational culture towards digital, and digital ways of working	<p>They consider training about digital as 'levelling up': giving everyone the know-how to thrive in the organisation.</p> <p>They are often concerned for wellbeing: how does digital make people feel? Accessibility and outreach are clear core values.</p>	<p>They have a strong focus on training, planned around core systems and processes.</p> <p>They support digital skills training across departments e.g. marketing, engagement, communication, management.</p>	<p>They lead from the front: acting as a digital champion and advocate.</p> <p>They foster innovation e.g. through external projects and internal initiatives.</p>

Table 1. Mapping leader personas with typical needs and outlooks in relation to leaders' aims for improving digital systems and processes, and/or people and culture.

8. Digital and sector resilience: a reflection from The Heritage Alliance

What did DASH 2021 tell us about the UK heritage sector?

Responding to the pandemic: a sector learning through necessity

The COVID-19 pandemic created few completely new challenges, rather it exacerbated existing ones. This theme is also evident in the area of digital and other non-heritage-specific skills. Consultations we carried out before the pandemic and ahead of launching Heritage Digital had already highlighted the lack of time and resources for heritage organisations to invest in their digital skills. During the pandemic, we witnessed many in the sector - through necessity - pivoting their activities to digital delivery which demonstrated resilience, flexibility and ingenuity, which we must acknowledge and celebrate. This is reinforced by the fact that most respondents, when asked to describe their organisation's approach to digital ways of working said their organisation was 'keeping up with the times'.

It is in these areas of digital skill that the greatest shift has occurred - organisations did what they needed to do in order to weather the storm and adapt to virtual ways of working. The skills the sector has gained here, though necessary, are valuable for the future. As DASH highlights, skills growth was greatest where it predominantly related to business-critical transactional activities as organisations fought for their survival over the past 14 months. In DASH, this is demonstrated through the growing confidence of people in heritage engaging with digital activities such as video-conferencing or using virtual collaborative workspaces. Staff reported that they managed this shift proportionately more than trustees and volunteers - an area worth further reflection in order to ensure parts of organisations are not left behind. One could even argue that for some organisations in crisis-mode, taking part in DASH itself might have been seen as a 'nice to have' rather than a business-critical initiative. It is therefore not surprising to see little change in organisational digital priorities since 2020.

A pandemic is not necessarily a fertile ground for long lasting 'innovation', a key priority area for funders and government. DASH shows that some of the areas that may be essential for the success of an organisation but may take more time, collaboration or development, have not been prioritised to the same extent during the pandemic. This is echoed through the findings of our COVID-19 response programme, Rebuilding Heritage. Organisations will require time and stability to support them through strategic and transformational digital innovation. Basic, often non-heritage-specific skills are still lacking and there is a bridge to innovation required for those organisations at the beginning of their skills and resilience journey.

The importance of capturing the breadth of heritage

Through collaborating with Timmus Research at the onset of the design phase, we were able to contribute to the survey design itself, improving on existing classifications, and as a result capturing better the types of organisation that had no 'tick box' in the previous year. For example, 10% of participating organisations identified as "sector support", a new category for 2021. Sole traders caring for historic built heritage were also included for the first time.

Testing the data collated by DASH against the subsample we had predetermined, provided us with confirmation that the survey reached the breadth of the sector across the UK. It is also revealing to see that the proportions of the sector are consistent across DASH 2020 and DASH 2021 despite significant numbers of new users in 2021. There is an interesting question about how the parts of the sector that actively engaged with DASH and digital correlates with the profile of the sector identified through new sector-wide initiatives such as Heritage Pulse, which will capture other sorts of data about organisational health, funding and resilience.

The challenge of hybridity

As we emerge from the pandemic, new expectations will pose new challenges for the heritage sector. As DASH indicates, a hybrid workplace will provide both the benefits that were gained through home-working while enabling face-to-face interactions and informal discussion with colleagues, beneficial to support information-sharing and innovation. However, anecdotal feedback from heritage leaders demonstrates that creating a new workplace which achieves this balance and the best of all worlds can be a real challenge in practice. We will, as a sector, need to learn together what works.

Similarly, evidence from DASH suggests that when it comes to training, respondents miss the opportunity to develop their skills via informal training, either in a shared physical working space or through exchanges between participants at a face-to-face training experience. To help maximise the learning experience for heritage audiences, future sector support programme might benefit from considering hybrid learning experiences.

It is also important to reflect on raised audience expectations and the need to provide a successful online or hybrid experience as part of delivery, a key challenge for the sector highlighted in the chosen digital priorities for the next three years. As our consultations in the summer for Heritage Digital reveals, there is a pressure on heritage organisations to catch up with new technology, such as AR and VR to meet audience expectations but they are constrained by time, capacity and budgets. There is also a danger that the experience or solution is created to fit with the technology, not the other way round, which could lead to products which don't actually suit the audience. Most importantly, there is a significant gap between the skills required to manage such experiences and the functional, business-critical skills that have been acquired over the last two years.

Providing online and face-to-face experiences both for workforce and audiences will prove an additional burden for time and resource-poor organisations. However, where new skills and successful embedding of new digital strategies and tools are successful, this can only enhance long term resilience.

Paving the way for digital: the role of leaders

It is critical to pause and acknowledge heritage leaders, formidable contribution to the sector over the last two years. In these unprecedented times, they across the sector ensured the continuity of business-critical activities, maintained cohesion across teams working from home, in many cases for the first time created online offers to remain relevant to their audience, and secured funding to provide stability for their organisations.

Vision over skills

The DASH survey identifies that people working in heritage are looking for leaders to provide a clear strategic vision for digital and (critically) how and where it is relevant to core organisational aims, and that this is more important than senior leaders displaying high levels of digital skills. DASH data highlights that leaders were more focussed with internal system and process improvements over the past two years as part of their firefighting efforts to maintain business-critical operations. But people in other roles cited the need for the quality of infrastructure, time and rewards issues and the need for strategic vision. This is reinforced by only 16% of staff being aware of an organisational digital strategy. The true benefit of a 'digital strategy' is one that works across all workstreams, supporting the organisation's core aims and mission, embedded in all elements of work, rather than relying on one or two tech savvy individuals as champions.

More organisational support for volunteers and trustees

The DASH data really made evident the difference in organisational support and or confidence between job roles, with senior staff feeling more confident and supported than staff and volunteers and trustees.

For leaders to really harness the full benefit of digital technology, they will need to consider how to engage their trustees and volunteers more actively in this space to drive motivation to learn and use new digital skills. The DASH 'QuickStart' data analysis activities provided on the DASH website are a very helpful way for leaders to engage their Board via reflecting on their DASH data. Similarly, volunteers responding to the survey demonstrated the lowest level of digital skills and confidence for their roles, perhaps as they traditionally assist visitor operations. As hybrid and digital offers become more significant for heritage organisations, it will be critical to ensure that volunteers are engaged around digital skills, so that the sector doesn't lose the support of these valuable ambassadors for the sector.

Fostering exchanges

DASH clearly evidenced the importance of informal face-to-face exchanges to support the learning journeys of staff, volunteers and trustees. It will be critical as hybrid workspaces are planned that leaders take this into account. The fact that half of the respondents had worked in another organisation in the past three years, often in different sectors, is an opportunity to harness informal knowledge-sharing and bring in new perspectives. In addition, leaders should reflect on how they can make the most of any freelancers they work with, a group who reported the highest levels of proficiency in many digital skills. Not only can freelancers support the organisation's digital activities, but by ensuring exchanges with staff and volunteers, some of that knowledge can be embedded in the organisations for their long-term benefit.

The benefit of sector support programmes

Heritage Fund-supported resource users show higher digital skills

DASH data identified the positive impact these programmes had already delivered in building digital skills. As DASH data and the various programmes' evaluations identify, participating individuals show higher digital skills in comparison to the background sample, for example digitally recording an activity, place or object (72% v 46%). It is, however, striking that only 23% of senior staff, 12% of trustees and 11% of staff respondents had already taken part in these initiatives, demonstrating a significant opportunity for DASH respondents yet to access this free training to benefit from these programmes in the future. For example, topics such as open licensing and data protection, identified in the DASH survey as upcoming areas of need for the sector, are already covered through a number of resources as part of Heritage Digital, Heritage Labs and the Heritage Fund Digital Guides.

