



**Embedded Systems in Framework Programme 7
(2007-2013)
Opportunities for SMEs**

Mercè Griera i Fisa

Bilbao – 22/06/2006



Presentation Outline

- **The 7th Framework Programme for research (FP7)**
- **Examples of structuring activities attractive to SMEs: ARTEMIS and e-safety**
- **SMEs statistics**
- **Actions to improve SMEs participation**



FP7 Structure

“Cooperation”

Predefined themes, refined FP6 instruments

“Ideas”

Frontier research, competition, individual grants

“People”

Human potential, mobility

“Capacities”

Infrastructure, SMEs, science and society,

Joint Research Center – non-nuclear

+

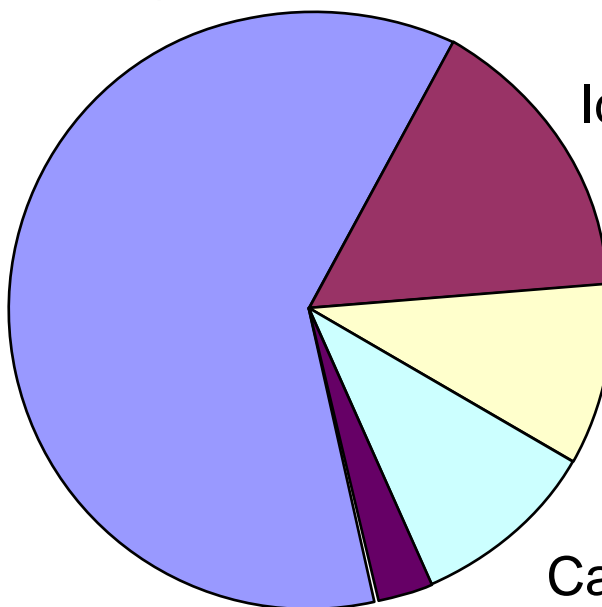
EURATOM



FP7 Specific Programmes

Cooperation: 32315 m (64%)

Total : 50521 m



Ideas: 7460 m (15%)

People: 4728 m (9%)

Capacities: 4267 m (8%)

JRC: 1751 m (3%)

