



GMES

- status and challenges
- relations to the meteorological community

EMS/ECAM

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Approach

- GMES aims at developing **information services**
 - To serve European policies
 - e.g. Environmental Action Plan, Common Agricultural Policy, Transport, Energy, Maritime, Civil Security
 - To meet international commitments
 - protocols and conventions e.g. GEOSS
 - To support national or regional implementation
 - To stimulate market development
- GMES is based on an integrated system approach:
 - Overall information chain
 - from observations to information requested by the users
 - System of systems
 - Integrating existing assets



Implementation steps

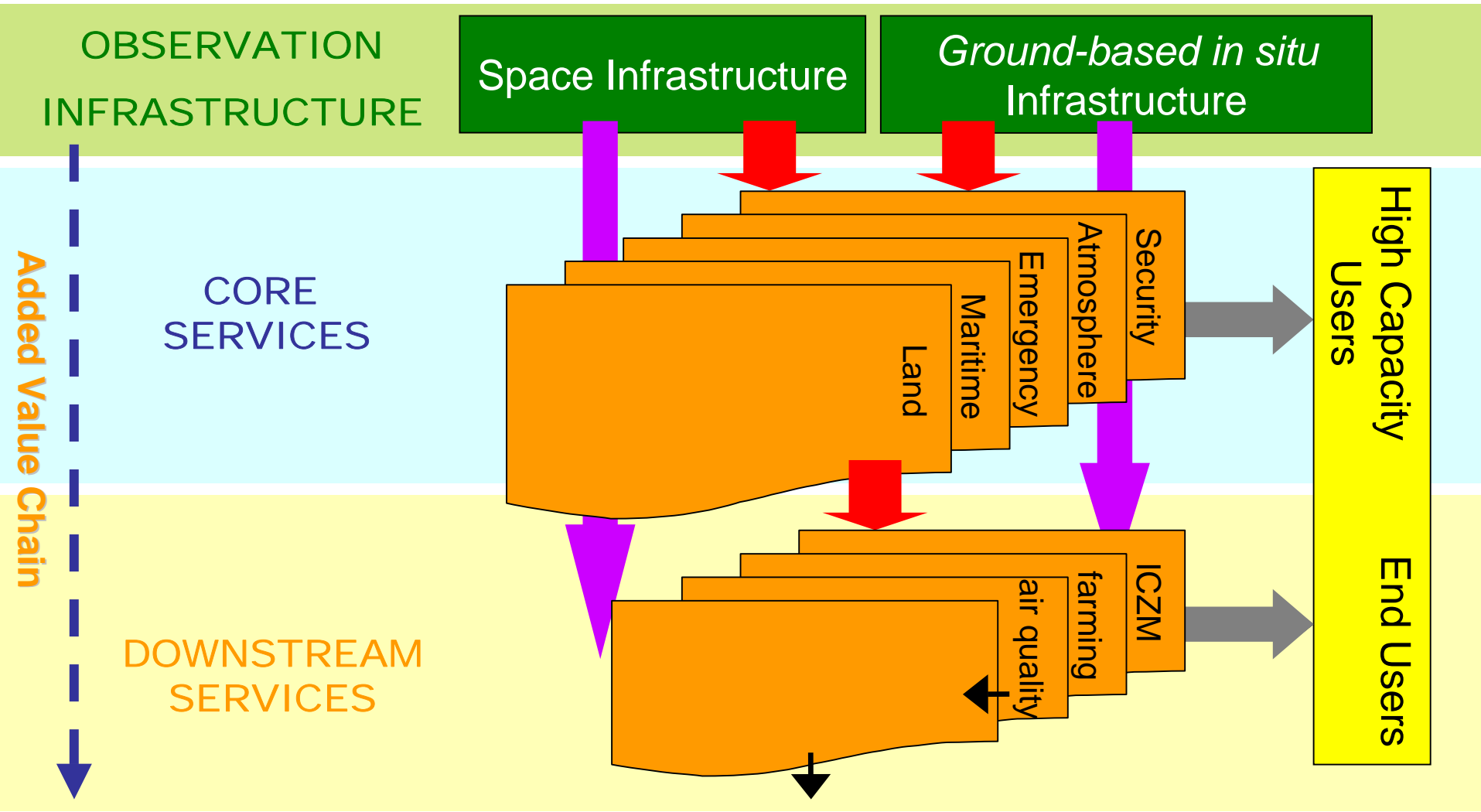
- Start **by 2008** a **GMES operational service capacity**
 - Fast track services:
 - Land
 - Marine
 - Emergency Response

