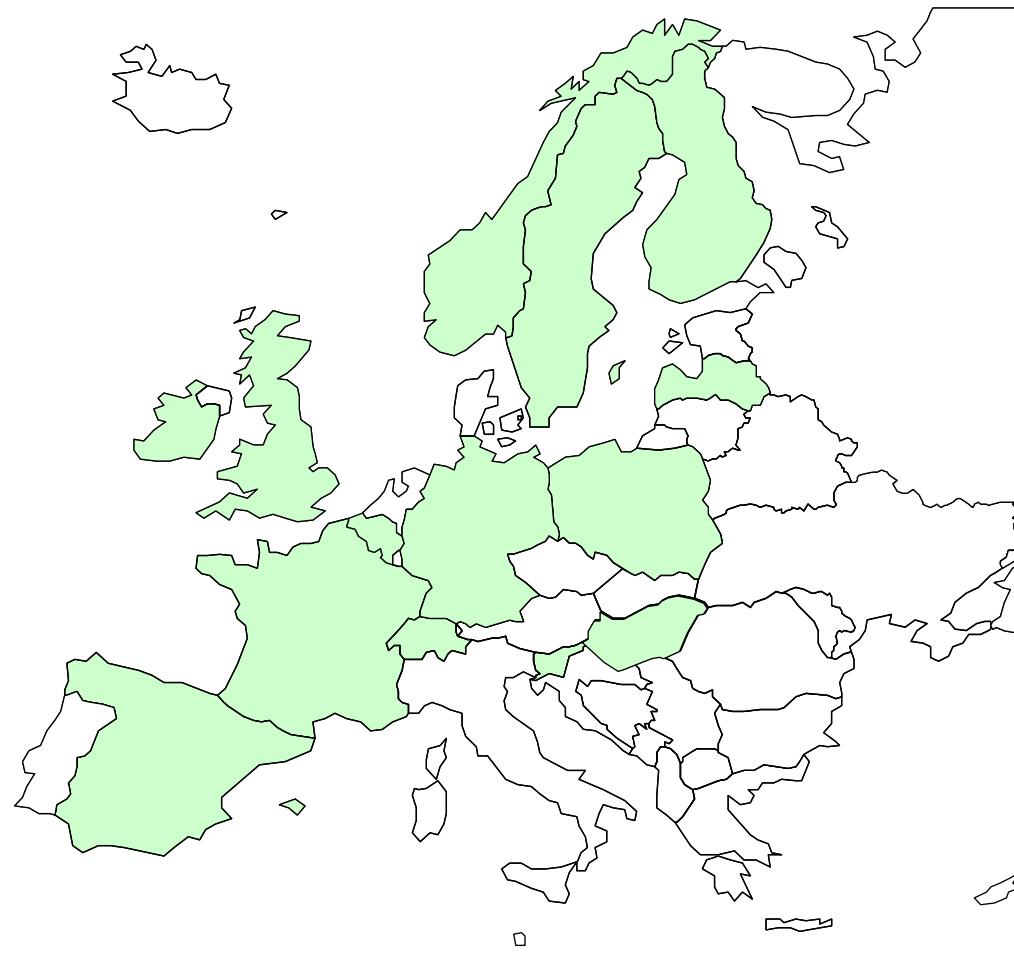


# National Reports

## Quality Knowledge Exchange Network

Madrid 14 October 2015





# 15 National reports



# National Geographic Institute, Belgium

## From January 2015 to September 2015

- News concerning quality management
  - Quality control process for the updating of our roads and buildings (scale 1:10k) is set
  - A method to determine the positional accuracy of historical orthophotos has been studied and developed



