

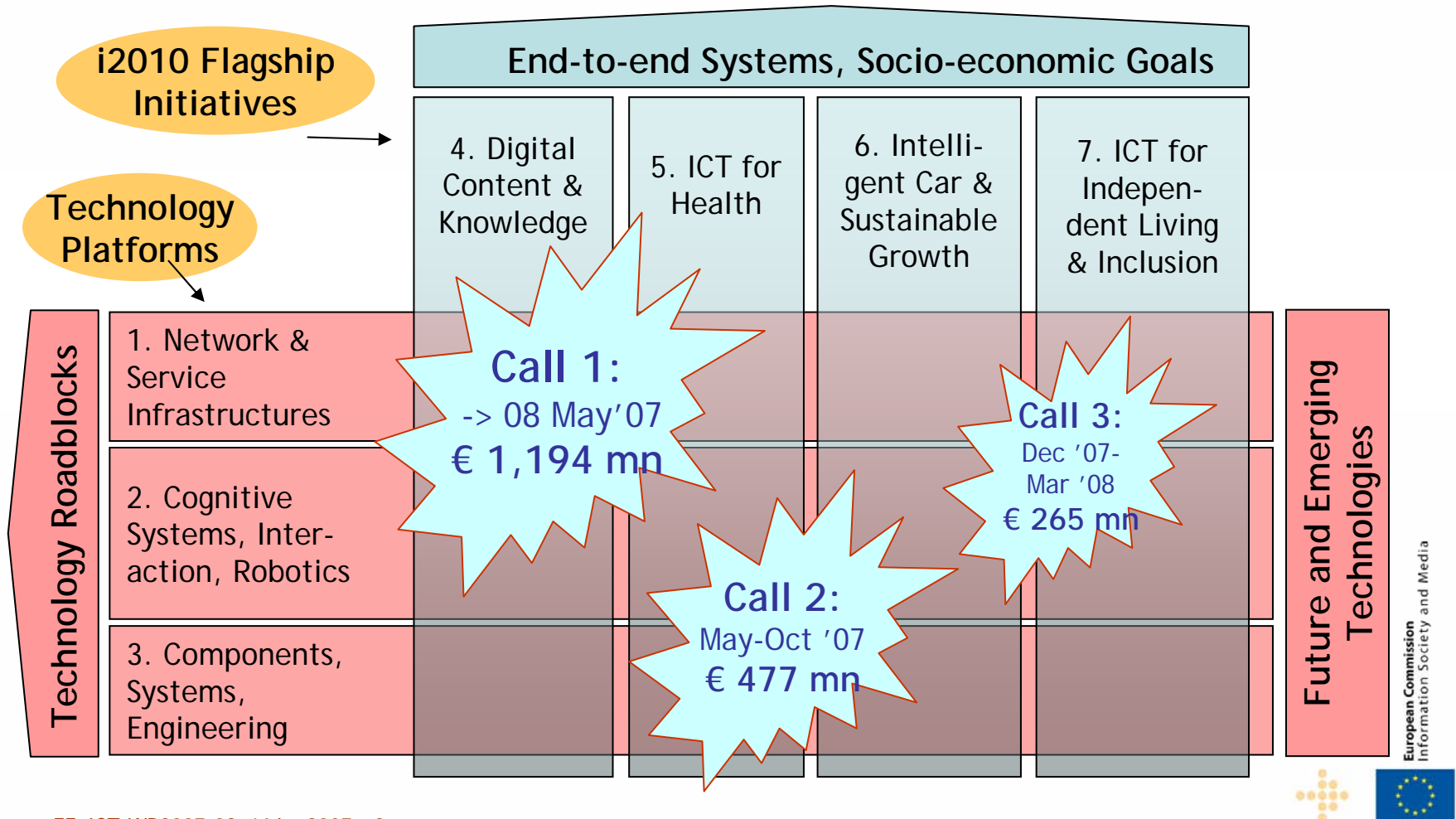
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Manufacturing & the ICT Call 3 Perspective

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ICT Work Programme 2007-08



Challenge 2: Cognitive systems, interaction, robotics

Call 1

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Call 3

- Cognitive systems, interaction, robotics
 - engineering principles for intelligent, integrated systems
 - robots/agents that operate autonomously
 - human-machine interaction based on sensor data & human language