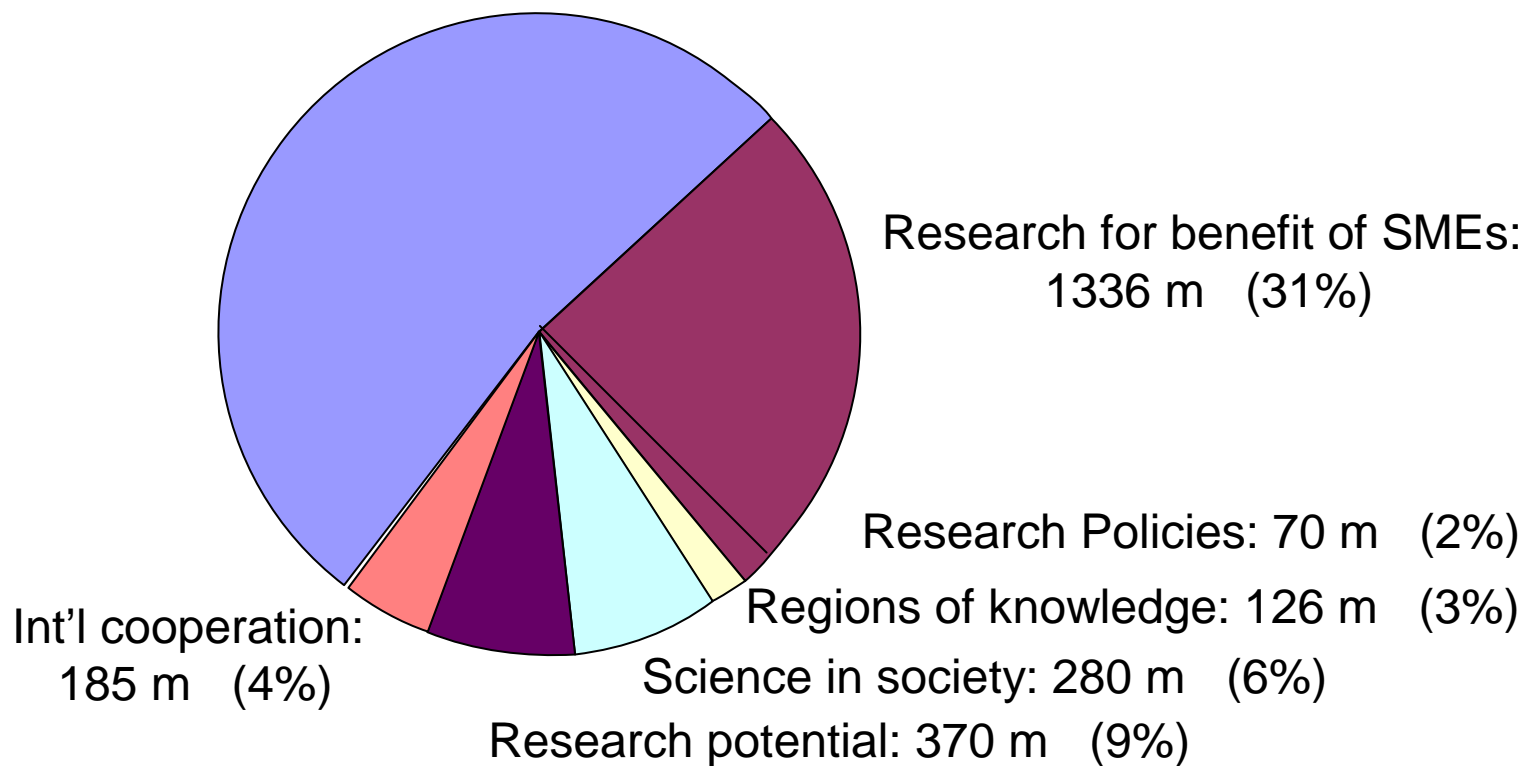
7 years programme from 2007 to 2013

Figures from
13 June Council



“Capacities”

Research infrastructures: 1900 m (44%)





“Cooperation” – Collaborative Research - Themes

1. Health

2. Food, Agri, Biotech

3. Information and Communication Technologies

4. Nano, Materials, Production

5. Energy

6. Environment

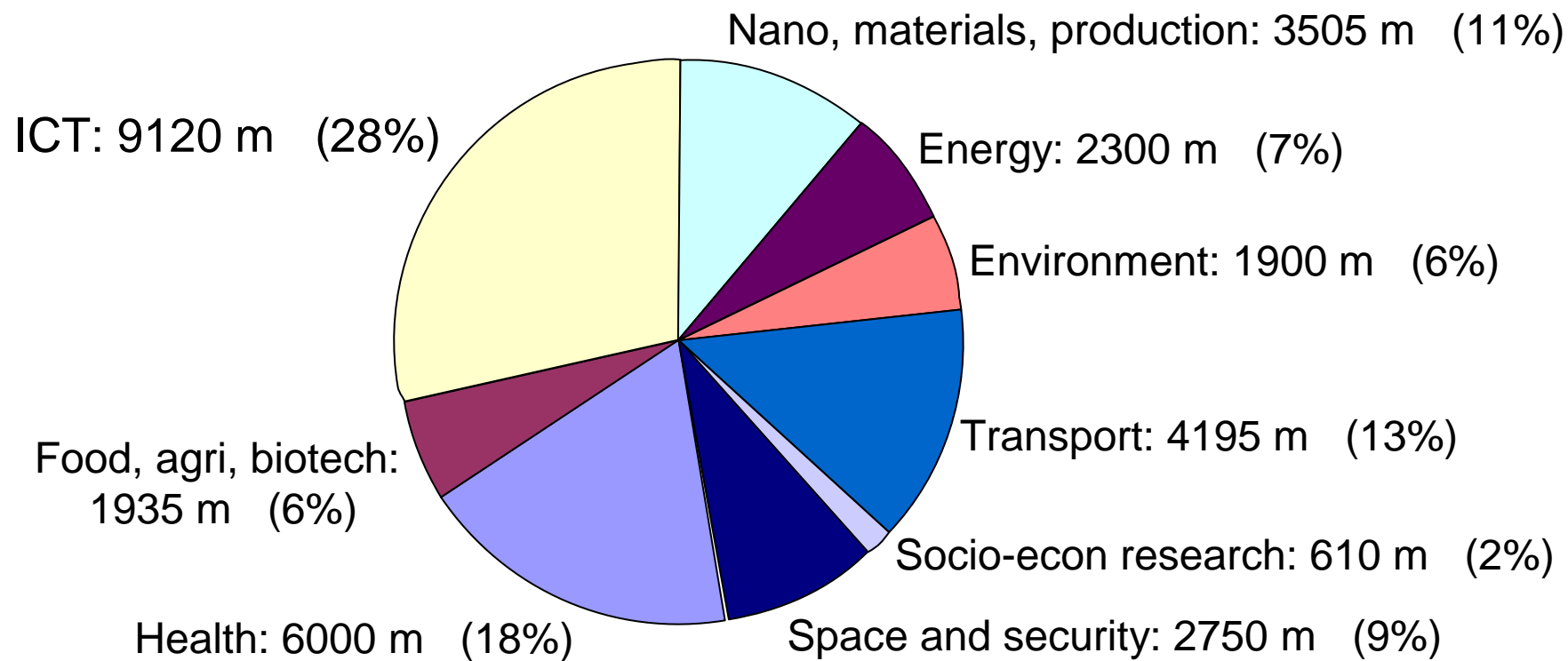
7. Transport (including Aeronautics)

