Digitalization of the construction process in Lithuania. Possibilities for innovations.

Arvydas Dotas
Head of Innovations division
State enterprise Centre of Registers, Lithuania
2019-11-21
State enterprise Center of Registers (SECR)

The Centre of Registers is a **keeper of base state registers of the Republic of Lithuania** providing services related to the data thereof.

Enterprise operates as **IT excellence centre of public sector**.

It **develop information systems and e-services** for other state and municipality institutions.

Openness is a **strategic goal**: open data, data availability, integrations, data re-use and cooperation.
TREND OF E-SERVICES USAGE

- The Real Property Register and Cadastre
- Register of Legal Entities
- Register of Addresses
- Market transactions
- Surveyors
- Register of Population
- Registers of rights

Usage from 2005: 30153, 8158, 10475
1. SECR data interfaces with IS „Infostatyba“ (e-files of buildings are delivered and decisions to form buildings as well applications to register buildings are returned using interface).

2. Transition from 2D to 3D cadaster.

3. One e-file of cadastral data of land parcels and buildings (gradual merge of the Real Property Register sub-systems Surveyor and GeoSurveyor).
DIGITALIZATION OF THE CONSTRUCTION PROCESS
IS „Infostatyba“

- provide e-services to the public
- collect, store and process data on the state of construction in Lithuania
- Provide data to state institutions to fulfill statutory functions
- Provide data to state information systems, registries, legal persons and residents

2005
I stage. Pilot project

2008
II stage. 8 e-services of 3rd maturity level

2015
Support and Development of 14 e-services of 3rd maturity level

Currently
19 e-services of 4th maturity level
DIGITALIZATION OF THE CONSTRUCTION PROCESS
IS „Infostatyba“. The aims of the current project.

• Fully electronic services and processes
• Use of innovative technologies
• „One portal“ for all construction related e-services
• A wizard that guides the user through the process
• Cross-institutional cooperation:
  • State Inspectorate for Territorial Planning and Construction
  • State service for protected areas
  • Department of cultural heritage
  • Municipalities
  • Utility companies
  • Centre of Registers
  • And many more...
DIGITALIZATION OF THE CONSTRUCTION PROCESS
IS „Infostatyba“ and SECR data and IS integrations

eFiles of buildings are delivered to IS „InfoStatyba“ and decisions to form buildings as well applications to register buildings are returned to SECR using interface.
TRANSITION FROM 2D TO 3D CADASTER
3D initiatives started in 2013
TRANSITION FROM 2D TO 3D CADASTER
Pre-sales procurement

• Evaluation of possibilities to transform available 2D data managed by SECR to 3D models
• Identification of third-party data, relevant to 3D model development and evaluation of possibilities to use it
• 3D terrain, surface and underground infrastructure data integration into a single 3D model
• Development of data model and process to be able to refine the model in parts
• Collection and display of 3D historical data
• Evaluation of the User Interface for 3D information usage
• Case studies, tools for spatial analysis and modeling
• Technology assessment for LiDAR, BIM, etc.
• Evaluation of the legal environment
3D CADASTER
1st. stage results. Conceptions.
BUILDING INFORMATION MODELING (BIM)
OTHER TECHNOLOGIES

- Remote sensing
- Photogrammetry
- Laser scanning
- Big data
- Spatial analysis
- Modeling
- Virtual reality
- Augmented reality
- RPA
- Artificial intelligence
- Blockchain
- Etc.
Arvydas Dotas
Head of Innovations division
arvydas.dotas@registrucentras.lt