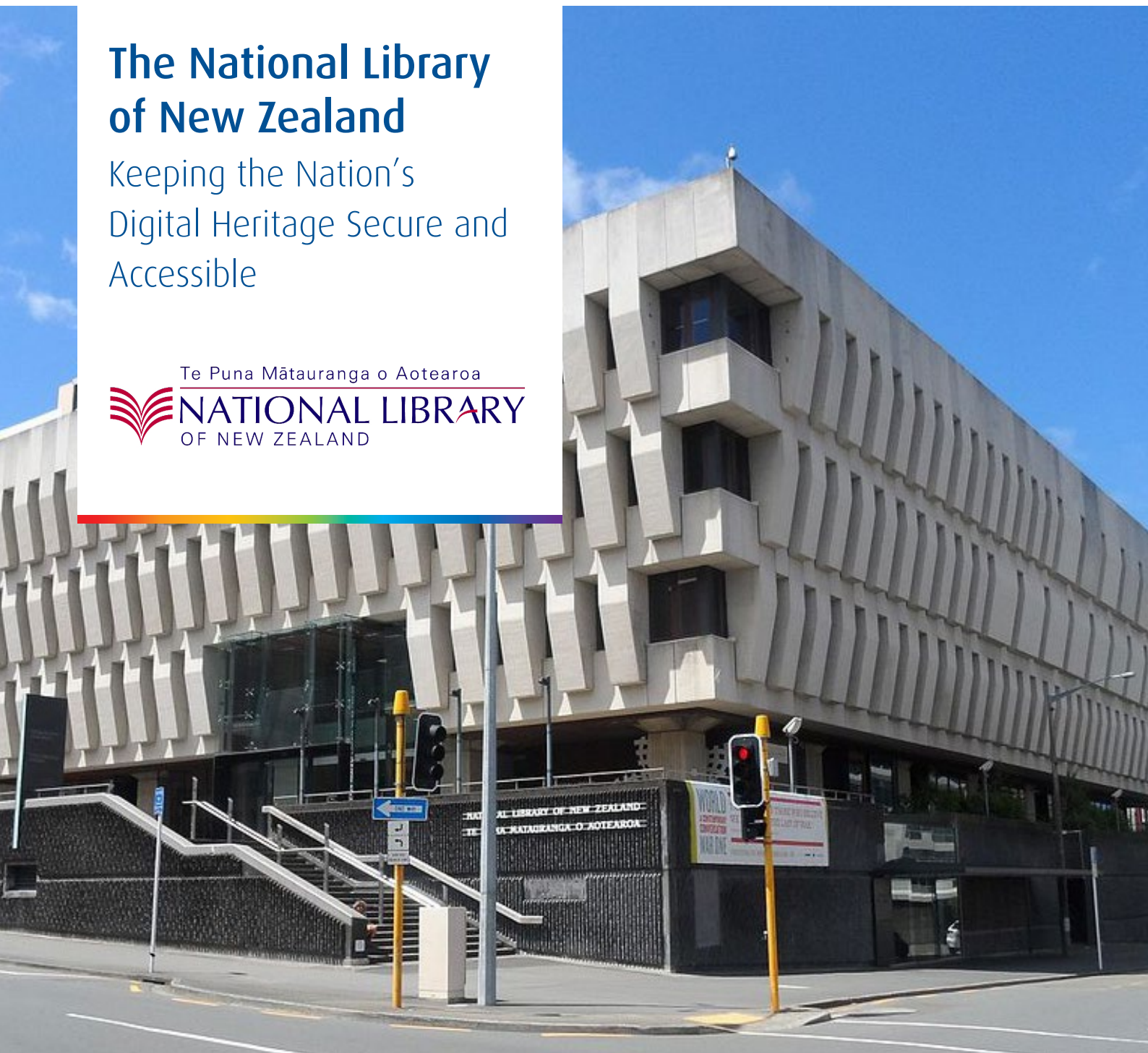


The National Library of New Zealand

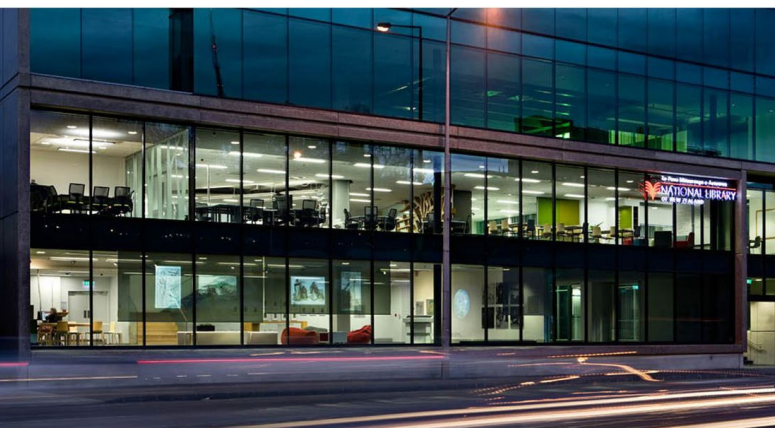
Keeping the Nation's Digital Heritage Secure and Accessible

Te Puna Mātauranga o Aotearoa



Ex Libris's Rosetta is the National Library of New Zealand's end-to-end system for ensuring the integrity, authenticity, access and usability of the Library's diverse digital collections into the future.

