The European Spatial Data Infrastructure Network Project
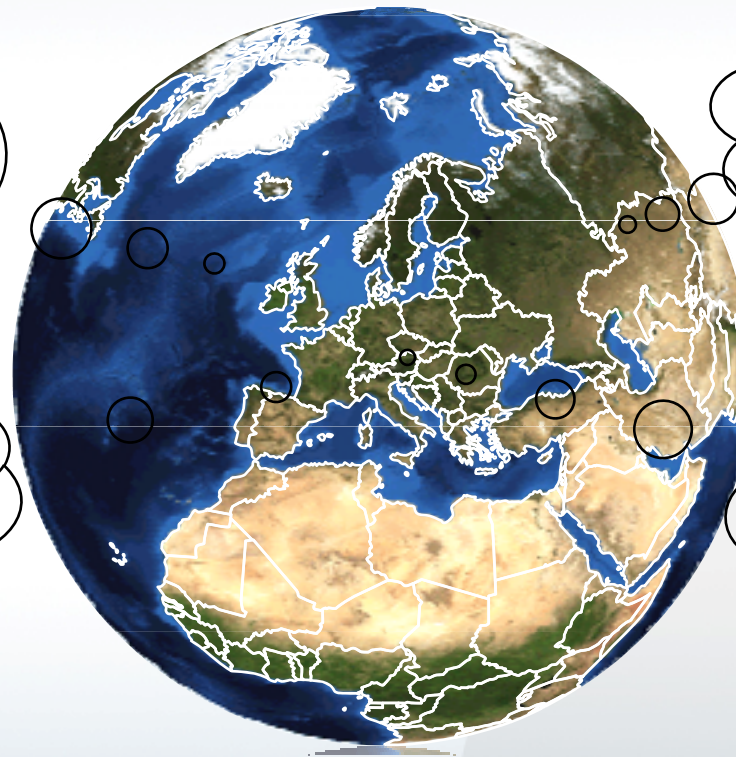
Anja Hopfstock, Antti Jakobsson

ESRI UC 2010, 15th July

EU needs for seamless pan-European reference data and services

GMES (Global Monitoring for Environment and Security) **is a European initiative for the implementation of information services dealing with environment and security**

Communication from the Commission on Shared Environmental Information System (**SEIS**) 1st February 2008

Directive 2007/60/EC on the assessment and management of flood risks entered into force on 26 November 2007

Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) entered into force on the 15th May 2007

ESDIN project info (www.esdin.eu)

esdin

European Spatial Data Infrastructure Network

- Project partially funded by eContentplus programme
- Started in September 2008 and will run for 30 months until March 2011
- Coordinated by EuroGeographics with 20 project partners

