

Beyond the Physical: The Taoka Online Project – A Case Study

by

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(hereafter referred to as 'The MIS Research Project')

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Abstract

Research problem: The number of digitisation projects undertaken by museums are increasing. Understanding how digitisation projects are understood by the key stakeholders involved is important to the project's success. Using the Taoka Online Project as a case study this research aims to examine digitisation projects in New Zealand.

Methodology: This research uses a qualitative case study approach. Interviews were conducted with representatives from eight stakeholder groups involved in the Taoka Online Project and then analysed using grounded theory.

Results: This research found that digitisation is considered very important by those involved in a digitisation project. Accessibility was the main benefit of digitisation, while working with cultural objects was often mentioned as a challenge. Participants believed the Taoka Online Project was progressing well, but that the work involved in a digitisation project was often under-estimated.

Implications: Accessibility is considered a very important aspect of a modern museum's role. Digitisation ensures that the collection can be reached by a wider audience, therefore digitisation helps a museum fulfil a primary function. Working with cultural material, particularly taoka, gives some New Zealand museum professionals a sense of anxiety, meaning familiarising staff with cultural protocols is important so staff feel more comfortable. Though participants believed the Taoka Online Project was progressing well, there was a sense that participants believed the sheer amount of work involved is often under-estimated. Making sure to realistically plan out a digitisation project is key to its success.

Keywords: digitisation – tikanga – accessibility – museum – taoka – taonga

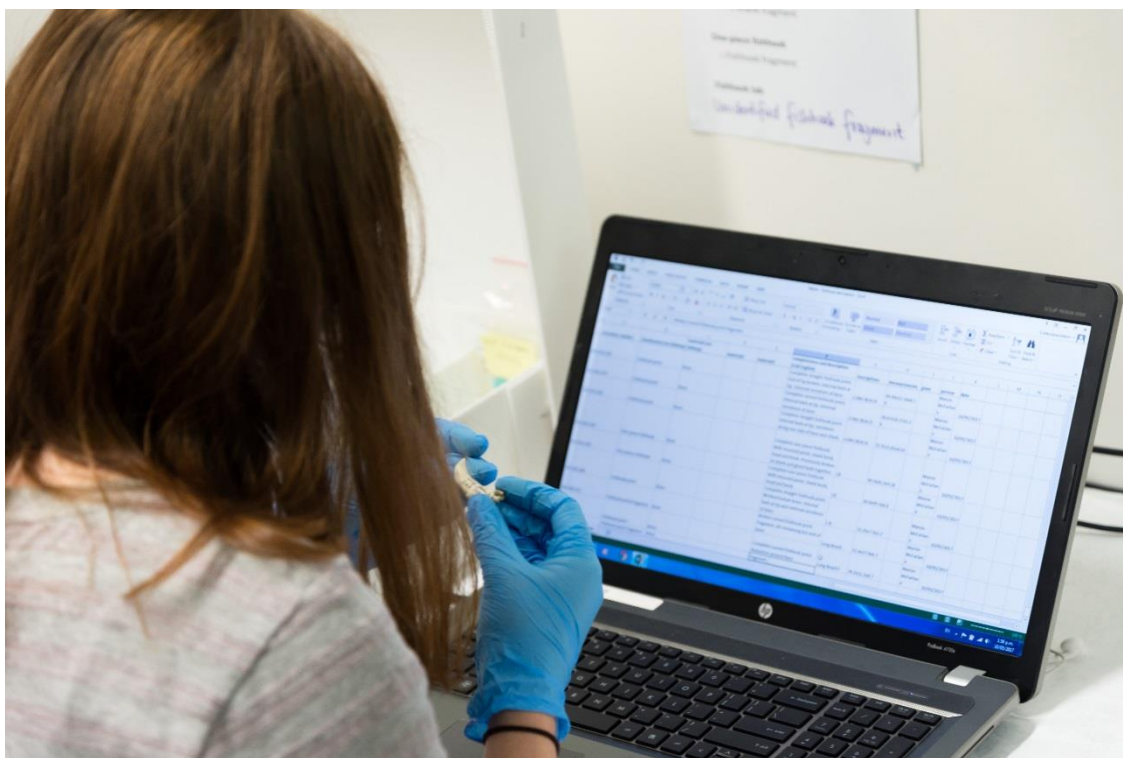


Figure 1: A volunteer describes a Kāi Tahu fishhook (photo credit: Kane Fleury © Otago Museum)

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I would like to thank my supervisor, Dr. Jennifer Campbell-Meier, for all her advice and encouragement throughout this process. I would also like thank all of my participants that made this research possible. Finally, I would like to thank all my friends and family that have patiently put up with me over the last three years while I completed this degree – I look forward to complaining about something else in the future!

1.0 Preface

Imagine the great wealth of knowledge, the overwhelming number of stories, and the tantalisingly close link to the past that objects in a museum offer. Even objects used daily - baskets, blades, or pieces of pottery - have the opportunity to contribute something amazing to our understanding of the past. But, as many museums are only able to display a small percentage of their collections in galleries or exhibitions, many of these stories remain unheard (Molineaux, 2014, p.123). Only the museum employee or interested researcher has access to these objects, and that is only if they know they exist. There are many of these everyday objects in the storerooms of museums across the world that deserve to have their stories known, that deserve to be reconnected with their culture; that deserve to be admired and researched as much as the archetypal objects on display. Digitisation cannot promise to solve all this, but it is a step in the right direction.

Step back in time 120 years ago to New Zealand's South Island. You are a hare trapper working your way across Central Otago's rough landscape. You discover a Māori flax kete (a woven basket) hidden there untouched and undisturbed for 150 years whose contents are in perfect condition. This kete and its contents eventually make their way to the Otago Museum, where it is now known as the Puketoi Station kete. Given this object's interesting story and well-documented history, it is not surprising that it has been the focus of much research. It has featured in magazines and research articles as one of those amazing discoveries that shapes what we know about how Māori lived 250 years ago (Steel, 2016; White, Smith, Te Kanawa, 2016). However, far less documented, but just as important, is the Lithics storeroom at the Otago Museum. This small storeroom houses roughly 5000 Kāi Tahu tōki (adzes), amongst thousands of other lithic objects such as gouges, blades, and chisels. A tōki can take up to 200 hours to make and these tōki are from different periods of Māori history and found in many locations across the South Island. While these tōki do not share the rare and unique history of the Puketoi Station kete, as a group they have an important story to tell about the history of New Zealand and the lives of early Māori. It is not feasible to physically display 5000 tōki, but with digitisation they, as well as the Puketoi Station kete, and countless other objects, are able to be accessed.

Their stories deserve to be found and shared. This is why digitisation is important, and this is what the Taoka Online Project seeks to achieve.

1.1 Introduction

Digitisation projects are important for cultural institutions throughout the world. Such projects are becoming increasingly common, with all the large, and quite a few small, museums in New Zealand having already digitised, or currently digitising, a portion of their collections. The Otago Museum began its own extensive digitisation project in April 2016, called the Taoka¹ Online Project, funded by a grant from the Lottery Environment and Heritage Fund (Otago Museum, 2015, p.14; Otago Museum, n.d., p.1).

The Otago Museum houses one of the largest collection of Kāi Tahu objects in the world, and this project aims to digitise 20,000 objects. This is an important collection, and while the Taoka Online Project has some formal documentation written by Otago Museum staff during planning, no other information has been captured so far during the project, except for quantitative data. The Taoka Online Project is the only digitisation project undertaken by a museum to focus exclusively on Kāi Tahu material, making it a unique research opportunity. The Taoka Online Project's plan was written in collaboration with the Otago Museum's Māori Advisory Committee (MAC) and Curator Māori, who gave considerable advice during the early stages of the project. While digitising the Māori taoka collection is the first goal of the project, the second goal is to engage with the community through outreach programs delivered by members of the Taoka Online team. These outreach programs will be offered to Māori community groups who wish to begin the process of digitising and preserving their own taoka collections. The Taoka Online Project has the goal of teaching local communities how to organise, care for, and digitise their collections without hugely expensive and specific equipment, instead focussing on how to make do with more easily obtained equipment.

Cultural institutions often have an interesting but sometimes problematic relationship with indigenous peoples. Ricardo Punzalan raises the issue that archives are a colonial construct, and this idea can be extrapolated to other cultural heritage institutions such as museums. He writes that despite the fact that archives are “undeniably a colonial creation, the presence of a national archives embodies the notion of a common and collective past that contributes to the formation of ‘national consciousness’ and consequently to the idea of nationhood of the Philippines” (Punzalan, 2007, p.389). He adds that “the conversion of the Spanish archives into the Philippine national archives, made possible through the efforts of the early American colonial administration, illustrates the close relationship of colonialism and nationhood with archives” (Punzalan, 2007, p.391). This relationship between colonialism and archives rings true to the situation of museums in New Zealand, which also has a strong colonial background, as museums “have become widely respected authorities that play

¹ This research uses the southern dialectical version of te reo, i.e. taoka vs taonga.

a significant role transmitting knowledge” (Brant, 2016, p.212). However, even if museums and archives are a construct of colonialism they still work towards creating a national consciousness through accumulating a common and collective past.

There is a gap in the literature surrounding digitisation in New Zealand. There are many articles on the more academic side of digitisation projects, looking at theories such as virtual reunification (Ngata, Ngata-Gibson, & Salmond, 2012), or experimental technologies (Brown, 2008), however, few articles seem to address the more practical aspects of digitisation projects. Though this case study will only focus on one institutional project, it may provide useful advice and ideas for other institutions looking to begin their own cultural digitisation initiative.

One aim of this research is to take a snapshot of the Taoka Online Project, which will provide a portrait of a unique digitisation initiative. In turn, this case study approach will provide an overview of progress, a chance to evaluate project protocol, and investigate the bigger picture surrounding the project. Secondly, this research aims to identify what key stakeholders involved in digitisation projects - such as museum professionals and volunteers - believe are the main issues and benefits of digitising taoka.

