NEW TRENDS AND HOPES
IN A WORLD OF CHALLENGES

The IT infrastructure and the library-specific applications of National Széchényi Library are about to renew. This is more than a simple continuation of the previous changes, as during the recent years almost everything that we have thought about libraries for centuries have been questioned. The complex and special services of a national library (ISBN-identification, collection of obligatory copies, setting up a national bibliography and a national catalogue, etc.) urge us to rethink and redefine the structure, staff organization and related IT services of National Széchényi Library.

Within this paradigm shift, the new opportunities offered by information technology have radically and globally changed the habits of publication, communication and access. Electronic media have been added to the traditional ones, and apart from the carefully authenticated products of professional editorials, now the works of basically anyone can go public. As film and photo technologies have become available for everyone, the production of new digital media is not restricted to film studios and professional photographers. Contents get multiplied by new creations like online forums, e-mail correspondences and digital legacies. The world wide web, as a significant carrier of our culture, as well as its valuable content is yet to be professionally elaborated. The amount of data grows exponentially. And what to collect? These trends invite us to rethink the scope of collection of a national library and draw up a new e-service legislation.

The amount of contents that cannot be processed by institutionalized workforce, makes it timely to involve external human resources (crowdsourcing) and use machine data processing with simple identification mechanisms or more complex artificial intelligence. The leading-edge provider is Google: users of the new digital world ask complex questions is a one-window browser and have a good chance to get relevant answers. Is this a help or a competition for libraries?

The format of library description and data links is far from trivial: the MARC language, even enhanced to more than two thousand description fields, cannot deal with the variety of data links. New standards of cataloging (RDA), new formats of data exchange (i.e. BIBFRAME), and new data models and description philosophies (like FRBR) are being built. The related pieces of information are available for all the subsystems which facilitates specialized use and the creation of commonly used and enhanced namespaces. Librarians thus find a rich store of intelligent and rational processes and semantic links. Software tools earlier called Integral Library Systems have been enhanced, and the cataloging and providing of digital contents as digital library, web archive, periodical editor is a common feature of the new generation Library Services Platforms. Copyright management is getting redefined, and librarians seek to apply also in Europe the freedom of the US copyright.

The revolution of access changes everything. Internet availability makes it possible anywhere and for any participant of the library life, publishers, editors, scholars, readers and catalogers, to do whatever they need. Neither the service, nor its use is locally bound. Technology can be used for anything on any platform and anywhere, provided there is internet access. There are new possibilities of work organization, unimaginable before: regardless of their location, users can access all the treasures of mankind created digitally or made digitally available.

And where has been the Hungarian national library and its e-service directorate in this process, during these years?

However desirable the continuity of our basic services might be, maintaining them is getting ever harder. We have been keeping running an outdated and hardly manageable infrastructure with old software solutions (an emergency subsidy was transferred to us by the Ministry of Human Capacities in 2015-16). Third-party partners worked for us without getting paid, our staff works hard to endure with low sala-

ries and poor environment. Our websites have been partly renewed, but several web services are still to be updated. Our digitization service runs in outdated hardware and software environments. Our digital library (MEK) and its related services (EPA, HU-MANUS, etc.) are available as before. Systems in all areas are due to undergo a planned and well-financed renewal, as we cannot expect everything from the efforts of our devoted staff.

In addition to maintaining business as usual, we have been constantly preparing for the future. We started a regular workshop on a monthly basis for the developers of our existing software and the library IT experts to discuss how to modernize the existing services. We invited third party companies and renowned experts of specific areas to discuss namespace and statistics questions. We took part in study tours to several European libraries (in Prague, Madrid, Copenhagen, Rome, Leipzig, Frankfurt am Main, Vienna and Luxemburg) to get acquainted with their best practices and be partners in achieving our goals. We invited the most important library system developers who presented on one-day events and workshops their results under continuous development. OCLC is a global association of libraries working for the libraries' comprehensive access to information that runs the world catalogue (WordCat) and the virtual authority file (VIAF) and believes in that "what is known has to be shared". Ex-Libris is the developer and provider of one of the most comprehensive cloud-based library systems. Monguz Ltd. is the most significant Hungarian library system provider. @cult is the developer of the library system with the most advanced data management that applies the latest Bibframe, RDA és FRBR standards and Linked Open Data. The Future of Libraries Is Open – FOLIO initiative built an open source modular framework in which developers, providers and libraries all can customize their systems, and freely handle deployment, development and modification issues.

In December 2016, twenty Hungarian libraries signed a declaration of willingness expressing the "need for the use of a common new generation cloud-based library platform". Within this framework, libraries will cooperate to achieve, related to National Széchényi Library's IT renewal, a cloud-based solution available and open for all types of library. The build, upload and maintenance of nationwide services will be a joint project.

By the period 2016-2018, the Hungarian Government allocated a significant financial framework in great part through the Governmental Information-Technology Development Agency (KIFÜ), to enable the integrated renewal of these systems by the total replacement of outdated hardware and software. The installations enabling the efficient work of the staff and readers of NSZL are about to renew: we will have considerable storage capacity, a modern digitizing workshop, new infrastructure for the event and exhibition galleries, as well as new institutional structure and services.

In the first half of 2017, the cooperating libraries drew up the requirements for the planned library system, and the public tender was announced. The most suitable provider will be chosen at the beginning of 2018, and then the detailed requirements described in the project will have to be met within 12 months from the signing of the contract. These requirements, in addition to the traditional library tasks, include a great number of novelties like the comprehensive integration of digital and electronic contents, the elaboration and providing of new content types, copyright-based access, and many more functions that are essential in a 21st century library system. Besides, we hope that our new structure will include breakthrough innovations that on one hand leverage new semantic relations (ontologies, relational dictionaries, new formats of data exchange, artificial intelligence etc.), and on the other, benefit from the consortium cooperation structure that facilitates the involvement of institutions as well as other participants like publishers, authors, researchers, students, interested readers, etc. in a system that can be enhanced openly.

Related to this system, our digital framework will also renew, offering to all types of institutions the opportunity to join. The Hungarian Internet Archive, envisioned more than ten years ago, may also be built. Web harvesting and web archiving will allow the collection and preservation of the documents of the digital era, and prevent them from disappearing. The project will be part of our larger library system, facilitating the sharing of tasks and the more comprehensive provision of the treasures explored.

The most important feature of our systems is openness and the willingness to share. We seek to open source all the individual developments to make

them available for the global librarian community. According to our plans, everyone will have access to the system through a very complex and sophisticated authorization and evaluation structure. All the phases of the elaboration, loaning and digitization workflow, as well as the results, can be shared by the cooperating institutions and third-party contributors. By providing copyright information, publishers and copyright owners will be able to build an access network in which the treasures, so far difficult to access, will be easy to identify and provide. The network will include traditional publications as well as the articles, audio material, lectures and websites of the academic scene. The system offers the freedom of choice and expansion. With its modular build, all the participants will be able to choose the most suitable workflow, and the flexible parameters will facilitate customization and configuration to meet any individual requirement. The cloud-based system spares the work of IT deployment for the users and allows them to build their own collections and workflows with custom design and special features, characteristic of each institution and individual collection.

The future of libraries is open. Not only NSZL and Hungarian libraries, but also libraries worldwide are in the process of finding their place in the new digital era taking shape. Participants must work together to involve the users in the creation of this change. This can ensure the development of a modularly built, complex structure in which both developers and providers can realize their individual plans.

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