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INSPIRE in the Context of Middle Europe

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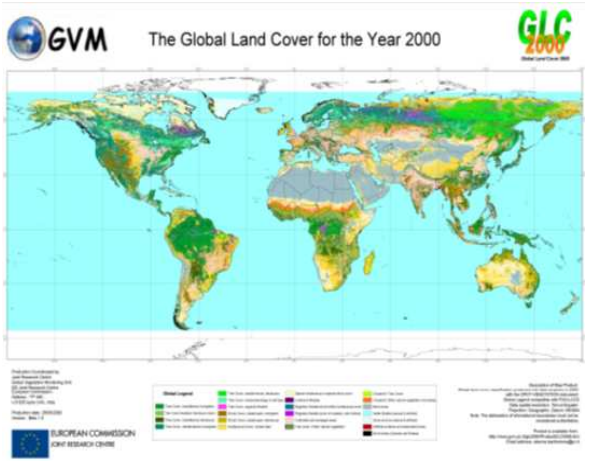
- Mission: to provide customer-driven scientific and technical support for the conception, development, implementation and monitoring of European Union policies.
- The JRC functions as a reference centre of science and technology for the Union.
- Close to the policy-making process, it serves the common interest of the Member States, while being independent of special interests, whether private or national.
- 7 institutes in 5 countries, 2000 people





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The presentation aims to:

- **Introduce INSPIRE** initiative and Directive Proposal development, and cross-reference with eGovernment.
- Focus on situation in the countries of **Central Europe:** strenghts and concerns related to INSPIRE implementation.
- Illustrate with selected **examples of webmap-**services in CEECs.

What is INSPIRE ?

INSPIRE =**IN**frastructure for **SP**atial **I**nfo**R**mation in **E**urope,

- is an initiative launched by the European Commission and developed in collaboration with Member States and accession countries ;
- it aims at making available relevant, **harmonized and quality geographic information to support formulation, implementation, monitoring and evaluation of Community policies** with a territorial dimension or impact;
- intends to trigger the **creation of a European spatial data infrastructure** (ESDI) that delivers to the users integrated spatial information services linked by common standards and protocols.

The **EU Geo-Portal** is Europe's Internet access point for Spatial Data and Services. From here, you can search for spatial data, services, and organizations.

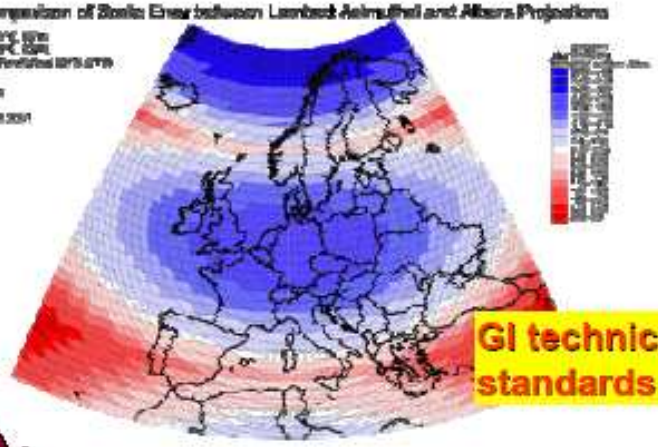
ESDI Concept

Launched in September 2001

MoU signed in April 2002 by Commissioners Wallström, Busquin and Solbes provides the basis for continued co-operation between DG ENV, EUROSTAT and the JRC for developing the initiative



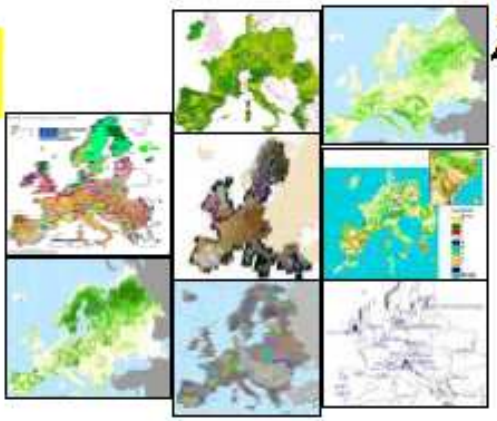
GI Institutional framework

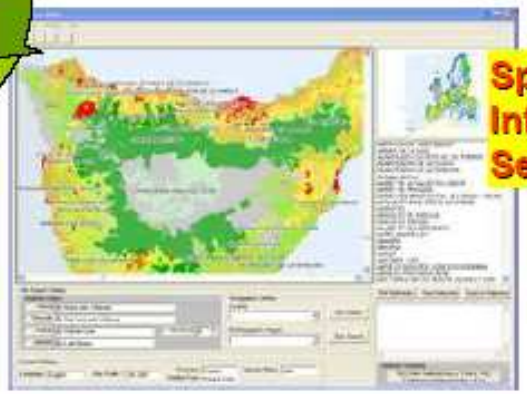


GI technical standards



Basis GI data sets





Spatial Information Services

INSPIRE Principles

- **Data collected once** and **maintained at the level where this can be done most effectively.**
- **Spatial information from different sources across Europe combined seamless and shared** between many users and applications.
- Information collected at one level to be **shared between all the different levels**, detailed for detailed investigations, general for strategic purposes.
- Geographic information needed for good governance at all levels should be abundant under conditions that do not refrain its extensive use.
- **Easy discovering which geographic information is available**, fits the needs for a particular use and under which conditions it can be acquired and used.
- **Geographic data becomes easy to understand and interpret** because visualized within the appropriate context selected in a user-friendly way.

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INSPIRE Process (long one… -:) but needed !
Bottom-up Stakeholder Involvement



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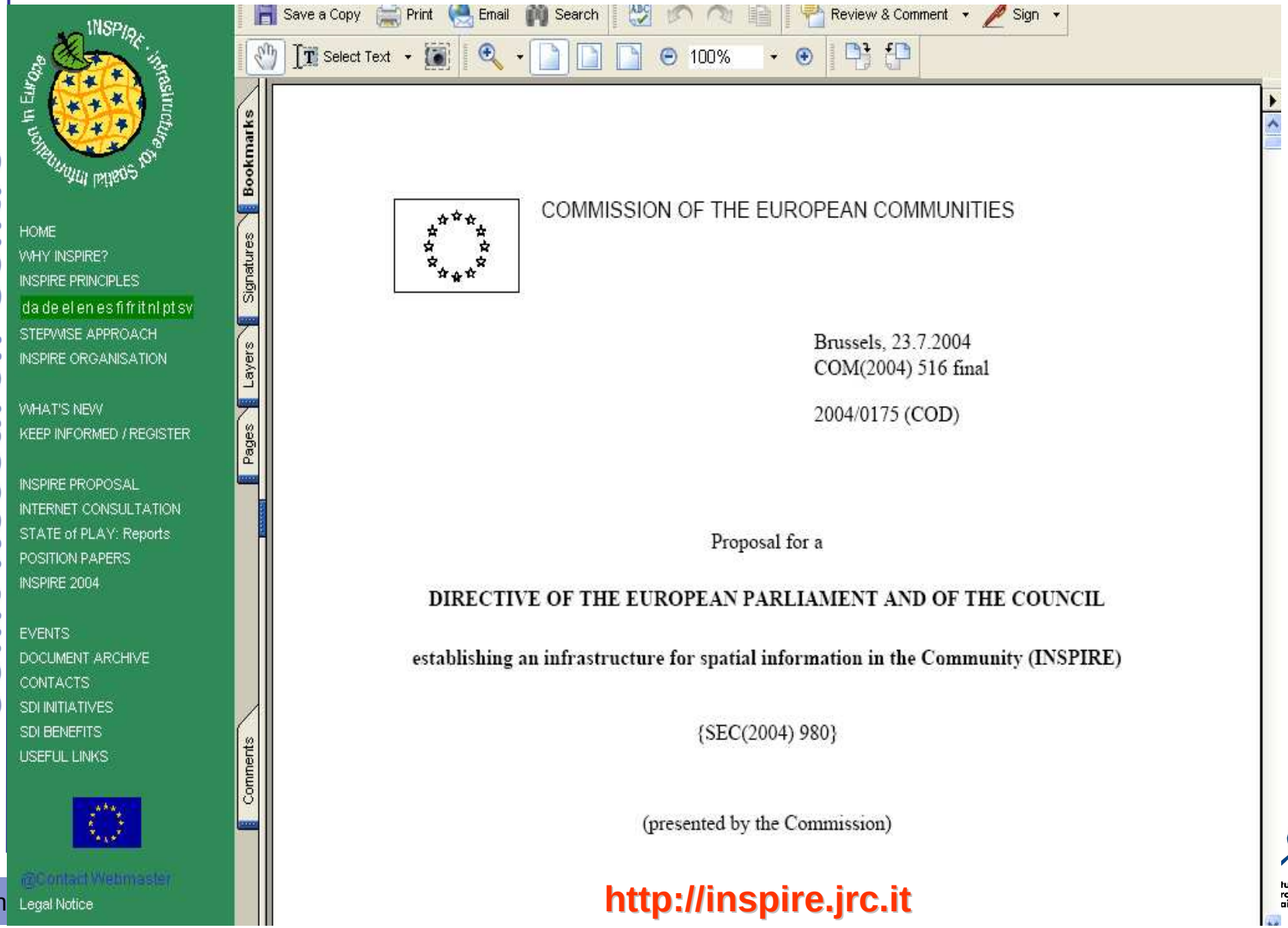
INSPIRE Directive Proposal

