



Software & Services Research in the European Union

Jesús Villasante

Head of Unit “Software Technologies”

European Commission

Information Society and Media Directorate General



European Commission
Information Society and Media





Outline

- **Software & Services research today**
- **Framework Programme VII:**
Software & Services research 2007-2013
- **Industrial Commitment: NESSI**
Networked European Software & Services Initiative



Software & Services: Some trends

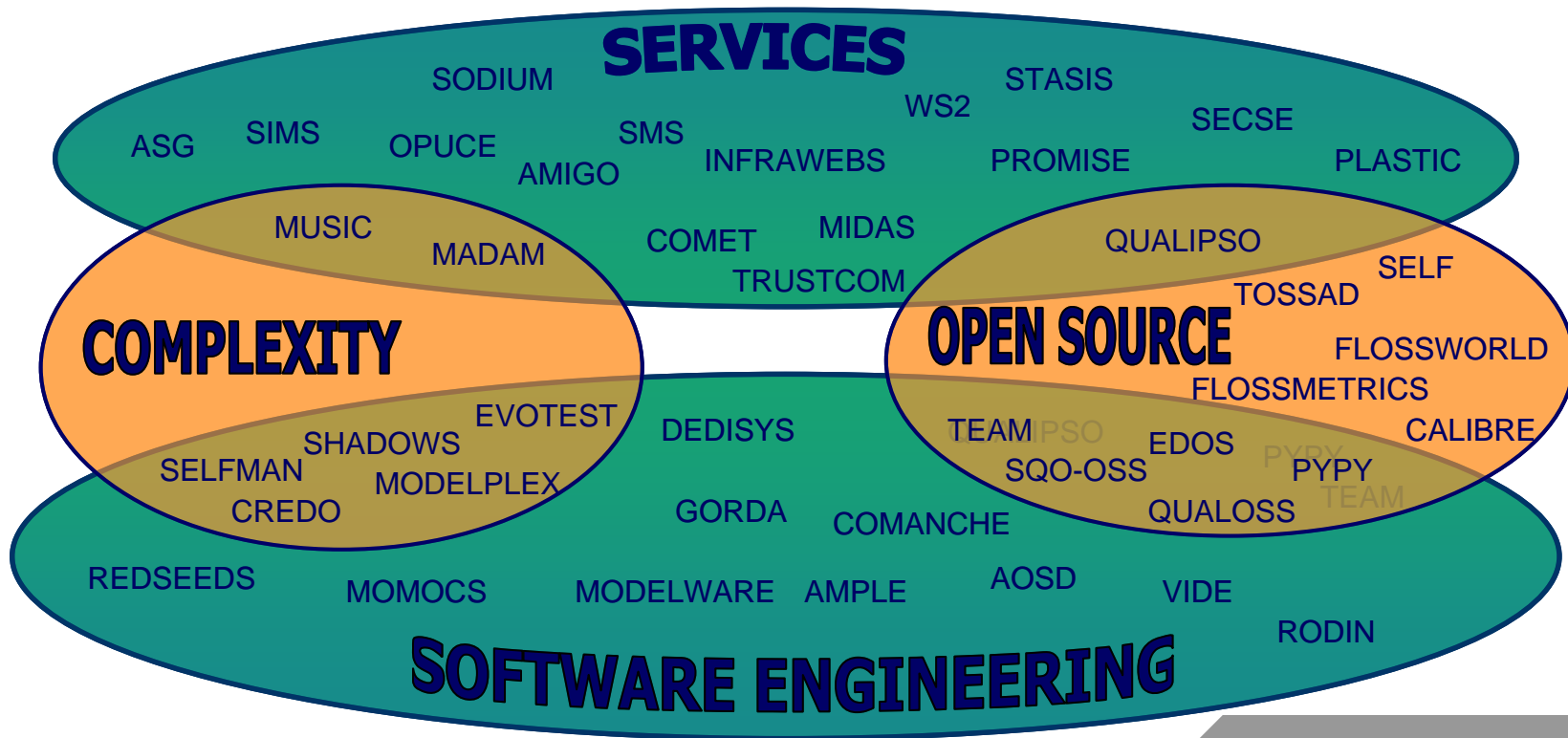
- **Digital convergence**
- **Ambient Intelligence runs on software**
- **From product to Services**
- **Growing requirements for reliability and dependability**
- **Laws, regulations, habits and culture**

The capability to develop Software and Services is an essential asset in the Information Society



Software & Services

Project portfolio



ROADMAPPING
Fassbinder, NessiSoft, 3S

46 projects + 4 studies
275 M€ (Total investment)
168 M€ (EC funding)
525 Participants
2400 Person/year

<http://cordis.europa.eu/ist/st/projects.htm>



Project portfolio: Some features

Service delivery

Development of platforms to support the creation and composition of seamless and innovative services

Laying Foundations

Future and long term vision on software engineering (complexity, evolvable systems, requirement engineering,..)

Handling software and systems complexity

Including software validation, testing and self-adaptability

Quality

Improving dependability, availability and robustness in software and services, including OSS

Productivity

Increase efficiency and productivity in the software development process

Roadmapping

Vision and research agenda for 2020...





Research topics

Software engineering

- Model driven development
- Aspect-oriented system development
- Rigorous design techniques
- How to build dependable large distributed systems?