"It is important that we do the best that we can to safeguard our digital content, and we are trying to make clear, well documented decisions to assist our successors in the long-term digital preservation program. Rosetta is at the centre of that enterprise for us." - Steve Knight, Programme Director, Preservation Research and Consultancy at the National Library of New Zealand.



About the National Library of New Zealand

The National Library of New Zealand Te Puna Mātauranga o Aotearoa, established in 1965, is dedicated to enriching the cultural and economic life of New Zealand by collecting, preserving, and protecting its documentary heritage. The Library, in treating this heritage as a common national taonga ("treasure"), also makes it accessible to the people of New Zealand.

Under the National Digital Heritage Archive (NDHA) program, the National Library of New Zealand extends its guardianship over an ever-growing digital collection. As of this writing, this includes 1.65 million digital objects – objects that have undergone digitization or that are "born" digital, from the days of audio cassettes to the latest online multimedia materials – preserved in 202 different formats. The National Library expands its digital collections through in-house imaging and audio/visual digitization, purchasing, direct donations, and in accordance with its Legal Deposit mandate.

From Makeshift Solutions to National Mandate

As the number of digital items of all kinds in modern Library collections has grown, so has the understanding that new methods of preserving them must be developed to ensure they remain available to future generations. At the National Library of New Zealand, this includes all different types of digital assets in a variety of formats.

In the year 2000, there was no long-term, coherent archiving solution available for digital resources. While many institutions had not yet begun to explore what was, at the time, a new frontier, the National Library of New Zealand began researching options for digital preservation.

In 2002 the Library released the first version of a preservation metadata schema designed to provide a working tool for the Library's digital collections. In 2003 the Library released an XML version of the schema and a metadata extraction tool which outputs the preservation-related metadata to a standard XML format for preservation planning.

It was, however, a makeshift approach, highly dependent on the specific circumstances and expertise of the Library itself.

Then, the National Library of New Zealand Act 2003 provided the Library with the mandate to collect and preserve the nation's digital heritage in perpetuity. This required a more systematic solution - and one that would also facilitate collaboration with museums, galleries and archives, nationally and internationally.

The logo for ExLibris Rosetta. It features the word "ExLibris" in a dark grey, sans-serif font. Above the letter "i" in "ExLibris" is a small, multi-colored rainbow arch. Below "ExLibris" is the word "Rosetta" in a bold, red, sans-serif font.

Organizing for the Future

The National Library of New Zealand recognized several challenges that had to be met in the effort to fulfill the institution's digital mandate.

One of the issues was the rapidity with which current technology changes. Obsolete or obscure digital formats can make digital library collections inaccessible to future library patrons. The Library, therefore, needed to be able to review the integrity and accessibility of stored assets. This entails ongoing risk analysis and the capability to digitally migrate items when necessary, as well as procedures for maintaining the integrity of stored items, no matter the format.

In addition, as an institution dedicated to the preservation of digital items, the Library needed technology and workflows for the intake of a wide range of materials, including digitized content. As the preservation mandate was intended to make the collected materials available now and into the future, the National Library of New Zealand also needed appropriate discovery and access options, and a corresponding digital preservation system to facilitate the day-to-day management and use of digital content.

With storing, preserving, and providing access to the nation's digital heritage forming an important and growing part of its mission, the National Library of New Zealand took action. In 2004, the library initiated the National Digital Heritage Archive (NDHA) program.

