

April 2019



For Public Circulation

AWDS Project Report

Background

Jisc / TNA Action Plan

The Jisc/TNA joint action plan (2017 - 2019) includes the following section relating to 'Developing the digital skills of the archival workforce'

The National Archives and Jisc will explore the development of joint training for digital competency for archives and information professionals, looking for external funding to subsidise it. We will map the current training offer available across the archives sector and the current skills base of archivists via a skills audit in support of the Government's Vision for Archives, Archives Unlocked.

This provides the context for this current report, although the scope of the action set out above is wider and more ambitious than the work detailed below. The activity described in this report relates to the first logical phase of the broader action; which is to map the current skills base of archivists via a skills audit. Through a better understanding of the skills base and by identifying the skills gaps, it will then be possible to make more informed decisions about the types of training and staff development that are required (taking into account what is already on offer and how effective it is). Having established this, the final phase would then be to explore funding and subsidy options. These future actions should be reflected in future iterations of the TNA/Jisc Action Plan.

RECOMMENDATION - Ensure there is effective follow-up to this report by inclusion of relevant work in the next iteration of the TNA/Jisc Action Plan.

Project Design

Whilst the project was formally commissioned by TNA and the work was organised, facilitated and managed by Jisc, in practice the design of the work; the particulars of community involvement; and the scope and detail of the survey was developed in partnership between the teams at Jisc and TNA. The work involved 4 main areas of activity.

1. Desk Research & Preliminary Discussion

The first stage of work involved an exploration of current resources and skills frameworks and familiarisation with any current or recent syntheses of the digital capabilities of the UK archival workforce. Some assumptions about skills gaps were proposed and then refined in the early stages of the work, based on the knowledge and experience of the project team and their broad engagement with the archival community (see Project Outcomes section).

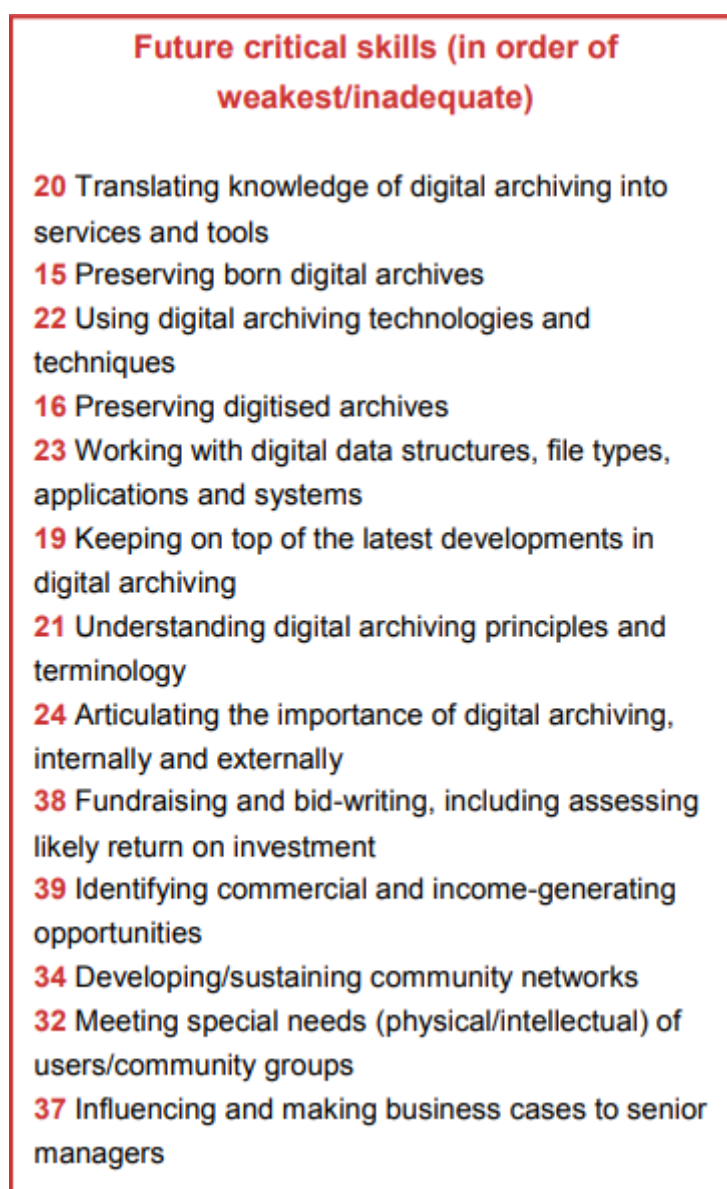
Other recent work was taken into account, in particular the work commissioned by the TNA from Pye-Tait Consulting:

Pye Tait Consulting Ltd., (2017), *Archives Sector Workforce Development Strategy*, commissioned by TNA, <https://www.nationalarchives.gov.uk/documents/archive-sector-workforce-strategy.pdf> (accessed 28/03/2019)

This comprehensive exercise looked more broadly at various areas of archival activity. As well as looking at skills and training, it explored issues such as: adapting to change; recruiting and retaining talent; career progression; workforce diversity and mobility. Of particular relevance to this report, it was clear from 230 survey respondents that there was significant concern and anxiety around how unprepared the sector felt in relation to tackling digital challenges.

Figure 1 below lists the skills that respondents deemed to be the most critical to have or to acquire; mapped against the level of current capability.

Figure 1 - Future Critical Skills



Pye Tait Consulting Ltd. - *Archives Sector Workforce Development Strategy*, (p.36)

The first eight explicitly reference digital tasks or issues. It was clear from these conclusions that further exploration and a deeper examination of the barriers and enablers that the community face in relation to engaging with digital challenges would be helpful.

2. Focus Groups

The second stage of work involved organising two focus groups to bring together a diverse mixture of archival professionals to begin to audit digital skills and capabilities across the community. Building on the preliminary phase above, all participants were provided with a briefing paper prior to the workshop to set out some background and to provide a starting point for discussion. The briefing paper is included as an appendix to this report (see [Appendix B - Archival Workforce Digital Skills Project: briefing paper for focus group participants](#)).

3. Survey

The third stage of work - again building on the previous phases - was to design and release a major survey where the archival workforce was invited to assess their current individual and organisational digital capabilities and skills. Additional questions were included that explored other related aspects such as: personal, organisational and managerial context; developmental barriers; the availability or otherwise of appropriate training; and the nature of infrastructure and systems within organisations.

4. Synthesis

The last stage of work (encapsulated by this report) is a summary, synthesis and evaluation of the outcomes of the previous activities leading to conclusions and recommendations.

The original intention of the work was principally to provide TNA and Jisc with useful further data and evidence to support and inform progress towards fulfilling the aims and objectives of their respective organisational strategies. As the work has progressed, it has become clear that the wider release of summaries, conclusions and analysis in anonymised formats will not only deliver value back to those who participated in the focus groups and the survey; but will also be of general interest to the broader archival sector.

RECOMMENDATION > Consider what formats and what selection of material from this process might usefully be publicly released to relevant communities

Project Outcomes

Desk Research & Preliminary Discussions

The Jisc project team carried out online desk research to explore a wide range of references and resources that were likely to have relevance to the topic. The purpose of this was twofold. Firstly, to double check that we were not duplicating work that was - or is - effectively being tackled by other bodies/agencies; and secondly, to provide deep context and potential directions for the focus group discussions and to inform the design of the survey. A small selection of the resources that were explored is listed in [Appendix A - Selected Resources](#).

Making generalisations about the wealth of online materials relating to archival digital practice is difficult and a more methodical approach will be required in any subsequent phase of work to accurately understand what the various current 'training offers' are from different organisations.

RECOMMENDATION > Build on this exercise to help refine the scope and definition of any future evaluation of training offerings

The following observations and reflections result from reviewing the available resources and materials.