2.0 Research questions

1. What issues are important to stakeholders involved in a current digitisation initiative about the digitisation process?
2. What potential benefits are important to stakeholders involved in a current digitisation initiative about the digitisation process?
3. How is the Taoka Online Project progressing in relation to the original project outline?

3.0 Literature review

There has been a substantial amount of research done on the digitisation of indigenous cultures throughout the world, with a reasonable amount coming from New Zealand and focusing on digitising Māori culture. Research has been done on digitising many different cultures’ heritages, such as Native American (Crouch, 2010); Canadian First Nations (Brown & Nicholas, 2012; Brant, 2016); Aboriginal Australians (Janke, 2012); Pacific cultures (Singh, Blake & O’Donnell, 2013) indigenous Hawaiian material culture (Matsuda, 2015); and the Philippines’ Spanish colonial records (Punzalan, 2014).

Digitisation projects “focus on the means of selecting, collecting, transforming from analogue to digital, storage and organization of information in digital form and then making it available for searching, retrieval and processing via communication networks” (Singh, Blake, O’Donnell, 2013, p.78). Thus, digitisation initiatives are important for the future of cultural heritage institutions, as they increase access to collection items, encourage international research, and ensure an authentic record of the object is kept (Singh, Blake, O’Donnell, 2013, p.79). In 2005, Museums Aotearoa identified that to “invest in and develop digital technologies for use in museums” was one of ten current issues facing museums in New Zealand (Museums Aotearoa, 2005, p.13). Written over a decade ago, this strategy shows that New Zealand has long identified digitisation as a necessary part of a museum’s role.

From a cultural point of view, increasing access to cultural material can be a double-edged sword. On the one hand, increased access to cultural materials means more research, more education, and a renewed connection with objects that have been held in storage by museums for, in many cases, over a century. However, placing images and information about cultural objects online can also cross cultural boundaries, allowing inappropriate people to view objects that require specific cultural knowledge (Byrne, 2008, p.4, Hunter, Koopman & Sledge, 2003, qtd. in Stevenson & Callaghan, 2008, p.4; Lilley, 2016, p.121; Janke, 2005, p.97). Byrne explores this dilemma in an Australian context, examining the dichotomy between the Aboriginal and Western ideas on digitising Aboriginal cultural heritage. Byrne notes that there is an anxiety for some Western cultural heritage when it comes to digitising Aboriginal material because they are unsure of how to identify the appropriate cultural owners, or even unsure of if they need to. Even if the appropriate owners are identified, they may be unable to give permission (Byrne, 2008, p.4-5). It can challenge Western scholarly practice for those who work in cultural institutions to follow cultural protocols, as there is a “deeply held professional commitment to free inquiry” that “can be challenged by the belief that certain cultural resources and understanding must be restricted to the initiated, or males (“men’s business”), or females (“women’s business”), or in some other way” (Byrne, 2008, p.5).

However, Byrne goes on to encourage digitisation of cultural heritage, arguing that with respectful practice and time a solution will be reached between the cultural owners and the heritage institutions (Byrne, 2008, p.5). Projects that are working to digitise indigenous material need to be considerate of cultural customs. This is important because it is crucial to have and maintain dialogue with the indigenous community and experts about the best approaches and practices when digitising cultural objects (Stevenson & Callaghan, 2008, p.6; Crouch, 2010, p.49, p.51; Lilley, 2016, p.122-123; Janke, 2005, p.100). Museums, as well as other cultural heritage institutions are, traditionally, places where Western ideas of information management take precedent over their non-Western

counterparts (Whaanga et al., 2015, p.527). However, as museums and other cultural heritage institutions realise the importance of working with indigenous communities things are beginning to change.

This is certainly the case in New Zealand, where cultural institutions such as Museum of New Zealand Te Papa Tongarewa have gone through great lengths to adhere to Māori tikanga, though not without some scandal. Such was the case when Te Papa asked pregnant and menstruating women not to attend a behind-the-scenes tour of Te Papa's collection (Wade, 2010). The request was criticised by some members of the general public, but Margaret Mutu, head of Māori Studies at Auckland University says the "policy is common in Māori culture" and "it's just the way we are ... It's part of our culture, but it's just one that isn't well known and that Pakeha aren't aware of" (Wade, 2010). Though a rather different scenario to following tikanga during a digitisation project, it raises questions of how to best integrate tikanga into what may be a predominately non-Māori operation.

Since an important aspect of this project is putting the digitised taoka online, it is important to investigate not only how tikanga operates within the museum, but also how it can be integrated online. Such was the case with the University of Otago for their He Tāonga Mokemoke exhibition (no longer online) and Auckland Art Gallery Toi o Tamaki's Gottfried Lindauer online collection, both of which had the policy of asking patrons to respect tikanga. These institutions, using the same phrasing, wrote they are "grateful to all the descendants who have given permission for images of their ancestors to appear on this website. These images have special significance for Māori and we ask users to treat these images, and other portraits, with respect. Please view and store these images in study areas only. The presence of food and drink or display in inappropriate ways will denigrate their spiritual significance" (Grbic, 2016, p.20). It is interesting to note that, while the former site is no longer available, the latter site did not maintain this request - instead changing the wording significantly - which leads to the possible conclusion that the request was either unsuccessful or unpopular with online users, though how this would be measured is unknown.

Ricardo Punzalan has examined the digitisation of indigenous materials throughout several articles. In his article on the creation of an archive for the Philippines' colonial Spanish records he writes, "unlike the fate of the records of America's other new possessions, the Spanish records in the Philippines were never removed from the country where they remain until today" (Punzalan, 2007, p.387). This is one problem that Māori collections have had to deal with that the Spanish records in the Philippines never did; British colonialism has spread Māori taoka across the world. Punzalan writes in another article that virtual reunification is becoming more and more common as a method of reuniting indigenous collections that have been dispersed through colonialism. Virtual

reunification, also known as virtual or digital repatriation, has been used in New Zealand by the Māori tribal organisation Toi Hauiti for their Te Ataakura project, which saw the creation of a digital archive of tribal taoka including digitally repatriated taoka from England. For Toi Hauiti, “digital repatriation offers a cost-effective and potentially far-reaching option, allowing the tribe and institutions that house their taonga to build a digital whare taonga on principles of collaboration and access” (Ngata, Ngata-Gibson, & Salmond, 2012, p.240). Though this may vary from iwi to iwi, for Toi Hauiti people “there is nothing unreal or inferior about ‘virtual’ repatriation”, which is one reason why they “have chosen ... to re-focus their efforts away from developing a physical repository for tribal artefacts and records towards ‘virtual’ repatriation” (Ngata, Ngata-Gibson, & Salmond, 2012, p.242).

Including the two projects mentioned above, there are many more Māori digitisation initiatives happening in New Zealand. Articles in the last decade have been written about these projects, examining how Māori have used modern technology to maintain control of their cultural heritage (Ngata, Ngata-Gibson, & Salmond, 2012; Whaanga et al., 2015; Brown, 2008; Brown & Nicholas, 2012). However, these articles often focus on the many and varied uses for cultural material after it has been digitised rather than the steps taken before the digitisation project begins, and how to ensure the project runs smoothly once it starts. Whaanga et al. reiterate this relationship by writing that “the management, conservation, care, and display of taonga (treasures and sacred objects), Mātauranga Māori, and information in institutions, libraries, archives and museums has traditionally been associated with the process of colonization” (Whaanga, 2015, p.522). They go on to quote Whaanga and Hedley, “taonga Māori held by international and national museums, galleries and libraries have been displayed, viewed and appreciated by many for generations ... [but] their cultural and spiritual significance have been largely ignored or, at best, under-valued” (Whaanga et al., 2015, p.522). This has led many Māori organizations and iwi to seek control of their own taoka, finding technologies that will allow them to manage their taoka as they see fit. Toi Hauiti took this route with the development of their digital archive, as have Ngāi Tahu and their Cultural Mapping project.

Deidre Brown examines how more experimental technologies such as virtual and augmented realities have been used by Māori to “support, rather than challenge cultural initiatives so that these appropriations are not considered by Māori to be demonstrations of assimilation into western or global cultures” (2012, p.60). Augmented and virtual realities have been used by New Zealand museums to “replicate objects, events and scenes that are difficult or impossible to realize or access otherwise” (Brown, 2012, p.64) – which has a number of benefits such as increased research opportunities, less stress on the object through handling, and helping with repatriation efforts.

However, these advanced technologies are not available to everyone, and creating virtual and augmented reality displays is a loftier goal than achievable to many small institutions.

However, even with Māori increasing control over taoka management and digitisation there are still many obstacles to address when it comes to taoka being held by non-Māori institutions. Lilley writes that,

“due to the ongoing failure of current intellectual property laws, tāonga and mātauranga Māori resources will continue to be susceptible to misuse and/or exploitation. There is a strong need ... to negotiate and collaborate with the moral owners of this knowledge over issues such as access to and the reproduction of these items. This is even more important in an environment where items are increasingly becoming available in digital formats thus making them more accessible than ever before” (Lilley, 2016, p.121).

Knowing what is appropriate to include in digitisation projects causes some museum professionals ethical anxiety, according to research conducted in Australia about digitising Pacific cultures by Singh, Blake and O’Donnell. Interviewees in their research used strong language when describing the ethical predicament digitising cultural material puts them in: “I’m not actually ... against these online things. I’m not. But what I’m against is the way ... that [some museums] have actually shown over the last few years a complete indifference or they don’t actually basically give a damn about indigenous rights on intellectual property” (Singh, Blake & O’Donnell, 2013, p.85). Another interviewee says that beginning digitisation before adequate discussions have taken place is “like colonising people all over again... As the museum, we’re publishing stuff that doesn’t really belong to the museum. It belongs to the people, and without working with the community and then just putting it online for the whole world to see ... it’s not very fair” (Singh, Blake & O’Donnell, 2013, p.85).

