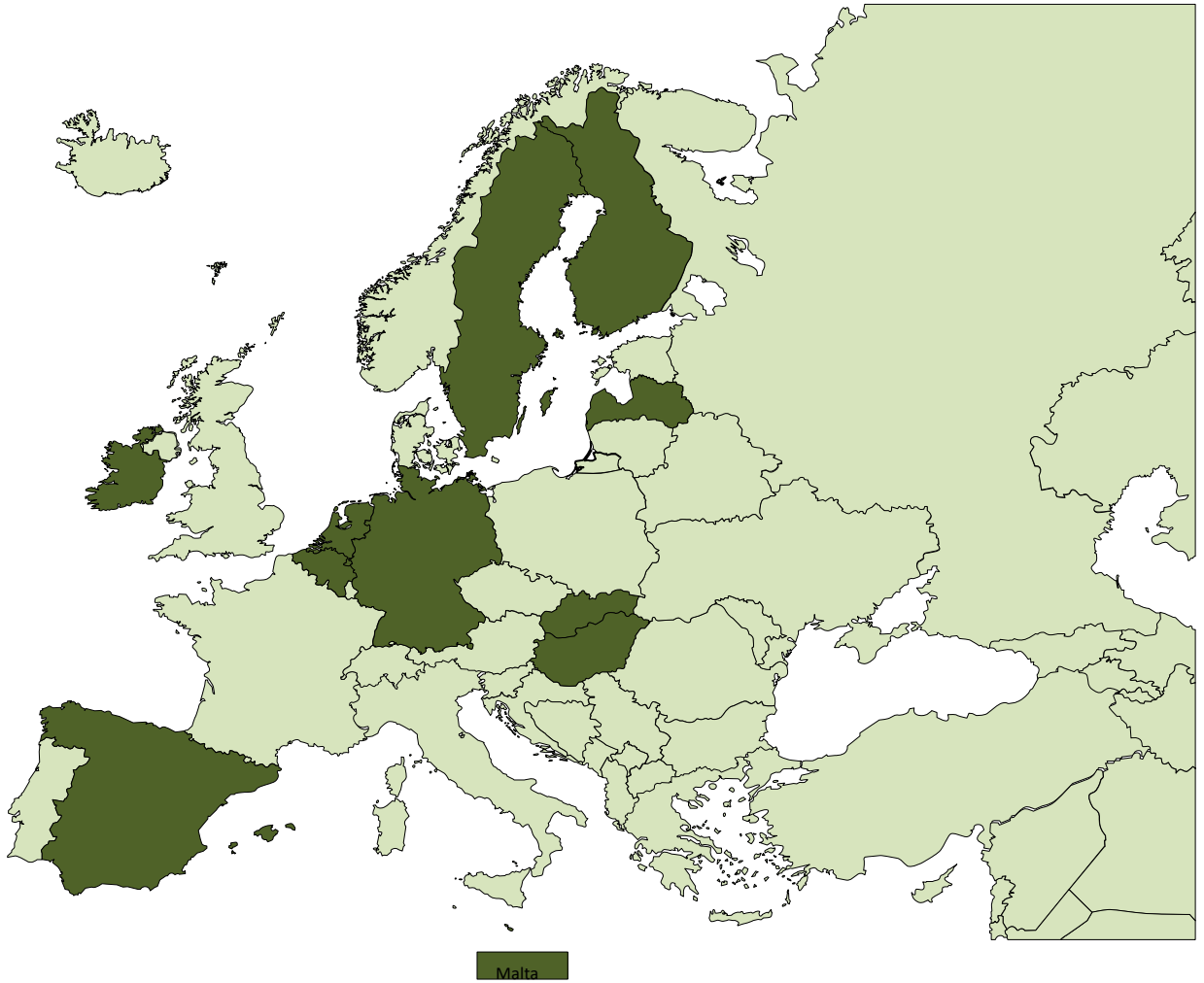
National Reports

2. April 2025, Virtual meeting

Prepared by Tamás Palya,
vice-chair of QKEN

12 National reports from 11 countries



National report (11+1)

National Geographic Institute, Belgium
From October 2024 to April 2025

Production challenge

- Increasing timeliness of the data with the same resources

Provisional solution

- More resources on updating reference dataset 1:10k
- Production cycles ➡ prioritization of updates
  - Systematic updates for small zones
  - Targeted thematic updates for larger zones
  - The above are client based
- Improved automated generalisation processes
- Quality control integrated in the production processes

National Geographic Institute, Belgium
From October 2024 to April 2025

Quality control:

- Aerial obstacles and DTM
- QC on demand

National Geographic Institute, Belgium
From October 2024 to April 2025

TEST Reference (unique ID)	DATA QUALITY ELEMENT	DATA QUALITY SUB-ELEMENT	Test Types		Time and Date of the start of the test		Name of the controller	Result of the test	Extra comments	Reference to the results
			Manual	Automated	Date	Time				
RO_PathSegment-Test_01	Age of the data	-	Yes	-	02/08/2024	09:00	Joren Van Gysegem	Most recent: 19/12/2023		
RO_PathSegment-Test_02	Completeness	Commission	Yes	-	09/07/2024	09:00	Annemie Scheppers	0.00%		
RO_PathSegment-Test_03	Completeness	Commission	-	Yes	02/07/2024	09:00	Jean-Yves Depasse	0		
RO_PathSegment-Test_04	Completeness	Omission	Yes	-	09/07/2024	09:00	Annemie Scheppers	0.63%		Results_QA_F46.gdb\Error_VC
RO_PathSegment-Test_05	Logical consistency	Conceptual consistency	-	Yes	02/07/2024	09:00	Jean-Yves Depasse	0.02%		Results_QA_F46.gdb\RO_PathSegment_pl
RO_PathSegment-Test_06	Logical consistency	Conceptual consistency	-	Yes	09/07/2024	09:00	Annemie Scheppers	0.00%		

Quality assessment:

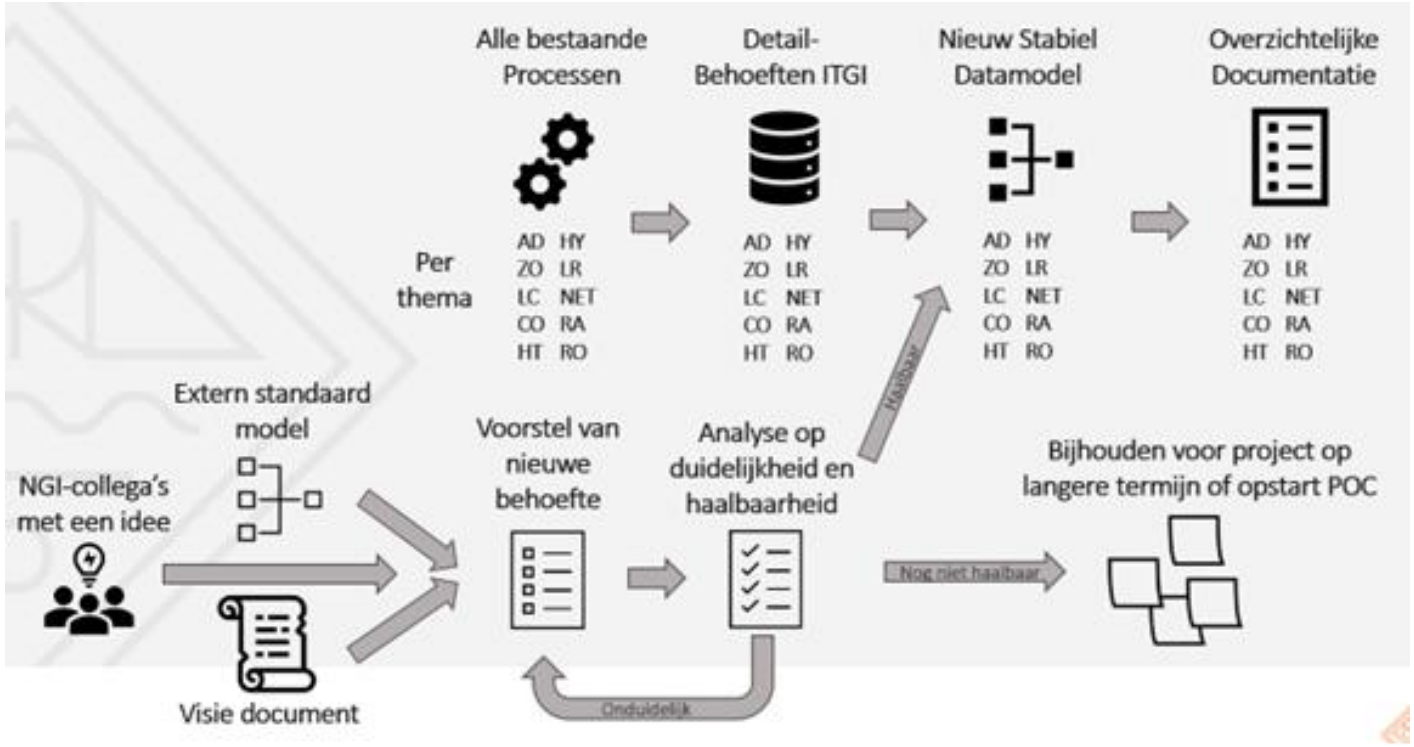
- Map sheets for military
- Specific themes
- External sources
- On demand

