Collections without frontiers

How online collections can enhance the accessibility, enjoyment and interpretation of our global heritage
Until recently, to experience a museum or gallery collection you had to travel to the institution, visit the displays or request access to object stores. Today, thanks to technology, cultural organisations can share their wonders with a global audience.

Online collections have the power to engage visitors both inside and beyond the walls of an institution by improving accessibility and making better use of the wealth of knowledge that museums, archives and galleries possess.

People from around the world are now able to access information that was previously unattainable, through the click of a button. At the same time, within an institution, virtual reality and augmented reality, interactive guides and interpretive experiences bring collections to life as never before.

This white paper explores the experiences of museums, archives and galleries, and shows how online collections can enhance offline, physical collections.

We will discuss how adopting this holistic approach to physical and online collections will rely on collaboration, integrated systems and good collections data. We’ll also look at how a joined-up way of thinking can help organisations achieve some of their most important aims.
Introduction

In recent decades, there has been a paradigm shift in the role of the cultural organisation. This evolution has seen the transformation from the exclusive institutions of old to today’s inclusive, visitor-facing, experience-driven spaces.

When museums and galleries first emerged as private collections of wealthy individuals, families or organisations, the emphasis was on gathering and preserving art and rare artefacts. These objects were displayed in so-called “wonder rooms” or “cabinets of curiosities” for the privileged to view.

Even well into the 20th Century, there was a perception in some quarters that cultural collections were the preserve of the educated few who collected and studied objects of scientific, religious and historical importance.

However, today’s institutions reflect the needs and expectations of a changing world and they take their responsibility to the public seriously, promoting understanding, encouraging debate and reaching out to the wider community.

We’re now into the next phase of this evolution, as organisations look beyond the confines of their walls to share their collections online with people around the globe. Exhibitors and archivists are not only making their collections accessible to anyone, anytime, anywhere, they are helping their visitors to interpret these collections and experience them more vividly.

Heritage organisations of all types are now faced with new challenges that come with publishing their collections online, namely the ongoing process of digitisation, managing these digital assets and checking copyright and licensing. The role of the collections manager is evolving as digital collections gain the ability to raise an institution’s profile, increase awareness and deepen knowledge of the treasures they contain.

As the digital revolution gains pace, there are exciting new opportunities to engage both virtual and physical visitors with collections. Technology is not only helping to improve accessibility and way-finding, but also inspiring storytelling and interactivity through mobile guides, games and apps as well as in-gallery kiosks and touchscreens.

The time has come to harness the power of digital publishing to increase engagement in online collections, and enhance awareness and understanding of physical collections.
The digital revolution has transformed the way we live. It’s hard to imagine not being able to order our groceries, book a holiday or catch up with the headlines at the tap of a screen.

Yet for many people, museums and art galleries remain rooted in the physical world.

Of course, the thrill of viewing an iconic work of art, dinosaur skeleton or letter written by Samuel Pepys can never truly be replicated by viewing an image on-screen. But online collections aren’t intended to replace physical collections, they enhance them by opening up treasures on a much wider scale, enriching knowledge and uncovering objects which would otherwise remain unseen.

Fiona Bourne, Archives Operational Manager at the Royal College of Nursing (RCN), believes there’s a role for both online and physical collections:

"Many people find our online archives enormously useful for a variety of reasons from study needs to historical interest. And, when they come in and see original documents, badges and belt buckles for themselves, people enjoy handling the objects, it gives them a real sense of wonder."

New technologies allow the Enlightenment ideal to be given a quite new reality. It should be possible to make the collection accessible, explorable and enjoyable, not just for those who visit, but to everybody with a computer or a mobile device. It can become the private collection of the whole world.

Towards 2020 - The British Museum Strategy
Reaching new audiences

In the digital age, collections managers have an unparalleled opportunity to share objects of historical, cultural and scientific significance with a much wider audience than ever before, reaching people who have never entered their buildings.

This presents new possibilities for institutions to fulfil their public service remit on a global scale.