Statens Kartverk

Lantmäteriet

The Finnish Geodetic Institute

Helsinki University of Technology

National Land Survey of Finland

Kort & Matrikelstyrelsen

IGN Belgium

EDINA, University Edinburgh

Kadaster

Geodan Software Development & Technology

Universität Münster

1Spatial

Interactive Instruments

Bundesamt für Kartographie und Geodäsie

EuroGeographics

Bundesamt für Eich- und Vermessungswesen

IGN France

Institute of Geodesy, Cartography and Remote Sensing

National Agency Cadastre and Real Estate Publicity Romania

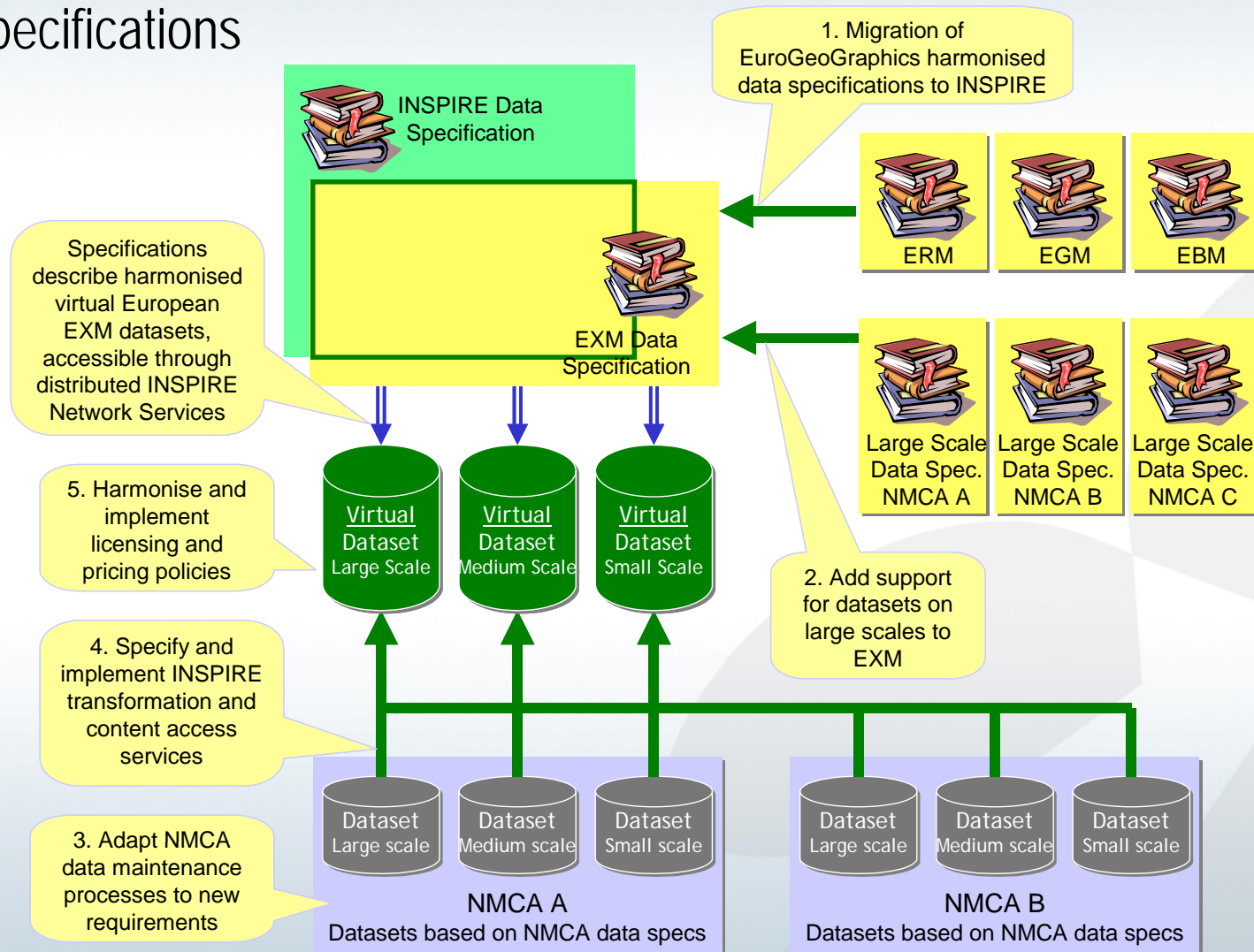National Technical University of Athens

Key Goals

- Further the ambition of the European Commission to create a European Spatial Data Infrastructure (ESDI) building on the National Spatial Data Infrastructures (NSDI) in Member States.
- Help member states, candidate countries and EFTA States prepare their reference data for INSPIRE related to Annex I themes in co-ordinate reference systems, administrative boundaries, transport network, cadastral parcels,hydrography and geographical names