Māori have been using non-traditional methods to accumulate their common and collective past for decades, adopting museum practices and modern technology to maintain control of taoka. However, that does not diminish the facts that “many of the very old surviving materials from indigenous nations are held in national public museums” and “we can return to the arguments about how the material culture got there, or even if they should be there, but the thing that intrigues me more is witnessing when our people realize the importance of the fact that they are still there” (Brant, 2016, p.213). Brant goes on to write however, that, in his opinion, indigenous peoples are not ungrateful for the care that museums have given to dedicated to the majority of indigenous collections; “Museums not only provide the expertise for caretaking, they also provide the social space for

people to meet and experience their cultural material” (Brant, 2016, p.214). Allowing for greater interaction with cultural material is one of the main goals of digitisation projects like the Taoka Online Project. By digitising cultural objects and placing them online (where appropriate), access to these items is greatly increased. This increase in accessibility leads to more research and interest in these treasures by the community, Māori or otherwise. Most importantly, Lilley concludes that “there is a continued need for these national institutions to have ongoing dialogue with Māori to ensure that a balance is struck between the freedom of information and the protection of tāonga and mātauranga Māori” (Lilley, 2016, p.122-123).

3.1 The Taoka Online Project

The Taoka Online Project is the first comprehensive digitisation project undertaken by the Otago Museum, and the Māori collection was chosen because of its regional, national, and international significance. The Otago Museum has an incredibly varied Māori collection, and approximately 85% of the Māori collection comes from the Otago region. With roughly 60,000 registered objects (objects with an accession number) there is a huge number of objects that need to be researched and stories that need to be gathered from the collection. Aside from the registered objects, there are also 670 ‘bulk registered’ lots, which mostly consist of archaeological material that is registered in batches of 70-80 items.

There has, of course, been some research into individual items in the collection that are known to be of special significance, but most objects have only the bare minimum of information attached to their records in the Otago Museum’s collection management system. Describing each object is one of the lengthier tasks involved in the project, but also has enormous benefits for researchers and the community. Images are also inconsistent. Not all objects have been photographed and the quality is uneven. On top of this, many of these objects are not online discoverable.

The Otago Museum identified that there was a growing demand for access from the community, and for the Otago Museum to be more responsible of commitments to the Tiriti o Waitangi. Thus, the idea for the Taoka Online Project was born. This ambitious project required outside funding from the Lottery World War One Commemorations, Environment and Heritage Committee Fund, which, if granted would pay wages of two full-time project staff for three years, as well as provide for high-grade digitisation equipment. The Taoka Online Project has a group of regular volunteers (about 15 at the time of writing) who ensure the project makes steady and quick progress. These volunteers are mostly archaeology students from the University of Otago.

Out of the literature read for this research, one of the main themes that emerges is the idea of respectful practice and discourse with the indigenous community whose cultural heritage you wish

to digitise. The Otago Museum takes its role as kaitiaki (guardians) seriously and has a Māori Advisory Committee and Curator Māori who provide counsel and advice on matters relating to mātauranga Māori.

4.0 Methodology

This research uses a qualitative research approach. In the broadest research philosophy framework, this research uses a social constructionist approach within a relativist ontology; i.e. “there are many truths” and “reality is constructed and given meaning by people” (Skills You Need 3, 2016, p.10).

Qualitative research “involves looking at characteristics, or qualities, that cannot be entirely reduced to numerical values” and a “qualitative researcher typically aims to examine the many nuances and complexities of a particular phenomenon” (Leedy & Ormrod, 2013, p.95). Qualitative researchers also “empathize and identify with the people they study in order to understand how those people see things” (Taylor & Bogdan, 1998, pg. 7). This is a useful approach to adopt when the main purpose of the research is to explore a situation, particularly situations involving humans.

More specifically, this project uses a single holistic case study approach (Yin, 2009, p.46). A case study “copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result benefits from the prior development of theoretical propositions to guide data collection and analysis” (Yin, 2009, p.18). This allows the research to be focussed on one project, the Taoka Online Project, using it as a basis on which to have conversations with all stakeholders involved with the digitisation initiative about the best way to digitise taoka. A case study structure requires a strong rationale with a detailed description of the context the case exists in, with this followed by a description of the collected data and a discussion of the coding and any patterns identified (Leedy & Ormrod, 2013, p.142).

This research collected data from eight individuals working, in some capacity, at the Otago Museum. Participants ranged from co-workers, upper management, and volunteers. Four of these participants identify as Māori. They have all been given gender-neutral pseudonyms, referenced using third-person pronouns, and their positions have not been identified to maintain anonymity. These interviews were done individually. Interviews “are most useful when you wish to discover someone’s viewpoint and why they hold that view, especially when the information is likely to be sensitive” (Skills You Need 3, 2016, p.40). Interviews were semi-structured, and started with a list of introductory questions and general topics to explore, which led the interviewee further into the topic. Using the semi-structured interview allowed the interviews to have a certain amount of flexibility, and also allowed the interviewee to view the questions ahead of time, giving them time to

think about the questions and topics. As the interviews progressed, topics or themes that seemed important were incorporated into later interviews. Not all interviewees were asked the same base questions, rather the questions were adapted to match the interviewee's familiarity with the Taoka Online Project and the conversation naturally progressed to topics the interviewees were interested in.

For data analysis, this research makes partial use of grounded theory whose methods "consist of systematic, yet flexible guidelines for collecting and analyzing qualitative data to construct theories 'grounded' in the data themselves" (Charmaz, 2006, p.2). Using a grounded theory approach involves using various kinds of coding to refine the data, often going back to collect more data, before a theory is developed out of the final collected and refined data (Leedy & Ormrod, 2013, p.146; Taylor & Bogdan, 1998, p.141). Grounded theory recommends not having any preconceived hypotheses going into data collection and analysis, which due to the prescriptive timeline and limited scope of this research, means using grounded theory in its entirety is not feasible. A literature review had already been conducted by the time data collection started, and therefore the researcher had some ideas of the overarching themes and issues surrounding the topic of digitising cultural material. This research draws upon the grounded approach to data collection and analysis rather than as a strict methodological approach.

This research project also draws on Freeman's stakeholder theory, which is a framework for exploring how organisations interact with their stakeholders. Stakeholder theory is a way to "understand capitalism as a set of relationships between customers, suppliers, communities, employees, and financiers (and possibly others), all of whom consist of human beings fully situated in the realm of both business and ethics" (Freeman, 2010, p.29). Freeman further categorises stakeholders as "those groups who are vital to the survival and success of the corporation" (Freeman, 2001, p.105). In essence, Freeman's stakeholder theory can be reduced to the phrase "stakeholders are about the business, and the business is about the stakeholders" (Freeman, 2004, p.231). Stakeholders are important because "businesses" (in this analogy the Taoka Online Project) operate most efficiently with the support of its stakeholders, and with so many stakeholders the Taoka Online Project has a lot of groups to work with and satisfy. Winning and maintaining the consent of stakeholders enables the business (or the Taoka Online Project) to perform and operate efficiently and successfully. The quality of the relationships a business has with its stakeholders is a key determinant of the success of the business.

Stakeholders involved in the Taoka Online Project can be divided into two categories, internal and external stakeholders. Internal stakeholders are those that operate as part of the Otago Museum,

such as upper management, the Conservation team, the Humanities team, and volunteers. External stakeholders are the Māori Advisory Committee, Māori community groups, and the Lottery World War One commemoration, Heritage and Environment. Stakeholder theory will be useful as way of examining the Taoka Online Project as an entity that has stakeholders and the value which the project can provide them. Being able to think of the project as a business and the interviewees as stakeholders is useful as a method to understanding how the myriad of groups involved interact with the project, and understanding how the project can give the most back to them. Using stakeholder theory, the research undertaken in the course of this research will allow the Taoka Online Project to better understand which stakeholders need the most communication, and how thorough that communication should be.