approved by the EC in July 2004



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INSPIRE → ← eGovernment

- INSPIRE lays down general rules for the establishment of an infrastructure for SI in Europe to support:
  - (i) environmental policies and
  - (ii) policies that affect the environment.
- INSPIRE based on infrastructures for SI **established and elaborated by the EU Member States**.
- Therefore INSPIRE implementation **depends on the awareness of and support by governments on national, regional and local levels**.
- They develop or build-up their particular e-services or entire **eGovernment**(s) **already now** !

INSPIRE → ← eGovernment

- According to the INSPIRE proposal the infrastructure includes: *metadata, spatial data sets and services; network services; agreements on sharing, access and use; coordination and monitoring mechanisms, processes and procedures.*
- All these topics are **important also for the eGovernment development**. In both initiatives issues such as ***interoperability*** need to be tackled.

INSPIRE Data Themes

Annex I

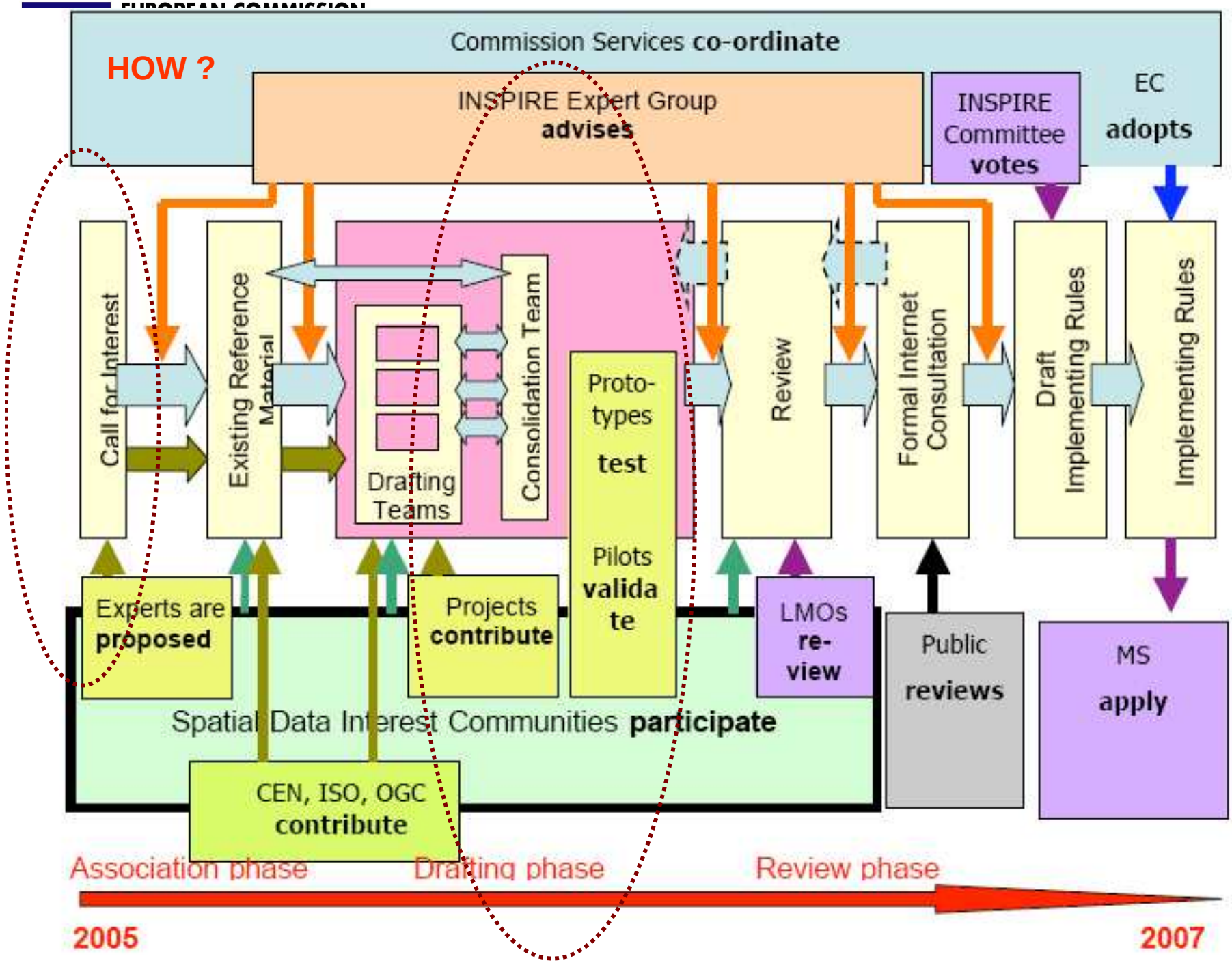
- Coordinate reference systems
- Geographical grid systems
- Geographical names
- Administrative units
- Transport networks
- Hydrography
- Protected sites

Annex II

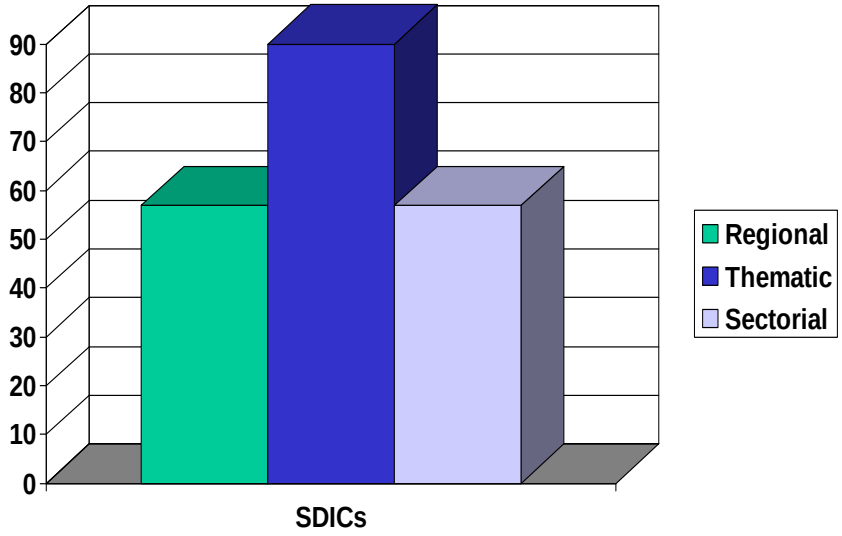
- Identifiers of Properties
- Elevation (including terrestrial elevation, bathymetry and coastline)
- Land cover
- Cadastral parcels
- Ortho-imagery