The importance of signposting existing resources

Those who have used the Digital Skills for Heritage resources show higher levels of digital skills and confidence, hence it is important to spread the word to those yet to discover them in order to harness the power of the excellent resources that have already been created. Investing in more signposting, updating and marketing of these resources could prove a cost-effective way to support the sector. Many DASH respondents commented that they had not heard of the initiative, hence DASH inadvertently acted as a way to signpost people to them. This also illustrates the importance of different initiatives namechecking one another and so creating a web of knowledge opportunities.

A bridge to innovation is needed

In order to support the heritage sector's journey to innovation, there will be a clear benefit if further investment supports basic skills-building. Digital skills should be considered as part of the wider picture of sector skill needs including strategic and business planning skills, governance, leadership, fundraising and equality and diversity. The evidence provided by DASH is also corroborated by findings from our Rebuilding Heritage programme. The pace of these programmes is also critical, with DASH reporting that 45% of participants finding it hard to develop digital skills due to a lack of time. This suggests that support programmes would benefit from being extended to longer periods of time to become accessible and have longer term impact.

Conclusion

The DASH Survey 2021 provided a timely initiative and moment for reflection for heritage organisations and the sector as a whole to take stock as we emerge from the pandemic.

DASH is a national survey that does a rare thing: it provides everyone in heritage - regardless of role or seniority - with a voice, and it provides organisations with access to their resultant data. Organisations can compare themselves to the national dataset and reflect on specific feedback from their people, and so help them provide better support and improve their offer. Participation supports data literacy and business resilience by helping organisations to see the value in collecting and reflecting on data. With this in mind, collecting longitudinal data over time will be important.

The sector has been impressive in its reaction to digital shifts required to ensure resilience during the immediate crisis. As we continue to collectively move from immediate necessity to further innovation around digital, the DASH results give much food for thought around what is needed to harness the potential that digital offers to the sector in the longer term.

Appendix 1: Organisational data from sign up form

In order to gain access to a unique DASH survey link, one lead contact (aka 'DASH Champion') completed a sign-up form on behalf of their heritage organisation. That sign-up form asked several questions about the type, size and activities of the organisation. These organisational attributes are analysed and summarised below.

A total of 416 organisations signed up to use DASH in 2021, of which 323 (78%) went on to collect at least one DASH survey response, and 63% collected at least two survey responses. There were no notable differences between the profiles of organisations that used DASH and those that didn't, other than the fact that organisations described by their DASH Champion as 'not engaged with digital ways of working' appeared less likely to go on to use the DASH survey.

Which ONE area of heritage best describes your organisation?

Category	Signed up and used DASH	Signed up but did not use DASH	TOTAL (all organisations that signed up) (N)
Collections (museums, libraries, archives)	29.7%	21.5%	27.9% (116)
Community heritage	18.0%	19.4%	18.3% (76)
Landscapes & Nature	11.1%	9.7%	10.8% (45)
Historic buildings & monuments	17.3%	15.1%	16.8% (70)
Industrial, maritime & transport	7.1%	11.8%	8.2% (34)
Cultures & Memories	7.4%	11.8%	8.4% (35)
Sector support	9.3%	10.8%	9.6% (40)

Table 2. The percentage of organisations that described themselves as predominantly being in one of the seven heritage areas, split into those who went on to collect at least one DASH response, versus those who did not use DASH, as well as the total. Numbers in brackets are the number of organisations in each category) (N=416)

What are the main aims or activities of your organisation? Please select up to TWO options

Category	Signed up and used DASH	Signed up but did not use DASH	TOTAL (all organisations that signed up)
Visitor and public engagement	71.5%	62.4%	69.5%
Conservation and preservation	46.1%	33.3%	43.3%
Education	40.2%	36.6%	39.4%
Professional body / professional training	4.0%	6.5%	4.6%
Grant giving	2.5%	2.2%	2.4%
Advocacy and campaigning	9.3%	15.1%	10.6%
Place of worship	5.3%	11.8%	6.7%
Research	8.0%	17.2%	10.1%

Table 3. The percentage of organisations that selected each option to describe their organisation's main aims or activities (N=416)

What geographical area do the activities of your organisation cover?

Category	Signed up and used DASH	Signed up but did not use DASH	TOTAL (all organisations that signed up)
One physical site	32.0%	31.5%	31.9%
Region of the UK	37.0%	35.9%	36.7%
Nation within the UK	11.2%	8.7%	10.6%
UK	15.2%	18.5%	15.9%
Overseas/global	4.7%	5.4%	4.8%

Table 4. The percentage of organisations that selected each option to describe their organisation's geographical remit (N=414)

What is the legal status of your organisation?

Category	Signed up and used DASH	Signed up but did not use DASH	TOTAL (all organisations that signed up)
Registered charity	63.4%	56.5%	61.8%
Limited company	6.8%	7.6%	7.0%
Local Authority/government/public sector body	11.5%	8.7%	10.9%
Community interest company	4.0%	7.6%	4.8%
Community or voluntary group	6.5%	13.0%	8.0%
Educational establishment	1.6%	2.2%	1.7%
Private owner	2.5%	1.1%	2.2%
Other e.g. sole trader	3.3%	3.7%	3.6%

Table 5. The percentage of organisations that selected each option to describe their organisation's legal status (N=414)

Where is your organisation's head office based?

Category	Signed up and used DASH	Signed up but did not use DASH	TOTAL (all organisations that signed up)
Scotland	8.4%	7.5%	8.2%
Wales	6.5%	6.5%	6.5%
Northern Ireland	9.9%	6.5%	9.1%
England: North	20.4%	15.1%	19.2%

Category	Signed up and used DASH	Signed up but did not use DASH	TOTAL (all organisations that signed up)
England: Midlands and East	22.6%	17.2%	21.4%
England: South East, South West, London	32.2%	47.3%	35.6%

Table 6. The percentage of organisations that selected each option to describe the location of their organisation's head office (N=414)

Roughly how many employed staff does your organisation have?

When describing organisation size we have focussed on describing this in terms of the number of staff and volunteers that work with each organisation, rather than turn-over or footfall. When it comes to considering digital technologies within an organisation, it is individual people who would need to be given access to technology and/or trained to use it. Hence for DASH we consider organisation size to be best described in terms of the numbers of people (staff and volunteers) involved.

If we include all organisations that had no paid staff at all, the mean average number of staff per heritage organisation across the whole dataset was 57 ± 514 people. In contrast, the median average was just five people. Clearly, the standard deviation of the mean and the large difference in the two averages illustrates the huge skew in the data, with the vast majority of heritage organisations staffed by a very small number of paid staff.

Category	Signed up and used DASH	Signed up but did not use DASH	TOTAL (all organisations that signed up)
No paid staff (volunteer run)	18.5%	22.5%	19.4%
1 to 10 staff	47.0%	57.3%	49.3%
11 to 50 staff	21.7%	14.6%	20.1%
51 staff or more	12.8%	5.6%	11.2%

Table 7. The size of each organisation in terms of the number of employed staff they have, split into four categories as used in DASH 2020 (N=414)

Roughly how many volunteers does your organisation have?

The number of volunteers at each organisation was more unreliable in 2021 than in 2020 because several organisations explained to us that COVID-19 had prevented them from being able to use their volunteer staff, such that many were no longer considered 'active'. Based on the data collected this year, the mean average number of volunteers per heritage organisation was $246 \pm 2,560$ people. In contrast, the median average was 20 volunteers. Again, this illustrates the huge diversity in the number of people associated with UK heritage organisations.

How would you describe your organisation's approach to digital ways of working?

