



FP7 Security & Space 2007 Draft Work Programme

European Commission DG ENTR-H4
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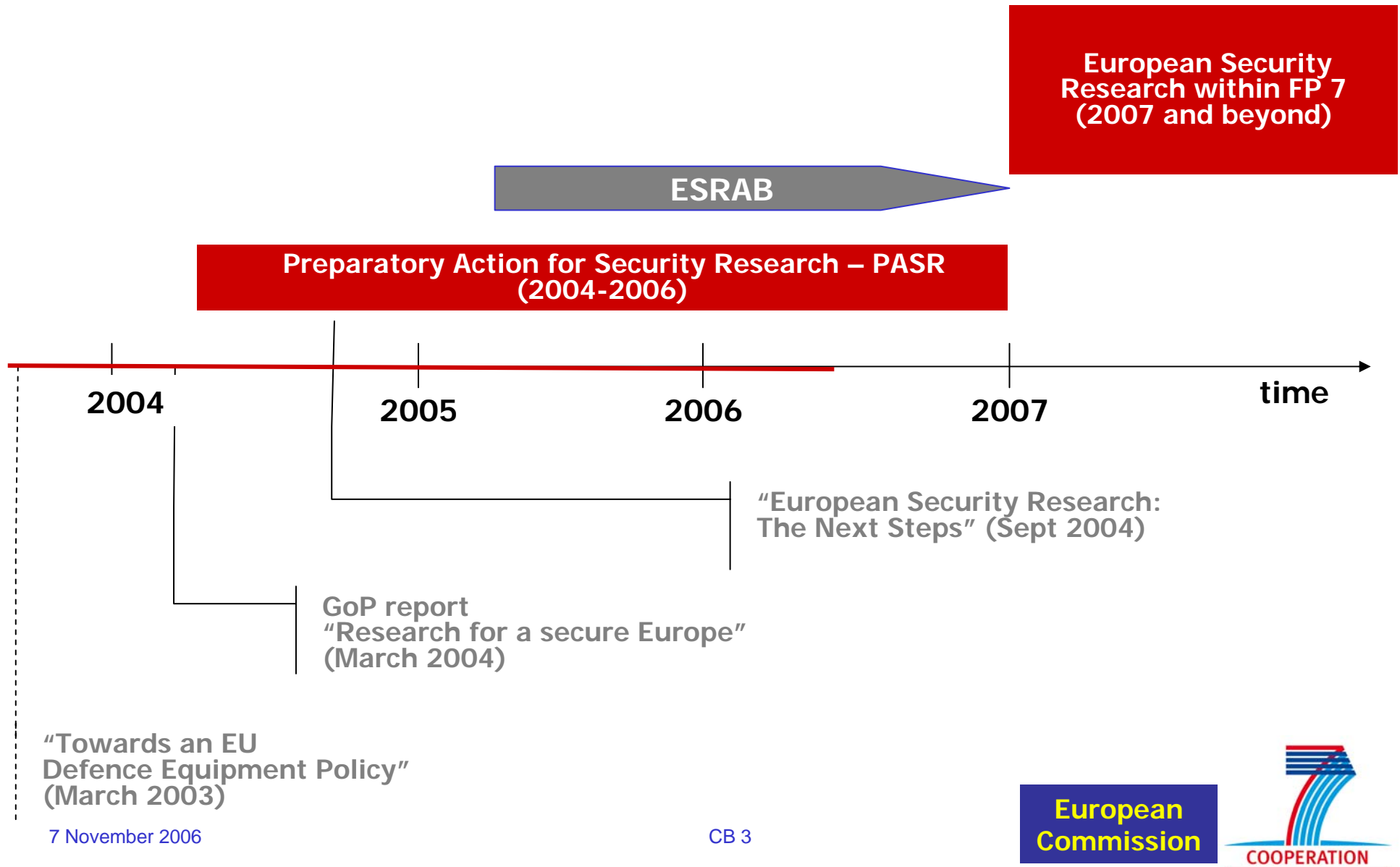
Security and Space: two themes with common approach

- **Build on recent experience (Preparatory Action in Security Research, FP6 for Space)**
- **Large increase in budget:**