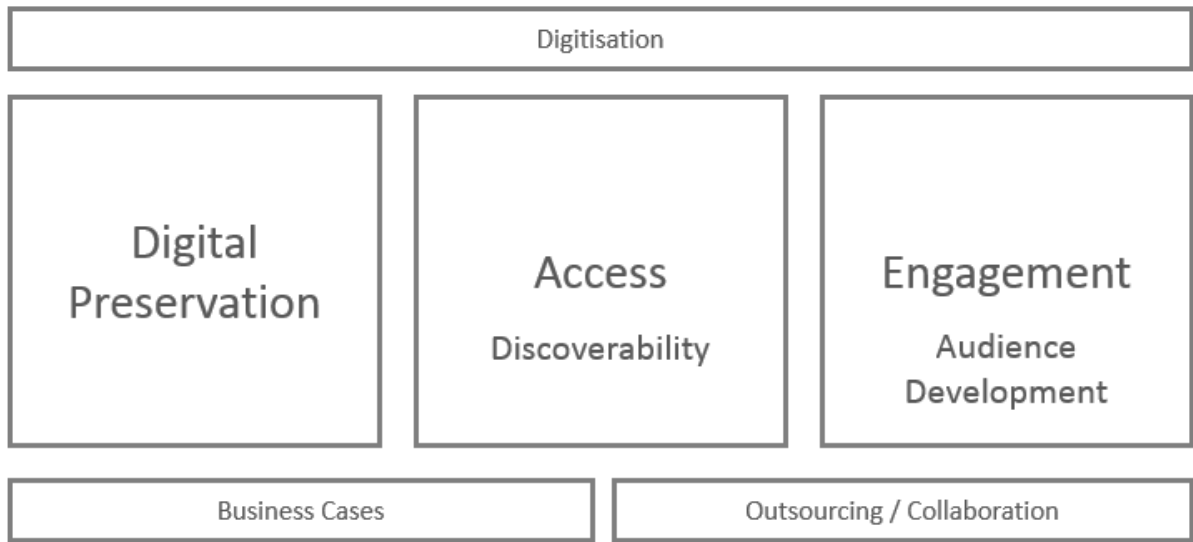
- Resources that appear to be of relevance to some of the areas (particularly perhaps 'discovery' and 'digital engagement') are widely scattered because individual skills are not necessarily regarded as linked
- It is complex to try and isolate archival digital skills from other ways of categorising skill sets such as 'digital scholarship' or just 'research'
- There are skills that do not automatically or exclusively sit within the archival digital skills areas (e.g. linked data) where - depending on the strategy of the organisation - it may be important for the archive to explore or acquire those skills
- Accredited UK academic courses (with the exception perhaps of UCL) cover description/standards but don't appear to focus on concepts such as 'discovery' or even 'digital' in any methodical or scoped way
- The literature and the focus of relevant sources often seems heavily weighted towards (overly concerned with?) 'the catalogue' and the hierarchy of descriptions and the use of authority information in an organisational context
- Library Carpentry - training and skills development that is online, self-led, community-based, internationally-aware, and self-sufficient would appear to be a useful, practical and sustainable way forward
- It is hard to think about 'skills requirements' in relation to individuals without simultaneously taking into account the needs and mission of their organisation, and the requirements and expectations of the users of the archive
- Required skills vary considerably according to the scale and ambition of the archive
- There is a wealth of training and guidance material freely available (particularly in the area of digital preservation) but it may be hard for the novice or the time-poor professional to work out what they *don't* need to know. This may be a barrier to getting started
- There may be alternative lenses to take on the question of the acquisition of digital 'skills'. If the skills are hard to obtain and the rewards are slight, from a sectoral gain point of view, it may be more productive to look at the provision of 'tools'; and make them more attractive and intuitive to use
- Isolating and defining the urgency and the requirements around 'skills' acquisition for the sector is difficult to disentangle from the urgency of 'tasks' that may need to be addressed. We may need to decide whether we are trying to address a career development challenge for individuals; or a crisis in the profession because a digital backlog of work is beginning to pile up

One of the purposes of undertaking preliminary work was to see if it was possible to alight upon an existing useable 'digital skills framework' that we could bring to the Focus Group discussions that would give participants something to react to: either to validate and agree with its assumptions and implicit requirements; or to come up with alternative assertions. However, the quantity and diversity of the currently available resources relevant to the digital challenges pointed to a need

to define a starting framework that was more based on experience, knowledge of UK archival practice, and prioritisation of sectoral objectives defined in existing national strategy documents.

Accordingly, a framework for describing likely critical gaps in skills and digital capability was defined by TNA and Jisc as follows:

Figure 2 - Proposed Skills Gaps and Priorities



Digital Preservation

Defined in this context as the active characterisation, ingest, storage and monitoring of digital assets in a system or workflow specifically designed for the purpose.

Access [Discoverability]

Defined as the generation of sufficient and appropriate metadata to support: user research, easy citation, content sharing and the findability of records

Engagement [Audience Development]

Defined as the process by which records are made interesting and relevant to diverse audiences. This might involve: creating narratives around specific selections of documents; the creation of additional contextual or linked information; the creation of bespoke microsites, tools or other supporting resources.

Other key areas included: digitisation; the generation of business cases to underpin digital activity; and the ability to collaborate with others or outsource effectively to achieve digital objectives.

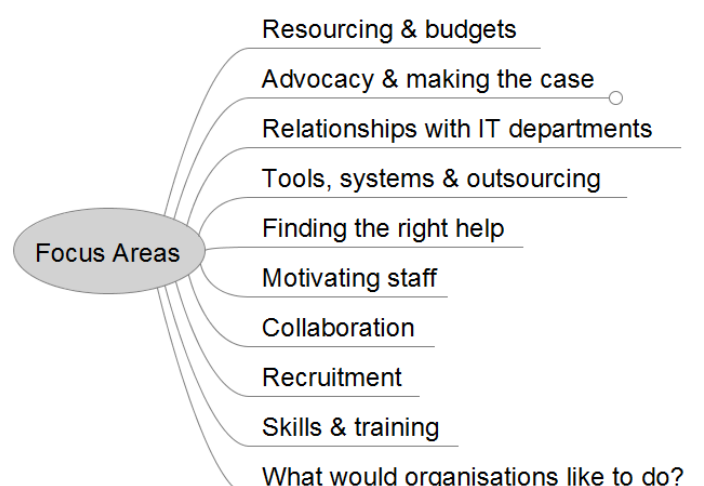
Focus Groups

Two focus groups were conducted, the first in Manchester and the second in London. Whilst there were some differences in emphasis between the discussions; and the conversations took a slightly different path in places according to the preoccupations and different sectoral affiliations of the participants, there were various common elements that came through. What also became clear was that those participating appeared to regard the Focus Groups as a good opportunity to ‘get things off their chest’ - which may point to a lack of other fora where it is possible to vent professional frustrations with like-minded colleagues.

For a detailed view of the outputs of the Focus Groups (including a representation of the post-it note exercise to map tasks and mind maps of each of the discussions) please refer to the additional material that accompanies this report. The slide deck is entitled <Focus Group Slidedeck.pptx>. [Note: it may only be possible to clearly read the mind maps on a large screen as they contain a lot of small detail].

The detailed discussions and much of the material generated by the exercise can mostly be represented by boiling it down into 10 key Focus Areas (see Figure 3).

Figure 3 - Key Focus Areas



Resourcing & budgets

One very clear message that came through strongly from both groups was that all archives face budgetary challenges but the local authority sector has faced particularly acute pressures and has been subject to cuts and austerity policies for a considerable period of time. The result of this constant contraction of opportunity and the inhibiting effect it must have on strategic development was reflected at various points during the discussion by the nature of the input from participants. When invited to think expansively and creatively, it was telling on several occasions that Local Authority participants' first tendency was to think in terms of how much budget would be available before imagining what action would be desirable. Whilst this was not consistent throughout, there was certainly a discernible difference of outlook between those archivists working in university environments and their colleagues in local authorities. Representatives from other sectors (national library, charity, business, cultural heritage) expressed a range of views according to their local situation.

Across all sectors, it was apparent that finding even relatively small sums of money represented a difficult or impossible challenge. It was widely agreed that securing a sum of £20k to pay the fees of an organisation such as Arkivum to provide long term secure digital storage was unrealistic for many of the organisations represented. One (university) participant stated that the IT department in her organisation said they would need to charge her £5k for setting up a server so that she could get started with managing her digital assets. The budget she had available for that aspect of her work was £3k. When discussing subscription to membership organisations that could help in areas such as digital preservation, there was some agreement that the fees charged by the Digital Preservation Coalition (currently around £3k for associate membership) were also unaffordable for many archives - particularly the smaller entities and especially charitable organisations.

When income is limited and funding opportunities are scarce or difficult to secure, organisations should look to monetise their assets and think creatively about generating revenue. Due to the nature and remit of many archives (and the temperament and inclinations of many archivists!), this more entrepreneurial way of thinking does not always come naturally or is very easy to operationalise. When the discussion turned towards monetising content and either charging subscription fees for digital access; or working with commercial entities to digitise parts of collections, it was pointed out that there were often restrictions that came with funding that precluded this type of activity. One (local authority) participant said that they had made images available through a subscription service but that was only possible because they had funded the project themselves. Which suggests that it may take significant investment in the first instance for an organisation to put itself in a position whereby it can generate revenue as a result of that investment.

Whilst there may well be tensions implicit in the concept of putting publicly or philanthropically funded digitised materials behind paywalls, there should also be an acknowledgement that if the archives that are responsible for sustaining access to those materials are not being adequately funded, then they also need to be given the means to support themselves as well as deliver to their users.