The potential to broaden horizons in education is endless. Students in Brazil working on a computing project can now study Charles Babbage’s pioneering calculating machine which is held at the Science Museum in London. And an art teacher in Australia can tap into inspiration from the Metropolitan Museum of Art’s vast array of digital masterpieces.

“A real boon about having our material digitised is having someone on the other side of the world seeing it from the comfort of their own home, without having to travel,” says Hannah Lowery, Archivist and Special Collections Manager from the University of Bristol Library Special Collections.

Online collections open up new avenues for the amateur enthusiast too. The Google Arts and Culture project brings together content from over 1,200 museums and archives in a storytelling format, allowing users to explore collections, immerse themselves in the stories behind them and build their own virtual collections.

By reaching people on their digital device or smartphone, institutions can interact with new audiences who may never have thought of themselves as museum visitors or archive researchers. Publishing a collection online extends the reach of the physical objects, documents and artefacts it contains.
Objects Tell Stories

New-York Historical Society completed a major renovation of their ‘open storage’ gallery. To address the challenge of identifying, interpreting, and creating context and meaning for over 450 objects displayed across two gallery spaces, the museum installed 16 interactive touchscreen experiences featuring 650 pages of interactive content. Multimedia interpretation included 1,500 collection images, +60 videos and animations, and 3D scans of more than a dozen key collection objects.

The guiding principal behind the interpretation - ‘Objects tell stories’ – was brought to life through layered storytelling that appealed to both history buffs and casual visitors, tech savvy and novice alike.

Gallery technology like this offers a unique opportunity to not only share deeper histories and connective threads across the collection, but also help visitors navigate what would otherwise be an overwhelming curio cabinet.

Collections are constantly evolving, so the museum’s staff is able to easily update content in the interactive as objects go on loan, rotate in the display, or have new interpretation available to visitors.

Raising profiles

Publishing a collection online does not mean people no longer need to visit the physical building. Indeed, by sharing collections digitally, you are likely to encourage more people to pay a visit and get closer to the custodian of those collections.

Online publishing is a powerful way to build awareness of an offline, physical collection.

With a growing number of hits on their social channels and websites in recent years, it’s not surprising that around half (49%) of museums have seen a boost in the number of people visiting the institution itself, according to a survey of museum professionals published by Axiell in 2016. Only 12% of all survey respondents said visitor numbers had either declined or remained stagnant. While not all museums are active on social media, this still suggests the blend of online, social and in-person interaction is driving effective engagement.

Revealing hidden gems

Most cultural spaces are packed to the rafters with items that they don’t have space to exhibit. Lack of physical space is an enduring issue for institutions, whether they are located in the heart of a major city, the centre of town, or a lodge in the grounds of a stately home.

Even with a dynamic, regularly updated programme of exhibitions, there are often large volumes of objects tucked away in stores as there is no room to keep them on display.

Online collections open up a whole new realm of possibilities by freeing institutions from the restrictions of the buildings that house them. With an estimated 90% of objects held in stores at any one time, digitising collections gives these objects a new life while they wait in the wings to be displayed.
Smaller collections, in particular, may see their online presence as a way of reminding people that they are there. Putting aspects of their collections online provides a taste of the overall visitor experience they offer.

Coupled with social media, an institution’s digital identity can help to increase exposure to a hitherto untapped audience which in turn creates new curiosity and raises the profile of its collections.

When the Museum of English Rural Life (MERL) in Reading posted a picture of a well-upholstered sheep on Twitter, the tweet went viral, attracting the attention of tech entrepreneur Elon Musk, and catapulting the museum into new-found fame. According to the MERL, their efforts on social media have led to thousands of new visitors to the museum.

It is hard to imagine exactly how the far-reaching changes of the past 30 years will play out in the coming decades. But as emerging technology continues to impact on the world around us, cultural organisations will seize new opportunities to present their collections in innovative ways, and to capture new audiences.

Online collections are central to the new era of audience engagement, whether that audience is on the other side of the earth, or walking through the rooms of your gallery.

