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FI PPP

Workshop on R&D Centers Participation in the FI PPP
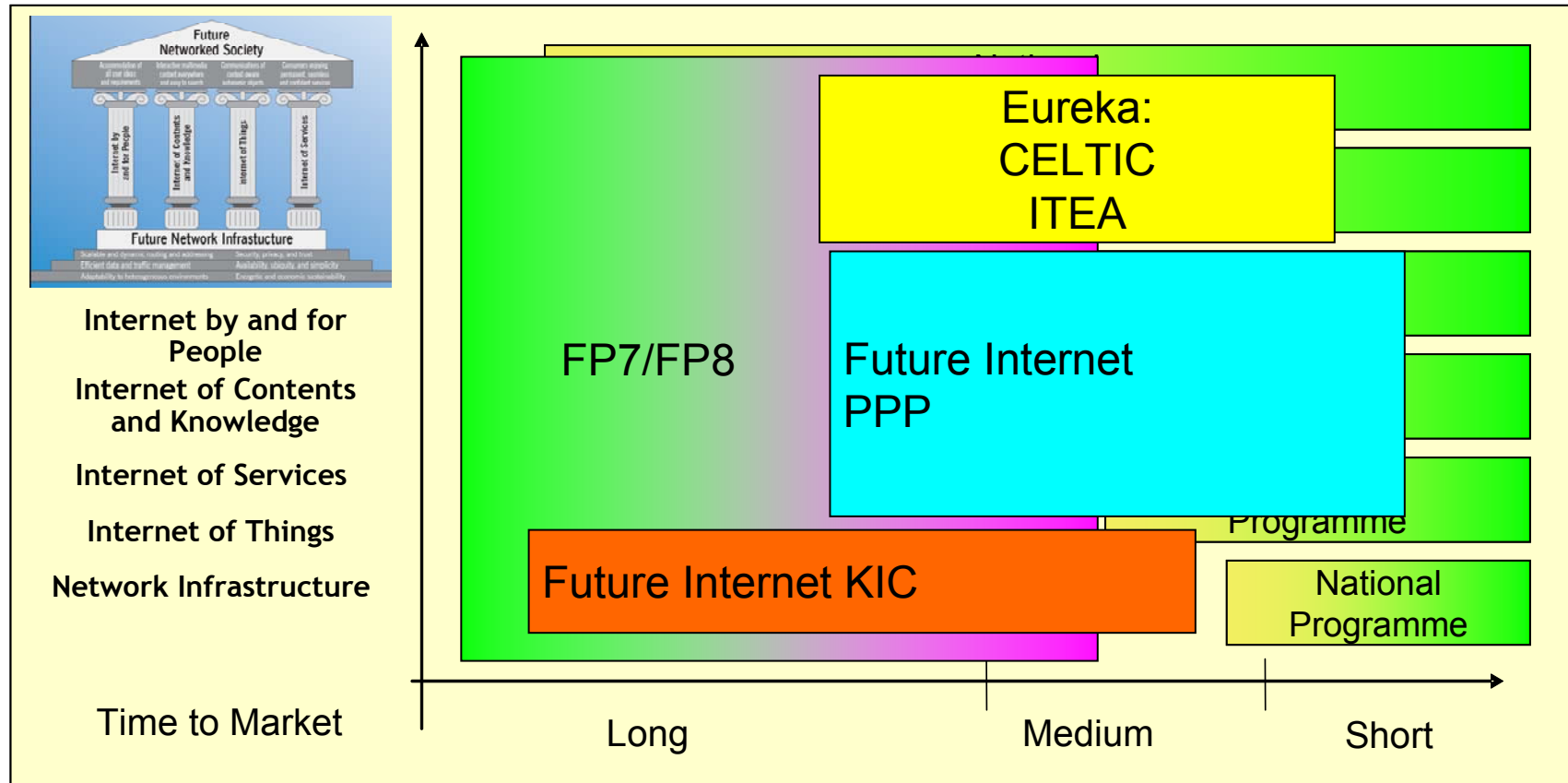
Dr. Didier Bourse