Category	Signed up and used DASH	Signed up but did not use DASH	TOTAL (all organisations that signed up)
Leading and innovative	17.5%	14.1%	16.7%
Keeping up with the times	49.1%	44.6%	48.1%
Following the practice of others	29.1%	30.4%	29.4%
Not engaged	4.4%	10.9%	5.8%

Table 8. The size of each organisation in terms of the number of employed staff they have, split into four categories as used in DASH 2020 (N=414)

What is your organisation's top digital priority over the next three years? (Free text)

This information was provided by the key contact on the sign-up form. It was analysed using InfraNodus to identify key influences and themes. The data structure of the text network was highly biased, meaning that the responses were diverse. However, some themes emerged clearly, which were:

- **Improve access** to heritage via online resources, interpretations, events and exhibitions. "Discover and use the latest proven methods of digital communication to interpret our landscapes"; "learning to deliver hybrid events"; "developing digital interpretation"; "development of an AR app for visitors"; "reach as many digital users as possible with innovative and engaging content that covers

marketing, historical information, education”; “improve access to and engagement with our collections”

- **Improve audience engagement and outreach** using web and social media: “develop our social media presence and use other digital forms such as podcasts to engage more young people”; “Engaging wider audiences and converting them into members through intelligent website UX”; “to have an online offer for our members beyond the website”; “improved digital storytelling, engaging broader audiences”
- **Upgrade IT and data systems:** “integration of digital platforms and gathering audience feedback and data”; “business systems transformation and integration with audience/visitor experience”; “invest in data analytics and shift towards evidence/data-based decision making”; “build an outcomes-focused, Cloud-based ecosystem with multiple integrations to make our working lives more efficient”
- **Develop or extend digital collections and archives:** “Creating a resource that would bring to life the Archive in the digital realm”; “digitizing hard-copy journals”; “putting our collection online for everyone to access”; “more visitor interactive kiosks that allow visitors to access archive and internal research material, from videos to interactive town maps and oral histories”; “Digitisation of archives and rare books. Creation of the online, accessible library catalogue”

Appendix 2: Question by question results tables

Each organisation collected between one and 249 survey responses. The mean plus standard deviation number of responses per organisation was 14 ± 26 ; the median average was six. A third of organisations collected at least 10 responses and 12% of organisations collected 30 or more responses.

Summary data tables are summarised in question order below, to allow organisations that used DASH in 2021 to compare their results with the national trends.

Q1: Which option best describes your job level?

Category	Frequency	Percent
Trustee/Board member	492	10.9%
CEO/Director/Senior Leader	372	8.2%
Staff	2,287	50.7%
Freelancer	65	1.4%
Volunteer	1,278	28.3%
No role information	20	0.4%
Total	4,514	100%

Table 9. The breakdown of DASH survey participants by organisational role (N=4,514)

Q2: What type of contract do you have?

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Permanent role	4.5%	87.4%	77.3%	3.1%	0.3%	47.1%
Project-based fixed term	0.4%	1.6%	7.9%	6.2%	0.1%	4.3%
Fixed term	7.9%	3.2%	10.6%	3.1%	0.2%	6.6%

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Zero hours	0.6%	0.3%	3.0%	-	0.1%	1.6%
Freelance (e.g. hourly/daily rate)	0.4%	1.3%	0.7%	83.1%	-	1.7%
Unpaid role (e.g. volunteer)	86.0%	5.9%	0.2%	4.6%	98.7%	38.1%

Table 10. The percentage of DASH survey participants by contract type (N=4,514, where 20 didn't provide role information)

Q3: How long have you worked or volunteered here?

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Under a year	0.8%	0.0%	0.7%	0.0%	0.6%	0.8%
1 – 2 years	10.4%	9.9%	18.2%	13.8%	14.6%	15.6%
3 – 4 years	17.1%	8.3%	15.0%	15.4%	11.9%	13.8%
5 – 6 years	21.7%	19.1%	18.3%	15.4%	23.5%	20.1%
7 or more years	15.7%	15.3%	10.8%	18.5%	17.7%	13.7%

Table 11. The breakdown of DASH survey participants by length of time spent working/volunteering at the organisation (N=4,514, where 20 didn't provide role information)

Q4: Which best describes your area of work? Tick all that apply

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Strategic management	56.3%	68.8%	7.6%	3.1%	1.9%	16.4%
Fundraising and Development	27.6%	31.5%	7.6%	3.1%	5.5%	11.1%
Policy / Advocacy	26.8%	24.2%	4.1%	0.0%	1.3%	7.4%
Finance / HR / Operations / Admin / IT	25.0%	32.5%	19.2%	9.2%	5.1%	16.8%
Engagement & Visitor Operations	20.9%	27.4%	36.6%	29.2%	64.2%	42.0%

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Comms and Marketing	17.5%	27.7%	14.6%	24.6%	3.9%	13.1%
Professional / technical	15.7%	22.3%	31.0%	26.2%	7.5%	21.9%
Project Manager	14.4%	33.3%	16.3%	18.5%	2.6%	13.7%
Academic / Researcher	12.8%	7.8%	10.5%	7.7%	11.1%	10.6%
Consultant	11.6%	8.9%	3.7%	16.9%	2.5%	4.8%
Membership	11.4%	9.1%	3.3%	6.2%	4.5%	5.1%

Table 12. The ways in which DASH survey participants describe their role (N=7,322 selections by 4,494 people)

**Q5: Have you worked for any other organisations in the last THREE years?
(Since September 2018) Tick all that apply**

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Yes – in the heritage sector	23.0%	17.2%	17.0%	49.2%	15.0%	17.6%
Yes – in the charity sector	36.6%	15.1%	11.7%	35.4%	23.9%	18.6%
Yes – in the public sector	13.6%	9.4%	9.2%	15.4%	9.2%	9.8%
Yes – in the commercial sector	20.7%	8.6%	11.2%	26.2%	8.7%	11.6%
Yes – in education / academic	16.1%	7.8%	9.4%	43.1%	10.4%	10.8%
No	27.6%	61.3%	55.8%	18.5%	44.5%	49.6%

Table 13. The proportion of DASH survey participants who have worked in other roles and sectors in the past three years (N=5,301 selections by 4,494 people)

Q6: How old are you?

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Under 18	0.2%	0.0%	0.2%	0.0%	0.2%	0.2%
18 – 24	0.6%	0.0%	5.6%	1.6%	1.8%	3.4%
25 – 34	3.3%	3.8%	25.7%	12.9%	2.0%	14.5%
35 – 44	9.1%	22.1%	25.2%	22.6%	1.4%	16.4%
45 – 54	10.9%	37.1%	23.2%	24.2%	6.5%	18.3%
55 – 64	28.0%	30.2%	17.2%	32.3%	18.9%	20.2%
65+	47.9%	6.8%	2.9%	6.5%	69.2%	27.0%

Table 14. The percentage of DASH survey participants in each age category, by job role (N=4,407)

Average age was statistically significantly different between job roles. On average, volunteers were aged 65+, trustees were 55-64, senior staff and freelancers were 45-54, and staff were 25-44 (N=4,407, H=1,898.3, df=4, $p < 0.001$). We used a non-parametric test as the data were not normally distributed.

Q7: How would you describe your gender?

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Male	57.6%	45.4%	30.8%	18.0%	44.5%	38.7%
Female	41.8%	54.4%	68.5%	82.0%	54.8%	60.7%
Other (e.g. non-binary)	0.6%	0.3%	0.7%	0.0%	0.7%	0.6%

Table 15. The gender of DASH survey participants, by job role (N=4,324)

Q8: Did you answer the DASH survey last year?

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Yes, completed DASH in 2020	6.7%	10.9%	10.0%	6.5%	8.7%	9.3%

Table 16. The percentage of DASH survey participants in each job role who completed the DASH survey in 2020 (N=4,322)

Q9: Do you use any assistive technologies day-to-day? (e.g. screen reader, text magnifier)

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Yes, use assistive technology daily	2.9%	2.2%	3.4%	1.6%	3.5%	3.3%

Table 17. The percentage of DASH survey participants who said they use assistive technologies on a daily basis (N=4,399)

Q10: In general, are you someone who ...