Security	1400 Mio €	(→*10)
Space	1430 Mio €	(→ * 5)
- **Research near the market**
 - Pre-operational in Space
 - Mission oriented in Security
 - Make best use of, and harmonise, existing systems
 - Support the development of new capacity where needed
 - First call 2007-2008
- **Requirement to involve end users**
- **Management by DG Enterprise and Industry**



Security research initiatives





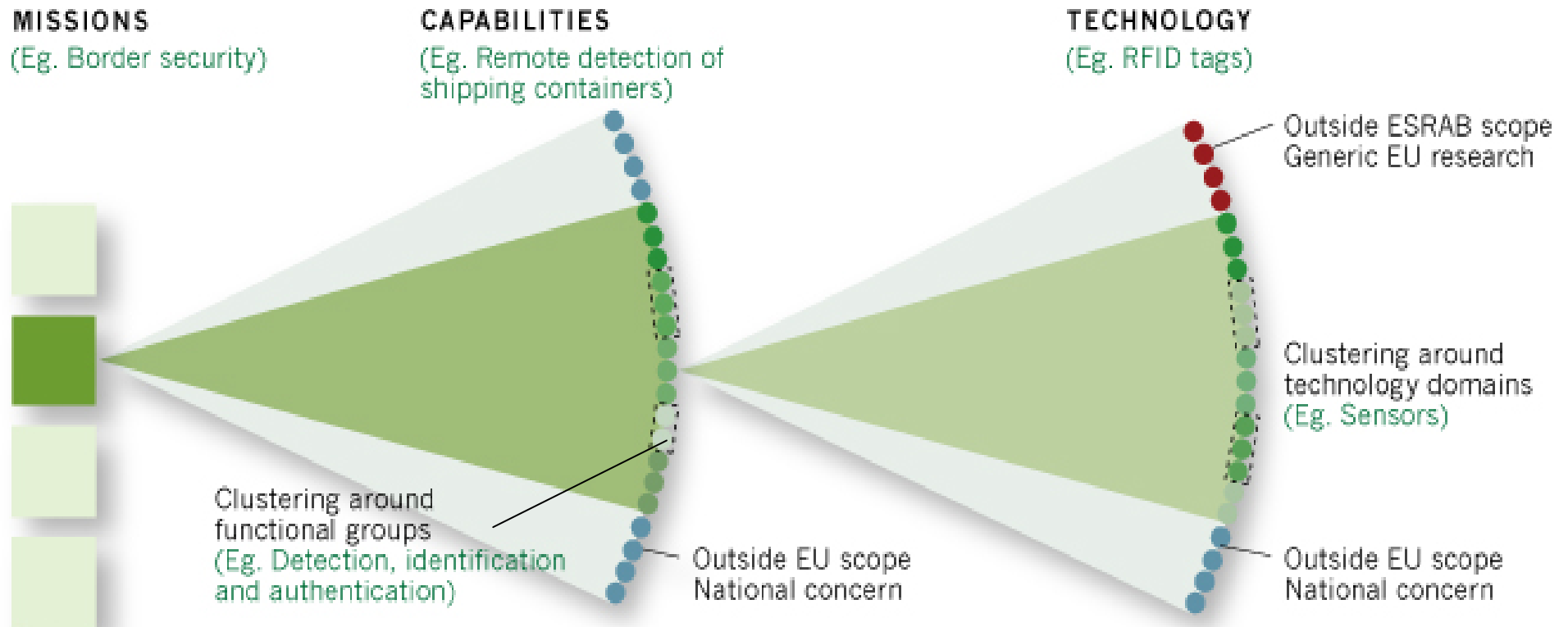
Security FP7 Activities

- **4 mission areas:**
 1. Protection against terrorism and organised crime
 2. Border security
 3. Critical infrastructure protection
 4. Restoring security in case of crisis
- **3 Cross cutting activities**
 5. Security systems integration, interconnectivity and interoperability
 6. Security and Society
 7. Security Research coordination and structuring



