

An ideal way of integrating the spatial dimension into the statistical production chain - Does it exist?

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Outline

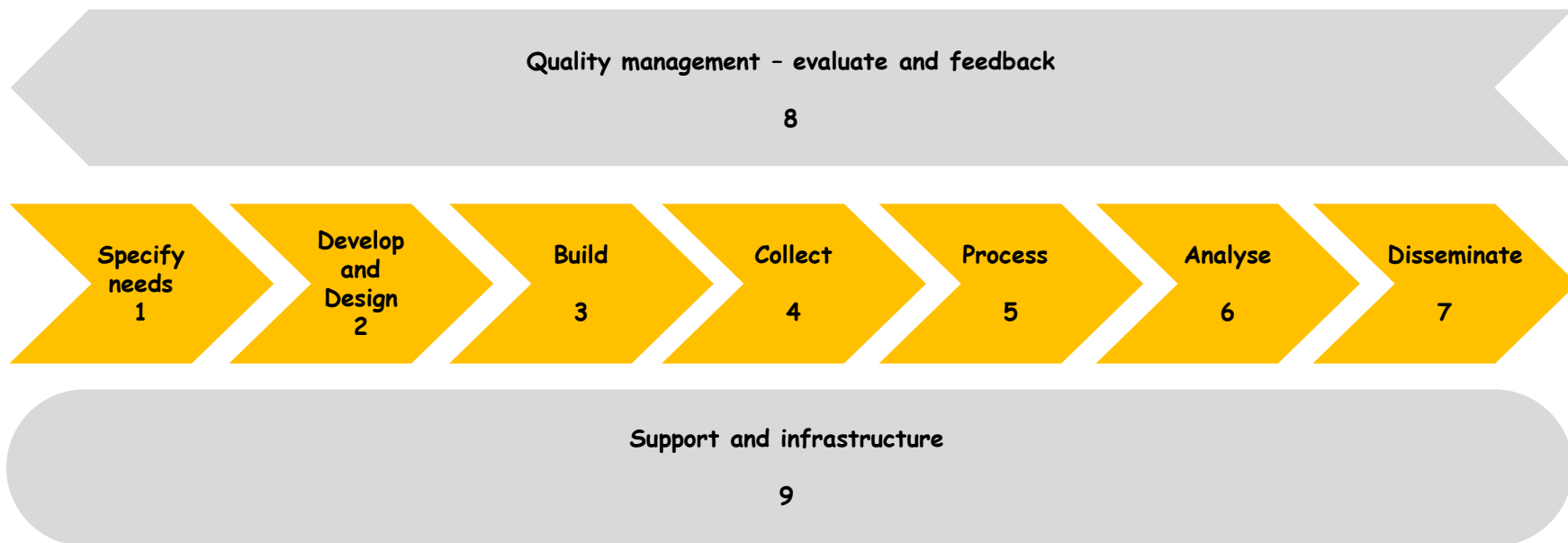
- Scope of presentation
- Production chain models: Statistical and GIS
- Registers and GIS in Statistics Bulgaria and Norway
- Status of integration of models;
 - Statistics Bulgaria
 - Statistics Norway
- Desired GIS activity in the statistical production chain
- What similarities do we find?
- Experiences from other NSIs and lessons- learnt approaches



Scope of the presentation

- There is not one single ideal approach for all National Statistical Institutes (NSIs) for integrating the spatial dimension into the statistical production chain.
- The main reason is differences and various premises among NSIs.
- The aim with this presentation is to present two NSIs (Bulgaria and Norway) with various settings and describe their differences, premises as well as similarities.
- Is it possible to identify:
 1. Any hindrances in the process of integrating GIS?
 2. Any possible solutions to these by learning from other organisations?

