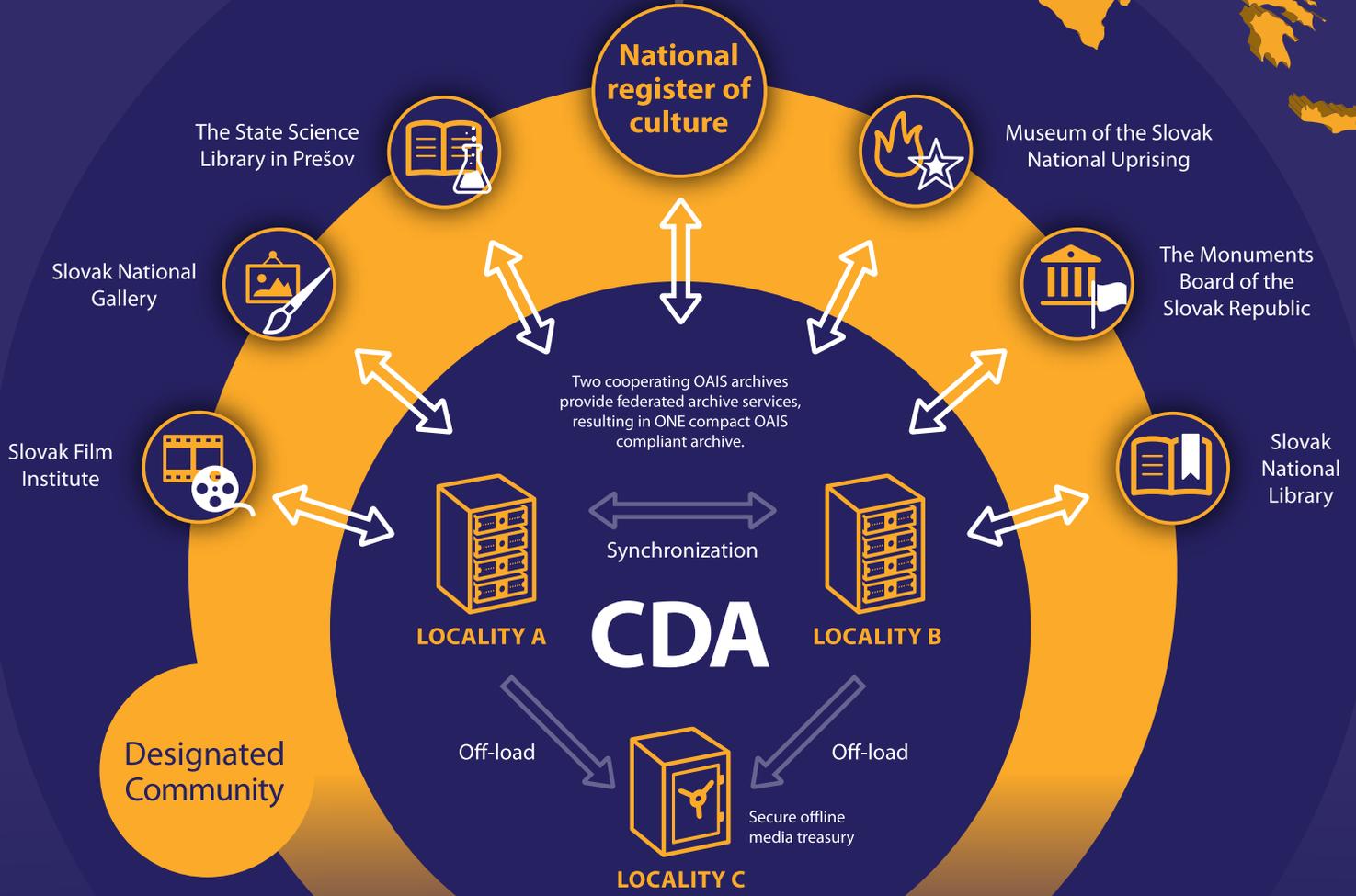


Central Data Archive

The countries of the European Union

Presentation of cultural heritage to general public



The project's result is a functioning LTP Archive with a nationwide scope, in the projected capacity, fully certified, permanently sustainable and reliable, comprehensively providing storage capacities and demands for Memory Institutions in Slovakia. After the completion of the project in 2014, a continuous refilling of digitizers and "digitally-born" documents, routine maintenance and modernizing of the CDA technical equipment will persist. A comprehensive assessment of the defined project indicators' fulfillment is in progress. Evaluated are the goals of the Operational Programme Information Society and the strategies of MI development, whose fulfillment will be reflected in the increased use of electronic services in culture. The result of the carried-out activities is the creation of the MI cooperation network and the implementation of the CDA project capacity according to the requirements defined by the participating MI and CDA, which is the project solver. After the completion of the project activities, a CDA comprehensive audit is planned. The project's result is to meet the priorities of the information society's development, the development of the knowledge-based economy and education, and a scientific development in culture.

Redundancy

Every piece of data is stored on three independent mediums stored in three geographically distinct places. Two of these locations are live systems that can fulfill the service requests of the community. The third location is a secure treasury for long-term media protection.

Designated community

The archive is used by selected partners involved in Slovakia's cultural heritage digitalization process (Operational Programme Information Society). There are seven MI involved at the present time. The community will grow in the future.

OAIS Compliance

The CDA is built as a fully OAIS compliant solution. It consists of two separate archives where each is OAIS compliant. These archives act as cooperating and federated archives providing a fully compliant encapsulated solution. Data is periodically synchronized, guaranteeing solid redundancy and availability. The solution is prepared for ISO 16363:2012 certification and also the operating Organization is preparing to get ISO 27000 certification. All internal processes are designed to follow and comply with ITIL framework recommendations and requirements.

High Flexibility

Each community member has signed a legal submission agreement with the CDA. This agreement contains data formats, validations, conversions and data-handling details tailored to the particular needs of a member. These details are later transformed into a concrete archiving profile.