A virtual extension

The Albright-Knox Gallery in Buffalo, USA, houses a renowned collection of modern and contemporary art, and has achieved something many leading institutions struggle with, the extension of the physical space, online.

The gallery launched a website to complement its gallery spaces, enabling visitors to navigate the collection online, find related works and download information and content from the site.

By linking to its main IT systems, the gallery gave website visitors access to high-resolution images of its artworks, along with concise descriptions.

In the six months following the launch, there was a 136% rise in visitors to the Search the Collection landing page, compared to the previous six months, and visitors to the artwork pages increased by a massive 326%.
Engaging visitors outside the walls

The heritage world is accustomed to adapting and re-shaping its collections and finding new ways to present these collections to its public. And as digital collections become more widespread, institutions need to think carefully about how they are engaging with their virtual audiences.

While you can easily observe the way your physical visitors navigate the space and interact with displays, understanding how a purely online audience engages with a collection can be more of a challenge.

The virtual audience

Publishing a digital collection is only the first step in reaching an online audience. Making a collection widely accessible is the next step, but to engage people online, you have to put the audience at the centre of the collection. Critical to this is knowing who the audience is, and understanding their needs.

Fiona Bourne, Archives Operational Manager, from the RCN says it’s important to consider the audience perspective when creating an online collection:

“Our digital archive contains records of information ranging from professional best practice, historical documentation and interviews with nurses.”

“A lot of the people who search the archives are members of the RCN, but our other online visitors can range from members of the public looking for basic information right through to PhD students wanting in-depth information.”

“We still get a lot of people wanting to come in and search the record, but our digital archive is increasingly helping us satisfy the needs of visitors of all types, saving us time and answering their questions more efficiently.”

Sharing knowledge far and wide

The Royal Ballet School in London plays an important role in nurturing the next generation of ballet performers and teachers and, as with any art form, an understanding of the history is vital. However, a change in access legislation meant it was difficult for people to visit the school’s special collections.

So the school created an easy to explore, interactive timeline, providing a resource that places items from the collection within their proper historical context. Content such as student and staff records, performance notes, programmes and posters were digitised and uploaded onto the collections database, and curated online.

In the 10 months following the February 2017 launch of the timeline, there were 3,500 visitors, massively broadening the Royal Ballet School’s reach, with visitors coming from as far afield as Japan and Australia.
Access all areas

So, how do virtual audiences find and access an online collection? Not all visitors will search an online collection from an organisation’s main website. Some will arrive via a Google search, or a mention on social media.

Hannah Lowery, Archivist and Special Collections Manager, from the University of Bristol Library Special Collections explains that their online visitors come through a range of channels:

“Our special collections staff write the content for our blog, and people will see that and decide to access our archives. We also put our major collections on the Archive Hub, and people come to us from that, or by doing a search on the National Register of Archives.”

As digital collections start to be shared in more places, the awareness of these collections grows, with people coming across collections they didn’t know about through a range of online channels.

“More and more of our collections and descriptions are going online all the time,” says Hannah. “So people are becoming more aware of what we have in our descriptions than they would be from the old paper lists. We might add something to our Isambard Kingdom Brunel online catalogue, for example, and quite soon afterwards, we receive requests to see it by enthusiasts around the world who would not have known about us before our archives went online.”

New horizons

One of the key benefits of publishing a collection digitally is that you can attract entirely new audiences by actively reaching out to people who had no previous knowledge of the collection. These online audiences may never otherwise have found their way to your museum, archive or institution.

There is also plenty of scope to actively reach out to new online audiences, as Hannah Lowery explains, “Last year, one of our archives, the Feminist Archive South ran a series of workshops to celebrate 100 years since some women gained the vote.”

“It really helped the researchers to have access to our catalogues online so they could hone into which aspects of the collection would be best to use. Content from our collection was toured around the country and the levels of outreach to young people was amazing.”

Deeper engagement

In the earliest days of digital technology, the emphasis was on the quantity of digital material rather than the quality of presentation. As time moved on, institutions have become more selective about which aspects of a collection should be digitised, and more thought is given to the way users explore online collections.

