

CI-FIRE White Paper

September 2014

*Why FanTaaStic is
a good fit for SMEs*



FIRE

Coordination and Integration of Future Internet
Research Experimentation Activities in Europe





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www.ci-fire.eu | www.testbeds.eu

Executive Overview

Why we need to sustain FIRE

The Future Internet Research & Experimentation (FIRE) initiative of the European Commission has brought Europe several large-scale test beds and platforms that offer a rich set of original, cutting-edge and diverse technologies for the future internet.

For the most part, FIRE facilities have traditionally targeted the research community, often limited to partners within the consortium or recruited through open call mechanisms. Overall, there has been little attention to the business community, especially those companies that need to test products and services before going to market.

While there have been some important successes, many test beds have failed to survive beyond the funding cycle.

Sustainability challenges

One reason for this is the special effort that is required to adopt commercial service management processes and widen the user base for FIRE resources. Another is the ability to manage the interconnectivity and federation trends in order to build on, rather than build again, key elements on the already existing FIRE offering.

Most FIRE integrating projects have dealt with the issue of sustainability and some have achieved some degree of self-sustainability, which may also imply some level of public funding. Open access mechanisms have become one of the most common approaches, where open access typically means free access on a best-effort basis for a defined period of time. To date, there is no convincing sustainable model that adopts a market-oriented approach with a focus on business value for companies of all sizes.

There is clear evidence of the need for a niche offering with streamlined and tailored testing services. This market demand presents important opportunities for FIRE. ICT-savvy SMEs and entrepreneurs with a beta technology not yet fully tested or a new idea do not typically have access to nodes, innovative test-bed features and cutting-edge technologies for the future internet. The usage of FIRE test facilities can therefore play a key role in enabling this important market segment.

CI-FIRE and FanTaaStic collaboration

CI-FIRE has embarked upon an exemplary collaboration with EIT ICT Labs and its FanTaaStic project to drive the sustainable use of test beds in Europe, based on a common vision to build and empower the community. It recognises the need for a more flexible, demand-driven approach that moves beyond the current upfront project-based participation towards a quality, on-demand service offer.

Building on the FIRE legacy

FanTaaStic has built on the FIRE legacy, its experimentation resources, knowledge and federations as a solid basis on which to build its business and support services. Its goal is to provide FIRE with a better usage rate and means for sustainability by ensuring revenue across the value chain of the services offered.

Benefits to business

FanTaaStic fills gaps in the current FIRE offer, including add-on features that are particularly attractive to businesses, from new and micro companies to large corporations. FanTaaStic implements the innovation cycle to ensure the intelligent development of new

systems, from idea or prototype to market. It is a fail-fast experiment-driven approach that challenges or validates assumptions at every step of the cycle. This fail-fast approach is particularly important for European firms, which can be risk-averse. FanTaaStic reduces this risk by enabling improvements along the way or even dumping an idea so firms can move on.

FanTaaStic today

FanTaaStic has started with two complementary facilities: FUSECO and OneLab. Today, the FanTaaStic Broker Service focuses on cloud computing, big data, mobility and the Internet of Things, which represent a sea change in information technology key to transforming not only business but also government, society and the economy.

Opportunities for FIRE

By definition, FanTaaStic is open to any mature FIRE resource provider to offer their testing services under

its brokering, as long as it meets specific criteria. To facilitate the feasibility of transition to FanTaaStic, CI-FIRE is providing a blueprint, that is, a standardised process that is open and transparent, matching the development of FIRE project sustainability plans with FanTaaStic brokerage build-up. The purpose of this White Paper is to highlight why FanTaaStic is a very good fit for SMEs based on direct feedback from the business community, making it a compelling case for FIRE. By presenting the current, successful outcomes of CI-FIRE-FanTaaStic collaboration, the Paper offers an initial step towards the blueprint, and an initial pathway towards developing a new approach for sustainability.

Prof. Serge Fdida, UPMC Sorbonne University & CNRS

*Susanna Avessta, UPMC Sorbonne University and EIT
ICT Labs*

September 2014

European SMEs in numbers

90% of the 22+ million SMEs in Europe are small and micro enterprises.

50% are 1-person companies.

The average European company has 5-6 employees.

The European business world is undergoing rapid changes as we embrace the digital economy. We need to be open and flexible to see where the many different experiments are going. But one thing is certain: we have not yet begun to imagine the next wave of innovation European entrepreneurs will bring.

What do they have in common? The need to go to market quickly.

FIRE White Paper

September 2014 - Why FanTaaStic is a good fit for SMEs

Current barriers to the sustainability of FIRE facilities and services lies in the difficulty of SMEs to access and use them because the system works in terms of project lifecycles and contracts with issues concerning continued existence after the end of funding.