RECOMMENDATION > Create advocacy materials and engage funders to consider where and when it may be appropriate and desirable to allow grant recipients (particularly when in receipt of funding for large digitisation projects) to charge access or subscription fees to either portions or the entirety of the relevant materials

RECOMMENDATION > TNA/Jisc should design future interventions for the sector based on a presumption that archives must be able to accrue very practical and demonstrable benefits if they are being asked to spend even small amounts of budget on training, career development or skills acquisition

Advocacy and making the case

This topic of discussion was necessarily focused both on internal and external advocacy. There was a widely stated need for much more internal ‘buy-in’ from senior management in cases where the archive was part of a larger organisation (e.g. university). As stated above, the local authority archives feel there is inadequate support from government and other types of archives generally sense that their visibility is lower than it should be.

In some cases, there are practical reasons why the archive is not attracting enough attention and support. One (national library) participant questioned whether it was widely known and accepted that local government even had a remit to work digitally. Another (university) participant described it as a ‘hard sell’ to get people working in a scientifically-oriented organisation to understand where the archive fits and what benefits it can deliver.

It was apparent from some of the input at both Focus Groups that many staff working at archives lack confidence when faced with the requirements of working digitally. The word “fear” was used during both sessions: “fear of digital” and “fear of the jargon, systems etc., paper is safe & and easy” (see post-it note exercise). When talking about the differences between working with physical items and working digitally, one participant talked about the “loss of control”. This anxiety works through into concern on the part of non-technical managers about being expected to supervise staff who have a high levels of technical knowledge.

Where there is this sense of insecurity and lack of confidence, it will be difficult for archives to unhesitatingly make a strong case for support and funding in the digital realm. Participants were clear that it was important for them as individuals and as members of the archival profession to always look to increase their professional standing. They emphasised the need for national bodies to play a part in advocating on behalf of the whole sector and to look for opportunities to see archives better represented in surveys and statistics. SCONUL stats were mentioned as somewhere that might feature more nuanced questions around the use of archives and special collections.

On a more practical level, one (university) participant noted that there was no support (that she knew of) for writing business cases to secure ongoing funding for archives. It was also noted that there were some areas (research data management and GDPR in particular) that were usefully attracting attention within some sectors and that archivists should be looking to adopt and embrace those activities in order to take advantage of the momentum and support they are currently enjoying. It was commented that much had been made recently of research data management (RDM) as a kind of sub-profession requiring specialist knowledge and skills; yet it was essentially a set of activities that required the same approach as records management. It was also noted that libraries seem to have been quicker off the mark than archives to claim RDM as something that they should be responsible for and that it represented an unfortunate ‘land-grab’ that archives should try to reverse! On a less adversarial note, it was then suggested that archives and libraries should actively seek to work more closely together to engage with emerging and evolving areas of digital practice.

RECOMMENDATION > Undertake a review of the materials that are available to support archivists with preparing business cases for activities that tackle digital challenges

RECOMMENDATION > TNA/Jisc to look for opportunities to bring archives more fully into scope of research data management initiatives and to advocate for their role and remit in that space

Relationships with IT Departments

This was probably the most consistently remarked upon topic throughout both Focus Groups and was a concept that prompted universal dissatisfaction. There is clearly a systemic and widespread problem with the way that organisations have split their archival and IT function and it would appear that there are low levels of understanding - and in some cases cooperation - between them. One particularly frustrated (local authority) participant stated that one of his challenges was “making progress with any digital task in the face of an under skilled, unenthusiastic, bureaucratic IT Department”.

The difficulties that this schism create are varied. There was broad agreement that archivists and IT specialists do not have a shared vocabulary and often seem to find themselves at odds with each other. It was noted that IT departments tended towards the ‘one big bucket’ approach and often took the view that as long as there was ample storage space and everything was backed up, the job was essentially done.

There is a need for archivists to be able to make their requirements better understood by IT staff and for both sides of the equation to be able to understand the challenges, constraints and opportunities. One (local authority) participant talked about his 14 month struggle to implement the Preservica digital preservation system into his organisation in the face of an uncooperative IT department. This illustrated a point echoed several times over that digital preservation (in particular) was not an area of work that was well-understood by IT colleagues. Various participants noted the impossibility of implementing open source software in their organisations as their IT colleagues were keen to implement policies that only allowed authorised software (usually well-established and ‘trusted’ commercial applications) to be loaded.

There appears to be considerable scope for interventions that will help to establish better relations and more trust between archives and IT departments.

RECOMMENDATION > Design materials, guides, advice and interventions (events, workshops) that promote more cooperation, trust and a shared understanding of practice and objectives between archivists and IT specialists

Tools, systems & outsourcing

It has to be of concern that several participants from both groups noted that they regarded the market-leading Collections Management System (Axiell CALM) as being an unsatisfactory product. One (cultural heritage) participant noted that she was struggling to use CALM as it was so restrictive. Others questioned whether it was possible to effectively link CALM to preservation systems. It appears that more could be done to communicate requirements to CMS providers so that they are able to refine and improve their products. There is undoubtedly scope also for archivists to improve their knowledge of products and to become more expert in their use of them. It was noted how useful product user groups can be for sharing expertise.

As stated above, the open source nature of some tools such as DROID means that local government archives in particular are not prepared to authorise their installation and use. This can seriously hamper attempts to make progress within institutions, particularly in a situation where resources are scarce and free tools would be the perfect way to navigate around the problem of having no budget to spend on software. The overhead of staff time remains of course to engage with and implement tools and participants suggested that even something as basic as DROID would benefit from having more explanation and guidance for users. It was also suggested that TNA might consider certification and accreditation of tools for archivists which may help win the argument with IT departments to allow them to be implemented.

Whilst there was appetite for trying to do work in-house and use locally developed systems where possible, it was acknowledged that archives had to be prepared to go out and confidently procure systems and work with suppliers in order to work effectively in the digital realm. The learning curve for some organisations (particularly smaller archives) is very steep when it comes to procuring complex systems and working up specifications and requests for proposals (RFP’s). Whilst there has to be some level of trust between supplier and customer, the inevitable risk that this entails can be greatly mitigated if the latter is an informed buyer and is able to seek good advice. It was noted that membership bodies that should be a source of such advice - the Digital Preservation Coalition (DPC) and the Archives & Records Association (ARA) - had both allowed commercial entities to become members and it was possible that this could affect the neutrality of their opinions when it came to recommending systems.

Overall the groups felt there was great benefit in archivists sharing detailed experience and new knowledge between themselves as a result of going through procurement and implementation exercises.

RECOMMENDATION > TNA/Jisc to support the sector by liaising with solution providers to improve and enhance the useability and effectiveness of their products

RECOMMENDATION > TNA to consider whether it is feasible to provide certification / accreditation for open source tools that are relevant to archives

RECOMMENDATION > Review the support materials available to the sector to help with systems procurement processes and either promote existing materials or provide guidance and templates for specification and RFP documents and procurement regulations

Finding the Right Help

There is a huge range of capacity and capability across the sector but there are a significant number of digital skills that are increasingly required for archives to thrive and be successful. Participants noted that archivists should not expect to be able

to become experts in all areas. There was confirmation from some participants that a lot of archivists felt uncomfortable about stepping outside of their comfort zone or accepting that they would have to take action in areas where they were not expert. One (local authority) participant described his difficulty with purchasing a scanner. He described the guidance that he had found online to be either too basic or too complicated for his needs and this resonated with others who had looked for guidance with other tasks.

Digital preservation was particularly noted as an area where it was difficult to find the right information to get started, despite the fact that the DPC website features a handbook that is broken down into chapters and begins with one called 'Getting Started'. Participants noted that there was no central repository of information where they could go to that had the information that they needed and that national bodies (such as TNA and Jisc) might want to consider building such a resource. When the organisers pushed back on this idea and pointed out it was not practical, there was some acknowledgement that the idea might be idealistic and difficult to achieve. That said, there is doubtless scope for TNA/Jisc to continually review how it presents its advice and guidance and ensure that it is up to date and relevant.

There was more practical discussion about how to foster good communication and collaboration across the sector. Listservs were cited as being really useful assets to the community, although there was some ambiguity about how they were viewed. On the one hand, participants agreed that the archive community was 'friendly' and would often respond helpfully to emails asking for help and advice. On the other hand, it was noted that big listservs (and specifically the NRA list) were intimidating to post to as there was scope for making a fool of yourself and very publicly damaging your professional reputation by asking simplistic or naive questions.

