

Panlab – The PII Project

Pan-European Laboratory Infrastructure Implementation

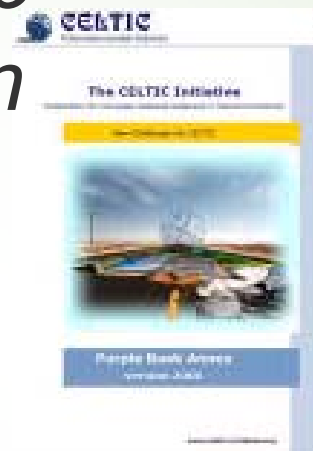
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Abstract concept

- ▶ *The Pan-European Laboratory is a concept that is being introduced to enable the trial and evaluation of service concepts, technologies, system solutions and business models to the point where the risks associated with launching of these as commercial products will be minimised*



CELTIC Purple book
www.celtic-initiative.org

Motivation for Pan-European Laboratory

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

Panlab Support Action in FP6



Define vision and roadmap for the Pan-European Laboratory



Develop mechanisms to enable Pan-European Laboratory activities



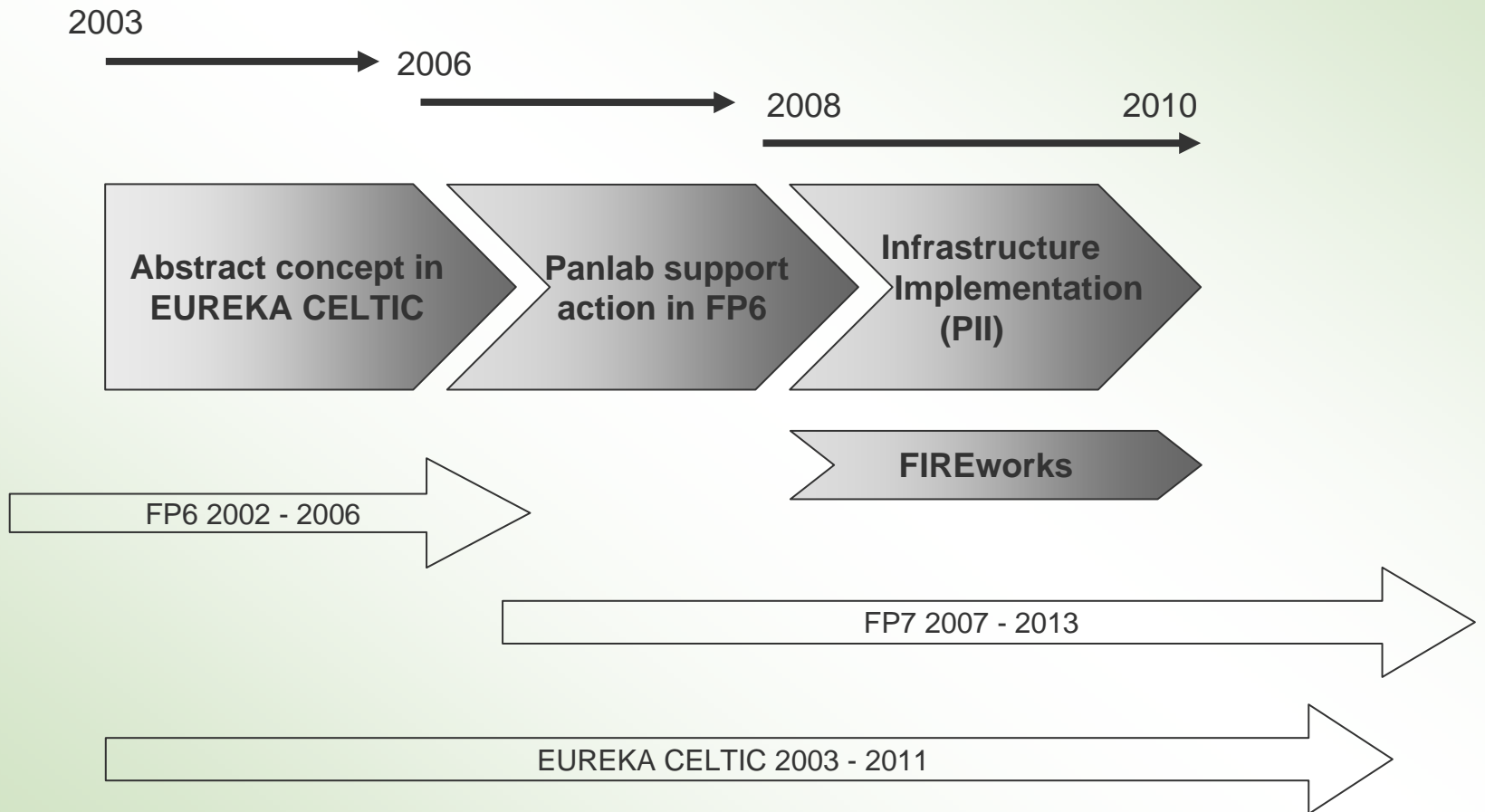
Specify major participants (partners and customers) of the Pan-European Laboratory activities