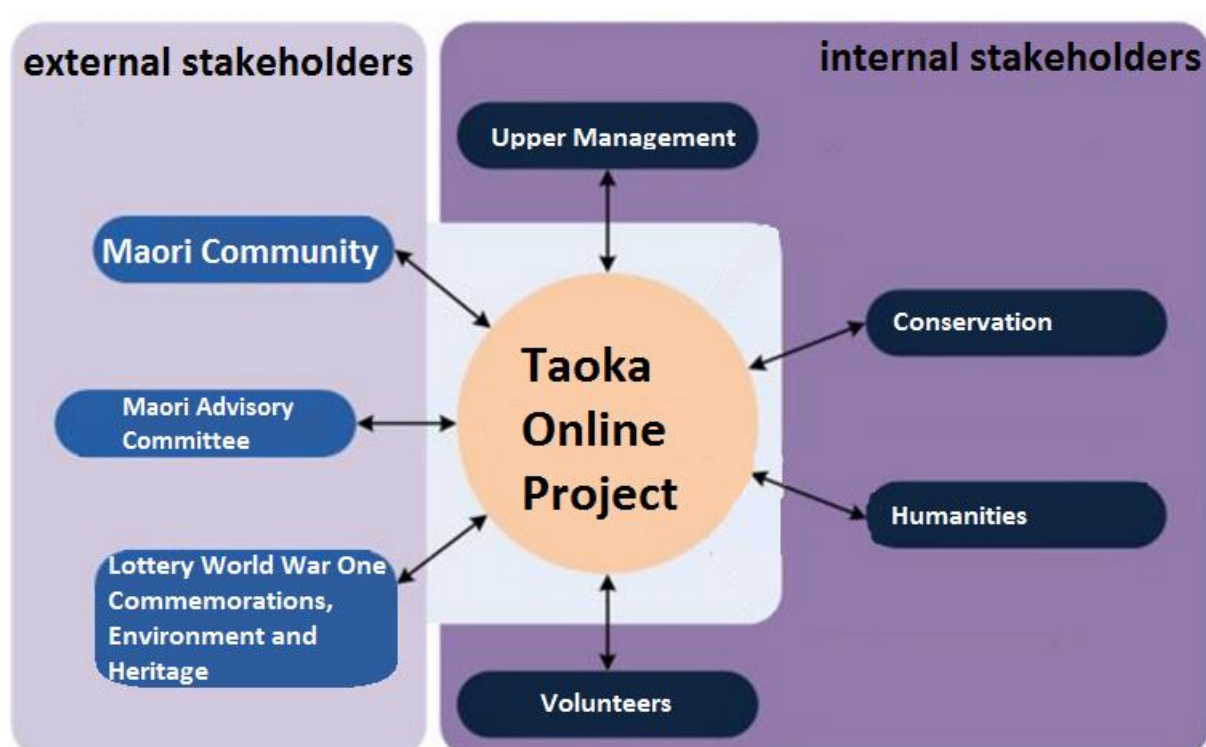


Figure 2: Stakeholders involved in the Taoka Online Project

While this research project is using a well-known combination of research methods and analysis, there are some drawbacks and issues worth considering. Case studies that focus on only one case have the limitation that “any generalisations made are, of course, tentative and must await further support from other studies” (Leedy & Ormrod, 2013, p.142) and are “less useful for drawing generalised lessons that can be applied to any other organisation” (Skills you need 3, 2016, p.17). Another consideration is that interviews rely on human memory, which can mean some distortion; “People are apt to recall what might or should have happened ... and even when people are talking about present circumstances, they aren’t always terribly insightful - and sometimes they’re intentionally dishonest - about their attitudes, feelings, and motives” (Leedy & Ormrod, 2013,

p.153). It was also not possible to interview representatives from all stakeholder groups, meaning some viewpoints (those from the Māori Advisory Committee and the Lottery fund) are absent from the research. With such a small sample size, it was also impossible to achieve complete saturation within the coded data, and a deeper study is needed to ensure this saturation of ideas (Birks & Mills, 2011, p.10).

4.1 Bias

Cresswell writes that it is necessary for researchers to “explicitly identify reflexively their biases, values, and personal background, such as gender, history, culture, and socioeconomic status (SES) that shape their interpretations formed during a study” (Cresswell, 2014, p.187). Therefore, it must be explicitly stated that I am the Project Coordinator for the Taoka Online Project, and I have interviewed co-workers within my immediate work setting. This form of research, sometimes called “backyard” research (Glesne, 2011, p.41), can “lead to compromises in the researchers’ ability to disclose information and raises issues of an imbalance of power between the inquirers and the participants” (Cresswell, 2014, p.188). Though this potential bias is a true concern, I have worked hard to remain reflective and therefore uncompromised as a researcher.

As Glesne writes “backyard research can be extremely valuable, but it needs to be entered with a heightened consciousness of potential difficulties” (Glesne, 2011, p.43). I was granted permission from my professional supervisor to conduct this research in the workplace, as the benefits of this research are potentially valuable or useful for the Otago Museum. The most concerning aspect of doing “backyard” research is the possibility that participants will be less honest with the researcher due to a perceived closeness, either professional or personal. To try and combat this, I read multiple guides on being an impartial interviewer - though the possibility still remains that any information gathered during this research project would be different if it had been collected by a third party interviewer. However, a benefit of conducting research in the same field that you work in is that “one acquires an understanding of how things work in that field, and why ... This knowledge, even if implicit, is taken into the research situation and helps you to understand events and actions seen and heard, and to do so more quickly than if you did not bring this background into the research” (Strauss & Corbin, 1990, p.42). I believe that my closeness with the project gave me, to some extent, an advantage, as I was able to understand what my participants were talking about in a way few other people could.

4.2 Data analysis approach

Using the grounded theory approach to data collection, the data collected through interviews was coded three times. The first stage of grounded theory analysis is open coding, where each transcript

was read repeatedly with pertinent sentences being assigned a code or key phrase. Next, for focussed coding, these open codes were grouped together to find linking concepts. Lastly, selective coding takes place, which takes these overarching concepts and works them into a formal framework which forms the basis of the theories that emerge from the data. This was an iterative process that often meant returning to the earliest collected data and re-examining it as new themes emerged.

Early on, a clear way to help me make sense of the codes was assign them to one of my two research questions. For my first research question, this often meant further assigning codes to the broad themes of what was a benefit and what was a challenge of digitisation. It's important to note that benefits and challenges are deeper than "good" and "bad"/"positive" and "negative". For example, one of my "challenges" nodes was "cultural respect" - which is in itself is a benefit of digitising taoka, since being respectful of cultures other than yours is an important aspect of working with cultural heritage. However, the way in which cultural respect was often mentioned in the interviews was that it was a *challenge* sometimes to know what was appropriate, or sometimes hard to understand cultural customs that align differently to one's own. So, while challenges may seem "negative" when they compared against "benefits" it, in fact, had many "positive" codes and themes emerging from it.

Memos are another important step of grounded theory data analysis, as they help to "actively engage in your materials, to develop your ideas, and to fine-tune your subsequent data-gathering" (Charmaz, 2006, p.72). Indeed, Glaser argues that "the writing of theoretical memos is the core stage in the process of generating grounded theory. If the researcher skips this stage by going directly to sorting or writing up, after coding, she is not doing grounded theory" (Glaser, 1978, p.83). Memos allow the researcher to make connections between codes and explore their abstractness beyond the coded data. Memos are written in "informal, unofficial language for personal use" (Charmaz, 2006, p.80). An early memo led me to question whether I was treating challenges as a negative, when in fact many challenges have the power to be positive through the fact that they are confronting. In the memo below I was reacting to a participant's answer about following tikanga that limits access to objects based on gender.

Memo 14

I'm not really sure that this fits into either RQ [Research Question]. In some ways I suppose it is useful to explore how far the stakeholders involved in this project are willing to go to be culturally sensitive? Am I treating "being culturally sensitive" as a negative because I have assigned it as answering the "what are the challenges of

digitisation?" RQ? I think it goes beyond being positive or negative, lots of things that are challenging are beneficial because of their confronting nature. Challenging yourself to think and understand different ways of doing something is important if you're going to work in cultural heritage institutions, especially somewhere like NZ where biculturalism is taken pretty seriously.

After thinking about my potential biases and how they relate to this issue I expanded the memo to include:

Memo 14.1

How much has my own thoughts and feelings about feminism and tikanga influenced my interpretation of my participant's answers? I am quite strongly opposed to the idea of not being able to do something based on irrevocable aspects of my gender. But I also acknowledge that being culturally sensitive is a really important part of working in museums, and it's a privilege to work with taoka. So maybe it balances out?

The iterative nature of grounded theory helps the researcher to become deeply involved with the data, though it is a challenging and lengthy process.

5.0 Results

A key result from the interviews was that participants identified more challenges than benefits of digitisation, though as mentioned before these are not all negative in nature. Many of the challenges about digitisation projects stem from the idea of working with Māori cultural material. Codes relating to culture were the most frequent, being almost twice as referenced as the next highest category of codes, and was one of only three focussed codes that were mentioned by all seven participants. It became clear early on that working with cultural material was an important aspect of the project for those involved.

The way in which culture was mentioned by the participants was varied. There was a strong desire by all participants to make sure that the Taoka Online Project progressed in a culturally appropriate way. For Jesse, who identifies as Māori, this project marked the beginning of a new chapter of cultural sensitivity at the Otago Museum; "we're also at a stage in this institution where we've just got our second Curator Māori so it's very ... kind of fresh for us having, like, this much focus within the Māori Collection. We're learning about these new practices and protocols for the first time. It's a very new time for a lot of staff. So, I think everyone's embracing it and doing really well, and kind of putting their best foot forward". Other participants also mentioned that there was a certain lack of confidence about how to proceed with some matters relating to tikanga, which could stem from this

being a new time for the Otago Museum. Riley feels they cannot comment on tikanga because they are Pākehā. Lee, who identifies as Māori, believes that tikanga is not well enough understood, though this was not necessarily aimed at Otago Museum staff. They mention a “kind of paralysis by analysis amongst pākehā who learn a little bit of Māori stuff and then suddenly freak out. Enough information to get the idea behind it, but not enough information to fully understand it and respect it in its appropriate setting”. Erin, who also identifies as Māori, acknowledged how important tikanga is to them, and that ensuring people have a basic understanding of it is essential. To combat non-Māori feeling uncertain with tikanga they suggested running tikanga workshops.

Stakeholder group	Interested in the impact on:				
	Working with cultural material	Lack of confidence with tikanga	Morale/motivation	Uncertain of project outcomes	Original scope method difficulties
Management	○		○	○	○
Conservation	○	○	○	○	○
Humanities	○	○		○	○
Volunteers	○	○			
Māori community	○	○	○	○	○

Figure 3: Stakeholders interested in identified challenges.

When asked about having an online warning in place requesting site visitors to follow certain aspects of tikanga, most participants agreed this was a good idea. Many participants agreed that it was unnecessary to have this warning on all objects, and it was more likely to only apply it to those identified as having a strong mana. Several participants indicated that it seemed impractical to ask people to respect digital tikanga, even though they felt it was important. Blair said, “I think no matter what kinds of conditions or caveats you put on the website it won’t stop people from looking at stuff if they want to”. Jesse mentioned that,

“it is a reasonable request to ask people to do that, but it’s also really impractical. Like, once you put something out into the digital space, you lose control of that you just, yeah, you can’t trust people to abide by everything that you ask for. So if you think that something’s going to get jeopardised potentially, then maybe it shouldn’t be put up at all”.