RECOMMENDATION > Explore if there is serious demand for trying to design and create a sustainable, useful, friendly and supportive new online environment where archivists and staff working in a national support capacity can ask technical questions and give technical advice to each other in a non-judgemental way

Motivating Staff

One challenge that was posited during both sessions was that it was quite difficult to get certain staff motivated and excited about engaging with digital tasks; and what a huge difference it made when staff *were* engaged and had the right kind of 'have-a-go' attitude. One (local authority) participant described what he was looking for as individuals who had 'digital curiosity'. He described his service as facing a lot of challenges - particularly in terms of the availability of resources - but he had confidence in his team's ability to meet the challenges once they were enthusiastic about finding solutions.

Other participants talked about the challenge of inspiring staff who had been in post for a long time to embrace new skills and to work differently. There was a need to provide incentives to change and to get staff to take ownership of ideas and initiatives that involved using digital tools and processes. Getting to the point where "you know how much you don't know" was described as a useful milestone and one that ought to be regarded as a positive rather than a depressing point in someone's learning curve. Reflecting what was said about much of the advice and guidance on offer, it was agreed that there was a 'chasm' between basic and advanced practice. One (local authority) participant advocated that when colleagues were confronted by a technical problem that they didn't know how to solve, they should just try 'googling it' and have a go at being self-sufficient.

Recommendation > TNA/Jisc to design advocacy that will excite and motivate archive staff (not just researchers) about the potential benefits, impact and new opportunities that will result from applying digital techniques to archival content. By implication this will highlight the need to optimise discovery and access of archival content in digital formats

Collaboration

Whilst there was an acknowledgement that collaboration inevitably incurred an overhead that was sometimes difficult to resource and often required justification, it was a principle and a practice that could be employed to mitigate almost all other problems. The use of a consortial procurement approach and shared digital services were proposed as helpful examples of where collaboration really delivered practical and economic benefits. The prospect of fulfilling the role of 'intelligent customer' was increased by joining up with colleagues from other archives with a range of different skillsets and expertise.

It was noted that individuals with particular skills and experience and who made themselves available to the community and were willing to guide others were of enormous value. As stated above, various participants found the advice forthcoming on listservs was often very useful but also noted that it was confusing and inconclusive when a question was ignored and remained unanswered. In such cases, the person asking the question was then left unsure as to whether the question was valid - or even made sense - which put them at more of a disadvantage than before they posed the query. Participants noted

that posting thoughts and ideas to Twitter often resulted in supportive responses and provided a good representation of the positive and friendly community spirit that was alive and well in the archival sector.

One suggestion made in both sessions was that archivists would do well to cultivate relationships with academics and students working in the digital humanities. The application of novel and evolving digital techniques to the processing and analysis of archival content is key to unlocking the value of archives and will be a future determinant of what data is deemed important. The value of presenting authentic and historic physical objects to audiences will always be of fundamental significance but the ability to get those audiences to use digital surrogates and the associated metadata to draw in others is equally fundamental.

Recommendation > Make case studies available that highlight and promote the use of archives in digital humanities scholarship, both to incentivise academics but also to motivate archivists to engage and make material available in ways that can most easily be exploited

Recruitment

One of the tensions mentioned by group members on the topic of recruitment is of relevance to the previous section. By looking to bring new skills into the organisation by hiring expertise there is a danger that existing staff are not motivated to develop their own skills and are left to continue legacy tasks. Whilst there are often good reasons that core tasks should be sustained, there is also a danger that staff become defensive about their roles and become overly protective of outmoded ways of working. However, participants were also clear that it was vital to make sure that archives have got the digital capability they need and should be thinking in terms of what the workforce should look like - even as little as 5 years down the line.

Another issue with recruitment is that roles are often self-selecting in terms of gender with males tending to apply in greater numbers for technical posts. The overall diversity in the archival workforce is very poor, which in turn runs the risk of teams approaching problems and making decisions with a narrow and uniform mindset.

The groups gave some examples where it had been quite easy and straightforward to recruit staff from a good pool of candidates. One (university) participant had no problem describing the digital skills that his organisation required for a project post and had made a successful hire. On another occasion, however, hiring someone for a conservator role had proved very difficult indeed. Another participant recounted their difficulties with recruiting a software developer and others agreed that not only were these roles difficult to hire, but IT departments tended to 'claim' these members of staff as belonging to them so it could be problematic to keep them focused on and close to the archive.

Whilst participants had no problem working up job descriptions for fairly generic roles (e.g. project manager), some said they would find it difficult to know what to ask for when hiring for more technical roles and what it was reasonable to expect someone to be able to do. It was agreed that a clear view was required of the purpose of the role so there is an implication that the archive has to have a clear strategic and tactical view of what it wants to do and what it wants to achieve going into any recruitment process.

RECOMMENDATION > Work with professional bodies (ARA, CILIP) to ensure that there is sufficient up to date guidance available to the sector that describes a wide range of technical roles; what skills are required to fulfil the role; what tools, standards and methodologies are associated with those skills; and what it is reasonable to expect in terms of cross-over of technical skill sets

Skills & training

On the face of it, a fairly clear view emerged from the groups about the type of training that participants most preferred and believed was effective. One-day courses conducted onsite (or at the very least regionally); with a mix of theory and skills (but with more emphasis on the practical); with sessions recorded and made available online afterwards. In terms of the outcome of the training, participants were looking to build ease and confidence with using digital tools and techniques, both archive-specific and more general (e.g. Excel skills); with a view to allowing them to have more confident interactions with IT colleagues.

However, it was also clear from the sessions that there were many challenges around the provision, the design and the purpose of training. Firstly, there was the ubiquitous problem of funding and resource and the unaffordability of most training. Perhaps even more problematic, participants also commented on the lack of senior management/organisational

buy-in to the principle of staff development and the acquisition of new skills. One (university) participant commented that universities management often don't understand what archives do and why it is vital – "we need advocacy".

Another issue involves a lack of clarity on the part of some archivists about what skills were most urgent and should be prioritised. The question was posed, how do you know what you need if you don't understand how to even get going in the first place? Participants noted that in practice it was hard to get the balance right between spending time learning about the principles (e.g. OAIS model for digital preservation); and getting the hands-on practical experience during training to actually start processing and managing digital files.

Related questions were raised about other ways of looking at the issue. Should the onus always be on archivists to make the use of the digital archive as simple and straightforward as possible for the user or would it pay dividends to focus more on the end user and upskill them? (For example, to download datasets and text mine them for relevant data rather than relying on expensive and elaborate discovery interfaces). Equally, should the focus always be on the acquisition by the archivist of the correct skills in order to be able to manipulate complex tools and carry out arcane procedures; or should there be more investment and focus on making tools much more intuitive to use?

In general, participants noted that they would welcome guidance from national bodies on what emerging good practice looks like for digital archives and some direction about what software and applications might usefully be prioritised by organisations. In terms of training, group 2 was specific and ambitious with how it would like to see national bodies scope and pinpoint interventions that would help organisations. They talked about getting the right trainer, with the right expertise, with the right delivery method, at the right time, to address the right problem! And whilst there was some acknowledgement of how difficult that would be to deliver in practice, it was this level of granularity that many archives are looking for.

In actual practice, the concept of peer collaboration was mentioned again and one participant talked about how successful some strategic partnering had been that her organisation had tried. They worked with the Kings College London Digital Humanities department on some projects to build websites which had gone very well. She suggested that it was difficult for many archives to know who is also working on initiatives that may benefit them and that it would be good to have somewhere to share ideas and stories after partner organisations had successfully collaborated.

On another positive note, participants from both groups were full of praise for the TNA's 'Bridging the Gap' initiative and stated that it was a model that was working very well from the perspective of organisations that were taking part. One participant also suggested that organisations taken as a whole may actually know more than they think they do, if the sum knowledge of individuals could be pooled and shared. Going back to the idea of 'attitude', participants also agreed that adopting a 'can-do' approach was probably one of the most important aspects to making progress, as was making soft skills work harder for the organisation in areas such as communication, collaboration and judgement.

RECOMMENDATION > TNA/Jisc to support the sector by regularly releasing sector landscape reviews focused on emerging practice for digital archives and relevant tools/techniques for managing them

RECOMMENDATION > TNA to consider whether they are able to deliver technical support and consultancy into institutions in a targeted way

RECOMMENDATION > Jisc to work with colleagues in CHEST to consider whether more affordable licences might be negotiated for certain types of software that would be of interest to archivists

RECOMMENDATION > TNA to continue and ideally expand the 'Bridging the Gap' digital skills traineeship programme

What would organisations like to do?

One of the most positive aspects of the two sessions was hearing about some of the ideas and ambitions that archives have to work in the digital space and to capitalise on the expertise and enthusiasm that exists within the workforce. It is important to get such ideas out into the open so that the sector has ambitious goals to aim for and ways of motivating their staff to engage with the skills agenda.