Category	Frequency	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Helps other people use digital technologies	Never	19.1%	11.9%	10.3%	13.3%	26.1%	19.1%
	Sometimes	60.7%	63.4%	61.7%	56.7%	59.9%	60.7%
	Often	20.2%	24.7%	28.0%	30.0%	13.9%	20.2%
Shares advice and information on social media	Never	36.0%	33.0%	39.7%	16.9%	49.2%	36.0%
	Sometimes	39.7%	45.7%	40.9%	54.2%	39.1%	39.7%
	Often	24.3%	21.3%	19.4%	28.8%	11.7%	24.3%
Finds own solutions to IT problems	Never	6.2%	4.2%	6.4%	5.0%	12.6%	6.2%
	Sometimes	52.4%	52.4%	54.7%	48.3%	53.4%	52.4%
	Often	41.5%	43.3%	38.9%	46.7%	34.0%	41.5%

Category	Frequency	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Looks after your health as a digital user (e.g. takes screen breaks)	Never	10.1%	12.7%	9.5%	8.3%	11.6%	10.1%
	Sometimes	50.4%	68.1%	65.2%	68.3%	44.3%	50.4%
	Often	39.4%	19.2%	25.4%	23.3%	44.1%	39.4%

Table 18. The percentage of DASH survey participants who said they never, sometimes or often help others to use digital technologies, share advice on social media, find solutions to IT issues and look after their health as a digital user (N=4,136, 4,104, 4,169 and 4,146)

Q11: How interested are you in learning new digital skills?

The average 'interest' rating was statistically significantly higher for senior staff, staff and freelancers than for volunteers and trustees (N=4,113, H=287.2, df=4, p<0.001). We used a non-parametric test as the data were not normally distributed.

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Median average	7	8	8	8	7	8
Mean \pm SD	7.1 \pm 2.1	7.8 \pm 1.8	7.8 \pm 2.0	8.1 \pm 1.9	6.4 \pm 2.5	7.3 \pm 2.3

Table 19. DASH survey participants were asked to rate their interest in learning new skills on an 11-point scale from 0 (not at all interested) to 10 (very interested). This summarises the median and mean average by job role, including the standard deviation of the mean (N=4,093)

Q12: What motivates you to develop your digital skills? Tick all that apply

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Solving immediate tasks or problems	77.6%	85.5%	76.9%	70.8%	65.7%	74.6%
Developing myself / my career	55.9%	66.7%	57.8%	56.9%	52.1%	56.8%
Trying new things	44.1%	64.8%	72.0%	72.3%	32.3%	57.2%
Making new contacts	16.9%	21.8%	15.0%	23.1%	11.3%	14.9%

Table 20. The percentage of DASH survey participants who are motivated to develop their digital skills by solving immediate issues, developing themselves, trying new things, and/or making new contacts (N=9,146 selections by 4,494 people)

A total of 489 people provided an 'other' answer to this question. Common themes, in line with last year, were:

- Keeping up to date with digital developments; keeping up with other people in respect of digital skills
- Working more effectively and efficiently for the organisation
- Helping others e.g. colleagues, users
- Supporting the organisation's goals, especially by engaging audiences more effectively

Senior leaders (senior staff and trustees) who answered this question were more likely to be motivated by training itself, and cited a range of applications they were keen to become more proficient with (e.g. Teams, Zoom, Google and Office applications):

“These skills are required to carry out [my] duties effectively”

“Tech develops so quickly that one's old skills are barely relevant without understanding the new ones”

This fits with their slightly higher tendency to be intrinsically motivated by training ('trying new things' and 'making new contacts') rather than extrinsically motivated. Participants in other roles were slightly more likely to mention 'helping others' as a motivation.

Q13: What is your attitude to learning new digital skills: do you expect to find it very difficult or very easy?

The average 'attitude' rating was statistically significantly different between job roles, with significance driven by the higher ratings by senior leaders in comparison with volunteers and trustees (N=4,009, H=45.6, df=4, $p < 0.001$). We used a non-parametric test as the data were not normally distributed.

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Median average	6	7	6	6.5	6	6
Mean \pm SD	6.0 \pm 2.0	6.4 \pm 1.9	6.1 \pm 2.1	6.3 \pm 2.4	5.7 \pm 2.1	6.0 \pm 2.1

Table 21. DASH survey participants were asked to rate their attitude towards learning new skills on an 11-point scale from 0 (expect to find it very difficult) to 10 (expect to find it very easy). This summarises the median and mean average by job role, including the standard deviation of the mean (N=3,990)

Q14: Please give an example of a digital tool or app you find really useful in your daily life (free text)

A total of 3,471 people answered this free text question. Common examples of a digital tool they found useful in daily life were:

- Mobile apps, with banking and online maps especially popular
- Microsoft software such as Teams and Excel, and general workplace applications such as email and calendars
- Social media: WhatsApp, Facebook, Instagram and Twitter

Q15: In the last 12 months what, if any, new digital skills have you learned? (Free text)

A total of 3,097 people answered this question. The most common responses were:

- Skills for virtual meetings, e.g. via Zoom or Teams
- Use of Excel (spreadsheet) and/or the Adobe suite of software - both skills that last year's participants said they wanted to learn
- Editing videos, and creating website and social media content - again skills highlighted as desirable last year
- General IT skills for the workplace, such as use of SharePoint

Staff and freelancers cited more specialist skills and the use of more specialist software, as might be expected. These included creating surveys, web and data analytics, managing digital systems, using digital maps, and providing online workshops. Leaders (CEOs/senior leaders/directors and trustees/board members) were more likely to say that they had learned general skills for online meetings in the last year. Responses given were very similar to last year, suggesting that this has been a period of consolidating the digital skills needed for the pandemic response.

Q16: What level of digital skills do you consider that you have?

The average 'digital skills' rating was statistically significantly different between job roles, with significance driven by the higher ratings by the lower average rating from volunteers in comparison with the other roles (N=3,796, H=73.6, df=4, p<0.001). We used a non-parametric test as the data were not normally distributed.

We used a multivariate technique called Key Driver Analysis (KDA) to investigate what, if any, of the variables were related to higher digital skills ratings. Results showed that having a higher interest in learning new skills (Q11) and rating their role as requiring higher digital skills (Q18) were the two key drivers of higher digital skills rating scores, although this only predicted 50% of the variation in the data (adjusted R square value =0.49). Gender, age, and organisational heritage area were not important in predicting higher digital skills rating scores in this analysis.

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Median average	6	6	6	7	6	6
Mean ± SD	5.9 ± 1.9	6.1 ± 1.7	6.2 ± 1.8	6.5 ± 2.1	5.6 ± 2.0	6.0 ± 1.9

Table 22. DASH survey participants were asked to rate their digital skills on an 11-point scale from 0 (no digital skills) to 10 (advanced digital skills). This summarises the median and mean average by job role, including the standard deviation of the mean (N=3,777)

Q17: Are you able to carry out these digital activities?

Category	Rate ability	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Use video conferencing for virtual meetings	Able and confident	76.1%	85.8%	75.8%	78.0%	56.7%	71.4%
	Able, not confident	21.7%	12.8%	21.1%	18.6%	32.6%	23.7%
	Not able	2.2%	1.4%	3.0%	3.4%	10.6%	4.9%
Use social media to promote an event	Able and confident	43.4%	53.3%	54.6%	67.8%	25.1%	45.5%

Category	Rate ability	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
	Able, not confident	27.4%	31.8%	32.3%	27.1%	32.3%	31.6%
	Not able	29.2%	14.9%	13.1%	5.1%	42.6%	22.9%
Digitally record an activity, place or object (e.g. photo, audio, video)	Able and confident	61.0%	63.1%	66.9%	78.0%	60.8%	62.9%
	Able, not confident	31.9%	34.0%	29.5%	20.3%	38.2%	31.5%
	Not able	7.2%	2.9%	3.6%	1.7%	10.7%	5.6%
Use a collaborative work space (e.g. Google docs, Teams, Slack)	Able and confident	41.7%	54.6%	56.9%	54.2%	28.5%	47.2%
	Able, not confident	38.7%	37.4%	35.4%	39.0%	39.5%	37.1%
	Not able	19.6%	8.0%	7.7%	6.8%	32.0%	15.6%
Analyse data from a spreadsheet or database	Able and confident	55.7%	68.1%	56.0%	54.2%	42.1%	53.1%
	Able, not confident	35.4%	27.9%	37.4%	37.3%	35.2%	35.7%
	Not able	8.9%	4.0%	6.6%	8.5%	22.7%	11.1%

Table 23. The percentage of DASH survey participants who are unable, able but not confident, or able and confident in relation to five digital activities, presented within job roles (N=4,077, 3988, 4071, 4015 and 4058 respectively)

Q18: What level of digital skills does your role require of you?