Riley believes it is important but it “can’t be completely policed because you’re relying on the integrity of the person viewing it”.

However, while Francis acknowledges the “ethical things around putting things online” and that “it’s a scary thought that we just put them up on the internet where anyone can do anything”, they also mention that they do not believe that’s a “good enough reason not to do it, and we have to assume the best of people”. It was important to Casey, who identifies as Māori, to have this sort of restriction on digital objects because “we don’t want to erode any of the mana of anything which is highly ... which has tapu on it or is a significant item”. Only one participant, Lee, disagreed with the idea of trying to implement a form of digital tikanga, a concept that they feel is “over the top” though they “can understand the thoughts behind it”. They go on to mention that “once it’s out there, it’s out there. And if you don’t want people to view things, then you just shouldn’t put them out there full-stop”. It was also problematic to Lee because “different iwi have different tikanga and different views on things”.

The Aboriginal Secret/Sacred collection was mentioned a lot when participants were asked about how they cope with following challenging cultural practices. For Lee there was a difference between the cultural practices of the Aboriginal secret/sacred material and Māori tikanga limiting access to taoka during menstruation because they believe that “if there’s a long-standing cultural purpose that still applies today then it’s OK. But if it’s just for the sake of, you know, ‘just because’ then I don’t think that’s ok... All that stuff around not being able to handle objects of be in certain places at particular time of the month, a lot of that, when you look back at read traditional thinking, it’s all based around common sense approaches to living at that time. And I think if you’re going to use tikanga in this day and age it needs to be common sense”.

It was also frequently mentioned that when unsure of how to solve a problem related to tikanga, the best way forward was to ask the Otago Museum’s Curator Māori, the Māori Advisory Committee (MAC), or the runaka whose objects you are handling. This was most often paired when asked about tikanga that limits access to taoka during menstruation or pregnancy. Francis mentioned that they were glad they are “not in any position to make the decision” and that they were “glad to have [the Curator Māori] to ask”. Erin mentions that all of the Otago Museum’s interaction with tikanga should be led by the Curator Māori because “she is the top person that we go to in regards to anything around Te Ao Māori, the Māori world”. For Casey, contacting individual runakas is important; “it’s quite impossible to know the different tikanga of the different runanga and what their wishes are. So our approach to [working with taoka while menstruating or pregnant] should be based upon what the wishes of the local runanga who form the bulk of our collection. And if it is their wishes that,

yeah, women during that time don't visit the collection or parts of, then that's our role as kaitiaki of that material to uphold". Riley mentions that they would start a digitisation project by talking to the Curator Māori, who would be able to help them establish ties with the local iwi and make sure that the iwi stayed very involved through the digitisation process.

The idea of accessibility was also very important to participants, and it was the most common benefit of digitisation that arose from the interviews. Speaking of digitisation in a broad sense, Ashley mentioned that "digitising taoka is kind of a step in the right direction of opening up our collections to the communities... and maybe that will give people, communities, indigenous communities, non-indigenous communities that knowledge to connect with those objects. Connect with us as an institution". For Blair, access to collections is one of the broadest and most important functions of a museum "so digitising them and making them discoverable online is a key way of encouraging access". Riley mentions that digitisation is a good thing and that "we're the technological age ... there are people that can't come to museums for a wide variety of reasons". Accessibility was the first thing mentioned by several participants when asked about the Taoka Online Project. Jesse mentions that "essentially, at its heart, it is using digitisation to make a collection more accessible", while Lee adds that "it is a project that aims to digitise, and make more accessible, items from the Taonga Māori collection ... to make them more accessible to a wider audience through online medium". Since accessibility was mentioned by all the represented stakeholder groups, it is clearly an important aspect of the Taoka Online Project.

Stakeholder group	Interested in the impact on:		
	Accessibility	Institutional benefits	Use of volunteers
Management	○	○	
Conservation	○		
Humanities	○	○	○
Volunteers	○		○
Māori community	○	○	○

Figure 4: Stakeholders interested in identified benefits.

It was mentioned that because the Otago Museum is able to have proportionally few things physically on display, digitisation is one way around that limitation. It is also a benefit to the local

Māori community; “Kāi Tahu people might want to come in and look at some stuff and they only have a few things to look at in Tangata Whenua, and they actually don’t have any way of knowing we have this amazing stuff ... so there’s a whole lot of information and amazing stuff that we get to see every day, which is why our jobs are so awesome, but the public doesn’t even know we have them, which is a shame” (Francis). Lee echoes this sentiment, “for me ... one of the really important aspects is that it is about connections. For, you know, the average Māori out there being able to access taonga is not an everyday thing”. Erin believes this project was important because “it’s making culturally appropriate material more accessible, honouring the importance of taoka and it’s safe keeping for future generations. So what we can pass on through this project I believe will then go forth into other future generations so they can learn more about these special things”. For Jesse, though appreciative of the benefits of accessibility, also believes that digitisation does not have the same effect as seeing the physical item in person. They add that putting the material online cannot substitute coming in to the Museum, rather “we still want to encourage people to come in and see the physical ... you’re tempting them to come in and see the physical by putting it online” (Jesse). There was also the metaphor of the museum as a physical barrier to the collections that was brought up several times.

All the participants mentioned that they believe the Taoka Online Project was progressing well; “I think that it’s going really well considering we’ve never undertaken a digitisation project of this scale and of this intensity before” (Jesse), “I think on the whole it’s going well” (Ashley); “I think it’s going fantastically” (Francis); “I think it’s going well for time ... and I’m really looking forward to seeing the end results” (Erin); “I think it’s going well” (Casey); “It seems to be going well” (Lee); “I think you guys are doing a really good job of picking up on the issues and trying to address them ... for me, I think it’s going really well” (Blair); “I think it’s going good ... I feel like it’s steaming along at a pretty good pace” (Riley).

However, there was also a sense of “going well, but...” that emerged (“going well” and “going well, but” became two distinct codes during data analysis). This “but...” was often in relation to the original project plan, which some felt was poorly scoped, and there was a sense that the workload of digitisation was underestimated. Jesse mentioned that “I don’t know if the people that scoped out the project and set the goals necessarily had the understanding of the collection to be able to set those goals ... which have not necessarily made them achievable. Which I think is very hard”. Ashley mentioned that “I do think we are potentially behind ... what the predicted numbers would be, but then I don’t think that’s anyone’s fault.... I think it’s just... the numbers at the start. It’s really hard to predict how long it’ll take... I think, yeah, definitely underestimated how long it’ll take”. Francis mentioned that the project proposal was optimistic; “as in any proposal document, I think one sort

of makes statements hoping for the best, but then the reality is slightly different". Finally, Blair adds that "one of the interesting things is never underestimate how much work is involved in digitising collections. We, unfortunately, and this is something we should always know, worked on the assumption that the collection was adequately housed, stored, documented, everything was located where they said it was and when you had a number on an object it actually related to that object. Now we should have known ... that no collection is like that".

Participants also identified other challenges to digitisation however, beyond the challenges of working with cultural material and a poorly scoped project plan. Some other challenges were the fact that the Taoka Online Project has many stakeholders involved in the project. As Jesse said, "I think it's also been challenging the groups of people having to really work together, because if one person doesn't fulfil their function then another person can't come in and do their part".

Maintaining motivation and morale of staff and volunteers was another challenge mentioned by several participants. Ashley said "dealing with such a large number of objects, and it is very repetitive, you do need to kind of break it up into manageable goals and manageable workflows and you need to, kind of, celebrate the small achievements along the way ... it's important to recognise the stuff the staff are doing and going like ... yeah, keeping morale up is important". Casey mentioned that "staff burnout" was of concern to them and "it's a lot of repetitive, mundane tasks that when you start doing them are interesting, but when you've done a hundred plus hours of the same task and you're only 5% through a project, it's pretty demoralising". While Blair mentioned that "the sheer weight of digitisation is an issue".

However, there were also additional benefits beyond accessibility. Several participants mention that the Taoka Online Project is of internal benefit to the institution and it's an essential aspect of keeping the collection management up to date. Francis believes that the Otago Museum benefits more than other stakeholders because "during this project we're sorting out so much stuff that would have ideally been done already. Getting information, data correct, and photographs and stuff like that. Makes our lives so much easier, our jobs so much easier". Another two participants, Lee and Blair, similarly agreed that the museum benefitted the most. There were several other stakeholder groups that participants identified as benefitting from the Taoka Online Project. The Māori community and researchers were mentioned most often, however artists, school groups, people with disabilities, elderly people, and the Otago University were also mentioned as groups that stand to benefit from the digitised collection.

The Taoka Online Project's use of volunteers was also mentioned several times in a positive way. To Jesse's knowledge "never to this intensity have we had this many volunteers in. So it's like, a real

credit to the project". Erin notes that they have "really enjoyed hearing about the volunteers coming in as well. And seeing it from their perspective and asking 'hey, how are you finding the project?' and a couple of them have just been really, really great about it and have thoroughly enjoyed being able to work with these treasures". For Casey the fact that the volunteers are getting such good hands-on experience is important; "it's meant there's a larger work force and it's also giving people experience ... and that's really good". Lee noted that they wish there were more Māori and Kāi Tahu volunteers working on the project. Riley, who works on the project as a volunteer, believes they are "getting as much out of it as you guys are getting from me".

6.0 Discussion

One thing that emerges strongly from the data gathered is that digitisation is an important topic to those stakeholders closely involved in it. Whether people find digitisation projects potentially "buzzwordy" or a "key way of encouraging access" each stakeholder interviewed for this research had a vested interest in how digitising affects themselves, their museums, and their communities.

