



GISCAD-OV

Project Presentation & State of Progress – September 2020

CLGE General Assembly, 18th September 2020

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Presentation overview

- Brief introduction by Maurice Barbieri / Jean-Yves Pirlot
- Self-presentation of Florian Lebourdais and Ivars Nudiens
- Project ID-CARD
- State of Progress & Key Findings
- Next steps



PROJECT ID-CARD

- **GISCAD-OV** involves the whole value chain of the Cadastral domain. Its main scope is to design, develop and validate an innovative and cost-effective high accuracy service for Cadastral Surveying applications, based on European GNSS Galileo signals.

- **Duration: 36 months – Budget: 3,23 MEUR**

- **CLGE part of the budget (7,8%) : 250,375.00 EUR – Reimbursement rate 100%**

Personnel costs: 162,500 EUR – Other costs (travels): 37,800 EUR – Indirect costs: 50,075 EUR

- **GEOWEB SPA (IT)** acting as Project Coordinator together with 13 partners from 3 categories:

1. Service Providers: TERIA (FR), GEOFLEX (FR), SOGEI (IT), GEO++ (DE), NOVATEL (CA), TELESPAZIO (IT)
2. Prof. Associations of Surveyors: CLGE
3. Academic and research institutes: VUGTK (CZ), UNIPD (IT), York University (CA), Delft University of Technology (DE), Roma Tre University (IT)



PROJECT ID-CARD

Whole Project is divided into 8 components called “Work Packages”:

(in red WP/tasks led or carried out by CLGE)

WP	Title	Leader
WP1	Project management	GEOWEB
WP2 <i>Task 2.3</i>	User Requirements <i>User requirements for Surveyors</i>	CLGE <i>CLGE</i>
WP3	Architecture Design	SOGEI
WP4 <i>Task 4.2</i>	Pilot Projects <i>Pilot Projects Implementation</i>	CLGE <i>CLGE</i>
WP5 <i>Task 5.4</i>	Validation <i>Cadastral Surveyors and Professional’s Validation</i>	SOGEI <i>CLGE</i>
WP6 <i>Task 6.3</i>	Standardisation and Regulations <i>Cadastral operative procedures for services utilisation</i>	Delft University of Technology <i>CLGE</i>
WP7	Business development and dissemination	GEOWEB
WP8	Ethics requirements	GEOWEB



State of Progress & Key Findings

- General contingencies:
 - Past containment and current health situation in most of the EU countries has made it more difficult to coordinate and conduct the tasks of each contributor. Nevertheless, most of the activities could be delivered without too much delay. **However, priority was given to respecting deadlines, even if it meant having to go back more deeply into certain tasks.**
 - **To date**, the teams working on the project have demonstrated their capacity to produce and move forward. This is made possible by telework and remote exchanges between all the members of the consortium spread over the 4 corners of Europe.
 - But the next activities to be implemented (Pilot Surveys) could encounter difficulties in their delivery as the health crisis continues or reactivates.



State of Progress & Key Findings

Focus on the first activities carried out

- Scope of the WP2 - 1st Deliverable is to define **User Requirements** for the design and Development of the GISCAD-OV Cadastral Solutions.
- It **compiles and analyses the information collected from the whole Value Chain Stakeholders, in the 7 partner countries (CZ, DE, EE, FR, HR, IT, ES):** 1. Mapping and Cadastral Agencies, 2. Service Providers, 3. Professional Associations of Surveyors
- Objective: **identify single countries' functional and non-functional Requirements** for the design of the services.
- **The document is written and improved iteratively:**
 - the first version is used for the primary user requirements definition,
 - later refined versions will be used for the preparation of the surveying campaigns.



State of Progress & Key Findings

First conclusions and lessons learned

- A **huge effort of harmonization** of the information collected from the 7 countries was required to **ease comparability of the data** and facilitate definition of common User Requirements.

This results from:

- the **heterogeneity** of the profession's organizational modes
 - the **level of involvement** of surveyors in the **national cadastral information system**.
- **On-going phase (WP4) enables us to improve this point by conducting interviews** with the three components of the value chain, namely the Mapping and Cadastral Agencies, the Service Providers and the Professional Associations of Surveyors.



WP4 – Objectives & Methodology

The objectives of the WP are:

- Development, Integration and Test of the System and Service Architecture (Task 4.1)
- Cadastral Pilot Project Execution (Task 4.2)
- Infrastructure Monitoring Pilot Execution (Task 4.3)

Timing:

- Assembly, integration and testing is planned from Oct 20 – March 21
- OV takes place from March 21 – November 21 (W, C, E, → Centralized, Rome)
- Planning in function of weather, COVID-pandemic situation and travel limitations, etc.



