

Towards a Future Internet Public Private Partnership. Position Statement

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Europe counts with 4,3 Million Km² of extension where 90% is rural and more than 483 Million people where 60% lives in rural areas that we should consider in further research and innovation programs. Rural areas in Europe are not characterized by poverty, lack of ICT knowledge and/ or extreme social and infrastructural disadvantages. It has a huge strength especially in the current economical crises. Europe fails in achieving Lisbon Strategy goals for being the more competitive economy in the world, neither the more cohesion supportive countries. One of the reasons is because we miss rural areas and rural inhabitants and because we do not count with them and their research and innovation capacities. Europe is losing its strengths that come from its diversity. Furthermore, Europe diversity becomes a weakness if we do not foster convergence properly and if we continue splitting communities, funds, research and innovation in isolated themes. *“The more intelligent researcher in Europe cannot be more intelligent neither can research more than he/she does”*. The only way to increase our competitiveness and the only way to increase our research and innovation capacities is to bring more people and regions to the research community.

Nowadays, Rural doesn't mean Agriculture and European citizens cannot be divided in rural vs. urban inhabitants. Once more we cannot split them in isolated groups. *Where should researchers live? Where should research infrastructures be? Why do not use rural areas and rural inhabitants in a convergence process, increasing the critical mass for further research and innovation?* It has many other externalities like environment care, energy efficiency strategies and improvements, PPP and sustainability approaches extremely important in the current economical crisis.

Unfortunately Europe has failed achieving Lisbon strategy goals, Europe have also failed as economic union with independent and risky behaviors among European countries that have increased the consequences of the current economical crises.

It is being launched the “Europe 2020: A strategy for smart, sustainable and inclusive growth” and as it is said the only way Europe can succeed is acting **collectively, as a Union**. Then an important effort in R&D is necessary for sustainable growth, and this is the reason why PPP-FI strategy plans to launch an important set of projects related to Future Internet ICT dealing with health, energy, transport and the environment highlighting that *“it is extremely important to achieve a good balance between technology push and application pull”*. Considering several related documents from EC and industrial and research centers, especially the “European Future Internet Initiative” EEFI and their “White paper on the Future Internet PPP definition” it is foreseen that Europe is going to repeat same mistakes that in the past, and that Europe is going to fail again in the EU 2020 strategy for the following reasons:

- Future Internet ICT research cannot be fitted in a core platform but a set of layered standards
- Important effort for user involvement and scenarios definition is being done although EU follows a traditional research strategy (first core platform, then user scenarios, then large experimentation). It is necessary to change the process and to shorten research cycles (first social spaces for research and innovation launch and/or support, then cyclic experimentation with real users application and services refining, and then continuous layered Future Internet standards definition and adoption)
- It is measured that 70% of knowledge in a successful R&D project comes from real user scenarios, then why we talk about real user application needs interpreted by ICT researchers jeopardizing the impact of this knowledge in the research community
- Rural areas have to be considering properly as 80% of EU territory and 60% of EU population is rural. This do not mean that we should divide EU inhabitants in rural versus urban, neither can we say that rural means agriculture only. Then if we should act collectively, as a Union, FI ICT has to consider the whole territory in all user scenarios already defined, (energy, content, health, transport, environment). Especially the environment is more important in rural areas that urban, and both have to be consider as a whole and integrated chain for Future Internet ICT Research
- EFII Founder Members are important ICT industries and several of them can be key representatives in several user areas selected for the PPP, at least in energy, health, transport and smart grid but definitely none of them are key players on content and on utilities and environment. Definitely many key user organizations representatives are missing from this group

1. **What use case and scenario in your area would you consider the most appropriate and representative one for large-scale experimentation with the Future Internet platform to be built starting from 2013.** TRAGSA an UPM can strongly contribute to the content and utilities and environment scenarios for large-scale experimentation specially in the following areas:

- a. FI tools with clear figures on energy consumption
- b. Sustainable development of rural areas
- c. Efficient water management
- d. Waste management and environmental risks
- e. Nature and environment
- f. Emergencies and Alert Situations