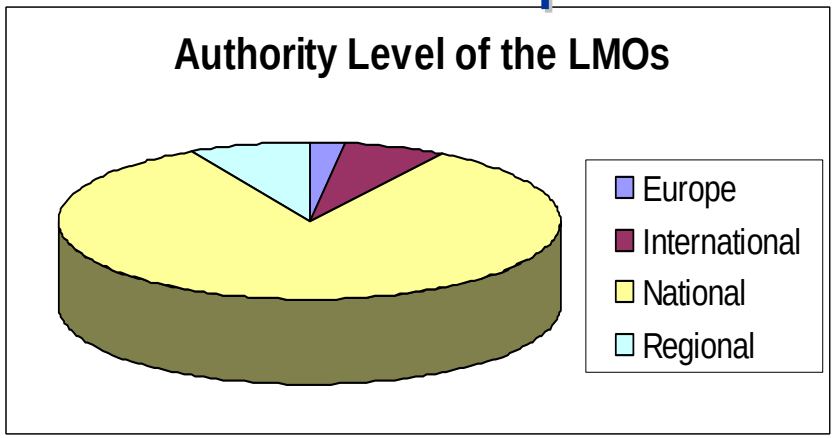
Annex III

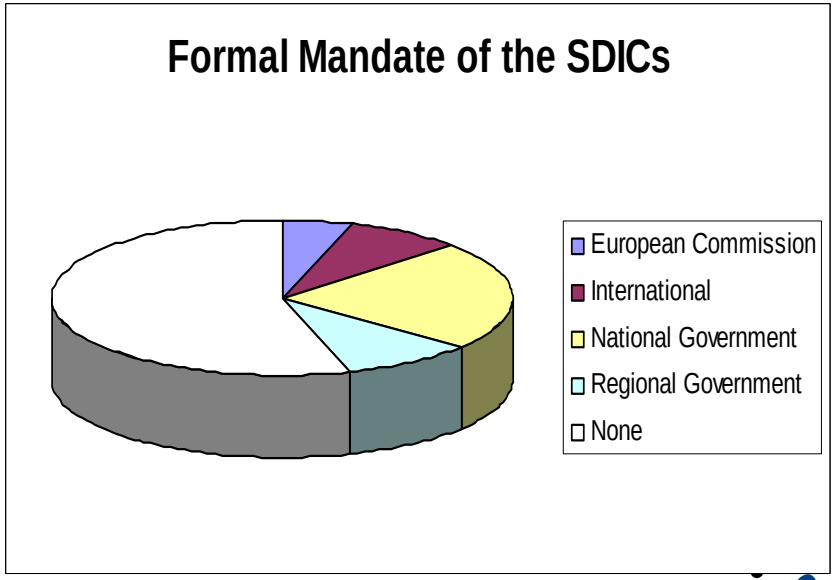
- Statistical units
- Buildings
- Soil
- Geology
- Land use
- Human health and safety
- Government service and environmental monitoring facilities
- Production and industrial facilities
- Agricultural and aquaculture facilities
- Population distribution – demography
- Area management/restriction/ regulation zones & reporting units
- Natural risk zones
- Atmospheric conditions
- Meteorological spatial features
- Sea regions
- Bio-geographical regions
- Habitats and biotopes
- Species distribution
- Oceanic spatial features

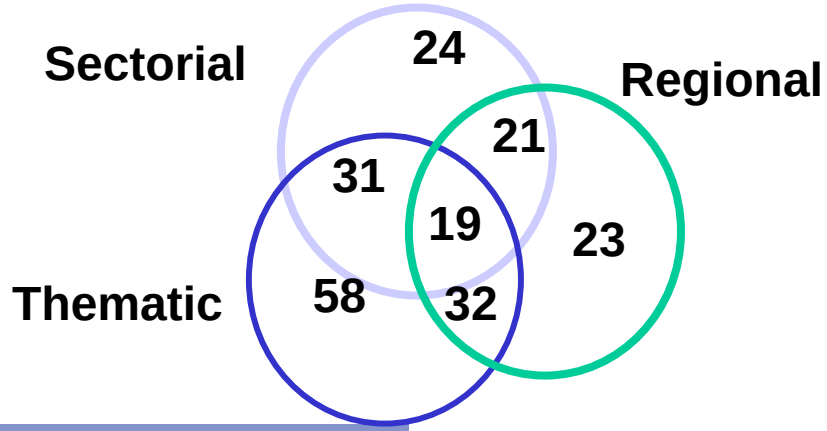

HOW ?
Commission Services co-ordinate
INSPIRE Expert Group
advises
INSPIRE
Committee
votes
EC
adopts
Call for Interest
Existing Reference Material
Drafting Teams
Consolidation Team
Proto-types
test
Pilots
valida
te
Review
Formal Internet Consultation
Draft Implementing Rules
Implementing Rules
Experts are
proposed
Projects
contribute
LMOs
re-
view
Public
reviews
MS
apply
Spatial Data Interest Communities participate
CEN, ISO, OGC
contribute
Association phase
Drafting phase
Review phase
2005
2007

Results of the EC Call for Interest to participate in INSPIRE development









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Specific Expertise Contribution Proposed by SDICs and LMOs