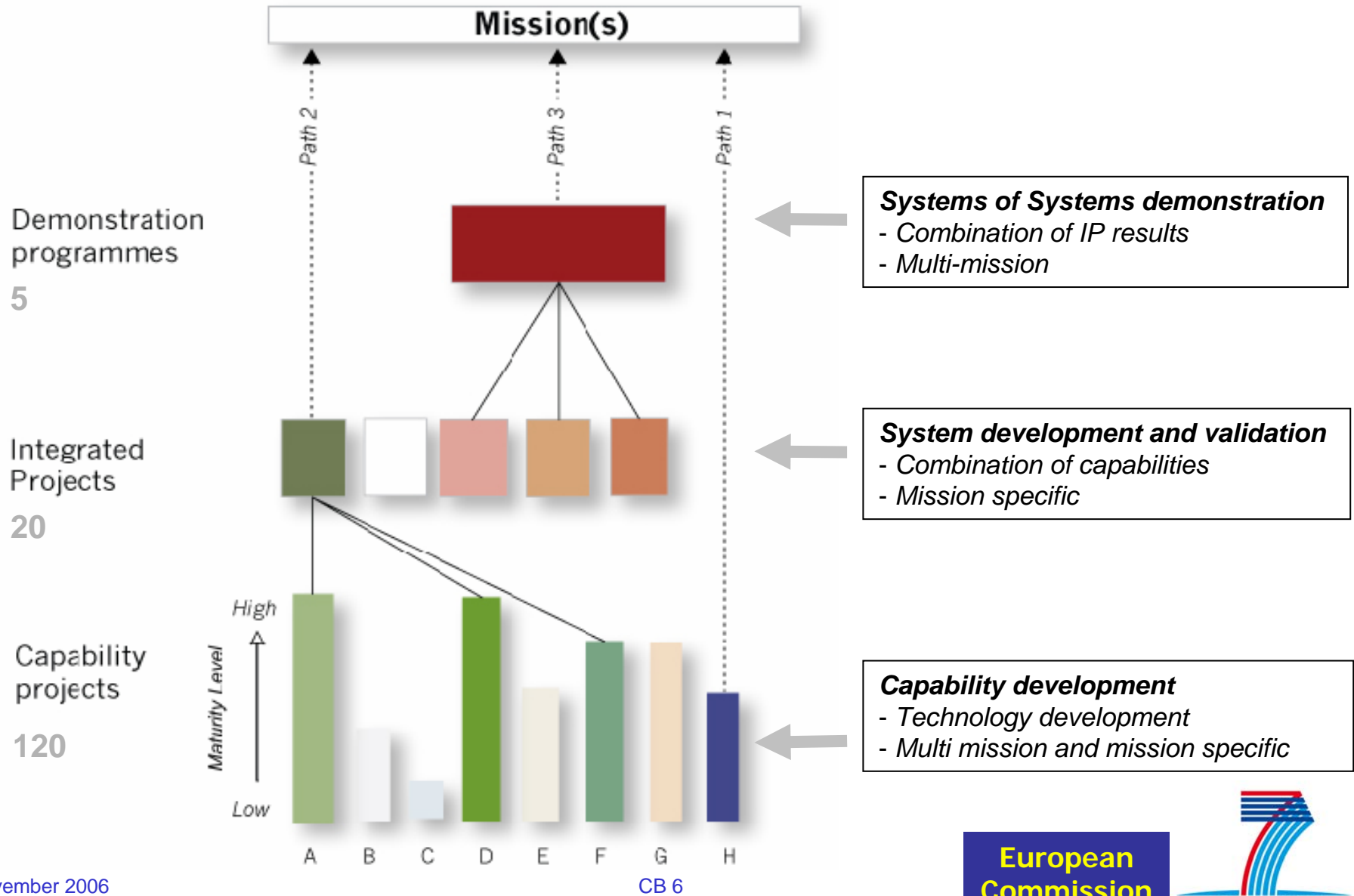
Methodology: from Missions to Technologies

From the analysis of these 4 security missions, capability requirements were described, grouped into functional areas, and then supporting technologies identified.