08.01.10 – Brussels

Future Internet PPP – Global Perspective

Internet by and for People

Internet of Contents and Knowledge

Internet of Services

Internet of Things

Network Infrastructure

Eureka:
CELTIC
ITEA

FP7/FP8

Future Internet PPP

Future Internet KIC

Programme

National Programme

Time to Market

Long   Medium   Short

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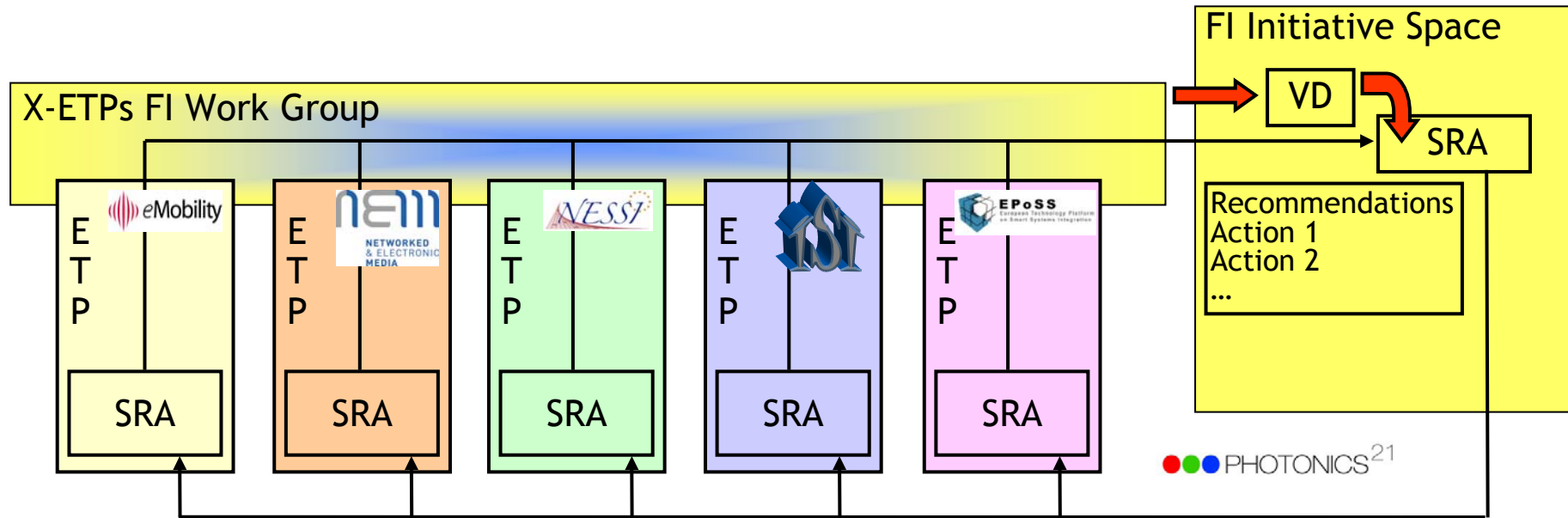## Future Internet PPP – Ambitions

- To secure EU interests and establish its role in the Future Internet domain

- A multidisciplinary approach, where massively distributed services and applications are run over large scale internet infrastructures is the only means to deal with the increasing complexity of intertwined application and service requirements

- Only strong coordinated and decisive action can enable the establishment of such a multidisciplinary approach at the EU level

- Form a Public Private Partnership (PPP) that will enable faster progress and exploit synergies in a way that is not possible with current Instruments

    - Target short-medium terms impacts

    - Accelerate industry developments and enable the pitch (and derisking) of specific developments that are today at lower priorities for EU industry

    - Contribute to close the gap between technology and applications

    - Contribute to close the EU innovation and competitiveness gap

    - Complement the longer term research of the FP

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Future Internet PPP – X-ETPs FI Basis

FI Initiative Space

VD

SRA

Recommendations
Action 1
Action 2
...