The definition of digitisation projects given earlier in this research was widely supported by the participants; the definition being that a digitisation project should "focus on the means of selecting, collecting, transforming from analogue to digital, storage and organization of information in digital form and then making it available for searching, retrieval and processing via communication networks" (Singh et al, 2013, p.78). All of these steps were mentioned by one or more stakeholders, though according to the interviews digitisation was considered mostly important because it made the collections more accessible. This aligns with literature written on digitisation in museums (see Byrne, 2015; Crouch, 2010; Lilley, 2016; Singh et al, 2013). Singh et al sum up digitisation well when they write that "there is a strong belief among museum experts in Australia that if digitization is done responsibly, it will combine museums' custodianship of cultural collections with the provision of broader access for source and diasporic communities" (Singh et al, 2013, p.79).

The challenge of working with cultural material mentioned in Singh et al's research on digitising Pacific cultural collection was very strongly echoed in this research, especially the idea of ethical anxiety. Several participants mentioned that they felt uncomfortable making decisions about how to work with taoka because they do not identify as Māori. Even participants that do identify as Māori mentioned that tikanga is not a static concept, and that there is variation in tikanga from iwi to iwi. Participants interviewed that identify as Kāi Tahu had a different understanding of tikanga to those interviewed that identify to another iwi, and those that identify as Pākehā had yet another understanding of tikanga. The implications of this are that local Māori need to be continually

involved with the digitisation project to help define what tikanga is used in the museum. Māori from many iwi may work in a single institution, so consistency with the local understanding of tikanga is important for maintaining the mana of the collection.

Looking at which stakeholders identified with which challenges (Figure 3) it becomes clear that having a better understanding of tikanga is important to the stakeholders involved in the everyday running of the project. This anxiety needs to be addressed to keep these key stakeholders satisfied, and it needs to be brought to the other stakeholders' attentions. Each institution should train its staff and volunteers in the tikanga of its local iwi.

This ethical anxiety was present when participants were asked about how they felt about digital tikanga and tikanga around menstruation and pregnancy, and especially how these two topics fit into museum theory. These topics were not often mentioned in the literature read for this project, and this seems like a potentially important area to be explore for future research. What this research terms "digital tikanga" is not something that many New Zealand institutions appear to be taking up as an approach for maintaining mana of digital representations of taoka. The Australian Institute of Aboriginal and Torres Strait Islander Studies takes a different approach. Rather than asking its non-indigenous users to be aware of cultural protocols, it warns Aboriginal and Torres Strait Islander people that their website may include images, voices and names of deceased people in the digital content. This warning pops up on screen each time a user visits the site.

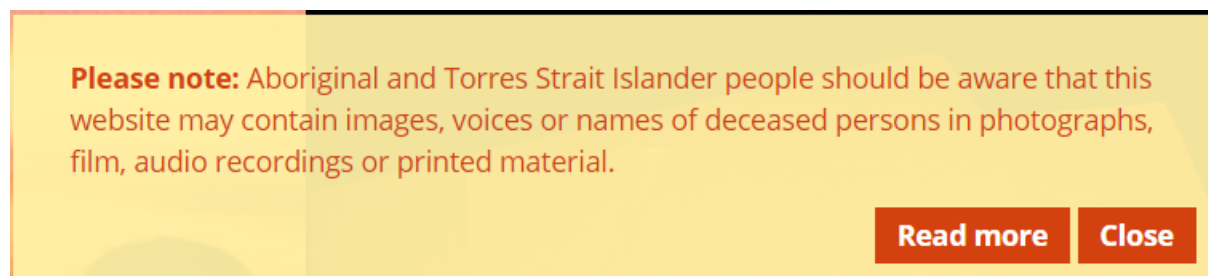


Figure 5: A form of "digital tikanga" on the AIATSIS website.

This is different to the digital tikanga discussed in the interviews, but may be one way of protecting the mana of digital taoka, though the final decision on any sensitive digital material being displayed online will be left to the discretion of the Curator Māori and MAC. Digital tikanga is a topic that will become increasingly important to bicultural relations in New Zealand, and it is imperative that institutions dealing with indigenous cultural material and the internet understand how the two intersect.

An issue with digitisation projects in general is that their worth is unknowable till the end product has been finalised and delivered. A common challenge noted by participants was that at this stage it

is impossible to know if the Taoka Online Project will be well-received and used by the various communities for which it is being developed. While there is little doubt that all the work behind-the-scenes of a digitisation project is useful to the institution, such as better photographic records, improved object descriptions, and updated shelf locations, it remains a great unknown how the digital objects put online will be used by the community. Having the end product being somewhat far removed from the day-to-day running of the project could be part of what effects morale. Not being able to “see” the progress of material going online and if that material is being used by the community can spark feelings of making little progress. Achieving the milestone of creating the online portal will be a very important step for the Taoka Online Project, and should be aimed for sooner rather than later.

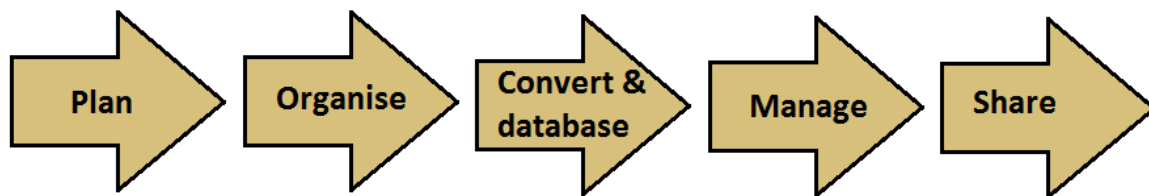


Figure 6: A simple digitisation workflow (adapted from <http://www.ala.org.au/about-the-atlas/digitisation-guidance/>)

Though the consensus of those working on the Taoka Online Project is that it is progressing well, the unexpectedly heavy workload and issues around object numbering issues are potential problems. Some participants really felt the strain of repetitive tasks, and worried that this could lead to mistakes being made in the process and loss of volunteer interest. There was the sense that all the unexpected numbering issues (for example, objects with duplicate numbers, unnumbered objects, or objects numbered incorrectly) is another issue that effects morale and motivation. Especially early on in the project, there was a much higher than expected occurrence of numbering issues. These issues were compounded by the fact that staff were still learning the best way to deal with these issues, and communication between teams was lacking. This was not a problem that was mentioned in the literature, as that research tended to focus more of the academic than the practical aspects of digitisation.

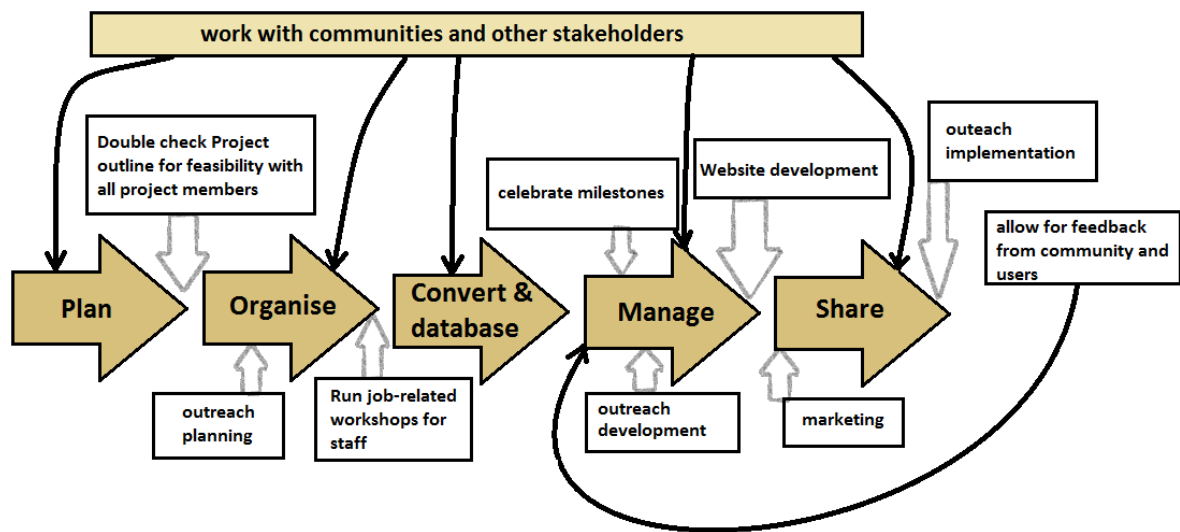


Figure 7: Digitisation workflow updated with suggestions from case study research.

Perhaps the largest points of difference between what was outlined in the project outline and what has been achieved so far by the Taoka Online Project is the slow start to the outreach aspects. Though going out to the community and undertaking workshops that assist them manage their collections is a major goal of the Taoka Online Project, none of these outreach services have yet been organised, at least at the time this report was written. Outreach was also rarely mentioned by those interviewed, indicating that this aspect of the project has been overshadowed by the more hands-on day-to-day aspects of the project. Meetings have been held with three of the local rūnaka offices so that the Otago Museum can better understand their needs, but as yet the Taoka Online Project has not fulfilled this important aspect of the project. This needs to be addressed soon if the Taoka Online Project is going to complete its Year 2 goals². A more consistent approach to outreach is recommended going forward.

² See Appendix 1: Taoka Online Project Plan.



Figure 8: Power/Interest grid of Taoka Online Project's stakeholders.

Keeping stakeholders happy with the progress of the Taoka Online Project is very important if stakeholder theory maxims are to be believed. This includes maintaining high levels of communication with other Otago Museum members of staff (for example, from the Conservation and Humanities team, as well as management), and external stakeholders, such as volunteers and members of the Māori community. The power/interest grid is used in stakeholder theory to clearly display how much attention each stakeholder needs³. For the Taoka Online Project, which has a relatively small pool of stakeholders, every group has at least a medium level of interest in the project. The stakeholders are then ranked by their power in relation to the project. Both management and the Māori Advisory Committee score high in power and interest, so they need to be “managed closely”, or in other words informed regularly with updates and consultations. The other internal stakeholders all have a high level of interest, and medium level of influence, since they work in tandem with the Taoka Online Project team to make decisions about the direction of the project. Volunteers scored the lowest on power, since they have little direct influence, though the project does rely on volunteer power to move forward. Lastly, the Lottery fund had a high amount of power to begin with, but as funding becomes secured their overall power lessens. However, keeping

³ See Appendix 2: Stakeholder influence & communication table.

the Lottery group happy is incredibly important, as any future projects could also rely on them for funding.