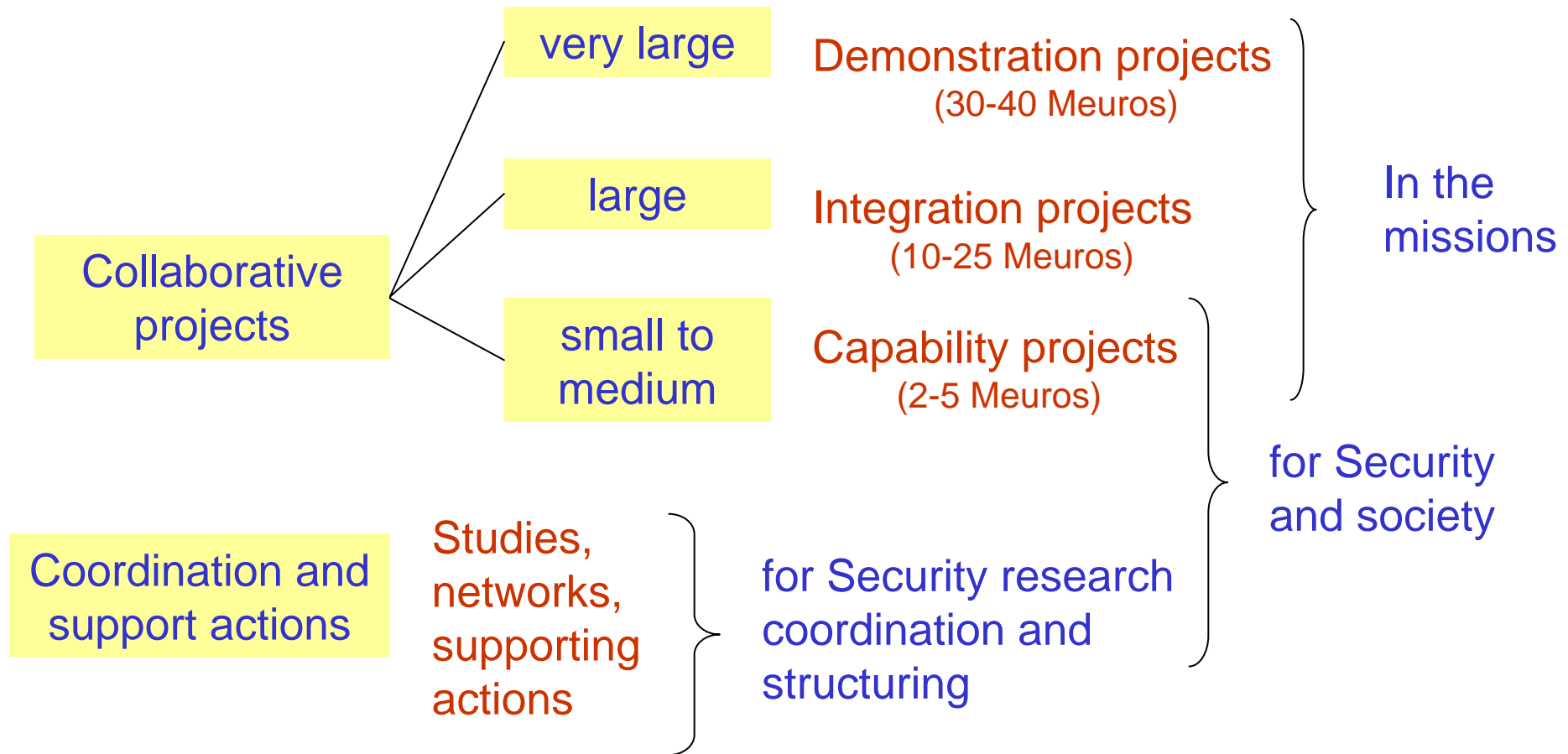


Instruments for the security missions





FP7 security theme funding schemes





Demonstration projects

- Systems of systems
- Provide a **federative frame** in areas of significant European interest
- Rely on the development of required “**building blocks**” (capability projects and integrated projects)

5 topics identified for the whole of FP7

- **European-wide integrated border control system**
- Crisis management system
- Logistic and Supply chain Security
- **Security of mass transportation**
- CBRNE (Chemical, Biological, Radiological, Nuclear, Explosives)



Integration projects (1)

1. Protection against terrorism and organised crime

- Secure strategic information management system
- Intelligent urban environment observation system
- Integrated mobile security kit

2. Border security

- Detection system for abnormal behaviour
- Integrated protection of rail transportation



Integration projects (2)

3. Critical infrastructure protection

- Main port security system (including containers)
- Unregulated land borders and wide land surveillance system
- Integrated check points security

4. Restoring security in case of crisis

- Network enabled command and control systems
- Integrated specialist search and rescue system
- Post incident basic service restoration system



Capability projects examples

1. Protection against terrorism and organised crime

Risk assessment, modelling & impact reduction

- Develop threat assessment models
- Modelling of criminal networks

Detection, identification & authentication

- Detection of hidden dangerous materials
- Improved control of explosives throughout their “lifecycle”