Panlab Framework

- ▶ Legal
 - Recommendation for a legal structure
- ▶ Approach to technical infrastructure
 - Describe and locate testing resources
 - Interconnect remote testing resources
 - Enable access in a uniform way
- ▶ Operations
 - Operational and administrative procedures

Panlab evolution



Federation of innovation clusters

- ▶ PII innovation clusters are ecosystems which function as incubators of innovation
- ▶ PII federates innovation clusters that exhibit the following common properties:
 - Regionally active – Thematically focused – Backed by large corporations
 - Bring together SMEs, large corporations, academic institutes and other organisations (e.g. early adopter users)
 - Operate testbeds as innovation supporting infrastructures
 - Organisational structure provided by an SME or an association
 - Looking for opportunities to exploit the European dimension

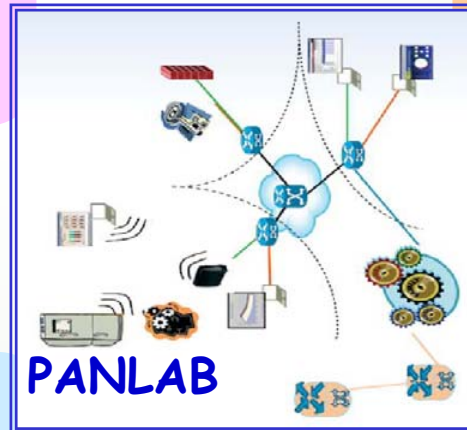
Federation requirements

Openness

for all European testbeds (and worldwide in the future)