For example, curators are no longer limited to the space on a label next to the physical object. They are now free to provide different levels of interpretation according to the needs and preference of the audience.

Websites and online platforms also give organisations different ways of presenting collections to suit how various audiences engage with information and content.

This is illustrated by the ‘Explore’ section of the National Museums Scotland (NMS) website. NMS allows audiences to search for high resolution images of the collection, and provides stories, films and games, which are all searchable by type, theme and subject.

The site offers audiences a way to engage with the collection in whichever way suits them best.

An online collection can include less detailed, simplified narratives, for the visitors who are only engaging with an item for a short time. Researchers and academics who seek more informed descriptions are able to drill down into deeper layers of content according to their interest.

The consensus among leading online collections professionals is that it’s important to meet your audience where they are. This means not only being online because your audience is online, but also connecting with audiences in a way that suits them.

Organisations which embrace this ethos are more likely to succeed. The MERL’s social media success was largely down to speaking the language of its audiences on social media. They were witty, funny and topical. They embraced meme culture and masterfully used the twitter thread to tell gripping narratives based around collection items.

The beauty of digital technology is that it gives institutions the opportunity to allow online visitors to forge their own path through a collection, and to easily explore those aspects most relevant to their interests.
Engaging visitors within the walls

With a wealth of objects and artefacts all around, some may question whether museums and galleries really need additional technology to engage the visitors who have walked through their doors.

But technology has an important role in showcasing a physical collection. The distinction between the digital and physical is increasingly blurred as technology becomes more embedded in our built environment. Indeed, the digital collection can deepen a visitor’s understanding and interpretation of the physical objects they are viewing.

Technologies such as augmented reality (AR) and virtual reality (VR) and mobile apps are becoming more widespread, and their potential to enhance the visitor experience of a physical collection is making itself known.

Learning transformed

This blend of the physical and digital is already having an impact on one of the cultural organisation’s traditional roles, as a force for good in education.

The next generation of learners are preparing for a different world of work which demands the ability to navigate massive amounts of information and think critically about the world around them. Cultural organisations offer experiential learning opportunities and are uniquely equipped to support schools and enhance curriculum through immersive, multi-media storytelling, multi-faceted interpretation of history, art & culture, and a facilitated dialogue to truly develop their critical thinking skills.

Dull school trips are a thing of the past. Through technology, they are being enhanced with a more immersive style of field trip in which students are increasingly absorbed in the period of history or scientific experiment they are studying.

Interactive experiences support this approach by bringing learning to life. It’s a technique that’s being used in an exciting exhibit at the National Museum of Finland, where people can ‘step into’ a painting from the year 1863. Visitors find themselves within the scene of the painting, and they can look around at the Hall of Mirrors from a 3D perspective. Visitors can even speak with the Russian Emperor and other characters depicted in the painting.
Storytelling

Seeing an exhibit and reading the label is only part of the experience. A key element of bringing a collection to life is in the storytelling. Technology takes storytelling a step farther by offering visitors multi-media content, non-linear pathways, and the chance to self-guide their experience based on their interests.

While audio-guides have been the standard technology offering for decades, the advent of smartphones has opened up a world of possibility for visitors from way-finding & discovery to interactivity to extending the experience at home.

Most critically, mobile apps have provided choice - tech savvy users can engage with more features, while traditional audiences can opt to just listen to audio the old fashioned way.

Not just for selfies

The Kimbell Art Museum wanted to attract, educate and engage teenagers by creating a mobile experience targeted specifically to teens. This meant not only creating content that gave the right balance of fun and information, but also aligning the app with how teenagers use their smartphones in their everyday lives.

For example the Kimbell Teen Art Scope asks users to respond to prompts about artworks using a language they’re familiar with: emojis. Once they submit their responses, they can see the trending responses of other users!

Young visitors can also tap on animated touchpoints to learn more about the artwork in a multi-media pop-up, which provides bite-sized interpretive nuggets about the works they are viewing.