8. Socio-econ

9. Security and space



“Cooperation” – Collaborative Research - Themes



Figures from
13 June Council



Information & Communication Technologies Theme

ICT Technology Pillars

- Nanoelectronics, photonics and integrated micro/nanosystems
- Ubiquitous and unlimited capacity communication networks
- **Embedded systems, computing and control**
- Software, Grids, security and dependability
- Knowledge, cognitive and learning systems
- Simulation, visualisation, interaction and mixed realities

Integration of Technologies

Personal environments, home environments, robotic systems, intelligent infrastructures

Applied Research

- Health, inclusion, mobility, environment, government
- Media, learning, culture
- Business, work, manufacturing
- Security & dependability

Future and Emerging Technologies



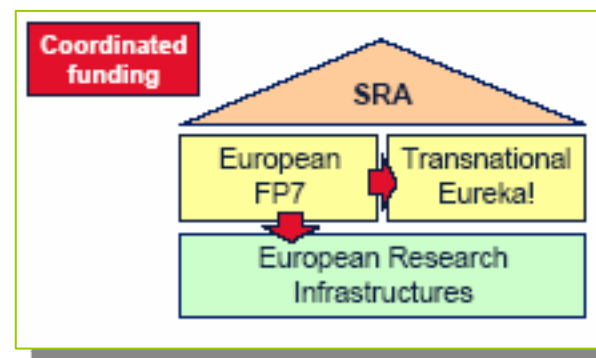
Structuring European research in FP7

- **Effective public-private R&D partnerships : European Technology Platforms (ETPs)**



*example :
ARTEMIS*

- Involving key R&D stakeholders, e.g. industry, the research community & public authorities
- Addressing major technological challenges
- Avoiding fragmentation & duplication of effort



- **Structuring R&D activities in Europe (ERA)**

- Defining R&D priorities, timeframes & action plans in several strategically important areas



*example :
e-safety*

ETPs and ERA initiatives offer opportunities for SMEs participation





European Technology Platforms launched (see Second Status Report, May 2006)

1. *The European Hydrogen and Fuel Cell Technology Platform (HFP)*
2. *ENIAC - European Nanoelectronics Initiative Advisory Council*
3. *NanoMedicine - Nanotechnologies for Medical Applications*
4. *The Gas Cooled Reactors Technology Platform*
5. *Plants for the Future*
6. *Water Supply and Sanitation Technology Platform (WSSTP)*
7. *The European Technology Platform on Photovoltaics*
8. *Technology Platform on Sustainable Chemistry*
9. *Innovative and Sustainable Use of Forest Resources*
10. *European Technology Platform for Global Animal Health (GAH)*
11. *ERTRAC European Road Transport Research Advisory Council*
12. *ERRAC European Rail Research Advisory Council*
13. *WATERBORNE Technology Platform (Supported by ACMARE Advisory Council).*
14. *The Mobile and Wireless Communications Technology Platform (eMobility)*
15. *Innovative Medicines for Europe*
16. *Embedded Systems (ARTEMIS)*
17. *ACARE - Advisory Council for Aeronautics Research in Europe*
18. *The European Space Technology Platform (ESTP)*
19. *The European Steel Technology Platform*
20. *The European Technology Platform for the Future of: Textiles and Clothing (ETP-FTC)*
21. *MANUFUTURE - Platform on Future Manufacturing Technologies*
22. *The European Construction Technology Platform (ECTP)*
23. *EuMaT - European Technology Platform for Advanced Engineering Materials & Technologies*
24. *The European Technology Platform on Industrial Safety*
25. *The NEM Initiative - European Initiative on NETWORKED and ELECTRONIC MEDIA*
26. *Food European Technology Platform " Food for Life"*