Specifications / selection criteria:

- Review of our specifications
- First step: integration of specifications created for external partner into our own specifications (Done!)
- Second step: continuous review of our specifications based on remarks from colleagues (Underway)
- Third step: Complete review of the specifications of our landcover data (Underway)

National Geographic Institute, Belgium
From October 2024 to April 2025

Project: Review of our data model



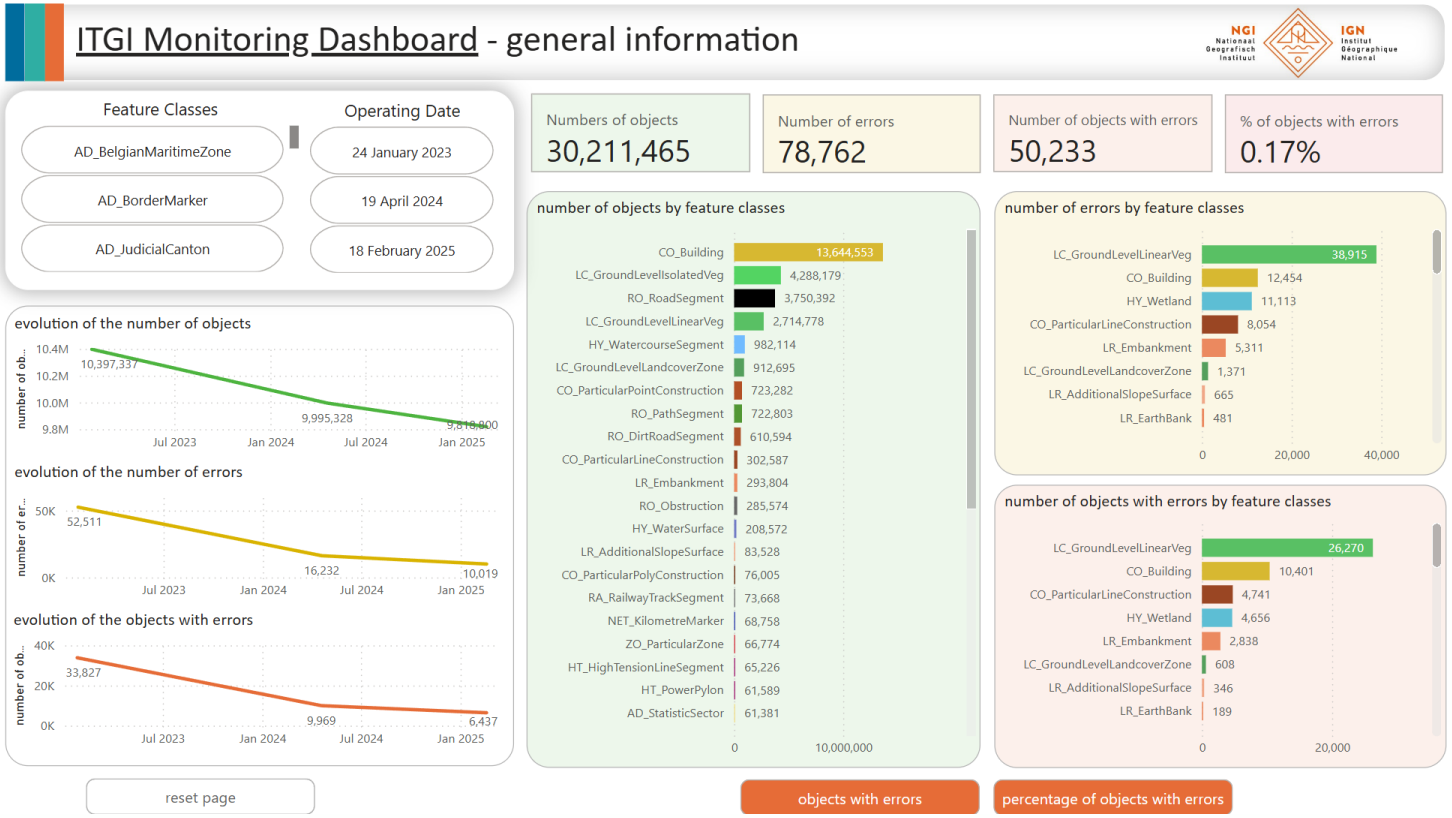
National Geographic Institute, Belgium
From October 2024 to April 2025

Project: Multiscale Seltec

- **Completely new way to store information about our selection criteria, specifications and definitions**
- **Object-central**

National Geographic Institute, Belgium
From October 2024 to April 2025

Project: Visual dashboard for representing quality of our data!



National Geographic Institute, Belgium
From October 2024 to April 2025

Other projects:

- Automatic QC of 1:250k, 1:50k, 1:25k
- Automatic QC of generalisation procedure 1:10k – 1:25k
- Deep learning implementation into our update procedure
- Working on a planning tool to organize our team’s work

National Geographic Institute, Belgium
From October 2024 to April 2025

No news

National Geographic Institute, Belgium
From October 2024 to April 2025

Visual dashboard?

National Land Survey, Finland
From 01/2024 to 04/2025

Development of the new Topographic database system

- Renewing data modelling based on user needs
  - Data analysis is increaslingly important compared to the cartographic products
- New technology solution
  - Based mostly on Open Source (QGIS, PostGIS,…)
  - Modular architecture
- Quality rules and tools for real-time checks
  - Operator gets immediate feedback errors, which must be corrected
  - Tools are available from GitHub
- Production starts in April
  - Data transformation from the old database to the new system is ongoing
  - Operators training is done simultaneously

National Land Survey, Finland
From 01/2024 to 04/2025

- **Renewing cartographic products and related tools and services**
  - **Following the renewal of the Topographic database system**

Map prodcuction definitions

- Cartographic databases (including generalization)
- Cartogprahic products and visulations
- Prints
- Open data and limitations in distribution

Service definitions

- New products in API's
- New products in dowload services
- Defnition of the change services
- HVD-/INSPIRE wms/wfs → OGC API Features
- Co-operation with security sector

Techical solutions

- Generalization service
- Visualization service
- Change information service
- Service Level Agreements
- Open Source usage and distribution

BKG, Germany
From 01/2024 to 04/2025

New Project for Raster Management

- Consolidation of DTM, DSM, ortho photos and topographic map workflows
- Turning away from different product owners for each product -> One project Group to manage all raster data to use synergies
- Establishing and refining data management roles: data steward, tester, workflow-manager, …

Replacing Oracle

- Replacement of the Oracle database for registering metadata
- New and improved workflow in Postgres, migration started in Q1 2025

Migration of more processes to FME-Server for more streamlined processes and better handling

Integration of redmine and agile methods (kanban boards & some aspects of scrum)

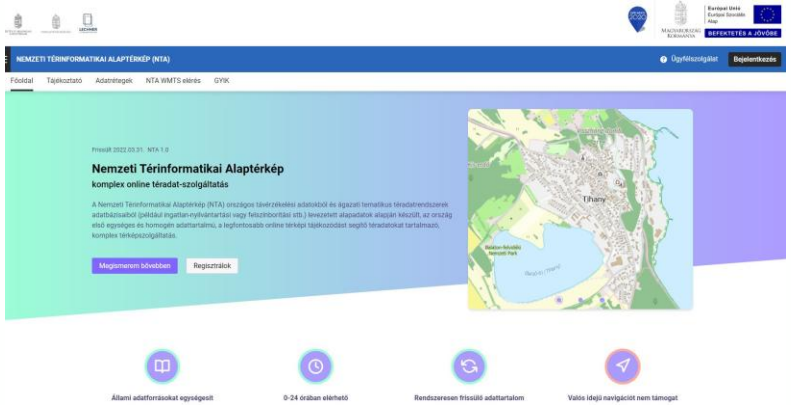
Lechner Non-profit Ltd, Hungary
From October 2024 to April 2025

