



European
Commission



GMES

Global
Monitoring for
Environment and
Security

The graphic shows a partial view of the Earth from space, with the word 'GMES' overlaid in large white letters. Below the graphic, the full name of the program is written in a bold, sans-serif font.

GMES Status December 2005

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DG ENTR/H3

Space research and applications



GMES - Global Monitoring for Environment and Security

- To provide, on a sustained basis, reliable and timely information related to environmental and security issues in support of public policy makers' needs
- An EU led initiative, in which ESA will implement the space component and the Commission will manage actions for identifying and developing services
 - GMES Communication - COM(2005)565
- Fulfills objective of a European Space Policy to make Space a tool to serve the policies of the Union , its Member States and its citizens
 - European Space Policy – Preliminary Elements COM(2005)208 final



GMES: a multi-purpose tool

- observation of the state and evolution of the global environment
- monitoring for the EC 6th Environmental Action Plan
- aid to civil protection for prevention, monitoring and assessment of natural and man-made hazards
- support to EC Common Agricultural, Fisheries and Regional development policies
- assistance to development and humanitarian aid
- support to the EU Common Foreign and Security Policy (CFSP) and other policies relevant to European citizens' security



GMES First steps

- **Initial Period (2001-2003) results in Final Report** (available at <http://www.gmes.info>) and Commission Communication [COM (2004) 65 final] (3 Feb. 2004)
 - Period aimed at defining GMES on the basis of:
 - ↪ users' requirements
 - ↪ expected services
 - ↪ policy support
 - ↪ economic and social benefits
 - ↪ potential partnership and international cooperation



GMES development

- **Projects for pre-operational services (2002 onwards)**
- Finance for pre-operational services (2001 onwards)
 - ESA: **83 M€** for 2003-2007– Earth Watch line
 - European Commission: FP5 & FP6 " Global Change" area (DG-RTD), **103 M€** within FP6 "Aeronautics & Space" area (DG RTD), **40 M€** Information Society Technology, and JRC direct actions



