



Global Monitoring for Environment and Security (GMES) and its opportunities for SME's

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Structure

I. What is GMES

II. Cost – Benefit of GMES

III. Opportunities for the industry

– Worldwide

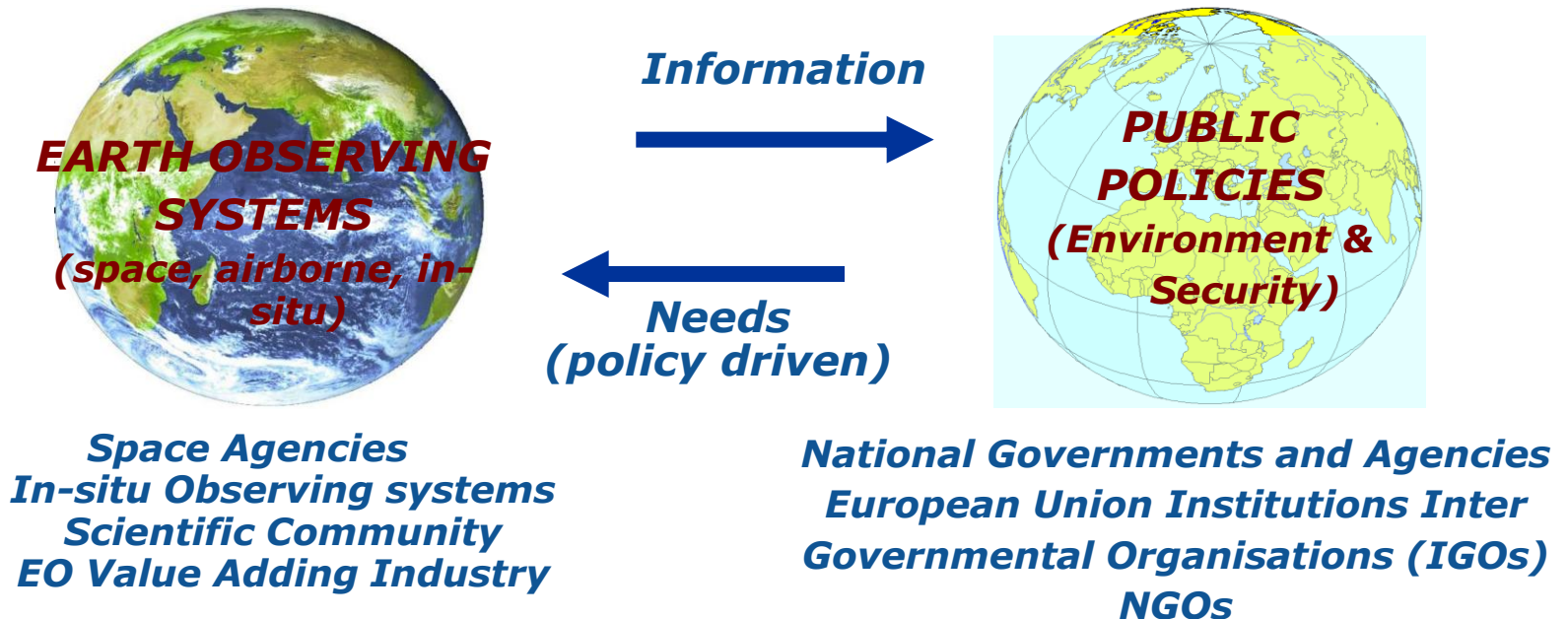
– European

I. What is GMES?

- An autonomous Earth Observation system for Europe
- The largest fleet of satellites and atmosphere/earth-based monitoring instruments in the world
- An end user-focused programme of services for environment and security
- Joined-up information for policymakers, scientists, businesses and the public
- Europe's response to the global need for environment and climate monitoring
- Partnership between EU, ESA and Member States

What is the objective?