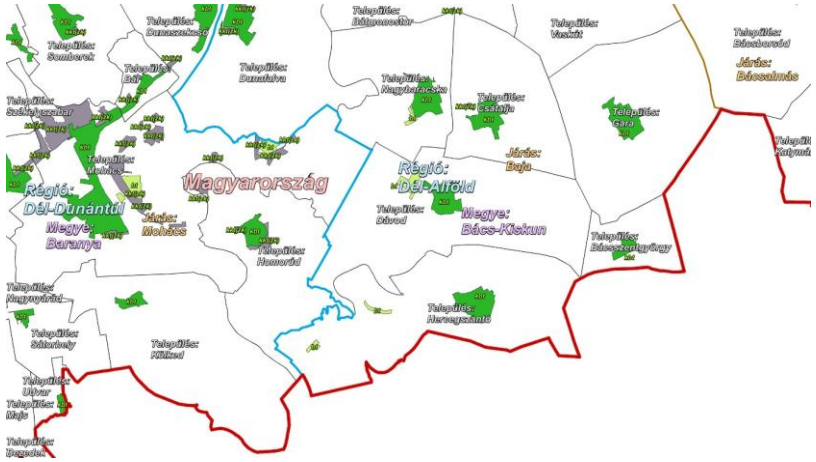
- News concerning Data Quality
  - Quality Control of the new national base map on the level of Hydro and transport network
    - Using of orthophoto (year: 2023) for the validation. It is preparing for whole country.
    - New orthophoto in 2024 western part of the country
- News concerning Quality management
  - There is no the continuation of general Quality management (according to ISO), but some departments have connection with IACS-LPIS, that needs ISO certificate. These departments have to be a quality assurance process.
  - In 2025, Lechner extended its membership of Hungarian National Committee for EOQ (https://eoq.hu/english/)
    - Support the raising the level of the Hungarian quality culture.
    - Enlargement and updating of the Hungarian quality professionals' skill.
    - Transfer of the up-to-date international quality knowledge and experiences towards the Hungarian professionals and customers.
    - Contribution to the Development of quality of the Hungarian products and services.
    - Dissemination of the Hungarian quality achievements on the international era.

Data Quality Update - Hungary

Lechner Non-profit Ltd, Hungary
From October 2024 to April 2025

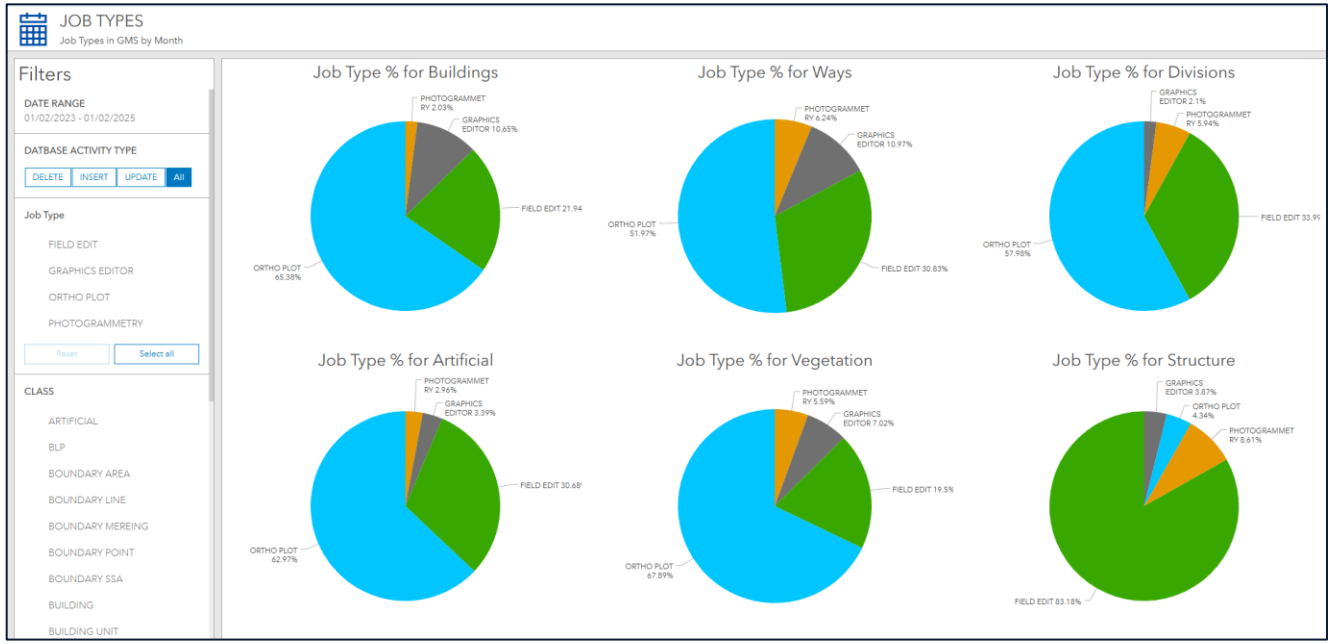
- Any other news that would be of interest for Q-KEN?
  - The National Geospatial Map of Hungary (NGMHu) 2.1 version entered into force
  - New thematic content: such as sport fields, solar parks, smaller airports, castles, refined geonames
  - Residential green spaces delineation are in focus considering the GreenData4All EU initiative and new Nature Restoration Law
    https://nta.lechnerkozpont.hu/
  - New structure of the Hungarian Administrative Units database in the close future
    - Basic unit: polygon -> line
    - Each line segment gets a corresponding value
    - Different levels
    - Similar to structure of EBM
    - Land parcel-based change detection helping county land offices provide data





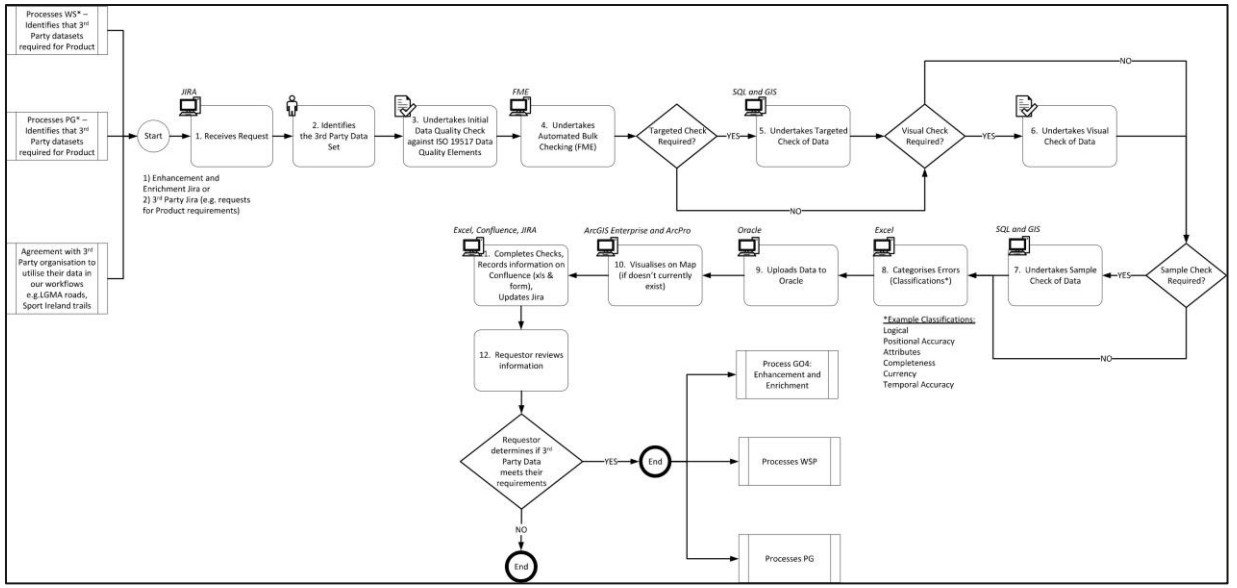
Tailte Éireann, Ireland
From 09/2024 to 04/2025

- **News concerning Data Quality**
  - **Review of external Data Quality Help Desk policies**
  - **Focus on Thematic Accuracy**
  - **New job type dashboard created**



Tailte Éireann, Ireland
From 09/2024 to 04/2025

- **News concerning quality management**
  - **Catalogue of 3rd party datasets used in products is being compiled by Data Governance team**
  - **Process maps for four high level Data Quality workflow & process map created in conjunction with external consultants for 4 Data Quality workflows:**
    - **Data Quality Help Desk**
    - **Data Enhancement and Enrichment**
    - **3rd Party Data**
    - **Data Quality Monitoring/ Dashboards**