Budget:
€ 193 mn



Challenge 2: Targets

Today

- Robots operating in 'modelled', 'structured', 'constrained' environments
 - industrial robots
 - 'programmed' service robots
- Basic understanding of computational representations of cognitive processes
 - first applications in cognitive vision
- Human-machine interactions static/passive
 - unable to adapt to human behaviours & to empower humans in their interactions

5 - 10 years

- Robots, machines & systems exhibiting advanced behaviour
 - operating with gaps in knowledge
 - operating in open-ended env'mts
 - operating in dynamic/frequently changing environments
- Machines & systems that understand their users/context
 - learning from observation
 - adapting to context
- Systems that analyse & understand multimedia & multimodal digital information
 - all senses, gestures, natural language - 'human-in-the-loop'

Challenge 2 - Call 1 Outcome

- **Input:** 185 proposals, 1,432 participations, 43 countries, €680m funding requested, €96m available budget
- **Output:** 63 proposals ranked, 26 retained (19 STREPs, 6 IPs, 1 NoE)
- **Coverage:** all topics covered, higher-level cognition prominent
- **Themes:** Robotics (grasping & manipulation; human-robot interaction; swarms); Detection of salient events (understanding behaviour); Interaction (natural language, incl. sign language, understanding); Robotics & language (endowing systems with intelligence, cognitive development through perception & action); Machine learning as key enabling technology



Challenge 4: Digital libraries & content

Call 1

+

Call 3

- Digital libraries & technology-enhanced learning
 - large-scale libraries, preservation, adaptive & intuitive learning ...
- Intelligent content & semantics
 - authoring, workflow, personalisation, semantics, knowledge ...

Budget:
€ 203 mn



Challenge 4: Targets

Today

- Limited access & usability
 - content not efficiently exploited
- Content capturing & editing in its infancy
- Content is not personalised
- Learning tools primarily focus on the delivery of content

5 - 10 years

- “Digital libraries” widely available
 - easy to create, interpret, use & preserve resources
- Advanced authoring of content
- Effective semantic-based systems & knowledge management
- Mass-individualisation of learning experiences with ICT (mid-term); adaptive and intuitive learning systems (longer term).



Objective 4.1: Digital Libraries & Technology enhanced Learning

- **Input:** 191 proposals, 1,713 participations, 53 countries, €609m funding requested, €52m available budget
- **Output:** 81 proposals ranked, 12 retained (7 STREPs, 4 IPs, 1 CA), 2 reserve list
- **Coverage:** all topics covered, well balanced over the 4 topics
- **Themes:** Multimedia content (reuse, enhancement; semantic search); Digitisation (scalability, cost effectiveness); Competence centres (outreach & services); Digital Preservation (datagrids, intelligent web harvesters, software agents for autonomous preservation); Personalising learning (adaptive systems; serious games, support to inquiry learning); Workplace learning & competence (integration with knowledge management & practices)



Objective 4.2: Content and Semantics

- **Input:** 148 proposals, 1,210 participations, 50 countries, €473m funding requested, €51m available budget
- **Output:** 55 proposals ranked, 15 retained (9 STREPs, 4 IPs, 1 CA, 1 SA), 1 reserve list
- **Coverage:** all topics covered, but with gaps in creative authoring and novel content experience modalities
- **Themes:** Content creation/processing (TV, film, images, advertisement, surveillance); Personalisation (including social sharing) ; Knowledge management/Decision support (corporate, public interest information); Semantic foundations (large scale, approximate reasoning, identity management); Knowledge integration (scientific databases; web services)



ICT Call 3

<i>Challenge 2</i>	Budget [mn €]
Cognitive systems, interaction, robotics	97
<i>Challenge 4</i>	
Digital libraries & technology-enhanced learning	50
Intelligent content & semantics	50
FET Pro-active (Science of complex systems for socially intelligent ICT; embodied intelligence; ICT forever yours)	60
Horizontal support actions	8

Call 3:
Dec '07-
Mar '08
€ 265 mn



For More Information



The ICT Theme:

<http://cordis.europa.eu/fp7/ict>

IMS Web sites:

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

<http://www.ims.org>

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