The average 'role digital skills' rating was statistically significantly different between job roles, with significance driven by senior leaders, staff and freelancers having higher average ratings than trustees, and by volunteers having significantly lower average ratings than all other roles (N=3,839, H=884.1, df=4, p<0.001). We used a non-parametric test as the data were not normally distributed.

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Median average	6	7	7	7	3	6
Mean \pm SD	5.8 \pm 2.0	6.8 \pm 1.5	6.5 \pm 1.9	6.9 \pm 2.0	3.7 \pm 2.6	5.6 \pm 2.5

Table 24. DASH survey participants were asked to rate their attitude towards learning new skills on an 11-point scale from 0 (no digital skills) to 10 (advanced digital skills). This summarises the median and mean average by job role, including the standard deviation of the mean (N=3,820)

Q19: Do you have any of these digital skills? Tick all that apply

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Carry out online research (e.g. for funding opportunities)	76.8%	79.3%	67.3%	70.8%	51.3%	65.0%
Write relevant digital copy	63.0%	63.2%	52.7%	69.2%	39.5%	51.3%
Train others how to use digital systems - formally or informally	29.3%	43.5%	48.8%	43.1%	21.3%	38.3%
Design a survey for online / mobile delivery	28.5%	45.4%	37.4%	52.3%	15.0%	31.0%
Manage a digital collection or archive	26.6%	27.4%	29.9%	43.1%	20.2%	26.8%
Develop a social media strategy	21.1%	29.6%	23.5%	30.8%	7.6%	19.4%
Manage secure sharing of data with other organisations	20.5%	33.9%	26.3%	23.1%	10.2%	21.7%
Choose a suitable IT subcontractor	19.3%	35.2%	9.7%	13.8%	7.4%	12.3%
Assess digital risks and opportunities for the organisation	18.3%	35.8%	14.4%	21.5%	5.9%	14.3%
Publish digital content with open licensing	13.2%	13.4%	14.5%	29.2%	6.8%	12.3%
Design infographics and/or animations	11.0%	13.4%	18.8%	30.8%	5.0%	13.8%

Table 25. The percentage of DASH survey respondents who reported they had each of 12 individual digital skills (N=13,712 responses by 4,494 people)

A total of 383 provided information about 'other' digital skills, a relatively low number suggesting that our closed categories captured most people's skills adequately. The 'other' skills were in practice often specialised or contextualised versions of skills in that closed list. The most common themes were:

- Creating online digital content and/or websites
- Editing digital videos and photographs
- Managing data, including using and creating databases
- Using GIS tools

Q20: How have you mainly developed the digital skills you use in your role?

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Brought skills from a previous organisation	46.0%	25.5%	26.8%	36.7%	34.3%	31.1%
Formal training in current organisation	4.6%	5.4%	7.6%	1.7%	3.1%	5.7%
Informal learning in current organisation (e.g. picking up skills from colleagues)	34.9%	59.9%	52.7%	31.7%	20.2%	42.1%
Not applicable (e.g. digital skills not needed in my role)	3.7%	0.6%	2.9%	5.0%	31.8%	10.7%
Other (please tell us how)	10.9%	8.6%	10.1%	25.0%	10.6%	10.4%

Table 26. The percentage of DASH survey respondents who have mainly developed their role-relevant digital skills in one of the five possible options provided (N=3,992)

A total of 420 people provided information on 'other' ways they had developed the digital skills they use in their role. Common themes were:

- Self-taught, for example using online resources and information: “using tools' guidance, trial and error, or googling how to”
- Acquired iteratively over time: “growing up with and using throughout education and work”

Several people commented that pandemic working had reduced the opportunities to learn from colleagues. A smaller number commented that they found it hard to acquire new skills after retirement, as they had lost the connection with work and work colleagues.

Q21: When have you discussed your digital skills at your organisation? Tick all that apply

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
During recruitment	7.5%	20.7%	32.4%	20.0%	9.4%	22.0%
At formal meetings e.g. appraisal	11.2%	28.5%	36.1%	18.5%	4.3%	23.5%
Informally with colleagues / peers	54.9%	71.8%	65.6%	61.5%	28.6%	54.5%
In response to the coronavirus lockdown	24.4%	43.0%	33.5%	33.8%	9.5%	26.5%
Never discussed	28.0%	13.2%	11.9%	13.8%	48.0%	24.2%

Table 27. The percentage of DASH survey respondents who reported they had discussed their digital skills within their organisation in one of the four options provided, or who had never discussed their digital skills (N=6,773 responses by 4,494 people)

Q22: What digital skills, if any, would you most like to develop in your role? (Free text)

A total of 2,300 people answered this free text question. Common themes were:

- Video editing and other content creation skills in media such as infographics, photography, animation, and website design
- Social media skills, especially in the context of marketing
- Data analysis, data management (e.g. using spreadsheets) and analytics, often in the context of market and audience research

These skills are very similar to those felt to be desirable last year. Comments about using social media were more likely than last year to include specific contexts such as

marketing, outreach, surveys, or recruitment, suggesting a more sophisticated understanding of how social media skills could support the organisation:

“Make short videos for promotional use, social media channels, and recruitment purposes, also for in-house training.”

“More use of social media management platforms and website analytics”

Senior staff were more likely than other staff to mention the use of digital systems for management tasks: content management, asset management, financial management, volunteer management, project management and so on.

Q23: Which of the following, if any, have made it difficult for you to develop digital skills in your role? Tick all that apply

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Not enough time	42.7%	69.1%	58.4%	50.8%	15.3%	45.3%
Not enough personal (face to face) support for digital skills	25.6%	23.1%	29.5%	23.1%	14.1%	24.2%
Not enough online training and resources	15.7%	15.9%	22.4%	21.5%	8.3%	17.1%
Lack of access to reliable devices and/or software	10.4%	16.9%	20.5%	16.9%	8.1%	15.5%
No one takes responsibility for my training and development	10.4%	12.1%	13.9%	20.0%	10.8%	12.6%
Not long enough in the same job role	2.0%	2.2%	7.1%	7.7%	3.0%	5.0%
I don't have any difficulties in developing digital skills	18.3%	21.2%	14.8%	23.1%	17.8%	16.7%

Table 28. The percentage of DASH survey respondents who chose each of the options when asked what, if anything, made it difficult for them to develop digital skills in their role (N=6,134 responses by 4,494 people)

Q24: Do current organisational systems or processes make it difficult for you to use digital in the ways you would like to? If yes, what?

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Yes	9.3%	21.1%	26.3%	10.5%	8.2%	19.0%
No	60.3%	50.9%	41.0%	52.6%	53.8%	47.6%
Unsure	30.5%	28.0%	32.6%	36.8%	37.9%	33.4%

Table 29. The percentage of DASH survey respondents who said that current organisational systems made it difficult for them to use digital in the way they would like (N=3,837)

A total of 666 people provided further free-text information about unhelpful organisational systems or processes. Common themes were:

- Poor functionality or reliability of infrastructure, and out of date equipment (less commonly noted by senior staff): 'Infrastructure and equipment are not always equipped or maintained for the tasks required'; 'Poor IT systems make basic digital experience slow and frustrating (eg disjointed systems, crap wifi, no-remote access or remote access that is cumbersome with slow load times).'
- Staff not sufficiently involved in choosing software and designing digital processes (again, less commonly noted by senior staff): 'Organisation not prepared to listen to staff feedback regarding their unsuitable digital software purchase. No consultation with staff on any digital process/system'; 'ICT department not accepting of professional level requirements'; 'hard to get permission to use certain tools due to company policy'
- Lack of awareness at a senior level of what is possible or necessary: 'many staff have been in posts for a long time so their knowledge is out of date'; 'more senior staff did not understand how transformative it would be for not just my workflow and efficiency, but for colleagues across the organization'; 'lack of digital skills at board level'; 'short-termism of senior management and poor approach to major IT projects.'
- Lack of time and resources for staff development: 'Digital team is understaffed meaning issues are often not dealt with until weeks or months after they arise'; 'Do not have enough opportunities or resources in our specific role'; 'Short staffed means that I don't have time for training or to deliver the opportunities that could be available to us'; 'no in-house training available'; 'No time for experiment or innovation'.

