

**The Pan-European Laboratory  
Infrastructure Implementation  
*perspectives***

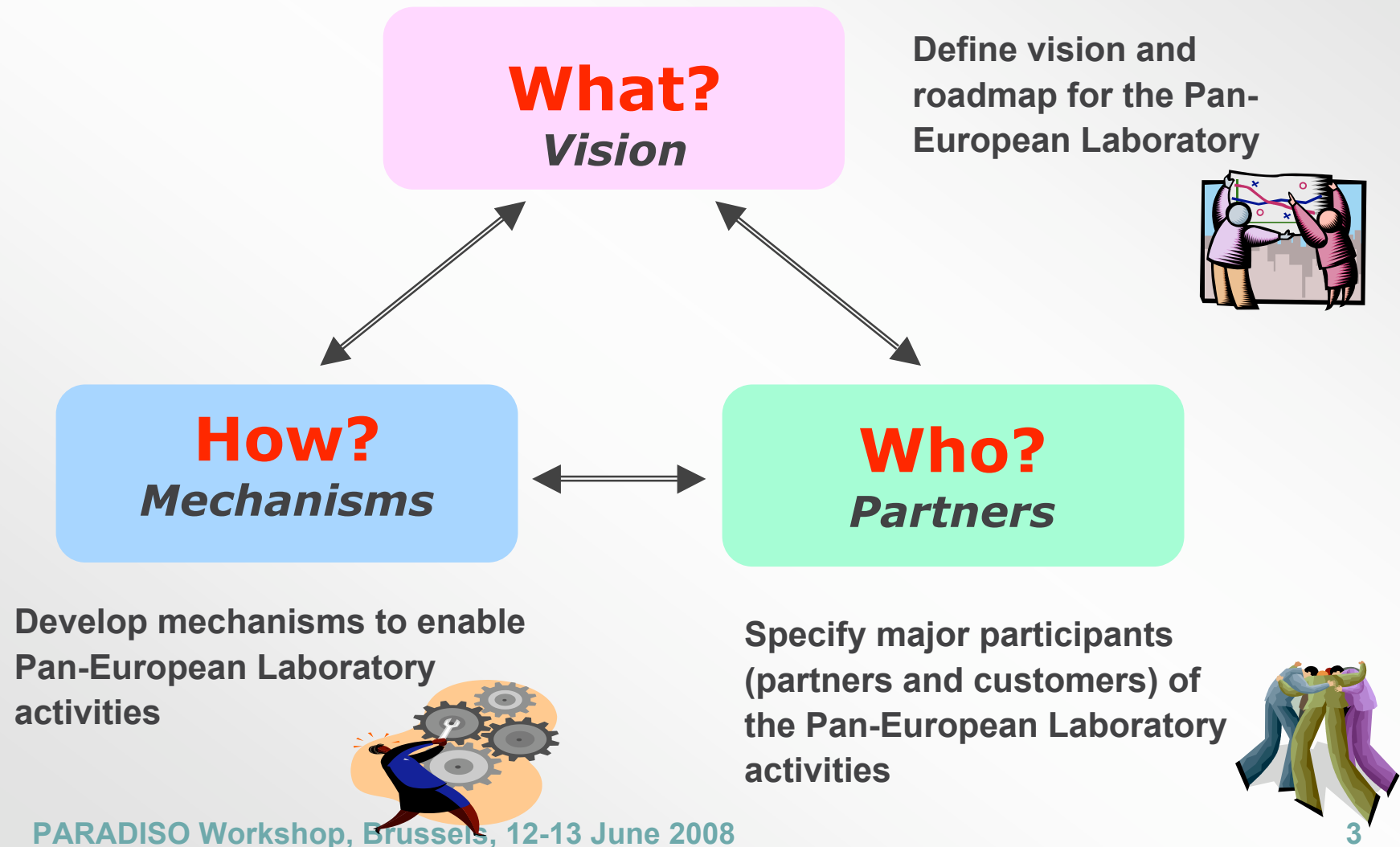