X-ETPs FI Work Group

ETP — eMobility — SRA

ETP — NEM NETWORKED & ELECTRONIC MEDIA — SRA

ETP — NESSI — SRA

ETP — ISI — SRA

ETP — EPoSS European Technology Platform on Smart Systems Integration — SRA

PHOTONICS 21

Recommendations

Identify achievable business models based on the current ecosystem and based on disruptions brought by the Future Internet developments
Develop a dynamic roadmap for the key research challenges to be tackled, and establish a road map ensuring the take-up of the research results
Explore different R&D evolutionary and disruptive approaches, covering classical, clean-slate, and experimentally-driven
Further develop the cross-domain research fertilization covered by the set of projects working together in the Future Internet Assembly
Provide the financial resources allowing for the strengthening of the industrial/public partnerships in R&D
Develop appropriate multi-disciplinary teaching and life-long training programs to ensure sustainable knowledge and skills acquisition facilitating innovation
Develop the an integrated and structured approach between National and European R&D programs so as to overcome the current fragmentation of efforts
Develop and implement the so-called push-pull model: Large investment in R&D accompanied by a solid and homogenous policy of leading edge markets development and public procurements
Stimulate a pan-European coordinated approach on matters relating to standardization and the single market
Provide the means to ensure global coordination of concepts and plans for the Future Internet to address industrial perspective
Raise awareness of all European citizens about the clear and visible benefit of the outcome of the investment in Future Internet development

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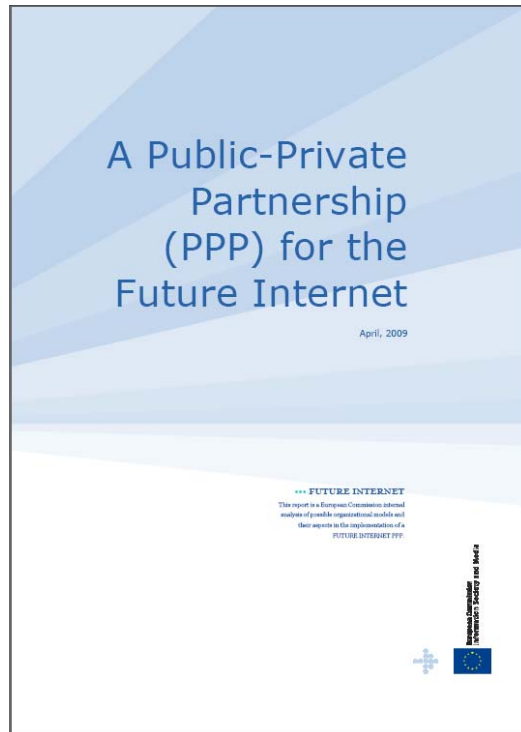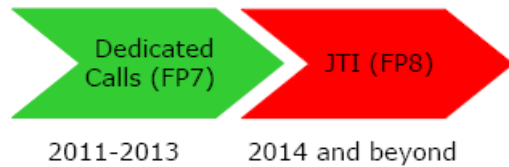
Future Internet PPP – Industrial Core Group (CG)

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Future Internet PPP – 2009…

Dedicated Calls (FP7) — 2011-2013
JTI (FP8) — 2014 and beyond

A Public-Private Partnership (PPP) for the Future Internet

April, 2009

*** FUTURE INTERNET
This report is a European Commission internal analysis of possible organizational models and their aspects in the implementation of a FUTURE INTERNET PPP.
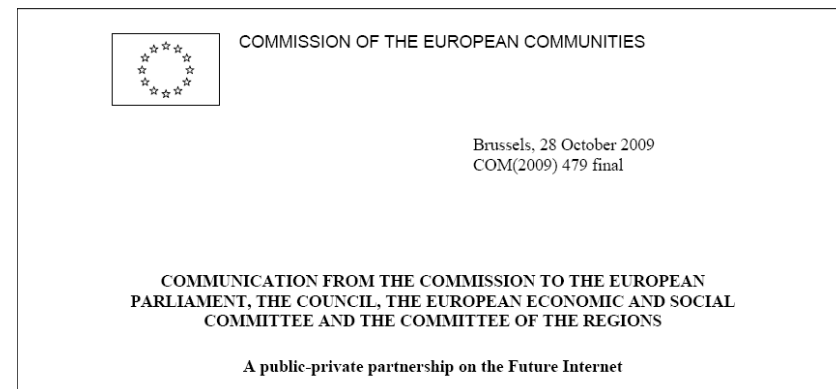
EC Document – April 09
http://ec.europa.eu/information_society/activities/foi/library/index_en.htm

Industry calls for a Public Private Partnership on the Future of the Internet – During the conference David Kennedy, Director of Eurescom and the representative of a group of leading European technology companies, presented their **industry call for action**, notably on the establishment of a public private partnership on Future Internet.