Tailte Éireann, Ireland
From 09/2024 to 04/2025

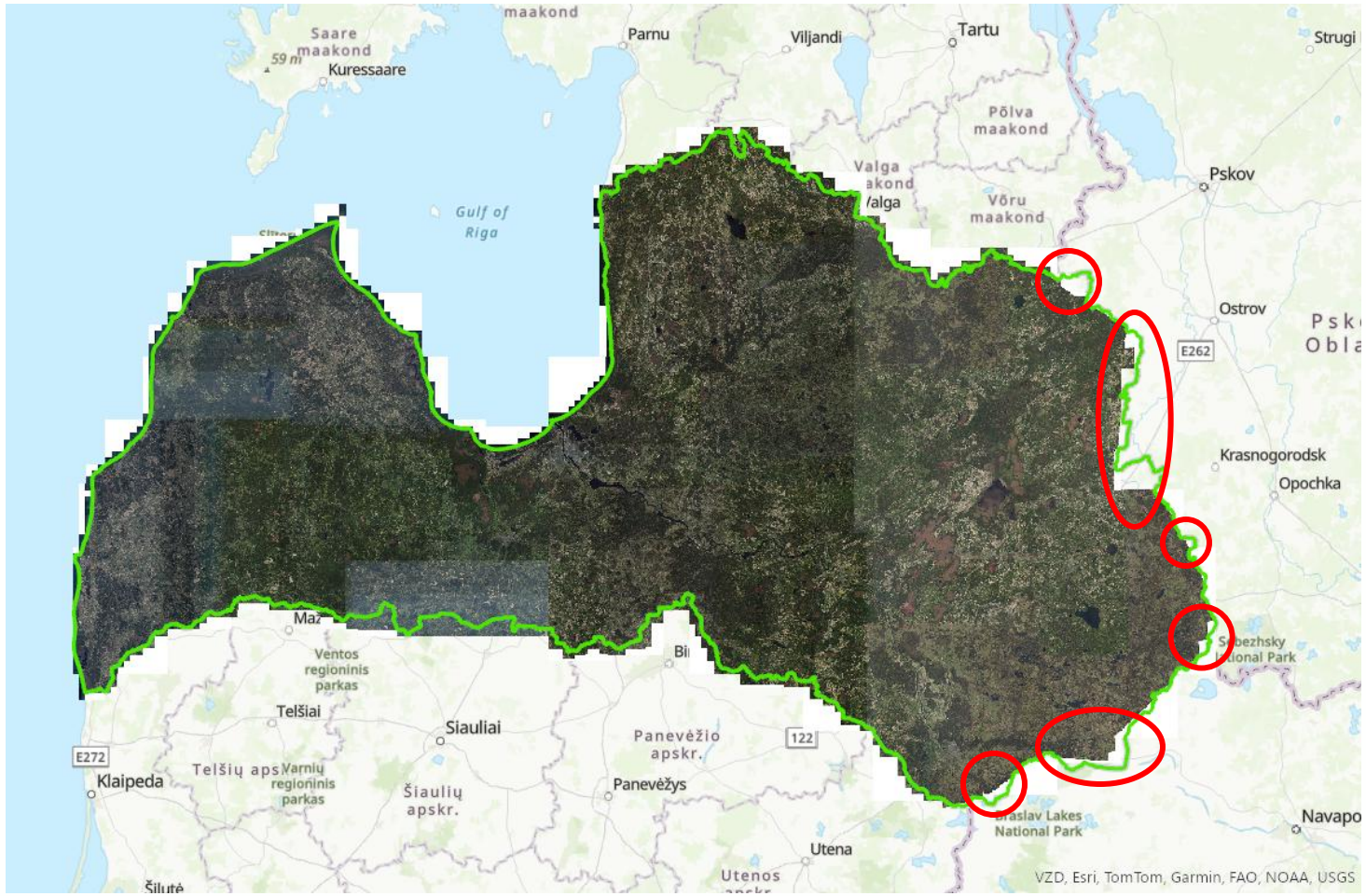
- Any other news that would be of interest for Q-KEN?
  - Plan for Implementation of a New National Map Specification
  - Implementation plan for compliance with the European Open Data Directive
  - TE Leasing Two New P.68 Vulcanair aircraft with Leica TerrainMapper-2 and CityMapper-2 aerial-mounted sensors.

Tailte Éireann, Ireland
From 09/2024 to 04/2025

- **Managing Data Quality in a Skin of the Earth Data Model?**

LGIA, Latvia
From October 2024 to April 2025

- News concerning Data Quality
  - The 8th coverage of Latvia with orthophotos has been recently finished
  - The data had to be processed in two parts, as there were issues with the data capture in the first half of 2024
  - Due to the geopolitical situation there are areas of missing data along the RU and BLR borders

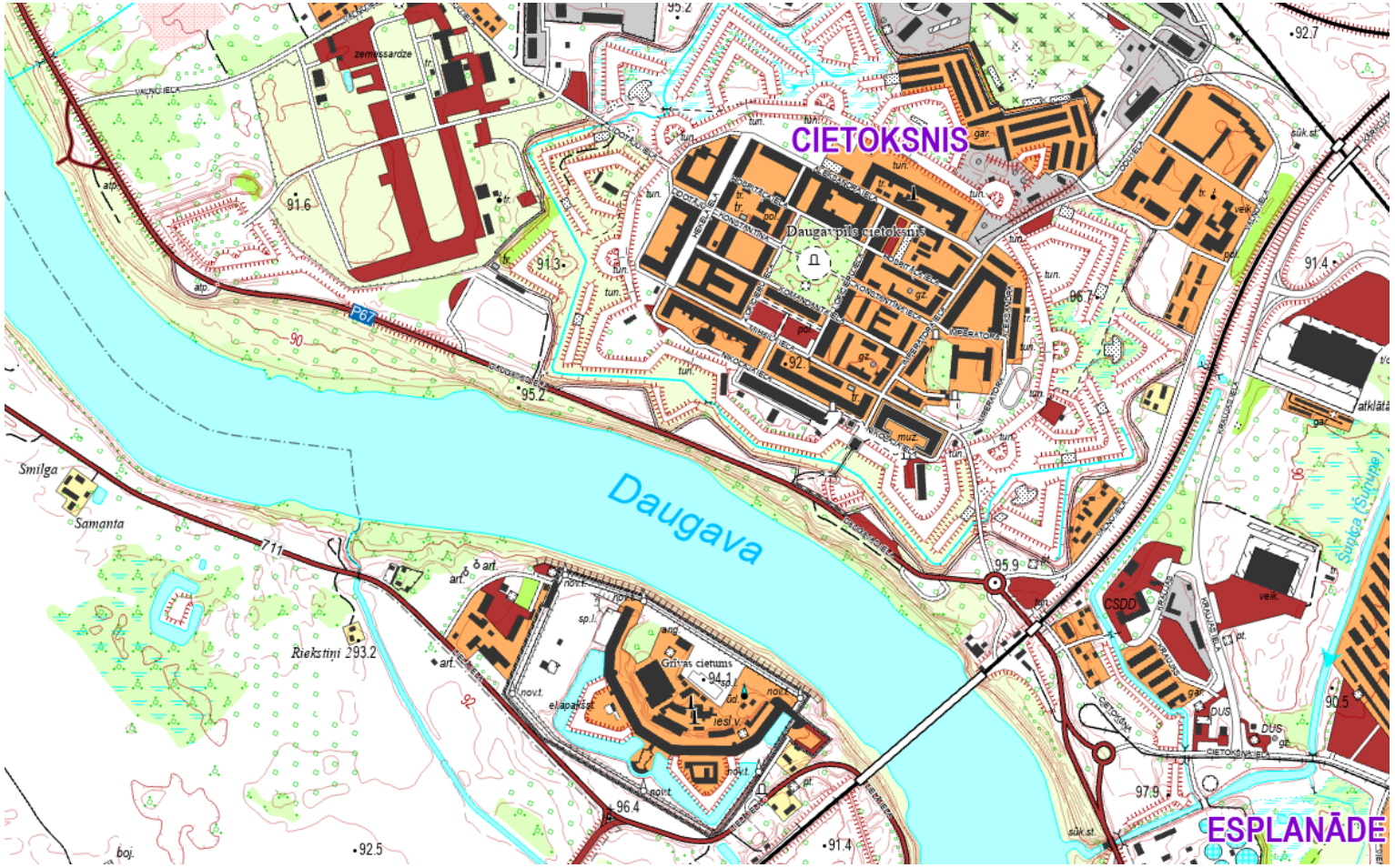


LGIA, Latvia
From October 2024 to April 2025

- News concerning Data Quality
  - The missing orthophoto data will be replaced with satellite imagery
  - The first part of the orthophotos that was processed in 2024, had a decent quality with errors in just 2.5% of pictures
  - The second part was even better with the amount of visual errors dropping to 1.3% of pictures
  - Even though the imagery was quite good, we had to deal with some unexpected software issues, as a batch process sometimes produced images with differing coordinate systems

