FIRE Portfolio

The FIRE Portfolio - History

The FIRE (**F**uture **I**nternet **R**esearch and **E**xperimentation) Initiative was launched at the beginning of 2007 as part of Framework Programme 7. It built upon the "Situated and Autonomic Communications" Initiative and other internet-related projects funded under the Future and Emerging Technologies (FET) Programme, as well as on several projects launched as Research Networking Testbeds already under FP6.

FIRE has two related dimensions: on the one hand, **promoting experimentally-driven long-term, visionary research** on new paradigms and networking concepts and architectures for the future internet; and on the other hand, **building a large-scale experimentation facility** to support both medium- and long- term research on networks and services by gradually federating existing and new testbeds for emerging future internet technologies.
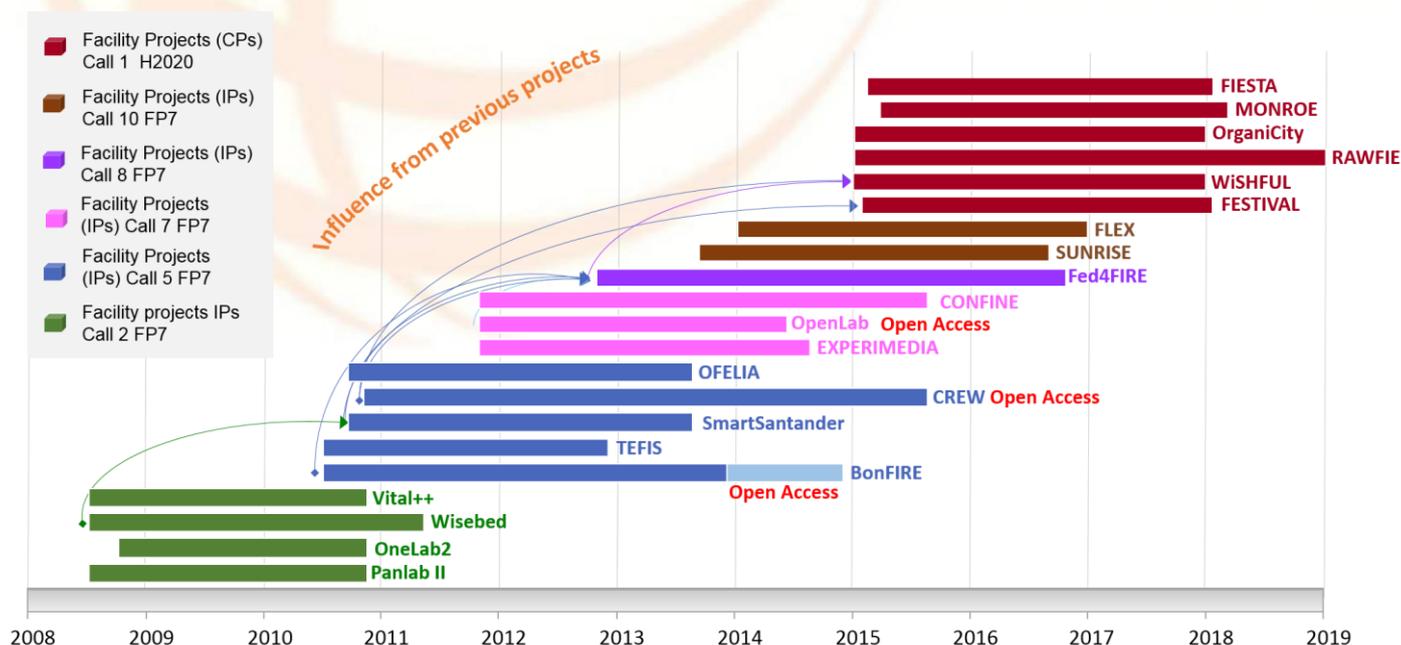

Figure 1 - Planned durations of the FIRE Facilities

FP7 ICT Call 2 gave birth to the first wave of FIRE projects, which ran until the second half of 2010. Four of the projects (Panlab-PII, OneLab (Open Access still continues), WISEBED and Vital++) were categorised as "facility projects" building experimental platforms for future internet researchers, whilst eight projects (ECODE, N4C, Nano Data Centers, OPNEX, PERIMETER, RESUMENET, SELFNET and SMARTNET) were research-focused and experimentally-driven (so-called "STREP") projects. The FEDERICA project funded by the Research Infrastructure programme complimented the facility projects of the ICT Call 2. Two Coordination and Support Actions (CSAs) for the FIRE Initiative were FIREWorks and PARADISO.

FP7 ICT Call 5 brought in 5 new Integrated Projects (IPs): OFELIA, BonFIRE, SmartSantander, TEFIS and CREW) and 8 new STREPs (CONECT, SPITFIRE, SCAMPI, CONVERGENCE, LAWA, EULER, HOBNET, NOVI). FIRE STATION was funded through this Call to co-ordinate and support the FIRE Programme. Three further CSA projects were funded to (i) examine the socio-economic aspects of the Future Internet (PARADISO-2), (ii) liaise with the Living Lab community (FIREBALL) and (iii) liaise with the Future Internet activities in Brazil, Russia, India and China, and keep the community aware of important standardisation issues (MyFIRE).

OFELIA, BonFIRE, TEFIS and CREW provided facilities in new technological areas, whereas SmartSantander can be considered as a continuation of WISEBED (from Call 2), but on a larger scale and in a real city environment.