>> **1st building blocks of GMES**
 - Other pilot services under way:
 - Atmosphere
 - Security
 - R&D and pre operations funding through FP 7

- Associated challenges:
 - Maximum use of **existing activities and assets**
 - Analyse the gaps and support to the development of **new capacities** if needed
 - **Harmonise ongoing initiatives**
 - **Need for sustainable governance and funding schemes**



Overall GMES Architecture





GMES Service Architecture

Added value chain divided in two layers:

- **Core services**
 - Pan-European (multi-purpose) information service capacity
 - Linked to EU information needs (EU policies and international commitments) or to decisions to share capacities at EU level
- **Downstream services**
 - Tailored for specific applications at local / regional / national / European levels (public good or private use)
 - EU not directly driving the service
 - EU not responsible for service requirements

Concept applicable on a case-by-case basis



Observation component

- GMES Space Component GSC infrastructure
 - Include ESA, EUMETSAT and national missions
 - requirements driven by GMES services
- In situ infrastructure for GMES
 - Measurement networks (including EU contribution to international) and “opportunity” observations
 - “Compartment” approach: atmosphere, ocean, hydrology
 - Status: evolution from research to operational systems
 - Start with infrastructure / data required by Pilot Services
- GMES is not about managing infrastructure, but about securing information services



GMES Pilot Services Current status

Fast Track Services main milestones:

- June 2005: approval by GMES Advisory Committee of three FTS proposed by EC
- Fall 2005: FTS User Workshops
- November 2005: endorsement of workshop outcomes by GAC
- Q1 2006: setting up of FTS Implementation Groups (IG)
- February 2007: release of IG Implementation Reports including scope, functionality & architecture, governance, external dependencies...
- March 2007: feedbacks from GAC and other stakeholders on IG reports
- September 2007: Evaluation of FP7 proposals finished
 - [IG reports were guidelines for FP7 proposals](#)



GMES Pilot Services Current status

- New Pilot Services
 - **Atmosphere**
 - FP6 (GEMS = 10 M€) & ESA GMES Service Element (PROMOTE = 5 M€) projects addressing:
 - Air quality
 - Climate forcing
 - Stratosphere (O3)
 - User workshop in December 2006
 - Implementation Group started work due 2008 Q2
 - Contribution to security issues
 - Security: complex issue at EU level (inter-pillar aspects)
 - Dedicated user workshop in March 2007
 - Action plan under definition



GMES full offering

- European land use/land cover
- Marine and coastal environment
- Global change issues
- Atmospheric pollution management
- Risk Management
- Forest Monitoring
- Food security and early warning mechanisms
- Maritime security
- Humanitarian aid



GMES governance under development

Two main issues to address:

- governance of individual architecture components
- overall GMES governance

Main milestones:

- April 2007: Munich roadmap (German presidency)
 - GMES architecture components
 - Governance principles (by component – general governance)
- End 2007: EC to propose governance packages
- 2008: analysis of governance solutions
- End 2008: final proposition for GMES governance
- 2009-2010: implementation of GMES governance mechanisms
- 2011 or beyond: kick-off of GMES governance scheme

Major consequence: no significant operational funding before 2012



GMES meteorology relations

- European Meteorological Infrastructure **is doing** and can do more for the GMES core services
- **EUMETSAT**
 - delivers MSG & EPS data to GMES services
 - EUMETSAT is bound to operate GMES satellite observations
 - Sentinel 4 and 5 satellite missions merge into MTG and post-EPS
- More is needed especially in data distribution and in situ observations
 - Pan European providing of e.g. air quality, stratospheric O3, solar energy production related data for GMES core services
- **EC promotes open data policies on environmental information (INSPIRE and Århus convention/directive)**
- **Preferably free access to all observational data**

Be active!



GMES-EMI mutual benefits

- Many GMES core services are interesting for developing NWP and meteorological services
 - Operational oceanography
 - Updated land cover
 - Atmospheric composition
- More resources to R&D efforts
- GMES can strengthen the importance of the meteorological community
- GMES gets EMI data and a proven operational infrastructure for its services



Thank you

- Any questions or comments

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<http://www.gmes.info/>