New -> Textiles

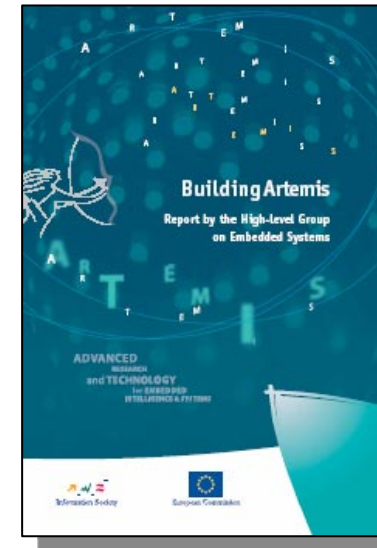
<http://www.cordis.lu/technology-platforms>



ARTEMIS: Advanced research & technology in embedded intelligence & systems

Aim and scope

- To develop & drive a joint European strategy in Embedded Systems
 - R&D, educational and structural issues addressed
- To align fragmented R&D efforts along a common strategic agenda at European level
- To benchmark & link with relevant initiatives outside Europe



... they spend annually € 25 bn in R&D

<http://www.cordis.lu/ist/artemis/>

Partners

8 of the 25 top-ranked European companies are members in ARTEMIS ...





SER

E:

S

A

Safety

- **A joint industry-public sector initiative**
 - e.g. European Commission, EU Member States, industry
 - Launched in April 2002
- **Objective:**
 - To accelerate the development, deployment and use of intelligent, integrated safety systems to increase road safety & reduce number of accidents on Europe's roads
- **Multiple activities**
 - eSafety Forum
 - Working Groups