European Commission



Structure

Inputs from

Data Providers

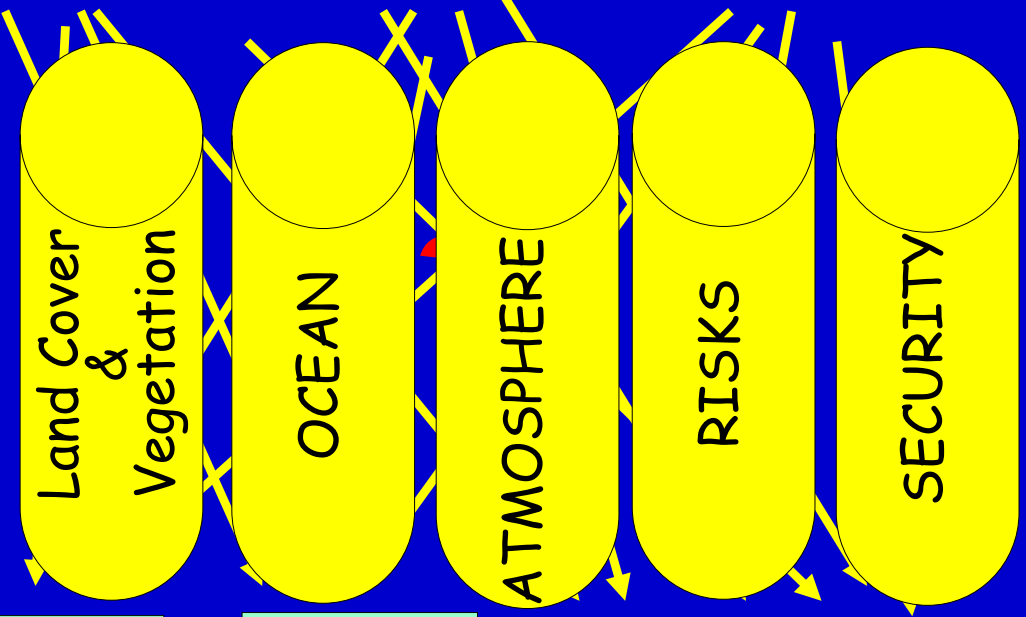
Space
Level 1 products / sensor

Airborn
Level 1 products / sensor

In-situ
Level 1 products / sensor

Production by

Service and/or Thematic Centres



Outputs for

Users



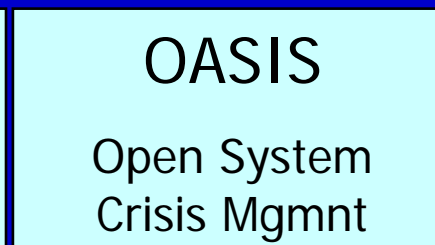
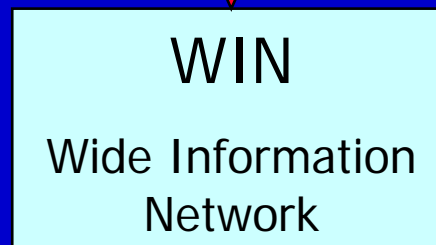
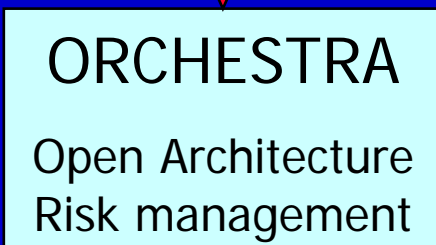
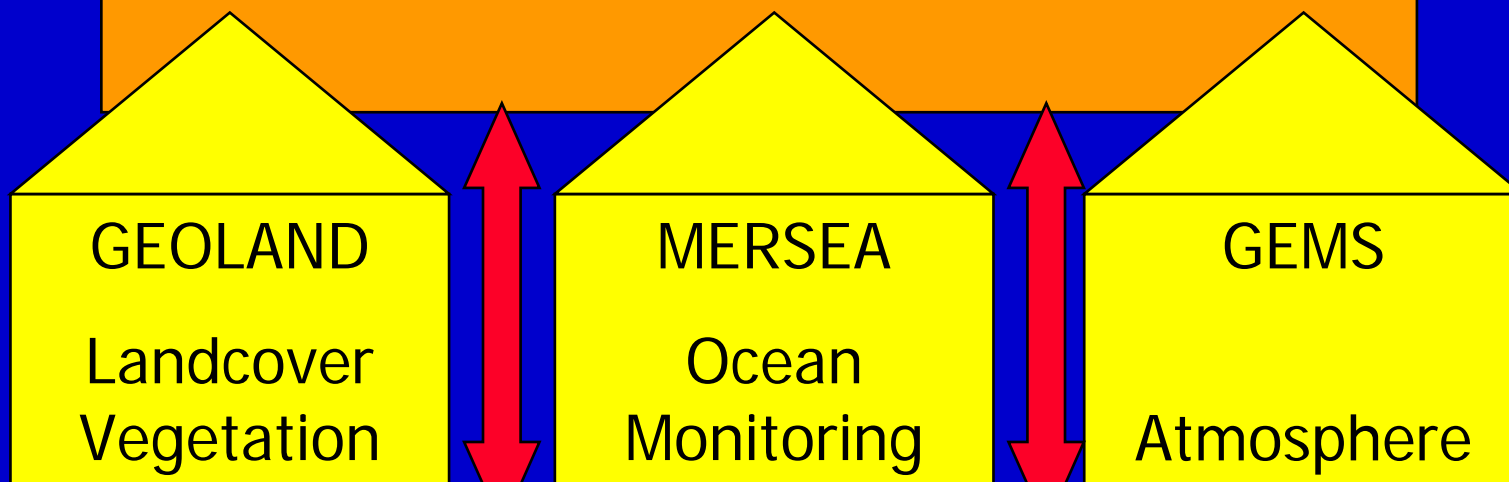


HALO Support Action

SSA

HALO - Harmonised coordination
of the Atmosphere, Land and Ocean integrated
projects
of the GMES backbone

IP





GMES Implementation Period (2004-2008)

- **Management actions**

- Advisory Council, Programme Office, GMES partnership(s),
Coordination actions in the framework of GEO

- **Implementation actions**

- in-situ component, space component, data policy, data
integration and information management, management
structure, services, security aspects

- **Funding actions**

- ensure sustainability of GMES services through appropriate
funding mechanisms (in the context of the EU Financial
Framework for 2007-2013)



GMES management (2004 – 2005)

GMES Programme Office

- operational management of GMES using mechanisms foreseen in EC/ESA Framework Agreement. Populated in part by seconded experts from Member States and EEA, EUMETSAT, EU Satellite Center, EU Council.

