CHAPTER ONE - DIGITISATION

UNESCO defines digitisation as “the creation of digital objects from physical, analogue originals by means of a scanner, camera or other electronic device. It is undertaken as part of a process that includes: selection, assessment, including of needs, prioritisation, preparation of originals for digitisation, metadata collection and creation, digitisation and creation of data collections, submission of digital resources to delivery systems and repositories. This process is accompanied along the way by management, including intellectual property rights management and quality control, and evaluation at the end” (Manžuch, 2017, p. 2)

In this post-pandemic world, digitisation has never been more critical than now. Digitisation can provide faster access to information, increase productivity and improve customer experience; during the global lockdown, digitisation was used as a tool to connect with people when doing so physically was not possible. In all aspects of life, embracing the digital age is integral for survival. An organisation must be online to maintain the reach it will have. Customers like to get information about where they are going before going. Have you ever looked up a restaurant & menu before going, to plan what you would order?

Regarding the cultural sector, this shift brings with it much potential. Digitisation can be a short-term solution in the absence of repatriation; it can diversify researchers and become a resource for students; there are many benefits to digitisation in cultural organisations. Identifying a reason to digitise makes the outcome more beneficial to the organisation and the users. If an institute can identify an excellent reason to digitise, it is easier to decide which collection to start with, and it helps with funding the project. There are lots of reasons to digitise, firstly, security. The institute has a digital record if an artefact is lost or damaged; the digital version can be used as a reference for conservators or to determine the object’s authenticity. It also provides the opportunity to truly preserve, protect, restore and share with the public and future generations. When an artefact disappears, the digital version of it can still be viewed, and the history is not lost, even if the artefact is. When we look at the mission statements and values of the museums and libraries in Ireland, those keywords always appear but, for many, still need to include a digital element. It might not have been a priority, or funding or the right expertise may be needed. However, we must realise now that digitisation is the absolute way to protect our history and engage with the public. Digitisation preserves artefacts even if the physical material disappears in the future. It enables access to the archive without needing physical contact, minimising further damage. Initiatives such as the Endangered Archive Programme (EAP) were established for this very reason; it funds digitisation projects where the artefacts are at risk of disappearing due to damage. Access to these archives is essential to ensure knowledge and memory, which is necessary for the success of these initiatives. “If this is the memory of the world, the world needs to be able to access it” (Supple, 2015) . Open access is an essential part of the success of digitisation; the EAP requires all funded archives to have open access, and groups such as the Budapest Open Access Initiative (BOAI) champion open access across all cultural organisations. This chapter will examine the EAP and the BOAI later on.

There is some pushback against digitisation, a worry amongst some academics that digitisation in museums will threaten classical scholarship and 'dumb down' displays in favour of 'edutainment' (Newell, 2012). A term given to something intended to be enjoyable and educational. This opinion is aimed at keeping out the 'uneducated' and perpetuates snobbery and the elitist exclusion of the everyday person from cultural institutions and national collections. Other arguments against digitisation include diverted funds. There is a worry that putting money into scanning, photography, and subscriptions will take money away from acquisition and conservation, not to mention the cost of keeping up with ever-changing technologies. Scholars are "overly suspicious of digital technologies despite how much there is to gain" (Turnbull, 2000) . Instead of putting digitisation and conservation into two separate categories, they should be seen to complement each other. They are both tools used to accomplish the same goal, the preservation of artefacts.

The Endangered Archive Programme

The Endangered Archive Programme (EAP) is an initiative that Arcadia established; it is a charitable fund of Lisbet Rausing and Peter Baldwin to facilitate the digitisation of archives around the world, specifically for archives at risk of deterioration, neglect or natural disasters. Based in the British Library, it is run by a panel of international experts that award grants to specific proposals. Since 2004, the EAP has digitised over ten million images and 35,000 audio tracks in over 90 countries (Library, n.d.). The aim is to preserve these collections and make them accessible online to the general public. Programmes like this are essential to further our understanding of different regions' social, political and economic history, and it is this accessibility that accommodates furthering our understanding. It provides students access to materials without restrictions through the various cultural institution's websites and the EAP website. At first, the EAP did not anticipate supporting the physical restoration of material. However, as the panel received more and more applications worldwide, separating between protecting by copying and protecting through new storage methods and physical maintenance became difficult. The initiative developed its approach as the panel learned of different archival issues they might have yet to encounter. The EAP assists in preserving artefacts as it should be done; the archive still belongs to the owner but is shared with a global audience, and the collection does not leave the country of origin to be digitised. Museums have a problematic past of stealing artefacts from all over the world under the guise of preservation. The EAP is decolonising the archive through this approach, which is extremely important in any digitisation project.