http://europa.eu.int/information_society/activities/esafety/



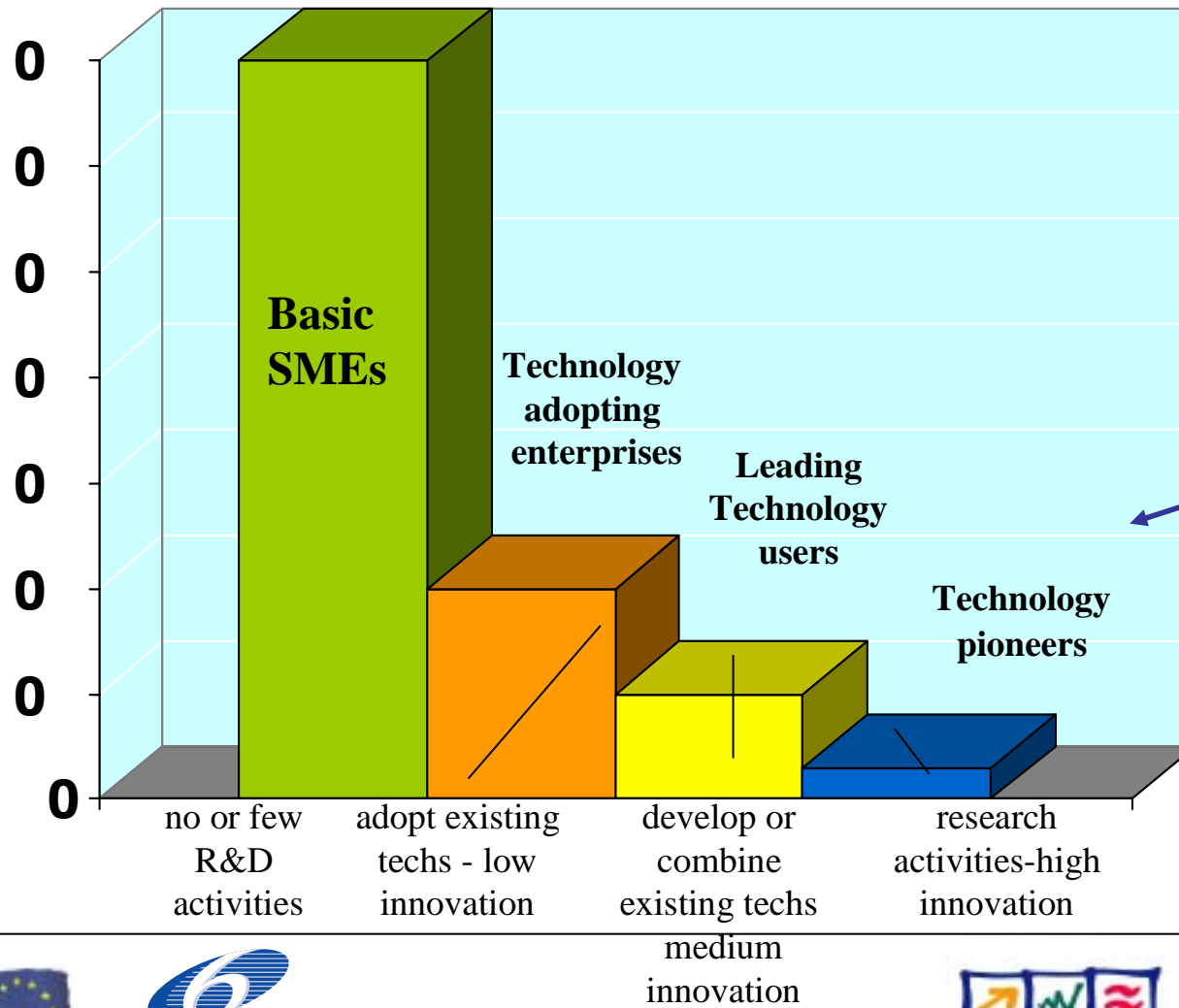
SME

- FP7 : Cooperation Programme
ICT theme
Embedded Systems
- FP7 : Capacities Programme
Research for the benefit of SMEs
- Structuring European Research
Technology Platforms (ARTEMIS)
ERA (eSafety)

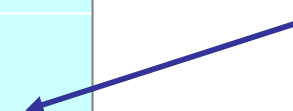


SME

Source: based on EURAB's report on "SMEs and ERA"

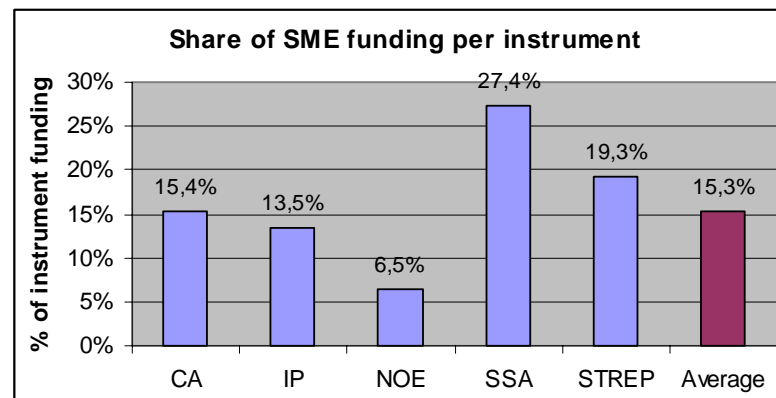
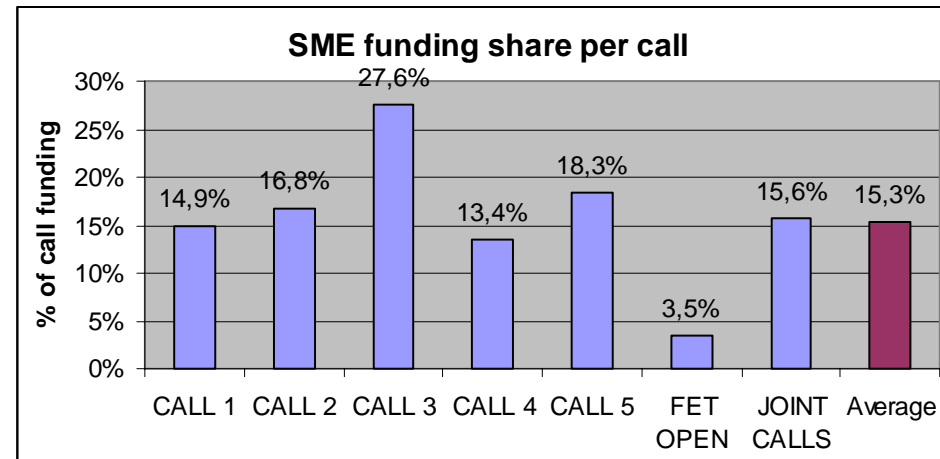