LGIA, Latvia
From October 2024 to April 2025

- News concerning quality management
  - Development and testing of new quality management tools for the upcoming 5th cycle of Topographic map in scale 1:10 000 in progress
  - Production is due to start this summer

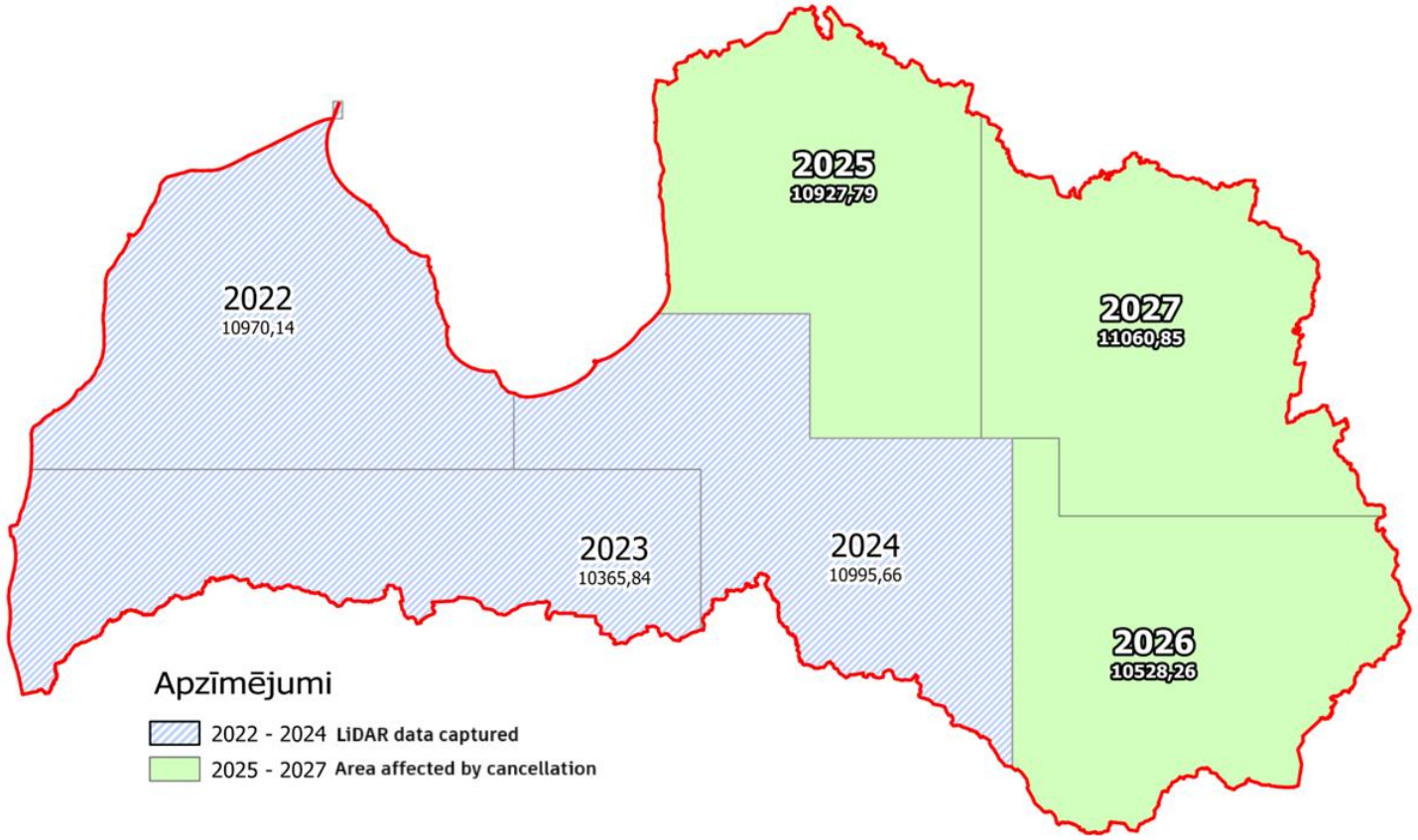


LGIA, Latvia
From October 2024 to April 2025

- News concerning quality management
  - Pre-set values for the data attributes should exclude the human error factor in spelling input
  - Pre-set conditions for attribute relations that forbid saving incorrect attribute combinations – less errors to find later
  - New set of data validation rules
  - No more splitting the objects per map sheets during production – all of the real life objects are merged in production database

LGIA, Latvia
From October 2024 to April 2025

- Any other news that would be of interest for Q-KEN?
    - The ongoing 2nd cycle of LiDAR data capture has been cancelled due to lack of funds after capturing roughly 50% of the country



LGIA, Latvia
From October 2024 to April 2025

- Topic I can offer for the next plenary
    - Conflicting issues of opening the data and security of the data

State Land Service, Latvia
From October 2024 to April 2025

- News concerning Data Quality/ Any other news that would be of interest for Q-KEN?/News concerning open data

  - Changes in the registration and accumulation of encumbrances in the Cadastre Information System from the 1 February of 2025
  - New process – intersection of the land parcels (polygons) depicted in the Cadastral Map with polygons of encumbered territories and registration of encumbrances in the textual part of the Cadastre Information System
  - More than 1 million land parcels are in the Cadastral Map
  - Information System of Restricted Territories was established in 2015 and the accumulation of data started at the end of 2016. As of February 1, 2025 has registered data on 2 million and 690 thousand encumbered territories
  - FME tools are used for intersection of polygons
  - Oracle procedure registers the resulting splits as encumbrances in the textual part of the Cadastre Information System
  - Conditions – encumbrances from 1m^2 are registered
  - Almost 2 million encumbrances were deleted and more than 3 million encumbrances were registered
  - Update - 4 times a year – all land parcels in the Cadastral Map
  - Each time - if new land parcel is registered or its boundaries are updated in the Cadastral Map
  - Encumbrances data available on data distribution and e-services portal www.kadastrs.lv
  - Deleted encumbrances on February 1 have been published on the Open Data Portal
  - Benefits – reduced financial burden for owners, more up-to-date encumbrances data for society and cadastral valuation

Organisation/Country
Period Covered

Planning Authority(PA), Malta

April 2025

Planning Authority(PA), Malta, April 2025

PA QC of basemap

- **ESRI topology rules tools**
- **Customised FME rules framework**
- **Visual checks**
- **Periodic positional accuracy tests**

Planning Authority(PA), Malta, April 2025

News concerning quality management

- The PA is constantly reviewing work processes to further speed up the updating process.

Planning Authority(PA), Malta, October 2024

Any other news that would be of interest for Q-KEN?

AI to enhance processes

This project aims to use AI to enhance the Planning Authority's (PA) process of updating Malta's national basemap. It will focus on detecting changes in building boundaries between 2018 and 2024 high-resolution aerial and satellite imagery using AI computer vision techniques. The project will address challenges such as shadow removal and object detection/classification to improve the accuracy and efficiency of basemap updates.