The EAP promotes written traditions worldwide and reorientates the writing of under-studied cultures. Digitising artefacts from regions like South Asia or Central America gives agency to these cultures in how they are studied, not from an outsider's or colonial perspective but a first-hand account from the members of that culture. This digitisation initiative highlighted the role of women in many cultures that have remained unknown, for example, the building of Early Accra (bEA) and the collection of architectural and administrative records from as early as 1894, which pre-dates the formation of Ghana. Many of the planning permissions applications were submitted by women in order to build their own houses. This furthers our understanding of the role of women and the status of women in Accra. The digitisation of these types of artefacts and records can unveil

an often minimised role of women in society; history told the wrong way or history that has been lost (Manful, 2022) .

The Northern Hemisphere holds a disproportionate amount of the world's museum collections due to colonial expansion throughout history. However, digitisation can be a short-term solution to this inequitable distribution while working towards repatriating stolen artefacts, making these collections available to researchers from their country of origin. Diversifying researchers through 'bioinformatic portals' allows the researcher to simultaneously access collections from around the world without being physically located at a particular museum. "2.6 million visits to GBIF from 1 January 2016 to 1 October 2017, four of the top ten countries with the greatest visitor ship came from mega-diverse countries in the Global South (India, Brazil, Mexico and Colombia)" (Correspondences, 2017). As touched on briefly earlier, this is highly problematic within museums. Digitisation not only makes collections accessible to countries that have had their artefacts stolen but also, through generating awareness of these artefacts, can lead to the repatriation of these objects. Slowly objects are being returned to their countries of origin; for example, a Mummy and Sarcophagus have been returned to Egypt from UCC. Also, in January 2023, the British Museum is in preliminary discussions with the Greek government about the Parthenon marble, which has been a highly controversial topic for over 200 years. Although the repatriation of these antiquities seems very far off, if it happens at all, it could start a movement where the physical artefact is returned to its rightful place. The people can engage with the physical artefact from their own culture, in their own countries and in, for example, Europe, the digital archive will be available if travelling is not possible.

The study of culture can be pretty linear and nationalistic, but a digital research approach can encourage thinking and history-telling from various vantage points (Newell, 2012). In the materials that the EAP is helping to digitise, there is potential to make it broader across regions and show the shared history between countries. The EAP can provide contextual information and details. Many of the manuscripts that have been digitised include annotations and fingerprints; from this, we can form a better picture of the reading culture at the time.

One of these digitised archives is the 'Dirgha Man Collection of photographs (the Late 1800s - Mid-1940s) Ganesh (Mid-1940s – Early 1950s)'. This collection contains 1800 glass slides and 4000 acetate negatives taken by Dirgha Man, a court photographer, and then his son Ganesh who took over the post. In 2015 the collection was digitised and moved to archival storage. Dirgha Man had access to a camera at a time when only courts and a few elites did. This allowed him to document local life, official events and state visits. Ganesh Man Chitrakar took the first aerial photograph of the Kathmandu Valley and was the first to develop colour slides in the country. His images have been used to record lost, and stolen artefacts from temples are Kathmandu. This is an excellent example of why documenting and digitising artefacts is so important; it helps identify artefacts. Many items have been repatriated to Nepal from museums, such as the British Museum and the Metropolitan Museum.

This archive was a fascinating insight into Nepal when the country was not open to visitors (pre-1950s) and a significant photographic record of Nepal's history that otherwise might be lost or

damaged. The collection condition was not ideal; the glass slides were in wooden or cardboard boxes, and the acetates negatives were in paper envelopes. Some emulsions had detached from the glass slides, and some were broken and held together with tape. Some acetate negatives were stuck together due to the high temperature and humidity. The primary motivation behind digitising these images was to preserve the collection for future generations.

The collection was organised and catalogued, then exhibited and developed into a book, and the archive is available to researchers.