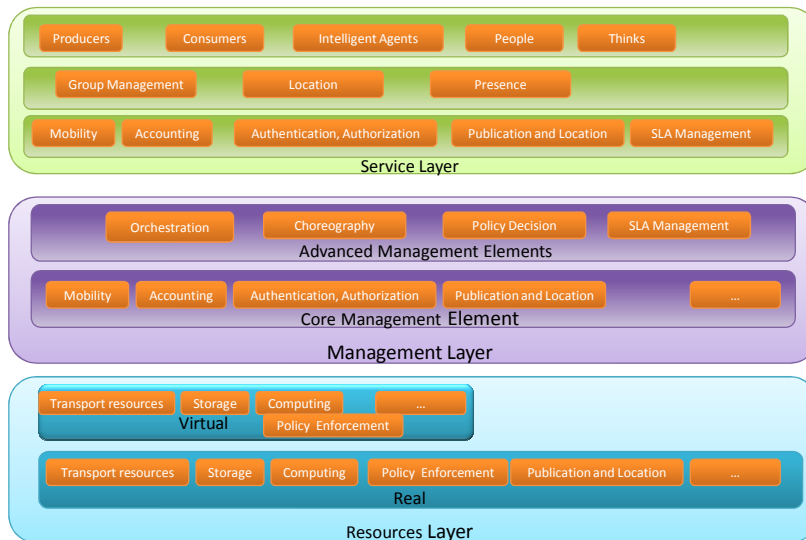
(2) **What innovative Internet functionality and technologies would you consider important for your suggested use case and scenario.**

Our vision of Future Internet ICT is a vision without Architecture. The Future Internet should preserve some success factors:

- Hourglass Paradigm
- KISS Principles
- Simple network Layer

- Network neutrality
- Internet as a social partner
- Internet has not Architecture

A Layered reference Model



This approach should consider the following technologies and methodologies

- Social Spaces for Research and Innovation as innovative communities and advanced Research Infrastructures. Open innovation led by empowered society.
- OSA (Open Services Architectures) & SaaS (Software as a Service) approaches.
- Sensor Networks
- Ad-hoc convergent networks, 3G, LTE, Satellite, DVB
- Cloud computing and GRID
- Satellite and earth observation techniques, LIDAR,
- Context awareness,
- ad hoc service composition and mash-up
- Delay tolerant networks extended in rural areas
- Open services architectures providing interoperable environmental services
- IPv6 deployment in rural areas and IPv6 in sensor networks
- accessibility & affordability
- security, privacy, identity and reputation

(3) **Which of the identified functionalities would you expect the Future Internet core technology platform to deliver to support your and other usage area scenarios?**

The most important technologies for utilities and environment are:

- a. Sensor Networks
- b. Context awareness,
- c. ad hoc service composition and mash-up
- d. Delay tolerant networks extended in rural areas
- e. IPv6 deployment in rural areas and IPv6 in sensor networks
- f. accessibility & affordability
- g. security, privacy, identity and reputation
- h. Satellite and earth observation techniques, LIDAR,
- i. Open services architectures providing interoperable environmental services

(4) What kind of experimentation environment would you consider necessary for broad large scale testing of the platform to be developed in your use area? What would be needed to experiment new services and applications cutting across use areas (services and application mash-up) and building a new services and application ecosystem around the prototype implementations of the platform?

Social Spaces for Research and Innovation **SSRI**. Open innovation led by empowered society in urban and rural areas.

(5) How do you see the potential role of your organisation in the FI-PPP, in the context of Usage areas taking a prominent role in the Initiative, to ensure an appropriate application driven approach? We foresee that TRAGSA-UPM can lead the utilities and environment user area considering the lessons learned in project like Collaboration@Rural <http://www.c-rural.eu>, the key role that TRAGSA plays in ICT for environment and the key role that UPM plays in ICT and Future Internet.