# The National Land Survey of Finland

## From Feb 2015 to September 2015

- The National Topographic Database (NTDB) –project started
  - The nation wide NLS Topographic Database and the large scale municipal data sets will be merged together to a unified data model and database
    - The municipal data sets are covering only a small fraction of the country
    - There will therefore be large scale (more detailed, more accurate) city area data and smaller scale whole country data in the same data model
    - Large scale data generalized to maintain the whole country data
    - CityGML used
    - Only maintained large scale city area data accepted
  - Also many state authorities are participating in the data production
  - The first phase of the project will end at 31<sup>st</sup> December 2018
  - The proceeding of the project is based on voluntary co-operation between organizations



# The National Land Survey of Finland

## From Feb 2015 to September 2015

- Quality and the National Topographic Database project
  - The quality matters more in a shared production environment
  - A National Database Quality sub project “QUALITY MODEL” is currently open
  - The project will produce a new quality system for topographic data
    - ISO standards 19157 (Geographic information -- Data quality) and 19158 (Geographic information -- Quality assurance of data supply)
    - There will be a new National Topographic Database Quality model
    - It will consist of three National Topographic Database quality model documents:
      - Topographic Data Objects
      - Aerial And Ortho Images
      - DEMs
      - Aerial Laser Point Cloud
  - There will also be a quality check software module to be used for incoming data checking



# The National Land Survey of Finland

## From Feb 2015 to September 2015

- The National Topographic Database essentials
  - The aim is to make the NTDB to be the basic topographic data register
    - Concentrating in maintaining only those objects which are really needed – public bodies being the main user sector (Homeland security needs have a high priority)
  - The project policy is to eat the elephant in small pieces
    - Then evaluate the outcomes and learn from the results in biting the next mouthfuls
  - 3D and 4D are natural features in NTB
  - Universal ID for (almost) all objects is a base element in managing the history information of the objects
    - Linked data already tested in NLS (a study in FGI)
  - Municipalities not able to maintain their large scale data are doing that in co-operation with the NLS
    - Eg. Laser scanning and aerial images



# Institut national de l'information géographique et forestière (IGN), France

## From January 2015 to October 2015

- News concerning Data Quality

- updating of IGN documentary corpus for the quality of geographic, forest and environmental information taking into account the evolution of standards (vector, grid and statistics) : a draft of the general introduction and vector data is nearly finished.

➡ See next slide



# Institut national de l'information géographique et forestière (IGN), France

## From January 2015 to October 2015

### 1 Introduction

- 1.1 Overview
- 1.2 Quality management and product quality
- 1.3 Product specification
- 1.4 Repository of the conformity of the production unit
- 1.5 Repository improving the series of data sets

### 2 Epistemology of geographic information

- 2.1 Theory of tacit and explicit knowledge
- 2.2 Theory of knowledge "macroscope"
- 2.3 The specific characteristics of products of "geographic information"

### 3 Elements of quality geographic data

- 3.1 The general case: the elements set out in the specifications
- 3.2 The specific kernel: the elements of data quality as a representation

### 4 The evaluation of the quality of the geographic data

- 4.1 Relations between the elements of quality
- 4.2 Importance of the order in the assessment of quality
- 4.3 Objectives of the evaluation
- 4.4 Definition of an evaluation methodology
- 4.5 Reading the data, "visual" inspection
- 4.6 Verification of formats and value domains (conceptual data model)
- 4.7 Automatic tests on compliance with rules and constraints
- 4.8 Comparison with considered as true data by pairing

### 5 Make-account of the quality of geographic data

- 5.1 The observations synthesized as
- 5.2 Observations in geo-localized form
- 5.3 The report of qualification of a data set (unit of production or delivery)
- 5.4 Metadata on the quality of a data set
- 5.5 The report of product qualification (for a series of data sets)

### 6 Compliance data

- 6.1 Definition of conformity
- 6.2 Special case of geographic information

### 7 Quality of vector data

- 7.1 Indirect evaluation
- 7.2 Direct assessment
- 7.3 Study of an example



# Institut national de l'information géographique et forestière (IGN), France

## From January 2015 to October 2015

- **News concerning quality management**
  - **work on social responsibility (but not directly ISO 26000)**
    - identify the stakeholders (can be reused for the 2015 version of ISO 9001),
    - actions plan in social responsibility,
    - update the Code of Ethics of the IGN,
    - writing a non-financial report for the IGN with the help of students from the Sorbonne University (without any obligation in France for a state company).
  - **new 2015 version of ISO 9001 probably in 2017 (but we shall try in 2016).**