Roy Rosenzweig from Columbia University advocates for democratic participation in the practice of history (Newell, 2012) . He sees digitisation as a flexible tool to discover historical connections and links. This flexibility gives new insight into the identity and meaning of artefacts. Digitisation allows for better searchability and brings together multiple types of resources from around the world. This makes historical research far less costly, time-wise and financially, without trips to various archives. Cross-institution research can be performed in front of a computer screen, from Columbia University to Cambridge University, through the Reciprocal Research Network. They allow students to compare materials from different collections.

The Prioritisation Process

When starting a digitisation project, the first step is to examine the collection. Ranking and prioritisation are essential when tackling a vast collection project, whether for an emergency management plan, cataloguing an archive or digitising a collection. The Reviewing Significance model was developed by Caroline Reed and a team of curators from University College London's Museum and Collections. Reed updated this model in 2010, Reviewing Significance 2.0, and it has been updated further to Reviewing Significance 3.0 in 2018 (Reed, 2018) . This latest edition includes applications to archives and libraries.

The model uses two processes, collection review and significance review. The collection review assesses the physical standard of the collection. Concerning the Pat Sweeney Collection, this evaluated whether the negatives or glass slides are scratched, faded or damaged and whether the current standard of care and maintenance is sufficient. This method provided a quick overview of the physical health of the collection.

The next step is to assess the collection's significance; this deepens the understanding of the collection and its place within a cultural organisation. The collection is divided into groups or bundles with a common theme. For example, in terms of the Sweeney Collection, the negatives will be divided based on the types of ships. Experts will be invited to the National Maritime Museum of Ireland (NMM) to assist with this aspect. Many of the volunteers at the NMM are retired from maritime careers and have a wealth of first-hand knowledge. Over several weeks, they will advise and overlook the process. This approach gives structure to the project and prioritises the collection for digitisation, making the task more manageable. It is unrealistic and unnecessary to digitise every negative in the collection. These decisions allowed us to separate the best material

for the museum's digital archive, display, or future ideas, making it more beneficial to the museum and its prospective users.

Through these processes, the project appeared more manageable. It provided a better understanding of the collection's historical and cultural significance, which is essential when addressing a board for funding, identifying target audiences and creating resources for visitors at the NMM.

Netherlands Cultural Heritage Agency

The Cultural Heritage Agency (RCE) is the centre of expertise for heritage; it is an executive body of the Ministry of Education, Culture and Science (Cultural Heritage Agency of the Netherlands, n.d.). The agency has divided its approach into three key elements, practical expertise, scientific knowledge and government policy. Each of these elements informs the other; practical advice is based on scientific knowledge and contributes to the development of policies.

The Netherlands Cultural Heritage Agency developed its framework for assessing collections, and it can be used when starting a digitisation project. Fig 1. Shows the collection management triangle, an easy-to-follow diagram used as a criterion for valuing a collection. It is divided into use, preservation and development. Use of the collections covers things such as exhibiting and lending, etc. And examining the objects for presentation or publication purposes. Preservation covers the conservation, cataloguing and storage conditions of the collection. Development covers acquisition and research, for example, donation of artefacts or further research carried out on artefacts already in a collection.

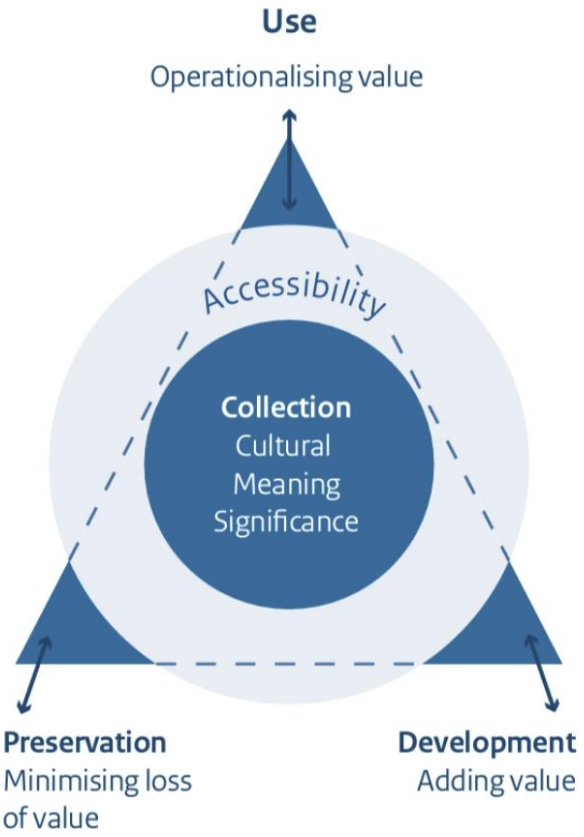

Figure 1 The Collection Management Triangle (NETHERLANDS, 2014, P. 7)