GMES Advisory Council

- long-term strategy, political and financial support Brings together EU/ESA Member States, the European Commission and ESA, plus other stake-holders, on an ad-hoc basis: (e.g. EEA, EUMETSAT, ECMWF, European Maritime Safety Agency, EU Satellite Centre, EU Council etc.), representatives of end-users, industry, service providers, research organisations, academia.





COM(2005)565

NEW !

- Released on November 16th, 2005
 - http://europa.eu.int/comm/space/off_docs_en.html#5
- Main issues addressed
 - Strategic dimension of GMES, place within GEOSS process
 - GMES at the service of the EU
 - Implementation of services and space component
 - ↪ Users at the forefront
 - ↪ Gradual introduction of pilot operational services
 - ↪ 3 Candidate services for Fast Track introduction by 2008
 - ↪ Funding strategy FP7 and ESA
 - ↪ Governance (EU – ESA - Member States)
 - Promotion of GMES



Special “fast-track” by 2008 ...

- Three candidate services for “fast track” introduction
 - **Emergency Response**
 - **Land Monitoring**
 - **Marine Core service**
- Process for confirming status & defining scope & modalities dedicated workshops (Oct-Nov 2005)
- Development & funding based on current process
 - EC/FP6 & ESA/GSE projects
 - Remaining FP6 resources focused as far as possible on “fast track” service implementation
- “Fast track” services as INSPIRE pilots



... with further pilot services coming online progressively in 2009 and onwards

- Already topics highlighted in COM
- ... Atmospheric service as raised at GAC 5
- ... consideration of Security – border surveillance
- Process now to be discussed:
 - Scoping paper for Member States consultation in GAC (April 2006?)
 - Consolidation of Scope – Implementation – Sustainability (*action for actors in field!!!*)
 - User workshop (late summer 2006?)