Excellence

Technological and geographical diversity



Efficient management

Capability to control complex testing processes

Simple governance

Including clear rules for relationships between testbed providers and customers

Main principles of PII

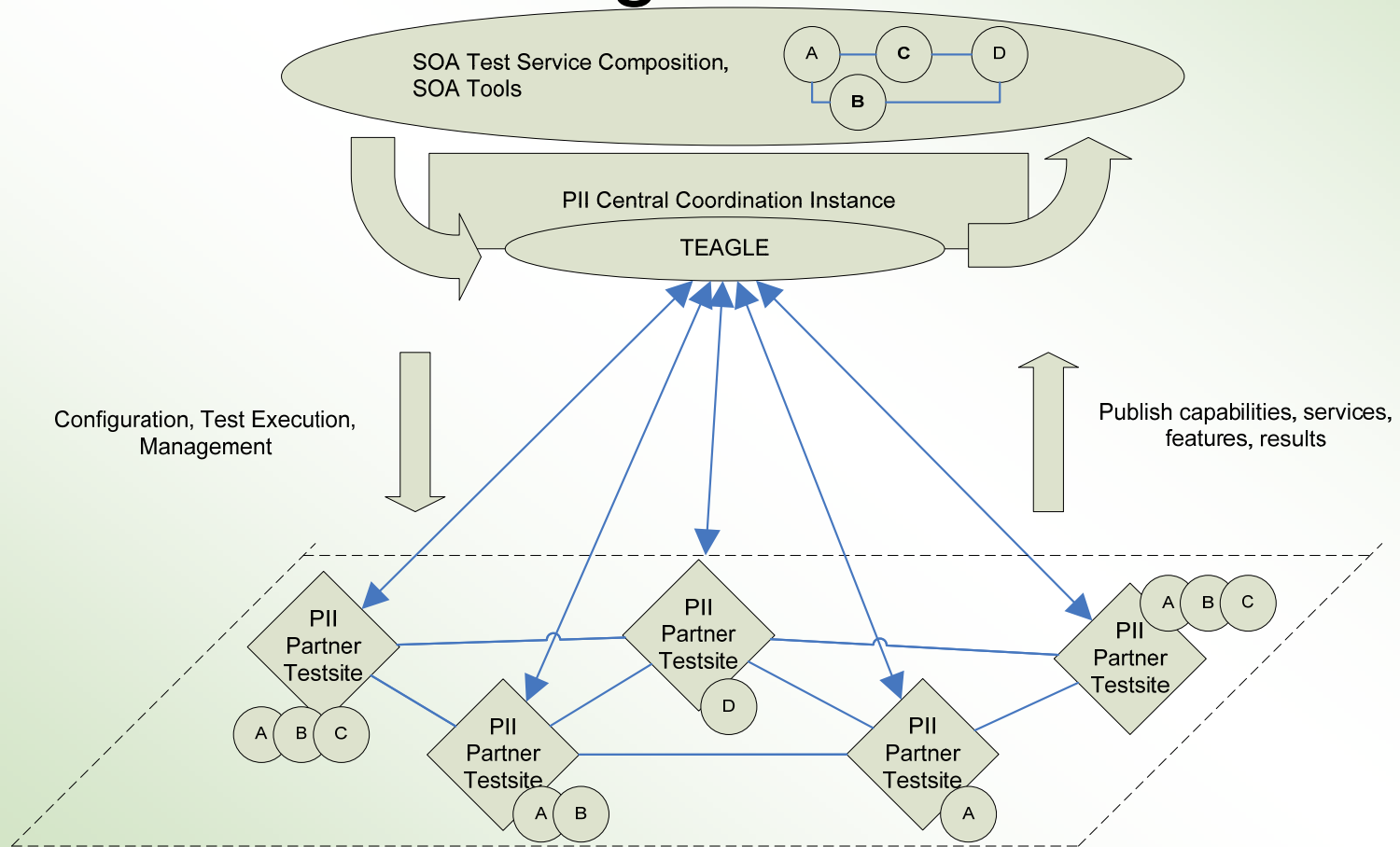
Principle: Openness

- ▶ PII addresses the need for large-scale testing facilities in the area of communications by implementing an infrastructure for federating testbeds. **The central objective of PII is to create a testbed federation among regional innovation clusters in Europe.** This will enable companies participating in these clusters to test new communication services and applications across Europe. The testbed federation is extendible, and currently includes four core innovation clusters and three satellite innovation clusters.

