

# Internet Science

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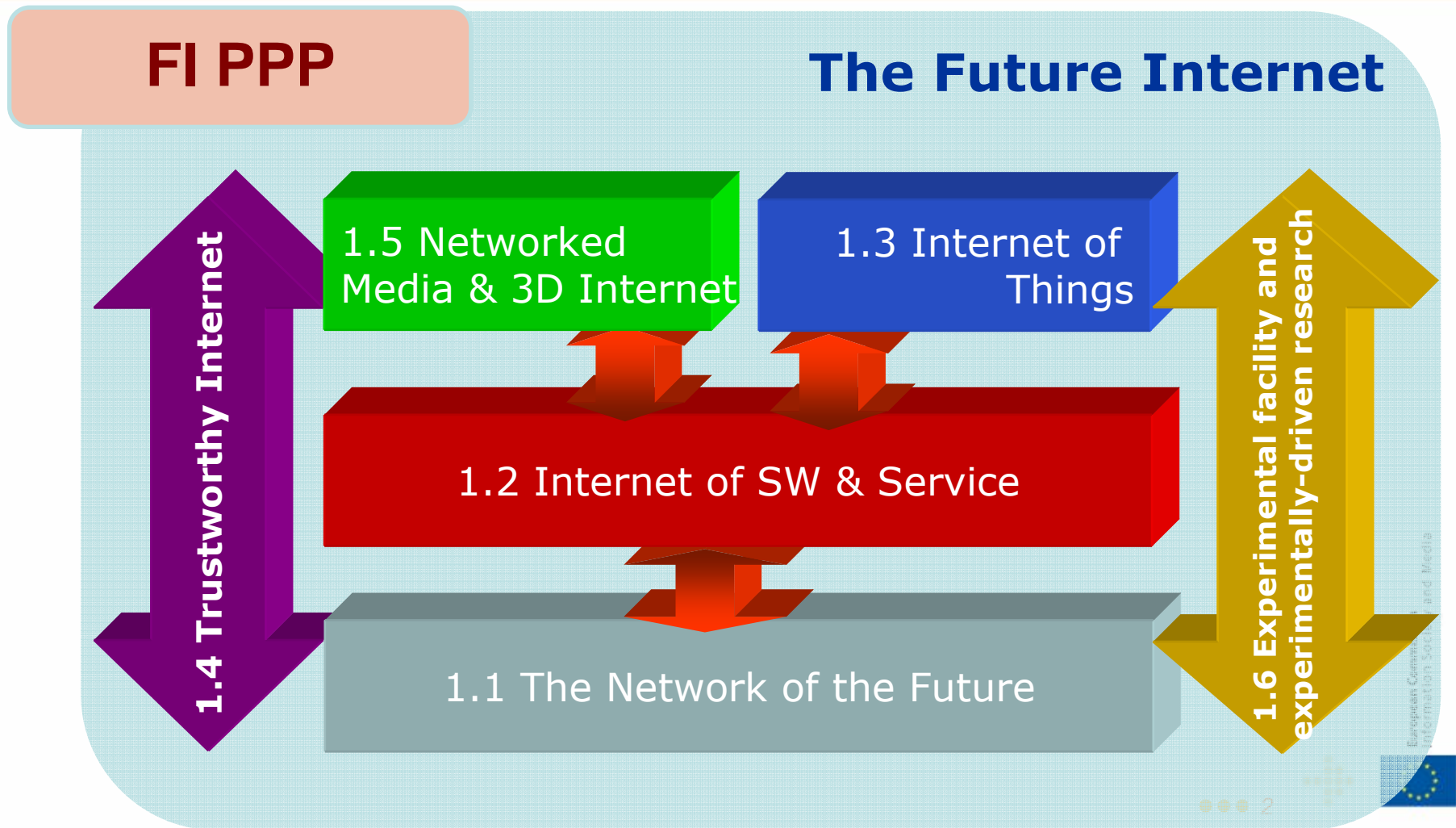
***New Paradigms and Experimental Facilities  
European Commission  
DG Information Society and Media***



European Commission  
Information Society and Media

# EU ICT research 2006/2013 in Future Internet

Approx. budget: **2 billion euro**



# but Internet is not just about technology...

- **Economic transformation**

- Productivity gains in standard businesses
- New businesses/SMEs, new advertisement paradigms, energy grids
- New economic models (skype, google, apple, cloud, ...)