Planning Authority(PA), Malta, Nov 2024 - Apr 2025

Topic I can offer for next webinar

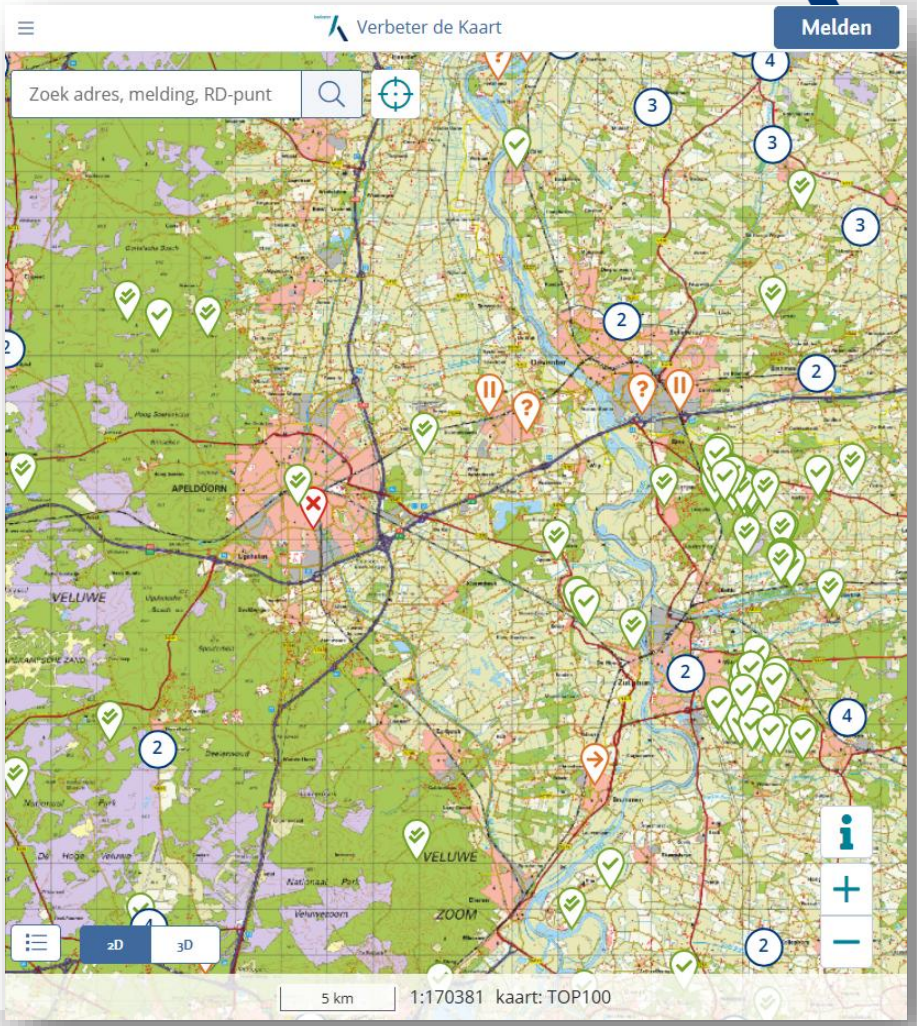
April 2025

Public feedback

Renaming feedback statuses for clearer communication:

Completed → Completed with change

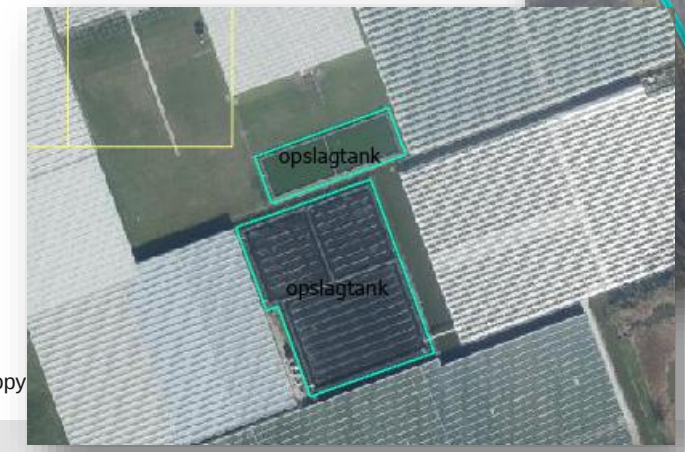
Denied → Completed without change

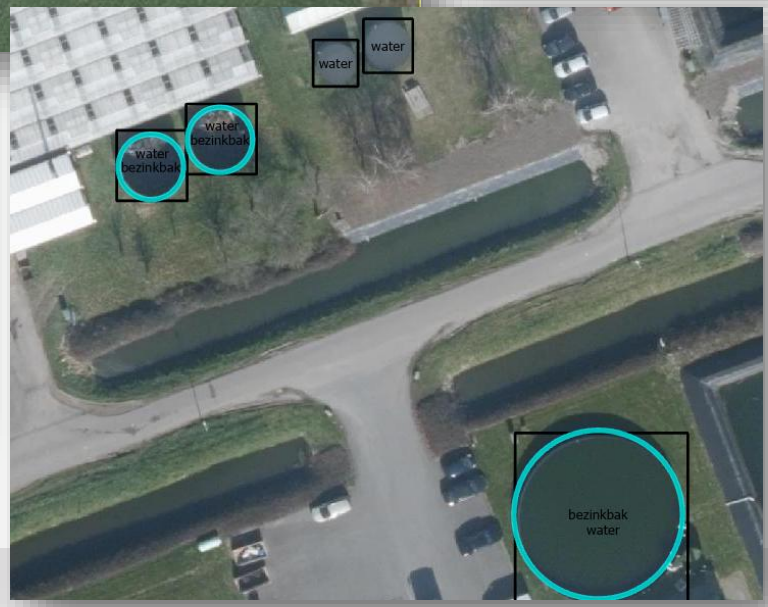


April 2025

Use of Geo AI and aerial images for

- Storage tanks
- Greenhouses
- Forest paths





April 2025

Use of Geo AI and aerial images for

- **Storage tanks**

291.360 results
But not all relevant

April 2025

Continuing project: Renewal of our topographic products. Using data from other Key Registers to produce the Key Register Topography while maintaining the current high quality (project BRT.next).

Question:

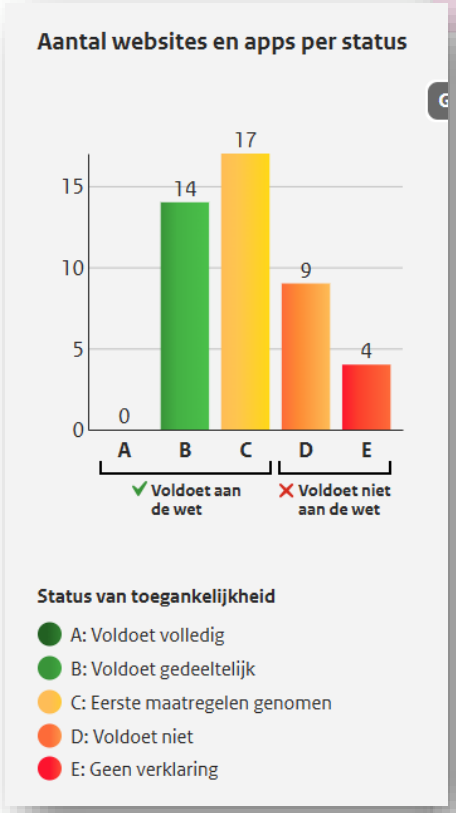
We will produce our new topographic maps using other registrations (Key Registers, other government sources, but also other external sources) with different quality and temporal accuracy.

Is there experience in other countries with determining the quality of a composite registration? How do you do that?

April 2025

Web Content Accessibility Guidelines (WCAG)

Work in progress…



Ministerie van Binnenlandse Zaken en Koninkrijksrelaties

Toegankelijkheidsverklaring | Register verklaringen | Inloggen

Home › Register van toegankelijkheidsverklaringen

Register van toegankelijkheidsverklaringen

Op deze pagina vind je een overzicht van alle gepubliceerde verklaringen van overheidsorganisaties. Wil je een bepaalde organisatie of verklaring vinden? Dan kun je beter in het Dashboard DigiToegankelijk zoeken. Het dashboard zal dit register op termijn vervangen.

