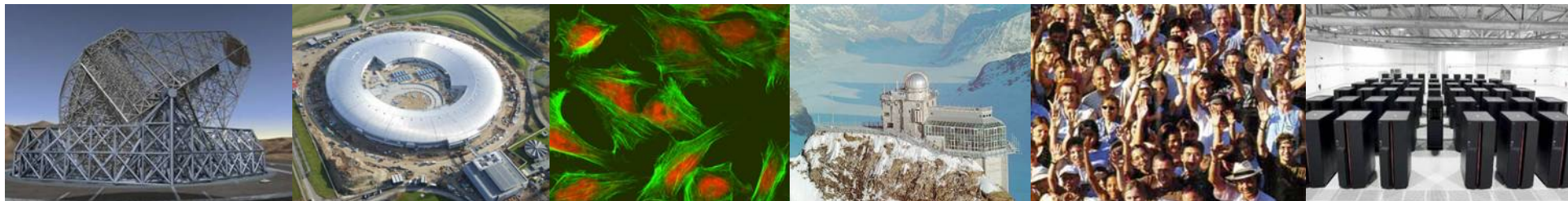




Research Infrastructures in FP7

Elena Righi Steele

Research Infrastructures Unit
DG RTD, European Commission



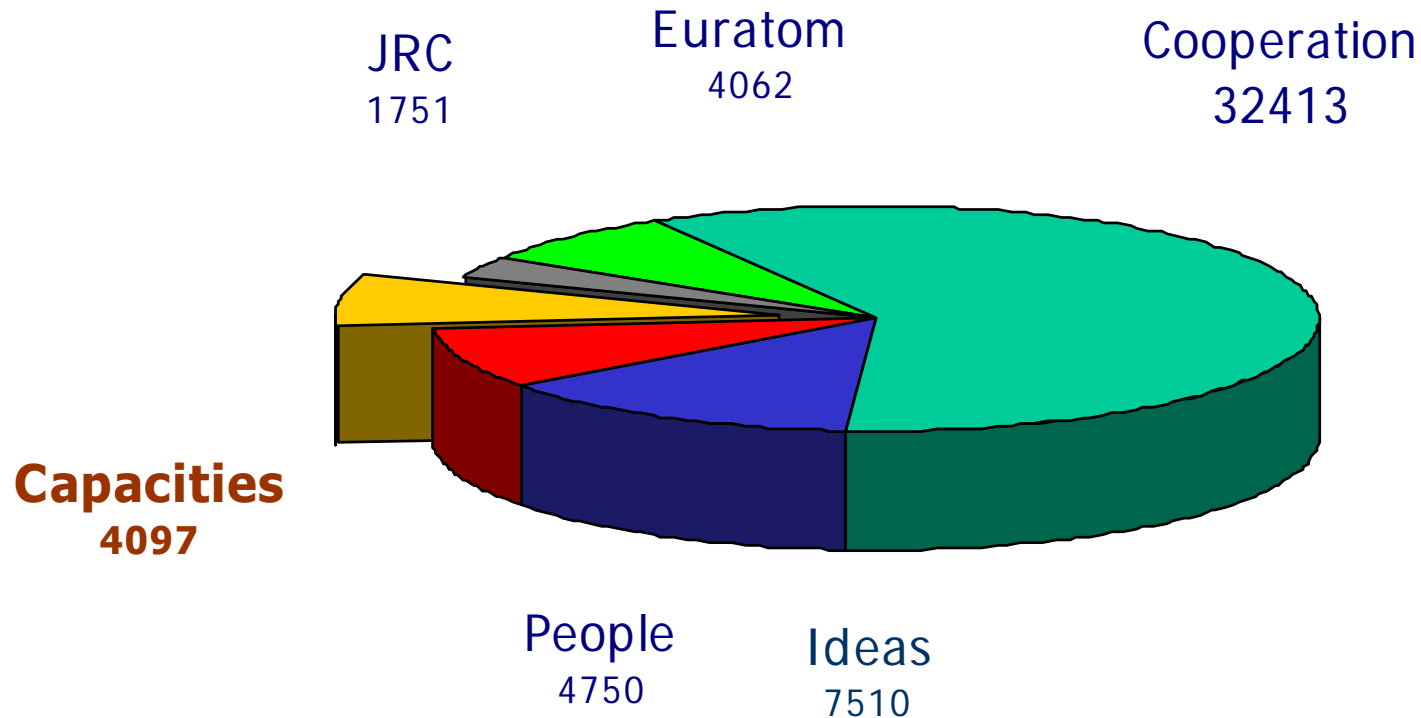
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F	S	K	I	V	R	D	L	S	Q	L	S	D	S	I	N	I	I	D	A	D	F	L	K	I	E	E	L	Q	Y	D	S	T	L	S	L	P	S	S	E	F	S	K	I	V	R	D	L	S	Q	L	S	D	S	I	N	I	ScPCNA