- **Social expansion**

- Ubiquitous access to information (copyrighted or free: wikipedias, googlemaps, ...)
- Online social networking (Linkedin, Facebook, Twitter, ...)
- Personal expression (Youtube, Flickr, ...)

- **Psychological change**

- Internet time (affecting workstyles and lifestyles)
- Globalisation, multilinguality, AR
- Online Trust

- **Legal Impact**

- Redefinition of Privacy and Identity
- Copyrights in the digital era
- Cybercrime



# two questions...

- the **present** Internet: was it ...

planned?

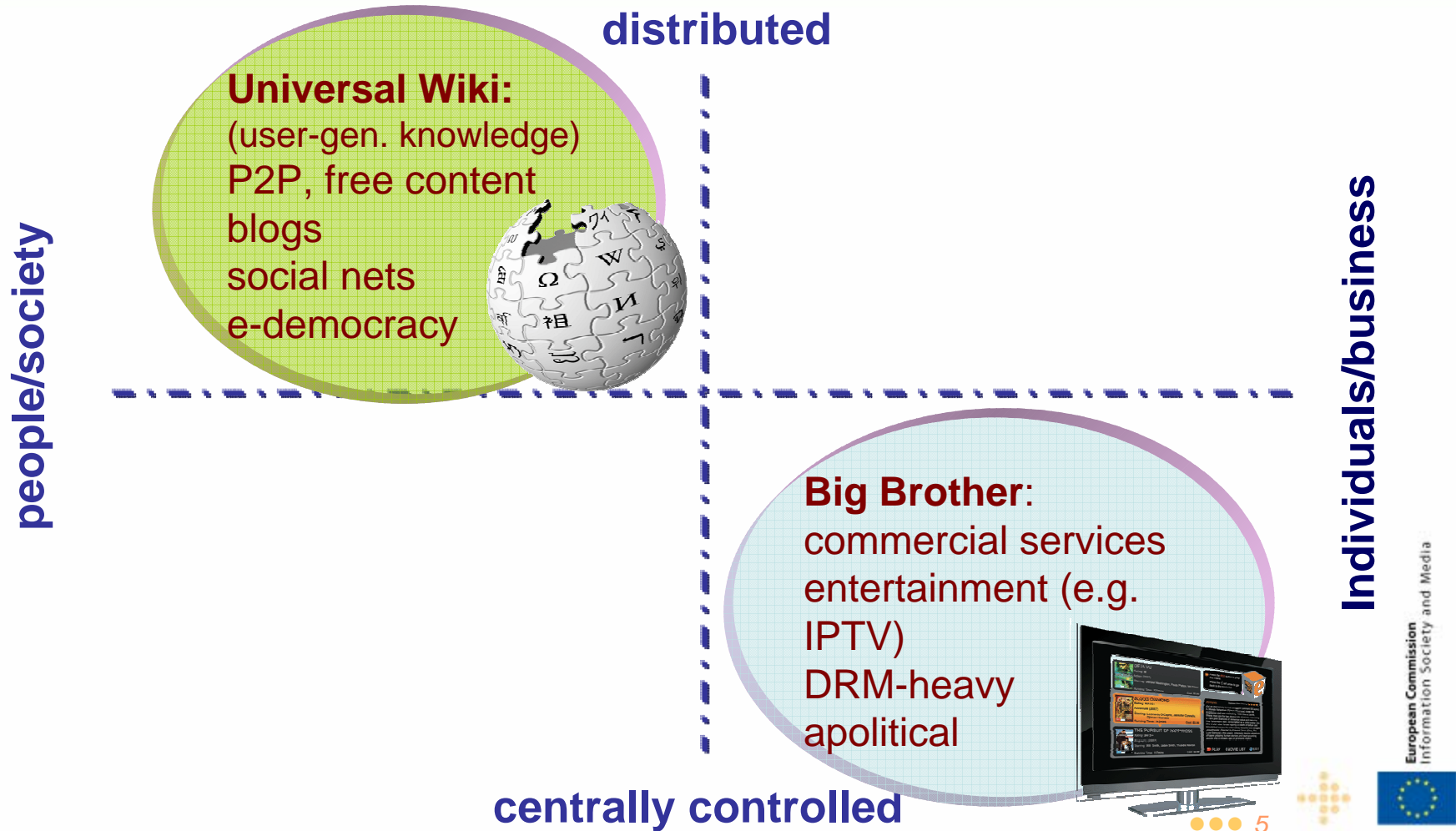
or just **serendipitous**?