Positioning & localisation

- Localisation and tracking of chemical components in production
- Observation through water, metal, ground etc

Situation awareness

- Water distribution surveillance



1. Protection against terrorism and organised crime

Area	Function	Topic
Demonstration projects		
Integration projects		SEC-1.2.1 Secure strategic information management system SEC-1.2.2 Intelligent urban environment observation system SEC-1.2.3 Integrated mobile security kit
Capability projects	A: Risk assessment, modelling & impact reduction	SEC-1.3.1 Develop threat assessment models SEC-1.3.2 Modelling of criminal networks
	D: Detection, identification & authentication	SEC-1.3.3 Stand off scanning and detection of hidden dangerous materials and/or stowaways, fast and reliable alerting and specification SEC-1.3.4 Improved control of explosives throughout their "lifecycle"
	E: Positioning & localisation	SEC-1.3.5 Localisation and tracking of components of substance production SEC-1.3.6 Observation through water, metal, ground etc
	F: Situation awareness & assessment (surveillance)	SEC-1.3.7 Water distribution surveillance

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Security FP7 Activities

- **4 mission areas:**
 1. Protection against terrorism and organised crime
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- **3 Cross cutting activities**
 5. Security systems integration, interconnectivity and interoperability
 6. Security and Society
 7. Security Research coordination and structuring



6. Security & Society (cross cutting activities)

Area	Topic
Citizens and Society	SEC-6.1.1 Understanding terrorist behaviour and motivation for terrorist acts SEC-6.1.2 Understanding factors that cause citizens' feeling of security and insecurity SEC-6.1.3 Human behaviour before, during and after crisis situations to understand how people react to threat alerts and security instructions SEC-6.1.4 Communication strategies of public authorities (including media strategies) before, during and after crises concerning risks, security threats and measures
Understanding organisational structures and cultures of public users	SEC-6.2.1 Behavioural, organisational and cultural issues to understand public user needs including those for joint European action SEC-6.2.2 Inventories of existing national resources, institutional mandates and practices across relevant sectors
Foresight, scenarios and security as an evolving concept	SEC-6.3.1 Research in broad societal foresight to capture new and emerging threats as well as other aspects of security as an evolving concept (e.g. ethical and economic aspects) SEC-6.3.2 Research on rigorous methodologies for assessment of security investments and trade-off between security and other societal objectives (e.g. privacy and social cohesion)
Security Economics	SEC-6.4.1 Research survey on the emerging field of European security economics research to provide an analytical framework for complementary research SEC-6.4.2 European Security Indicator: methodological research to provide a few select indicators of security and security policy in Europe measuring the effects of both insecurity and security policies on the economy SEC-6.4.3 Public finance: Studying the scale, function and roles of various types of government security spending across Europe and time.
Ethics and justice	SEC-6.5.1 How to maintain the proportionality between the right to security and civic rights and how this is implemented in practice, particularly addressing the issue of privacy and security SEC-6.5.2 Ethical aspects of security technologies

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7. Security Research coordination and structuring (cross cutting activities)

- Technology Watch
- European Security Research Network, incl. for Standardisation
- Network of facilities for test and validation of security related products
- Transparency and networking amongst Member States
- Supply chains and market integration
- Trans-national co-operation among NCP's



Coordinated Call ICT & SECURITY

5. Security Systems Integration, interconnectivity and interoperability

Resilient networks

- Risk Assessment and contingency planning for interconnected infrastructures
- Modelling and simulation for training
- Optimized situational awareness through intelligent surveillance of interconnected infrastructures
- ICT support for first responders in crises occurring in critical infrastructures



FP7 Security Research Calls

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Two calls – Budget 2007-2008

- Call for security research only: ~ 150 Mio€
Publication January 2007 – Deadline April 2007
- Coordinated call for ICT and security research: ~ 20 Mio€
Publication September 2007 – Deadline December 2007