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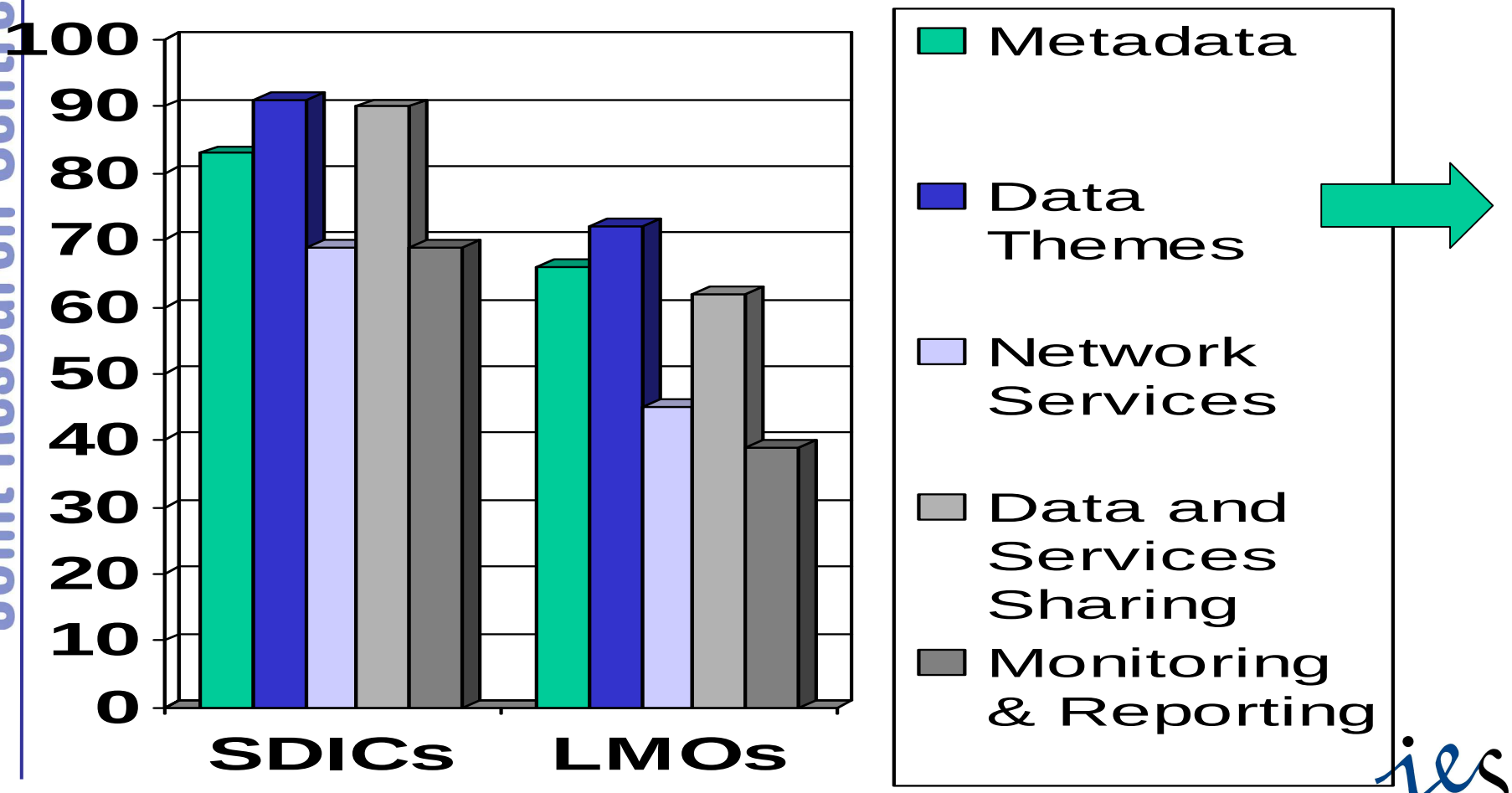

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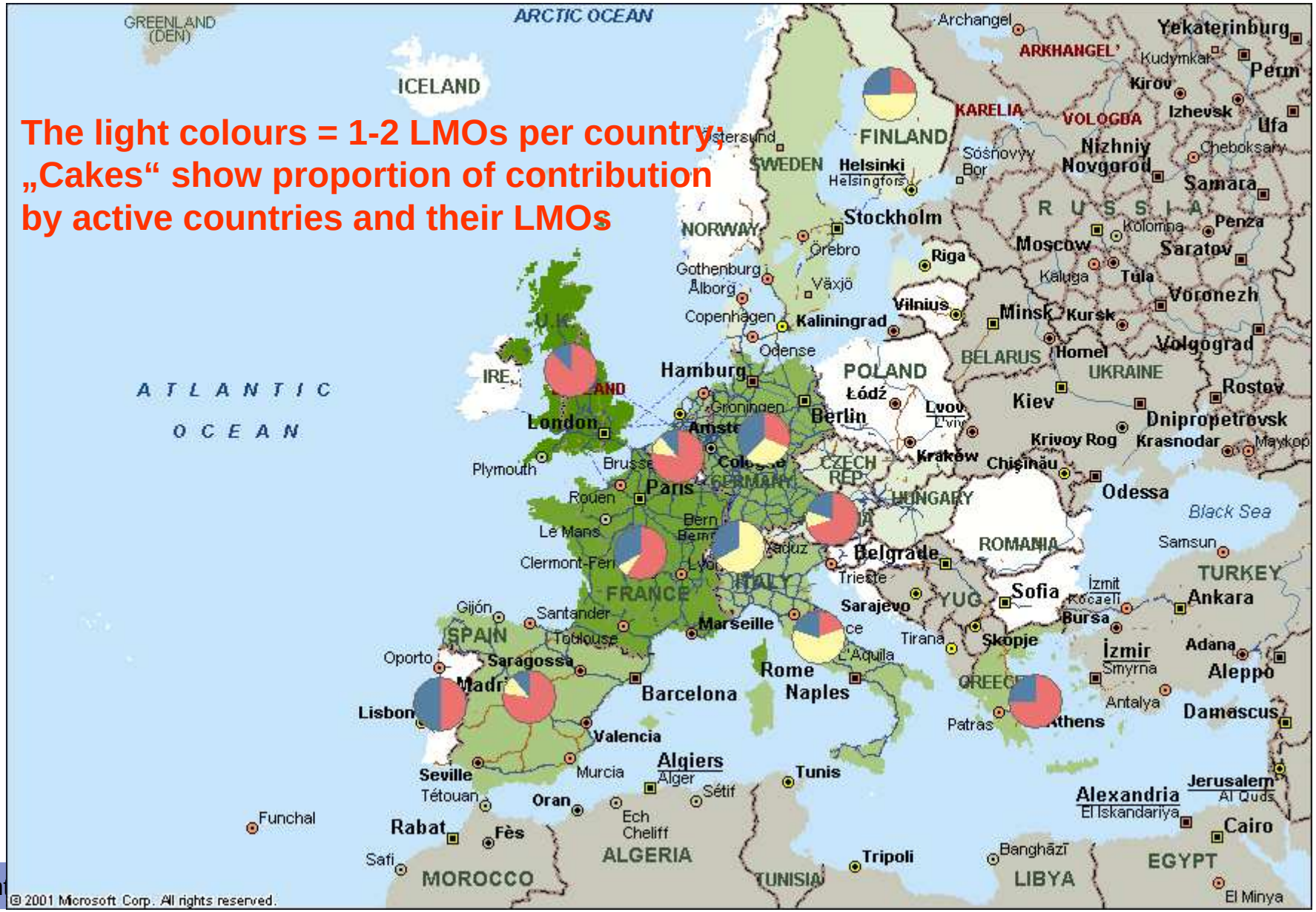
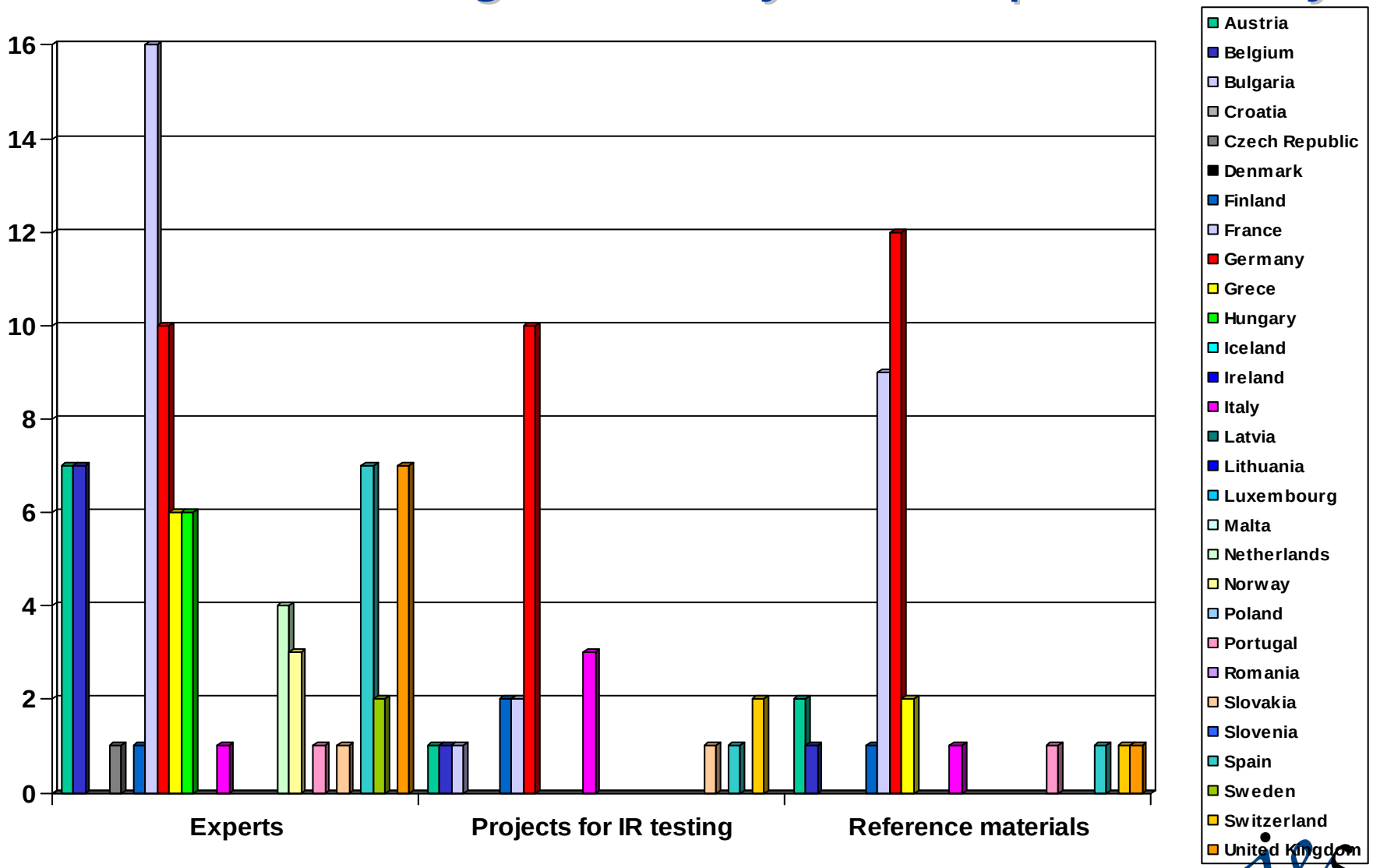
Countries involved in INSPIRE development – June 2005