EC FI Newsletter N°6 - 18.06.09 and http://www.future-internet.eu/

COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 28 October 2009
COM(2009) 479 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

A public-private partnership on the Future Internet

http://ec.europa.eu/information_society/activities/foi/library/fi-communication_en.pdf

Video Mario Campolargo (18.12.09)

http://ec.europa.eu/information_society/newsroom/cf/itemdetail.cfm?item_id=5510&utm_campaign=isp&utm_medium=rss&utm_source=newsroom&utm_content=tpa-7

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Future Internet PPP – Main Objectives as Proposed by EFII (1/2)

- Increase the effectiveness of business processes and the operation of infrastructures and applications of high societal value
  - Make use of reappraised internet architectures, services and technologies in large-scale application contexts
- Address service architectures and platforms, building on the longer-term requirements of the Internet and encouraging European industry to address the challenges of smart infrastructures
  - …whilst contributing to EU policies in terms of innovation, sustainable growth, energy and environmental targets
- Foster cross-sector industrial partnerships built around Future Internet value chains
- Involving users and public authorities at local, regional and national levels

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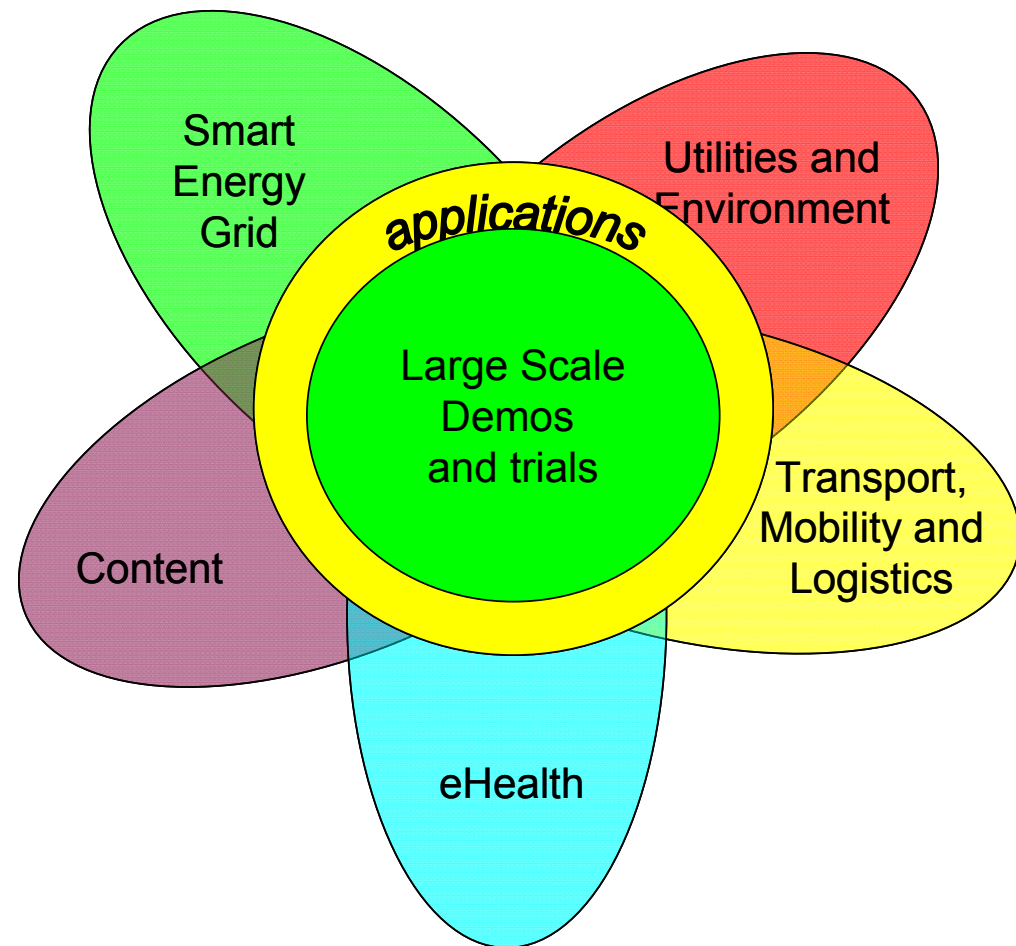
Future Internet PPP – Main Objectives as Proposed by EFII (2/2)

- Lever the Internet infrastructure as an open, secure and trusted platform for building networked applications on the basis of user-centred open innovation schemes

