



Spatial Data Quality

Instructors:

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Target audience: Staff of national mapping/cadastral agencies and private companies, researchers, academics, and students

Preconditions: Participants are expected to be familiar with the geospatial information systems (GIS) and geospatial data processing tools. Experiences in geospatial data acquisition and geospatial database management are welcome.

Course objectives: The geospatial landscape has experienced a significant transformation, with the volume of geolocated data expanding rapidly. Geospatial data now plays a vital role in sectors such as urban planning, environmental management, and transportation. However, data quality can vary widely, from highly precise and detailed datasets to more basic maps that may contain inaccuracies or outdated information. The importance of spatial data quality cannot be overstated. Key aspects like accuracy, completeness, and consistency are critical in minimising errors and maximising the value of spatial data across various applications.

For national mapping and cadastral agencies, maintaining high standards of spatial data quality is crucial for ensuring the dependability of the information used in decision-making. The concept of "fitness for purpose" further emphasises the need to evaluate how well data meets specific user requirements. Understanding and assessing these quality elements is essential for geospatial professionals.

To gain better insights into spatial data quality, EuroGeographics Quality KEN and EuroSDR will organise a course that is fully dedicated to this topic.

Topics tackled: spatial data quality, spatial data quality management, quality elements, quality evaluation, quality assurance, innovative approaches to data quality evaluation and assurance

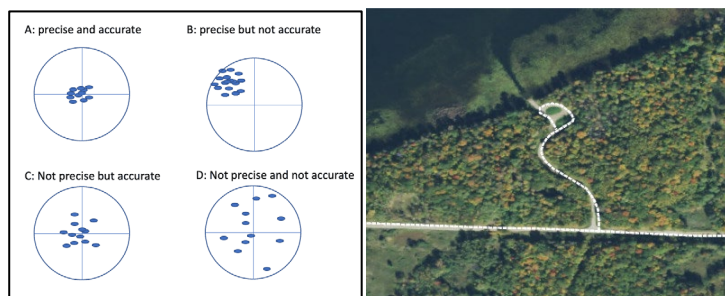
The course is structured into four modules, spread over two weeks. Each module includes a lecture covering relevant theories followed by a practical tutorial, lasting 2-3 hours in total.

Module 1: Spatial data quality basics

The introductory presentation on fundamentals of spatial data quality will be followed by a set of questions and answers related to basic terms/definitions of spatial data quality, sources of possible geospatial data errors, and elements of spatial data quality.

Module 2: Spatial data quality management

Spatial data is acquired from various sources, which can introduce uncertainty in multiple forms. Uncertainty in spatial data refers to the lack of exact knowledge about the proper location, attributes, or relationships of geographic features due to various sources of error, imprecision, or variability. It can arise from limitations in data collection, processing, representation, and interpretation. The module is dedicated to the specification of spatial data quality, using standard spatial data quality elements.



Data quality assessment – positional precision and accuracy.

Module 3: Quality assurance and evaluation

This module continues Module 2, where spatial data quality assessment and valuation will be presented using selected datasets.

Module 4: Visualisation of quality in dashboards & crowdsourcing

A successful quality dashboard is a tool within a quality management regime. The module is dedicated to the presentation of the main principles for the visualisation of spatial data quality in dashboards, with some good practices.

Data quality assessment & visualisation



(Mertens K., 2022).

To pass the course, a participant is required to complete assignments for at least two of the four modules.