

Visions of the Future Internet

A European R&D perspective

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European R&D shaping the future Internet-enabled world

- **Policy framework: EU2020**
 - Digital Agenda for Europe
 - Innovation Union
- **ICT R&D policy and the Digital Agenda for Europe**
- **Internet trends**
- **R&D on the Future Internet**
- **Conclusions**

The general context Europe 2020: 7 flagships

Smart Growth	Sustainable Growth	Inclusive Growth
<p><u>Innovation</u> <i>« Innovation Union »</i></p>	<p>Climate, energy and mobility <i>« Resource efficient Europe »</i></p>	<p>Employment and skills <i>« An agenda for new skills and jobs »</i></p>
<p>Education <i>« Youth on the move »</i></p>	<p><u>Competitiveness</u> <i>« An industrial policy for the globalisation era »</i></p>	<p>Fighting poverty <i>« European platform against poverty »</i></p>
<p><u>Digital society</u> <u>« A digital Agenda for Europe »</u></p> 		

Digital Agenda for Europe: *the need for a step change on ICT R&D&I*

- The race to innovation: more intense, global
 - Emerging economies competing in R&I
 - Shorter and shorter innovation cycles
 - notably in service innovation, creative industries...
- ICT innovation: from enabling to transformative
 - Not only for business but also for societal behaviours
 - new needs, new markets
 - **Internet: the key open platform for creativity & innovation**

A step change in our strategy is therefore needed:

- **Strengthening and sharpening our effort**
- **Supporting a wider range of stakeholders**
- **Achieving higher and faster impact**

Digital Agenda for Europe

Some actions for R&D&I

- **Support to Infrastructures and Poles of Innovation**
 - eInfrastructures, Cloud Computing, Transition to eScience, virtual/regional Clusters (Labs, EIT)
- **Involvement of Member States in large scale experiments**
 - Development and testing of innovative and interoperable solutions in general interest areas (smart cities, regions, Competitiveness and Innovation Programme pilots) and for grand societal challenges
- **Use of the Framework Programme to support open standards and platforms**
 - Possible European Industrial Partnership on Future Internet...
 - Novel Web services, new actors (games, social network, creative industries...), multilinguality

Exploitation of the Digital Single Market for ICT innovation

New services/ new markets

Present

Limited providers of services/centralized

Text-based information search

Services tethered to a network/ device

Writing and reading

Services not aware of context

One-size-fits-all content aggregation

Video streaming/Web TV/Hybrid TV

Basic user profile controlled by Provider

Emergent and Future

Users created services/collaborative

MM search/Intelligent Agents find

Services follow users on any device

Our “surrounding” is the interface

Awareness enabled' Services ‘

Personalized content

Immersive environments, 3D

Rich user profile controlled by user



Towards active control by users of a plethora of services including network services.





Internet of Things

IoT the next innovation wave on the Internet
Context awareness at the forefront of innovation:
more intelligent, invisible and autonomous services, greater integration of the physical with the digital world.

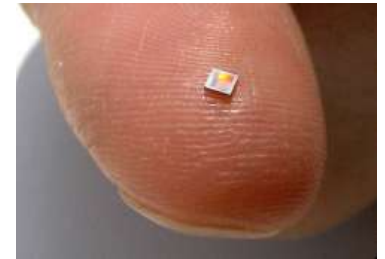
Key Applications

- Automation and control

- Control of consumption to optimize resource use

- Information and analysis

- Monitoring the behaviour of persons, things or data through space and time
- Real time awareness of physical environment
- Sensor driven decision

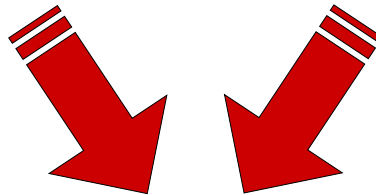
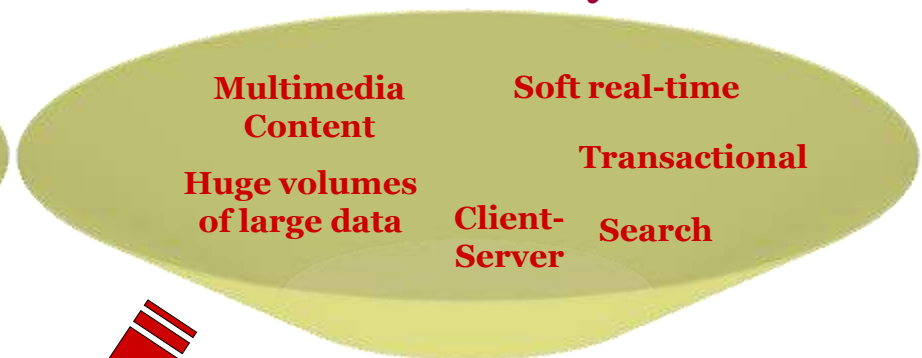


Confluence of 2 paradigms

Networked objects



Web-centric systems



clean slate / evolutionary

Generic, open, trusted

New architectures

New platforms

New use scenarios

*smart-**

An Internet-enabled service economy and society



Street Light Management



Public Safety



Smart travel



Management Control



Education



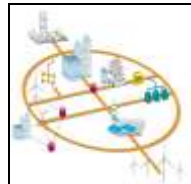
Fleet Management



VoD



Video Conferencing



Smart Grid



Health Care



KIOSK



Access Control



Parking Control



CCTV Monitoring



Waste Management



Facilities Control



Power Control



Light Control

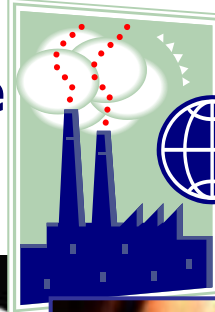
Media



Challenges for a Trustworthy Information Society

• Technology

- Cyber-threats, cyber-crime
- Complex ICT Systems and Services underpinning Critical Infrastructure
- Clouds, IoT, Social Networks...???



• Users

- Trust, accountability, transparency
- Identity, privacy and empowerment,
- Creativity, Usability
- Human values and acceptance

by way of Conclusions

- The Digital Agenda for Europe and the Innovation Union are comprehensive ICT and innovation policy for all Europeans;
- The Future Internet is an important vector of the smart, sustainable and inclusive growth;
- Next year will be key to define with the stakeholders how the Future Internet can be carried forward under FP8;
- Cooperation of all the stakeholders opens up a promising avenue to build a European Innovation Partnership

The future of our society and its values should be paramount



Thank you for your attention!!

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