- Inefficient working practices that do not allow digital skills to be used effectively: 'Very antiquated systems will little or no synergy, recording same information multiple times - inefficiencies'; 'a lot of top-down control over use of digital, with an assumption that anyone not in a specifically "digital" role, does not have these skills'; '[we have to] use our own email address to circumvent organisational restrictions in order to carry out the tasks that we are paid by that organisation to do'.

Q25: What one thing could your organisation do to improve digital ways of working? (Free text)

A total of 2,254 people provided information in response to this free text question. Like last year, the most frequent request was for more and better training. However, this year there was a wider range of alternative suggestions, mainly to do with organisational practices and systems. Common themes were:

- Invest and take an interest in people's digital skills (mainly from staff): "Identify digital skills which are relevant and useful in our individual jobs, and then help us to access courses and training"; "take digital seriously and embed it as part of everyone's role and projects"; "Talk to me personally about how my skills should be developed to meet the needs of the company"; "Increase capacity to have dedicated paid members of staff focus on specific digital skills and delivery"
- Provide more and better organised training (staff and volunteers offered specific ideas about how to do this): "Develop a skills programme", More opportunities to learn from others (workshops and informal meetings); "face-to-face training to suit learning styles"; "formal collective training sessions, to ensure no-one gets missed out"; "employ a person to coordinate training, especially with new software roll-outs"; "colleagues sharing their systems with others e.g. Miro"
- Upgrade digital systems, both on-site and for remote working: "Improve wifi connectivity and update internal systems"; "invest, invest, invest"; "better infrastructure (eg better wifi coverage etc) a designated space for digitisation and investment in equipment"; "have a digital preservation policy, better infrastructure (eg better wifi coverage etc) a designated space for digitisation and investment in equipment"; "implement a properly secured file server with remote access"; "dedicated videoconferencing system" (and many requests for specialist systems, from content management to bookings)
- Develop and action organisational strategies for digital skills (almost exclusively from leaders): "Embed the digital strategy created during the Change Programme and stick to its guiding principles"; "Create a digital strategy for our organisation and move to a new web support agency to improve our ability to update website in-house"; "Take digital seriously right across the organisation"

- Ensure joined-up systems: “systems that speak to each other”; “fewer parallel systems”; “streamline the number of systems in use”
- Introduce organisation-wide protocols and practices: “a rethink in terms of how we work, in terms of work flows rather than specific tasks”; “we need to work out what good Teams etiquette looks like and find a way to use it that doesn't eat up so much time”; “make sure there is a standard, especially when creating content or visual media”; “a digital strategy that would help our lead-in times and cement unity (by process) within these vital departments”; “reduce divisions between departments and teams and stop operating in silos”
- Unlock access and encourage staff to experiment: “Allow us access to more software and platforms”; “Have some computers available for trialling and experimenting with new software for research”; “be more open to new platforms and ideas”

Extracting the data from senior leaders (i.e. trustees and senior staff) to compare with the totality of responses, these respondents were more focused at the organisational level, as would be expected. Their comments about digital skills were strategic, intending to improve access and provision of training. Their comments about systems reflected a general desire for integration and shared protocols, rather than a detailed knowledge of specific software and hardware issues.

Q26: How would you describe your organisation's approach to digital ways of working?

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Leading and innovative	9.6%	14.6%	9.8%	7.0%	5.4%	9.6%
Keeping up with the times	45.7%	47.5%	43.2%	50.9%	31.5%	45.7%
Following the practice of others	30.1%	30.6%	30.9%	19.3%	16.2%	30.1%
Not engaged	5.7%	3.8%	5.0%	10.5%	6.8%	5.7%
Unsure	8.9%	3.5%	11.2%	12.3%	40.0%	8.9%

Table 30. The percentage of DASH survey respondents who used each of the five possible options to describe their organisation’s approach to digital ways of working (N=3,843)

Q27: What aspect of your organisation could be improved with new or better digital ways of working? (Free text)

A total of 1,906 people provided information in response to this free text question. Almost all could see the potential for improvements in their own area of work if the organisation were more digitally capable, so responses tended to reflect participants' personal contexts. For example: "better record keeping, easier access to information, sharing information quickly, satisfying customer enquiries more quickly and better, ability for multiple use of material at the same time, easier customer and public access to our archive to name a few."

InfraNodus classified the text network created from these responses as 'biased': there were very weak associations among the different concepts, consistent with most people answering this question from a rather narrow focus on their own role, context, and area of organisational concern. However, common themes did emerge as follows:

- Giving online access to aspects of the organisation's offer, whether collections, events, spaces or simply information
- Project, process and workflow management internally: "Improved born-digital workflows, including more integrated data capture from field to analysis"; "Integrated programming of projects across multiple departments"; "sharing and collaboration between departments"; "a better system for accessing equipment"
- (Related to this) more efficient use of staff and volunteer time: "greater flexibility in working patterns"; "more time for staff to work together as a team"; "more efficient digital workspaces"; "reduced time performing repetitive operations"
- Communication, internally and externally: "better internal data management to enable us to better share knowledge externally"; "more constructive communication with our members"; "marketing communications, donor relationship management"
- Outreach and audience engagement: "We could reach more people and involve different kinds of people"; "More attractive engagement with the public at all levels, cultures and ages"; "engaging communities rather than using digital media as a noticeboard"; "Storytelling and showing that we are on a journey too"

There were very few differences between last year and this year's coded responses.

Extracting the data from senior leaders (i.e trustees and senior staff) to compare with the totality of responses, these senior staff were more likely to talk about strategic goals such as reach and brand recognition, and about management systems. They seemed slightly more concerned about internal communication and slightly less concerned about external engagement (members, audiences etc) reflecting their focus on organisational efficiency.

Q28: Which of the following does your organisation provide you with? Tick all that apply

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Help to set up your own digital devices (e.g. to work from home)	14.8%	62.9%	56.5%	20.0%	6.3%	37.7%
Training in systems/software relevant to your role	11.4%	46.2%	47.2%	18.5%	14.9%	33.7%
Chance to be involved in decisions about digital working	29.1%	47.6%	25.4%	33.8%	5.9%	22.3%
Opportunities to share digital practice with others in the sector	10.6%	25.5%	13.8%	24.6%	4.8%	12.0%
Recognition for digital skills you bring to your role	12.4%	19.9%	17.2%	26.2%	7.4%	14.3%
A digital lead/champion you can contact	11.6%	22.3%	15.7%	7.7%	5.4%	12.8%
None of these	37.4%	9.9%	10.1%	27.7%	43.5%	22.9%

Table 31. The percentage of DASH survey respondents who reported that their organisation provided them with each of the six options listed, or who chose 'none of these' (N=6,992 responses by 4,494 people)

Q29: Which of the following does your organisation make you aware of?

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
How to behave safely and respectfully online	29.9%	57.3%	50.7%	23.1%	18.2%	39.4%
How to make digital media accessible to all	12.0%	19.6%	16.2%	16.9%	5.2%	12.9%
How to handle data securely and within the law	35.6%	67.2%	59.2%	26.2%	16.8%	44.9%

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Digital licensing issues including open licensing	7.5%	19.6%	14.4%	7.7%	2.9%	10.7%
How to look after your health and wellbeing as a digital user	10.8%	47.3%	45.9%	18.5%	8.1%	31.1%
An organisational digital strategy	13.0%	16.7%	15.7%	12.3%	3.7%	12.1%
None of these	35.4%	10.8%	10.2%	32.3%	40.4%	22.0%

Table 32. The percentage of DASH survey respondents who reported that their organisation made them aware of each of the six options listed, or who chose 'none of these' (N=7,779 responses by 4,494 people)

Q30: How would you rate your organisation's support to develop your digital skills?