- Maximise the societal benefit through involvement of civil society/consumer organisations where needed

- Address regulatory and policy issues such as interoperability, openness, standards, data security and privacy within the context of the Future Internet complex and 'smart' usage scenarios

  - This may also address the required methodologies, procedures and best practice needed to address transnational aspects such as cybercrime prevention

- Participation of the public sector in the PPP will be a key asset to progress in non-technological issues

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Future Internet PPP – EFII Approach

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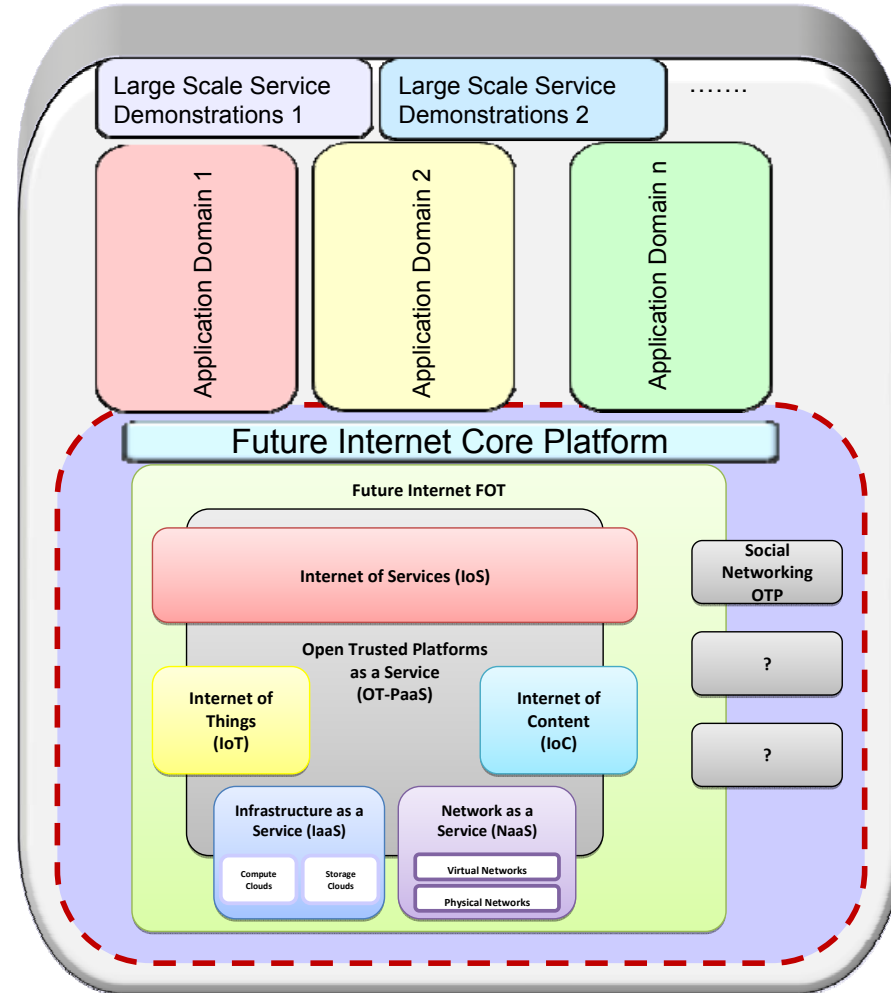
Future Internet PPP – EFII Applications and Generic Enablers

- 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

Smart Energy Grid

Utilities and Environment

applications

Large Scale Demos and trials

Content

Transport, Mobility and Logistics

eHealth

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Future Internet PPP – EFII Recommendations for the Programme

- **Large scale projects**
  - Integration will not happen in many small projects

- **Flexibility in every stage**
  - The Future Internet is a hard target to follow

- **Systematic approach to project selection**
  - Projects must contribute to the programmme and uniquely address aspects of the programme

- **Facilitate open sharing of project foreground**
  - IPR issues should not hinder collaboration

- **Integrate sector competence with the ICT competence**
  - The PPP target is to enhance all sectors with the Future Internet

- **Lead by example: large scale trials and demos**
  - Proving scalability and viability

- **Synergy: build on existing results and resources**
  - Time and scale dictate using what we have already achieved in Europe

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Future Internet PPP – EFII Programme Phasing