Maurizio Cecchi, Telecom Italia

Sustainability is one of the key issues in keeping the Future Internet Research & Experimentation (FIRE) facilities alive and running for the benefit of research, education and business to validate and fine-tune innovative products and services. In Horizon 2020, FIRE+ places even greater emphasis on sustainability. Many FIRE integrating projects have dealt with the issue of sustainability, which may imply some level of public funding. Several projects have achieved some

degree of sustainability mainly through open access approaches, that is, free access on a best-effort basis for a defined period of time. However, the existence of a test bed is not enough to meet the needs of the demand side.

Currently, there is no convincing sustainable model that drives a more business and market oriented approach. Such an approach is essential for building up the user base, clearly stating the benefits with easy access to tailored information, whether for business, research or education.

Small- and medium-sized businesses (SMEs) typically need support in many different product development phases, especially testing support. SMEs also typically lack the know-how to set up a multi-tech test bed but need enabling so they can focus on their new product.

A new collaborative model supporting FIRE sustainability

Sustainability and the best use of developed test-bed infrastructures is highly critical for both FIRE and EIT ICT Labs. Many FIRE facilities have now reached a level of maturity that allows them to be opened up for a wider use. Today, there is a strong momentum for putting into practice pioneering sustainability models.

While there are several challenges in offering on-demand test-bed usage on a commercial basis, driving this game-changing approach brings exciting new opportunities for test-bed users as well as test-bed providers.

Florian Schreiner, COO, FanTaaStic

With the FIRE initiative, EIT ICT Labs is promoting the concept of experimentally-driven research, working to create a dynamic, sustainable, large-scale European facility. The common vision between EIT ICT Labs and FIRE is to build and empower the community and foster the best use and development of FIRE based on three strategic pillars: sustainability,

development and collaboration. By doing so, we can provide a framework in which European research on future Internet can flourish and Europe can be established as a key player in defining future Internet sustainability concepts globally.

CI-FIRE has embarked upon a unique collaboration model with EIT ICT Labs that has the FanTaaStic Broker Service, a double-facing market offer, at its heart. In order to support the strategic importance of sustainability for Europe, CI-FIRE is analysing FIRE sustainability potential, providing examples of sustainable models by working closely with FanTaaStic, which currently includes FUSECO and OneLab, and in developing a framework for the business-innovation lifecycle.

By driving an alternative approach to sustainability, we recognise the need for a more flexible and demand-driven approach, moving beyond the current upfront project-based participation towards an on-demand offer based on a quality service.

Pioneering approach of FanTaaStic

FanTaaStic is promoting the concept of experimentally-driven research, working to create a dynamic, sustainable, large-scale European experimental facility. The innovation cycle underpinning FanTaaStic enables the intelligent development of new systems, from idea or prototype to market. It is a virtuous cycle for continuous improvements at each stage. Its rapid iteration is a fail-fast, experiment-driven approach that challenges the business roadmap at every milestone, and allowing the validation of assumptions in every step of the innovation cycle.

To drive forward this radical new approach to sustainability, FanTaaStic has moved quickly and has already:

- » Produced a business plan, leveraging the eTOM agile business process framework. eTOM (enhanced Telecom Operations Map) is the TM Forum's blueprint for enabling successful business transformation.

The implementation of eTOM has helped make FanTaaStic efficient, effective and agile.

The framework has also helped implement a set of services currently missing from the FIRE portfolio as compelling added on features.

A One-stop-shop services with: billing, payment, and legal contracts.

Matchmaker services: discovery and assignment of resources.

Advisor services: expert advice on Test bed/resource usage/Experimentation & Testing, plus Consultation on Business Model, Feasibility.

On top of this framework, FanTaaStic has also made price comparisons, which are important to compare offers, foster competition and increase transparency.

- » Analysed the available tools and frameworks from past and current FIRE/federation projects to define sustainable EIT ICT Labs test-bed operations. This analysis focused on initial candidates for FIRE-EIT ICT Labs test-bed integration. The output is an operational model with a gap analysis for educational, research and commercial (SME) usage. FanTaaStic has started with two complementary facilities – FUSECO and OneLab, with a focus on cloud computing, big data and the Internet of Things.
- » Opened up its platform for trialling, mainly for SMEs, and plans to commercially launch its Brokerage Service in 2015.

Why FanTaaStic is a good fit for SMEs

A good approach for the SME market segment would be a fast-track to guaranteed testing; a one-stop-shop federation where specific needs are translated into different phases with training, guidance and support even at a minimum level.

Jean-Charles Point, JCP-Connect & FUSION

CI-FIRE has invited the business community and peer initiatives with a focus on SMEs, such as FUSION, to identify practical ways of overcoming current barriers to business usage. The direct feedback from both small and large companies has been extremely useful in clearly defining business priorities and effective engagement strategies that significantly challenge the typical FIRE approach today.

FanTaaStic has also recognised that several of the practical tips from SMEs has helped to improve its own marketing strategy, a clear demonstration of the value that CI-FIRE brings by offering a platform to showcase FanTaaStic to both the supply and demand side.