- the **future** Internet: what will it look like?





# Future Internet scenarios

(Oxford Internet Institute Study on Technological, Social and Economic aspects of FI)



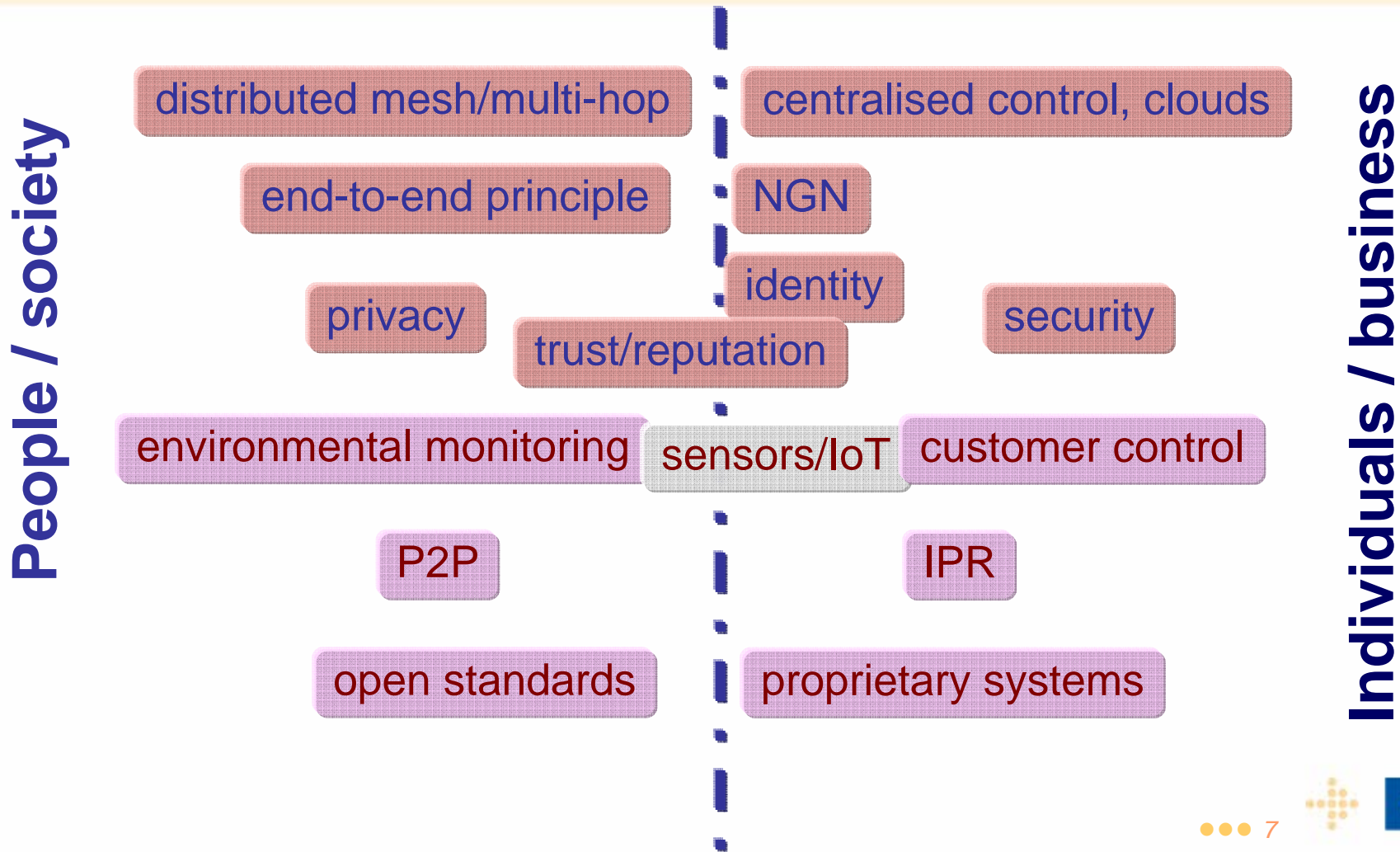
# Technological and Policy choices have Social and Economic impacts

