



CASE STUDY



Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Founded in 1855, The Swiss Federal Institute of Technology Zurich (ETH Zurich) is a science and technology university with an outstanding worldwide research record, a place where 28,000 people from more than 100 nations study, conduct research, and work. More than 450 professors teach and conduct research in the areas of engineering, architecture, mathematics, natural sciences, system-oriented sciences, and management and social sciences.

Challenges

Digitalized and digitally-born resources—such as websites, social media, learning objects, and research data—are often more difficult to preserve than physical collections because of their rapid pace of change and growth. How to preserve and ensure access to the enormous and constantly growing quantity of research data and born-digital content housed by ETH Bibliothek presents a huge challenge to the university.

Rosetta for Research Data at ETH Zurich

ETH-Bibliothek, established in 1855, is the largest public library in Switzerland and the main library of the Swiss Federal Institute of Technology Zurich (ETH Zurich), a world-renowned science and technology university. The library holds more than 7.9 million items, including electronic and printed journals, e-books, databases, rare books, images, maps, archival material, and much more. Special emphasis is given to innovative library services and to the electronic resources that the faculty, staff, and students access at ETH Zurich.

150 Years of Research to Preserve

ETH-Bibliothek began investigating ways to preserve its digital collections early in the 2000s, at a time when the major commercial vendors did not offer any tools for digital preservation. Indeed, although the issue was discussed in library technology circles, the most advanced options on offer were open source systems for digital content management. “We decided to wait until commercial systems focused exclusively on digital preservation came on the market,” explained Dr Wolfram Neubauer, Director of ETH-Bibliothek.

For several years, the library and its partners within the university actively researched the evolving issues surrounding digital preservation in various projects, including assessments of the Ex Libris digital preservation system being developed in partnership with the National Library of New Zealand. That system went live in 2009 and was named Rosetta in the same year. “Even at that early stage we realized that Rosetta was founded on a deep understanding of the needs of libraries, universities, and other organizations to capture digital content for the long term – possibly for perpetuity,” added Dr Neubauer.

Behind the investigations into possible digital preservation solutions lay ETH-Bibliothek’s historic role as a research library. The university had subscribed to electronic journals and databases since the 1990s and was keen to ensure access to those resources long after the publishers had ceased to publish them in their own environments. In addition, rapidly multiplying resources digitized by ETH-Bibliothek added to the pressure to find a long-term solution. In recent years the library, along with academic institutions worldwide, has recognized the importance of research data as a resource in their own right, and, in parallel, requirements on researchers to keep their data accessible as part of good scientific practice became more demanding.



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Solution

ETH Zurich began considering options for a digital preservation system in the early 2000's, long before any commercial solutions were available. Open source options available at that time offered no convincing alternative, either. The university made a strategic decision to keep up to date with developments in preservation systems, including the Ex Libris solution that was later named Rosetta.

Results

Live at ETH Zurich since 2012, Rosetta occupies a central position in the university's strategy for digital preservation, comprising all the core functionality of a digital archive according to the OAIS-Standard. The university library, ETH-Bibliothek, believes that in the future users will be unaware of Rosetta, yet will be able to discover and access digital collections seamlessly as a result of its active preservation processes.

"Research data isn't usually published in stable, commercial environments in the way academic articles or printed books are," related Dr Töwe, Head of Digital Curation at ETH-Bibliothek. "If we don't preserve that data, it could easily be lost as storage formats and locations evolve over time. We also had no technological basis for making research data available to other scholars, even though that's been expected of us for a number of years." Securing access to data was even more important in disciplines where the data couldn't be collected again because it is tied to the point of time of its observation.

Stability, Interoperability, Scalability

The university's selection of a digital preservation system was based on a number of essential requirements. "We started from the fundamental requirement of a system that supported the Reference Model for an Open Archival Information System (OAIS). On top of that we were also seeking an open approach in the software that would enable us to integrate with other, open-source tools being developed in the digital preservation field," noted Dr Töwe. "Scalability was also critical since our collections were already growing at extremely fast rates."

ETH Zurich was initially attracted to Rosetta because of the clear vision it presented, which demonstrated a shared understanding of the challenges facing research libraries. "After several discussions with Ex Libris we found that many of our core requirements were supported by Rosetta's out-of-the box functionality," Dr Töwe explained. In the library's evaluation of all major players in the market, no other system was able to meet the needs of ETH Zurich for end-to-end preservation and access, encompassing all types of digital resource and research data.

"Rosetta's sophisticated preservation planning methodology, the scalability of the solution, and the integration of a format library—which enables us to add, manage, and identify risks for all formats—were crucial factors in our decision to adopt this solution."

Joint teams of experts from ETH Zurich and Ex Libris installed Rosetta at ETH-Bibliothek during 2011, with Ex Libris providing thorough testing of the system and on-site training for staff members. "The Rosetta specialists worked as a highly effective joint team," noted Dr Töwe. "In addition, having a dedicated project manager was extremely helpful. The project manager and the whole Ex Libris team were very responsive and guaranteed a direct line of communication between ETH and Ex Libris senior management."

Although Rosetta now forms the backbone of preservation efforts at ETH-Bibliothek, staff members are aware that implementation is only the first step. Teams are looking to the future with ways to integrate Rosetta into many more workflows for the creation and publication of digital content, which will place preservation at the center of any digital initiative—from highly specific research data to the institution's own web pages.



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A Developing Partnership

When ETH Zurich and Ex Libris began discussing digital preservation solutions, Rosetta (then un-named) was young, and the company was eager to receive input from customers and stakeholders. "Our relationship with Ex Libris was built on a shared understanding that all ideas and suggestions for Rosetta were open for discussion, and this led to a very productive environment for both our agreement and the actual project," Dr Töwe reflected.

From the start of their discussions, the many challenges that ETH Zurich—like all sophisticated research institutions—faced in terms of preserving digital collections were embraced rather than ignored. "Ex Libris actively welcomed our suggestions for adapting the solution, many of which entered the Rosetta roadmap and are now on their way to becoming standard features," commented Dr Neubauer. "Now that our system is live, we continue to feel that Ex Libris views us as partners in the ongoing development and success of both our project and the Rosetta solution as a whole."

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