

1. Questions and Answers

- (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 (please refer to the documents referred to on the above websites for inspiration)?
 - *On the functional side, F-O-T (Federated, Open, Trusted) makes the difference to the currently dominant systems. F-O-T also represents European interest quite well.*
 - *Systems with pan-European coverage that allow third-parties to contribute and an open developer community to exploit its capabilities are best suited to demonstrate the F-O-T capabilities.*
 - *Context-management platforms for travel management and e-tourism or for e-health services for travelers are a suitable use case that is able to demonstrate key innovations and that is realistic to be starting from 2013.*
 - *Logistics, Mobility and Transport might also be an appropriate use area.*
- (2) What innovative Internet functionality and technologies would you consider important for your suggested use case and scenario (e.g. context awareness, sensor networks, advanced real time processing capabilities handling huge volume of data, ad hoc service composition and mash-up, managed broadband connectivity and services, embedded media support for interfaces easing the interpretation of processed contextual data, etc.)?
 - *The most innovative visions and usage areas for the Future Internet require network capabilities that will not be available or will be too expensive to deploy until 2013 (e.g., real-time, high reliability networks).*
 - *Of the realistically implementable technologies, context-management and trust/privacy/ID management are probably the most relevant for many usage areas. Here, a F-O-T implementation is required to make a difference to existing systems.*
- (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?
 - *A global future internet framework specifying the functional interaction between different key enabler (a specification of data interfaces is not required but a specification of functional interdependencies).*
 - *A concept for FOT (Federated, Open, Trusted) implementation of horizontal platforms for context management and ID management as key enablers for many innovative usage areas.*
 - *A concept that demonstrates the usability of the Future Internet core technologies for third parties (e.g., open interfaces on the technical level, and trusted and transparent incentive methods that allow third parties to receive a compensation for their contributions).*
- (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?
 - *For short-to-mid-term solutions as addressed by PPP, key new technologies will not be available for experimentation in large scale tests. With a mid-to-long-term scope experimental facilities that*

combine future internet and embedded systems capabilities are required to understand cyber-physical systems.

- *For short-to-mid-term solutions, instead of experimentation environments, trials in the market with non-friendly users could be used to validate concepts and to demonstrate innovations that are driven from a technical and business perspective.*
- *Trials modelling the business aspects of usage-areas can help to understand the market acceptance, the attractiveness for open developer communities, and to evaluate the interaction of technical and business innovations*

(5) How do you see the potential role of your organization in the FI-PPP, in the context of Usage areas taking a prominent role in the Initiative, to ensure an appropriate application driven approach?

See below → Usage area E-health.

2. Comment on Multi-purpose platforms

Multi-purpose platforms as multi usage area product

The deployment of many of the system solutions addressed in the PPP FI scope will be based on platforms. It is obvious that one can try to use these platforms for more than just one usage area (multi-purpose platforms). Some examples for smart FI platforms and for which usage areas they might be used are listed below.

Multi-purpose platforms

- can help to cross-finance applications for high societal value (AAL) but with low business potential,
- can generate the scale-of-economies needed to make PPP commercially successful,
- provide the reference for standardization efforts,
- provide a business opportunity for manufacturers.

Example: Important usage areas as assisted living, green buildings, or e-grids might have problems to finance the necessary investments. **Multi-purpose smart home platform** allows to cross-finance these usage areas by other usage areas that users might find more attractive (home entertainment, building maintenance, baby sitting, burglar protection, home energy management, ...).

3. PPP FI – Usage Area E-Health

Statement of Interest and Project Proposal

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Assisted Living and health-care for Everybody and Everywhere

Challenges addressed:

- After almost two decades of research on Assisted Living we still do not have solutions for the mass market. Existing assisted living solutions are still very expensive and only available for privileged people.
- Many Assisted Living and e-health solutions are tied to the home or your local medical and social infrastructure. Assisted Living and health-care for people travelling guaranteeing the same level of care and protection that people are used to is not yet available (for technical and legal reasons but also because of the low interest of some established e-health players to support open platforms).

Solutions:

Development of a **multi-purpose smart home platform** that is able to support Assisted Living and other home services as e-grid, home maintenance, baby-sitting, burglar protection building maintenance or even home entertainment. With this approach, the **AAL home platform can be cross-financed** by other application for which the users might more likely be willing to pay.

A European standardization effort would be required to establish the smart home platform as the platform for as many home FI applications as possible.

When travelling, the **mobile phone should be able to take over some of the smart home AAL functionality** (e.g., by detecting and automatically using sensor capabilities available in hotel rooms) and, with this, extend the coverage of the smart home platform to the user's instantaneous environment (wherever he is: hotel, office). Since the user's mobile might also be part of the smart home AAL environment, a **federation approach of the home platform and the mobile phone** might be considered. Mobile Cloud Computing ideas might be used to implement this approach.

The connectivity between the mobile and the smart home platform might help to reduce some of the legal problems related to mobile e-health solutions.

Available resources and experience:

- Ambient Assisted Living "Living Lab"
- Houses (in use by elderly people) equipped with Assisted Living infrastructure
- Close collaboration with a construction company building houses with ambient assisted living, e-grid and building maintenance infrastructure
- A planned pilot scheduled for 2011 where additional houses equipped with the latest AAL, e-grid and building maintenance infrastructure will be build
- Development and integration of a European e-health infrastructure for a leading provider of cardiovascular disease treatments (incl. data base, alert services, connectivity, access control, anonymisation and pseudonymisation, interface for data mining, etc)