Zoeken op instantie, naam of URL

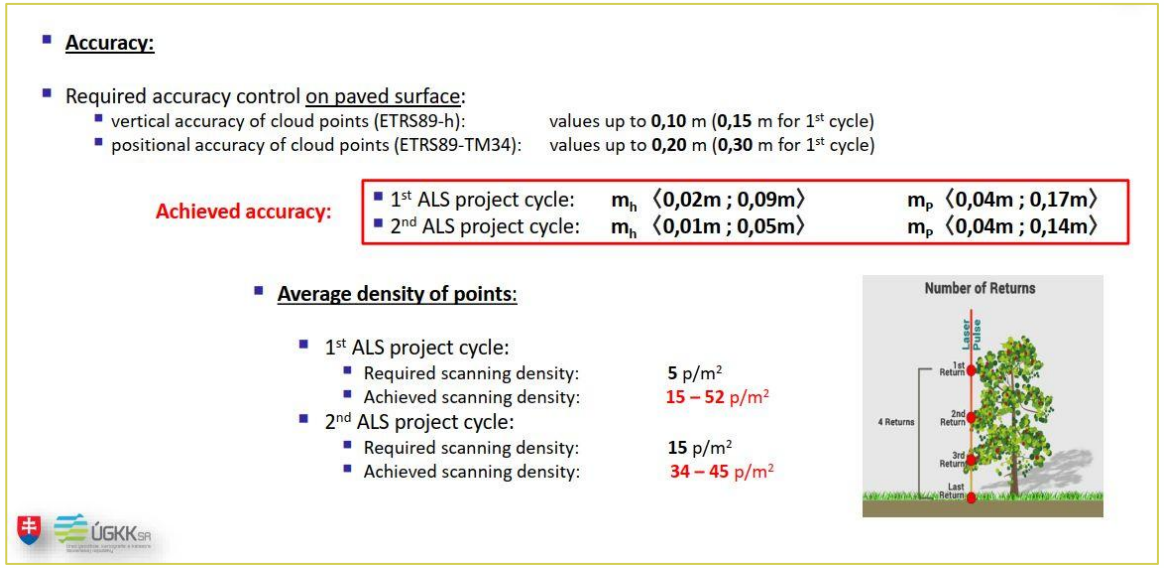
kadaster | Zoeken | Reset

Overheidsinstantie	Naam	Status	Laatst gewijzigd	Verklaring
Dienst voor het kadaster en de openbare registers	KLIC-viewer	B - Voldoet gedeeltelijk (onderbouwing toereikend)	23-10-2024	Bekijk verklaring
Dienst voor het kadaster en de openbare registers	Nationaal Georegister (NGR)	C - Eerste maatregelen genomen	24-12-2024	Bekijk verklaring
Dienst voor het kadaster en de openbare registers	NL Maps	C - Eerste maatregelen genomen	03-03-2025	Bekijk verklaring
Dienst voor het kadaster en de openbare registers	Topotijdreis	C - Eerste maatregelen genomen	03-03-2025	Bekijk verklaring

Geodesy, Cartography and Cadastre Authority of the Slovak Republic, Slovakia
From October 2024 to March 2025

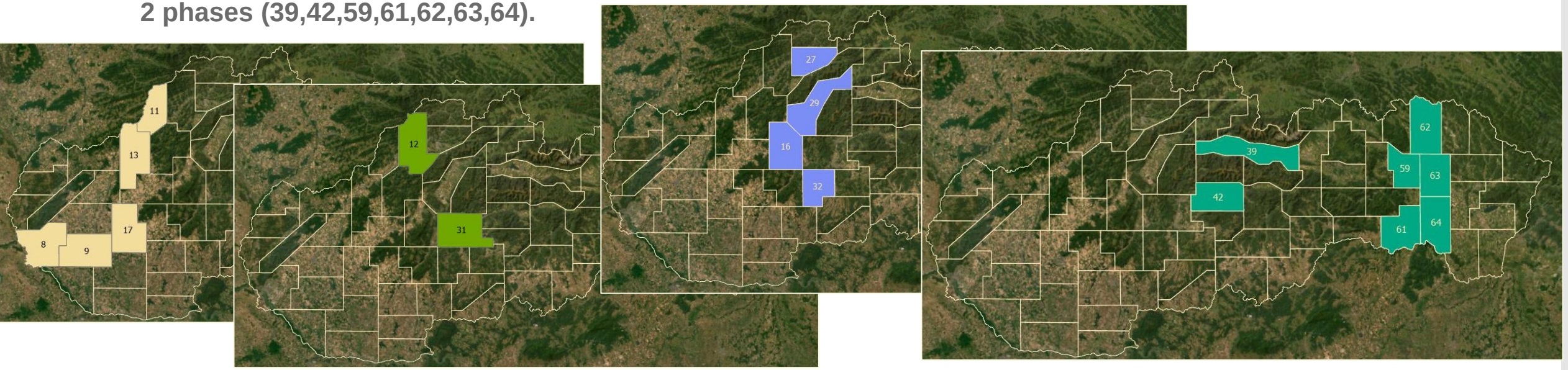
- **News concerning Data Quality**
  - **Regarding to the Airborn Laser Scanning project we are conducting research on point cloud classification using deep learning. Currently, we are testing and analyzing the classification results of Buildings, Vegetation and Wiring. For this purpose, we are using the LP360 and ArcGIS Pro software.**
  - **Another ongoing research project focuses on data refinement based on the new-generation Digital Terrain Model(DTM 5, DTM 6 and DSM).**

- **Comparison of Accuracy between the 1st and 2nd cycles of the ALS project**



Geodesy, Cartography and Cadastre Authority of the Slovak Republic, Slovakia
From October 2024 to March 2025

- **News concerning quality management**
  - **From the last QKEN Plenary Meeting in October 2024 until the end of the year, within the second project cycle of the Airborn Laser Scanning project (2022 – 2026) we accepted 5 locations (8,9,11,13 and 17). At the end of March 2025, we accepted 2 more locations (12,31) and we are currently waiting for the data from the developers for the next locations (16,27,29,32). This year we are opening 7 new locations for competition in 2 phases (39,42,59,61,62,63,64).**



Geodesy, Cartography and Cadastre Authority of the Slovak Republic, Slovakia
From October 2024 to March 2025

- Any other news that would be of interest for Q-KEN?
  - How visualization / dashboards is progressing in your organisation?
  - Current projects
  - Etc.

On January 5, 2025, the whole National Mapping and Cadastral Agency - its subordinate institutes (Geodetic and Cartographic Institute and the Research Institute of Geodesy and Cartography in Bratislava), as well as all 75 cadastral offices - suffered a serious cyberattack. We are gradually restoring our services for state institutions, banks, and the public.

Our public service MAPKA (a map-based information search platform/tool) is available in a limited mode. We are gradually restoring all functionalities of this tool.

Instituto Geográfico Nacional (IGN), Spain
From October 2024 to April 2025

- News concerning quality management
  - Application of the UNE 0080 specification, ***Government, Management and Data Quality Management Assessment Guide***, in the update of the transport network (UNE is the Spanish standardization body)

    https://www.une.org/encuentra-tu-norma/busca-tu-norma/norma?c=N0071383
  - This specification provides a standardized model to evaluate an organization's maturity in data management. It allows organizations to analyze their internal procedures, identify weaknesses, and establish action plans to improve the quality and reliability of data.
  - It establishes levels of capability:
    - Level 0: incomplete. The process is not implemented.
    - Level 1: complete. There is evidence of the process being carried out.
    - Level 2: managed. The process is managed and the work products are established, controlled, and maintained.
    - Level 3: established. An adapted process based on a standard process is used.
    - Level 4: predictable. The process is managed using quantitative techniques.
    - Level 5: innovated. The process is continuously improved to meet current and future business objectives.
  - For each level, there is a predefined set of processes. It is evaluated whether the organization applies them and, accordingly, achieves a level of capability.

- # News concerning quality management

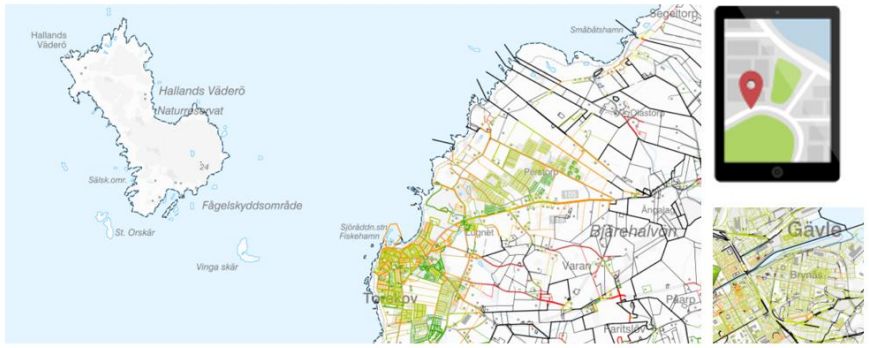
  - Lantmäteriet is participating in the digital training "EuroSDR EduServ23 Spatial Data Quality" in June 2–13 2025.

  - Participating with two individuals who work with Information architecture and activities within the field of Data Quality.

    - To learn more about:
      - Basics of spatial data quality management
      - Quality assurance and evaluation (including measures)
      - Methods
      - Visualization
      - Crowdsourcing

- **News concerning Data Quality**

Action plan for Lantmäteriet's work to improve location accuracy for property boundaries (boundary points) in the register map.

