

2016

## The Design and Development of Digital Return Platforms for Northern Indigenous Heritage



KNOWLEDGE SYNTHESIS FINAL REPORT FOR  
THE SOCIAL SCIENCES AND HUMANITIES  
RESEARCH COUNCIL OF CANADA

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10/13/2016

## **Acknowledgements**

This report was supported by the Social Sciences and Humanities Research Council of Canada and the University of Calgary. I am grateful to Colleen Hughes and Christina Robinson for their excellent work and thoughtful insights on the data collected. Vital research support was provided by Billy Ukutak, Luke Suluk, Jamie Bell, Eric Anoe, Nunavut Arctic College, The Arviat Heritage Society, the Arviat Film Society, Shirley Tagalik, and Joe Karetak. Thanks also to A. Kate Peach for editorial assistance and comments.

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**Knowledge Synthesis Final Report for the Social Sciences and Humanities Research Council of Canada**

Suggested citation –

Dawson, P. 2016. The Design and Development of Digital Return Platforms for Northern Indigenous Heritage. Knowledge Synthesis Final Report for the Social Sciences and Humanities Research Council of Canada. Department of Anthropology and Archaeology, the University of Calgary, Calgary, Alberta, Canada.

Cover Photo Credit: Members of the Arviat Hunters and Trappers Association view panoramic images from Arvia'juaq National Historic Site using Google Cardboard Viewers in 2016. Photo credit: Colleen Hughes.

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## Key Messages

- This knowledge synthesis report provides the first bibliometric profile and systematic review of digital heritage projects and the concept of digital return in the North American and European Arctic.
- Canada is a leader among circumpolar nations in initiating and developing digital return projects in Indigenous communities. Within Canada, there is an almost equal representation of projects between Nunavut, Northwest Territories, and the Yukon, with fewer projects occurring in Nunavik and Nunatsiavut. The majority of academically oriented projects are situated in Nunavut.
- Most projects emphasize collecting local knowledge that is environmentally focused, and are primarily concerned with heritage within the last 50 years. Such projects tend to be led by academic and government individuals/groups. Comparatively few projects focus on the digital repatriation of archaeological and ethnographic collections, even though a case study of grass roots heritage organizations identify this as an area of high priority.
- Cyberinfrastructure issues in most arctic communities have created a “digital divide” that severely limits the use of digital technologies for preserving, archiving, and disseminating information about tangible and intangible heritage. This is not being adequately addressed by most projects and funding sources.
- The consequences of placing cultural objects and knowledge online and in open source contexts where Indigenous communities have little or no control over how digital assets are accessed, circulated, and used is not being adequately addressed by the digital return projects examined in this report. As a result, different kinds of “open access” will need to be negotiated.
- Social media platforms and file sharing sites are used by community-led projects to disseminate most heritage content. In contrast, projects led by academic and government groups utilize websites, electronic atlases, and online databases to manage and distribute heritage data.
- Little research has been done on how the process of digitization affects the values and meanings associated with cultural objects in the eyes of source communities. Furthermore, digitization significantly alters the concept of “repatriation” and the practices that surround it. For example, is it actually possible to return something that can be replicated over and over again, or when one cannot be certain what version of the object is being returned?
- There is an urgent need to develop obsolescence management practices to guard against the consequences that rapid technological change may have in rendering digital return platforms inoperable to Indigenous stakeholders.
- Digital return initiatives that are community-led are often youth focused. A side benefit of this is that they can provide important opportunities for training and skills development in digital technology. This will have positive economic impacts in northern communities where youth unemployment is a serious issue.
- Digital return can be viewed as a disruptive technology because it *disrupts* established institutional models/networks for archiving, accessing, and interpreting objects and cultural knowledge.
- At the same time, digital return is a disruptive technology that has the potential to alter Indigenous networks that support how objects and cultural knowledge are accessed and circulated.
- Partnerships between industry and Indigenous communities are rare among the digital return projects reviewed in this study. Recent successful collaborations in Alaska between Cook Inlet Tribal Council and E-Line Media, coupled with the intense interest in digital technology among Inuit youth, suggest that similar collaborations in the Canadian Arctic would be equally successful.