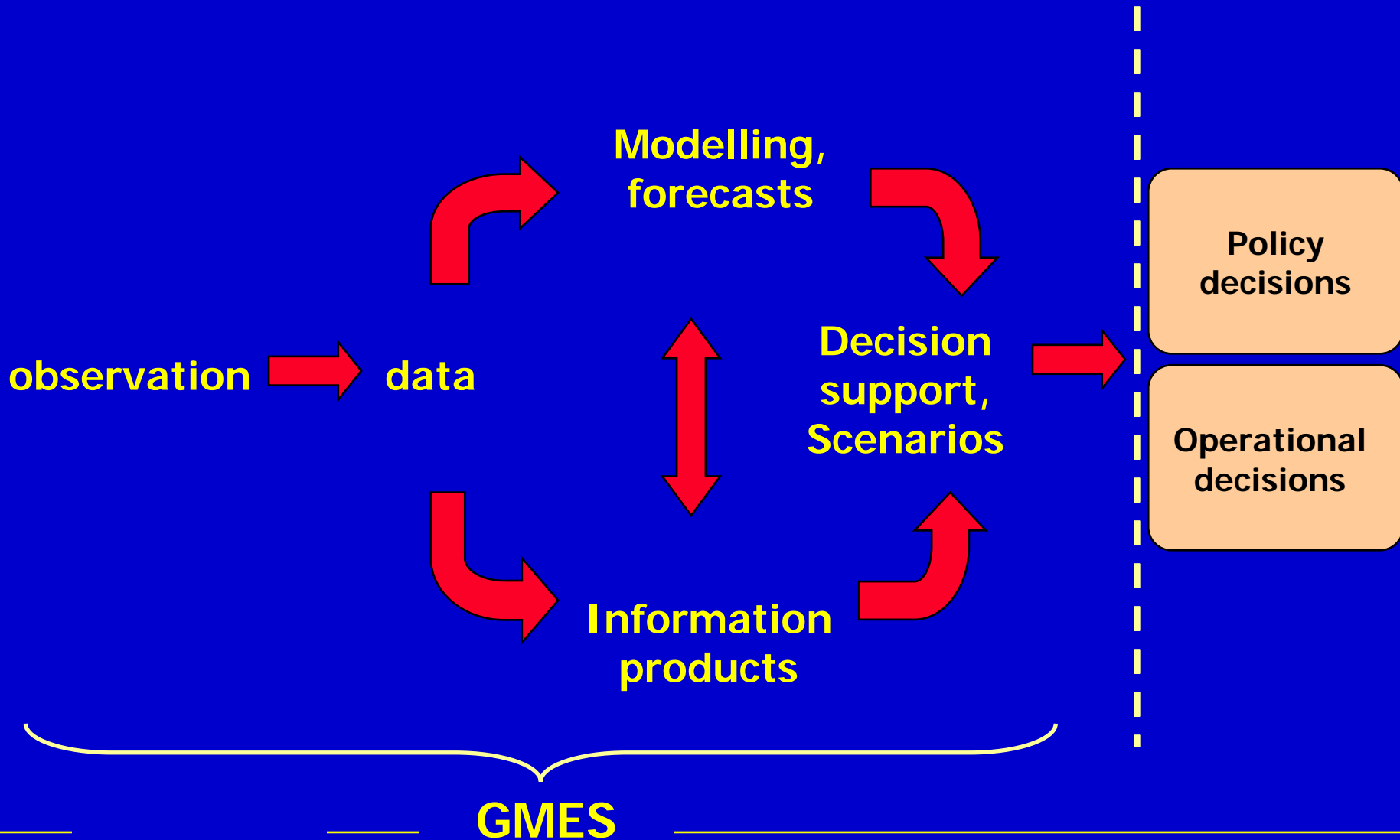


Pilot Operational Services

- Based on:
 - Their maturity (technical and political)
 - Their uptake by user communities (policy relevance)
 - Long-term sustainability of demand & supply
- Funding by aligning EC, national & regional resources
- Challenges
 - Interoperability of acquisition systems
 - Standardisation of data structures & interfaces
 - Fusion of data from different sources
 - Cost-effective, innovative, user-friendly services
- Part of a coherent overall programme



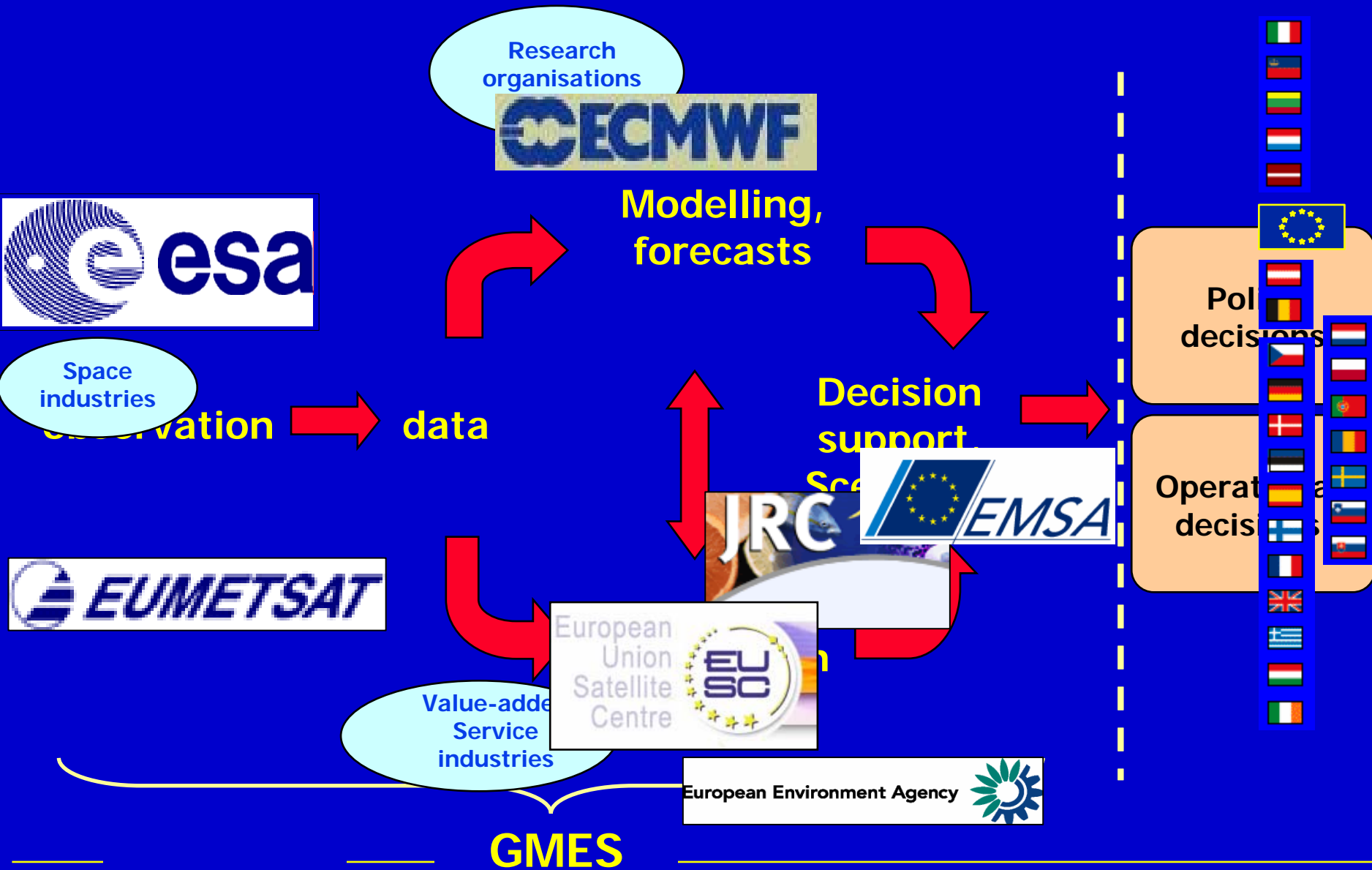
GMES functions implemented by a large number of actors