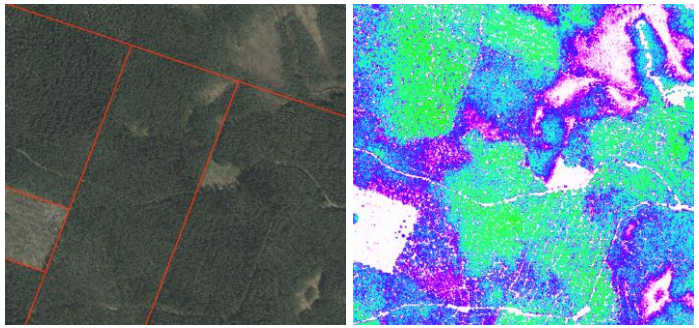


Smart countryside

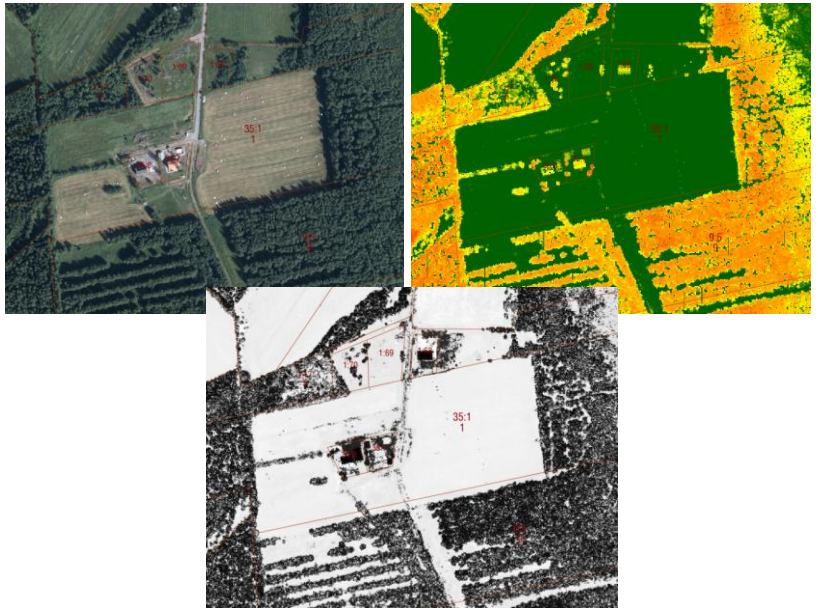
• News concerning Data Quality

Property boundaries – ”metes and bounds” vía intensity raster from lidar data.

Differences in tree height via normalized digital surface model (nDSM)



Property boundaries - More accurate assessments with lidar data?



POC for more correct location for property boundaries in forest

- **Task:**
  To test if different combinations of geographical data (for example different types of processed lidar data) can support us in getting more correct locations of property boundaries in forest.
  And also test solutions together with forest owners and the Swedish Forest Agency.
- **Our Aim:**
  Gain an understanding of the society´s benefit that arises from implementing the work methodology
- **Expected result:**
  - analysis of the benefits for forestry
  - technology choices and advantages and disadvantages
  - cost estimate
  - benefits for forestry
  - other benefits that can be described

- # Any other news that would be of interest for Q-KEN?

Thesis by Linda Aldén, Industrial PhD student, Lantmäteriet, 2024

Coordinate-Defined Real Property Boundaries : Analysis of conditions and proposals for reform of the Swedish boundary system

- Sweden have app 3.5 million real properties and 8.9 million boundary marks
  Legislation on boundary markings according to priority
  - Marking on the ground
  - Cadastral dossiers including maps and coordinates
  - Legal claims or agreements

- The main objective is to replace the physical mark with the coordinates as a border mark – co-ordinates exists also today in some cases. The thesis describes how it will be done, not if it is possible. Successive transition to a new system with coordinates

- Link with abstract in English: https://www.diva-portal.org

• Any other news that would be of interest for Q-KEN?

1. Cadastral system development

- Development of a new handling system for cadastral processes
- Development of an interface to the real property register

2. High Value Data

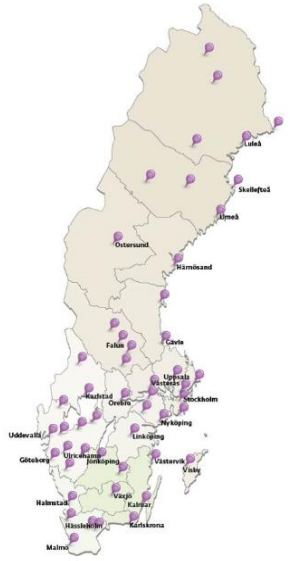
- Implemented

3. Upcoming tasks

- Register of condominiums
- Comprehensive changes to the legal framework of the real property register
- Crime prevention and law enforcement – how can Lantmäteriet (and others) do more

4. Government investigations

- Digital coordinates for the definition of real property boundaries
- Responsibility for cadastral work in Sweden in the future



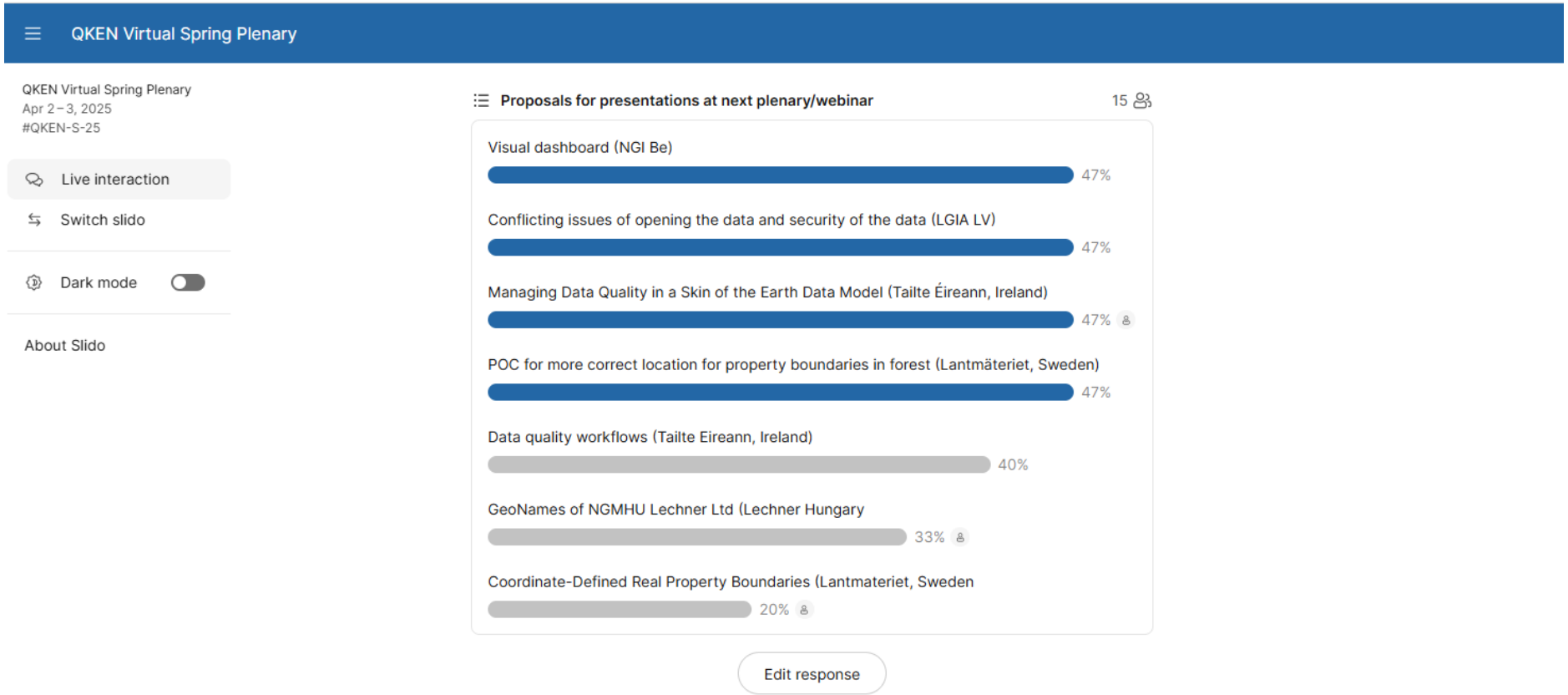
- # Topic I can offer for next webinar

  - **Erik Nilsson, POC for more correct location for property boundaries in forest**

Proposals for presentations at next plenary/webinar

Subject	Organisation
Visual dashboard	NGI, Belgium
Conflicting issues of opening the data and security of the data	LGIA, Latvia
Managing Data Quality in a Skin of the Earth Data Model	Tailte Éireann, Ireland
GeoNames of NGMHU Lechner Ltd	Lechner, Hungary
POC for more correct location for property boundaries in forest	Lantmäteriet, Sweden
Coordinate-Defined Real Property Boundaries	Lantmäteriet, Sweden
Data quality workflows	Tailte Éireann, Ireland

Result of the voting on sli.do



Thank you for your work!