...to provide information services to policy-makers and other users



...but also to strengthen the market

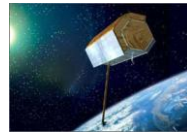


European Commission

GMES Components

Space Component

Sentinels,
Contributing
Missions
and related
Ground
Segment



Services Component

Information
services for
marine,
atmosphere,
climate
change, land,
Emergency and
security

GMES



In-situ Component Land, air and water monitoring sensors

GMES Services

Monitoring of Earth systems



Land



Marine



Atmosphere

⇒ **Output: Added
value services**

Horizontal applications



Security



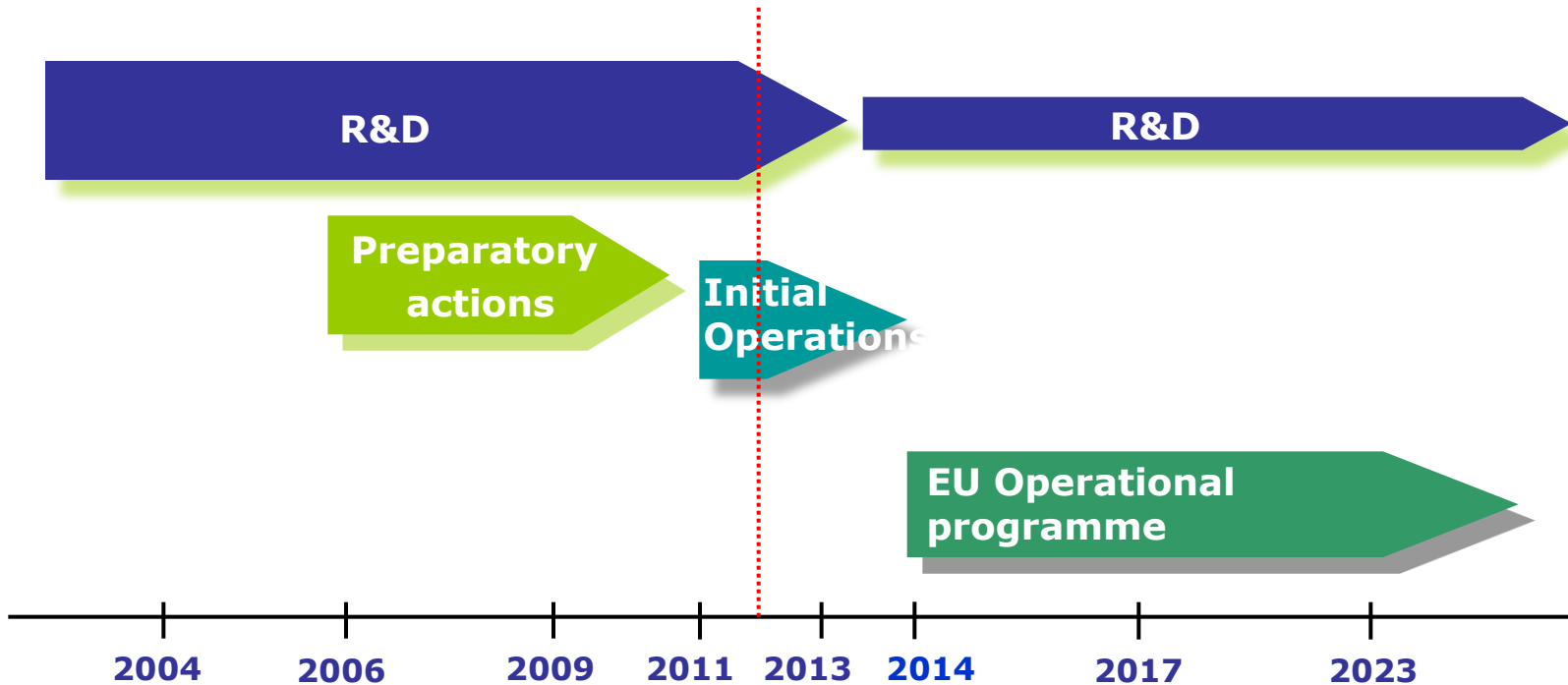
Emergency



Climate Change

GMES Timeline

Activities now transfer to future operations



State of play

- **Regulation 911/2010 establishes the GMES programme and its initial operations for 2011-2013**
- **Communication COM(2011) 831 proposed a way forward for 2014-2020**
- ***What's next?* Institutional debate in the EP and Council under the Danish Presidency on the future of GMES and to clarify both its funding and governance**

