A European Public-Private Partnership on the FUTURE INTERNET

peter.fatelnig@ec.europa.eu
7 December 2009
Why & why now?

1. The Internet is an economical critical infrastructure pervading all aspects of our life.

2. It is here, and here to stay - today's ICT trends are irreversible.

3. Hundreds of seemingly unrelated changes are coming together now - in space and time, enabling a leapfrog in what the Internet can do for society and economy in the future.
Today

The good side …

• Future Internet research is mainstream in many countries
• FIA = 100 projects
• 2011-2012 a flurry of new Internet related R&D in Europe.

…however challenges:

• Access rates
• Internet traffic
• Internet users
• Service needs
• “Things” moving online
Communication on FI PPP


A public-private partnership on the Future Internet
1. Future Internet research in FP7

- Current research efforts on the Future Internet account for more than 90 EU-projects, involving more than 500 European organisations with a total EU funding of around 400 million Euros. Initiatives such as "FIRE" or "GEANT" support the deployment, testing and experimentation of the Future Internet.

- The European Commission intends to continue investing 200 million Euros per year through the ICT work programme, covering the remainder of FP7. This budget sustains long term Research and Development (R&D) in the Future Internet area. In addition, it is necessary to overcome technological roadblocks and address user involvement, governance, standardisation and IPR.

- The Commission also emphasises the importance of the "Future Internet Assembly" (FIA), which has a federating effect on the European research community, as a tool to encourage the R&D, disseminate results, explore future research and promote applications for the Future Internet.
2. Future Internet Initiatives by MS

- Working within the Future Internet Forum (FIF), the Commission will actively pursue the initiatives of the Member States in order to reduce fragmentation of efforts.
- It will step up to enhance the EU's bilateral and multilateral international cooperation with other leading Future Internet initiatives.
- The main objective is to enhance global standards and interoperability of the Future Internet. The FIF was set up by the Member States that build on common approaches, coordination of national initiatives to address the Future Internet jointly.
3. Industrial and innovation dimension

• The European Commission encourages **industry-academia partnerships** sharing research roadmaps.

• **eMobility, NEM, NESSI, ISI** and **EPoSS** are five European Technology Platforms (ETP's) currently active in Future Internet-related technologies and systems.
4. The European Commission proposed an EU-wide internet innovation strategy: create a public-private partnership (PPP) between public sectors and major ICT players!

- The initiative of a public-private partnership (PPP) on the Future Internet, recently activated and proposed by the industry, is supported by the European Commission with 300 million Euros for 2011-2013 in addition to the 200 million Euros spent per year for long term R&D.
- The Commission will develop the work programme, the specific evaluation and the modus operandi the Future Internet PPP.
- Under a call of the Commission, industries must define a PPP content by mid-2010 to firstly, advance Europe's competitiveness in Future Internet technologies and systems and secondly, to support the emergence of Future Internet-enhanced applications of public and social relevance.
- The Commission will review the possibility of setting a governance structure of Joint Technology Initiatives (JTIs) in the area of Future Internet.
Mega-trends

More INTELLIGENCE
How to take advantage of the wealth of information available real-time from a multitude of sources to make more intelligent choices?

Turning data into value

More FLEXIBILITY
How to make organization and systems just as dynamic as today’s most innovative businesses?

Leveraging the value of “networked”

More EFFICIENCY
How to face our collective responsibilities:
- Traffic jams costs Europe 135 B€/yr
- 40 to 70% of electricity is lost in inefficient grids…

Getting green and sustainable

Opportunity: making key societal infrastructures and business processes more intelligent and sustainable through tighter integration with the Internet.
Closing gap R&D → Innovation

- Going beyond an “R&D model only”
- Leveraging early results of running efforts (FIA)
- Moving from a “technology push” to a “market/user” pull
- Reinforcing the links with key EU policies
- Engaging bold industrial commitment
- Bringing users into the picture
- Involving more closely Member States

A clear view regarding current “gaps” is key to the success of the Future Internet PPP
Cross Sector and Sustainable

• Stand alone solutions developed in any one sector, will not provide the efficiency and productivity gains that a networked solution will be able to provide and that the market can support.

• A multidisciplinary and integrated approach, where massively distributed services and applications are run over large scale and secure internet infrastructures is the only means to deal with the increasing complexity of intertwined application and service demands.
Why now?
A strong momentum of change

- **Stockholm**: smart traffic system
- **Amsterdam**: mobility & energy intelligent management, third harbour concept
- **Malta**: early adopter of smart grid
- **Malaga**: energy intelligent connected grid
- **Nice**: waste management through capillary nets
- **Venice**: tourism
- **Luxembourg**: ...