Service engineering

- How to specify services
- How to find services
- How to dynamically bind services
- How to build dependable service oriented architectures

Complexity

- How to manage complex software systems
- How to make systems self* (self-adapting, self-healing, self-optimizing, etc)

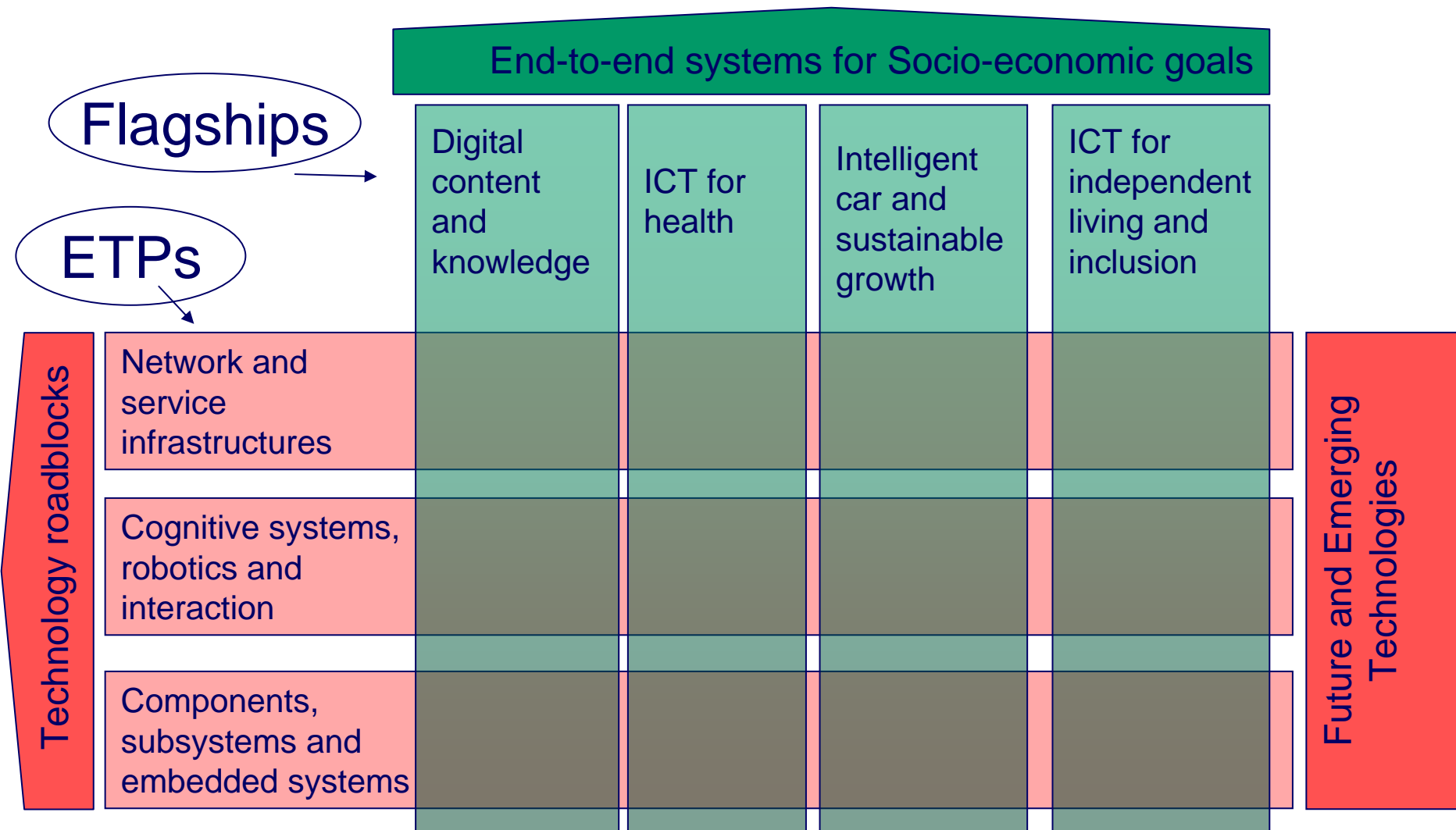
Open source

- Take up of open source by companies
- Licensing issues
- How to assess the quality of open source



Framework Programme VII

Software & Services research 2007-2013



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



Challenge 1 'Pervasive & Trusted Network & Service Infrastructures'

draft

The network of the future

- Ubiquitous network infrastructures and architectures
- Optimised control, management and flexibility of the future network infrastructure
- Technologies and systems architectures for the Future Internet

Secure, dependable and trusted infrastructures

- Security & resilience in network infrastr.
- Security & trust in dynamic and reconfigurable service architectures
- Trusted computing infrastructures
- Identity management and privacy enhancing tools

Services & SW Architectures, Infrastructures and Engineering

- Service architectures
- Service/SW engineering approaches
- Strategies and technologies enabling mastery of complexity, dependability and behavioural stability
- Virtualisation tool, system software and network – centric operating systems
- Enabling the integration of dynamic service architectures in the networked enterprise

Networked Media

- Interoperable MM network & service infrastructure
- End-to-end systems



Industrial Commitment →



Develop a visionary strategy for **Software and Services** driven by a common **European Research Agenda** where innovation and business strengths are reinforced.



Expected impact:

- standardisation, common service platform open standards
- improve EU competitiveness in S&S
- reduce sector fragmentation and align R&D efforts
- openness: an open initiative mobilising SMEs, academia and industry
- address key R&D and policy challenges in S&S

www.nessi-europe.com





For More Information ...

- **Software & Services research**

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

- **NESSI**

<http://www.nessi-europe.com>

E-mail: jesus.villasante@ec.europa.eu

