As various papers prepared for this summit make clear, traditional funding sources for digitization, limited as they were, are now uncertain. The government grants for cultural heritage projects are limited in the current economic environment and are often event focused (e.g., the anniversaries of the War of 1812, First World War, and Confederation). At the same time, the institutions holding the original record of our experience as a society know that demand for open and online access is increasing. Digital access to unique heritage sources is now assumed by the general public, researchers, genealogists, and educators alike. There is a belief among the general public that if information is not online it does not exist.

It is evident that economic realities combined with public expectations demand new funding models for heritage collection digitization, preservation, and online access. This paper highlights some strategies that could be used by not-for-profit institutions to move toward sustainable financial models. It will attempt to explore the economic realities, value proposition, and economic options for sustainable digitization initiatives.

Institutions involved in digital heritage preservation are responsible for developing and maintaining self-sustaining operations, ensuring that digital collections are perpetually accessible. Digital repositories and discovery infrastructures are in a constant state of evolution, adapting to new technologies and metadata standards. They require:

- infrastructure, policies, procedures, and practices compliant with a high level of standard, including third-party review, for a trusted digital repository (TDR);
- mutual multiple redundant backup locations across a network of institutions supporting trusted digital repositories;
- ability to convert file formats to adapt to changing standards;
- continual refreshment of hardware and software infrastructure as technologies evolve;
- continual refreshment of storage media; and
- continual development of discovery and access tools.
Above all, digital heritage preservation requires continuing viable institutional support that meets the standards of a trusted digital repository, with sustainable funding that does not come solely from project-based grants and sponsorship.

The key stakeholders include our institutions and the broader heritage community. To these we might add the general public. Based on the number of visits to the Canadiana.org collections and the number of subscribers to *Canada's History* magazine, we estimate that there are approximately 450,000 Canadians, representing all ages and genders, who are actively interested in learning about our past. More than 1.7 million Canadians visit genealogy websites monthly, and each spends about $250 a year for online access to genealogy-related records.

We are witnessing a growing demand from the public for access to digital heritage. For example, Canadiana.org’s Early Canadiana Online collection was developed for academics. In the past three years, after making it more accessible to the public, fully two-thirds of the page views have been by members of the public and only one-third by academic researchers and university students. Native studies and women’s history are the two fields most in demand. When Canadiana.org launched the Canadiana Discovery Portal, the website received over 10,000 daily hits from the general public. Similarly, the recent experience of Library and Archives Canada with genealogy-related initiatives serves to emphasize that, clearly, Canadians want access to their heritage and expect to find it online.

While free and open access is the ideal model, the reality is that digital preservation is not free. If documentary heritage is valuable to a wide market, then documentary heritage can be made to pay for its own preservation. There are a number of revenue strategies:

*Grants and sponsorship:* If collection holders rely on grants to fund their digitization initiatives, they are often saddled with new budget lines for operations and maintenance when the project funding ends. These ongoing obligations are then susceptible to budget cuts in times of financial downturns, making it difficult to ensure access to the records in perpetuity. New projects attract grants, but the substantial long-term costs do not have the same appeal.

Used strategically, grants and sponsors can be useful sources of funds for heritage digitization. Over the long term, when grants are available, they can be used to subsidize content collection projects, allowing institutions to reserve their operating budgets for ongoing operations. Grants are usually tied to specific digitization initiatives, but it is hoped that public and private sponsors will become more open to investing in the long-term preservation of digital collections. Corporate sponsors may wish to gain marketing value from partnerships linked to such collections. Private sponsors may enjoy the profile of having their name associated with preservation of specific content.
These opportunities may depend upon the policies of the collection holder organization.

*Subscription models:* The cost to build and preserve digital heritage collections is substantial and ongoing. If a collection, by being online, provides a cost savings to institutions that need access, then institutional subscription models may be a supportable revenue source. Depending on the content, private individuals, particularly those with special interests, such as genealogy, historical research, and cultural exploration, may be willing to pay for a subscription if the content is of interest and is not available or easily accessible elsewhere online. It is more cost-effective than travelling to access the original source materials.

*Value-added services:* If some or all content in a digital collection is freely accessible, there may still be opportunities to offer premium services for a fee. Users could have the option to buy the enhanced services in order to save time searching for relevant content. Digital collections can be enhanced by providing name indexes or special curated views of their material, organized by specific historical themes, such as prominent historical events, geographic areas, cultural topics, occupational categories, etc. These thematic, curated collections could be offered as subscriber services.

*Content repurposing:* Digital assets could also be repurposed and sold to raise funds for ongoing support. The micro-purchase model with e-commerce infrastructure can be built by the digital archive or outsourced to a distribution channel. Repurposed content might also increase the organization’s chances of obtaining funding from private sponsors, particularly if the content is of special interest to a sponsor.

*Advertising:* Advertising is a sensitive issue in not-for-profit organizations. That said, substantial revenue can be generated if sites receive a high volume of visits. Advertisements are not necessarily compatible with the image of organizations and their websites. There may be a middle ground that could generate revenue. It is becoming common for Internet sites such as YouTube and Netflix to have ads. As this becomes ubiquitous on the Web, cultural institutions may decide to take advantage of the user expectation that ads will be part of a Web experience. This could overlap with sponsor recognition.

*Centre-of-excellence services:* Memory institutions that have been digitizing, preserving, and making accessible documentary heritage have developed significant expertise that could be leveraged. This expertise could be used to provide digital documentation services to third parties in private industry or government organizations based on cost recovery. Examples of marketable services include:

- digitization/scanning
- ingesting already scanned and born-digital documents
- metadata enhancement for pagination, article linking, etc.
- OCR generation to metadata for keyword searching
• searchable PDF generation
• generation of other derivative formats, e.g., e-books
• cataloguing
• loading and indexing into a secure repository
• hosting
• Web discovery portal development
• Web portal hosting
• collection hosting
• TDR preservation services
• backup services for other repositories
• consulting services on all aspects of workflow, technology planning, and support for digitization, preservation, and access.

Digital heritage has significant financial, cultural, and scientific value, and its preservation is important to current and future generations of researchers, academics, educators, and the general public. Government grants for digitization projects can offer an excellent funding opportunity, but they are relatively scarce and are often linked to specific event-related initiatives. They seldom support the long-term preservation of digital repositories. Not-for-profit organizations can both operate efficiently and receive compensation for services, including harvesting heritage assets, preserving, making accessible, repurposing for copy-on-demand and curated collections, operating subscription services for closed collections, and providing optional premium services for open collections.

Collaborations and creative new relationships among collection holders (archives, libraries, and museums) with government and commercial stakeholders may be the best strategy for creating, maintaining, and providing access to repositories of digital heritage content.