- **Coming soon**: Hamburg, Lisbon, Santander, ...
- **Leading infrastructure development**

New “smart” applications for key emerging internet technologies
FI PPP - Overall Aims

- Leverage the internet infrastructure as an open, secure and trusted platform
- Improve the inter-linkages between technologies and applications
- Make business processes and operation of infrastructures and applications more efficient
- Foster cross-sector industrial partnerships
- Address regulatory and policy issues
Focus on a Smarter World
1. The result should be a generic, open and secure communication and services platform… standardised and providing cross sector services through common enablers…

2. Multiple use case scenarios considered. It is anticipated that Internet-enabled smart infrastructures and processes require at least to capitalise on:
   - Sensor Networks
   - Cloud like service infrastructures
   - Wireless capabilities

3. Open to “user” driven innovation through multiplicity of Use Cases – SME Innovation platform.
Building the Partnership... to maximise the outcome

- Operators, service developers and equipment manufacturers - Industry core group coming out of the ETP’s eMobility, NESSI and NEM.
- Public stakeholders and user (e.g. utilities)
- Need to bring in research & innovation centres

- Engaging actors in sectors such as healthcare, mobility, environment and energy management
- Public contribution is key (openness requirements, infrastructure support…)
- Eventually engaging users in validation phases
Maximising the Common enablers*

- Examine the basic enablers in each area
- Determine the common enablers
- Determine the enhanced enablers
- Work out how to provide a core platform that supports the enablers
- Build it and show the world
- Use it in large scale trials and tests
- Use existing advanced infrastructures to test future Internet function

* Slide courtesy of the group of 16
Ongoing EU actions

- Develop the work programme with a strong programme “logic” and the specific evaluation and modus operandi in cooperation with stakeholders (industry, user, research and EU member countries)
- Use the mechanisms of the current Framework Programme
- Allocate million 300 Euro under the upcoming ICT work programme covering the period 2011-2013
- Commission expects industry to define a focused PPP content proposal by early-2010
- Member States primarily involved through the Future Internet Forum to help refine policy/usage requirements
- PPP work includes review of legal & governance structures towards a more formal instrument “a la JTI”?
Phase 1 Application

Call 1

Projects

Phase 1 System

Usage Area

Phase A

Phase B Usage Area

Phase B

Phase C

Phase 2

Core Platform and Generic Enablers

FI PPP Programme Support CA

Seed & Leed Capacity

SME Innovation

Call 2


FI PPP - Open Calls

Post FI - PPP Activity

FI PPP

– Open Calls

JTI

– Post FI

– PPP Activity
Our recommendations for the programme

1. Large scale projects
   ➔ Integration will not happen in many small projects

2. Flexibility in every stage
   ➔ The future Internet is a hard target to follow

3. Systematic approach to project selection
   ➔ Projects must contribute to the programme and uniquely address aspects of the programme

4. Facilitate open sharing of project foreground
   ➔ IPR issues should not hinder collaboration

5. Integrate sector competence with the ICT competence
   ➔ The PPP target is to enhance all sectors with the Future Internet

6. Lead by example: large scale trials and demos
   ➔ Proving scalability and viability

7. Synergy: build on existing results and resources
   ➔ Time and scale dictate using what we have already achieved in Europe.
FI PPP milestones

October 2009: adoption of the FI PPP
  ▪ €300M in ICT WP 2011-2013
  ▪ advancing Europe’s industrial know-how
  ▪ supporting Future Internet-enhanced applications

December 2009: draft contribution to the WP

April 2010 (Valencia): Presidency event - PPP Launch event – EU Council conclusions

July 2010: Work programme approval and call sequence launched
Draft Implementation Roadmap (tbc!)

- **Call 1** (July 2010) – budget 70 MEuro
  - Technology Foundation (up to 4 years)
  - Technology seed & lead capabilities (up to 4 years)
  - Usage Areas – Phase A (4-6 areas) (18 months)
  - Programme support (up to 4 years)
- **Call 2** (3rd quarter 2011) – budget 100 MEuro
  - Build Testbeds – Phase B (3-5 areas) (2 years)
- **Call 3** (mid 2012) – budget 130 MEuro
  - Enlargement of Testbeds – Phase C (X areas)
  - Technology foundation backbone – top-up
  - SME Open Innovation (2 years)
Group of 16 companies*

- Creating a **community** in ‘10
- Determining the **focus points, challenges, and optimal structures**
- Encouraging innovation in structures as well as projects
- Position paper by year end
- Invitations to **workshops** on applications, enablers, and infrastructures in the new year.

* Slide courtesy of the group of 16
Further Information

Events in 2010:
• 10 March (tbc) – Brussels, open information day
• 13-16 April – Valencia, EU Presidency event “From Recovery to Sustainability” and FIA Conference
• 16-18 June – Florence, ICT Mobile Summit
• October – Nantes, NEM Summit
• 27-29 September – Brussels, ICT Event
• December – Ghent, FIA Conference

Sites to drill further:
• ec.europa.eu/foi – read about the many activities the EC undertakes on the subject Future Internet
• www.future-internet.eu – The European Future Internet Portal – the community site
• cordis.europa.eu/ict/ch1 – Ongoing European research and development activities
Union of 497 Million people
Backup Slides
Technologies available

- Devices
  - Smart Phones
  - Sensors
- True Mobile Broadband
  - LTE
- Enabling Capabilities
  - Real Time Context Based analytics
  - Real Time Social Networking
- Cloud services
- Secure & Trusted environments

- New Business Models
- New social opportunities
- A plethora of end-user created personalized mobile applications
- Users empowered
- New ways of enterprises relating to their customers, employees and partners
- New Business Processes

FI technologies deployment to smart systems/infrastructures is very promising

✈️ virtuous circle technology/applications