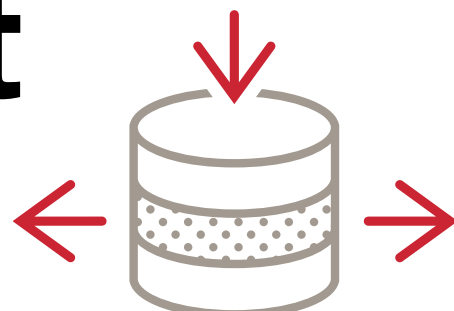
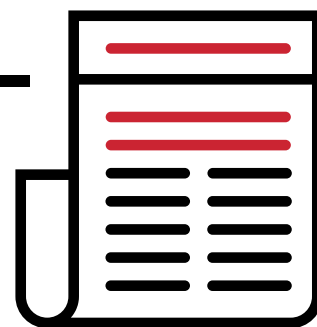

Document management in the NBS



We have helped the National Bank to shorten the time needed for searching for records and links, and we have increased the efficiency, control and transparency of processes, all at reduced cost.

For our client, the National Bank of Slovakia (NBS), we have implemented an information system allowing electronic document management, digital archiving of inventory records with a scholastic portal, and administration of special funds. The digital archive of inventory records with the scholastic portal provide registration and access to archival documents. The archive of special funds is designed to register photos, audio and video files and other information in general. The system helps to simplify the work of 1,150 users at NBS. The TEMPEST eOffice system covers the whole life cycle of documents and linkage to the Central Government Portal (slovensko.sk).

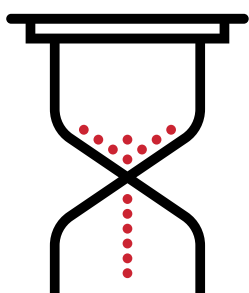
ADVANTAGES

the time needed to search for
complex records and connections
was reduced FROM
HOURS TO SECONDS ✓

efficiency was increased by record
digitizing and centralizing ✓

transparency and control in
processes were increased ✓

operating costs were reduced ✓



THE SOLUTION

The comprehensive solution is integrated and interconnected in several interrelated areas - electronic document management and automated registry administration, a scholastic portal, special funds and electronic workflows. The solution meets the parameters of a qualified electronic mailroom and guaranteed electronic signatures. The solution covers the entire life cycle of registry records, processing and making archival documents accessible, and special fund administration.

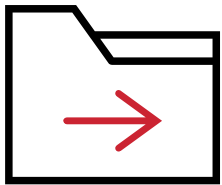
77 256
INVENTORY
UNITS AND
ITEMS

METADATA
FROM **203**
ARCHIVAL FUNDS
AND
COLLECTIONS

SOLUTIONS AT THE NATIONAL BANK OF SLOVAKIA

1. DOCUMENT MANAGEMENT AND REGISTRY ADMINISTRATION,
2. DIGITAL ARCHIVE OF INVENTORY RECORDS WITH A SCHOLASTIC PORTAL,
3. DIGITAL ARCHIVE TO ADMINISTER SPECIAL FUNDS.

1. DOCUMENT MANAGEMENT AND REGISTRY



TEMPEST eOffice provides systematic recording of all types of documents (paper documents, electronic documents, mail, forms and electronic communication documents through electronic mailbox interfaces) that come into and out of the company or are created internally. The solution controls the processing of registry records from record registration, through record assigning, adding records into files, execution by authorized processors up to record keeping and removing. At the same time, it provides instant information on record and file processing status and checks compliance with legal and internal deadlines. TEMPEST eOffice covers complexly the field of registry administration in accordance with valid legislation of the Slovak Republic, and is a certified system of the Ministry of the Interior of the Slovak Republic. It complies with the requirements of Decree No. 525/2011 Coll. on standards of electronic information systems for registry administration with a "high level" ranking.

2. SCHOLASTIC PORTAL



The scholastic portal is publicly accessible via the Internet and its functionality depends on the user role of the scholar. The scholars are provided with inventory unit search services based on published archive aids (inventories and catalogues) allowing them to create scholastic sheets and applications. It includes an editorial system to manage the portal's static content. The portal is linked with the internal section - a digital archive of inventory records on archival documents, from which inventory records intended to be published for scholars are synchronized at regular intervals, while, at the same time, all scholar registrations, their scholastic sheets and applications for approval are synchronized. The portal meets demanding archival-scholastic and technological requirements.

3. SPECIAL FUNDS



Special Fund Administration is designed to register records, photos, audio and video files and information on them in general. Authorized users can define different record parameters (registration aids) that then serve as sort and search criteria. The special funds cover also borrowing entering and approval procedures.

THE OLDEST
RECORDS DATE
BACK TO
1723

PROJECT INFORMATION

Project duration:
24 months

The transition to production was carried out with three months of increased surveillance. It was difficult for employees. No step-by-step implementation was possible.



Six people from the bank and 12 people from TEMPEST worked on the project for the longest period. Irregularly, many more people worked on the project on both sides. The project met the required goals.