Rosetta: A First-of-Its-Kind Solution

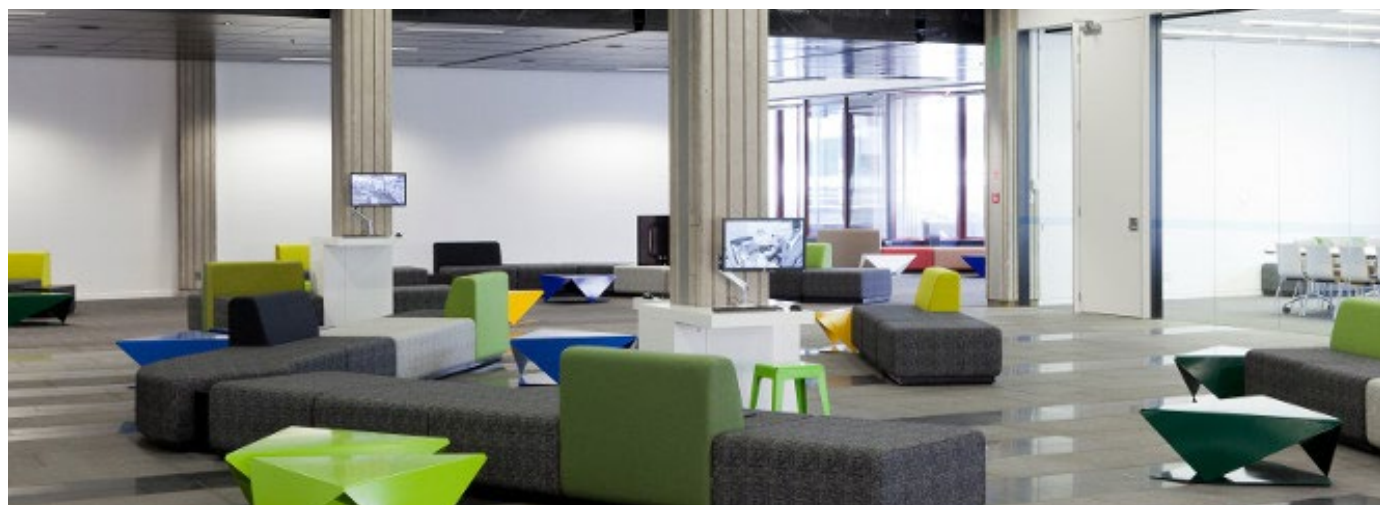
For over a year, the National Library of New Zealand undertook a painstaking endeavor to develop clear requirements for an effective digital preservation and management system. One of the driving factors shaping the project was to preserve the library's reputation as a trusted institution in the digital space.

It rapidly became clear that no existing open-source solution or digital repository software would meet the Library's needs. The National Library of New Zealand therefore decided to form a development partnership for the creation of a first-of-its-kind solution, one that would ensure both flexibility and interoperability in meeting its requirements. In 2007, this led to a collaboration with Ex Libris to develop a commercial system designed to benefit the entire digital preservation community.

A close relationship was formed between the National Library and Ex Libris, expressed most tangibly by the presence of an Ex Libris project manager in New Zealand throughout the two years of core development.

Above all, however, the project demanded openness, responsiveness and intellectual rigor, which was driven by a shared understanding of the significance of the ultimate goal.

The result was Rosetta, an enterprise-class, end-to-end digital preservation solution for libraries, archives, museums and any other institution requiring long-term safekeeping of its digital assets. Rosetta went live at the National Library of New Zealand in 2008.



A Decade of Setting the Standard

Rosetta forms the core of the National Library of New Zealand's digital preservation program from submission to dissemination. Highly scalable, secure and sophisticated, Rosetta also serves to set the standard across other public institutions.

After a decade, including continuing fruitful collaboration and development with Ex Libris, the National Library boasts over 1 billion files comprising 1.65 million digital objects and 204 terabytes of information in the permanent repository, preserved and managed by Rosetta (the entire digital preservation environment is currently just under a petabyte in size).

Based on the Open Archival Information System (OAIS) model and conforming to Trustworthy Repositories Audit and Certification (TRAC) criteria, the end-to-end Rosetta solution offers full security, auditing, and integrity of the Library's digital collections over time. Contributed objects are checked for validity and origin - when, how, and by whom it was created - and then enriched with all the descriptive and technical metadata needed for long-term preservation. These Rosetta-based processes allow the National Library of New Zealand to maintain the fine balance between openness and adherence to institutional and legislative requirements.

To help ensure NDHA collections are accessible and useful to the public via multiple discovery solutions (including Ex Libris Primo), Rosetta includes user-friendly, web-based application programming interfaces (APIs) and deep linking through persistent identifiers. To make sure the digital heritage assets

remain accessible into the future as well, Rosetta saves them in a sustainable format that is continually evaluated to guarantee ongoing usability. Another aspect of Rosetta's future-proofing is its distributed architecture that can support multiple, flexible server and application configurations, providing scalability while meeting the unique digital preservation requirements of the National Library.

The National Library of New Zealand has chaired the Rosetta User Group (RUG) since its inception providing a high value pipeline into Ex Libris's development cycle thanks to sophisticated and committed members, representing over 200 global customers.

The Rosetta User Group exists to provide advice and guidance to Ex Libris on the direction and activities relating to Rosetta, and also serves as a forum for information sharing, discussion and collaborative analysis and assessment of the development of Rosetta to ensure that development continues to meet the needs of the Rosetta user community.

After helping to create and shape Rosetta, the National Library of New Zealand went on to select the Ex Libris Primo discovery and delivery solution, as well as Ex Libris Alma for library management. Key to the library's choice of solutions was its interoperability with Rosetta, which enables cataloging of content via Ex Libris Alma, preserving it via Ex Libris Rosetta and making it accessible via Ex Libris Primo. Another key selection criteria was Ex Libris' expertise in providing open interfaces that enable the development of unique extensions to meet changing and specific needs.



About Ex Libris

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