Phase 1

- Several Usage Area projects to identify requirements coming from the different application sectors, identify new FI research fields (cross sector enablers), define the evolution of the business models, and define the standardization, regulatory and policy measures to be engaged
- One Future Internet System project to integrate the perspectives developed in the different vertical applications projects and contribute to the definition of the Future Internet "Generic" Enablers development project
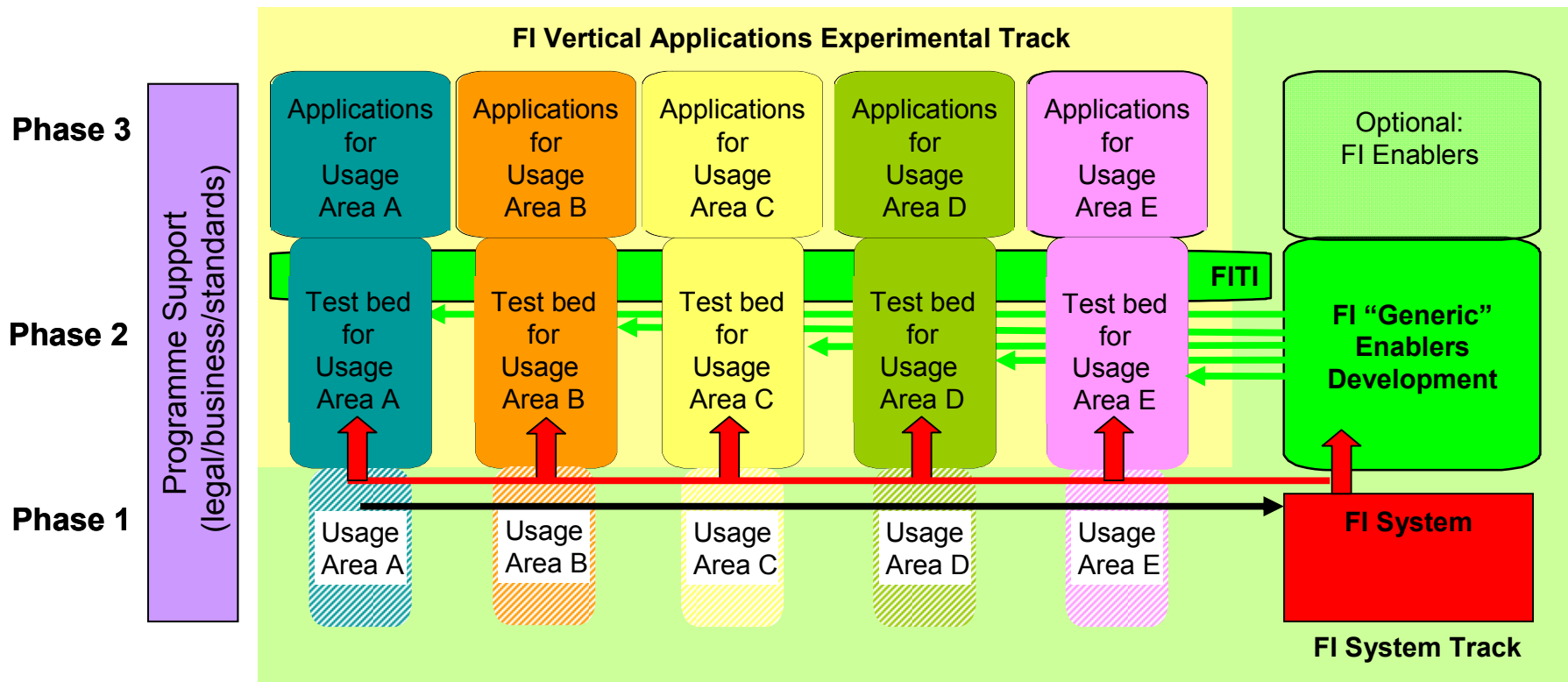- One Coordination action

Phase 2

- Several Usage areas development projects to set up pan-European experimental platforms and pilots for "Smart Cities", relying on specific prototyping facilities, trials on existing networks and "real" Internet (e.g. through NOs networks), and pilots in different European cities
- One Future Internet System project to develop the core platform and the key generic enablers
- One Future Internet Testbed Interconnection Project

Phase 3

- Several small to medium size projects on application development on the basis of the usage area test beds/trials