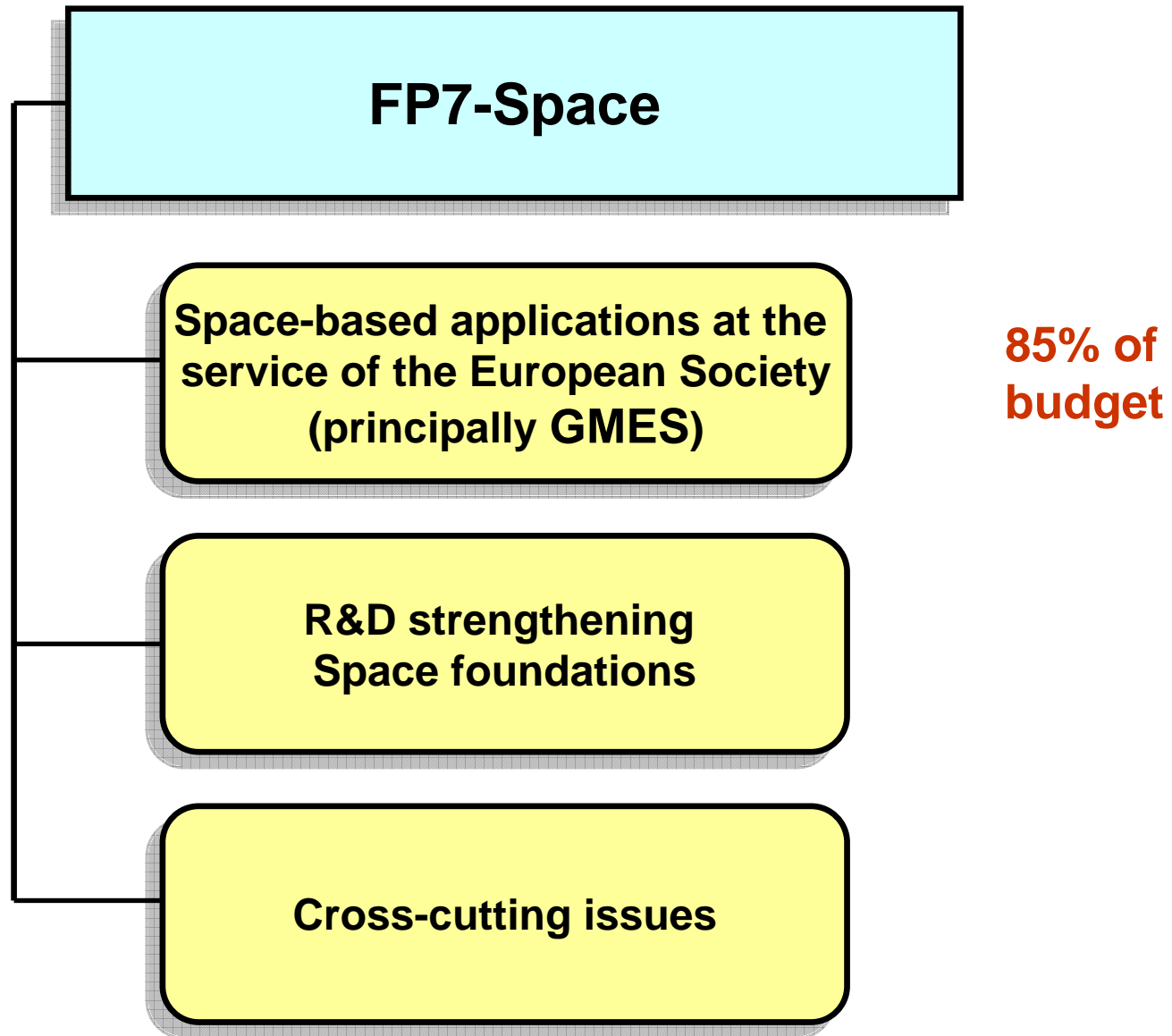
2008-2012 - Annual Security Research Calls opening in June each year (with the budget of the following year)

Possible further coordinated calls



Space research: GMES (Global Monitoring for Environment and Security)

- The EU flagship for Space after Galileo is GMES
- Commission will manage actions for identifying and developing *services* relying both on in-situ and remote sensing data and ESA will implement the *space component*
- R&D for GMES in FP7 should:
 - Make best use of, and harmonise, existing systems
 - Support the development of new capacity where needed
 - Explore condition for long-term sustainability





Space-based applications at the service of the European Society (GMES)