II. Cost-benefit of GMES

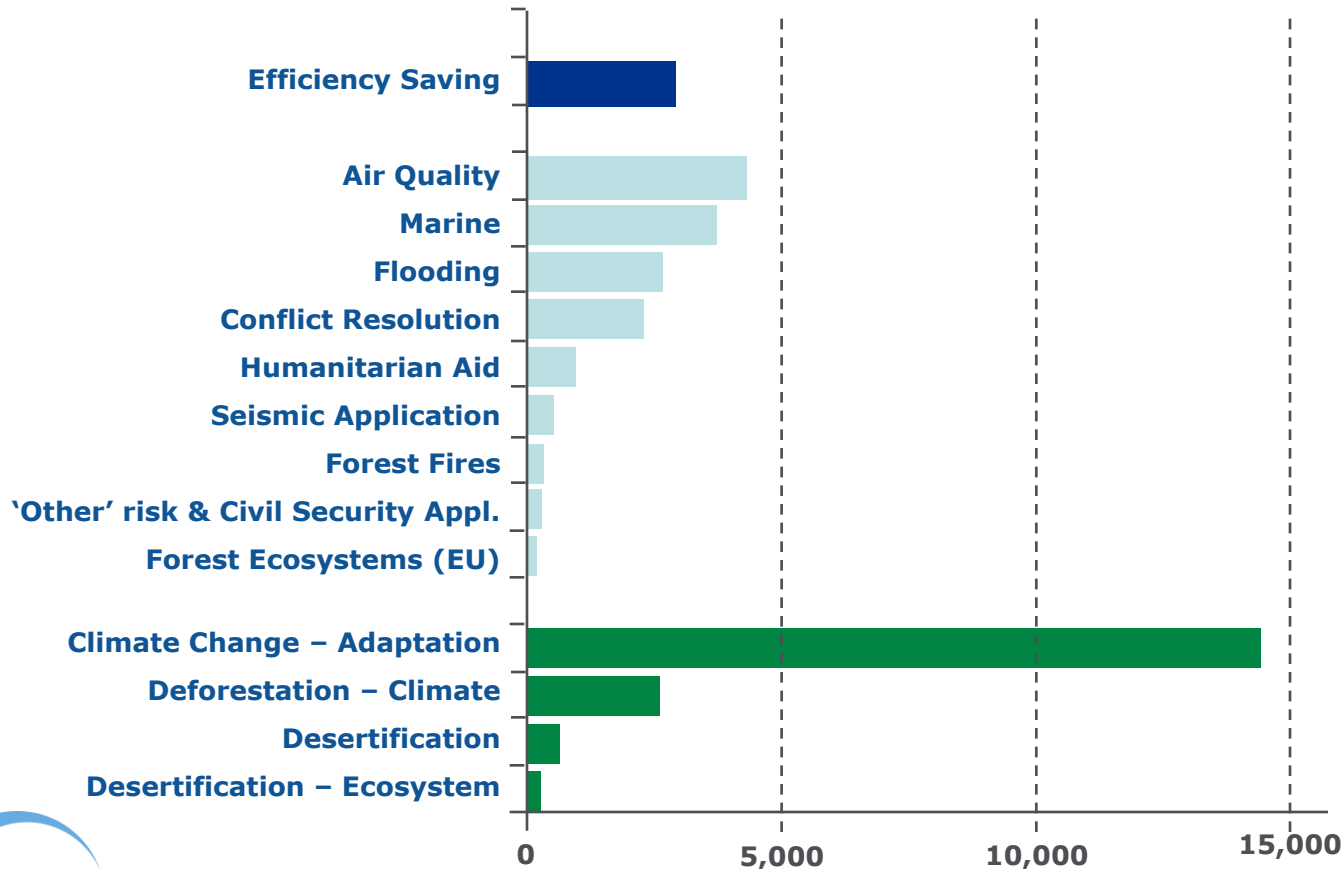
Value of GMES = information

Benefits:

- **Short term: support to the implementation of running policies and legislation**
- **Medium Term: support to the definition and formulation of new policies//downstream services**
- **Longer Term: impacting the formulation and implementation of policies with a global reach//downstream services**