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Future Internet PPP – EFII Draft Programme Structuring

FI Vertical Applications Experimental Track

Phase 3

Programme Support
(legal/business/standards)

| Applications for Usage Area A | Applications for Usage Area B | Applications for Usage Area C | Applications for Usage Area D | Applications for Usage Area E | Optional: FI Enablers |

FITI

Phase 2

| Test bed for Usage Area A | Test bed for Usage Area B | Test bed for Usage Area C | Test bed for Usage Area D | Test bed for Usage Area E | FI "Generic" Enablers Development |

Phase 1

| Usage Area A | Usage Area B | Usage Area C | Usage Area D | Usage Area E | FI System |

FI System Track

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Future Internet PPP – EFII Draft Programme Planning

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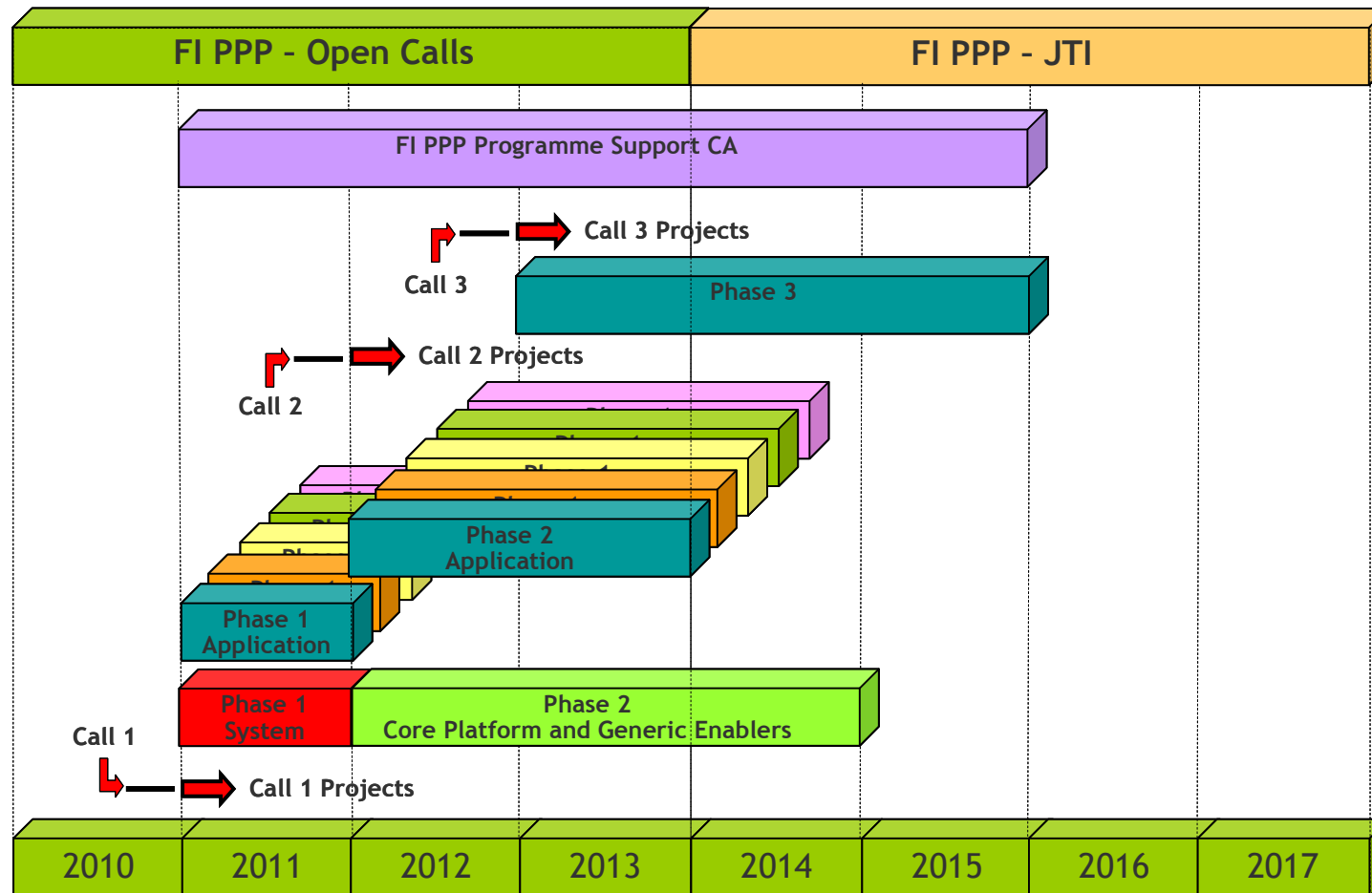
Future Internet PPP – EFII Next Steps