Statistical production chain



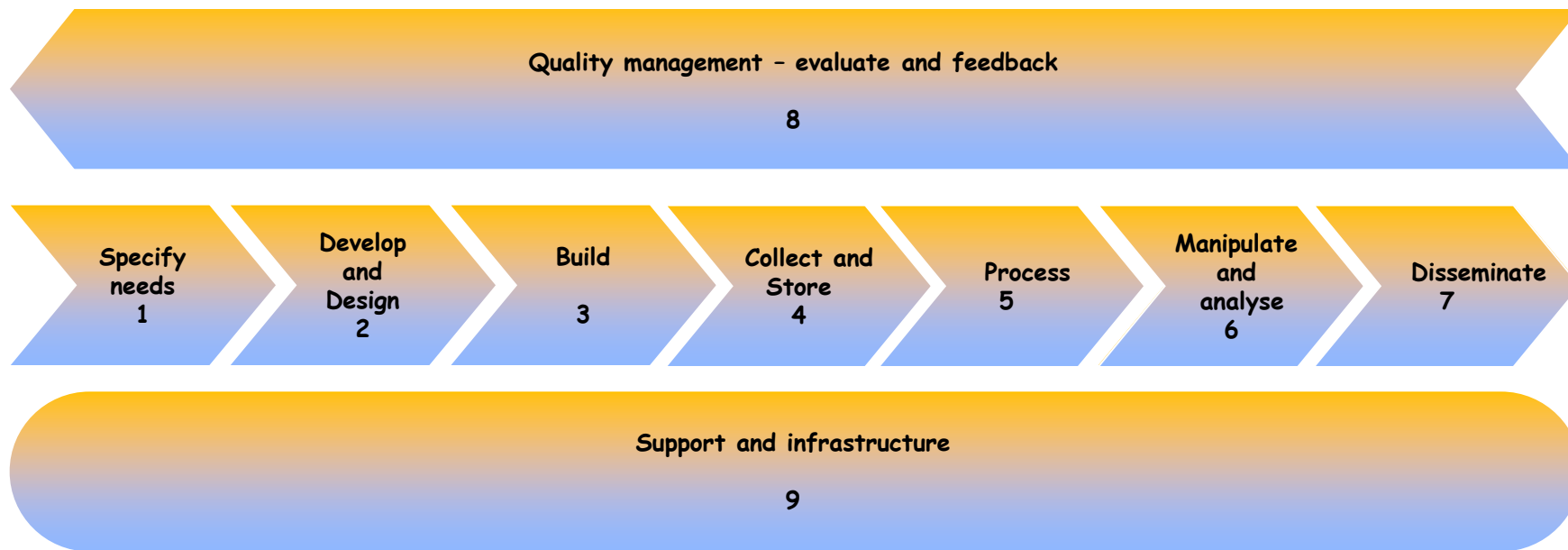
Statistical production chain of Statistics Norway based on Joint UNECE/Eurostat/OECD Work Sessions on Statistical Metadata (METIS). Generic Statistical Business Process Model

GIS production chain

Traditional GIS production chain



Integration of the two production chains



Statistical production chain of Statistics Norway based on Joint UNECE/Eurostat/OECD Work Sessions on Statistical Metadata (METIS). Generic Statistical Business Process Model



Registers and GIS

in



Statistics Bulgaria



Statistics Norway

REGISTERS

- Census 2001, 2011
- National register of populated places
- Information System Demography, 2007 (including statistical population data from 1992)
- Short-term statistics on residential buildings, 2004

TRADITIONS OF USING GIS

- 2000

STAFF WORKING WITH GIS

- 4 persons

REGISTERS

- Central register of Establishments and Enterprises, 1956
- Statistics Norway Cadastre
- Statistical Population Register 1964

TRADITIONS OF USING GIS

- 1992

STAFF WORKING WITH GIS

- 10 persons



Integration of GIS in the statistical production chain, 1-3



1. Needs:

- Specified needs for data production:

- Mostly from other national actors
- Few from own institute

- for enhanced data quality:

- GIS is only partly used for quality control of existing data (e.g. registers)



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2. Develop and design:



Data structure and internal geoinfrastructure in line with external frameworks (Spatial Data Infrastructure e.g. INSPIRE) is under development.