7.0 Recommendations

Collecting the thoughts and experiences of those connected with the Taoka Online Project is important for maintaining successful relationships with stakeholders. Though there are several things that need to be improved, the project seems to mostly be on track. Sitting down and talking with the stakeholders involved with the project (outside of team meetings) was never a prescribed task involved in the Taoka Online Project, but hearing the suggestions for improvements and gathering the general concerns and ideas of those involved in a one on one meeting was extremely useful, and should possibly happen at regular intervals for the remainder of the project.

Finding a way to keep digitisation interesting for those that work on it will be an ongoing challenge, as will be managing further object numbering issues so that they do not slow progress. Finding solutions to these will be important to maintaining consistently good quality digitisation outputs. Motivation is closely linked with feeling appreciated and that a staff member's contributions are important. Stephen Giugni says "the challenge for the organisation is to provide an environment that allows for each of its members to see their role as something important and that their participation is critical. It is equally important to provide a recognition system that matches these motivating factors" (Giugni, 2006, p.69-70). Therefore, making a progress chart that could be updated regularly with small "progress rewards" when a milestone is completed could be one way to encourage motivation. Finding a way to reward the volunteers for their contribution is another possibility, though the main obstacle to this is funding. Sharing the load amongst qualified staff so work does not fall squarely on one team member's shoulders is another possibility, though in small institutions there will be little choice as to who does what, and when. However, where the possibility of taking "shifts" is feasible this could be another way to combat the repetitiveness of digitisation work.

Another possibility to positively affect morale would be to start sharing what the Taoka Online project has done, both online and with the community. An identified challenge was the anxiety associated with not knowing how well the project is going to be received, since up to this point all the work has remained internal. Sharing the knowledge and skills that the Taoka Online Project has amassed so far, and in turn receiving feedback on these could give staff working on the project a boost in morale. Creating instructional outreach material, or working towards the online component could be a very positive step towards making concrete and demonstrable progress.

Running tikanga workshops based on Kāi Tahu understanding of tikanga for Otago Museum staff and volunteers is a sensible solution to the identified lack of confidence working within tikanga and

might engender more confidence in working with Māori taoka. Participant Lee's concept of "paralysis by analysis" would theoretically lessen if staff members felt more confident in their roles of working with tikanga, however input from the Māori communities and the Māori Curator will still be invaluable. Because tikanga varies so much from iwi to iwi it will be helpful for all Otago Museum staff and volunteers to have a fundamental understanding of Kāi Tahu tikanga, whether they are Māori or Pākehā.

In keeping with stakeholder theory, it would be of benefit to this project to make regular progress updates and check in with stakeholders. In aid of this, a Power/Influence grid (Figure 8) and a Stakeholder influence and communication table (Appendix 2) have been drafted as part of this research. Figuring out which stakeholders need to be kept informed of what developments will be beneficial to the project's long-term success. Though volunteers score low on the influence axis, it is still important to recognise their contribution and take any suggestions they provide seriously. Underappreciating the immense input of work from the volunteer stakeholder group would be negligent, given the extent that the Taoka Online Project, and museums more generally, relies on their participation. Thus it is recommended that even though as a stakeholder group they have little direct power, keeping volunteers happy will be of immense benefit to any institution.

Because of the focused nature of this case study, these recommendations are primarily suited for the Otago Museum. However, there is no reason that they cannot also extend to other institutions. Ensuring digitisation projects are realistically scoped before starting, especially with regards to either solving numbering issues or establishing procedure to handle them, as well as ensuring the timeline is adjusted to account for these issues, should be the first step before involving other internal stakeholders. Keeping the morale of those involved in also important, which may be as small a thing as having regular rewards or reading management literature on keeping motivation amongst staff and volunteers. Ensuring staff understand local tikanga is crucial for all New Zealand cultural heritage institutions that hold taoka for safekeeping. Involving your local iwis and understanding their needs is a much better approach than following a generic understanding of tikanga. Understanding the main goals of your project, and having a consistent plan to ensure progress is steady is important, so there is not a large portion of unaccomplished goals to achieve in a short amount of time at the end of the project.

8.0 Conclusion

In the future, digitisation will only become more important to museums and indigenous communities. Understanding the challenges and benefits of digitising cultural material is essential to undertaking a realistic digitisation project. A standout benefit of digitisation, according to

participants interviewed in this research, is the increased accessibility of the collections, particularly in the sense that the collections will no longer be physically constrained to the museum, but viewable across the entire world. Another benefit are the numerous groups of stakeholders that stand to gain from the Taoka Online Project, some for research, some for cultural purposes, and the museum itself for organisational purposes.

Challenges mentioned by participants ranged from keeping morale high through the repetitive stages of this project and the issues surrounding working with cultural material. Though the Taoka Online Project is going well, and has completed most of its one-year goals, there is still much the project needs to achieve, and some aspects of the project that have yet to start (such as organising outreach events with the community; see Figures 6 and 7). Several suggestions from the interviews will be put forward to stakeholders involved in the Taoka Online Project. It is clear from the interviews that digitisation of taoka is very important to museum professionals and other stakeholders involved. There is much to gain from digitising cultural heritage, but only if it is done properly with the respect and knowledge to make it worthwhile rather than worthless.

9.0 References

Australian Institute of Aboriginal and Torres Strait Islander Studies. (2017). Retrieved June 06, 2017, from <https://aiatsis.gov.au/>

Birks, M., & Mills, J. (2011). *Grounded Theory: a practical guide*. London: Sage.

Brant, J. (2016). Establishing Aboriginal Presence in the Museum Sector. In C. Callison, L. Roy, & G. LeCheminant (Eds.) *Indigenous Notions of Ownership and Libraries, Archives and Museums* (pp.210-228). Berlin, Boston: De Gruyter Saur. Retrieved from <http://www.degruyter.com/view/product/429232>

Brown, D. (2008). "Ko to ringa ki nga rakau a te Pakeha" – Virtual Taonga Maori and Museums. *Visual Resources*, 24(1), 59-75. DOI: 10.1080/01973760801892266

Brown, D., & Nicholas, G. (2012). Protecting indigenous cultural property in the age of digital democracy: Institutional and communal responses to Canadian First Nations and Māori heritage concerns. *Journal of Material Culture*, 17(3), 307-324. DOI:10.1177/1359183512454065

Byrne, A. (2008). Digitising and handling Indigenous cultural resources in libraries, archives and museums. *Communities*. Retrieved from https://www.researchgate.net/profile/Alex_Byrne4/publication/267198208_Digitising_and_handling_Indigenous_cultural_resources_in_libraries_archives_and_museums/links/551b11970cf251c35b504fb5.pdf

Charmaz, K. (2006). *Constructing Grounded Theory: A Practical Guide through Qualitative Analysis*. London: Sage Publications.

Cresswell, J. (2013). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. California, USA: Sage Publications.

- Crouch, M. (2010). Digitisation as Repatriation?: The National Museum of the American Indian's Fourth Museum Project, *Journal of Information Ethics*, 19(1), 45-56. DOI:10.3172/JIE.19.1.45
- Freeman, R. (2001). A Stakeholder Theory of the Modern Corporation. In Snoeyenbos, Almeder & Humber (eds.), *Business Ethics* (3rd ed.), pp. 101-114. New York: Prometheus Books.
- Freeman, R. (2004). The stakeholder approach revisited. *Zeitschrift Für Wirtschafts-Und Unternehmensethik*, 5(3), 228-241.
- Freeman, R.E., Harrison, J., Wicks, A., Parmar, B., de Colle, S. (2010). *Stakeholder Theory: The State of the Art*. New York, USA: Cambridge University Press.
- Giugni, S. (2006). Nurturing imagination: fostering creativity in your organisation. In C. Barker & R. Coy (Eds.), *Innovation and Imagination at Work* 2nd Edition, pp.63-96. Australia: McGraw-Hill.
- Glaser, B. (1978). *Theoretical Sensitivity: Advances in the methodology of grounded theory*. Mill Valley, CA: Sociology Press.
- Glesne, C. (2011). *Becoming Qualitative Researchers: an introduction*. Boston, MA: Pearson.
- Grbic, V. (2016). *Virtualising the Stories of Ngā Māhaki Mā Te Whare E Arahi: Let the whare be the guide*. Unpublished master's thesis, Unitec Institute of Technology, Auckland, New Zealand.
- Janke, T. (2005). Managing Indigenous Knowledge and Indigenous Cultural and Intellectual Property, *Australian Academic & Research Libraries*, 36(2), 95-107. Doi: 10.1080/00048623.2005.10721251
- Janke, T. (2012). Keeping cultures alive: archives and Indigenous cultural and intellectual property rights. *Archival Science*, 12, 151-171. DOI 10.1007/s10502-011-9163-0
- Leedy, P., & Ormrod, J. (2013). *Practical Research: Planning and Design* (10th ed). Upper Saddle River, N.J., USA: Pearson.