- Improve data access to partners data by **implementing and testing services based on distributed service architecture**
- As a results project will provide the **Data Specifications (ExM)** as a set of profiles of the INSPIRE Data Specifications for large, medium and small scales
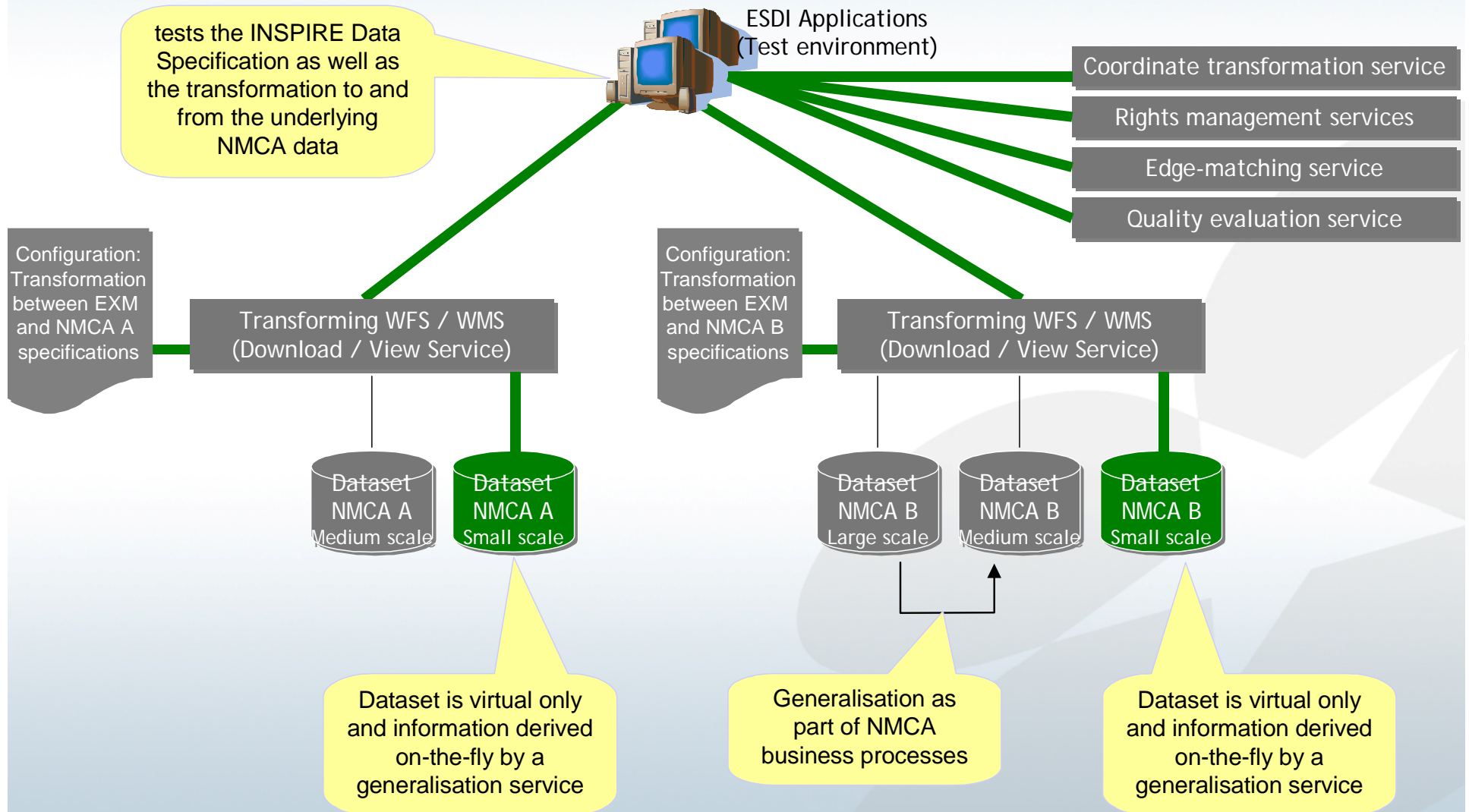- Build a best practice network of all related stakeholders

ExM Specifications

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European Spatial Data Infrastructure Network

1. Migration of EuroGeoGraphics harmonised data specifications to INSPIRE

INSPIRE Data Specification

EXM Data Specification

ERM   EGM   EBM

Large Scale Data Spec. NMCA A   Large Scale Data Spec. NMCA B   Large Scale Data Spec. NMCA C

Specifications describe harmonised virtual European EXM datasets, accessible through distributed INSPIRE Network Services

Virtual Dataset Large Scale   Virtual Dataset Medium Scale   Virtual Dataset Small Scale