This is a great way to assess how significant or valuable the collection is; the value given to a collection will dictate whether it is put on permanent display, whether time will be put into the preservation of the collection or if new research has given a collection more value. This is an essential process for any museum and can be applied when planning or preparing for a digitisation project.

The six-step valuation process has been improved in many ways, one of which is that it can now be applied to different types of collections, including maritime. The process can be used to identify potential. Since the NMM has yet to start digitising the Pat Sweeney Collection, this will be a fantastic framework to implement.

The Six Steps of Valuation

The first step is to identify the motivation for the valuation process. When starting the valuation aspect of a digitisation project, it is essential to identify the motivation. These motivations could be restoration or a temporary exhibit. The motivation will inform the process and the outcomes. The NMM's motivation is for a temporary exhibition and a digitised archive.

Step two is to decide what is going to be valued and what it is going to be compared to in the valuations. This reference framework will aid in identifying whether the collection being valued

is of high, medium or low value and whether it is of national, regional or local importance. In any project, it is vital to identify the stakeholders as well. The Pat Sweeney Collection will be valued; it is of regional importance as it is centred around Dublin Port. The stakeholders in this project are Dublin Port and the volunteers, of which many assisted with the funding application.

The third step is to decide the relevant criteria and define the framework. It is possible to use the criteria form provided by the RCE if a specific criterion has yet to be decided. A maritime historian with a wealth of knowledge on this will recommend the framework of this collection.

The fourth step is to assign value scores and support them with arguments. The RCE provide a valuation form for this. To give a value score, the object must fulfil the criteria chosen from step three, and there must be a clear reason as to why the object is a valuable addition to a collection.

The fifth step is to process the assessment; this can be done in several ways. A statement of significance, this is a report with all the findings from step four. It is a helpful tool when communicating with the stakeholders and explaining why and how these items were selected. A value ranking or grouping is another method of processing the assessment. This is suited for larger museums that have different sections. The items are ranked and can be organised into categories such as highlights, core collection etc. An investment plan can be used to process the assessment as well. This plan looks to the future of the collection and is an excellent tool in cases where funds are needed. This method highlights the development opportunities of a collection and how it can add value.

The final step is a decision or action; a decision or plan of action can be made using the valuation. It must be stated that the valuation can be changed or revisited. The value of a collection can change; the information gathered in a statement of significance has a limited validity; it can be useful at other times, but if more research is carried out on a collection, it might have to be valued again. This process fluidity of this process is extremely helpful and can be revisited easily.

Frameworks such as Reviewing Significance 3.0 and the RCE's Assessing Museum Collections will make the process more manageable for the NMM.

Heritage Research Hub

The Heritage Research Hub is a research community established and run by the Joint Programming Initiative on Cultural Heritage (JPICH). It provides an online forum where researchers can share and search for content such as news, funding or training opportunities. The Hub also collects and displays online resources on and for heritage research (Heritage Research Hub, n.d.) . This fantastic resource emphasises a sense of community within the cultural sector.

The Heritage Research Hub organised a project called DigiCONFLICT – Digital Heritage in Cultural Conflicts. The project examined the history of digitisation and its impact on how the citizens of countries (Poland, Sweden, and Israel are examples used) interact with their cultural past. It challenged the claim that digital heritage had the ability to be universal and democratising. Its aim was (Heritage Research Hub, 2018):

- To explore how national politics affects digital definitions of cultural heritage;

- To investigate who creates and engages with digital heritage and how;

- To study how the scope and value of cultural heritage are being negotiated and reformulated in a digital context.

The findings of this project were that digital literacy dictates the level of involvement of the owners of the collections. Although digitisation is a good thing, the skills needed limit who can practically be involved in the process. This digital literacy gap means people are blocked from the process and cannot influence the selection of what is being digitised. This is an issue when communities that need to digitise their historical collections are reliant on outsider stakeholders and cultural institutions. It leaves them open to exclusion in the digitisation process and the collection's significance being defined by someone else.