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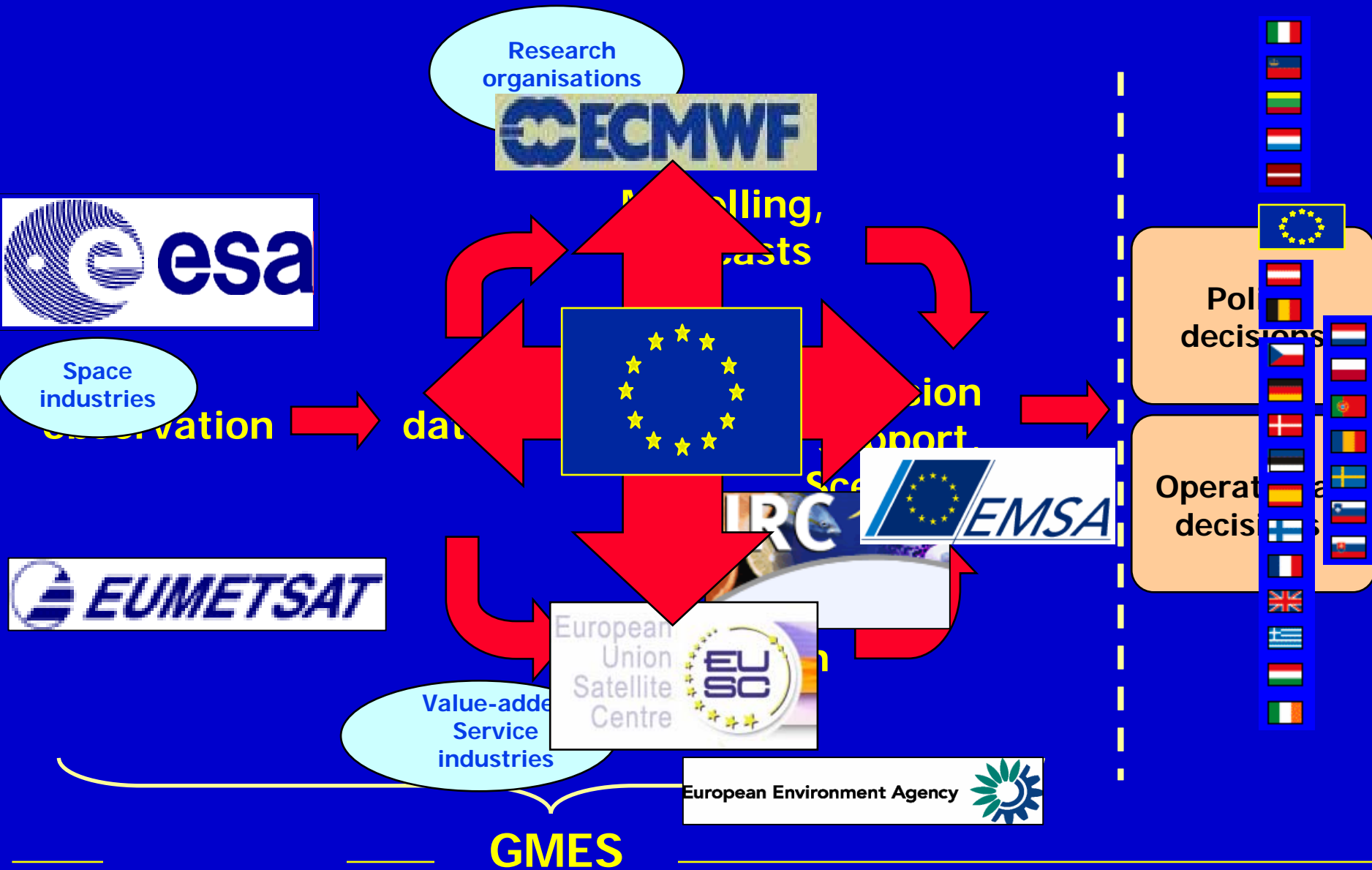
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European Commission

