



Coordination of the European Future Internet Forum of Member States



D4.8 - Report from European-Level Workshop

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1. Introduction

A central objective of the ceFIMS project is to optimise collaboration among Member States and to support the sharing of information on European, National and Regional Future Internet initiatives. In order to achieve this objective, ceFIMS has undertaken a wide range of data-gathering and data-sharing activities which has led to the creation of a valuable repository of information on Future Internet initiatives and projects. Using this information and combining it with inputs from a wide range of Future Internet Stakeholders, ceFIMS has produced a roadmap setting out a framework to support the maximisation of synergies between EU and MS investments in FI research. The ceFIMS roadmap (D4.4c Roadmap) analyses a series of potential collaboration mechanisms and also looks at specific research topics which appear to offer potential to harness the research commonalities among Member States. The roadmapping process aims to identify the key elements of a framework that would help decrease fragmentation, maximise investment synergies and support stronger collaboration among Member States, and between EU and Member States, in their initiatives and investments in Future Internet research.

An important component of the roadmapping process has been the consideration of the pan-European context and specifically, the range of EU-level investments that are in place to support Future Internet research. Primary amongst these is the FI-PPP which has developed as a critical part of the European infrastructural and investment framework. Member States will in their future investment strategies, need to align and compliment FI-PPP and the large-scale infrastructural deployment foreseen in the FI-PPP. It is important that FI-PPP and Member State investments are complimentary and in so far as is possible, duplication of investments is avoided. The Future Internet Public Private Partnership (FI-PPP) offers exciting opportunities for Member State interaction and progression in the field of FI research. For their part, Member States can also enhance the effectiveness of the FI-PPP infrastructural investment programme and in particular, play a pivotal role in facilitating and support industry (especially SMEs) to utilise the new infrastructures to develop new business models and opportunities. The FI-PPP offers a new added dimension for Member States to consider in fixing their national FI investment strategies and offers enormous potential to compliment existing investment policies. As such, any roadmapping exercise on future Member State collaboration must give proper consideration to the FI-PPP.

Bearing in mind this strong connection and interdependency, the ceFIMS project has maintained close contact with the FI-PPP and has actively engaged with the INFINITY Coordination Action. These engagements, undertaken from the earliest stages of the ceFIMS project are detailed in Deliverable D3.5 'A report on contacts between ceFIMS and INFINITY'. These engagements have been useful in getting the FI-PPP perspective on ceFIMS activities and now as the ceFIMS project comes to a completion and the roadmap document is finalised, it is opportune to engage again with the INFINITIY project. With this in mind, ceFIMS approached INFINITY to request a ceFIMS workshop discussion as part of the Fourth INFINITY Concertation Board meeting held at the FI event in Dublin on 8th May, 2013. The theme of the Board meeting was the 'Adoption of and Opportunities for European ICT Infrastructures' (Agenda in Appendix 1).

The ceFIMS workshop session focused on two key themes that are crucial to the relationship between Member States and the FI-PPP i.e. how Member State investment can support the FI-PPP and how Member States can facilitate and support SMEs to engage with and utilise the FI-PPP infrastructures. Many of the inputs received from the workshop (as set out in section 2 below) touched on these themes. However as the discussions progressed at the workshop, additional inputs on related issues were also offered.

The Concertation Board meeting offered an excellent opportunity for ceFIMS to present its near-final roadmap in a dedicated ceFIMS session and to engage with and get additional inputs to its completion from the diverse range of FI stakeholders present at the meeting. Stakeholders present included INFINITY and ceFIMS project partners, Member States representatives (invited by ceFIMS), SMEs and Infrastructure providers (List of Attendees in Appendix 2). The presence of such a diverse range of FI stakeholders provided an excellent opportunity for interaction between Member States and the European FI-PPP community and in particular to secure additional inputs to the roadmap, based on its presentation to the workshop participants.

2. Inputs received from the workshop

A number of important inputs and viewpoints were received through the discussion at the workshop. These inputs were further developed and elaborated on after the workshop and are now being added to / incorporated into the roadmap document. These inputs, most of which related to the focus of the ceFIMS session at the workshop viz. - how Member State investment can support the FI-PPP and how Member States can facilitate and support SMEs to engage with and utilise the FI-PPP infrastructures - fed directly into the ceFIMS roadmap and have provided a useful addition to the completeness of the document. The inputs were also framed by the presentation given on the ceFIMS project by Brian Foley of Waterford Institute of Technology.

There were a number of noteworthy points to come from the workshop in relation to the availability of infrastructures and testbeds. This is a crucial dimension for Member States as they strive to prioritise their infrastructural investment strategies with existing privately and publically-funded infrastructures at regional, national and European levels.

