



# What does Future Internet mean for enterprise?

## Introduction

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with acknowledgement of inputs from all session caretakers and speakers

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# Context and Background

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- To do

# 5 years Priorities for a Digital Europe



- 1 Access to Digital Content
- 2 European m-payment Space
- 3 Open Digital Economy to SMEs
- 4 ICT for a low-carbon economy

VIVIANE REDING 2009 Ludvig Erhard lecture on Digital Europe, July 9<sup>th</sup> 2009

**3. Europe's digital economy should be opened up to small businesses.** In Europe, we have 23 million small and medium sized enterprises (SMEs) which make up 99% of all firms. Accounting for over 100 million jobs, SMEs can be the mainspring of Europe's economic resurgence. But in the use of productivity-boosting ICT tools, SMEs lag substantially behind big firms: only 9% of SMEs use electronic invoices, and only 11% of them have technology-based human resource management. If SMEs could access computing power over the web, they would no longer need to buy and maintain technologies or IT applications and services. Such web based services – called "cloud computing" – are the medicine needed for our credit squeezed economy: they can make businesses more productive by shifting from fixed costs (i.e. hiring staff or buying PCs) to variable costs (i.e. you only pay for what you use). However, today these new services are nearly all US-owned and US-based. Once again, the US has started to exploit a business model before Europe has managed to do so. We cannot let this continue. In my view, we need a major effort to set up Europe-hosted "clouds" to give European SMEs access to fast, open and productivity enhancing services. A recent study estimated that online business services could add 0.2% to annual GDP growth, create a million new jobs and allow hundreds of thousand of new SMEs to take off in Europe over the next five years.

**So what are we waiting for?**

# Session Objectives

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- **Problem Statement: What will the Future Internet deliver for Enterprises?**
- Towards building a common baseline for identifying and prioritising issues in research
  - Orientation: what needs to be done to ensure that European enterprises including SMEs would benefit from Future Internet research and its outcomes
  - Focus: the *application* of Future Internet technologies in support of business innovation and enterprise transformation

# Agenda

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## 1. Welcome and Introduction

## 2. Position Statements

## 3. Knowledge Cafés **Blue Green Red**

### a. Visions & Policy aspects: Enterprise Interpretation of the Future Internet

(Moderators: Man-Sze Li FISO-FISE-MANA, Jean-Dominique Meunier NEM & FCN)

### b. Socio-economics aspects: The emergence and impact of new interconnection economics paradigms

(Moderators: Sergios Soursos FISE, Stefano de Panfilis FI PPP & FISO)

### c. Technology aspects: Enterprise transactions, service composition, information management

(Moderators: Sergio Gusmeroli FISO-RWI, Michele Missikoff FInES Cluster)

## 4. Feedback and Summary

# Position Statements

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1. **Stefano De Panfilis, ENG** (FI Public-Private Partnership)
2. **Sergios Soursos, INTRACOM** (FISE)
3. **Jean-Dominique Meunier, THOMSON** (NEM)
4. **Paul Moore, ATOS** (FCN)
5. **Michele Missikoff, CNR** (FInES Cluster Research Roadmap)
6. **Sergio Gusmeroli, TXT** (COIN Integrating Project, FInES)

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# Knowledge Cafés

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- Visions & Policy aspects: Enterprise Interpretation of the Future Internet

Moderators: Man-Sze Li, Jean-Dominique Meunier, supported by Paul Moore

- Socio-economics aspects: The emergence and impact of new interconnection economic paradigms

Moderators: Sergios Soursos, Stefano de Panfilis

- Technology aspects: Enterprise transactions, service composition, information management

