

The National Archive's digitisation programme forms an essential part of the organisation's strategic aims and is achieved in partnership with commercial partners. The programme has drastically increased access to our collections, while creating substantial revenue - between a quarter and a third of The National Archives' operating budget - and preserving records at the same time. I will talk you through this programme, as well as how conservation fits into our digitisation programme and the changes we've made to ensure that our records are protected within a commercial environment.



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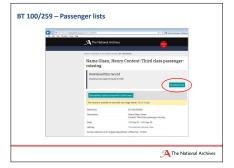
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Not surprisingly, over the last 15 years, we've seen a huge increase in people accessing The National Archives' content online, with image downloads increasing dramatically - from 1.3 million in 2004/5 to around 200 million per annum currently. This required highly effective responses from our conservation team and strong and collaborative relationships.



The National Archives has been imaging collection content on a mass scale since the 1960s through its microfilming programme. Recognising the value of digitisation for access, preservation and income, we have led the move to digital imaging to create online content, and started by digitising on a mass scale in 2002, using the vault of microfilm surrogates to front-load the process relatively cheaply. During that period, we planned our first projects to digitise our primary physical collections from original records.



Among the first large scale projects in 2006 were the digitisation of a number of Board of Trade series comprising outgoing passenger lists from various ports. A number of projects of varying sizes, including digitisation of the 1911 Census with around 18 million images, followed shortly after. During these early years of digitisation, many of the 'easiest' series were done – these being identified as single series containing structured data of fairly consistent format with low or no need for conservation.

Once we've exhausted this potential, our programme needed to become more creative and diverse as well as opportunistic and demand-driven. Subsequently projects became more complex, with 'themes' comprising of multiple series, structured and unstructured data, a wide variety of formats and a greater need for conservation.



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As well as publishing content on our own platform, Discovery, we've increasingly worked with third parties to ensure that the main series of records relevant to family history research are available to view and download online, and in doing so have leveraged in access of £80 million from the private sector to date. As a result, Family History has become very much an online pursuit.



Our commercial partnerships, for the most part licensing agreements, but also on demand provision of images, help us to deliver services and to create revenue. They are at the heart of The National Archives' commercial strategy, and have impacted on the organisational structure and the skill-set required to deliver a successful programme, which needed time to develop.

Family history now forms the bedrock of our partnerships and we are constantly increasing the number of records available by partnering with online genealogical companies – Ancestry, Find My Past, The Genealogist, My Heritage, to name but a few.

All of our licences are non-exclusive, and for fixed time periods – we never offer rights in perpetuity and these two conditions are non-negotiable.



We have also been working with Academic partners, for example Cengage Gale, Adam Matthew Digital and Proquest for more than 20 years to provide access to our collections. Where once they took copies of microfilm, today digital images with a mixture of Optical Character Recognition and manual transcription to index key terms create searchable records, meaning that academic publishers are now driving forward research as well as technological advances. Cengage's use of so-called 'Term Clusters' are designed to aid researchers with specific search terms – devised by an algorithm that creates clusters of terms – meaning that a key term such as *famine in Ireland* can be refined to search further for each category. This is just one of the ways by which research is being driven by the academic sector to encourage the innovative use of data. No matter the type of material, online users increasingly expect to be able to interrogate data and the use of OCR and keyword search is a vital element of this.



Some of our projects are also part of crowd-sourcing endeavours. One example is 'Old Weather', where images of our historic ships' log books are used alongside books from other collections, to reconstruct historic weather patterns by using an army of volunteers. This originally started on the Zooniverse platform from Oxford University's astronomy department, and is used to key in weather readings such as wind speed, wind direction and air temperature. By tracking and comparing changes in wind and weather in the 19 century with today's weather, vital information on climate change can be obtained. So we're open to multiple innovative ideas which encourage re-use of our records.



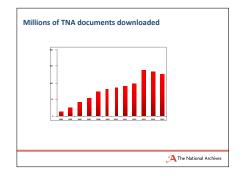
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Another crowd-sourcing project using Zooniverse is the ongoing, phased digitisation of our First World War Battalion War Diaries. This project used volunteers in two ways: to help sort documents in date order as the very first step in our digitisation (almost 2 million pages to date) and also using volunteer 'citizen historians' through the 'Operation War Diary' platform. Approximately 14,000 registered users have applied in excess of 730,000 tags to the pages to date – tags can cover, people, places, dates and activities – and have debunked the myth about what the records themselves contain. The battalion war diaries themselves, whilst always extremely popular in our reading rooms, have previously been overlooked by genealogical companies as they were not considered 'name rich' data. The project has shown that they are in fact immensely name, place and date rich, opening up the information inside the records.