# BKG, Germany

From January to October 2015

- News concerning Data Quality
  - “National geo-information strategy” defines strategic aims across all political levels (federal, state and municipal)
    - quality and diversity of geo-information are driven by user needs
    - geo-information will be documented and published transparently
    - > users may read up on quality and suitability for their use case



# Ordnance Survey, Great Britain

## From January 2015 to September 2015

- News concerning Data Quality
  - Names Consolidation Programme is now complete. Approximately 400,000 changes were made to the database
  - Water Network went live in March. We've had some good initial feedback on the data but there is more work to do
  - Now working on projects to improve the quality of the functional sites product and also prepare the data for an improved topographic product
  - Heard today about a 1Integrate for ArcGIS which may offer something for the group.



# Ordnance Survey, Great Britain

## From January 2015 to September 2015

- News concerning quality management
  - Standardisation of reporting procedures and test results is ongoing. Lack of manpower is restricting this activity
  -



# Ordnance Survey, Great Britain

## From January 2015 to September 2015

- Any other news that would be of interest for Q-KEN?
  - Ordnance Survey became a Government owned company in April. This is likely to bring a more commercial focus to the organisation
  - New CEO appointed – Nigel Clifford
  - Re-shape of the senior team. Peter ter Haar and Ian Nunn have left the organisation and a new Chief Finance Officer and HR Director will arrive shortly.
  - David Henderson is currently filling Peter's role and will be the contact for EuroGeographics.



# FÖMI, Hungary

## From February 2015 to October 2015

- News concerning Data Quality
  -
- News concerning Quality management
  - ISO (17025) accreditation of Measurement Lab of GPS calibration. On-site inspection is finished. First-year review of the accreditation is in progress.
  - Reconstruction of ISO 9001 and ISO 27001 (information security) is in progress in 2015.
- Any other news that would be of interest for Q-KEN?
  - Word Quality Forum of the International Academy for Quality will be held in Budapest on October 26-27, 2015. See on the web: <http://www.iaq2015.com/>
- Topic I can offer for next webinar or meeting
  - Hungarian Building Monitoring project



# Ordnance Survey Ireland, Ireland

## From January 2015 to October 2015

- News concerning Data Quality
  - Over 300 rules (server side) being applied on each job before updating Prime2 database (Radius Studio)
  - Most of these rules can be run against the data on the editor (1Edit) while job is still active
  - Program for Enhancement & Enrichment of Prime2 started
    - Building Form/Function & English\_Name\_Value
    - Sixth/Seventh Class Ways
    - ‘Unused’ geometry being applied appropriately
    - Named Ways (National & Street)



# Ordnance Survey Ireland, Ireland

## From January 2015 to October 2015

- News concerning quality management
  - Further development of Radius Studio rules
  - Enhancement & Enrichment
- Any other news that would be of interest for Q-KEN?
  - Data model for Tailte Éireann
  - Heighting of Prime2 objects using best available National DTM
  - Incorporating Statute & Admin boundaries in Prime2



# The Norwegian Mapping Authority, Norway

## From 01 2015 to 09 2015

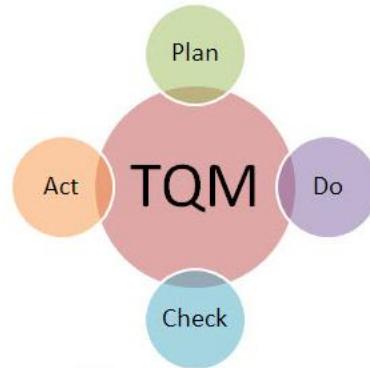
- News concerning Data Quality
  - National Geodata-standard (ISO19157) revised (January, 2015) – establishes principles for describing the quality of geodata, control and report, thus ensuring data quality in order to use, maintain and manage geodata.
  - Working on implementation of the quality-standard in large scale data
- SOSI (the Norwegian SOSI-standard – the general feature catalogue and national data format) Product Specification for N50 Kartdata – revised (September, 2015)
- SOSI Product Specification for N250 – N5000 Kartdata – under revision