Socio-economic benefits

Total benefits (up to 2030): PV Benefit: 35 billion €



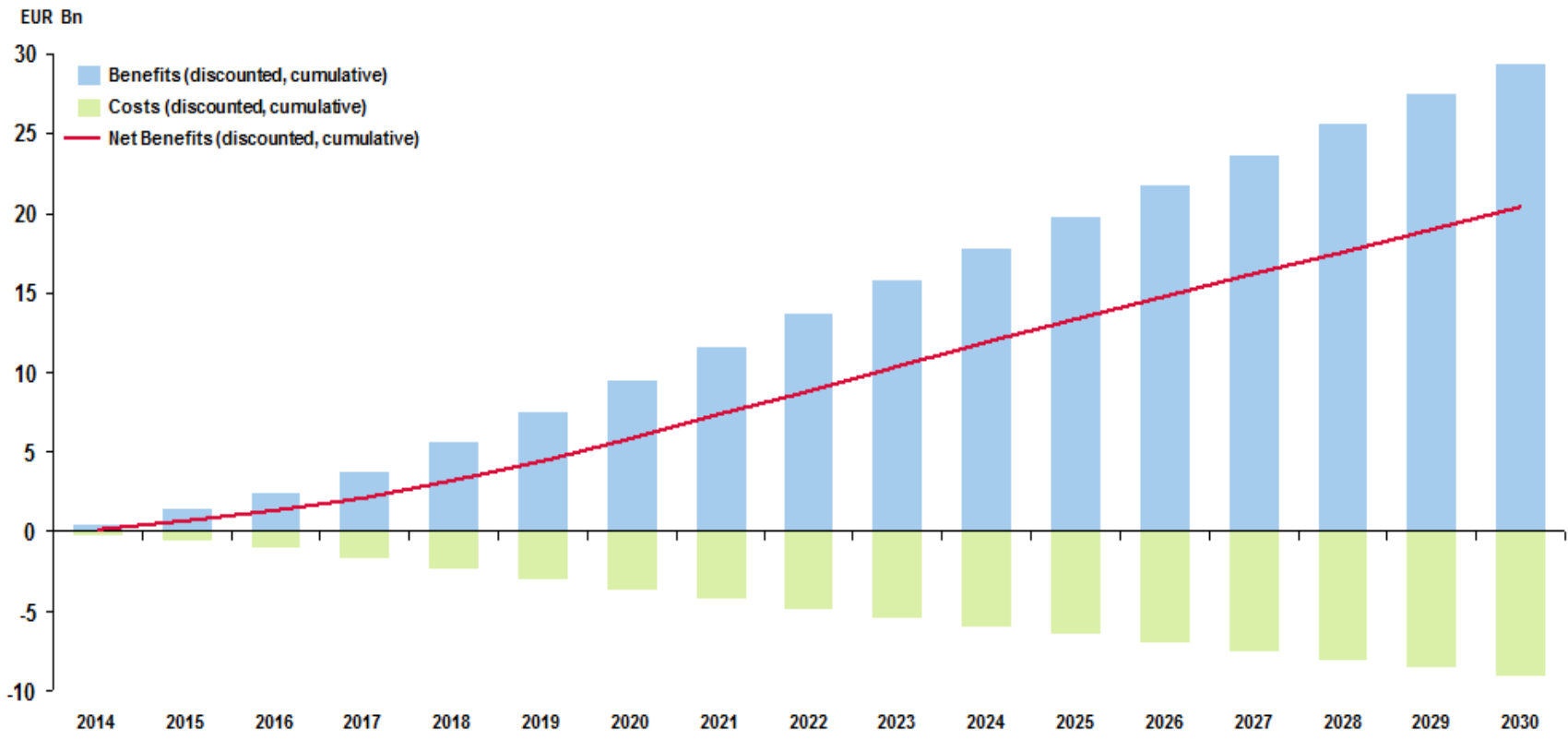
Cat.1
(Efficiency
Benefits):
2786 M€

Cat.2
(European
Policy
Formulation
Benefits):
14582 M€

Cat. 3
(Global
Action
Benefits):
17298 M€

Based on PWC
study

Cost-Benefit Analysis, € Billion, 2010 prices



Source: Booz & company Analysis



III. Opportunities for the Industry - Worldwide

➤ EO Industry continues to expand

- **140 EO satellites** from **26 countries** launched over the last decade, **298** from **43 countries** expected for the next decade
- Remains a **priority of governments**
- Implies **opportunities along the value chain**
- **Investment to remain high, though budgets are tightening, which results in uncertainties**
- **Investment into civil government EO reached \$5.9 billion in 2010**
- **Commercial data sales reach \$1.3 billion in 2010**

Strategic Issues and Forecast - Opportunities

- **Manufacturing revenues to increase by 32% in the decade**
 - Cost of manufacturing EO satellites should decrease from \$154 million per satellite in 2001-2010 to \$86 million in 2011-2020
 - Growth spurred by a **doubling of the number of satellites**
 - Towards smaller, cheaper, and more responsive EO satellite missions