The app’s Challenges section features a teen friendly scavenger hunt with different types of clues including multiple choice, free response, check-in and photo challenges. Each challenge provides an interactive learning opportunity that can be saved on the visitor’s phone, shared on social media or reset to play again.

When the museum interviewed teenage visitors, the feedback was overwhelmingly positive.

Personalised experience

Each visitor to a museum, gallery or institution will have their own areas of interest, and while some people spend a long time contemplating a small number of objects, others move more quickly through the display spaces.

Digital techniques can now allow each visitor to plan their own unique journey through a collection.

Artificial Intelligence (AI) and machine learning is being used in many public spaces such as retail outlets, airports and entertainment venues to track the way people move through them and monitor the effect of changing shop displays or queuing systems.

There is exciting potential to use AI and machine learning technology to gain greater insight into how your visitors move around the spaces and absorb the displays. This approach has been adopted by the Cleveland Museum of Art in their innovative ArtLens Gallery.

Visitors use the ArtLens app to save the artworks they learn about during their visit, and they can also map their visit throughout the space using the app’s responsive wayfinding technology. So if a visitor has a number of favourite pieces, it’s easy to navigate through the galleries to find them.

In addition, the ArtLens Wall, an interactive multitouch wall, provides a digital visualisation of the collection and allows visitors to browse all artworks currently on view as well as some that are off view. If something catches the visitor’s eye, they can touch the artwork on the wall and find out what it is and where it is in the building.

Initiatives like these demonstrate the power that online collections have to enrich the experience of the visitor within the walls of an institution.

Taking a holistic approach to collections across platforms allows teams to create narratives that work both digitally and in-gallery. However, this is dependent on having tools that allow metadata, item descriptions and narratives to be pulled from the CMS to online tools and digital displays.
How to prepare for the online collection

Technological progress has no start and end date, it is a constant process of development, evaluation and old-fashioned trial and error. It takes time, funding and expertise to embed technology through the fabric of an organisation or a building, particularly one that has been around for decades or even centuries.

Sharing collections online with a global audience is no small undertaking, but there are some key steps institutions can take to move towards building new technology into a collection.

1. **Set out clear objectives**

The role of technology will vary according to the size and nature of the institution. It is worth considering what your key objective is when publishing a collection online. For some organisations, the aim might be to increase physical visitor numbers by 10%, for instance. For others it could be to share scientific knowledge with the international academic community, or to create interactive guides for group tours.

Once the objectives are decided, you can determine what needs to be digitised, which systems to use and what level of metadata to pull through.

For Hannah Lowery, the objective was to raise awareness of the University of Bristol’s special collections. “We have around five kilometres of material, from archives to objects and books. We thought long and hard about what to put online and not all our collections are digitised, partly due to resources and copyright restrictions.”

“However, it was a priority to get all our paper lists online to give people around the world an idea of the extent of our special collections.”

2. **Collaborate with other institutions**

Collections institutions can gain a lot from knowledge sharing and collaborating. While one organisation may be making great strides in reaching off-site visitors with its collections, another might be taking an innovative approach to working with schools on immersive experiences for students.

Pete Herbst, Developer at the Field Museum in Chicago, recommends taking a collaborative approach to building an online collection.

“Generally speaking, museums tend to have limited resources. People are always looking for solutions that are common across institutions that we can share and work on together. For example, we can share best practice and ask systems providers to give us common solutions that can be used by multiple museums.”

“Individually, we don’t have the time or resources to move as quickly as we would like. Together we can all work better towards creating effective online collections.”

Creating a digital presence takes time, thought and planning, and you can benefit from sharing expertise and working with other organisations to embrace the digital world. This can be particularly beneficial when working with a limited budget.
In the case of the MERL Twitter success, it was a spark of genius that generated widespread interest on social media. But a lot of planning, training and collaboration had led to that moment.

3. **Ensure good quality data and media**

Digitisation is an important part of preserving the knowledge stored within collections. However, it’s important to consider the technology that’s being entrusted with this task. For instance, many photographs taken on standard cameras ten years ago would not work well on a high definition screen now.