# The Norwegian Mapping Authority, Norway

## From 01 2015 to 09 2015

- News concerning quality management
  - Ongoing implementation of ISO 27001 (Information Security Management), deadline 01.01.2017
  - Using TQM (Total Quality Management) in 2015



# The Norwegian Mapping Authority, Norway

From 01 2015 to 09 2015

- Any other news that would be of interest for Q-KEN?
  - developed “Rett i kartet” (“Fix The Map”) web service (<http://www.rettikartet.no/>) – users can propose new/modify/delete object
  - considering all available data sources, each case is processed accordingly, and map data will be updated within one week.



# State Land Service, Latvia

## From January 2015 to September 2015

- News concerning Data Quality
  - Riga Municipality continued to clarify addresses - 2500 addresses are registered in the State Address Register and in the National Real Estate Cadastre Information System (Cadastre)



# State Land Service, Latvia

## From January 2015 to September 2015

- Any other news that would be of interest for Q-KEN?
  - SLS developed and implemented software for Restricted Territories Information System
  - SLS developed and implemented Archive document digitization process
  - SLS provides new opportunities in data distribution and e-services portal [www.kadastrs.lv](http://www.kadastrs.lv). Customers have access to a wider textual and spatial data volume on real property free of charge and customers have possibility to order services electronically
  - The Ministry of Economy has developed the Building Information System, which is being planned cooperation with the Cadastre to ensure data exchange and service integration



# GUGiK/Poland

January 2015 – September 2015

- The most important project in Poland is the Integrated Information System of Real Estate (ZSIN).
  - We finished Phase 1 of ZSIN: the implementation of the modernization of cadaster data for selected units (58 = 15.3% of the total) and the conversion data to the new application schema (the converted data have a proper quality defined in law). One of the aims of this modernization is the elimination of analog maps.
  - For 30 counties the work has been completed, and for the other 28 districts it is nearly completion.
- Phase II (until 2018) - an increase in the number of participating counties, allowing the creating of a map. The evaluation of the errors in the data is absolute when we take data from different databases and place it onto one map.



# GUGiK, Poland

From January 2015 to September 2015

- We have:
  - Topographic databases (BDOT)
  - Basic networks register
  - Boundaries register
    - for the whole country
- in the new structure defined in law
- Topic I can offer for next webinar
  - After the election (25.10.2015)



# Geodetska uprava Republike Slovenije, Slovenia

## From January 2015 to September 2015

- News concerning Data Quality

- The quality control of state transformation model for transforming databases (particularly cadastral) from the "old local" D48\_GK to the "new ETRS" D96\_TM coordinate system was performed.

SMA selected ~70 test areas where verifies the quality of the existing transformation model with GNSS measurement. If quality control shows larger deviations additional GNSS survey will be carried out in critical areas. These additional points will be used to produce a new, improved model. Currently, the survey was carried out at approx. 2500 "cadastral" points where the coordinates are well known in the both coordinate systems.

- Data quality model for new topographical database, compliant to INSPIRE, was set up. Guidelines and requirements from INSPIRE and ISO 19157 were taken into account.
- The procedure for quality control of street data, reported from local communities, in the procedure of recording data in the Cadastre of Public Infrastructure, was updated. Public Authority of Infrastructure was more firmly involved in this activity.