WP4 - Tasks

Task 4.2: Pilot Implementation (TL - CLGE)

From April 2020 to November 2021

- Cadastral or property survey's following national regulation in 7 pilot countries
- Test different scenarios and environments
- Real local professional surveyors
- Surveying standard and data collection procedure
- Survey Results recording in a standard format
- Monitoring of the Galileo HAS availability in the test zones
- Monitoring of the ionospheric conditions
- Test report

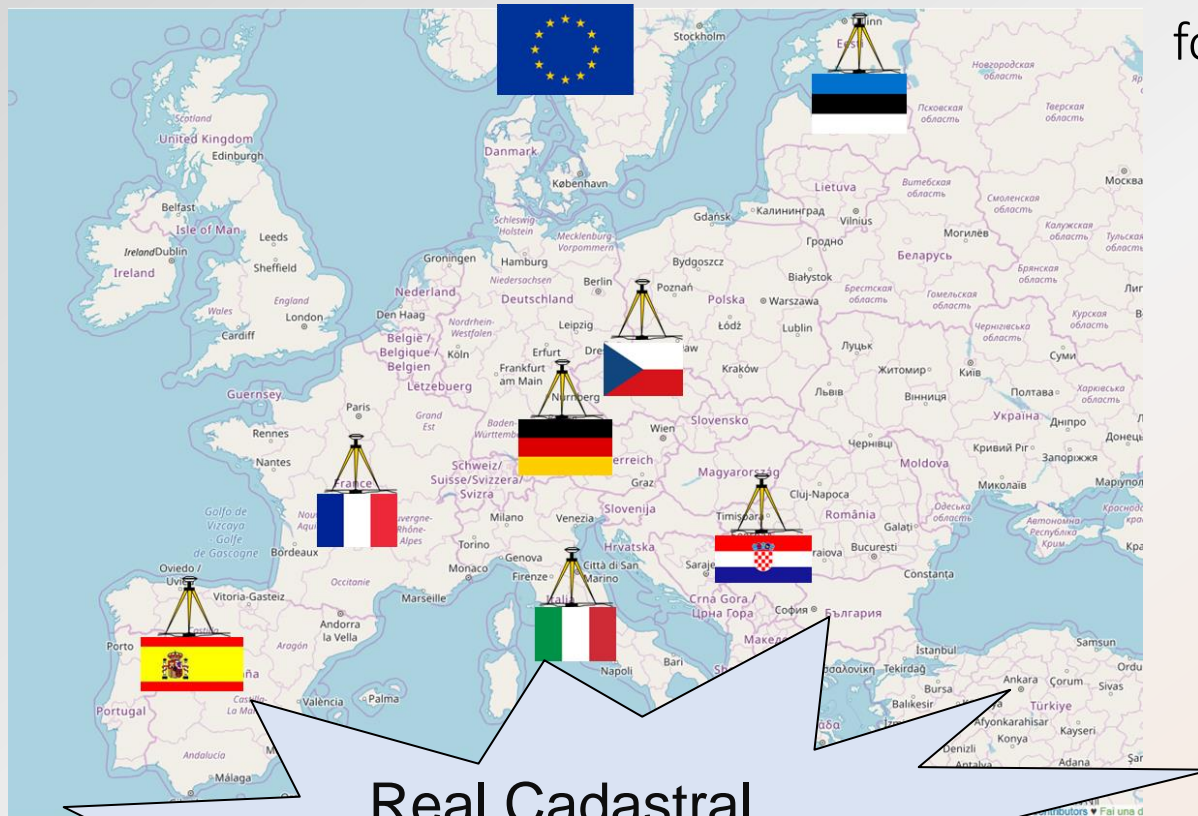


WP4 - Tasks

Task 4.2: Pilot Implementation

On-Field Validation in the following Countries:

1. Italy
2. Spain
3. France
4. Germany
5. Croatia
6. Czech Republic
7. Estonia



Real Cadastral Surveys in each of the Pilot Countries

Comparison between current techniques and GISCAD-OV proposed solution



WP4 - Survey Implementation

- 5 survey sites (urban, peri-urban, rural, high forest coverage...)
- Real or Simulated Cadastral update
- Survey region as 70 km radius around the capital city
- Custom built NovAtel Galileo HAS rover receiver and software
- Current RTK/NRTK and PPP/PPP-AR vs. GISCAD-OV



WP4 - Survey Implementation hints

- Relevant rover receiver binary files or RINEX files (@ 1s) will be logged
- Surrounding Reference Station RINEX files (@ 1s) and RTCM streams will be used
- Existing Ground Control Points or Cadastral Marker coordinates for comparison
- Real Cadastral survey, surveying all necessary element using typical surveying methods
- Relevant auxiliary points used for hidden Points surveying
- Test Report
- NMCA approval/not approval



WP4 – Deadlines for Tasks & Deliverables

Task 4.1 – Assembly Integration and Test

Pilot projects test plan (SOGEI) – Report / February 2021

Task 4.2 – Pilot Implementation

1. Survey campaign scenario > **August 2020**
2. Single countries surveyors' selection > **September-October 2020**
3. Survey site selection > **September-October 2020**
4. Analysing single countries Cadastral rules > **October 2020**

Pilot Projects Surveying Standard and Data Collection Procedure / May 2021

5. Start Test surveys > **Internal deadline Spring 2021**

Pilot Projects Test Report / November 2021

Task 4.3 – Infrastructure Monitoring and 3D Surveying

Infrastructure Monitoring and 3D Surveying / November 2021