Contribution registered by LMOs per country



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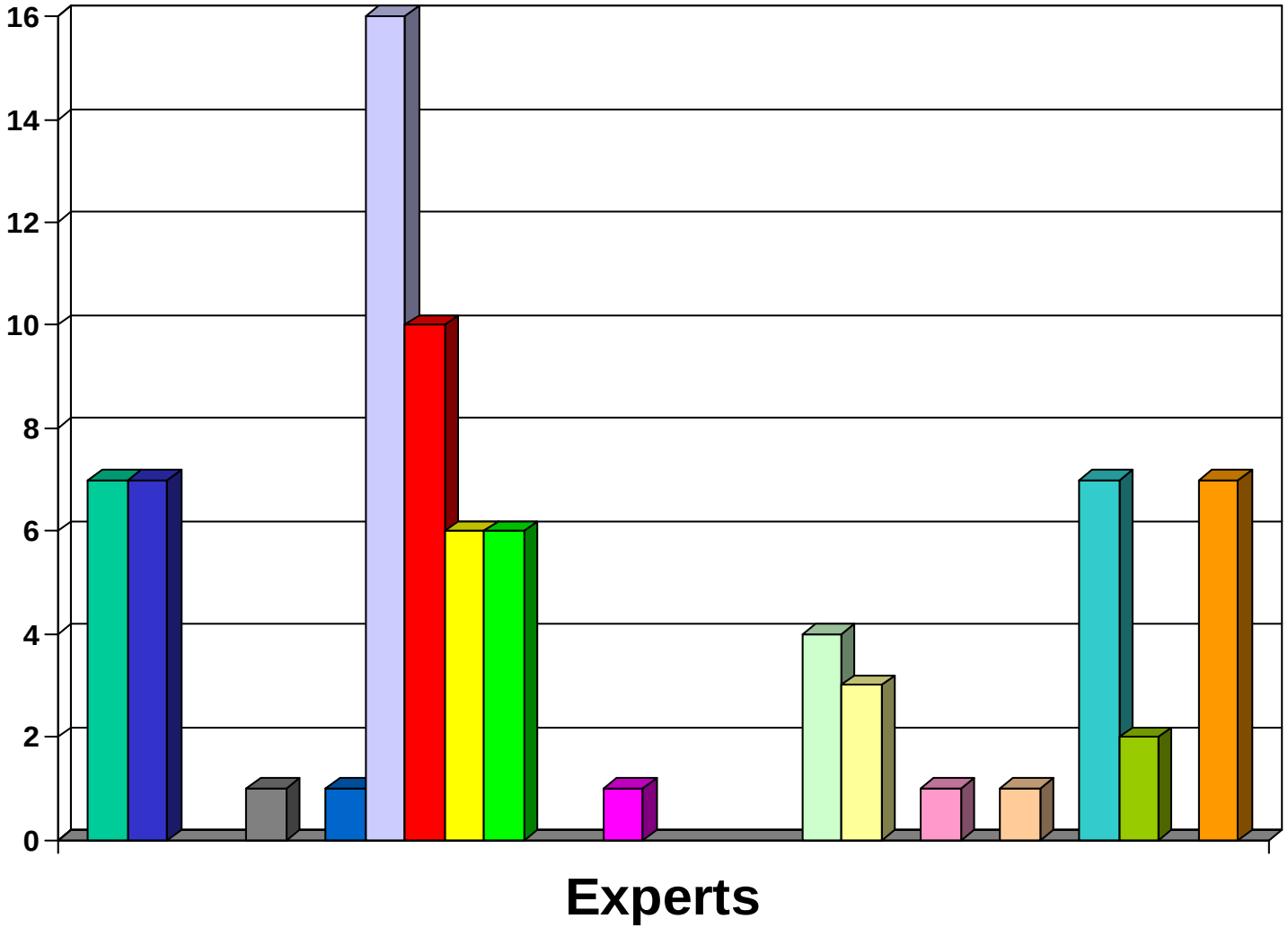
eContent, Prague, 2006