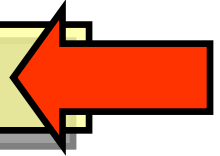
GMES functions implemented by a large number of actors





FP7 Specific Programmes

Cooperation – Collaborative research



Ideas – Frontier Research

People – Human Potential

Capacities – Research Capacity



JRC (non-nuclear)

JRC (nuclear)

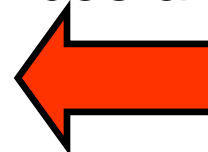
Euratom



Cooperation – Collaborative research

9 themes

1. Health
2. Food, Agriculture and Biotechnology
3. Information and Communication Technologies
4. Nanosciences, Nanotechnologies, Materials and new Production Technologies
5. Energy
6. Environment (including Climate Change)
7. Transport (including Aeronautics)
8. Socio-Economic Sciences and the Humanities
9. Security and Space



9. Security and Space

Protection against terrorism and crime

Security of infrastructures and utilities

Border security

Restoring security in case of crisis

Security systems integration
and interoperability

Security and society

Security Research Coordination
and structuring

Space-based applications at the
service of the European Society

Exploration of space

RTD for strengthening
space foundations

Joint Technology Initiatives

**Hydrogen
and Fuel Cells for a
Sustainable Energy
Future**

**Global Monitoring
for Environment
and Security**

**Aeronautics and
Air Transport**

**Innovative Medicines
for the Citizens
of Europe**

**Towards new
Nanoelectronics
Approaches**

Embedded systems

*Other possible themes
to be identified later...*

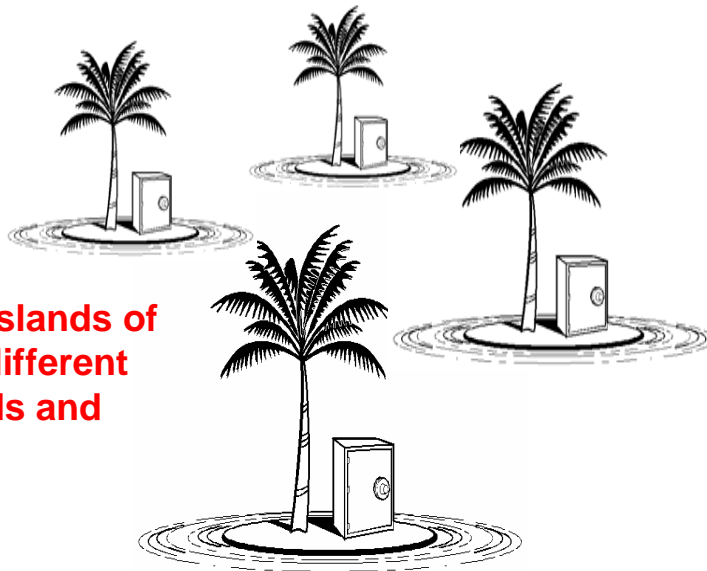
INSPIRE - Overall context

Needs

- Better information needed to support policies
- Improvement of existing information flows
- Differentiation across regions to be considered
- Revision of approach to reporting and monitoring, moving to concept of sharing of information

Situation in Europe

- Data policy restrictions
 - pricing, copyright, access rights, licensing policy
- Lack of co-ordination
 - across borders and between levels of government
- Lack of standards
 - incompatible information and information systems
- Existing data not re-usable
 - fragmentation of information, redundancy, inability to integrate



EU has islands of data of different standards and quality...