Some of the ideas were important but rather prosaic, such as using large investments to address the cataloguing backlog or to embark on very large digitisation programmes. One (local authority) participant was particularly keen to ensure that the endangered archives of audio media were digitised and preserved and it is important to remember that basic workaday tasks

such as cataloguing and digitisation are not neglected or taken too much for granted when considering skills issues across the sector. It is as important to keep the basics going as it is to focus on more ambitious goals

Other participants elaborated on their wishlists:

- Go one step further with digitisation and do multi-layered digitisation of medieval court records featuring multi-spectroscopic views, transcript layer, translation layer, and accompanying audio file
- Make recorded live theatrical performances available from the archive (and somehow tackle currently intractable copyright problems!)
- Create a new media player along the same lines as the Wellcome's Universal Player
- Put touch screens in village halls so that people can browse the archive where they are, rather than have to come to the archive
- Extend free wifi into local parks and create augmented reality history trails using geo-tagging of the collections
- Create virtual reality environments and use gamification to bring the archive to life for younger users, featuring levels and rewards for exploring the collections
- Digitise items on request and build up the digital archive over time with new approaches to cataloguing and creating and applying metadata
- Develop good authority files or link to existing authority files and improve discovery by publishing linked open data and creating links to Wikipedia entries
- Get the archive out into the community by putting on live experience events and reaching out to people who wouldn't normally think of setting foot in the archive itself
- Give students experience of handling and viewing important historical objects and then encourage them to tag and post and promote the archive across social media

In the course of the conversations, it was also apparent that participants saw an enabling role for national bodies to also support and drive innovation. One idea that surfaced picked up on various points that had been made throughout the session about linking up practice, disseminating good practice, fostering partnership working, and keeping archives up to speed with emerging technologies. The resource was referred to as a 'Knowledge Network'.

Another suggestion picked up on the problems of consistency of descriptions across the sector and the consequent problems it caused with linking information and joining up collections. Participants talked about the need for a 'National Taxonomy'. The TNA representative present suggested that a resource did exist that had similarities to what was being described but might need to be reviewed or re-invigorated.

RECOMMENDATION > TNA to explore what the shape and role of a 'Knowledge Network' might consist of; how it does or doesn't overlap with other recommendations in this report; and to work with the community to understand whether what is being called for is a new requirement, or whether initiatives already exist that could be better promoted or more joined-up to serve the purpose

RECOMMENDATION > TNA to consider the role of a 'national taxonomy' for use by cataloguers and to evaluate its utility to the sector

Survey

Introduction

A 77 question online survey was distributed in January/February 2019, and was live for 6 weeks. The purpose of the survey was to understand archivists' current digital skills capabilities, and any skills gaps that are apparent across the sector. The survey aimed to uncover what digital support and training the sector needs, and where that support can be most effectively targeted.

A very thorough analysis of the survey results has been carried out by Lisa Charnock of the Jisc Insight Team and is set out in an accompanying slidedeck entitled < DigitalSkillsArchiveSurvey_Report.pptx>. Given that it is unnecessary and duplicative to

repeat the summaries and visualisations that are set out in the presentation, what is set out below are the top level headlines only - followed by some reflections on the survey results.

Headlines

The data indicate that confidence in digital skills is low across the sector, and skills gaps are identified by practitioners and managers. Digital preservation and programming are highlighted as the skills staff have least experience of, however responses suggest interest in all aspects of working with digital materials in the archive, both born-digital and digitized.

Organisations are at different levels of maturity in terms of prioritisation of digital activity but, for most, the data suggest that digital activity has not yet achieved high levels of resource across the responding organisations. The majority are not working to a dedicated digital or digital preservation strategy, and most either have limited understanding of how much funding is allocated to digital activity or indicate inadequate funding. Both practitioners and managers highlight a lack of organisational buy-in as a barrier to developing digital skills.

The current training offer is not providing the sector with digital skills, but there is an appetite for free or affordable training, tailored to the specific needs of archival professionals. Responses suggest that practical application of skills should be prioritised, and that the opportunity to consolidate learning in real-world situations, i.e. outside of the classroom, is essential to the development of digital capability. Linked to the point above, organisational buy-in is important here.

Reflections

The survey was designed to be extensive and quite demanding and we were fortunate to get a good response from the community. This is obviously a good result but does mean that it has produced a great deal of data that has been complex to analyse and then represent in a concise way. The expectation is that TNA will make use of the summary visualisations in the slidedeck and if necessary dig into to underlying data to check more specific points. For the purposes of this report, the following provides some oblique reflections on the survey, mainly to prompt thinking about questions of methodology and signpost other ways into the data, rather than to try to elaborate on, or further summarise, the already analysed data in the slidedeck.

Respondents

The question of who responded is perhaps worth looking at closely and exploring further. There were no responses from health archives and fewer than 10 responses from community, family estates, school and FE, and professional archives. It would be interesting to know what percentage of the UK sector these kinds of archives represent and to what extent it may (or may not be) worthwhile to try and reach out to them. Does low or no engagement with the survey simply indicate that this kind of exercise is of no interest to them; or might it point to the fact that these organisational types are those most in need of assistance? It's possible that they might not be plugged into the channels of communication that are widely engaged with by the rest of the community and may have missed the survey. It's equally possible that the question of digital skills may be a low priority for them. Either way, it may be worth exploring whether there is scope to design different kinds of communications for these types of archives and ultimately whether they may benefit from different forms of support.

Demographics

Although it is hard to make sense of such a mass of data and the temptation is to go in the direction of abstraction and synthesis, there may be a case for drilling down to get the clearest idea possible about trends over time and the effect of demographics. For instance, the levels of satisfaction with formal archival education courses (MA/MSc degrees) have changed over the decades and in response to Q.7 (*To what extent do you agree that this qualification has provided you with sufficient digital capabilities to work in the sector?*) it is noteworthy that 47% of the cohorts from the last 5 years (2015-2019) agree or strongly agree with the statement. This may or may not be encouraging and some benchmarking with satisfaction levels in other disciplinary areas would be useful. But in comparison with previous decades and with the overall view on satisfaction (22%), it indicates that university courses have certainly changed and perhaps the tide is turning recently. The fact that 53% of those 45 survey respondents did not feel able to agree that their qualification provided them with sufficient capability is still of course a worry.

Promotion

Another detailed dive into the data raises questions about what opportunities there are for archivists to progress and to be promoted within the profession. There were 129 managerial responses to the survey and 210 who identified as practitioners. Of the 86 respondents who had been employed less than 5 years, 16 identified as managerial (19%). Expanding this to those who have been in the sector 5-10 years, the figure climbs to 25%; and then to 29% for those up to 20 years. This would again

bear some comparison with other professions if it were possible to find comparable figures. But it feels like the numbers of those making their way into managerial positions after long periods working in archives is on the low side.

Social Media

Various parts of the survey data reveal gaps that may be worth particularly emphasising, either because they reveal pockets of practice that seem surprising, or because they represent areas where focused and targeted intervention may be possible. The use of social media is picked up in various places in the survey. In the table that sets out confidence levels across a wide range of skills (see slide 18), 'post on social media' has the second highest confidence score of all the skills in the table. However, when looking at the channels actually being used it is apparent that none of the social media platforms (Twitter, Facebook, Instagram etc.) are being used by a majority of the 355 respondents. The most used platform, Twitter, attracts 45% of use and the figures go down from there so although respondents have high confidence levels in this particular skill, it would appear that those skills are not necessarily being employed for outreach and engagement on behalf of their organisations.

Digital Assets

Looking at the levels of digital assets held by organisations, it is apparent that there are organisations (particularly national agencies) that are looking after significant amounts of data. However, 56 of 105 respondents (53%) are responsible for less than 500GB of digitised assets and 17 respondents (16%) have no digitised assets at all. When it comes to born-digital assets, 57 of 107 respondents (53%) are managing 50GB or less; and 29 (27%) are not yet managing anything. Bearing this in mind, it is perhaps less surprising that 'organisational prioritisation for digital preservation' (slide 47) and 'capabilities for digital preservation' (slide 48) depict a sector that is not yet particularly committed to, or prepared for, the effective long-term management of digital assets. It would appear that many organisations have yet to properly even get started with actively archiving digital assets in any great quantity. It would be useful to understand the precise reason that archives are holding back from actively collecting or creating digital assets and to what extent anxiety is an inhibiting factor; as opposed to say: a lack of resources, a lack of opportunity, no remit, or a lack of engagement and managerial direction to target digitised and born-digital content.

Training

Respondents appear to be asking for two different things when it comes to their preferred mode of training. They want online or recorded sessions that are affordable (preferably free) and can be engaged with flexibly to fit in with busy work schedules. But they also want face to face hands on sessions that are more practice-based rather than theoretical sessions. Practice-based sessions by their very nature require a high level of interaction and potential use of equipment/software that wouldn't necessarily be available in the work environment. So, certainly expectations need to be managed but it looks like what's needed is a mixed training offer that fits specific subject areas and learning outcomes.