The number of records digitised in partnership with commercial publishers has resulted in greater online access to our collections and raised revenue that is now firmly built into our overall funding structure. In order to achieve this it has been necessary for us to undergo a significant cultural shift in our thinking. It has been a cultural shift for us as an organisation and has required a different way of thinking for our commercial partners too. This also applies to our approach to conservation for digitisation.

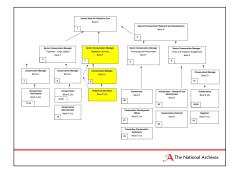


No doubt, the preparation of records for digitisation requires conservation involvement. The repetitive handling of documents in a digitisation project can put them at risk, especially if they're already fragile, and conservation for digitisation for us is non-negotiable. All documents that are to be digitised are therefore assessed by our dedicated conservation team and, if necessary, treated in preparation of imaging, within very strict parameters.

This of course increases the costs of digitisation for our partners, but the digitisation programme substantially benefits from Conservation involvement in a number of additional ways, which add significant value to the process, and which help to get our partners' buy-in and to negotiate that conservation treatment is in their best interest and worth investing in:

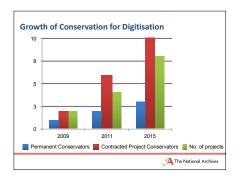
- · Scanning is more efficient as documents are less fragile
- · Text that has previously been illegible due to damage is revealed
- · Optimum image quality is achieved
- · Complaints about illegible images and neglect of documents are reduced, minimising reputational risk to the institution and image provider.

It's important for our partners to understand all elements of their project and we have worked hard to convince partners of the necessity, value and benefits of them picking up the bill for all conservation work prior to digitisation.



Many of our digitisation projects involve hundreds, if not thousands, of documents and millions of individual images are created each year. To meet the demand on conservation, we've adopted a new and commercially driven model for one strand of our conservation team, which is not side tracked by other tasks.

This response allowed us to maximise resources and flexibility, and also to enhance our partners' experience of working with us through a much more efficient system, as well as taking pressure off the rest of our Collection Care Department.



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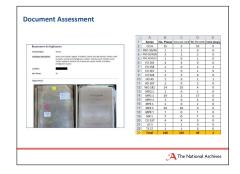
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We have now approximately 2.5 FTE permanently employed to manage the commercial arm of our conservation services, and up to 10 project conservators working on several digitisation projects simultaneously. All project conservators are externally funded and work on full cost recovery, allowing us to scale our team according to demand. The costs for permanent staff working on digitisation projects are offset against profits we make from our licensing agreements, and according to demand we can employ this resource for any function of Collection Care.



We run a separate studio close to the scanning teams, and all the management of both team and projects are consolidated under one Senior Conservation Manager-Digitisation Services. This guarantees a unified approach, allowing digitisation conservation methodology to be refined and changed freely as appropriate. It also enables us to continually improve both conservation and recruitment processes to maximise efficiency and keep up with demand, and to be closer to the scanning teams to respond to queries and ensure implementation of the handling training all operators undergo before handling documents. It also allows for stronger relationships with scanning teams, and having dedicated conservators working alongside them means there is constant dialogue to deal with queries.

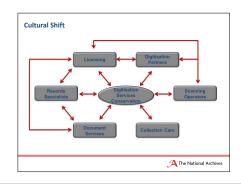


An initial assessment determines whether any conservation is needed. If so, a survey of every item is undertaken. This gives our partners and us a clear understanding of exactly how much and what treatment is required, and which pieces within the selection need any work before imaging. Each item is given a specific allocation of work-time so that we can predict the duration and cost of the conservation work. We have to get this as accurate as possible as we can't change our contractual agreements in hindsight. We keep treatments simple and typically only perform repairs, cleaning, consolidation and mould cleaning and any other process required where necessary. We don't undertake more interventive treatments as it's not necessary for the purpose, although we do store the collection information for future reference and potential further treatment beyond the purpose of digitisation, if appropriate.



The survey information allows us to co-ordinate with the imaging team to fit as seamlessly as possible into their workflow. It's important for the conservation team to fit into the wider project and not work in isolation. As the survey results tell us exactly how many and which documents require conservation, and how long each will take, we can manipulate the flow of documents to the camera team to meet their schedule. This is also important as space restrictions in the scanning area mean we can't order all documents at the same time and we have to be mindful that any reader may request any of these documents whilst we run the project, so it's important to minimise the time documents spend out of circulation.

Our processes are consistent, but flexible to meet differing demands of individual projects and partners, and we constantly refine them as we learn lessons or are faced with new challenges.



The work to create and maintain these partner relationships has been very successful: our partners' understanding of the importance and value of our work has noticeably improved, although some challenges remain due to the very specialist nature of our work. As with all collaborations, building these relationships is an on-going process, both internally and externally to ensure a constant and efficient workflow for effective delivery.



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