3. Build:



Ongoing implementation of the predefined design and database being populated with geodata.

Integration of GIS in the statistical production chain, 4-5



4. Collect:

Separately collection of statistics and geodata. No georeferenced statistical microdata on the collection phase.



4. Collect:

Geodata collection on ad hoc basis, but striving for organizing data collection in line with predefined tasks.



5. Process:

Format and coordinate systems for Bulgarian geodata are not standardized. Working on reprojection for all geodata.

Here statistical data is combined with geodata after great efforts of processing both kind of data - spatial and statistical.



5. Process:

Format and coordinate system for Norwegian geodata is now standardized but some deliveries are still not following the standards.

Integration of GIS in the statistical production chain, 6



6. Analyse:

- Production of statistics by Geospatial analyses
- Interpret and explain
- quality control
- prepare for dissemination.
- No familiarity with GIS within Statistics Bulgaria's and the various units within the organisation.
- **Competence in GIS needs to be raised.**



6. Analyse:

- High production of statistics by Geospatial analyses including interpretation, quality control and prepared for dissemination.
- Possible to improve the geodata infrastructure in order to ensure exchange and reuse of tools and procedures.
- Familiarity with GIS within Statistics Norway's and the various units within the organisation.
- Knowledge of the statistical themes in combination is here important in order to analyse and evaluate the statistics.



Integration of GIS in the statistical production chain, 7



7. Disseminate:

- Presenting data as figures, paper maps.