The average 'organisational support' rating was statistically significantly different between job roles, with significance driven by senior staff, staff and freelancers having higher average ratings than trustees, and by trustees having significantly lower average ratings than all other roles (N=3,217, H=279.0, df=4, p<0.001). We used a non-parametric test as the data were not normally distributed.

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Median average	5	6	6	6	4	5
Mean ± SD	4.4 ± 2.3	5.5 ± 2.0	5.4 ± 2.2	5.3 ± 2.2	3.7 ± 2.6	4.9 ± 2.4

Table 33. DASH survey participants were asked to rate the organisational support they receive to develop their digital skills on an 11-point scale from 0 (no support) to 10 (excellent support). This summarises the median and mean average by job role, including the standard deviation of the mean (N=3,201)

Q31: What specialist software application(s) or data system(s) do you use most in your role? This would be anything other than standard MS Office

or Mac equivalent software. If you don't know the names, please just tell us the type of activity e.g. bookings, HR, CRM etc. (Free text)

A total of 2,606 people provided information in response to this free text question. A huge diversity of applications and systems were in use, reflecting the diversity of organisations and roles represented. In descending order of frequency, specialist systems cited were:

- Adobe creative applications e.g. for image editing and website design
- Customer Relationship Management (CRM) systems
- Booking and events management systems
- HR and volunteer management systems
- Collections management systems
- Content and website management systems
- Geographical Information Systems (GIS)
- Mail and other communication systems
- Accounting software

Q32: If you use specialist software, do you find it ...

Category	Rate agreement	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Fit for purpose (does what you need it to do)	Agree	47.0%	28.3%	29.9%	39.7%	65.5%	41.2%
	Neutral	39.0%	47.4%	46.9%	36.2%	23.6%	39.7%
	Disagree	14.1%	24.3%	23.2%	24.1%	10.9%	19.1%
Reliable (works consistently on the device and network you use)	Agree	72.3%	63.7%	52.4%	57.1%	59.7%	56.4%
	Neutral	25.1%	31.0%	33.1%	40.0%	33.8%	32.4%
	Disagree	2.6%	5.2%	14.5%	2.9%	6.5%	11.1%
Sector standard (as good as other organisations are using)	Agree	56.2%	59.9%	51.6%	45.7%	43.7%	51.8%
	Neutral	38.8%	31.8%	36.7%	48.6%	45.9%	37.7%

Category	Rate agreement	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
	Disagree	5.1%	8.3%	11.7%	5.7%	10.4%	10.5%

Table 34. The frequency of DASH survey respondents who reported that the specialist software they used (N=2,334, 2,338 and 2,128 respectively)

Q33: Do you feel able to influence digital ways of working at your organisation?

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Yes, a lot	22.3%	44.0%	7.9%	23.9%	5.0%	13.5%
Yes, a bit	56.6%	45.0%	53.2%	54.3%	33.4%	49.6%
No, not at all	21.1%	11.0%	38.9%	21.7%	61.6%	36.9%

Table 35. The percentage of DASH survey respondents who felt they could influence digital ways of working at their organisation (N=2,803)

Q34: Which, if any, of the following Digital Skills for Heritage initiatives have you used? Tick all that apply

Category	Trustee	Senior staff	Staff	Freelancer	Volunteer	TOTAL
Heritage Digital	6.1%	11.3%	6.3%	15.4%	1.4%	5.4%
National Lottery Heritage Fund Digital Guides	6.1%	11.6%	3.9%	6.2%	0.5%	3.9%
Digital Heritage Lab	1.4%	4.3%	3.3%	7.7%	0.3%	2.4%
Leading the Sector (Culture24)	1.2%	5.4%	2.4%	0.0%	0.2%	1.9%
Raising Confidence Digital Help Desk	0.2%	1.1%	0.2%	0.0%	0.1%	0.2%

Table 36. The percentage of DASH survey respondents who had used each of the named Digital Skills for Heritage initiatives (N=4,494)

A total of 445 people (10%) from 181 (56%) of the organisations that used DASH had used at least one of the Digital Skills for Heritage initiatives, and a further 62 people named other resources they were using, the most common of which were ACE, Digital Culture Network, The National Archives, Better Impact and Charity Digital. When we look by job role we can see that 23% of senior staff, 20% of freelancers, 12% of trustees, 11% of staff, and 2% of volunteers had experience of at least one Digital Skills for Heritage resource. Several people commented that they had never heard of these resources, but would now take a look, suggesting that DASH is also useful as a way to advertise free resources to the sector. One or two comments came from people who assumed these came at a financial charge.

Appendix 3: Methodology

DASH sign-up data were collected via [BOS Online Surveys](#). DASH data were collected via a Premier license to an unbranded version of SurveyMonkey, with individual customised links created for each organisation.

Every question in DASH was optional, so exact sample sizes differ slightly between questions. The sample sizes are shown as 'N=' under each data table. Where questions were 'tick all that apply', the denominator was taken as the maximum number of people in each that answered the survey.

For DASH 2020 users looking to compare their data between years, users will need to group 2021 data for CEO/senior leader, freelancer, and staff into one 'all staff' category.

Quantitative data were handled and analysed in Excel and SPSS v28.0. Statistical significance is taken as $p < 0.05$. Comparisons of data collected in 2020 and 2021 were carried out by comparing the mean averages (for interval scale data) or median average (for ordinal data) per organisation. Where means are quoted, we also provide the standard deviation.

When comparing between years, we carried out matched pairs analysis using the organisations that used DASH in both years. First, we ran this for all data collected in both years (to see if opinions across the whole organisation had changed), and then we only included people who in 2021 said they had completed DASH the year before, versus all data collected in that organisation in 2020. Data were not normally distributed, so were analysed using non-parametric statistical tests.

Responses to free text (qualitative) questions were downloaded, cleansed, and analysed. Building on the findings of DASH 2020 (when a randomized sub-sample of data from each question was manually coded) we used two different analysis tools to analyse the full set of free text responses for each question, before checking for detail by hand. Where relevant these results were compared with those from last year.

Qualitative analysis was carried out via thematic topic modelling using [InfraNodus](#) language processing package. This is a web-based open-source tool for generating insights using text network analysis. For each free-text question of interest, we used InfraNodus to identify the most influential keywords and topic clusters (i.e. keywords tending to appear together). For some questions where we identified role-related clusters, we ran separate analyses using the text responses only from participants identified as leaders (i.e. CEOs/Senior leaders and Trustees) only.

We also used NVivo, a widely respected qualitative data analysis tool, to carry out basic word frequency analysis and to explore some of the keywords identified by this method and/or highlighted by InfraNodus. Again, we ran some analyses using responses from leaders (CEOs/Senior Leaders and Trustees) and from 'other'

participants as separate samples. We then investigated the instances where differences were found by hand. NVivo word trees allowed us to better understand the keywords and topics in context.

Persona analysis was carried out using a statistical process called multiple correspondence analysis (MCA) using the R statistical software package and using refined groups created from 11 original variables (Q1, Q2, Q3, Q6, Q11, Q16, Q20, Q21, Q26, Q33 and Q34). Clusters of variables were taken as potential persona types before being validated against free text comments by searching for people with those attributes throughout the DASH dataset.

Key Driver Analysis, another multivariate statistical technique, was also carried out in SPSS using a custom plugin. Variables used in that analysis were: the four rating scales (Q11, Q13, Q18, Q30), gender, age class, organisation's heritage area, and organisation size (using the four categories based on number of employed staff; see Appendix 1 for details).