EC Proposal COM(2004) 516 for a Directive establishing an infrastructure for spatial information in the Community - INSPIRE



- The INSPIRE Process - Bottom-up Stakeholder Involvement

– Building consensus in expert groups

- Orientation and Position papers of experts
- Establishing the state-of-play

– Preparing the proposal -> A Framework Directive

- Scoping policy measures with expert advice
- Assessing the political and socio-economic impact
- A public review of the proposed measures

– Adoption of the Framework Directive by the Commission

– The proposal on the political agenda of the EU Presidency

– Co-Decision Procedure by Council and Parliament

– Adoption of the Framework Directive

– Transposing the Framework Directive

– Implementing the Framework Directive

2001

2002

2003

2004

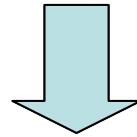
2004-6

2007-8

2009-13

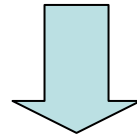
The broader context

- The implementation of INSPIRE needs to consider the broader context of existing initiatives which could contribute to ESDI



- The INSPIRE Work Programme should interface with those partnerships and initiatives where relevant and establish synergy*

**e.g. GEOSS, GMES, GALILEO, GSDI,...*



**concept of Spatial Data
Interest Communities (SDIC)**

- SDIC bundle the human expertise of **users**, **producers** and **transformers** of spatial information, technical competence, financial resources and policies. Many SDIC exist today, generally organised by region, thematic issue or sector (industry).

The role of Spatial Data Interest Communities (SDIC)

- collect and describe user requirements,
- submit/develop reference materials
- allocate experts to the drafting teams,
- participate in the review process,
- implement pilot projects
 - to test/revise/develop the draft Implementing Rules,
- make cost/benefit analysis
 - to assess costs of the draft Implementing Rules,
- contribute to awareness raising and training

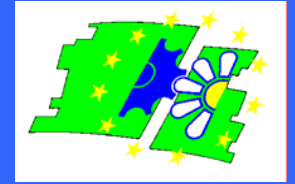
The role of Drafting Teams (DT)

- to analyse and review the reference material
- to write draft INSPIRE Implementing Rules
- to provide recommendations to the CT (in case of conflicting technical specifications)
- to provide suggestions to the CT for testing any proposed specification



State of Play

European Commission - DG Environment

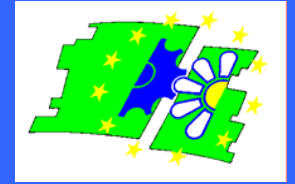


- EP first reading adopted 7 June 2005 – strongly supports Commission proposal
- Council political agreement reached on 24 June 2005, but lacks ambition on public access and sharing between authorities
- Commission therefore will not support Common Position; AT, CZ, ES and PT have also expressed concerns.



Prospects for 2nd reading

European Commission - DG Environment



- Formal Common Position will be adopted December, transmitted to EP in February
- AT Presidency will aim for 2nd reading agreement with EP in June
- Failing this, political agreement followed by conciliation under Finnish Presidency



Tentative Roadmap for FP7

2005

- 6/4 Commission - Adoption of FP7 proposals
- 18/4 Council - Exchange of views
- 7/6 Council - Orientation debate
- 21/9 Commission - Proposals on SPs and Rules for participation and dissemination
- 11/10 Council - Exchange of views on SPs and Rules
- 23/11 Commission - Proposals under Articles 169 and/or 171
- 28-29/11 Council - Orientation debate on SPs and Rules
- 12-15/12 EP - 1st reading on EC FP. Opinion on Euratom FP

2006

- Feb/Mar Council - Common position on EC FP
EP - 1st reading on EC Rules. Opinion on Euratom Rules.
- April Common position on EC Rules
- May/June EP - 2nd reading on EC FP; Opinion on SPs; 2nd reading on EC Rules (earliest)
- June Council - Adoption of FP and Rules (earliest)
- July Council and EP - Adoption of FP and Rules
- July Council - Adoption of the SPs
- Oct Commission - Adoption of Work programmes and necessary materials
- Nov Commission - Publication of 1st calls