## Executive Summary

Digital return technologies<sup>1</sup> offer Indigenous communities a means of repatriating objects and knowledge gathered from their ancestors as part of earlier colonial endeavors. Many third party institutions such as museums, universities, and government heritage agencies, retain possession of these collections because of the perceived impracticality of returning them to source communities. The concept of digital repatriation or “digital return” has emerged as a means of rebuilding relationships between source communities and third party institutions through the transfer of knowledge and objects in digital form. In this way, digital return systems, such as online archives, electronic atlases and digital databases, are excellent examples of *disruptive technologies*. The idea of disruptive technologies was first popularized by Clayton Christensen in his 1997 book “The Innovator’s Dilemma”. Disruptive technologies are technological innovations that upset networks supporting the existing state of affairs. Digital return acts as a disruptive technology because it *disrupts* established institutional models for archiving, accessing, and interpreting objects and cultural knowledge. Paradoxically, digital return also *disrupts* traditional Indigenous networks that support how objects and cultural knowledge are accessed and circulated by making them freely available on the public Internet. Resolving this paradox requires that we identify and address existing knowledge gaps in both the sociocultural and technological sides of digital return.

A three-part scoping review of Indigenous digital return projects in regions of the North American and European Arctic was undertaken to: a) identify the extent and objectives of academic, government, and community-led digital return projects; b) characterize the digital return methodologies currently used in arctic communities; c) identify the issues and challenges facing digital return projects within the study area; and d) draw attention to heritage initiatives that are grass roots and community led. The methods used in this study include: a) bibliometric analysis of electronic databases; b) online surveys of digital return projects; and c) a case study of community-led heritage organizations and their projects.

Key findings of this scoping review include:

- The majority of digital return projects reviewed were undertaken in the Canadian Arctic. Within Canada, there is more or less equal representation of projects between Nunavut, Yukon, and NWT. Fewer digital return projects were reported in Nunavik and Nunatsiavut. Most academic projects are situated in Nunavut.
- Most projects focus on digitally recording heritage data from the 1950’s onwards. Comparatively few projects have specifically targeted the digital repatriation of ethnographic and archaeological collections from the historic and pre-contact era.
- The majority of projects are oriented towards capturing a single category of data. The most frequently collected datatype among projects led by academics was local Indigenous knowledge focusing on climate, flora, fauna, and sea ice. In contrast, the data categories collected by community-led projects focused on oral histories and place names.
- The majority of projects utilized a single method for digitizing heritage data. Geographic information systems (GIS) and digital databases were the preferred methods of academic and government-led projects. Audio and video recording were the preferred methods used by projects that were community-led.
- Websites were the preferred dissemination method used by academic and government-led projects. In contrast, community-led projects made greater use of social media and file sharing sites such as Vimeo,

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<sup>1</sup> The term “digital return” is used in this report to refer to digital heritage projects aimed at repatriating knowledge and objects to source communities.

YouTube, blogs, Twitter, Facebook, and IsumaTV - a free web-based Internet portal that streams video created by Indigenous filmmakers.

- Most digital return projects last for only a year, even though many remain on the Internet for much longer. However, the rate at which obsolescence renders digital return systems inoperable to source communities is unreported, suggesting it is not taken into consideration by projects and funding sources.
- Few digital return projects were designed for the specific types of cyberinfrastructure found in most arctic communities, such as satellite and dial-up Internet.
- Rather than tablets and smart phones, most digital return projects are accessed from laptops and desktop computers in source communities. However, few projects mention exactly what types of devices they were designed to accommodate.
- Source communities express an overwhelming level of dissatisfaction vis-à-vis the accessibility of digital content contained within digital return projects. Much of this stems from the digital divide resulting from weaknesses/limitations in cyberinfrastructure.
- Copyright/Intellectual Property issues, implications, and concerns were not mentioned in the vast majority of projects.
- Of the 52 projects identified in the bibliometric analysis, only 29 involve partnerships. Partnership types include government, industry, community, and academic. The majority of partnerships were between academics, with communities serving mainly as participants.
- The majority of grass roots, community-led heritage initiatives are focused on Indigenous youth and the transfer of local knowledge between generations. As a side benefit, these projects can develop digital technology skills among young people which create paths to potential employment and economic development and within the community.