Institutional policies and legal protection of cultural heritage were also examined. There is much to improve in these aspects. Community heritage can sometimes be a means of targeting new audiences and boosting public engagement by cultural organisations instead of being an opportunity to highlight cultures and provide new material for researchers. Community contributions do not receive any legal protection, and because of this, the communities can be re-marginalised and excluded from mainstream discourse.

This is highly problematic; initiatives like the EAP try to remedy these issues by supporting training in the countries in which archives are being digitised; this means that the community is in complete control of the selection process and defining its significance and expertise in digitisation and cataloguing are developed and embedded in the local cultural institutions (Endangered Archives Programme, n.d.) . Any initiative that funds community heritage must try to do it as ethically as possible, especially because of museums' questionable acquisition practices around the world in the past.

The DigiCONFLICT project helped further the understanding of how we engage with and understand our shared cultural heritage and how digital methods can be a tool in creating inclusive societies.

Potential Limitations Of Digitisation

The effect of digitisation and the relationship between the actual item and the digital version is only now being assessed. Digitisation has transformed traditional museums and our understanding of indigenous culture and the past. However, there is a worry that increased digitisation could decrease access to the actual artefact and that only established researchers will have access to the original artefacts, leaving the digital version for students. This could set precedence with new researchers who will be more comfortable with digital copies than previous researchers, diminishing the connection with the tangible item. This could have negative repercussions on their understanding of the artefact. With all things, there are pros and cons. In some ways, digitisation can lead to limited access to physical artefacts in the name of preservation. However, in terms of

the EAP's work, it also highlights collections and archives that otherwise would not be accessible or even known by anyone on a larger scale.

Despite all of this, there are genuine significant limitations to digitised collections. Reliable internet is still an issue in many parts of the world, including parts of Ireland. Lastly, many of these projects are only maintained short-term due to once-off funding, as opposed to receiving a continuous stream of income and resources. This is a recurring issue; digitisation is an excellent development for the Arts, Culture and Heritage sector but should be recognised as an ongoing process, not a once-off event or singular action to be taken. If it is to be a resource people can revisit, it must be maintained and developed.

What Is Lost Through Digitisation?

Is there anything lost by digitisation? From a tangible point of view, potentially. As stated earlier, if digitisation blocks new researchers from the actual object, then there is a risk that they will be more comfortable with the digital version, therefore, losing that connection to a real-life item that was made to be used. Digitisation should not create hierarchies; it should democratise research and resources. The physical artefact must always be available to researchers.

In Rosalind Krauss' essay 'Photography's Discursive Spaces: Landscape/View', she discusses what is lost through reproduction. She compares a photograph of Tufa Domes, Pyramid Lake (Nevada) by Timothy O'Sullivan and a photolithograph reproduction published by King Survey. Krauss claims that by reproducing the image at a higher quality than the original, it loses its mystic and silent beauty. The Lithograph was banal, and all the details were clear, taking the wonder from the scene. There is something lost when looking at a digitised reproduction versus the actual artefact; there is no denying that. A digitised reproduction of Reflections of Clouds on the Water -Lily Pond by Monet is nice, but it will not inspire the same reaction as visiting the painting in the Museum of Modern Art in New York. The digitised version is removed from the tangible, and the wonder of the item is slightly removed. Seeing an actual object is still the best way to connect with it, reconnect us to our humanity and envision how it was used in the past or even how it was made. However, these two versions may be viewed as fulfilling two different purposes. Krauss separates the two images, O'Sullivan's image operates within an aesthetic discourse, and the lithograph belongs to the discourse of geology and was made for science (Krauss, 1982). It, therefore, needed to be grounded, coordinated and mapped. A manuscript from the Chester Beatty Library is a beautiful work of art created by someone centuries ago and used for religious purposes.

It is impressive, and one cannot help but wonder about the person who created it and their sincere faith or the conditions the manuscript was made under. The digitised version though still impressive, lacks that humanity; however, its purpose is research. Digitisation is not purposefully taking away the mysticism and humanity of artefacts but reproduces them for historical research. If the digitised version of an artefact is judged at the same standards as the actual artefact, something is lost, but if we look at it from a researcher's point of view, it is a valuable resource.