	<b>Universal Wiki</b> 	<b>Big Brother</b> 
<b>Internet infrastructure</b>	Current architecture ad hoc/mesh, user driven	Vertically integrated specialized nets
<b>Technological developments</b>	Interoperability Distributed control Generalized wiki	NGN or "clean slate" for streaming Walled gardens
<b>Security and Privacy</b>	Privacy / identity more than security Online Reputation	Strong Security, proprietary
<b>Policy</b>	Light / no IPR protection Transparency	Strong IPR protection
<b>Standards</b>	Open or Open source standards Multi-cultural support	Competing closed standards may prevail National customisation
<b>Network Neutrality</b>	Key, to enforce	Just a burden



Findings from the MIT workshop

# Understanding links between technological issues and socio-economic impacts



**Individuals / business**

European Commission  
Information Society and Media



# multidisciplinary approach

- **Why** multidisciplinary:
  - to **understand** socio-economic impacts of technology
  - to **design** networks capable of sustaining positive social developments
- Towards an “**Internet Science**”
  - An holistic approach based on scientific and humanistic disciplines
    - networking, computing, telecommunications, complex systems, security, trust and identity, privacy, sociology, psychology, energy, user interfaces, law, anthropology, economics, knowledge management, ...
  - creating an “**internet scientist**” profile
    - The “**architects**” of the future internet



# What competences does an architect need

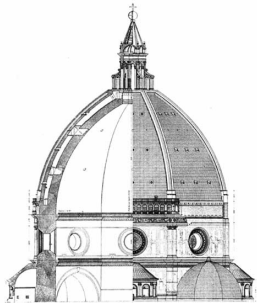


*tecnology /  
infrastructures*

*sociology*



## Life and Social Sciences



*art*

*policy /  
economy*



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# Internet Science - first step

- Network of Excellence – 5 M€ budget
  - ICT objective 1.6d - Call 7 - deadline 18/1/11
- Web forum [http://cordis.europa.eu/fp7/ict/fire/internet-science\\_en.html](http://cordis.europa.eu/fp7/ict/fire/internet-science_en.html)
- Related actions
  - [http://cordis.europa.eu/fp7/ict/fire/future-internet-and-society\\_en.html](http://cordis.europa.eu/fp7/ict/fire/future-internet-and-society_en.html)
    - Oxford Internet Institute Study on Interrelations between Technological, Social and economic aspects of the future internet
    - Paradiso 2 accompanying measure
- Workshops:
  - FIREWeek Ghent, 15 December 2010
  - ...



# towards an NoE in Internet Science - open issues

- **Effectively involving human sciences**
  - Also in the “driving seats” of the multidisciplinary governing/advisory board
- **Define target application areas**
  - e-democracy, energy, environment, modelling, etc.
- **Ensure discipline and EU coverage**
  - networking, computing, telecommunications
  - complex systems, game theory, physics
  - software, services, security
  - sociology, ethnology, anthropology, philosophy, ethics
  - trust, privacy, laws, economics, governance
  - psychology, perception, user interfaces, art
  - knowledge management, semantics
  - ...



# towards an NoE in Internet Science /2

- **Types of activities to be supported:**
  - Multidisciplinary workshops / publications
  - Schools (in thematic multidisciplinary areas)
  - Researcher exchanges (between different disciplines and sites)
  - Contests / open calls on specific topics
  - Roadmapping, definition of multidisciplinary areas
  - Creation/recognition of new Curricula / Scientist profiles
  - Your ideas ...