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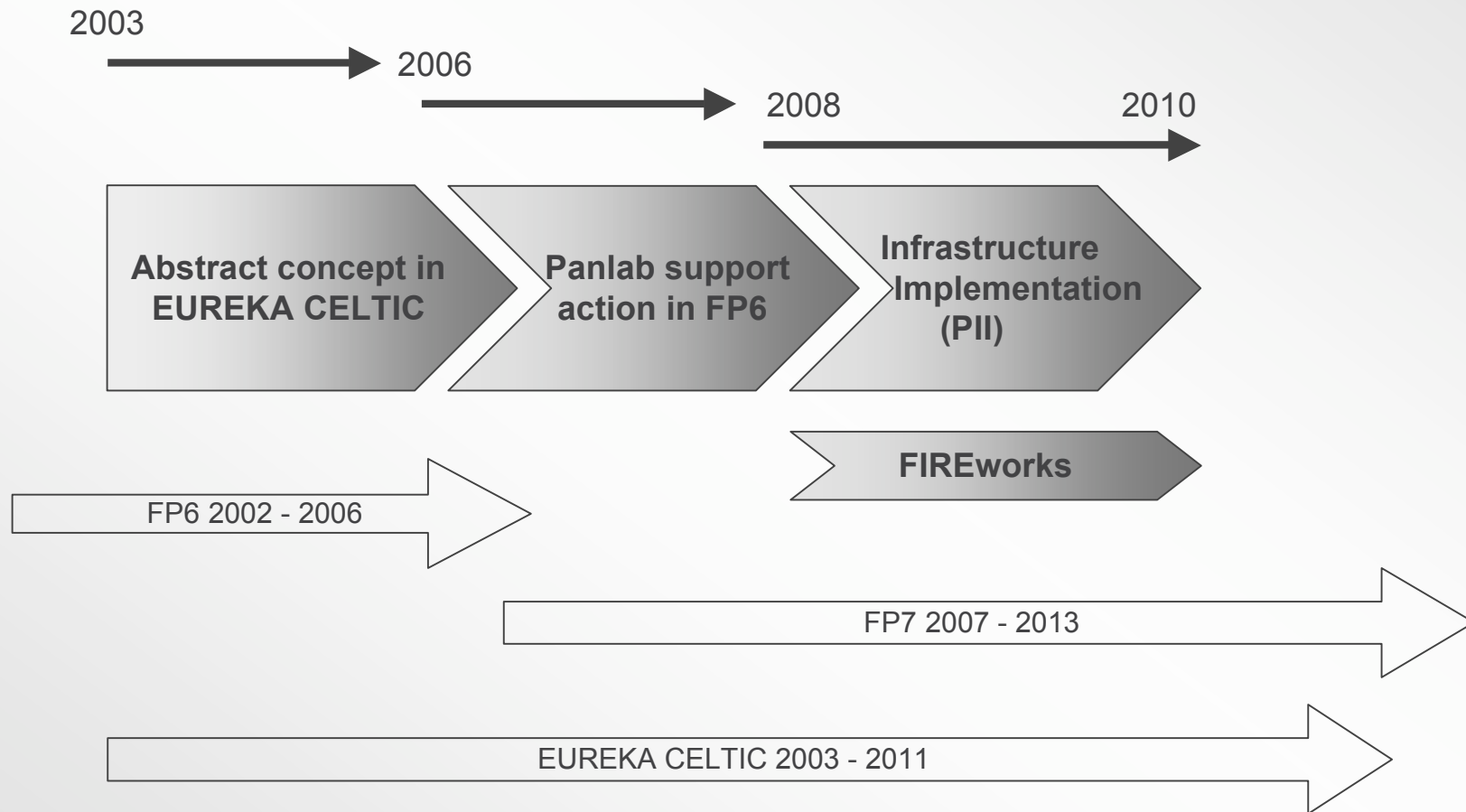
# Motivation