Our knowledge synthesis approach revealed some key research gaps and needs including:

- How long do digital return systems remain accessible and operable to source communities, and what are the determining factors? Obsolescence management practices that guard against the consequences of rapid changes in software and hardware need to be developed to ensure that digital return platforms remain accessible to source communities over the long term.
- Why do so many digital return projects focus on Indigenous heritage from the last 50 years? Our synthesis reveals that the digital repatriation of archaeological and ethnographic collections takes a back seat to digitally capturing local knowledge concerning the environment. As Indigenous arctic peoples are on the frontlines of living with climate change, using digital return to reinforce an ancient/traditional cycle of knowledge transfer between generations may be viewed as a more immediate need by source communities. The abundance of these types of projects may also represent an “echo” resulting from the most recent International Polar Year (IPY) in 2007-8. Numerous academic research programs funded through IPY were focused on climate change, and many utilized community-based monitoring programs and local Indigenous knowledge. This stands in contrast to the views expressed by the community-led heritage organizations consulted in this study. The fact that these groups often listed the repatriation of artifacts and human remains as their number one priority suggests that institutional agendas may still be guiding digital return projects, albeit to varying degrees.
- Why is so little mention made of copyright and intellectual property issues, and the potential consequences of placing cultural information into open source contexts? Our review indicates that significant gaps exist in our knowledge of the potentially serious issues associated with placing tangible and intangible heritage online. The UNESCO Convention for the Safeguarding of Intangible Cultural Heritage (2003) advocates the use of digital technologies for preserving cultural heritage, but stops



short of safeguarding groups from having heritage assets accessed and used in ways that are not within the consent of the communities from which they have been derived. This opens up the possibility that cultural content placed online and in open source contexts can be accessed, distributed, reproduced, and repurposed (mashed) in ways that subvert traditional meanings and values. This is an area of concern because of the uncertain judicial status of local knowledge in terms of copyright and ownership. For example, who “owns” a video or audio recording of an Elder discussing traditional land use? The Elder, or the creator of the content (i.e. the person behind the video camera)? Given that so much of the Internet is structured around the concept of “open access”, we may need to define different kinds of “openness” in order to accommodate the needs of source communities. Digital copies can also disrupt the sense of trust between researchers and source communities because of the risk of unauthorized distribution over the Internet.

- Why do digital return projects have so few industry partners, given the rich potential for synergies with Indigenous training and northern economic development? The recent success of the video game *Never Alone* demonstrates that mutually beneficial and financially successful partnerships can be developed between industry and Indigenous organizations. Also known as *Kisima Injitchujja*, this game was developed through a partnership between Cook Inlet Tribal Council and E-Line Media. The game uses traditional stories to explore what it means to be human through an adventure story involving an *Inupiak* girl and her arctic fox. Nunavut-based *Pinnguaq* is a media company exploring similar applications of video games as transmitters of cultural knowledge between generations. The Arviat Film Society’s successes in engaging youth with digital media suggest that research into how similar partnerships could be developed in other arctic communities should be pursued.
- Are social media platforms such as Facebook and web blogs a better way of disseminating digital return content to source communities than online databases and websites? Social media platforms are easy to use, easy to access, and circumvent some of the cyberinfrastructure issues currently experienced in arctic communities. The extensive use of IsumaTV by the Arviat Film Society to distribute digital content may provide a good model for designing future digital return platforms for other types of digital return data.
- How does the process of digitization affect the value and meanings attached to traditional artefacts? Do Indigenous perceptions of digital replicas and their relationship to actual objects vary among cultural groups? Or between generations? How does the process of digitization affect the meaning of “repatriation” and the practices that surround it? For example, how is it possible to return something to a source community that can be digitally reproduced over and over again? What version of the digital object is being returned? Finally, is it actually possible to return something to its source when it can exist simultaneously anywhere on the Internet? Is the process of “digital return” more akin to “digital reciprocation”?

A knowledge mobilization plan drawing upon Graham’s Knowledge-to-Action (KTA) framework will seek out credible messengers to communicate these key messages to other stakeholders using a KTA strategy that is specific to Northern Canada. To achieve this objective, a website portal will be created to provide access to a database of publications identified and indexed in Part A, along with an interactive electronic map showing the locations of source communities associated with the digital return projects surveyed in Parts A and B. The information contained in the portal will be accessible in Inuktitut, English and French. Users will also be able to express their views on content, as well as reach out to the creators of the projects documented in the study. This may result in new collaborations and partnerships for future digital return projects.