What is also apparent is the predictable but not very realistic expectation that training should be available either at very low cost or for free across the sector. For national agencies that have a mandate and funding to deliver training this may be sustainable. Allied with community-driven training initiatives such as the 'Library Carpentry' model, doubtless much progress can be made. But in some areas of digital skills, or to achieve more specialist objectives, it will almost certainly be necessary to turn to training providers who are unable to deliver courses without at least covering their costs. It may, therefore, be pragmatic to pursue a policy of prompting organisations to always anticipate training costs as an integral part of a wider advocacy programme of increasing organisational buy-in to the digital capabilities agenda.

Skills

The representation of skills gaps from the survey data is relatively predictable given other indications from across the sector and from the input of the Focus Groups. Respondents were largely comfortable with the process of cataloguing but asides from social media and blogging, no other digital skills made it past 50% of respondents saying that they definitely had the skills and knowledge to do the task in question. So there are a great many areas of intervention across a wide range of skills that might be valid to contemplate and the question becomes, where might we start with investment and effort to upskill the sector? Some further thoughts on this are set out in the 'Conclusions' section below.

On a more practical note, it is clear that archivists want to be trained in a hands-on way but organisations will often not be able to set their staff up with the most appropriate software, quarantined systems, test datasets etc. In such cases - particularly where recourse to training is unaffordable - it would be helpful to produce guidance and support materials that outline what can be done even if you don't have what might be considered the 'usual' systems in place. This might end up

being a hybrid between 'theoretical' and 'practical' learning resources; or might simply be referred to as a 'Digital Skills on a Shoestring' approach.

There was also a lot of reported interest in programming skills. It would be useful to follow this up by finding out what kind of tasks archivists want to undertake with these skills, in order to understand the kind of training that needs to be offered. There are lots of mentions of Python but is that always the best or only tool?

And lastly, the approach adopted going into the the focus groups and the design of the survey was that digitisation was an enabling activity that had been a feature of archival activity for a long time and was probably not a skill set in its own right that would warrant much attention or intervention. And whilst it is not necessarily mentioned explicitly that often, confidence in current digitisation provision/sufficiency is in fact noticeably low (see slide 52). It would be worth following this up further, to establish the extent to which this is to do with resources as opposed to skills. Given that users are very clear that they want more digitised collections, it is important to explore where the blockages are with digitisation. Where it is a funding problem then solutions are required at organisational, strategic and sectoral levels. But if there are skills issues, then other types of solutions can come into play.

Conclusions

'My main challenge is I feel like I am sitting on a timebomb with no means of addressing the issue due to a lack of resources and expertise.'

Focus Group 1 Participant

The quote above feels like a pretty good summary of many of the feelings that were expressed by participants to this exercise, either face to face during the sessions or as a reflection of the data gathered by the survey.

The focus of this exercise was to look at skills gaps in order to identify future possible interventions that will help address those gaps, improve the training offer, and increase the prospects of the archival sector to thrive in an evolving digital environment. In order to do this effectively, we have tried to gain a deep understanding of the root causes of the skills gaps. It is for this reason that both the Focus Groups and the Survey went to some lengths to elaborate on the topic of 'skills', explored related themes and examined the question from a number of perspectives, many of which are set out in the report above and in the accompanying slidedecks. The opinions and data that we have gathered are extensive and it has not been possible with this report to come to concise and definitive positions. We anticipate that both TNA and Jisc (and others where appropriate) will be able to use this data as a reference source over time as strategies are refined and programmes of work are created.

Having said that, there are some very key messages that arise from the work and the messages are not - in the main - new or surprising. They are, nonetheless, important and need to inform next steps. The picture that has emerged is that there is a worrying lack of leadership and institutional buy-in around digital engagement. More specifically there is an absence of a business-as-usual attitude towards fostering digital capability in many parts of the archival workforce and this needs to be urgently addressed. If it is not, then the throttling of resources for training and for software and equipment may eventually mean that many archives are simply irrelevant for generations of researchers and students who cannot conceive of a repository that is not easily and conveniently accessible via a browser.

There would seem to be arguments for tackling this in various ways but one practical focus might be to promote the idea of organisational digital strategies. A significant number of organisations report that they either don't have one or are unsure if they do or not. Through the process of designing a strategy, most other aspects of digital planning and resourcing need to be considered so this measure could become a valuable benchmark (and source of peer pressure on organisations) to have in place.

In terms of the headline concerns around digital skills gaps, it is clear (and it is no surprise) that digital preservation is easily the area that presents the sector with the biggest set of challenges. That is useful to have reinforced and TNA/Jisc and others would do well to ramp up support to the sector to tackle a problem that is not going to go away any time soon. A factor that was perhaps less frequently observed prior to this exercise - and has serious implications for digital preservation capability within organisations - is the often debilitating relationship in some (many?) organisations between the archive and their colleagues in the IT department. This feels like a systemic problem that also needs tackling as a matter of urgency and in ways that factor in perspectives from both sides. Staff working in IT are often under a great deal of pressure to manage and

configure sometimes quite large infrastructures with little resource and the penalties for making mistakes can be severe. So it is no wonder that their default response to non-routine requests or apparently eccentric requirements will often be negative. A mediated approach is needed that will allow archivists and IT staff to meet each other half way and to foster a culture of collaboration and curiosity about the opportunities and constraints that are an intrinsic part of both domains of work.

Whilst digital preservation is at the top of the list in terms of 'digital skills gaps', there are no shortage of other areas where it would be helpful to take action and design interventions. In fact, choosing where to focus is quite problematic. Of the 30 skills listed in the 'Skills Audit: level of confidence ...' table (slide 18), it is difficult to judge whether the more highly technical skills towards the top of the table are: a) important tasks but people don't have the skills/confidence to undertake them; or b) that people haven't prioritised acquiring those skills yet because the tasks are unimportant. However they are characterised though, the overall message is clear. More work is needed to upskill the workforce and increase its confidence to manage digital assets. So decisions must be made about whereabouts on the skills list is it sensible to focus investment. Should it be on the relatively 'easy' tasks which might represent 'quick wins'. For example, 'Edit a Wikipedia article' or 'copy files from original media'. Or should time and effort be sunk into the harder tasks, such as 'Measure and report the impact of a digital project'.

The answer will probably end up being 'both', but there are practical limitations on what national agencies can achieve and the resources they have. This is a very significant and long-term challenge and it seems sensible to think in terms of strategies for the short-term and different strategies for the long term. How this works out in practice will almost certainly need to tie in with strategies for collaboration across agencies and between membership organisations and all interested stakeholders. It is often a bit too easy to rely on the concept of 'collaboration' or 'partnership working' to provide a concise solution to a large and complex problem but in this case, there would seem to be no other sensible way of tackling the scope of the issues that this report covers. The TNA has principle responsibility as national sector lead and that provides some very useful clarity as a foundation. Jisc has a remit that provides useful overlap but so do other organisations such as RLUK, the British Library, the Digital Preservation Coalition, the Archives & Records Association, CILIP and others. As we go into the next phase of work and try to design activities that meet the challenges set out in this report, we should recognise that one or two organisations do not need to shoulder the entire burden of this work.

Recommendations

The recommendations listed below are in order of where they appear in the text and do not represent priorities. There is also no distinction between ones that are focused on practical interventions that respond to and mitigate the problem of archivists not having the digital skills they need to perform in their roles effectively; and more general recommendations that arise as a result of the broader considerations of the report.

Not all recommendations have actors assigned to them and we are offering this set of actions primarily as a prompt for further discussion. Specific actions arising from the survey analysis will almost certainly overlap or modify those listed below.