- Development and validation of pre-operational GMES services, starting with the Fast Track Services
- Integrating Earth Observation with SatCom and SatNav technologies (esp. for prevention and management of emergencies)
- Support to the coordinated procurement of data (space and in-situ) for related projects in FP7
- Development of dedicated space infrastructures for GMES (→ESA)



R&D strengthening Space foundations

- **Space science and exploration**
- **Space transportation and critical technologies (for Non-Dependence)**
- **Reducing the vulnerability of space-based systems**



Space Research: Cross-cutting issues

- **International cooperation**
- **European Research Area Networks (ERA-NET)**
- **Integration of SMEs**
- **Dissemination**



Space Research: First call 2007 priorities

- Development and validation of pre-operational GMES Fast Track Services (Ocean, Land, Emergency)
- Development and validation of further pre-operational GMES Services (Atmosphere, Security)
- Basic Space science, technology and transportation

AND

- Support to the coordinated procurement of space-based data for GMES related projects in FP7 (→ ESA)



Space Research: First call 2007 budget

- **Budget 2007-2008 of the first call: ~ 175 Mio€**
- **Publication January 2007**
- **Deadline May 2007**
- **Funding schemes**
 - Collaborative projects
 - Networks of excellence
 - Coordination and support actions



More Information on EU Security and Space Research websites

<http://ec.europa.eu/enterprise/security>

<http://ec.europa.eu/enterprise/space>

<http://cordis.europa.eu/security>



Additional material showing open priorities for the first call of security

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1. Protection against terrorism and organised crime

Area	Function	Topic
Demonstration projects		
Integration projects		SEC-1.2.1 Secure strategic information management system SEC-1.2.2 Intelligent urban environment observation system SEC-1.2.3 Integrated mobile security kit
Capability projects	A: Risk assessment, modelling & impact reduction	SEC-1.3.1 Develop threat assessment models SEC-1.3.2 Modelling of criminal networks
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	E: Positioning & localisation	SEC-1.3.5 Localisation and tracking of components of substance production SEC-1.3.6 Observation through water, metal, ground etc
	F: Situation awareness & assessment (surveillance)	SEC-1.3.7 Water distribution surveillance

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2. Critical infrastructures protection

Area	Function	Topic
Demonstration projects		SEC-2.1.1. Security of critical infrastructures related to mass transportation
Integration projects		SEC-2.2.1 Detection system for abnormal behaviour SEC-2.2.2 Integrated protection of rail transportation
Capability projects	A: Risk assessment, modelling & impact reduction	SEC-2.3.1 Modelling tools for risk assessment and response models for Critical Infrastructures and services
	D: Detection, identification & authentication	SEC-2.3.2 Detection of unattended goods and of owner SEC-2.3.3 Detection of abnormal behaviour of vehicles & threats, both in wide and small land areas
	F: Situation awareness & assessment (surveillance)	SEC-2.3.4 Small area 24 hours surveillance

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3. Border security

Area	Function	Topic
Demonstration projects		SEC-3.1.1. Integrated border management system
Integration projects		SEC-3.2.1 Main port security system (including containers) SEC-3.2.2 Unregulated land borders and wide land surveillance system SEC-3.2.3 Integrated check points security
Capability projects	D: Detection, identification & authentication	SEC-3.3.1 AIR 3D detection of manned and unmanned platforms
	F: Situation awareness & assessment (surveillance)	SEC-3.3.2 Surveillance in wide maritime areas through active and passive means
	I: Communication	SEC-3.3.3 Solutions for ensuring end-to-end communication availability, relying on physical and logical technologies, on diversity of hybrid systems

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4. Restoring security in case of crisis

Area	Function	Topic
Demonstration projects		
Integration projects		SEC-4.2.1 Network enabled command and control systems SEC-4.2.2 Integrated specialist search and rescue system SEC-4.2.3 Post incident basic service restoration system
Capability projects	F: Situation awareness & assessment (surveillance)	SEC-4.3.1 Developing a common operational picture between regional and national authorities, first responders etc.
	J: Command & control	SEC-4.3.2 Warning, alerting and response coordination: communication, message and information exchange at all levels SEC-4.3.3 Intelligent decision support
	K: Incident response	SEC-4.3.4 Personal equipment SEC-4.3.5 Emergency equipment: Emergency Power Generation, Temporary shelters, Specialist rescue equipment SEC-4.3.6 Neutralisation of devices/effects

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