Institute for Environment and Sustainability

Contribution registered by LMOs per country



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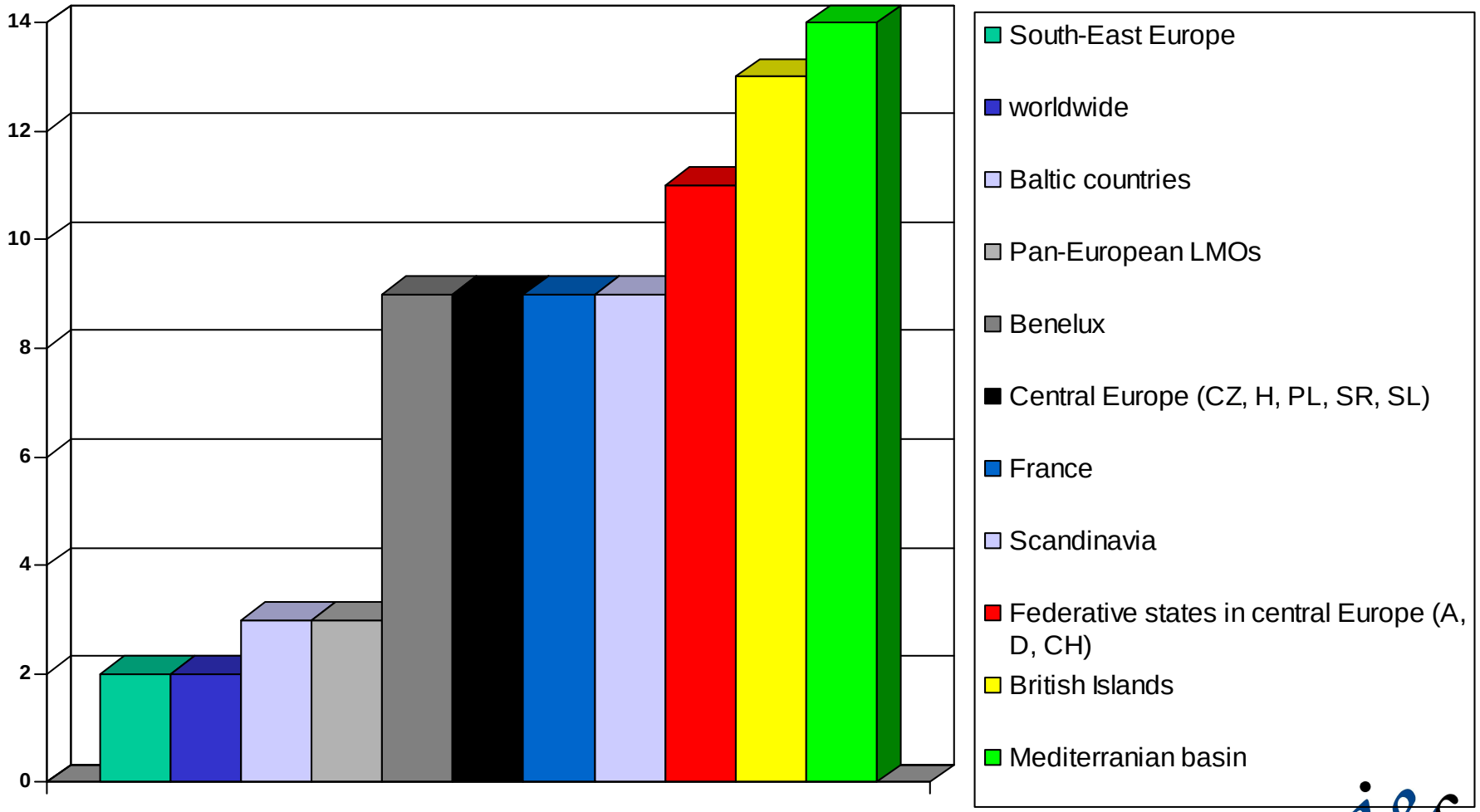
Representation of "Activity" Regions by LMOs



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Low participation of the NMSs in contrast with their activities and achievements in the GI&GIT domain

WHY ??

- Comparison with the NMSs' strenghts and concerns formulated during the "INSPIRE and eGovernment" workshop in Prague, April 2005.

"INSPIRE and eGovernment"

workshop in Prague, April 2005

- A panel from
  - **heads of eGovernment departments** at the Cabinet Offices or relevant ministries (Informatics, Telecommunication, Infrastructure or Finance in dependance on structure of national governments)
  - representatives of the NMAs or NEAs in **national councils for IS**.
- WS primary targeted on the eGovernment Senior Officials **from the New Member States or recent Accession Countries**. IEG Members participated in the selection.
- Several **international and national SDICs** were also invited due to the complexity of the issue (EuroGeosurveys, EUROGI, Prelude-G4G).
- About **35 active experts** from **14 countries**:

  Bulgaria, Czech Republic, Estonia, Germany, Hungary, Italy, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia, the United Kingdom.

Focus of the "INSPIRE and eGovernment" workshop

- structured **presentations of the countries and/or SDICs**;
- experience with and possibilities and risks for **integrating INSPIRE into the national eGovernment** or **infrastructure development programs** were debated;
- **Practical examples** from countries as the Czech Republic, Estonia, Slovakia or Slovenia demonstrated possible interconnections between INSPIRE and the modern (electronic) governance.
- The **re-use of public sector information** and the **role of SMEs** in the building-up process were debated as specific issues;
- **recommendations** formulated (i) from the countries view before the WS, (ii) in brainstorming at the end of the WS;
- **follow-up report** is in elaboration

Potential for INSPIRE and eGovernment

Strengths in the New Member States

- Strong political mandate and good legal background;
- Raising demands for spatial data and SDI coordination
- Framework of standards for eGovernment, national information systems development and spatial data;
- eGovernment building is an important part of public administration reforms
- An entire improvement or development of ICT infrastructures in all countries since 2000
- eGovernment provides Network infrastructure within public sector
- Many data exist in digital form (CZ, SI, SR, EE, H, PL) and their accessibility increases;
- Skilled and qualified experts in the field of IT and geodesy
- Experience based on pilot projects
- International cooperation and knowledge transfer (???)

Strengths
INSTITUTIONAL CONTEXT

- Relatively **strong political mandate and good legal background:**
  - **National Policies and new acts for Information Society development, including eGovernment,** exist in majority of NMSs.
  - Recent governmental policy is favorable to IST development also in the ACs, the relevant legal framework is already in line with the EU.
- **Raising demands for spatial data and SDI coordination:**
  - **Clear NSDI vision or NSDI/NGII program in place** (PL, CZ, SR?)
  - GI systems and NSDI have got a high priority in Information Policy and action plans of several states – EE, LT;
  - All CEECs pay high attention to cadastre renovations and support them with modern e-services to:
    - reconstruct the continuity and transparency of ownership;
    - encourage economic development (investment, bank services, taxation, real/estate market);
- The framework of **standards** for eGovernment, national information systems development and spatial data exists and was presented by several countries[1].
- The NMSs have got a complex transformation experience during the past 10 – 15 years. **eGovernment building became an important part of public administration reforms** in the CEECs.
  - The eGovernment approach opens space for **governance rethinking** and enhancement; it works as the **Catalyst for culture change** within the public sector.
  - The success of eGovernment comes with delivery of **better services** to citizens, businesses and public servants themselves.

Strengths
TECHNICAL INFRASTRUCTURE

- **An entire improvement or development of ICT infrastructures in all countries[1]:**
  - **High level of internet penetration** (SI, EE, CZ, followed by SR?)
  - **Several countries leap to the wide spreading of BroadBand** (EE, SI, LT)
- **eGovernment provides Network infrastructure within public sector**:
  - eGovernment raises Network accessibility for both public sector and society
  - Recent eGovernment infrastructure (e.g. eGovernment portals) can/might support future INSPIRE services and data accessibility, and reduce implementation costs.
  - Additional security measures influence trust building and may stimulate the use of provided e-services (EE, LT).
- **Many data exist in digital form** (CZ, SI, EE, H, PL) and their **accessibility increases:**
  - Some countries have large sets of digital data covering the whole country and provide webservices to make them free available (CZ, EE, LT, SI, SR).
  - There are also detailed data or services focused on specific theme(s), which reflect the needs of a country or a particular region.
  - Good level of geodetic and mapping services is provided by private companies (EE, CZ, RO);
  - eGovernment and INSPIRE move to electronic data and information, and may empower demand for and access to digital geographic data and information by both public and private sector.
  - More and more spatial data become easily accessible for decision making by authorities and for public participation.