- Creating a community in 2010

- Organizing workshops on applications, enablers and infrastructures

- Determining the focus points, challenges, and optimal structures

- Encouraging innovation in structures as well as projects

- Releasing the position paper in January 2010

- Further defining the "state-of-the-art" considering the EU, national and trans-national completed and running projects

- Participating actively to the "Valencia Week"

www.future-internet.eu

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Usage Area Example: Smart Energy Grid
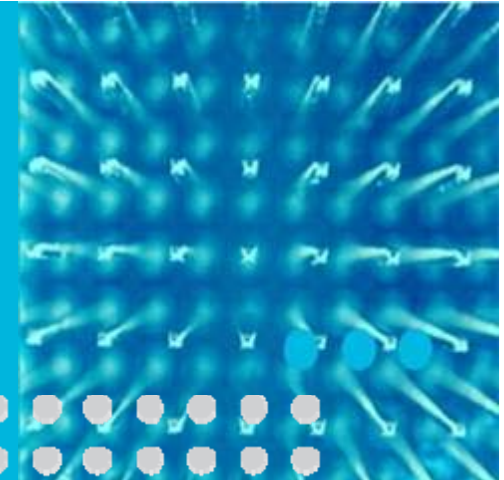
Dr. Johannes Riedl, Siemens AG

08.01.10 – Brussels

... from a systemic viewpoint:

- Development of a Global Smart Energy Grid architecture

- Standardization to improve Smart Energy Grid interoperability and security

- (ICT based) Business models on energy market with different stakeholders

- Credible deployment and evolution scenarios of the Smart Energy Grid, and the role ICT plays therein

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… from a technical viewpoint:

- Development of a communication and control network being global, scalable, easy to use, reliable and secure, and versatile

- Self-configuration and adaptation capabilities at different scales

- Reliable decision support systems for energy flow control and integrity protection, wide-area black-out prevention

- Security/Privacy concept e.g., to avoid major acceptance problems especially in the consumer area.

- IT-based Energy Systems Management: Control, measurements/data collection and visualization

- Development of adaptable service portfolios for the deployment and evolution path of the Smart Grid

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… from an experimental viewpoint:

Scalability testing:

- – *many 10s of millions of households (prosumers)*
- – *many millions of electric cars*
- – *100.000s of smaller and medium power plants (esp. renewables)*
- → *not only a bandwidth problem but also a problem of complexity for control algorithms, management systems and data handling/messaging.*

International Interworking:

- – *Responsiveness in case of a wide-area blackout*
- – *Resilience of the whole system, stability management*
- – *Load / generation pattern prediction in connection with real-time configuration of adaptable balancing groups crossing international boundaries*

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Ambition 1:

Setup a **pan-European Smart Energy Grid test environment** connecting **several Smart Cities** from different countries, **involving a large number of participants** based on **a large amount of re-newable** energy production using the Future Internet test network for communication and control purposes.

Ambition 2:

Develop a **pan-European black-out prevention** concept and **verify its functioning** through proper testing in the test bed/trial environment.

Ambition 3:

Enabling the European energy e-market. The **energy broker's role(s)** as well as the **interworking** with the residential end-users (prosumers), professional end-users as well as all considered energy sources (especially renewable ones) and storages **will be trial-wise implemented in the pan-European Smart Energy Grid test environment.**

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(1) Clarify mode of interworking with other existing initiatives:

- Quite some activities are already ongoing, also in terms of pan-European Test bed set up, e.g.
    - FP7-ENERGY
- ICT for future electricity market:
    - FP7-ICT Call 5, Challenge 6
- Quite some Smart Grid Initiatives have been started (recently), e.g.
    - EU Smart Grid Task Force
    - SET / SETIS / European Industrial Initiative (EII) Smart Grid
    - CIP ICT PSP (Competitiveness and Innovation Framework Programme ICT Policy Support Programme)

(2) Involve other major players and their views in the discussions

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Thank you !

Any Questions ?