Recommendations

1. RECOMMENDATION > Consider what formats and what selection of material from this process might usefully be publicly released to relevant communities
2. RECOMMENDATION > Build on this exercise to help refine the scope and definition of any future evaluation of training offerings
3. RECOMMENDATION > Create advocacy materials and engage funders to consider where and when it may be appropriate and desirable to allow grant recipients (particularly when in receipt of funding for large digitisation projects) to charge access or subscription fees to either portions or the entirety of the relevant materials
4. RECOMMENDATION > TNA/Jisc should design future interventions for the sector based on a presumption that archives must be able to accrue very practical and demonstrable benefits if they are being asked to spend even small amounts of budget on training, career development or skills acquisition
5. RECOMMENDATION > Undertake a review of the materials that are available to support archivists with preparing business cases for activities that tackle digital challenges
6. RECOMMENDATION > TNA/Jisc to look for opportunities to bring archives more fully into scope of research data management initiatives and to advocate for their role and remit in that space
7. RECOMMENDATION > Design materials, guides, advice and interventions (events, workshops) that promote more cooperation, trust and a shared understanding of practice and objectives between archivists and IT specialists
8. RECOMMENDATION > TNA/Jisc to support the sector by liaising with solution providers to improve and enhance the useability and effectiveness of their products
9. RECOMMENDATION > TNA to consider whether it is feasible to provide certification / accreditation for open source tools that are relevant to archives
10. RECOMMENDATION > Review the support materials available to the sector to help with systems procurement processes and either promote existing materials or provide guidance and templates for specification and RFP documents and procurement regulations
11. RECOMMENDATION > Explore if there is serious demand for trying to design and create a sustainable, useful, friendly and supportive new online environment where archivists and staff working in a national support capacity can ask technical questions and give technical advice to each other in a non-judgemental way
12. RECOMMENDATION > TNA/Jisc to design advocacy that will excite and motivate archive staff (not just researchers) about the potential benefits, impact and new opportunities that will result from applying digital techniques to archival content. By implication this will highlight the need to optimise discovery and access of archival content in digital formats
13. RECOMMENDATION > Make case studies available that highlight and promote the use of archives in digital humanities scholarship, both to incentivise academics but also to motivate archivists to engage and make material available in ways that can most easily be exploited

14. RECOMMENDATION > Work with professional bodies (ARA, CILIP) to ensure that there is sufficient up to date guidance available to the sector that describes a wide range of technical roles; what skills are required to fulfil the role; what tools, standards and methodologies are associated with those skills; and what it is reasonable to expect in terms of cross-over of technical skill sets
15. RECOMMENDATION > TNA/Jisc to support the sector by regularly releasing sector landscape reviews focused on emerging practice for digital archives and relevant tools/techniques for managing them
16. RECOMMENDATION > TNA to consider whether they are able to deliver technical support and consultancy into institutions in a targeted way
17. RECOMMENDATION > Jisc to work with colleagues in CHEST to consider whether more affordable licences might be negotiated for certain types of software that would be of interest to archivists
18. RECOMMENDATION > TNA to continue and ideally expand the 'Bridging the Gap' digital skills traineeship programme
19. RECOMMENDATION > TNA to explore what the shape and role of a 'Knowledge Network' might consist of; how it does or doesn't overlap with other recommendations in this report; and to work with the community to understand whether what is being called for is a new requirement, or whether initiatives already exist that could be better promoted or more joined-up to serve the purpose
20. RECOMMENDATION > TNA to consider the role of a 'national taxonomy' for use by cataloguers and to evaluate its utility to the sector

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All participants at the 2 Focus Groups

Appendix A

Selected Resources

General Frameworks

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|--------------|---|
| Organisation | Archives and Records Association (ARA) |
| Resource | Competency Framework https://www.archives.org.uk/images/CPD/New_CPD_221217/ARA_Competency_Framework_March_2018.pdf |

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| Organisation | Chartered Institute of Library & Information Professionals (CILIP) |
| Resource | My professional knowledge and skills base https://www.cilip.org.uk/page/PKSB |

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| Organisation | Jisc |
| Resource | Digital Capabilities Framework https://www.jisc.ac.uk/building-digital-capability |

Academic Courses (UK)

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| Organisation | Aberystwyth University |
| Resource | Various Masters Courses (archives administration, digital curation, ILS) https://www.aber.ac.uk/en/imla/courses/ |

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| Organisation | University of Dundee |
| Resource | Archives and Records Management https://www.dundee.ac.uk/study/pg/archives-record-management/ |

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| Organisation | University of Glasgow |
| Resource | Information Management and Preservation https://www.gla.ac.uk/postgraduate/taught/informationmanagementpreservation/ |

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| Organisation | University of Liverpool |
| Resource | Archives and Records management https://www.liverpool.ac.uk/study/postgraduate-taught/taught/archives-and-records-management-ma/overview/ |

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| Organisation | University College London |
| Resource | Archives and Records Management https://www.ucl.ac.uk/information-studies/study/postgraduate-study |

General Training

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| Organisation | Jisc |
| Resource | Archives Hub Contributor workshops https://archiveshub.jisc.ac.uk/workshops/ |

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| Organisation | University of Oxford |
| Resource | Excel for Archivists https://help.it.ox.ac.uk/courses/archivists/index |

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| Organisation | The Archive Skills Consultancy Ltd. |
| Resource | Various training courses http://www.archive-skills.com/training/index.php |

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| Organisation | British Library |
| Resource | Digital Scholarship Training Programme (not specifically aimed at archivists but covers useful skills) |

<https://www.bl.uk/projects/digital-scholarship-training-programme#>

Traineeship Programmes

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| Organisation | The National Archives (TNA) |
| Resource | Bridging the Gap: Digital Skills Traineeship Programme http://www.nationalarchives.gov.uk/archives-sector/projects-and-programmes/bridging-digital-gap-technical-traineeships-archives/ |

Digitisation Guidance

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| Organisation | British Library |
| Resource | Doing Digitisation https://www.bl.uk/events/doing-digitisation-short-course |

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| Organisation | Tate Gallery |
| Resource | Tate toolkit for designing an archive digitisation project: https://www.tate.org.uk/art/archives/archives-access-toolkit/designing-archive-digitisation-project |

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| Organisation | Wellcome Trust |
| Resource | Wellcome Trust digitisation guidelines https://wellcome.ac.uk/sites/default/files/technical-guidelines-digitisation-projects.pdf |

| | |
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| Organisation | National Archives Australia |
| Resource | National Archives Australia digitisation guidelines http://www.naa.gov.au/information-management/managing-information-and-records/capturing/digitising-accumulated-records/index.aspx |

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| Organisation | National Archives (US) |
| Resource | National Archives (US) digitisation guidelines https://www.archives.gov/preservation/technical/guidelines.html |

Discovery Guidance

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| Organisation | Jisc |
| Resource | Making your digital collections easier to discover https://www.jisc.ac.uk/training/making-your-digital-collections-easier-to-discover |

Digital Preservation & Curation Guidance

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| Organisation | Digital Preservation Coalition (DPC) |
| Resource | The Digital Preservation Handbook https://dpconline.org/handbook |

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| Organisation | MetaArchive Cooperative |
| Resource | Getting to the Bottom Line: 20 cost questions for digital preservation https://www.metaarchive.org/public/publishing/ma_20costquestions_final.pdf?thumblink |

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| Organisation | DigCurV |
| Resource | The DigCurV Curriculum Framework https://www.digcurv.gla.ac.uk/ |

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| Organisation | Digital Curation Centre (DCC) |
| Resource | The Digital Curation Reference Manual http://www.dcc.ac.uk/resources/curation-reference-manual |

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| Organisation | University of London |
| Resource | The Digital Preservation Training Programme https://dptp.london.ac.uk/ |

Blogs

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| Organisation | OCLC |
| Resource | Hanging Together - the OCLC Research Blog - What's in a digital archivist's skill set? http://hangingtogether.org/?p=3912 |

| | |
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| Organisation | Library of Congress |
| Resource | What does it take to be a well-rounded digital archivist? https://blogs.loc.gov/thesignal/2014/10/what-does-it-take-to-be-a-well-rounded-digital-archivist/ |

Other Sources

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| Organisation | Library Carpentry |
| Resource | Data Intro for Archivists https://librarycarpentry.github.io/lc-data-intro-archives/ |

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| Organisation | Society of American Archivists |
| Resource | Guide to implementing rights statements https://www2.archivists.org/standards/guide-to-implementing-rights-statements-from-rightsstatementsorg |

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| Organisation | Society of American Archivists |
| Resource | Leadership Skills for Archivists https://americanarchivist.org/doi/abs/10.17723/aarc.74.1.h65171q8q115557g |

Appendix B

Briefing Paper for Focus Group Participants

Archival Workforce Digital Skills Project

Briefing Paper for Focus Group Participants

Background

The National Archives and Jisc are working together to tackle various challenges at the intersection of archival practice and digital technologies. Whilst these two organisations have the expertise and remit to shape and progress national strategies, it is imperative that we work closely with the community to ensure that the requirements of archives and their staff are completely understood. We wish to undertake a detailed exploration of issues relating to digital skills gaps in the archival workforce and these Focus Groups are a critical first step in eliciting community input.

This phase of work will be followed up by a survey, which will then inform a report that will set out recommendations for further work to look at the availability and suitability of training offers to the sector. Ultimately, all of this work will shape strategies for the provision of training and the design of funding for the type of skills development that will be critical for the ongoing health and vitality of the archives sector.

Focus Groups

We are convening two groups in November (Manchester) and December (London) where a cross section of invited archivists will come together to discuss: what they think the most important digital skills for archivists are in certain key areas; which are currently most lacking within the profession; and what the ramifications of such skills gaps are for themselves and their organisations.. We have purposefully tried to bring together a mix of people representing large and small archives and those who can bring managerial and/or practitioner insights and experience to the discussion.