The following represents a summary of the discussion

- The INFINITY project has gathered information on a large number of investment infrastructures at European, National and Regional level. It is evident from an analysis of these investments that they are driven by national and regional priorities with little reference to similar investments in other Member States. This is despite the fact that part of the funding may be from the European Development Fund or other Europe investment sources. A good example here is the large number of national and regional Smart City initiatives. This issue has also emerged regularly at ceFIMS-organised workshops and from an analysis of the ceFIMS database and points to the need for strategies to identify interfaces for Pan-European collaboration with particular emphasis on

supporting greater collaboration between national research funding and infrastructure investment programmes.

- In many cases we see the same multinational organisations involved in multiple testbeds. However their participation appears to be driven by the decision of the national branches / offices of the multinational organisation. While this should bode well for the availability of testbeds and infrastructures for public research and commercial exploitation, nevertheless it often proves to be the case that because of different governance models, access to these testbed networks is often limited resulting in their underutilisation, in particular by SMEs (especially those who are not business partners of the large multinationals). This illustrates the paradox of large scale infrastructural investment but limited access and availability for SME users. Infrastructure managers will need to identify a commercial model that addresses the concerns of the SME community and in particular, help overcome the difficulties for SMEs to engage in infrastructure trials.
- There is a need to align public infrastructural investment with the research lifecycle i.e. from long term research (for instance funded through FETS) to pre-commercial innovation and market validation through to the delivery of market-driven commercial solutions. Each phase of the research lifecycle can require the availability of different infrastructures with different funding models e.g. early stage “Blue Sky” research and supporting infrastructure will require greater government investment than later stage investment. Coupled with this, there is often an unreasonable expectation that infrastructures can be self-funding within a short period of time and an absence of a realistic business model). There is a need for increased recognition of a research, innovation and commercialisation lifecycle model in Member State investments. The national research agencies can play an important role in making sure that this happens. Industry too has a role to play here.
- Engagement of the key stakeholders (investment agencies, academics and industry and consumer groups) in the pre-commercial infrastructure scoping and investment prioritisation process can ensure a greater balance between short, medium and long-term investment priorities and build a bridge between the pre-commercial infrastructure platforms as represented by the FI-PPP core platform and the more commercial platforms operated by commercial industry.

This engagement process requires greater emphasis on promoting open solutions that are standards-based and are both industry and consumer focused. Industry could usefully be encouraged to engage in early stage research infrastructure investment and early-stage research collaboration to promote better transfer of the research advances in pre-commercial R&D and

more effective uptake of research outputs and their validation in pre-commercial prototypes and trials. Policies are required to encourage service providers (and particularly SMEs) to invest in open source and/or standard solutions. Likewise, there is a need for the development of a model for investment by State bodies that recognises the need for greater state investment in early-stage research infrastructures, particularly in universities and nationally funded research centres. The research lifecycle can therefore become a catalyst for greater co-ordination between public and private infrastructure providers to ensure that their business models are complimentary and maximise the overall impact of their collective investments at each stage in the research lifecycle, thus optimising the utilisation of the combined infrastructures by users (especially SMEs).

- There is a strong imperative to engage SMEs actively in the investment process. This is a complex question and while recognising that national supports for SMEs are Member-State specific with each Member State supporting a multitude of research and innovation grants depending on industry size, market focus and location, there are nevertheless some general observations that can be made in this regard. There is often a low level of awareness and poor take-up of research infrastructures by SMEs. The massive combined European, national and regional infrastructural investment is not being adequately exploited by European SMEs. Feedback from SMEs acting as third party service providers raises concerns about the SME engagement policies as promoted at European and National levels. There appears to be a mismatch between the focus on technology issues associated with most infrastructure investments and the SME need for commercial pathways for product development. There is a gap between on the one hand, the focus of the European and national agencies on infrastructure from a technology perspective and on the other hand, the needs of SMEs for market validation, reference sites and routes to market. Member States and their national and regional agencies, can play a key role in addressing this seeming disconnect between infrastructural investment strategies and the needs of innovative SMEs that are building new business models around new technologies and technological research. There are some interesting initiatives which could reduce this apparent disconnect e.g. the model underpinning the 'FP7 Research for the benefits of SMEs' programme which links SMEs with research providers in bottom-up, technology-agnostic research projects that aim to strengthen the innovation capacity of small and medium-sized enterprises (SMEs) in Europe and their contribution to the development of new technology based products and markets. There are interesting opportunities here for Member States to take similar approaches to reducing the disconnect at national levels.
- A recurring theme is how to minimise duplication in research and infrastructure investments and how best to provide the opportunity to support greater strategic impact through the development of mechanisms for greater information-sharing and collaboration between these instruments in

support of a more integrated approach. At a national and regional level, each Member State supports a complex array of funding programmes supporting research and innovation at multiple levels. The national funding structures vary from Member State to Member State and in the main, reflect national economic and political structures. Our analysis in ceFIMS has suggested that the approach to funding academic research appears to be converging across Europe particularly since the establishment of the Europe Research Council and the recognition of the importance of the European Research Council as a benchmark for research excellence.