The Benefit Of Open Access

Currently, much potential research by students or enthusiasts is blocked behind expensive paywalls. Free sources are often unreliable, and sites such as Wikipedia are not adequate resources for academic essays. ‘Ironically, once scholarly publications have placed their contents online, it actually costs more to maintain the gates that lock out potential readers than it would to open these works to the world.’ (Rosenzweig, 2011) . Suppose digitisations open up archives and other material to the general public; in that case, there is more to be gained than lost, especially if the cost of maintaining paywalls is considered. Online resources are referenced four times more than offline sources (Rosenzweig, 2011). Naturally, open resources receive more traffic than those behind paywalls. Open access increases engagement, which improves the writer's or organisation’s recognition. There are some instances where open access is not appropriate, and that will be tackled later in the next section.

The Budapest Open Access Initiative (BOAI) is a statement of principles that champions open access to research material. This kind of access would push researchers’ papers in front of a much larger audience, it would highlight unknown or lesser-known research, and in terms of archives, it would highlight artefacts and stories that have remained unknown. ‘An old tradition and a new technology have converged to make possible an unprecedented public good’ (Budapest Open Access Initiative, 2002). Archives and research would have a more significant impact if they were readily available to everyone. Most importantly, these digital resources and collections would benefit the citizens. Digitisation and open access can broaden and democratise research, which is achievable in this digital age, and the benefits are too great to simply not.

The Ethics of Digitisation

As more and more cultural archives have been digitised, the question of ethics has been raised. Digitisation is a great thing and is hugely beneficial, but it is not without issues. This new professional practice has raised new ethical challenges, which cannot be considered separate from the planning of digitisation; tackling these issues is an aspect of it. This is a vast topic and still needs to be fully resolved; attitudes towards the ethics of digitisation are changing; some issues have practical solutions, and some still need to be solved.

With the rise in affordable and easy-to-use tools for digitisation, there has been an increasing number of digital community archives. These archives are maintained by individuals or by the community themselves. As stated earlier, these cultures have been represented by dominant societies in the past; digital archives have been utilised by minorities or formerly colonised countries to take control of their heritage, which has been commercialised and exploited.

The World Intellectual Property Organisation (WIPO) has advised indigenous communities to digitise their intangible heritage, such as songs and dances. In the past, this kind of intangible heritage has been recorded by people outside the communities it originates from. Therefore, its selection and curation can conflict with that community’s views. These digital community archives highlighted the inequality, prejudice and discrimination caused by the decisions of cultural institutions, many of which were influenced by power or politics. As these digital archives became

more common and attitudes towards them were changing, issues in digitisation became apparent (Manžuch, 2017, pp. 5-6).

- Selection and interpretation of the digitised heritage. Cultural institutions had biases and a 'Western approach' if the collection was overseas and not in the country of origin. This means that the communities were not involved in the selection process or the information given about the digitised archive. An outer body was still representing their culture.

- Application of metadata schemas that the 'western world' commonly uses to describe indigenous heritage. Cultural Institutes used metadata schemas to fit indigenous culture into a western worldview. The dominant power curated these digitised collections instead of the communities to which the culture belongs.

- Applying open access to every object in a digitised collection. Some items are restricted even within the culture it belongs. This can depend on age, gender etc. It is incredibly problematic and disrespectful to disregard this, digitise the sacred or secret object and make it publicly available to anyone. It neglects the community's beliefs and values as that heritage creators.

Displaying and digitising collections that belong to indigenous communities have to be done so for the benefit of the communities rather than the cultural institutions' engagement with visitors. This issue encourages cultural institutions to involve these communities in digitisation and development. A content management system, Mukurtu, addresses the issue of open access where it is inappropriate. It provides different levels of access to the archive, and different indigenous communities can add descriptions. This participatory archive gives different perspectives and dimensions to our understanding of these cultures.

When digitisation is carried out respectfully and ethically, it can be a wonderful tool to encourage engagement, highlight different cultures, diversify researchers and lead to the repatriation of the object. Initiatives such as EAP can facilitate ethical digitisation by providing training to improve digital literacy in the communities the archive belong to, keeping the archive in the country of origin and providing open access. This keeps the community at the centre of the process and allows them to represent themselves. The digitisation process is heavily guided; frameworks such as the Reviewing Significance 3.0 and the Netherlands Assessing Museum Collection make the task more manageable.