- ▶ Increasing demand from industry and research
  - ➔ Large-scale testing and experimentation
- ▶ Need for an interdisciplinary approach
  - ➔ Assess the user (consumer) role in the innovation chain
  - ➔ Socio-economic impact
- ▶ Fundamental need for large-scale testing
  - ➔ Beyond individual project testbeds
  - ➔ Large systems perspective
  - ➔ Including interoperability issues at all levels
  - ➔ Across layers

# Panlab Support Action in FP6



# Panlab evolution

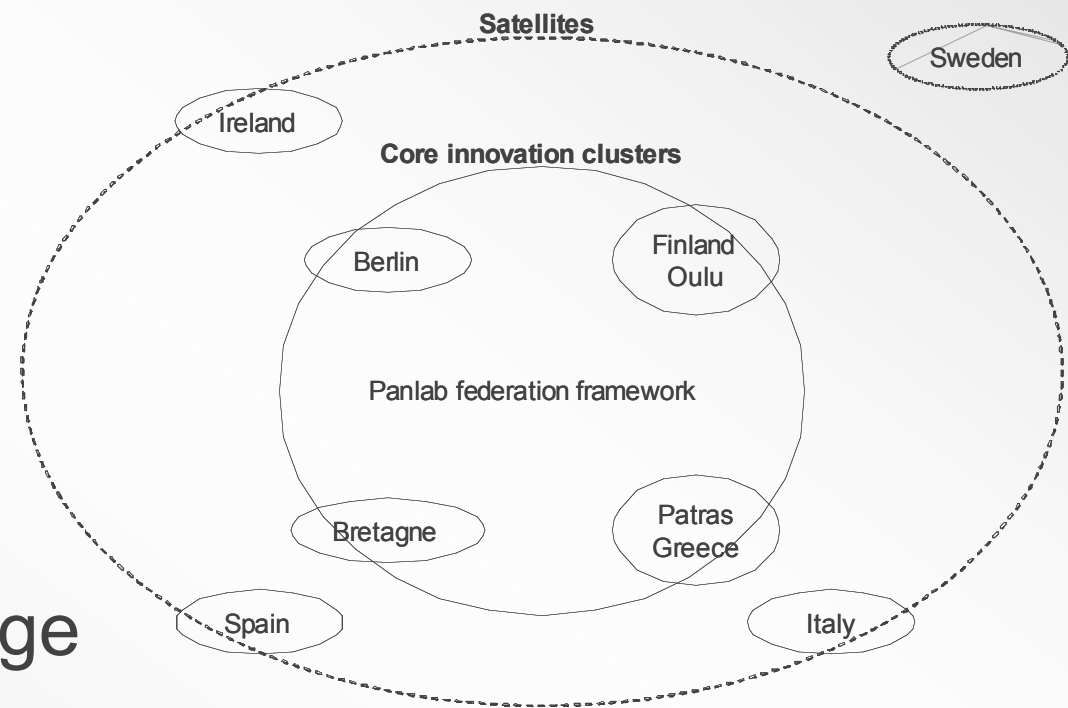


## PII general characteristics

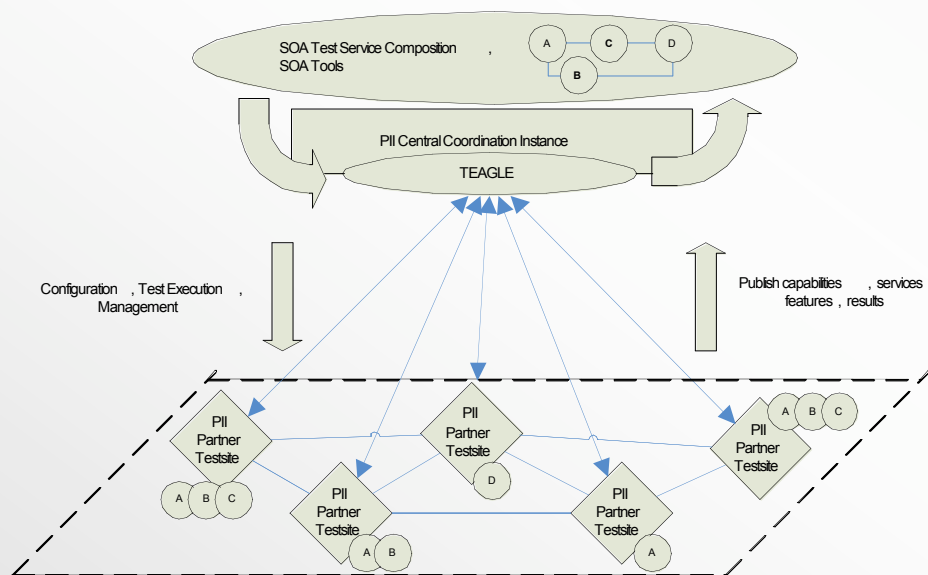
- ▶ Open federation as a design principle
- ▶ Sustainable research infrastructure
- ▶ End-user role and experience
- ▶ Societal and economic impact
- ▶ Openness and dynamicity

# PII principle openness

PII creates a testbed federation among regional innovation clusters in Europe to enable companies participating in these clusters to test their new products in a large scale



# PII principle dynamism



PII develops a tool to help the user locate and provision the necessary testing environment across a large pool of available testing resources

## (excerpt...) from PII objectives

- ▶ ...
- ▶ Establish trust across the federation
- ▶ Integrate the concept of User Driven Innovation
- ▶ Execute a techno-socio-economic study to assess the long-term sustainability of the federation model
- ▶ ...