Analysis of national investment strategies indicates that the Future Internet is an area of strategic importance in all Member States and receives a large percentage of the total investment funds available for academic research, industry research and innovation and strategic-oriented collaborative research between industry and academia. As a community of Member States, attention now needs to turn to how investment strategies in infrastructures can promote the transfer of solutions in order to minimise the duplication in investments and optimise the uptake of research results. Will this be based on the promotion of standards and open source or should government funding agencies focus their investments on supporting solutions that are portable. How can this be achieved? - in particular how can SMEs be incentivised to look at service portability and to overcome constraints to portability where technical solutions are in many cases bespoke solutions that are not portable without major additional development requirements. Here we should cast the net wide and consider for example the programmes of DG-Regio, established to support regional economic development and innovation across Europe. European Development Fund is an instrument for regional infrastructure development: Marie Curie actions for Industry to support the flow of people and ideas between industry and academia on a European-wide basis: The European Institute of Innovation and Technology and the associated ICT labs can reinforce European innovation capacity particularly through the translation of research to products and services.

Data-sharing will continue to play an important part in this process of increased collaboration and alignment. The data-gathering and information-sharing initiated in projects like ceFIMS need to be further developed and 'institutionalised' with appropriate levels of support with a view to arriving at a fully-integrated information base on all Future Internet support initiatives irrespective of their origin and/or funding instruments.

Appendix 1 : Agenda

Start time	Planned duration	Item description	Presenter / Chaired
09:00	5 mins	Introduction	<i>Christopher Foley (WIT), Concertation Board Chair</i>
09:05	30 mins	FI-WARE Open Innovation Laboratory (OIL) <ul style="list-style-type: none"> • What OIL is about • How Infrastructure owners and SMEs can get involved and the benefits in doing so. 	<i>Juanjo Hierro (TID) - FI-WARE</i>
09:35	30 mins	XIFI – FI-PPP Capacity Building Project <ul style="list-style-type: none"> • What XIFI will offer? • Its open call and how ICT infrastructures can become part of XIFI • Key integration points for stakeholders; <ul style="list-style-type: none"> ○ Infrastructure owners ○ Use Case Projects ○ SMEs, FI Development Community 	<i>Anastasius Gavras (EURESCOM) - XIFI</i>
10:05	25 mins	Open discussion on both FI-WARE and XIFI presentations and in general on what the FI-PPP program will offer to different stakeholders	<i>All</i>
10:30	15 min	Coffee – Served in Mahony Hall	
10:45	30 mins	AmpliFIRE – Vision for FIRE experimental Facilities and FIRE’s current offering	<i>Hans Schaffers (Aalto Univ) - AmpliFIRE</i>
11:15	40 mins	Adoption of ICT infrastructures – An SME perspective <ul style="list-style-type: none"> • Difficulties involved when adopting an ICT infrastructure from an SME viewpoint • Does the Return on Investment outweigh the effort of adoption 	<i>Jean-Charles Point (JCP Consult) – Patrick Diamond (Wholeschool) Jeanne Caffrey (QuartzSpark Ltd)</i>
11:55	20 mins	Questions and discussion	
12:15	30 mins	Business Models which encourage or hinder adoption of ICT Infrastructure	<i>Mike Surridge (IT Innovation) – INFINITY</i>
12:45	15 mins	Questions and discussion	
13:00	60 mins	Lunch – Served in Mahony Hall	



14:00	40 mins	Canada's Advanced Research and Innovation Network (CANARIE) The Digital Accelerator for Innovation and Research (DAIR) http://www.canarie.ca/en/dair-program/about	<i>Mark Wolff (CANARIE) - DAIR (remote presentation)</i>
14:40	20 mins	Questions and Discussion	
15:00	40 mins	ceFIMS Presentations and Discussion focusing on (TBC) <ul style="list-style-type: none">• Their roadmap• How Member State Investment can support the FI-PPP• How Member States can facilitate and support SMEs and users to engage with and utilise the FI-PPP infrastructures http://www.cefims.eu/	<i>Brian Foley ceFIMS Project</i>
15:40	20 mins	Questions and Discussion	
16:00		Close	<i>Willie Donnelly, WIT</i>

Appendix 2: List of Attendees

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