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FP7 2007 - 2013



FP7 budget (M€)

Source: revised FP7 agreed by Council +
Parliament in October 2006

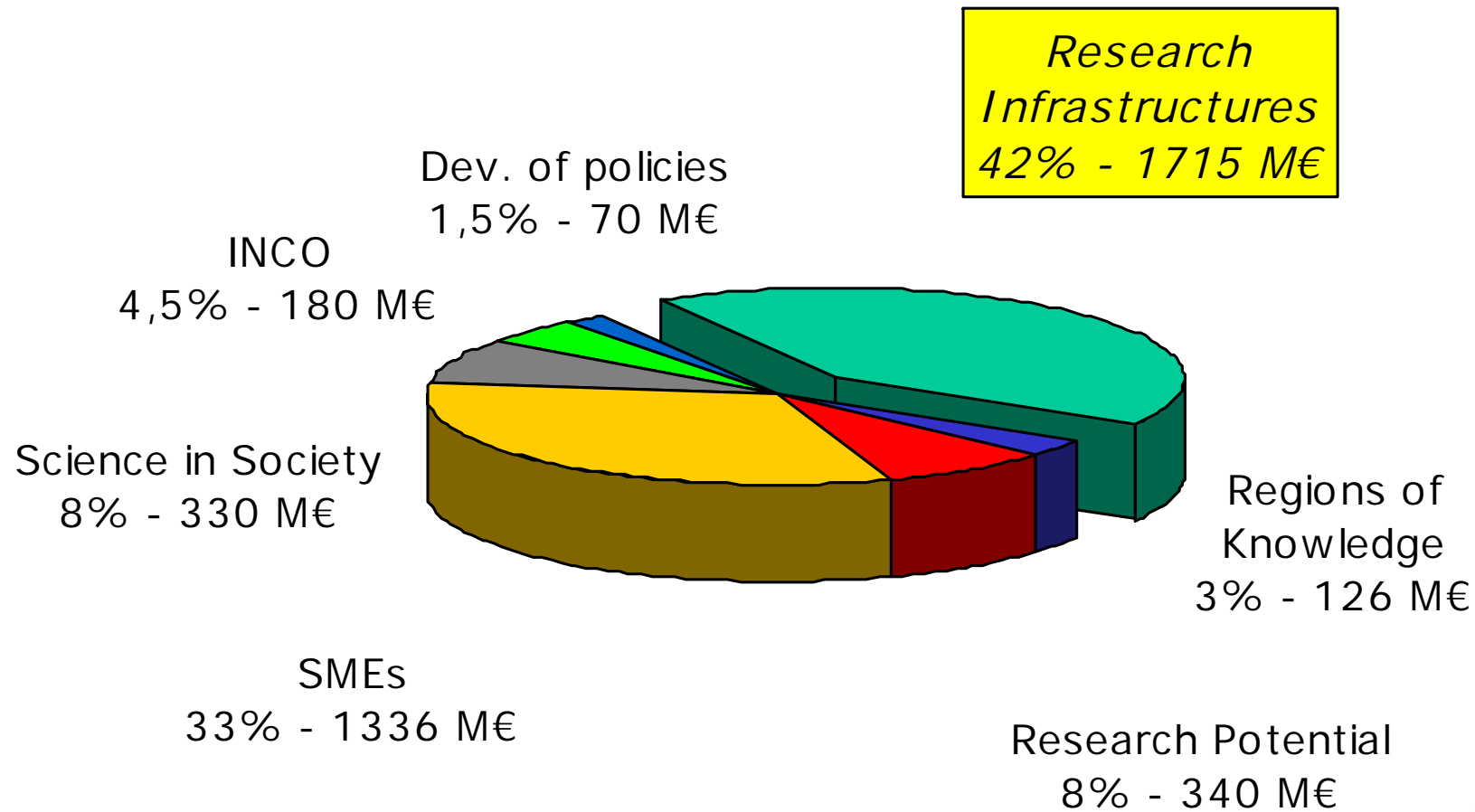


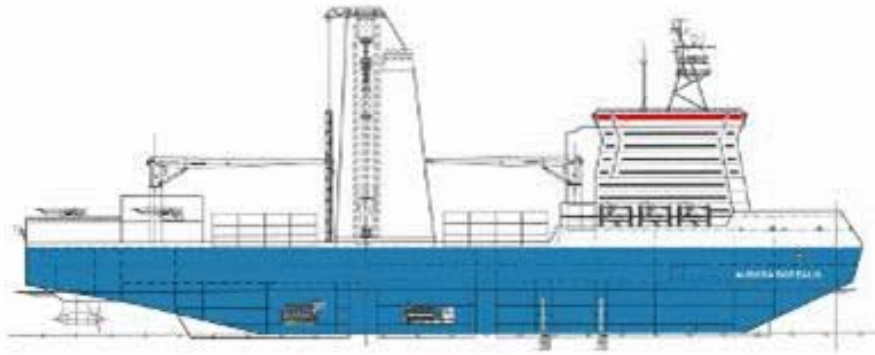


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Specific Programme Capacities





Definition of Research Infrastructures

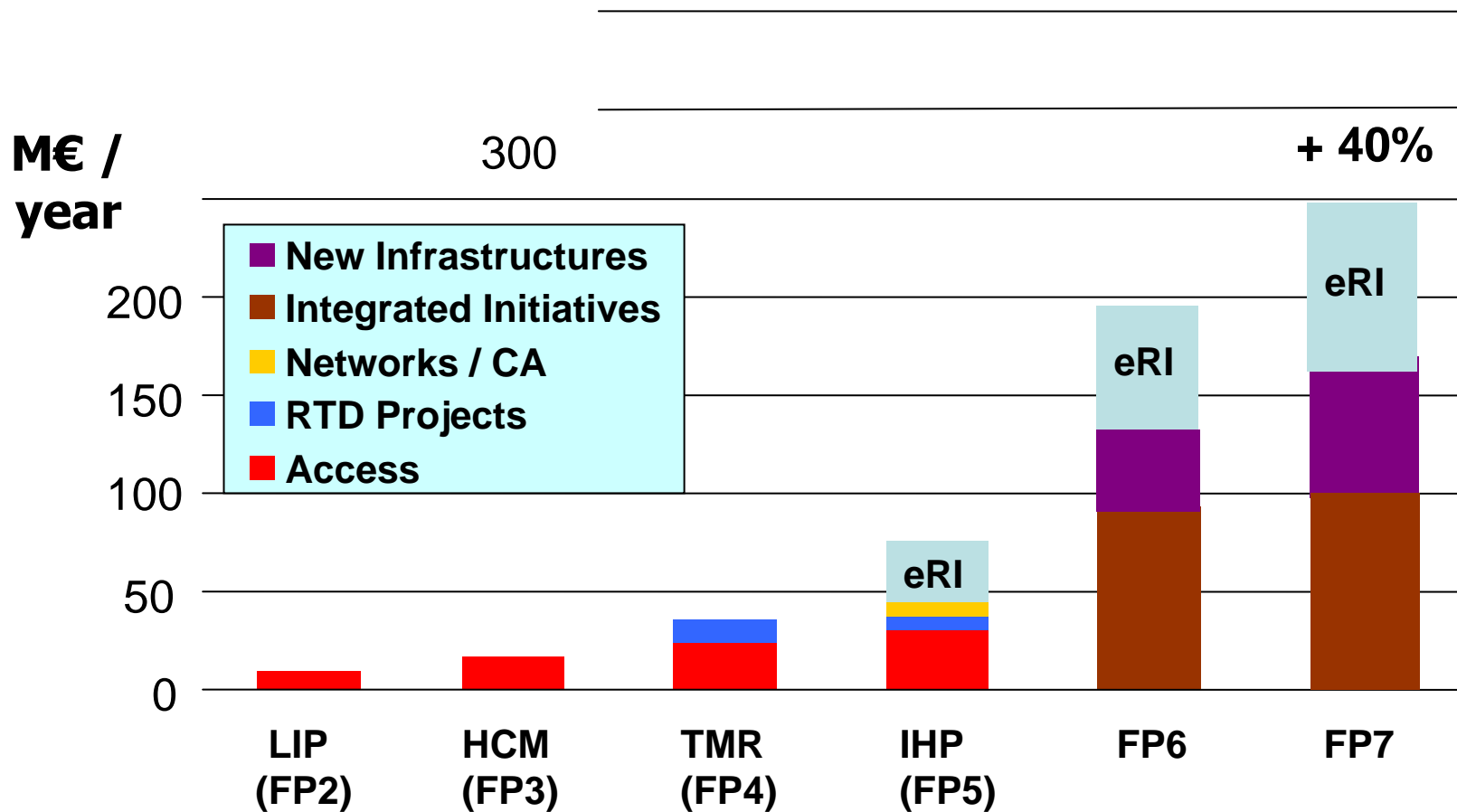
- **Facilities, resources, and related services used by the scientific community for**
 - **Conducting leading-edge research**
 - **Knowledge transmission, knowledge exchanges and knowledge preservation**
- **Includes**
 - **Major scientific equipment**
 - **Scientific collections, archives and structured information**
 - **ICT-based infrastructures**
 - **Entities of a unique nature, used for research**