Logistics

The data can be delivered online or by a specialized logistics system provided as part of the CDA solution. The shipment guarantees suitable environmental conditions for transported media and proper media handling and protection. Logistics also provides proper media packaging and package labeling. Currently Logistics is concentrating on magnetic-tape handling, but the solution is open enough to introduce new data media in the future as needed.

Security

All online communication of external subjects is protected by encryption and all sensitive operations are protected by two-factor authentication. The CDA operates its own Certification Authority offering PKI services for all members of the designated community. The CDA solution also implements strong mechanisms for digital content signing so it guarantees high data consistency and authenticity.

Data protection

In addition to multiple data redundancy on a physical layer, CDA implements modern state-of-the-art principles of logical data protection to guarantee long data preservation in terms of accessibility, quality and reliability. Customizable ingest procedures based on plug-in architecture allow extensibility and future proof usability. The same principles are used for periodic LTP processes, format management and preservation planning, and risk evaluation. Providing modern management tools for preservation planning solutions offer their own system for the management of data formats. This tool collects information about processed formats in the archives from various sources and external databases, and also allows the manual evaluation and processing of formats which are particularly new or not widely known. It allows the management of the entire life cycle of the format from the planning phase to end-of-life and format conversions.

Capacity

Raw storage capacity: 75PB • Usable storage capacity: 25PB
Expected objects: 381 346 900 • System scalability: unlimited

State-of-the-art technologies

The CDA solution is built from state-of-the-art technologies using all the modern principles and architecture used for big data processing. The main intention of this approach is to guarantee a future proof solution that can hold future needs for growth, extension and modernization. The main objects during architecture building have been to guarantee modularity, scalability, robustness and extensibility.

Open system

CDA solution is build as open system and combines open source and enterprise grade tools . It is developed in cooperation with the University library in Bratislava (www.ulib.sk) and the VT Group software company (www.vtgroup.sk).