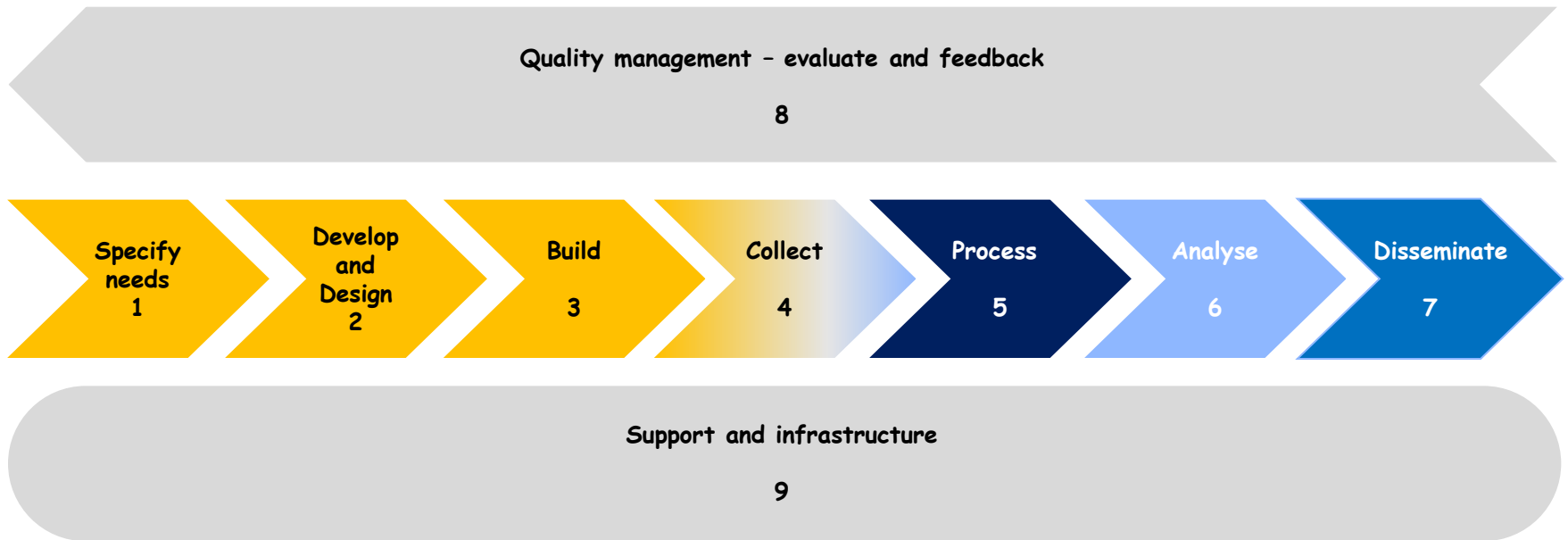


7. Disseminate:

- Presenting data as figures, paper maps have lately changed in order to increase the use of internet based services such as:
 - web map service (wms),
 - web feature service (wfs)
 - web coverage service (wcs).