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A continuous increase of budget over successive FPs





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Some information on Research Infrastructures in FP6

Facts and Figures:

- **Total budget:** **735 M€**
 - of which 222 for GRID + GEANT
- **Number of projects** **143**
- **Number of RIs supported** **248**
- **Expected number of users** **>20000**
(2004-2010)





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Objectives of the Community Research Infrastructures action

- Optimise the use and development of the best **existing research infrastructures** in Europe
- Help to create in all fields of S & T **new research infrastructures** of pan-European interest needed by the European scientific community
- Support **programme implementation** and **policy development** (e.g. international cooperation)





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Participation

- **Operators of research infrastructures, universities and other public research organisations as well as industry, for example equipment manufacturers**
- **Public authorities or funding agencies at national and/or regional level**
- **Fully open to participation of Third Countries, with or without EC contribution (decided on a case by case basis)**





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FP7 will continue supporting existing Research Infrastructures

- **Integrating Activities** to promote the coherent use and development of research infrastructures in a given field, *implemented through*:
 - **A bottom-up** approach for proposals open to all fields of science
 - **Targeted** approach with topics defined in cooperation with the FP7 thematic areas
- **ICT based e-infrastructures** in support of scientific research





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Integrating Activities and e-infrastructures

- **To optimise the use and development of existing research infrastructures**
- **Based on the continuation of the successful FP6 instrument “**Integrated Infrastructure Initiative**” (I3s)**
- **Within one single contract:**
 - ➔ **Networking activities**
 - ➔ **Transnational access and/or service activities**
 - ➔ **Joint research activities**





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Networking Activities

- To foster a culture of **co-operation** between the participants and the scientific communities benefiting from the research infrastructures
- Forms of activities:
 - Towards **the users**: training, studies, feedback, coordination...
 - Towards **good practice**: exchange of personnel and visits, standards and quality...
 - Towards **virtual infrastructures**: Web-sites, common softwares, databases, data management...
 - **Technical workshops**, forums, working groups and studies...





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Trans-national Access and/or Service activities

- Provide **trans-national access** to researchers or research teams to one or more infrastructures among those operated by the participants
 - "Hands on" access
 - **Remote** access: sending of samples, sample analysis...
Managed by the contractors
- Provide research infrastructures related **services** to the scientific community
 - Remote access to distributed infrastructures
 - Services provided through **electronic means** ; Data and resources management
 - Upgrading **communication** infrastructure
 - Support of **Grid** infrastructure; support of **middleware** component repositories





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Joint Research Activities

- **Explore new fundamental technologies or techniques underpinning the efficient and joint use of the participating research infrastructures**
To improve the services provided by the infrastructures (in quality and/or quantity)
- **Forms of activities:**
 - **Prototype** development
 - Development of **methods, protocols, standards...**
 - Development of **software**, middleware, algorithm; Database creation, upgrade, curation...
 - Development and **curation** of samples