It’s not possible to completely future-proof the process, but institutions can think ahead by making sure their records are clear, their data is well maintained and media are available in relevant formats. If you invest time in cleaning data and refining your cataloguing it will be easier to upgrade to new technology and systems when they become available.

It’s important to follow industry standards when selecting providers and to use recommended formats to avoid loss of data, and ensure media does not become unusable over time.

Fiona Bourne from the RCN explains that a lot of background work goes into digitising collections. “We are digitising all our publications, member bulletins, staff bulletins and guidelines, and we need to make sure people can access them via their mobile devices. People nowadays expect to have instant access to things on their phones and our systems have to allow for that.”

The team at NOMA can view these answers and iterate questions overtime based on these responses. And, the museum is able to build their newsletter list by simultaneously prompting the visitor to submit their email along with their response.

All digital labels (and NOMA’s mobile guide) track metrics to understand what content, stories and interactivity is most engaged with by their audiences - whether they are skimming through the galleries or are diving deep.

4. **Use systems that talk to each other**

Many institutions will have been using collections management systems for a number of years, and they may also have invested in digital asset management systems, or solutions for their born digital content.

Creating an online collection as well as mobile apps and in-gallery interactives are much more effective if all these systems integrate smoothly with one another.

By pulling data directly from your collections management system into an online collection, the background, metadata and story behind an object is already there and ready to be used without the need to re-enter information. For exhibit interactives featuring the collection, the collections management system becomes the central archive of all this crafted content and helps support the ‘create once, publish everywhere’ philosophy that is critical for scalable, sustainable technology in the coming decades.

Membership and ticketing software can also provide a wealth of data to use to personalise the visitor experience and better serve your audience. However, when collecting visitor data, it’s essential to check for compliance with data protection regulations, for instance the privacy notice should clearly articulate what the organisation will be doing with personal data, and ask for consent.

Much of the groundwork that institutions do now to make their collections accessible to their virtual and physical communities will shape the way they evolve in the years to come.
Conclusion

Collections organisations have always worked hard to preserve treasures for future generations, and our future will be largely digital. There are new, yet realistic opportunities to break down barriers and reach new audiences. Publishing collections online opens up the physical stores and releases objects into the world for all to see.

The art lover who can no longer travel, the researcher with an impossible schedule and the housebound history enthusiast can all explore the wealth of collections from the comfort of their studio, laboratory or home.

But it is by no means the end of the bricks and mortar institution. Online collections combined with emerging technology can transform a visit to a physical collection into a personalised storytelling adventure. Visitors can dig deeper into the narratives behind a favourite work of art, and children can uncover exciting facts and figures about the creature on display in front of them on their smartphones.

Online collections not only disseminate information about art, science and culture, they invite everyone to share in it by engaging audiences and allowing them to travel through collections at the pace and direction that suits them best.

Publishing an online collection is not an end goal, it’s an ongoing process, in the same way as managing a physical collection within the walls of a building. The online and offline are inextricably linked. By setting clear objectives and ensuring their IT systems work smoothly together, organisations can make the most of the wealth of knowledge they look after.

When a collection is published online, it has the effect of enhancing the physical collection behind it, expanding the knowledge and understanding of the items it contains.

As collections institutions continue to innovate through online publishing and digital techniques, more people will be able to enjoy, understand and appreciate the wonders of both online and physical collections.
Axiell provides software and services which help organisations to organise and share culture and knowledge with the world. Our solutions help our community of global customers to manage their collections, encourage reading, preserve cultural heritage, improve learning and increase engagement with the public.

Axiell is working in partnership with CultureConnect to create digital experiences and interactive exhibits for museums, cultural and tourism organisations.

If you’d like to hear more about Axiell and how we can help you increase engagement with your collections, please visit www.axiell.com/culture-connect

References
3. https://twitter.com/TheMERL
4. https://www.youtube.com/watch?v=YPUG_5VgtUQ
5. https://www.nms.ac.uk/explore/
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