Moderators: Sergio Gusmeroli, Michele Missikoff



# Visions & Policy aspects

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1. **ICT adoption by enterprises:** Why are the figures so low? Would FI make a difference? Would “enterprises in the clouds” make a difference? Given that “SMEs can be the mainspring of Europe's economic resurgence”, should there be a greater emphasis in FI research to support SMEs? What needs to be done?
2. **The trend towards ICT commoditisation:** What are the relationships between commoditisation, innovation and a level playing field? The benefits for the enterprise are clear, but are the benefits equally clear for ICT providers? Should more attention be paid to governance of ICT beyond telecoms?
3. **People, Things, Services, Content:** These are currently four fairly self-standing research streams linked in some manner to the FI Network Infrastructure research stream. Is this the best way to encourage ground-breaking research to develop an innovative approach that enables the development, deployment and adoption of more productive and fit-for-purpose enterprise systems of the future? What are the characteristics of those systems?
4. **Europe, US and ROW:** What is the “European way to Future Internet”? How would that impact on enterprises? How would that support enterprises in reaching their business objectives?
5. **What are we waiting for?** What are enterprises waiting for? Do enterprises really care about FI? Should they? And if so, how?



# Socio-economics aspects

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1. **The impact of FI on enterprises:** What are the trends? What are the needs? How to determine, evaluate and measure the needs?
2. **A new notion of enterprise and enterprise network:** Internal organization of enterprises - traditional hierarchical structures will change? External organization of enterprises – new forms of enterprise collaboration and new paradigms for enterprise competition? Boundaries between what are “inside” and “outside” an enterprise – more fluid, less structured, even disappear?
3. **Business models and relationships:** Enterprises as “prosumers” of FI technologies and services? New agreements will emerge? New possibilities of and approaches to enterprise innovation?
4. **Enterprise “attractiveness”:** new business values beyond economic values? Enterprise sustainability incorporating economic sustainability, environmental sustainability and social sustainability?
5. **Telecommunications sector:** how will Telcos adapt to the FI technologies in order to expand their area of business, their customer base and the offered services?



# Technology aspects

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- 1. Internet by and for People, the Enterprise of Employees.**  
FI will empower employees and workers by making them more prone to networked collaboration, to open innovation, to social solidarity and at the same time allowing them to become co-owners and convinced ambassadors of the Enterprise's mission and objectives
- 2. Internet of Contents and Knowledge, the Enterprise of Experience.**  
FI MultiMedia and Knowledge Management technologies will allow an unprecedented user-centric production and sharing of experiences for professionals and citizens, by radically changing the notion and nature of IPR & DRM, inside and outside the Enterprises' borders
- 3. Internet of Things, the Enterprise of Intelligence.**  
Trillions of Things becoming smarter and smarter will further decentralize enterprise vital and decisional processes, while proliferation of information and need for mobility will emphasise the need for ubiquitous and more personalized decision support and multi-modal, interactive semantic workspaces
- 4. Internet of Services, the Enterprise in the Cloud.**  
FI highly professional Service Parks (Cloud Computing), user-generated Service Galaxies (Service Web) and open/trusted Service Federations (Utility Platforms) will represent an unprecedented opportunity for Enterprises not just to outsource their IT functions and dynamically access them from the cloud, but also to become service providers and protagonists of the Service Economy
- 5. Trusted Network Infrastructure & Experimental Facilities, the Enterprise in the FI.**  
FI Universal Business Infrastructure, characterized by technology convergence, low- or zero-cost, easiness of use, availability to all, federated trust and security policies as well as encompassing end-to-end large scale test beds will allow Enterprises, and SMEs in particular, to win their reluctance to go digital and to run their most critical and vital transactions and business processes in the Future Internet Infrastructure, under guaranteed and secure agreements

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# Next Steps

- Session report within 1 month
- All materials related to session available at session wiki  
<http://services.future-internet.eu/index.php/Enterprises>

- Discussions to continue at session wiki

**Please contribute!**

- FIA Enterprise Position Paper in time for FIA Valencia, based on your contributions and inputs from all

**Expressions of interest most welcome!**

- Session caretakers to disseminate, motivate & coordinate