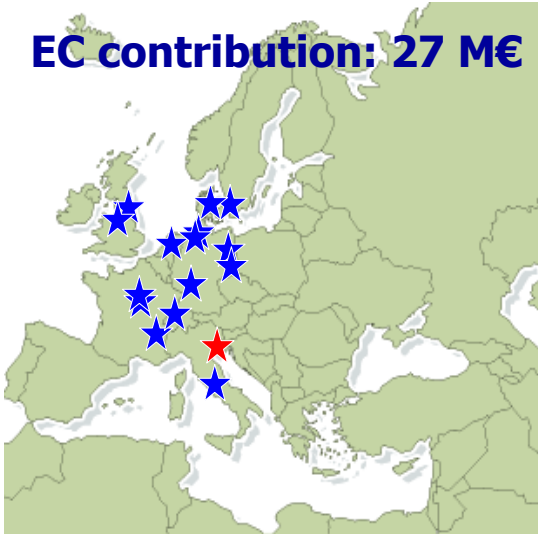




IA-SFS (Analytical Facilities)

Developing a pan-European Synchrotron and Free Electron Laser research infrastructure

EC contribution: 27 M€



TA (~19 M€):

- 15 installations, with 4000 users from a very broad spectrum of disciplines

NA (~2 M€):

- Specialized workshops, conferences and schools (support areas of transnational cooperation)
- Exchange of scientists

JRA (~6 M€):

- European platform for Protein Crystallography
- Development of:
 - Instrumentation for Femtosecond Pulses
 - Diffractive x-ray optics
 - Superconducting Undulator
 - Photoinjector for X-ray Free Electron Lasers

➤ **Offer a common access platform and trigger coherent future developments**





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FP7 will also increase support to new research infrastructures

- **Design studies:** to support the conceptual design for new facilities or major upgrades, of clear European dimension and interest
 - through bottom-up calls
- **Support to the Construction of new infrastructures and major upgrades (ESFRI Roadmap)**
 - **Preparatory Phase** - to support all preparatory work needed to initiate construction of a new RI
 - **Implementation Phase** - mainly left to Member States, the owners of the new facilities





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The Preparatory phase

- **Tasks** focusing on:
 - Strategy development
 - Technical work (e.g. final prototypes)
 - Governance and logistical work
 - Financial arrangements
 - Legal issues
- The first call will be restricted to the projects identified in the **2006 ESFRI roadmap**
- Direct EC (average) contribution around **5 M€**





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Participation to the Preparatory phase

- Project **consortia** should involve, as appropriate :
 - Public authorities or funding agencies at national and/or regional level
 - Research and development agencies
 - Operators of research facilities
 - Research centres, universities, industry
- The European Commission may act as a **“facilitator”**





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The Implementation Phase

- **Direct Community financial support will be **very limited****
- **The European Commission may again act as a **“facilitator”****
- **The challenge: an increased use of **financial engineering****





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Policy development and Programme implementation

- 1. ERA-NETs for research infrastructures**
- 2. Studies, conferences and coordination actions for policy development, including international cooperation**
- 3. Coordination actions to support emerging needs**
- 4. Network of National Contact Points (NCP)**
- 5. Other Support actions, as appropriate**





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Planning of calls and indicative budget