Degree of GIS activities in the statistical production chain in Bulgaria



low



25 October 2012

medium

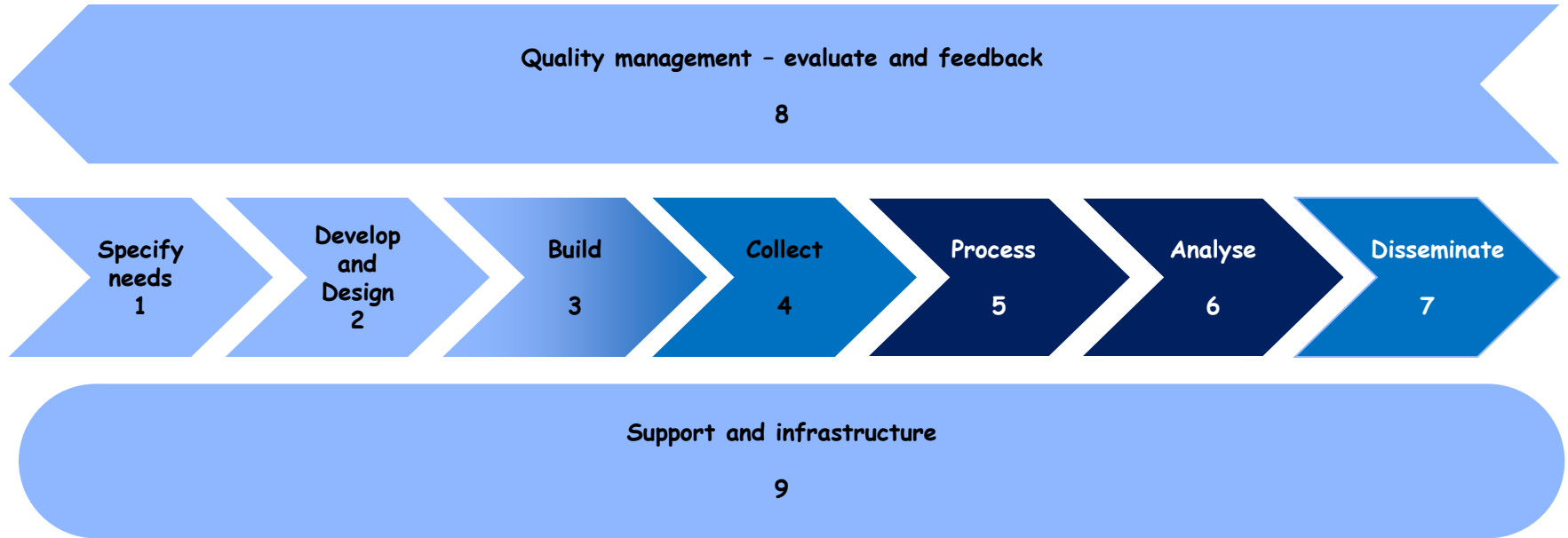


EFGS Conference, Praha 2012

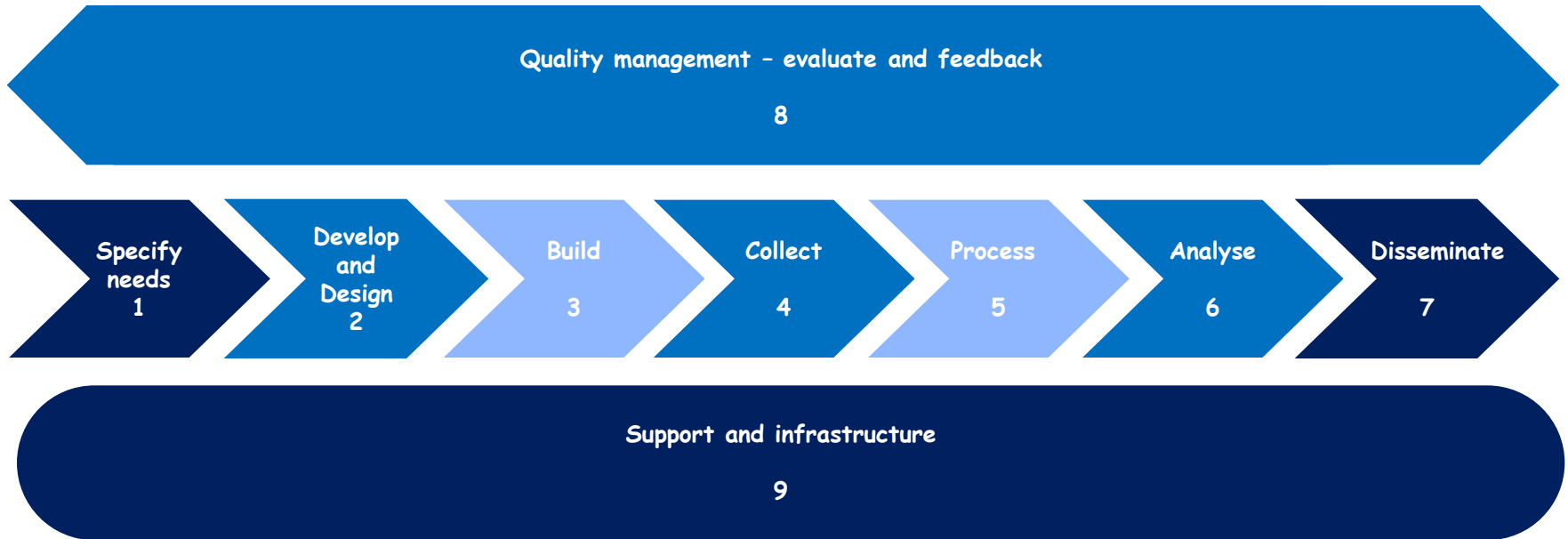
high



Degree of GIS activities in the statistical production chain in Norway



Desired GIS activity in the statistical production chain



low



25 October 2012

medium



high



EFGS Conference, Praha 2012

What similarities do we find?

- The integration is a continuous (and/but necessary) process.
- The process of identifying and specifying needs can be improved.
- Few defined needs internally neither for geodata or for interdisciplinary analyses.
- Scarce resources with GIS and "support and infrastructure" competence make it difficult to reformulate ("design and develop") "needs" into the daily operations of a NSI.
- Heavy work load make decision makers to prioritise other tasks that they are more familiar with.



Experiences from other NSIs and lessons-learned approaches

1. Czech Statistics and Norwegian Forest and Landscape Institute are examples of the importance of GIS aware decision makers for integrating GIS
 - **Offering GIS training of decisions makers**
2. Statistical Office of the Republic of Slovenia has a long experience of reaching out to the user community
 - **Establish or re-establish user communities externally with other national institutions**
3. Statistics Sweden is a part of the Swedish Geodata Strategy and the implementation of INSPIRE
 - **Long term strategy and geoinfrastructure for the organisation that is in line with external frameworks (Spatial Data Infrastructure)**

Thank you for your attention!