- **Services benefit from** increased data supply – **value added services industry generated** revenues of 1.9 billion in 2010

Strategic Issues and Forecast - Opportunities

➤ **Downstream services benefit from lower cost solutions**

- Downstream services **market is said to grow significantly** in the future
- **Global and very competitive market**
- **Civil government** is the primary customer for value added services
- Majority are SME's
- Fragmentation and lack of standardization is hindering growth potential
- It is important for those participants to understand that **they are considered to be valuable**

III. Opportunities for the Industry - European Opportunities

- EU is building **two major space infrastructures**:
 - **Galileo/EGNOS** for positioning / timing / navigation
 - **GMES** for Earth Observation
- **Substantial investments from EU, MS and ESA budgets for the infrastructures and to develop services for institutional public users**
- **EGNOS already available** (x10 more precise than simple GPS)
- **Galileo will be operational from 2014**
- **Hundreds of “products” already available daily from GMES Services**
- **Huge data streams from Sentinel satellites available from 2014**

The SME Market

- Companies **offer added value products** based on EO data
- Segments: **Meteorology, Defence & security, Oceanography, Natural resource Monitoring, Land Monitoring**
- Concrete examples:
 - **Urban planning**
 - Use of EO data for **new shipping routes**
 - **Adaptation of maps to be user friendly to communal authorities - snow density maps**

Opportunities

- **FP7**
- **GIO**
- **CIP**

FP7-SPACE-2012-1

Opportunities for SME participation in GMES found in the **development and adaptation of methodologies and tools for services tailored for specific applications**

Collaborative projects supported in 2012 **to bring together SMEs not traditionally working in space projects with Space industry or space research organisation**

Stimulate **new commercial activities** through innovative space data applications, thereby having a beneficial impact on SMEs active in the value-adding sectors

Participation of SMEs encouraged, as this could potentially enhance the innovative impact of proposals and could strengthen research alliances for space technologies

Innovation dimension across the whole of FP7 to be strengthened by continuing the efforts to **increase the SME participation**, in particular through defining SME relevant research areas in the calls

Call FP7-SPACE-2012-1

Activity 9.3 **Cross- cutting activities/SME specific**

GIO (GMES Initial Operations)

- **Land Monitoring Service:** Delegation agreement to **EEA**
- **Emergency Management Service:** Sub-delegation to the **JRC** and set up of the institutional coordination
- **Calls for tenders** launched in 2011
 - **Emergency Management Service – EFAS (2 calls)**
 - **Emergency Management Service – Mapping (3 calls)**
 - **Pan-EU component of Land Monitoring (1 call)**
- **Support to GIO implementation activities** (1 call – 3 lots)
 - **Lot 1: Support to the GMES user consultation**
 - **Lot 2: Support to the take up of GMES services by users (training, communication activities, awareness raising, implementation of technical interfaces)**
 - **Lot 3: Studies in support to GMES related Policy measures**

CIP / EIP Innovation programmes

- **CIP is the European Competitiveness and Innovation framework Programme**
- **3 Specific programmes:**
 - *EIP: Entrepreneurship and Innovation Programme*
 - *ICT Policy support Programme*
 - *Intelligent Energy Europe*

See <http://ec.europa.eu/cip>

EIP Call 2012

- EIP 2012 Work Programme includes an action **to support the development of downstream applications by private enterprises** (focus on SMEs)
- "Extension to EMMIA", the European Mobile and Mobility Industry Alliance, focusing on concrete applications using GMES and Galileo / EGNOS
- More and better **support for SMEs** in the mobile and mobility industries
- Total budget: 2.5 M€ (+ 1 M€ under discussions)
- Two strands: 1/ **vouchers schemes** to support service providers or users
2/ **large scale demonstrators** of innovative services
- Call for proposals to be open in February/March - Start of the selected actions in the 2nd half of 2012

Data Policy

- **GMES: a public good**

Overriding goal is to provide **free and open** access data and information with minimum restrictions

- **Science** is also recognised as key community to use and evolve GMES

- Need to distinguish between data policy for **Sentinels, contributing missions, GMES service products & information**

- **Security restrictions** may apply

- Next step: **delegated act** Spring 2012

More information on:

EC GMES website

<http://ec.europa.eu/gmes>