# Geodetska uprava Republike Slovenije (SMA), Slovenia

## From January 2015 to September 2015

- **News concerning Data Management**

- SMA continues maintaining data on the properties that are under its jurisdiction in the context of their regular duties - management and maintenance of real estate records. It began to revised the register of real estate data. It prepared a proposal for the simplification of the actual uses of the parts of the buildings and the arrangement of the data model of the real estate register. The proposal excludes the data, for which it is established that the owners do not maintain (eg. Access to cable TV, the type of heating, vacation end housing, the presence of kitchens, bathrooms, toilets, ...). It is also proposed to unify the data structure for all parts of buildings, irrespective of the actual use of parts of the buildings. The proposal is under coordination. Also SMA prepares studies and pilot implementation to improve the positional accuracy of the land cadastre. Implementation of improving the positional accuracy of the Land Cadastre is planned within the so called project e-space that is planned within Operational Programme for the Implementation of the EU Cohesion Policy in the period 2014 – 2020.
- SMA is also preparing an amendment of Real Estate Recording Act, which will contribute to improving the quality of real estate register data. The proposal will regulate the management and maintenance of the register of real estate including information on ownership.



# ICGC, Catalonia – Spain

## From February 2015 to October 2015

- **News concerning Data Quality**

### ICGC Topographic Data Bases

- New GIS environment for the production of the 5K Topo DB based on Geomedia (ID's, lifecycle, customized tools for 3D).
- Finished and approved the technical specifications of the new 25K model (DQ & MD records according to updated ISO standards).
- Goals on process till first term of 2016:
  - New environment ready to be ISO 9001 certified.
  - Design of a 1K Topo DB in 3D (LOD 2). Working group in progress (members of the local and regional Administration)

### ICGC Orthophoto series

- Analyzing how to transform Orthophoto and DTM series to Orthoimagery and Elevation INSPIRE models.
- Working to increase the rate of Orthophotos published in the same year as they are captured and produced (17% in 2014).



# ICGC, Catalonia – Spain

## From February 2015 to October 2015

- **News concerning quality management**

### Achievements

- Obtained ISO 9001 certificate including new environment of the 25K Topo DB based on Geomedia.
- Inclusion of risk identification in the Management Review Report 2014: Moving towards ISO9001:2015.

### Goals in process

- Gap analysis in order to know how to adapt the quality management system to the new ISO 9001:2015:
  - Context of the organization: Focus area, stakeholders groups, costumers needs and expectations.
  - Risk management: Contingency plan.
  - ...



# ICGC, Catalonia – Spain

## From February 2015 to October 2015



- Any other news that would be of interest for Q-KEN?
  - Application of the Catalan Transparency Law

Terms of use (CC-BY), service charter, response time to request for information from citizens...
  - Facilitation of INSPIRE Thematic Cluster #3
    - *Elevation, Orthoimagery, reference systems, Geographical grids*  
<https://themes.jrc.ec.europa.eu/>

Please continue promote the participation of your organizations in this INSPIRE implementation activity!
    - *Workshop on transformation of coverage-based data themes and WCS held in Barcelona on 29 and 30 September 2015.*  
<https://themes.jrc.ec.europa.eu/news/view/36826/inspire-ken-thematic-cluster-3-workshop-on-transformation-of-coverage-based-data-themes-and-wcs>



# ICGC, Catalonia – Spain

## From February 2015 to October 2015



- **Topic I can offer for next webinar**

- Inscription of data sets in Cartographic Register of Catalonia: Technical specifications as a source for making the quality test data guide.
- Updated quality controls for Topographic Data Bases (5K & 25K) in the new GIS production environment.



- **News concerning Data Quality**

- **ELF WP4 - Data Quality Validation**

- Testing ArcGIS Data Reviewer using INSPIRE compliant data from IGN:

- Administrative boundaries finished.

- Hydrography and transport network under process

- Seven WMS-Inspire compliant INSPIRE QoS (Quality of Services): Performance ( $t < 5\text{sg}$ ) and Availability ( $> 99\%$ )

- **Data Quality Validation in Topographic Bases**

- In the Geographical Reference information Data Bases (GRI) of Hydrography, Transport Network, Populations, and Topographic Data Bases (25k and 100k), a new methodology visual quality control has been designed based on sampling, and its corresponding management of the results (conformant/not conformant).