Appendix 4: Acknowledgements

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A very big thank you to all those organisations who participated in the DASH project in 2021, including those who provided permission to share their name:

25 Group Royal Observer Corps Association	Bristol Culture & Creative Industries
Aberdeen FC Heritage Trust	British Motor Industry Heritage Trust
Acumen Community Buildings	Bryn Residents Action Group (BRAG)
Amgueddfa Forwrol Llŷn Maritime Museum	Built Environment Forum Scotland
Archaeological Research Services Ltd.	Bury Art Museum
Archbishop's Palace Conservation Trust	Buxton Museum and Art Gallery
Armenian Institute	Caistor Arts and Heritage Centre
Armstrong Storytelling Trust	Caistor Heritage Trust
Art at the Heart CIC	Cambridge Past, Present & Future
Art UK	Canal & River Trust
Arts and Heritage CIC	Charles Dickens Museum
Association of Local Government	Chartered Institute for Archaeologists
Archaeological Officers	Chelsea Physic Garden
Association of Transport Photographers and Historians	Circle Heritage
Aston Manor Road Transport Museum Ltd.	Clapham Film Unit
Avant Cymru	Clare Castle Country Park Trust
Aviation Heritage UK	Cleveland Ironstone Mining Museum
Awen Cultural Trust	Clwyd-Powys Archaeological Trust
Babylon ARTS	CofGar (Carmarthenshire Museums)
Banana Enterprise Network Ltd	Colchester and Ipswich Museums
Barnsley Museums	Coldharbour Mill Trust Ltd
Bat Conservation Trust	Colne Valley Park Trust
Bath Preservation Trust	Comann Eachdraidh Uibhist a Tuath, North Uist Historical Society
Bath Royal Scientific and Literary Institution	Community Solutions
BCP Council	Conwy Culture Service
Beaminster Museum Trust	Cornwall Area of Outstanding Natural Beauty
Belfast Hills Partnership	Cotswold Archaeology
Belfast Mic Tours	Creggan Country Park
Benefice of Eglwysilan and Caerphilly	Cullercoats Watchhouse
Bishopsteignton Heritage	Culture Syndicates CIC
Blyth Tall Ship	Curious Spark Ltd
Boarderland Voices, arts for health and mental wellbeing	Dean Heritage Centre
Boundary Way Project	Delapré Abbey Preservation Trust

Dr Chris Cumberpatch, Freelance
Archaeologist
Dronfield Heritage Trust
Dundee Museum of Transport
Dunfermline Heritage Partnership
Durham Cathedral
Eden Rivers Trust
Edo Diaspora UK CIC
Eisteddfod Genedlaethol Cymru
Elizabeth Gaskell's House
Ely Museum
Empower Women for Change
Engaging The Youths Through Creative
Entrepreneurship (EYCE)
Féile Women Singers
Fife Historic Buildings Trust
Firing Line Museum of The Queen's
Dragoon Guards and The Royal Welsh
Five10Twelve
Flintham Museum
Folkestone Leas Lift Company CIC
Foresight North East Lincolnshire
Four Corners
Free UK Genealogy
Freud Museum
Friends of Neath Abbey Iron Company
Friends of Norris Green Park
Friends of the Newport Ship
Friends of Tower Hamlets Cemetery Park
Fusilier Museum and Learning Centre
Garden Museum
Gardens, Libraries and Museums -
University of Oxford
GIRES
Glastonbury Abbey
Global Generation
Guildford Cathedral
Halstead 21st Century Group
Hartlebury Castle Preservation Trust
Heads Together Productions / Chapel FM
Arts Centre
Hearth Historic Buildings Trust
Heeley City Farm
Heritage Lincolnshire
Heritage Trust Network
Heritage Trust Network (Northern Ireland)
Heritage Trust Network (Scotland)
Hertfordshire and Middlesex Wildlife Trust

Historic Houses
Historic Ryde Society
Hoopsfix Foundation C.I.C.
Ingol and Tanterton Community Trust
(Intact)
Keighley Creative
Kents Cavern Prehistoric Caves
Kettle's Yard
Kingston Heritage Service
Lagan Legacy
Laxfield Bells
Leeds University Library Galleries and
Special Collections
Leicester & Rutland At Risk War Memorials
Pro
Leicestershire and Rutland Wildlife Trust
Leisure and Culture Dundee
Lewes Rowing Club
Live from Worktown
Living Archive MK
Llandudno Museum and Gallery
Llantrisant Guildhall CIO
Local Planning Authority Conservation
Officers
London Gardens Trust
London North Western Railway Society
Ludlow PCC - St Laurence Ludlow
Luton Council
Manchester Histories
Maritime Heritage Trust
Markenfield Hall
Maryhill Burgh Halls Trust
Medway African and Caribbean Association
Mehdi Nameni
Meols Hall
Mid Ulster District Council
Mine2Minds Education
Ming-Ai (London) Association
Monmouthshire County Council
Morris Society
Moseley Railway Trust
Mrs Smith's Cottage
MSDS Marine
Multicultural Cumbria
Museum of Cornish Life
Museum of London
Museum of Royal Worcester
Museums & Galleries Edinburgh

Museums Galleries Scotland
 Museums Partnership Reading (The MERL and Reading Museum)
 Mythstories
 Nantwich Museum Trust Limited
 National Biodiversity Network (NBN) Trust
 National Historic Ships UK
 National Museums Northern Ireland
 National Museums Scotland
 National Paralympic Heritage Trust
 National Transport Trust
 Natural Enterprise Ltd
 Neath Port Talbot Libraries & Museum Service
 Nerve Centre
 Newton upon Derwent Local History Group
 Norman Nicholson House CIC
 North Craven Building Preservation Trust
 North Duffield Conservation and Local History Society
 North York Moors National Park Authority
 Northern Ireland Environment Link (internal and members)
 Northern Ireland Museums Council
 Northern Ireland Museums Council (members)
 One Voice Blackburn
 Oriel Mon
 Oxford Preservation Trust
 PCC of Holy Trinity Church
 Peak District National Park Authority
 Pennine Heritage Ltd
 Peterborough Environment City Trust
 Plantlife
 Pontefract Civic Society
 Portrush Heritage Group
 Protege
 Qisetna
 Red River Archaeology Ltd
 Reimagine Remake Replay
 Road Roller Association
 Rotherham Museums, Arts and Heritage
 Royal Society of Wildlife Trusts
 RWA (Royal West of England Academy)
 Saffron Walden Heritage Development Group
 Saint Peter's Cathedral, Belfast
 Sangat Centre
 Scottish Seabird Centre
 Seadream Education CIC
 Seaton Tramway
 Selby Abbey
 Severn Rivers Trust
 Shakespeare Birthplace Trust
 Shrewsbury Abbey
 Silvery Light Sailing
 Skylight Circus Arts
 South West Archaeology Ltd
 St Paul's Cathedral
 St. John the Baptist RC Church
 Steamship Freshspring Trust
 Stowe Nine Churches PCC
 Suffolk Artlink
 Sulgrave Manor Trust
 Swansea Canal Society
 Tetbury Police Museum
 The 78 Derngate Northampton Trust
 The Alasdair Gray Archive
 The Apostolic Order of St Hadrian of Canterbury
 The Birch Community Association
 The Co-operative Heritage Trust CIO
 The Erne District Chinese Families' and Friends' Association
 The Farmland Museum
 The Friends of Chain Bridge Forge
 The George Community Pub (Wickham Market) Ltd
 The Gower Society
 The Heritage & Cultural Exchange
 The Heritage Alliance
 The Heritage Alliance - members
 The Highlife Centre
 The Hunterian, University of Glasgow
 The Institute of Historic Building Conservation (IHBC)
 The Museum of Military Medicine
 The Pilgrim Trust
 The Pioneers Project CIC
 The Poetry Archive
 The Rachel Kay-Shuttleworth Textile Collections
 The Regency Town House
 The REME Museum
 The Roald Dahl Museum and Story Centre
 The Royal Parks

The Smallprint Company
The Sound Agents Limited
The SPAB
The SS Great Britain
The Tall Ship Glenlee
The Victorian Society
The West House & Heath Robinson Museum
Trust
The William Morris Society
this Great Adventure Ltd.
Thrive
Totnes Heritage Trust
Truro Cathedral
Turton Tower
Ulster Wildlife
University of Liverpool Museums & Galleries
University St Mark and St John

Warwickshire Wildlife Trust
Waterworks Museum - Hereford
Watts Gallery - Artists' Gallery
Wells Cathedral
Wessex Archaeology
Whitchurch Waterway Trust
Winchcombe Town Trust
Windrose Rural Media Trust
Woodbridge Tide Mill
World Heritage UK
Wreningham Heritage Group
YHA England & Wales
York Consortium for Conservation and
Craftsmanship
York Mansion House
Yorkshire Film Archive

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