# Governance induces trust

- ▶ Different stakeholders
- ▶ Different administrative domains
- ▶ Different expectations
  
- ▶ A governance model must address at least
  - ➔ Confidentiality and trust
  - ➔ Rights and obligations
  - ➔ Intellectual property rights
  - ➔ ...
- ▶ Governance is the foundation for a long-term sustainable federation

## User driven innovation (1)

- ▶ Cover as far as possible the whole value chain, including the end-user
- ▶ Early feedback by the end users for delivering useful services
- ▶ Empower the end users to create the services they need

## User driven innovation (2)

- ▶ User driven innovation means engaging the intended end-users in the whole process of inventing and creating something new and relevant
- ▶ Three groups of users:
  - ➔ The smallest, with 1 % of the population are the creators and using producers, who actively think of completely new solutions for problems
  - ➔ 9 % of the population, are the synthesisers or producing users, who actively new technology and take a role in improving it or thinking new ways of using it
  - ➔ The rest are consumers or everyday users who are not particularly eager to jump at new technology and use all products in the intended way, or in their own way thinking that it is the intended way

## User driven innovation (3)

- ▶ By allowing end-users access to the testbeds, it is possible to observe their behaviour and invite them to a dialogue on their needs, wishes and habits of use of technology
- ▶ UDI endeavours to include the user in the full innovation process, starting from brainstorming and conceptualisation and ending with the delivery of useful services
- ▶ Embrace the notion of “beta culture”, where unfinished concepts are pre-released, but if not undertaken “Fail fast, fail cheap!”

# Long term sustainability

- ▶ The federation aims to be economically self-sustainable (not necessarily profitable)
- ▶ Define an action-plan in cross-border interaction between involved stakeholders.
- ▶ Identify technical, economical and social key activities and factors judged by the stakeholders as important to create a sustainable federation
- ▶ Analyse the relation in, and between, these key activities and factors.
- ▶ Create incentives and pre-requisites to include the end-users as parts of the testing process and possibly as members of the federation

# Contact and further information

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The screenshot shows the Panlab website homepage. At the top, there is a navigation bar with tabs for Home, Objectives, Initiatives, Publications, Contact, and Community. Below this is a search bar and a breadcrumb trail indicating the user is on the Home page. The main content area is divided into three columns. The left column contains a sidebar with a 'Home' section listing links to News, Objectives, Publications, Initiatives, Events, Community, and Testbed Repository. Below this is a 'User login' section with fields for Username (containing 'tassos') and Password, and a 'Login' button. The middle column features an article titled 'Panlab Seminar - Testbed Federation in Europe' with a sub-heading 'Panlab Seminar - Testbed Federation in Europe'. The article text describes the seminar held on 13-14 May 2008 in Dinard, France, and mentions that presentations are available for download. Below the article is a 'Main Conclusions' section. The right column contains a 'Latest News' section with two entries: one dated 28 May 2008 titled 'Panlab Seminar Report - Testbed Federation in Europe' and another dated 15 April 2008 titled 'Approach to Technical Infrastructure published'. Each news entry includes a brief summary and a '[more]' link.