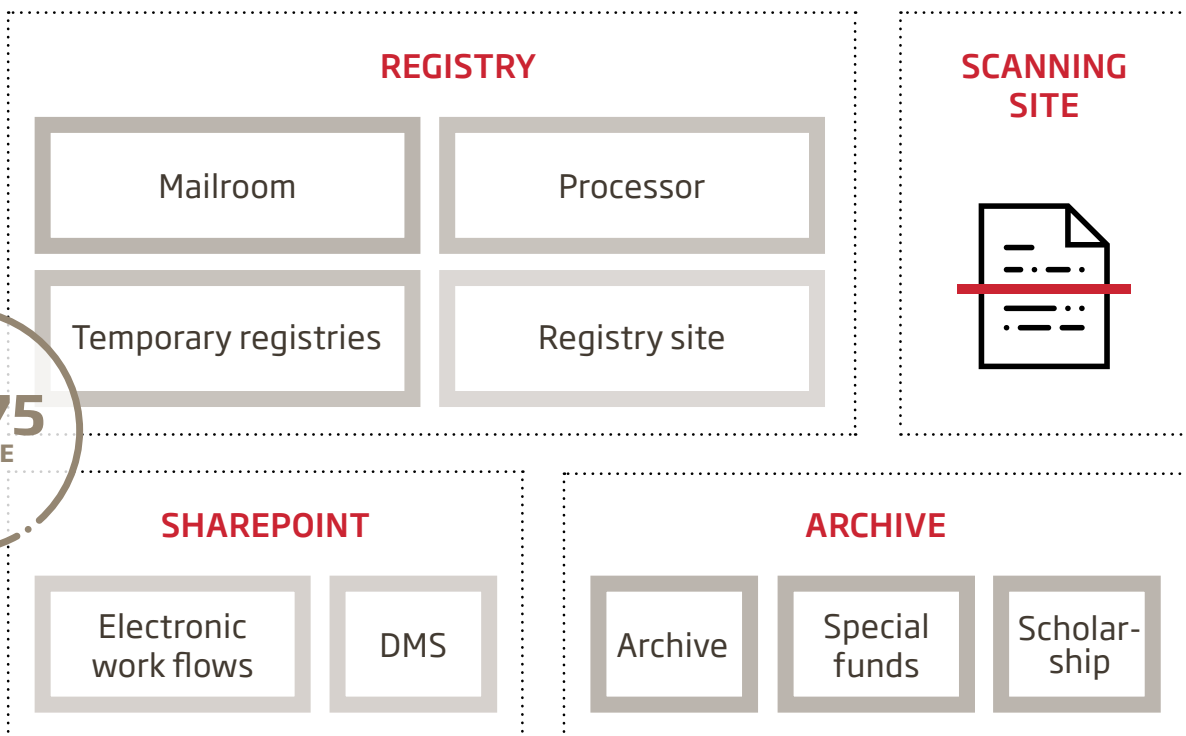
PROBLEMS BEFORE THE PROJECT STARTED

- ✗ registration using a number of paper records and registry logs
- ✗ demanding, inefficient and long search backward or editing
- ✗ decentralization and the resulting duplication and errors
- ✗ diverse applications that were not compatible

FROM DESIGN TO IMPLEMENTATION, THE PROJECT LASTED **24** MONTHS

TECHNOLOGICAL VIEW

MAIN DOMAINS



15 175
STORAGE
UNITS

PLATFORM AND ARCHITECTURE

The entire solution includes document management, archives, special funds and the scholastic portal. It is based on the eOffice product, using ASP.NET Web Forms and MVC technologies. Microsoft Sharepoint was used as the basic platform for electronic workflows and DMS. The solution shares the Microsoft SQL Server relational database.

The architecture of the solution is multi-layered. During its creation, modularity, scalability and openness were prioritized, with an emphasis on simple integration of such solutions as **electronic mailroom, long-term archive (LTA) and guaranteed electronic signature**. The functionality of the archive has been built beyond Microsoft .NET Framework, and from a technological point of view the whole solution is homogeneous.

USER INTERFACES

User interfaces for Intranet modules were built with an emphasis on ergonomics as a thin web client that is available through Internet browsers without any need to install additional software. The user interfaces are interconnected so that users can display the details of the related record from the archive. The Intranet user interfaces use the SSO mechanism to allow NBS employees already logged into the domain at the workstation level to enter the application environment without any need to re-log in. The solution is also ready for two-factor authentication.

The public interface for external users (scholars) is created using ASP.NET MVC technology to maximize availability and meet ISVS standards for web locations. The communication channel is provided using the SSL mechanism or the HTTPS protocol.

“TEMPEST involved a team of experts in the project who were focused mainly on the overall usefulness of the solution for the National Bank of Slovakia, not just on meeting requirements. The result is a solution with high added value for NBS, meeting the required standards for registry administration information systems, and has an intuitive user interface and modern design. This was reached even though the auction tender was concluded at 1/3rd the of the estimated value of the contract. I feel very positively about the project, and today we have very good relations with the people from TEMPEST.”

Ing. Milan Vlček, Head of Registry and Archive

NATIONAL BANK OF SLOVAKIA (NBS)

NBS is the central bank of the Slovak Republic. Since 1 January 2009, NBS has been a part of Eurosystem. In cooperation with the European Central Bank and the other central banks of Euro area countries, its primary objective is to keep price stability in the Euro area. Within the Eurosystem, the role of the National Bank of Slovakia is to contribute to securing the monetary policy, foreign exchange operations and foreign exchange reserves, issuance of Euro banknotes and coins, payment transactions, collection and compilation of statistics, international cooperation, mutual cooperation and support of central banks and financial stability in the Euro area.