- Lilley, S. (2016). Ko Aotearoa Tenei: Indigenous Cultural and Intellectual Property Rights in Aotearoa New Zealand. In C. Callison, L. Roy, & G. LeCheminant (Eds.) *Indigenous Notions of Ownership and Libraries, Archives and Museums* (pp.210-228). Berlin, Boston: De Gruyter Saur. Retrieved from <http://www.degruyter.com/view/product/429232>
- Matsuda, S. (2015). *Toward a Hawaiian Knowledge Organization System: A Survey on Access to Hawaiian Knowledge in Libraries and Archives*. Unpublished master's thesis, University of Hawaii at Manoa, Honolulu, United States of America.
- Molineaux, K. (2014). Permanent Collection Displays. In M. Piacente & B. Lord (eds.), *Manual of Museum Exhibitions* (2nd ed., pp. 121-132). Lanham, MD: Rowman & Littlefield.
- Museums Aotearoa. (2005). A Strategy for the Museum Sector in New Zealand. Retrieved from http://www.museumsaotearoa.org.nz/sites/default/files/strategy_1.pdf
- Ngata, W., Ngata-Gibson, H., Salmond, A. (2012). Te Ataakura: Digital tāonga and cultural innovation. *Journal of Material Culture*, 17(3), 229-244. DOI: 10.1177/1359183512453807
- Otago Museum. (2015). Otago Museum Annual Report 2015-2016. Retrieved from <http://otagomuseum.nz/assets/documents/Otago-Museum-Annual-Report-2015-2016.pdf>
- Otago Museum. (n.d.). Museum Receives Lottery Funding for Taoka Online Project. Retrieved from <http://otagomuseum.nz/assets/documents/Press-releases/Museum-Receives-Lottery-Funding-for-Digitisation-Project.pdf>
- Punzalan, R. (2006). Archives of the new possession: Spanish colonial records and the American creation of a 'national' archives for the Philippines. *Archival Science*, 6(3), 381-392. DOI: 10.1007/s10502-007-9040-z
- Punzalan, R. (2014). Understanding Virtual Reunification. *The Library Quarterly: Information, Community, Policy*, 84(3), 294-323. DOI: 10.1086/676489

- Singh, S., Blake, M., & O'Donnell, J. (2013). Digitizing Pacific Cultural Collections: The Australian Experience. *International Journal of Cultural Property*, 20.1, 77-107.
doi:10.1017/S0940739112000483
- Steel, P. (2016). Te Puketoi Kete. *Fabricate*, Spring(1), 26-27.
- Stevenson, A. & Callaghan, S. (2008). Digitisation and Matauranga Maori. Retrieved from <http://researcharchive.vuw.ac.nz/handle/10063/608>
- Strauss, A., & Corbin, J. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Newbury Park, CA: Sage Publications.
- Taylor, S., & Bogdan, R. *Introduction to Qualitative Research Methods: A Guidebook and Resource* (3rd ed). New York, USA: John Wiley & Sons.
- The Skills You Need Guide for Students: Research Methods*. (2016). Retrieved from www.skillsyouneed.com
- Wade, A. (2010, October 12). Anger at Te Papa ban on pregnant women. *The New Zealand Herald*. Retrieved from http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10679873
- Whaanga, H., Bainbridge, D., Anderson, M., Scrivener, K., Cader, P., Roa, T., Keegan, T. (2015). He Matapihi Mā Mua, Mō Muri: The Ethics, Processes, and Procedures Associated with the Digitization of Indigenous Knowledge - The Pei Jones Collection. *Cataloguing & Classification Quarterly*, 53:5-6, 520-547. DOI: 10.1080/01639374.2015.1009670
- White, M., Smith, C., Te Kanawa, K. (2016). Māori Textiles from Puketoi Station, Otago, New Zealand. *Textile History*, 2(46), 213-234. <http://dx.doi.org/10.1080/00404969.2015.1121664>
- Yin, R. (2009). *Case Study Research: Design and Methods* (4th ed). USA: Sage Publications.

10.0 Appendices

10.1 Appendix 1: Taoka Online Project Plan

Attachment 3 – Taoka Online Project Plan

Year 1 (2016)

February 2016 – April 2016 - Recruitment and Setup

- Recruit Project Digital Archivist (Attachment 4 – Position Description). The Digital Archivist will work with the Project Officer and collections team to manage the flow of digital content and ensure all rights management, version control, data standards, metadata tagging and the appropriate cultural filters are delivered, maintained and supported.
- Project Archivist will work with suppliers and the Museum's Developer Systems & Interactive Media to ensure the integration of the new Digital Assets Management System is installed and interfaced with Museum infrastructure. Establishing the interface with the Museum's Collections Management System, Vernon, will be a priority.
- Recruit Project Officer (Attachment 5 – Position Description). The Project Officer will be largely responsible for the day to day management of the project and will coordinate digitisation and condition and conservation assessment activities.
- Acquire imaging equipment, computers etc., and complete fit-out of the Museum's new imaging suite. Two conventional imaging stations will be provided and a third station with turntable etc. will be configured for 3D imaging and 'panning' views.
- Collections, data and conservation assessments will commence almost immediately by Museum staff assigned to the project. These activities will inform the assessments processes and support the new appointments.
- Report progress at quarterly meetings of the Māori Advisory Council and Otago Museum Trust Board meetings.

May 2016 – July 2016 – Stores, collections, condition status assessed

- Collections and conservation staff together with the project appointments will continue with assessments of stores and collection groups in order to determine conservation materials requirements, storage conditions and groupings of taoka for digitisation.
- Work towards identifying a staged program of conservation assessments and digitisation.
- Place orders for conservation materials, storage boxes etc. that will be required as the collections are assessed and digitised.
- Arrange meetings with community/Marae to determine conservation and digitisation needs.
- Commence review and development of resources for community conservation and digitisation services.
- Report progress at quarterly meetings of the Māori Advisory Council and Otago Museum Trust Board meetings.

August 2016 – October 2016 - Project scope and milestones defined

- Finalise digitisation and preventive conservation assessments strategy with target dates for collection components or groups. These will then form the basis for monitoring progress during the course of the three year project.
- Continue collections digitisation and preventive conservation assessments.
- Objects destined for the redeveloped Tangata Whenua Gallery will be given priority as will those identified for 3D imaging.
- Submissions for online content delivery, collection access etc., considered by Māori Advisory Committee
- Post permitted collections data online.
- Pilot resources for community conservation and digitisation services.

- Commence discussions with Otago University's departments of Māori Studies, textiles Conservation etc. regarding possible internships and collections based research input.
- Report progress at quarterly meetings of the Māori Advisory Council and Otago Museum Trust Board meetings.

October 2016 – December 2016 - Outreach activities commence

- Once all infrastructure is in place and workflows are finessed seek interns and volunteers to assist with digitisation of Otago Museum collections. Others may be tasked with translations, collection research and image rendering.
- Develop digitisation resources for the community. These may include the provision of simple data entry forms to supporting the implementation of collections management systems for small museums with an online facility.
- Develop conservation resources for the community. Adapt the condition and conservation assessment procedures developed for the Otago Museum collections for use for or by participating communities. This will include lending data loggers to the communities to undertake environmental monitoring of identified storage facilities. General information and advice will be shared on collection storage requirements, assessments of building envelope etc. so that preventive conservation surveys and measures are tailored to the individual circumstances of Marae.
- Continue collections digitisation and preventive conservation assessments.
- Regularly report progress to the Māori Advisory Committee, the Otago Museum Trust Board, online and via social media. Progress reports forwarded to Lottery Fund as required.
- As project targets/milestones are met and the necessary clearances given, post content online and promote via social media and elsewhere.
- Subject to the approval of the communities involved, post stories and content from community activities online, via social media and elsewhere.
- Review collections digitisation and preventive conservation assessments program against proposed milestones.

Year 2 (2017)

- Continue to digitise content and provide condition and conservation assessments within the museum and externally to targets set/reviewed in year 1.
- Continue to work with the communities in support of the digitisation and conservation assessments of their own collections.
- Develop/finesse and provide training modules in digitisation, condition assessments and collections care of taoka for local communities.
- Regularly report progress to the Māori Advisory Committee, the Otago Museum Trust Board, online and via social media. Progress reports forwarded to Lottery Fund as required.
- As project targets/milestones are met and the necessary clearances given, post content online and promote via social media and elsewhere.
- Subject to the approval of the communities involved, post stories and content from community activities online, via social media and elsewhere.
- Review collections digitisation and preventive conservation assessments program against proposed milestones.

Year 3 (2018)

- Continue to digitise content and provide condition and conservation assessments within the museum and externally to targets set/reviewed in years 1&2.
- Continue to work with the communities in support of the digitisation and conservation assessments of their own collections.

- Regularly report progress to the Māori Advisory Committee, the Otago Museum Trust Board, online and via social media. Progress reports forwarded to Lottery Fund as required.
- As project targets/milestones are met and the necessary clearances given, post content online and promote via social media and elsewhere.
- Subject to the approval of the communities involved, post stories and content from community activities online, via social media and elsewhere.
- Review collections digitisation and preventive conservation assessments program against proposed milestones.
- Promote successful project and community outcomes in the press, online and via social media.
- Host a community collections review workshop at the Otago Museum to develop strategies for continuing documentation and conservation management beyond the project timeframe.

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10.2 Appendix 2: Stakeholder Influence & Communication table

Stakeholder Influence & Communication table				
Stakeholder	(A) Level of Influence and (B) Interest (high, medium, and low)	Influence explained	Communication Vehicle	Frequency
Management	A = High B = High	Has final say in day to day management of the project.	Internal communication.	Often
Conservation	A = Medium B = High	Influences speed and progress of project.	Internal communication.	Often
Humanities	A = Medium B = High	Influences speed and progress of project.	Internal communication.	Often
Volunteers	A = Low B = Medium	Little direct influence, however project relies on them to progress.	Emails sent to individuals.	When needed
Māori Advisory Committee	A = High B = High	Final say on matters relating to taoka.	Through the Curator Māori.	Updated when MAC meetings occur
Lottery WW One, H&E	A = Medium B = Medium	Dictated funding, low day-to-day influence.	Through management.	Updated in mid-term reports drafted by management
Māori communities	A = Medium B = High	Influences decisions made relating to the taoka.	Through the Curator Māori.	When needed