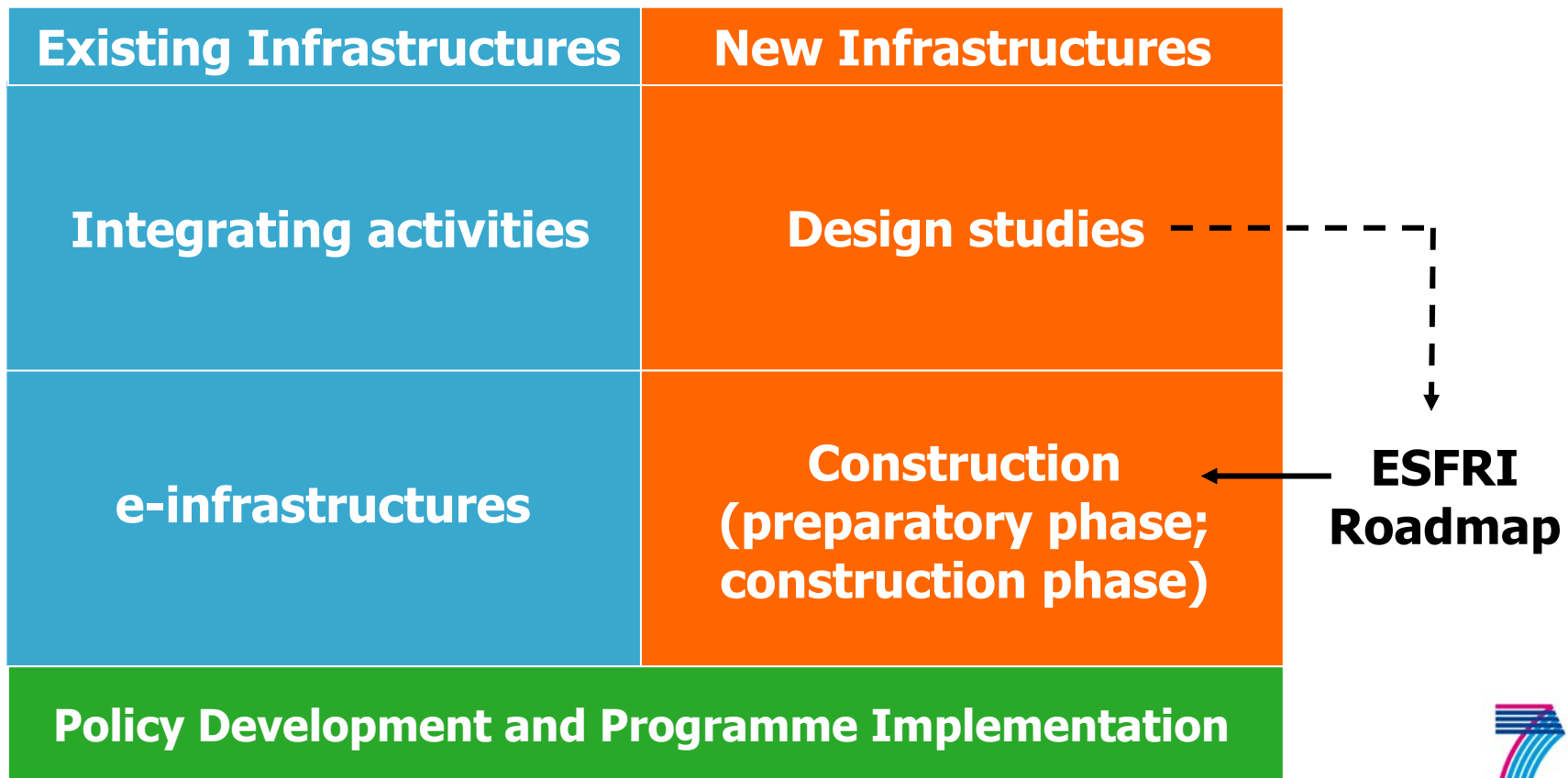
Total operational budget 1630 M€	<i>Call 1 2007</i>	<i>Call 2 2008</i>	<i>Call 3 2010</i>	<i>Call 4 2012</i>
Integrating activities		275	x	x
e-Infrastructures	89	115	x	x
Design studies	35		x	
Construction – Support to the Preparatory Phase	135		x	
Construction – Support to the Implementation Phase	RSFF (200 M€) + 100 M€			
Policy Development and Programme Implementation	25	5	x	x
Total per call (M€)	284	395		



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FP7 Research Infrastructures in brief





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... in summary, an improved FP7 action for Research Infrastructures

- An increased **budget** for FP7 (**+40%**)
- Better consistency within FP7 (**targeted calls**)
- Tackling better fragmentation (Integrating Activities)
- Catalysing effect towards the **construction** or major upgrade of Research Infrastructures
- A **vision** for the next 10-20 years fostering capacity building and excellence





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Useful links

- **FP7 Proposal and Capacities Specific Programme**
<http://cordis.europa.eu/fp7/>
<http://cordis.europa.eu/fp7/capacities.htm>
- **Research Infrastructures on CORDIS (FP6)**
<http://cordis.europa.eu/infrastructures/>
<http://cordis.europa.eu/ist/rn/>
- **ESFRI (Eur. Strategy Forum for Research Infrastr.)**
<http://cordis.europa.eu/esfri/home.html>
- **e-Infrastructures Reflection Group (e-IRG)**
<http://www.e-irg.org>
- **Research Infrastructures in Europa (on-line soon)**
<http://ec.europa.eu/research/infrastructures>