Strengths

HUMAN RESOURCES

- There are **skilled and qualified experts in the field of IT and geodesy** (PL, H, SR, CZ, SL, EST, Ro)[1] and a potential for **knowledge exchange.**
- **Experience based on pilot projects:**
  - Most of the countries developed national **projects**, which demonstrate or potentially enable **bridging or synergy between eGovernment and INSPIRE** (from e-cadastre services and geoportals in CZ, SR, SI, LT, EE; to Telecentres and iBulgaria).
  - **Czech good practice in the capacity building and knowledge transfer:**
  - Long-term awareness raising on use of GI(T) together with Internet for practical public services ("**Geo-Application** of the Year" – Czech national contest and a rich overview of existing solutions & horizontal cooperation);
  - Webcastle / the international **web-service for publishing good practices** based on spatial data.
- **International cooperation and knowledge transfer**
  - Most countries appreciated the **cooperation with other countries.**
  - All new Member States and Accession Countries:
  - participated in **the CLC and Image2000** pan-European projects, *see Vanda's report*
  - have the status of Active Members in **EuroGeographics** and take part in its pan-European projects, see www.eurogeographics.org/
  - Baltic and SEE countries participate in **bi- or multi-lateral projects** in their geographic domains;
  - National GI association or INSPIRE relevant LMOs of some countries are **members of pan-European or Global SDICs** and participate in their activities (e.g. PL, H, CZ in EUROGI; and CZ and H in GeoSurveys, in FIG),
- >>>> use these established, built-up (and already paid) information and communication channels and mechanisms for dissemination, benchmarking, experience exchange, addressed awareness-raising and other sorts of capacity building.

Potential for INSPIRE and eGovernment

Concerns and Lessons Learnt

- Unclear **data access regime** and concerns related to **Intellectual property rights (IPR) or Liability** lead to the heterogeneity of data or services (the 'patchwork quilt' effect).
- **eGovernment has political backing** currently, but its **wane can happen** suddenly.
- **Impacts of re-organizing the Public sector** (positive or negative) become usually **visible with a delay**.
- **Public administration has specific features**, which need to be reflected also in designing and maintenance of data and e-services for eGovernment and INSPIRE;
- **Complex initiatives** and long-term programs are **endangered by many factors.**

Concerns and Lessons Learnt INSTITUTIONAL CONTEXT 1… *tbc*

- Unclear **data access regime** and concerns related to **Intellectual property rights (IPR) or Liability** lead to the heterogeneity of data or services (the 'patchwork quilt' effect).
  - Intellectual property rights remain an issue in all CEECs, *see also the Innovation S&W* report stating that IPR on a low level in all NMSs and ACs.
  - Policies for Pricing of data and communication services still not coherently developed or implemented (SR, CZ).
- **eGovernment has political backing** currently, but its **wane can happen** suddenly.
  - Several countries learnt this lesson of **Information Society fragility** on both, national and regional levels.
  - Political attitude to Information Society, support and personal representation for eGovernment often have been changed by newly elected governments.
- **Impacts of re-organizing the Public sector** (positive or negative) become usually **visible with a delay**. This concerns also ambitious eGovernment services or future INSPIRE implementation. They may reach a "different" society, which faces:
  - different political situation (e.g. effected by terrorism) or
  - demographic changes (aging, raising representation of former minorities);
  - impacts of other Policies already in place (PSI);
  - new technological solutions or services provided by commercial sector (Google Earth).

Concerns and Lessons Learnt
INSTITUTIONAL CONTEXT 2… *tbc*

- **Public administration has specific features**, which need to be reflected also in designing and maintenance of data and e-services for eGovernment and INSPIRE:
  - **continuity of public service** agendas with request on long-term archiving (cadastre);
  - binding **legal aspect of different groups of data**, including spatial data (owners rights and responsibilities; Master plans, administrative boundaries or any regulation zones are results of formal long-lasting decision-making procedures with many involved parties);
  - this characteristic features are obligatory from the legal and administrative perspective, but can be in conflict with new technological opportunities and therefore **underestimated by most of the ICT or GIT experts**;
  - any unclear responsibility for data or their maintenance, their quality or legal relevance **decreases the practical use and benefit of digital data or e-services** for administrative agendas.
- **Complex initiatives** and long-term programs are **endangered**, in general, by:
  - Lack of interested political leaders.
  - Changes of political priorities in new election periods.
  - Legal issues (PL, SR).
  - Budgetary limits (structure and timing do not fit to the traditional, vertically designed rules for financing, auditing etc.).

Concerns and Lessons Learnt INSTITUTIONAL CONTEXT 3

- **Risks for INSPIRE** due to:
  - Becoming too exclusive.
- >>>Ensure that the frameworks are user centric.
- >>>Enable involvement of different types and sizes of institutions (institutionally, financially) (EE)
  - Lack of coordination (LV) cross government levels or horizontally; overlap with many other data and reporting requirements.
  - Not complying with the EU Competition law and meeting single market.
  - Loosing momentum due to technologically advanced commercial solutions which will have been in place before 2012 (INSPIRE implementation milestone)
- >>> analyze what is relevant for public, and for private services, >>> focus on the aims and activity stream appropriate to the public domain.
  - Getting a low political priority in the ACs due to urgent problems (e.g. poverty outside big cities in RO, etc.)
- **Financing challenges** for INSPIRE.
  - Budgetary problems due to its complexity
  - High or additional costs for:
    - Communication infrastructure;
    - Multi-plicate or additional activities and services (metainformation input and maintenance)
    - Migrating of existing data
  - Difficulties to ensure sustainability after initial projects will have been finished

Concerns and Lessons Learnt

TECHNICAL INFRASTRUCTURE

- **Different technological levels**
  - There are differences between infrastructures in the EU NMSs and ACs, despite the enormous improvements of communication infrastructures in all CEECs since 2000.
  - Several infrastructures seem to be weaker in remote and rural areas.
- **Risk of stifling innovation:**
  - for some lower developed ICT Infrastructures or
  - due to selection of particular ICT products without open source
    - >>> defining minimum basic requirements, which would be obligatory for all participating bodies but open for potential enlarging (in content and ITC solution) in a future phase;
    - >>> enabling umbrella or outsourcing services for those, who do not want or are not able to be on board from the very beginning or in a full extent.
  - **Concerns due to additional data requests:**
- Ignoring/underestimating **the needs for data** and spatial-data-underpinned services, which **reflect countries differences** as:
  - geographic features and consequent data accuracy demands;
  - available resources;
  - public service agendas, which depend on:
  - the historically developed structure and form of public services;
  - the content and terminology of national legal acts and lower regulations.
- >>> Search for the minimum of joint obligations

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Conclusions

INSPIRE :

- is a framework Directive with implementing rules to be defined within 1-2 year(s);
- Is a long-term process including political, organizational and technical aspects;
- cross-references with e-Government.
- Stakeholders can be involved through the concept of Spatial Data Interest Communities (SDICs) and LMOs.
- Pilots and Projects play a key role to define and validate the implementing rules.

Central Europe

- The countries of Central Europe have **several common features** based on their geography, shared history and experience (e.g. administration, cartography or cadastre).
- Austria belongs to the active INSPIRE actors.
- In contrary, the NMSs expressed only a low interest to be involved despite their pool of geodata, professionals and existing geo-information based e-services.

The eContentplus**Program**

- may provide a good basis **to rigger and deploy the** participation of NMSs in the ESDI/INSPIRE development through:
  - ***Targeted projects;***
  - Documenting and sharing ***Best Practices*** or
  - Building a ***Thematic Network*** focused on Spatial Data Infrastructure(s).