- Automatic rules for GRI developed and implemented in an ad-hoc tool.



- **News concerning quality management**

Training course about Project Management according PMI and programming a Quality Continuous Improvement (Lean, Six Sigma) training program.

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

- **In Cartographic and Topographic Bases**

Pilot process for the Cartographic Data Base at 200k and the Topographic Data Base at 100k for updating data in the cloud with PostGis. This project includes the implementation of the Quality Control System in the cloud. It's possible to introduce changes from several operators directly in the database and run the Automatic Quality Control. We want to extend this methodology to others products.



# Lantmäteriet, Sweden

From February 2015 to September 2015

- News concerning Data Quality
  - On going work to improve the quality test for our data and how to visualize and report the result
  - Test to use Data reviewer in ArcGIS for the ELF themes
- News concerning quality management
  - A project is started to analysed the process for managing the integrated information system of Real Estate to improve the quality.



# Lantmäteriet, Sweden

From February 2015 to September 2015

- Any other news that would be of interest for Q-KEN?
  - The Swedish handbook for Data product specification will be available in English in November 2015.
  - A workshop with presentations and discussions (in English) on the topic ISO 19131 will be held in Stockholm 24 November.
  - New contact for Eurogeographic is now Mikael Lilje, and a network for the persons involved is now established.



# Bundesamt für Landestopografie swisstopo , Switzerland

## From 01 2015 to 09 2015

- News concerning Data Quality
  - Improvement in QA-Tools
  - More and more use of QA-Tools in production workflow
- News concerning quality management
  - Consequent use of checkservices for product integration in geodatawarehouse.
  - improvement in automatic testing of exported products after new software release



# Bundesamt für Landestopografie swisstopo , Switzerland

From 01 2015 to 09 2015

- Any other news that would be of interest for Q-KEN?
  - New version of Notification of map amendments or changes in geodata  
<http://www.swisstopo.admin.ch/internet/swisstopo/en/home/apps/revatlas.html>  
<https://map.geo.admin.ch/?topic=swisstopo&lang=de&bgLayer=ch.swisstopo.pixelkarte-farbe>
  - Growing Geodatabase with new and past versions of raster data and vector data.



# Proposals in Madrid for presentations at next plenary

Subject	Organisation
A method to determine the positional accuracy of historical orthophotos has been studied and developed	National Geographic Institute, Belgium 1 votes
Updating of IGN documentary corpus for the quality of geographic, forest and environmental information taking into account the evolution of standards	IGN, France 4
Work on social responsibility	IGN, France 6 votes
Reconstruction of ISO 9001 and ISO 27001 (c) is in progress in 2015	FÖMI, Hungary 1
Pilot process for the Cartographic Data Base at 200k and the Topographic Data Base at 100k for updating data in the cloud with PostGis. This project includes the implementation of the Quality Control System in the cloud	IGN, Spain 4 votes
New GIS environment for the production of the 5K Topo DB based on Geomedia (ID's, lifecycle, customized tools for 3D).	Catalonia 6 votes
Quality control process for the updating of our roads and buildings (scale 1:10k) is set	Belgium 8 votes
Names Consolidation Programme is now complete. Approximately 400,000 changes were made to the database	GB 3 votes



# Proposals in Madrid for presentations at next webinar

Subject	Organisation
Hungarian Building Monitoring project	FÖMI, Hungary
Inscription of data sets in Cartographic Register of Catalonia: Technical specifications as a source for making the quality test data guide.	ICGC, Catalonia – Spain
Updated quality controls for Topographic Data Bases (5K & 25K) in the new GIS production environment.	ICGC, Catalonia – Spain
Suggestion: “Fix the map” topic	Sweden (proposer)
Suggestion: work on social responsibility	Sweden (proposer)