Embedded Systems Tool developers (this meeting)





IST Call 1 To Call-5 (FP6)

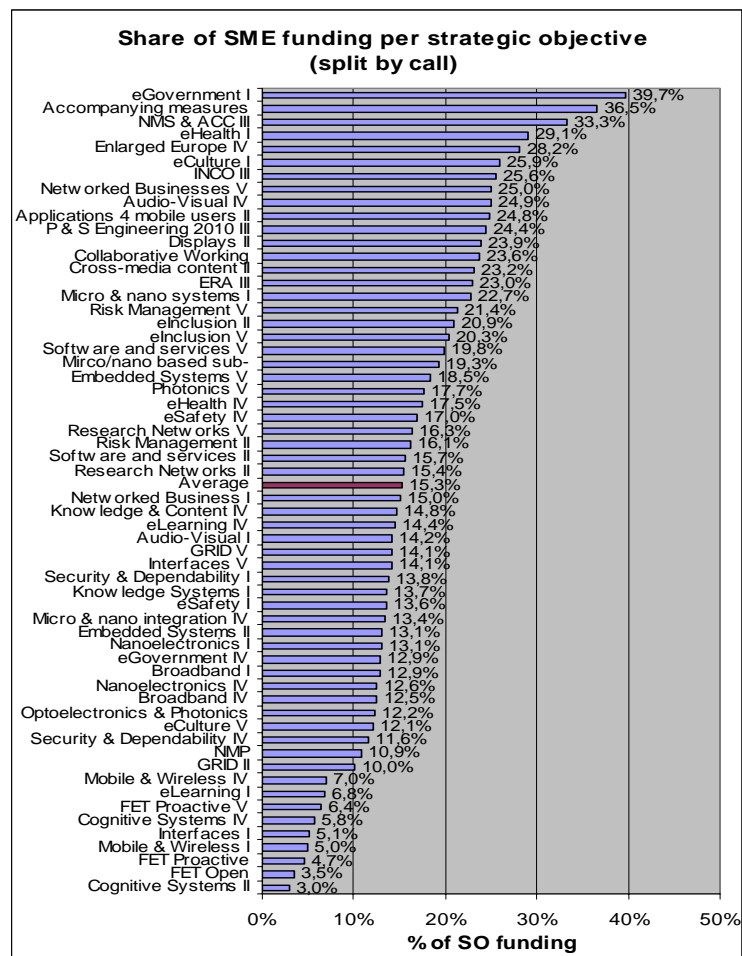




SISTSSME

Embedded systems
Among the top
Technology-driven
IST areas wrt
SMEs.

In funding = 18.9%
and in number of
Participants =
26.0%
(call 5)



— *IST Average 15.3% funding*



ASME

At implementation level :

- Collaborative Projects instead of IPs and STREPs
- The concept of AC and FC will not be used anymore
- Reimbursement rates could go up to 75% for research activities carried out by SMEs
- Number of Audit Certificates will be reduced

Launching Joint Technology Initiatives

- For ICT : Nanoelectronics, Embedded Systems ...



ASME

At content level :

- SME research needs and potential should be taken into account in developing content of thematic areas, and topics of particular interest to SMEs may be further identified in work programmes
- Meeting of 12th May in Brussels and its report
- This meeting is expected to provide a qualified input to the embedded systems work programme in FP7 and beyond concerning :

STRATEGY,
PRIORITY TOPICS and
MODALITIES (work programme / calls / projects)



RM

- **Spring 2006** : finalisation of Specific Programmes and Rules for participation
- **Before Summer 2006** : final draft of : contracts, financial guidelines, evaluation criteria + first draft of the Work Programmes
- **November 2006** : IST Conference in Helsinki + distribution of the Work Programmes
- **January 2007** : first call for proposals open
- **February 2007** : Information Day in Germany



/

European research on the web:

<http://www.cordis.lu/>

<http://www.cordis.lu/era/fp7.htm>

<http://europa.eu.int/comm/research/future/>

Information Society & Media:

http://europa.eu.int/information_society/

<http://europa.eu.int/eeurope>

<http://www.cordis.lu/ist>

Embedded Systems :

http://www.cordis.lu/ist/directorate_c/ems/