Purpose of the Meeting

The purpose of the meeting is not to audit individual or organisational capability in the area of digital skills. No organisation is in any position to make judgements about how other organisations manage their activities because every entity works within its own context and according to the resources that it has access to.

In preparation for the day, we would simply ask you to think about the digital skills which are of most importance to your work or that of your organization; which areas of specialisation you think these fall into; and what challenges or problems arise where these skills are lacking.

If you are a practitioner, you may wish to think about how these skills relate to the different tasks you undertake on a day to day basis. If you are a manager, you may wish to think about the skills required by different members of your team, or teams within your organization.

We have also put together two diagrams below, describing some of our own assumptions about these questions, which you may wish to reflect on in advance. The discussions will also help to shape a national survey, which will give us a clearer picture of the situation across the UK.

Digital Tasks and Skills

Mapping the relative complexity of individual skills and tasks within each area of work, and their relevance to different roles within the sector, is challenging. Even more so when we acknowledge the complexity of requirements across and within different types of organisation.

Below is one proposed model for how we might do this.

Fig. 1 Archival Digital Tasks Map featuring post-it note exercise exemplars

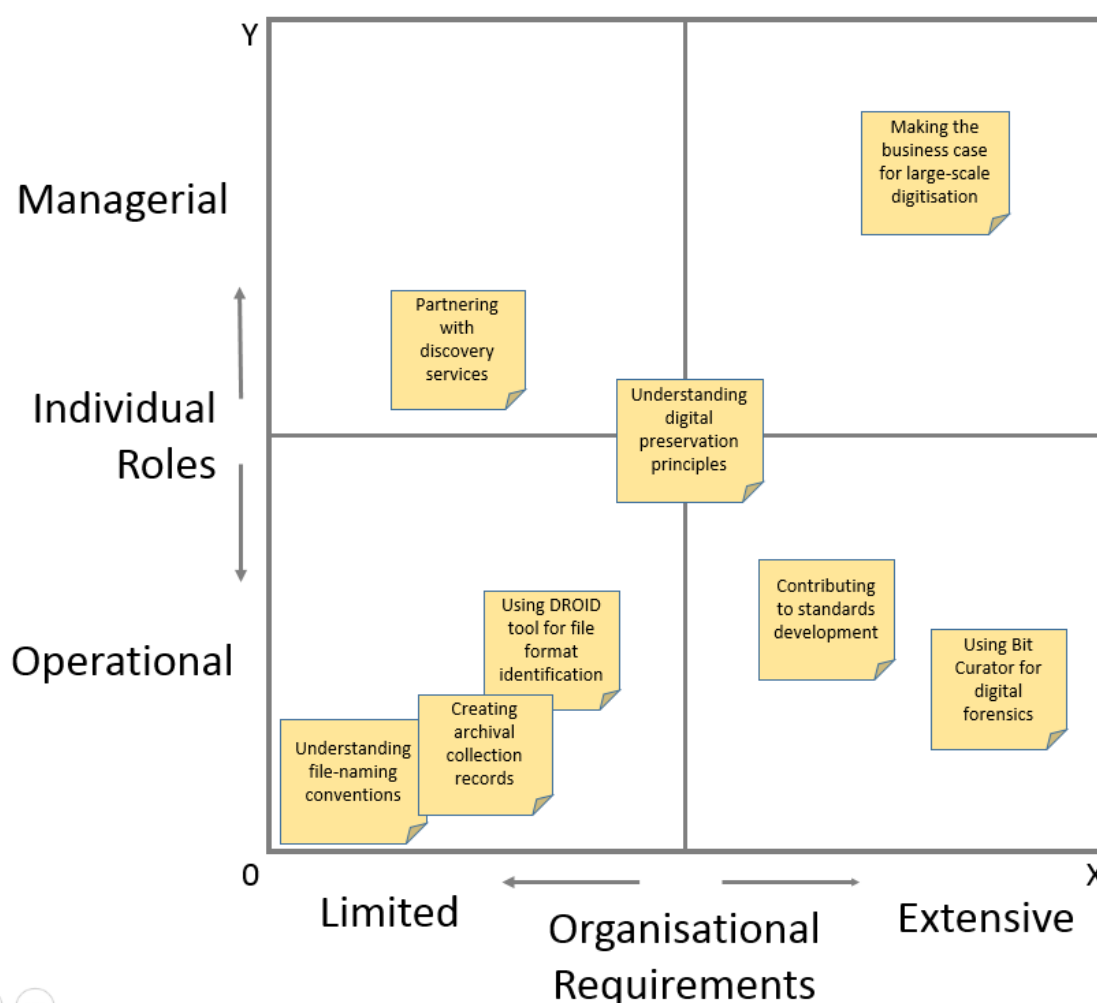


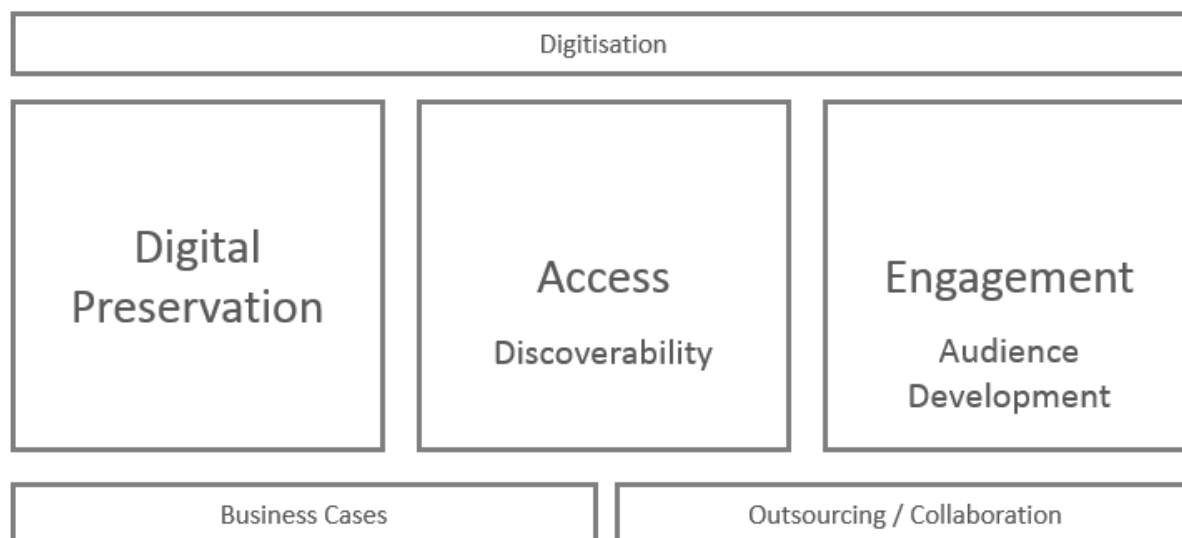
Figure 1 situates the role of the individual along the 'Y' axis and allows a task to be placed in relation to the role of the member of staff. Clearly, the requirements on managers/leaders to acquire or understand certain digital processes will be different to those undertaking more hands-on or operational roles. Equally, organisations will be working in contexts where the nature of their collections or their remit may require them to implement more or less complex digital solutions. This is acknowledged along the X axis.

The post-it notes featured in figure 1 are meant to indicate possible positions for tasks identified by a participant in relation to their own work context. They are simply exemplars and their positioning is up for debate. We will start the Focus Group with a post-it note exercise where participants will be invited to list tasks that are of relevance to them and their organisation and then to try and map them onto the matrix. We will use the exercise as a jumping off point for discussion.

A Draft Skills Gap Map

Based on our experience of providing services and support to the archive sector, TNA and Jisc propose that the following areas (in Figure 2) represent areas of skills gaps in the archival workforce, with a particular emphasis on the three topics represented by the largest boxes.

Fig. 2 - Skills Gaps and Priorities



Definitions

Digital Preservation is the active characterisation, ingest, storage and monitoring of digital assets in a system or workflow specifically designed for the purpose.

Access [Discoverability] in this context means the generation of sufficient and appropriate metadata to support: user research, easy citation, content sharing and the findability of records

Engagement [Audience Development] is the process by which records are made interesting and relevant to diverse audiences. This might involve: creating narratives around specific selections of documents; the creation of additional contextual or linked information; the creation of bespoke microsites, tools or other supporting resources.

As part of the conversation on the day, we will ask you to discuss whether you agree with this mapping, and which skills you feel are most crucial to each of the three key areas of work.

Please feel free to challenge or dispute any or all of these assumptions/models at the meeting, and/or ask for explanations and more clarity! There will be plenty of time for discussion.