Three new IP projects started in Autumn 2011 from the FP7 ICT Call 7: CONFINE, EXPERIMEDIA and OpenLab. In addition, CREW (additional testbeds) and BonFIRE (new Use Case) extended their facilities.

A specific call for collaboration between Europe and Brazil resulted in one new FIRE project FIBRE-EU. The main goal of the FIBRE-EU project was the design, implementation and validation of a shared Future Internet research facility between Brazil and Europe.

FP7 ICT Call 8 brought in one IP project (Fed4FIRE), 12 STREPs (RELYonIT, OFERTIE, STEER, Social&Smart, IRATI, 3D-LIVE, CLOMMUNITY, EAR-IT, ECO2Clouds, ALIEN, EVARILOS, Cityflow) and 2 CSAs (AmpliFIRE and FUSION). These started in the 2nd

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half of 2012, or at the beginning of 2013.

FP7 ICT Call 10 resulted in 2 IPs (FLEX, SUNRISE), 5 STREPs (IoTLab, FORGE, TRESCIMO, MOSAIC 2B, SMARTFIRE), 3 CSA projects (CI-FIRE, ECIAO, ceFIMS-CONNECT) and 2 FIRE-related projects from Coordinated Calls with Brazil (Rescuer) and Japan (FLEX-EU). TRESCIMO and MOSAIC 2B are joint projects with South Africa and SMARTFIRE is a joint project with South Korea.

The first FIRE Call in the ICT11-H2020 brought 5 new FIRE projects:
- FIESTA covers the integration of IoT platforms allowing for reuse of IoT data stream across multiple experimental application. FIESTA will also address the convergence of IoT with Cloud computing.
- MONROE addresses the measurement in terms of stability and performance of Mobile Broadband networks. Experiments will be run on operational 3G/4G Mobile Broadband networks.
- ORGANICITY develops an integrated experimentation-as-a-Service facility respecting ethical and privacy sensitivities providing a strong foundation for future sustainable cities. This project builds on top of the SmartSantander FIRE facilities.
- RAWFIE creates a federation of different network testbeds mixing experimentation in unmanned vehicular, aerial and maritime environments.
- WISHFUL addresses the spectrum in defining platforms for flexible and unified radio and network control.

The FIRE Portfolio – Current status

FIRE's current offering (October 2015), as depicted in the Figure 2, includes eleven facility projects:
CONFINE, Fed4FIRE, FESTIVAL (international IoT project), FIESTA, FELIX-EU, FLEX, MONROE, ORGANICITY, RAWFIE, SUNRISE and WiSHFUL. Additionally the CREW and the OneLab projects offer Open Access.

FIRE's other projects:
FORGE, IoT LAB, TRESCIMO, MOSAIC 2B, RESCUER and SMARTFIRE are specifically research-focused and experimentally-driven.

The Coordination and Support Action (CSA) projects and their main functions are:
AmpliFIRE: FIRE vision, strategy, dissemination; FIRE Board & Forum; and ceFIMS-CONNECT: European Future Internet Forum (FIF) Support.

Previous FIRE projects have laid the foundations for FIRE's portfolio/offering today and created a solid basis for the continuous development of the FIRE Facility and experimental research; supported by Coordination and Support Action (CSA) projects.
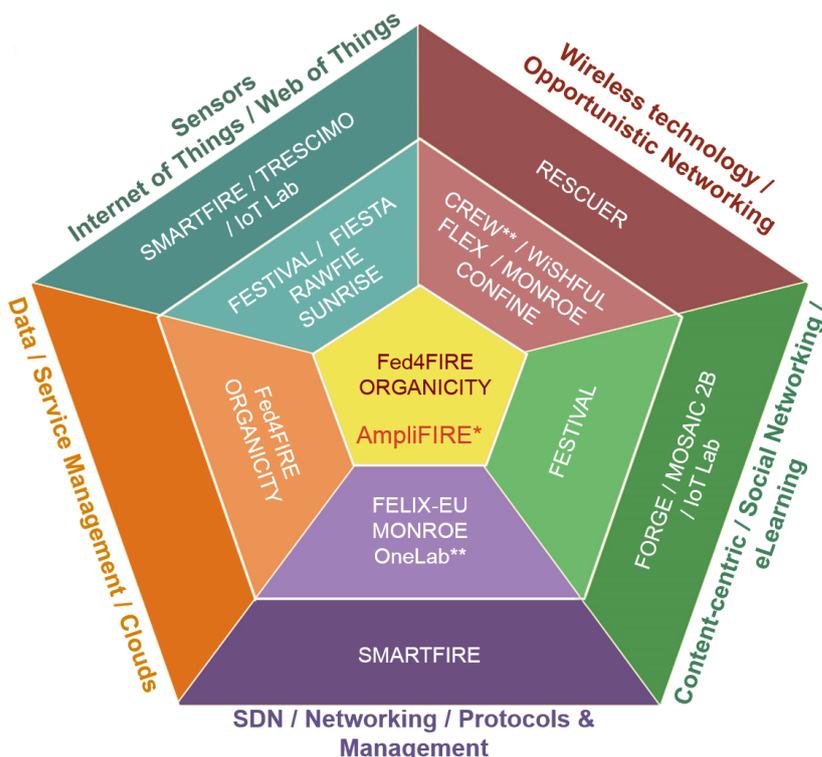

Figure 2 - FIRE projects and their technology areas

* Coordination & Support Action projects such as AmpliFIRE to support all FIRE projects.
** OneLab and CREW projects finished - Open Access continues.

More information on the FIRE website at: http://www.ict-fire.eu/home/fire-projects.html.