

PRE-COMMERCIAL PROCUREMENT
**DEVELOPING A TECHNOLOGY FOR PREPARATION,
STORAGE AND MANAGEMENT OF SPATIAL
THREE-DIMENSIONAL (3D) DATA NECESSARY FOR
EFFECTIVE IMPLEMENTATION OF ECONOMIC
DEVELOPMENT PROJECTS**

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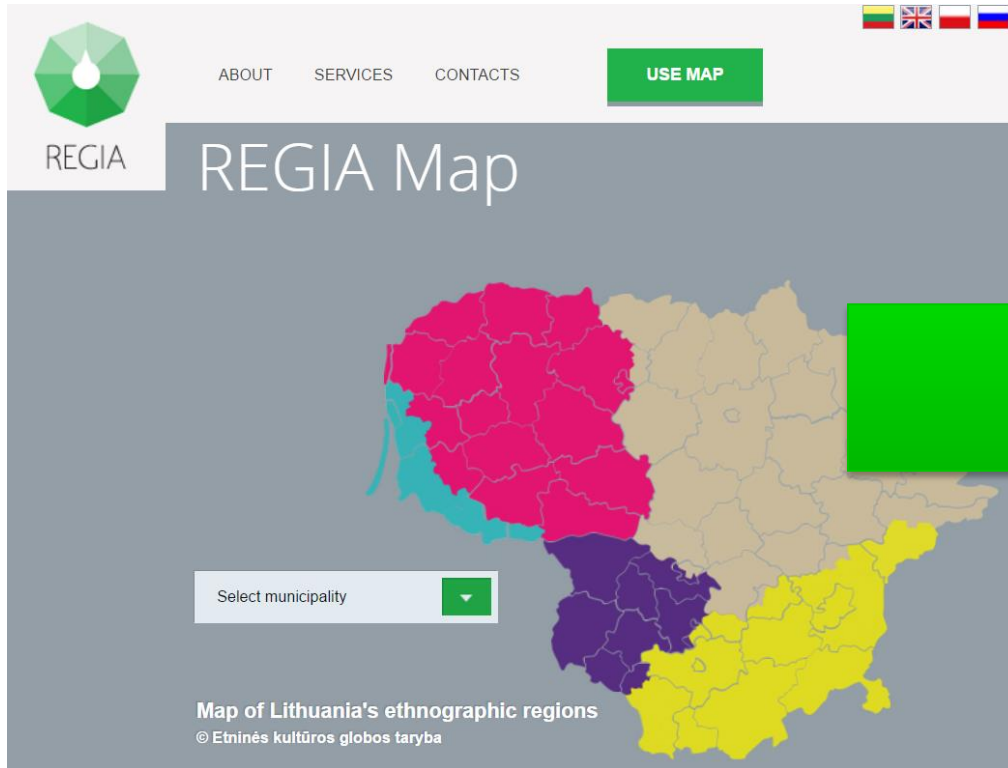
State Enterprise Centre of Registers

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 an **excellence centre of public sector**.

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

FEATURE TECHNOLOGICAL DEVELOPMENT PLANS



Open Data

BIG data

Spatial analysis

3D

Imagery

Internet of things

Real time data

Etc.

The Project goal is
to develop a pilot version of the technology for preparation, storage and management of spatial 3D data necessary for effective implementation of economic development projects. The developed Technology would enable integration of the Real Property Cadastre and other geographic information systems and 3D representation of their data.

MAIN TASKS

1. To create an **automated model/methodology for the conversion of two-dimensional real property cadastral data** into the tree-dimensional models.
2. It must also **ensure integration of 3D over ground object models with land surface**.
3. To create **3D models of underground structures** (stored in the Real Property Cadaster and municipal databases) and **integrate them into the common 3D model**.
4. To create **3D data viewer concept**: data visualization, user interface and user experience.
5. The proposed Technology should allow **transferring 3D models with lower level of details into the models with higher level of details**.
6. The Technology must **be able to integrate the building information models** created during the BIM process.
7. The Technology must allow **dynamic representation of the history of spatial data changes**.
8. **Possible 3D data analysis and other 3D model application tools should be identified and proposed**. Some of them should be implemented for demo purposes (examples: visual pollution, shadow analysis, etc.)
9. When developing the methodology, **the following tools and technologies must be evaluated** (but not limited to the list provided): existing GIS data, geodetic and cadastral measurements, ortho-photographic images, laser scanning, aerophotogrammetry and ground-based photogrammetry methods, etc.

PLANNED USAGE

- **For citizens** (when taking part in the state governance, when dealing with real property investments, planning trips and travelling, searching for various information, etc.);
- **For all representatives of the government (municipality) institutions** in their work using spatial data for decision making;
- **For business representatives**, investors, professionals from various fields such as architects and designers, land managers, monument protection specialists and urban planners, developers and contractors for roads and their facilities (viaducts), to the companies maintaining buildings, engineering networks, real estate brokers, property valuers, surveyors, agents, etc.).

The **State Enterprise Centre of Registers** will use the developed technology for integrating the spatial data stored in the Real Property Register, other registers and information systems, for creating 3D models for the entire territory of Lithuania and for publishing in REGIA.

PRE-COMMERCIAL PROCUREMENT STAGES AND DURATION

Pre-commercial procurement stages, planned duration (of each stage of the pre-commercial procurement) and maximum number of financed tenderers:

The pre-procurement procedure shall consist of **3 stages**. At the end of each stage, the tenderers compete and their number shall be reduced after each stage in order to select those tenderers whose tender mostly corresponds to the Technical Specification of the pre-commercial procurement.

Total duration of the pre-commercial procurement stages shall be **25 months**:

Stage	Duration*	Maximum number of financed tenderers
Stage I (concept development)	5 months	4
Stage II (prototype development)	12 months	3
Stage III (pilot production)	8 months	2

* The duration of each stage includes 4 weeks for the evaluation of respective stage results (tenders). The Contracting Authority shall have the right to extend duration.



Stage I

Designing of spatial data integration concept

At the end of the first stage, all tenderers shall submit their developed technology concepts. Experts will evaluate them, select three from four concepts developed during the first stage, and announce three as the best ones.

Stage II

Development of technology prototype and test product

Three bidding suppliers at the second stage will develop a technology prototype.

Test product will be created on the basis of the technology prototype - spatial 3D test data will be integrated for a defined area, and a methodology for preparing, storing and managing of such data will be developed. During this stage, a full system check will be performed.

At the end of the second stage, three bidding suppliers will submit the technology prototypes and the test products developed. Two of the prototypes and test products developed by the bidding suppliers will be evaluated and selected by experts as the best ones.

Stage III

Creating a service for publication of the test product (spatial 3D data) in REGIA

The test products developed during the second stage of the project (integrated spatial 3D data of the defined area) will be published on the Internet using REGIA. To this end, a service for publishing a test product in the REGIA will be developed during the third stage. Test products developed for the defined territory will be presented to potential users. The public (potential users) will be informed of the new product within the REGIA platform itself and during the workshops.