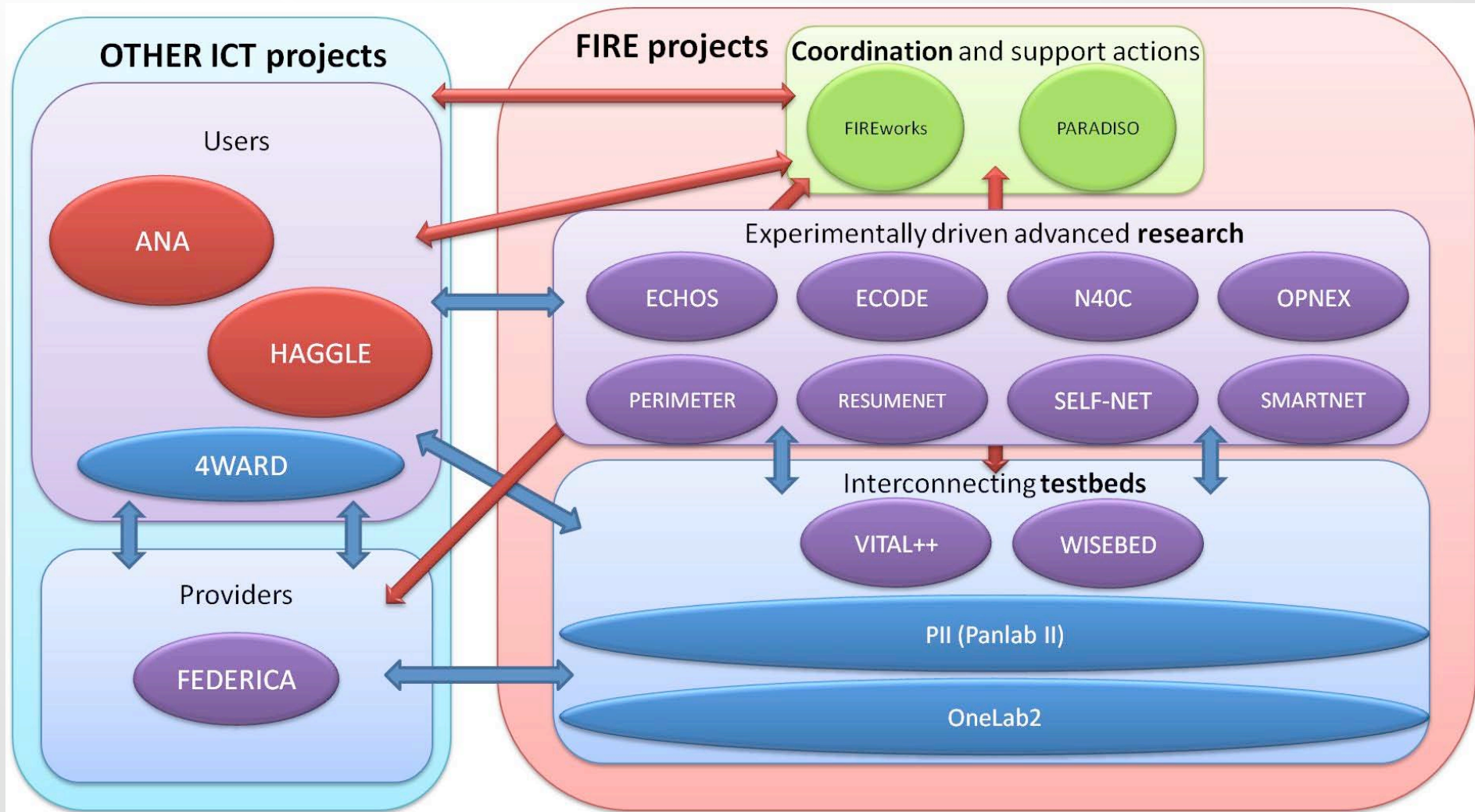
# FIRE Community

- ▶ FIREworks creates a sustainable forum for testbed stakeholders in the area of the future Internet, including networks and services
- ▶ FIRE Office serves the FIRE Community members in administrative issues, such as maintaining information on testbeds, enabling exchange of information within the Community, organising events, etc.



# FIRE Strategy

- ▶ Fireworks facilitates and stimulates the strategy development of two dimensions:
- ▶ What research, what type of testbeds?
  - ➔ Promoting experimentally-driven, visionary research on new paradigms and networking concepts and architectures for the future internet.
- ▶ How to federate?
  - ➔ 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 or future internet technologies.





## Contact and further information

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**OTHER ICT projects**

- Users: ANA, HAGGLE, 4WARD
- Providers: FEDERICA

**FIRE projects**

- Coordination and support actions: FIREworks, PARADISO
- Experimentally driven advanced research: ECHOS, ECODE, N40C, OPNEX, PERIMETER, RESUMNET, SELF-NET, SMARTNET
- Interconnecting testbeds: VITAL++, WISEBED
- PII (Panlab II)
- OnLab2

[www.ict-fireworks.eu](http://www.ict-fireworks.eu)