The availability of a test bed is simply not enough. FanTaaStic provides quality services and resources and fills gaps in current FIRE offers, making it a good fit from a technical point of view. Most importantly, it meets the needs and priorities of the SME community in a practical, business-like manner.

FanTaaStic has set as a top priority a service portfolio with SME needs firmly in mind. Its added value is

recognised as a very good fit for SMEs by the business community itself, both small and large companies.

FanTaaStic offers support that SMEs typically need in many different product development phases, especially testing support. It also supports SMEs that typically lack know-how to set up a multi-tech test bed but they need enabling so they can focus on their new product.

FanTaaStic has implemented the innovation cycle to enable the intelligent development of new systems, from prototype to market. It is a virtuous cycle for continuous improvements at every stage. This rapid iteration is a fail-fast, experiment-driven approach that challenges the roadmap at every milestone, with the means to validate assumptions at each step in the innovation cycle. This fail-fast rapid iteration can also help to reduce risk as an important feature for European businesses, many of which tend to be conservative and risk-averse.

FanTaaStic is a real opportunity for FIRE test bed facilities to implement pioneering sustainability models and advertise their offer through the Brokerage Service. Its eTOM framework can be used as a check list to verify the market readiness of test beds, which need a 'seal of approval' before integration.

Equally important, this framework could help reduce sustainability planning, which currently requires considerable time and effort, a challenge that the FIRE test-bed facilities have already highlighted.

Future Steps

FanTaaStic builds on FIRE projects and their legacy. The FIRE experimentation resources, the FIRE knowledge and federations achieved serve as a solid basis on which FanTaaStic can build its business and support services, providing FIRE with a better usage rate and means for sustainability by ensuring revenue for the entire value chain of the services offered.

FanTaaStic has tangible plans for ramping up its services in coming years. The goals for 2015 include enabling users to discover, select and book test-bed resources and human resources for testing support.

Key goals for 2015 are also:

- » significantly broaden the portfolio by integrating several complementary test beds and technologies in co-operation with the Fed4FIRE project
- » enabling various 5G testing scenarios;
- » improving usability, especially for SMEs-
- » ensuring trustworthiness and customer satisfaction through enhanced service level agreement (SLA) management mechanisms, as well as improving customer retention and loyalty.

By driving an alternative approach to sustainability,

CI-FIRE and FanTaaStic recognise the need for a more flexible, demand-driven approach, moving beyond the current upfront project-based participation towards an on-demand quality service offer.

By definition, FanTaaStic is open to any FIRE resource provider to offer its testing services under its brokering and to benefit from FanTaaStic add-on services as well. The CI-FIRE blueprint will set out the criteria required and the processes to be undertaken in assessing the feasibility of transition to FanTaaStic. The blueprint will play a key role in matching the sustainability plans of FIRE projects after funding has ended with the build-up of the Brokerage Services.

We seek to ensure the openness and transparency of the processes, while building trust at the commercial level in rolling out support services for testing, as well as the innovation cycle management at large.

The ultimate goal of EIT ICT Labs and FIRE is to provide a framework in which European research on Future Internet can flourish and Europe can be established as a key player in defining sustainable Future Internet

Playing your part

Large companies

The involvement of large companies is important to show how FIRE can move beyond the experimentation phase towards innovative services in the marketplace.

Industry's deep knowledge of market drivers and trends makes it an important ally in pushing research boundaries, leading to new processes and new business models. Involvement can also be a "healthy" reminder to the research community of the importance of being market-driven and market-facing.

Stefano de Panfilis, Engineering; Project Coordinator
at EIT ICT Labs and Chair of the FI-PPP Steering
Board

We invite EIT ICT Labs to help build on the FIRE legacy and CI-FIRE-FanTaaStic collaboration. We invite large companies with a stake in the future internet to continue their support by sharing their insights and recommendations so we can all play a part in improving and sustaining new services.

Leaders of the EIT ICT Labs Co-location Centres and Business Developers

Co-location Managers and business developers can play a key role in offering hands-on guidance and in positioning FanTaaStic for success in the marketplace. They can help identify innovators and new sectors as potential customers and in advertising its services.

Together, we can make a difference for FanTaaStic and the future internet.

FanTaaStic Team

FanTaaStic brings together ICT and business development expertise and is powered by EIT ICT Labs.

- » Udo Bub, CEO
- » Florian Schreiner, COO
- » Serge Fdida, CSO
- » Alexander Willner, CTO
- » Stephan Albrecht, Innovation Manager
- » Ozan Özphelivan, Test Manager
- » Thomas Günther, Test Manager
- » Ciro Scognamiglio, Test Manager



European Commission



CI-FIRE has received funding from the European Commission under the 7th Framework Programme for research, technological development and demonstration under grant agreement no 611591.