2. Add support for datasets on large scales to EXM

5. Harmonise and implement licensing and pricing policies

4. Specify and implement INSPIRE transformation and content access services

3. Adapt NMCA data maintenance processes to new requirements

Dataset Large scale   Dataset Medium scale   Dataset Small scale   Dataset Large scale   Dataset Medium scale   Dataset Small scale

NMCA A
Datasets based on NMCA data specs

NMCA B
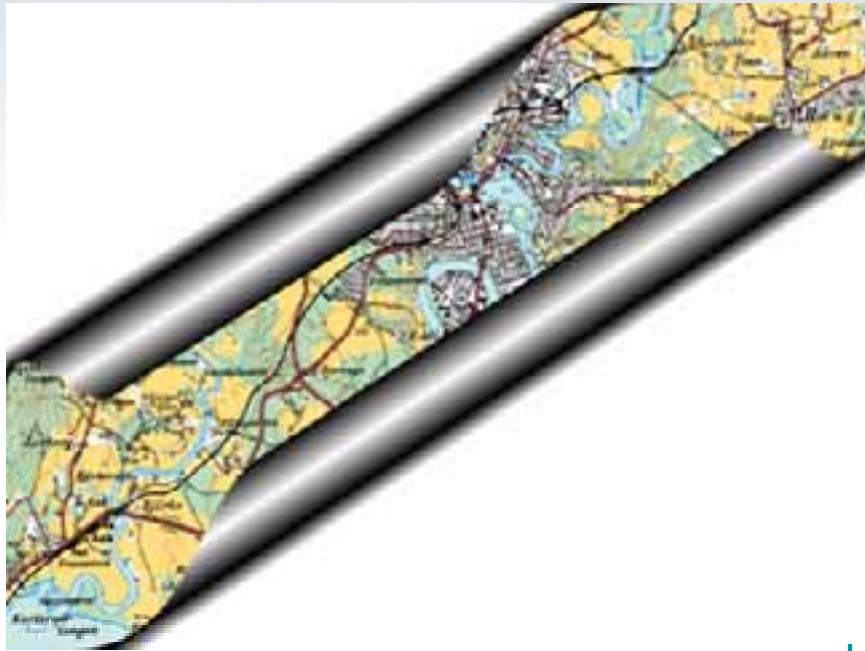Datasets based on NMCA data specs

ExM Specifications and Guidelines

- EGM/ERM/EBM specifications migrated into framework of the INSPIRE Data Specifications – ExM Data specification (medium/small scale)

- National specifications migrated into framework of the INSPIRE Data Specifications – ExM Data specification (large scale)

- General Guidelines and rules completed by developed scripts and tools for Edge-matching and Map generalisation

- General specifications and guidelines for sustainable maintenance at the European level for Stable Unique Identifiers, Incremental update delivery and Geo Rights Management services

- Data policy and pricing guidelines

- Prepare guidelines for the creation of discovery metadata and data evaluation

- Develop a quality model.

Service Infrastructure

tests the INSPIRE Data Specification as well as the transformation to and from the underlying NMCA data

ESDI Applications
(Test environment)

Coordinate transformation service

Rights management services

Edge-matching service

Quality evaluation service

Configuration: Transformation between EXM and NMCA A specifications

Transforming WFS / WMS
(Download / View Service)

Configuration: Transformation between EXM and NMCA B specifications

Transforming WFS / WMS
(Download / View Service)

Dataset NMCA A Medium scale

Dataset NMCA A Small scale

Dataset NMCA B Large scale

Dataset NMCA B Medium scale

Dataset NMCA B Small scale

Dataset is virtual only and information derived on-the-fly by a generalisation service

Generalisation as part of NMCA business processes

Dataset is virtual only and information derived on-the-fly by a generalisation service

Implementing and testing Service Infrastructure

- **Seamless INSPIRE- conformant access to the partners data through a distributed technical architecture**

- Develop transforming services including co-ordinate transformation, schema transformations to ExM specifications,

- Test Geo-rights management services, edge-matching service and quality evaluation service

- Recommendations for putting results into sustainable operation

Any questions?

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