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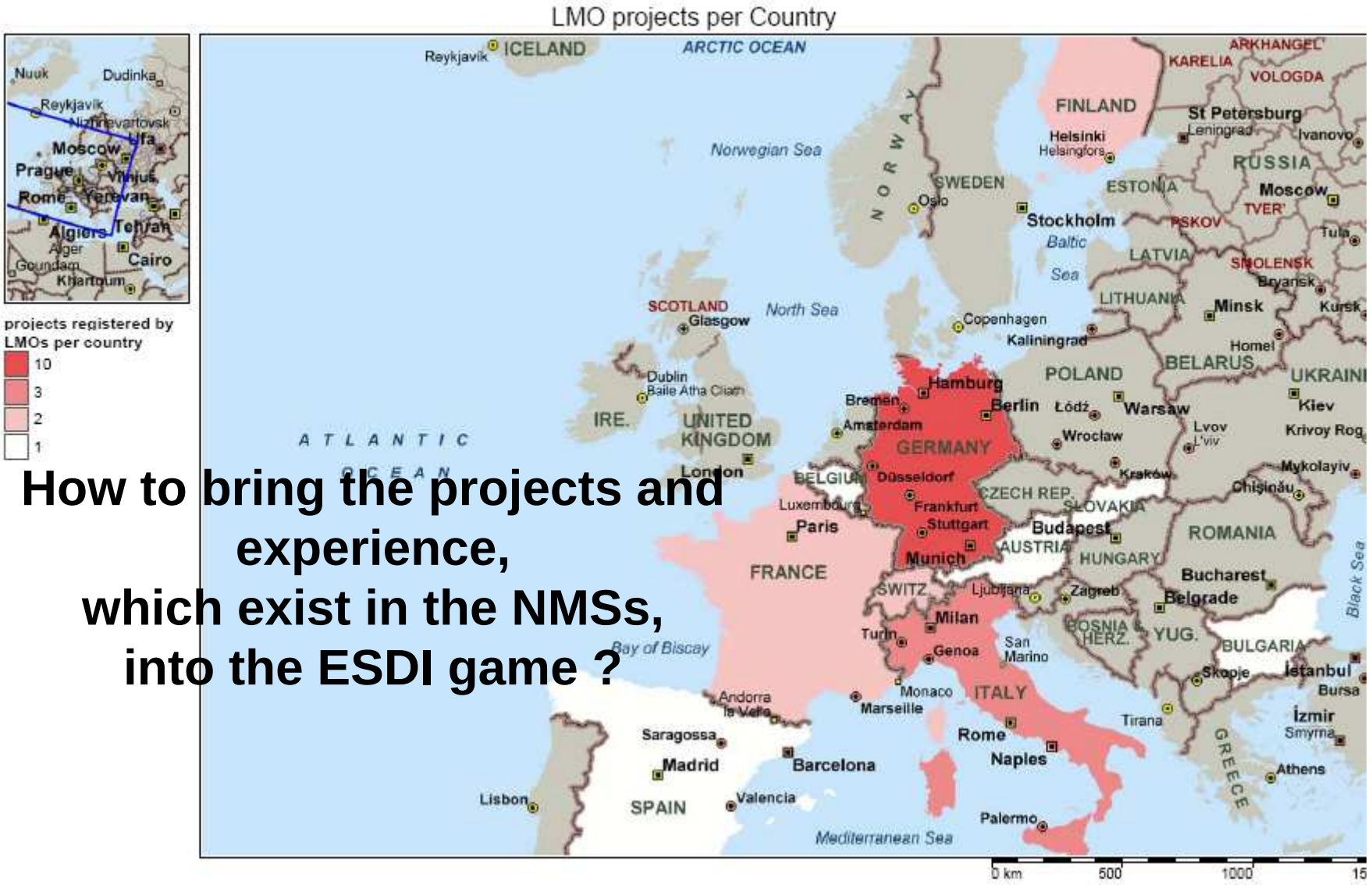

How to bring the projects and experience, which exist in the NMSs, into the ESDI game ?

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Thank you for your attention !



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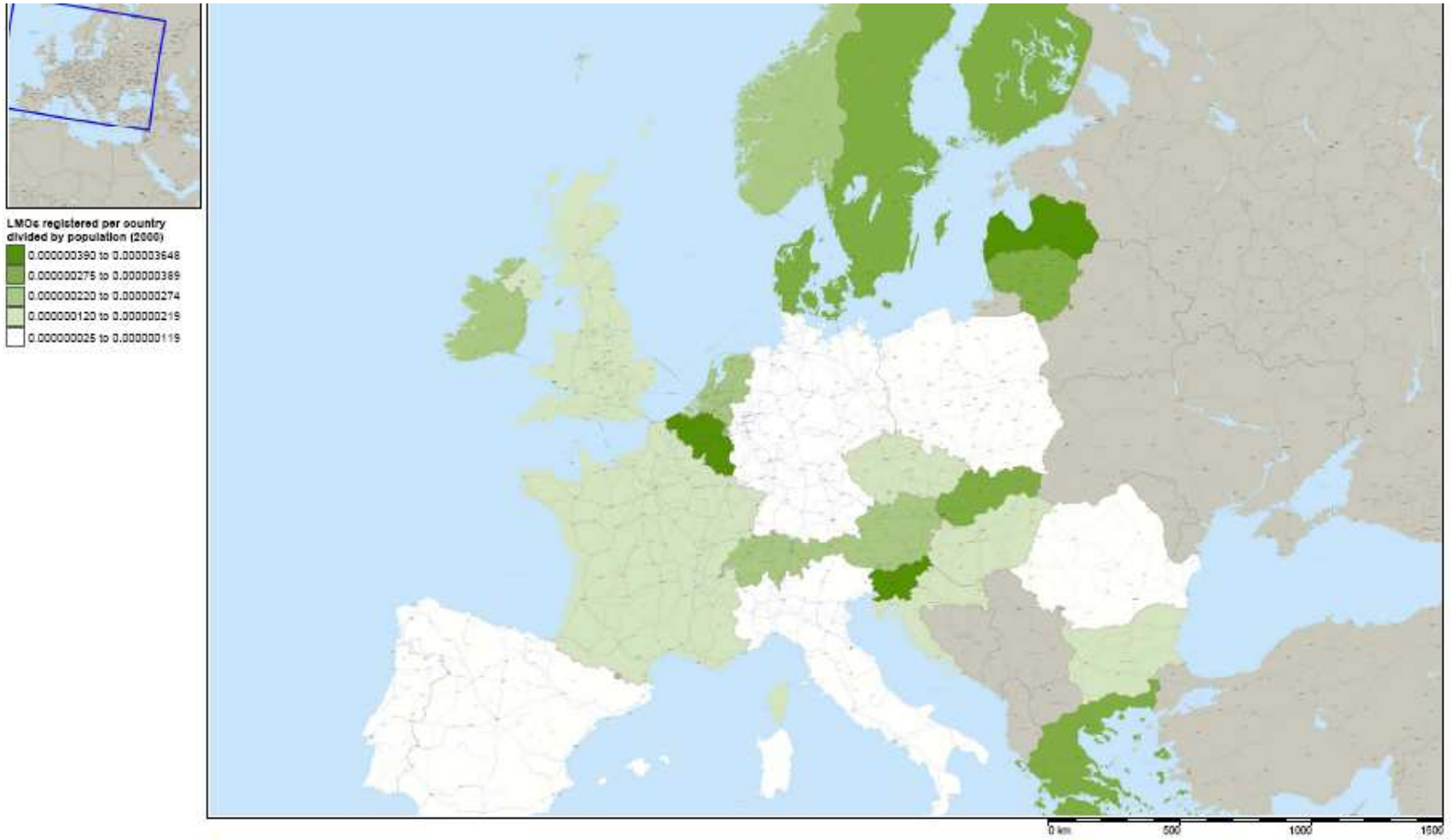
LMOs registration per country

divided by countries population (2000)



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INSPIRE → ← eGovernment

Thanks for contribution especially to:

D.Berova. E.Bielecka, U.Boes, A.Ciobanu, Ch.Corbin, M.Craglia, D.Florea, M.Gatt, J. Grigas, I.Gudele, J.Hiess, G.Kovacs, P.Kubicek, M.Kuchyna, Z.Molnar, T.Petek, R.Tomas, K.Toth, J.Valis, U.Vallner, R.Zimova

Thank you for your attention

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