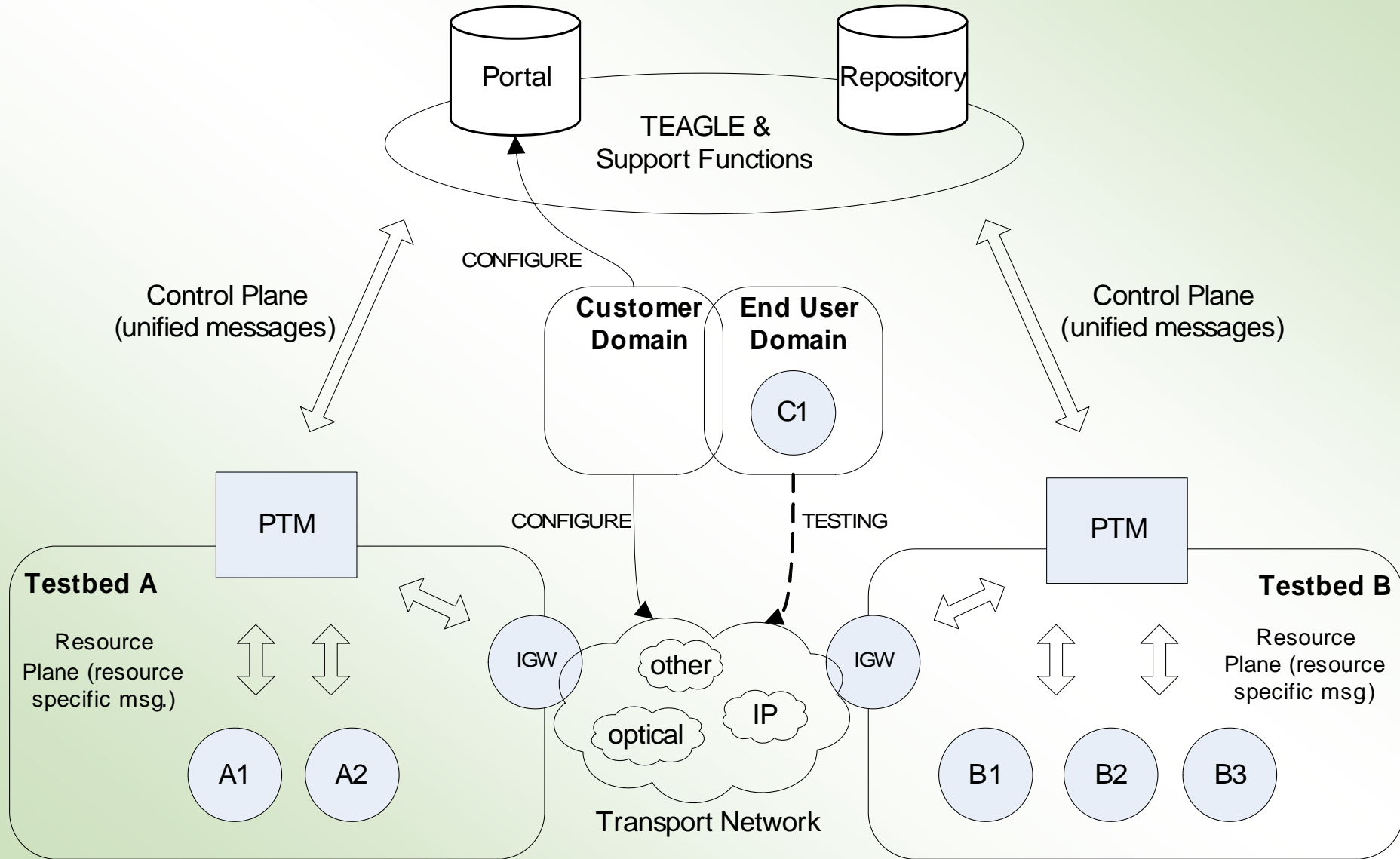
Principle: Dynamism

- ▶ PII will develop a web service, Teagle, that provides the means for a testing customer to express the testing needs and get feedback on where, how and when testing can take place. The web service enables finding a suitable site for one's testing needs. It does this through a database of partner test-beds. The objectives of Teagle in its fully operational form are to manage the complete set-up, necessary resource reservations and needed interconnections of any foreseen testing needs.

Discovering, composing, provisioning testing services



Overall PII Architecture



FIRE use cases

- ▶ In the context of the Future Internet Research and Experimentation initiative (FIRE)
- ▶ Illustrate how to use the testing and experimentation facility in the short/medium and long term
 - Provider point of view
- ▶ A template to describe use cases
 - Provided by the FIREworks support action
- ▶ Example use cases
 - e.g. PII provided use cases for concurrent testing and certification process

Template for use cases (I)

- ▶ Targeted users
 - provide information about the actors and stakeholders
 - primary actors, supporting actors, stakeholders and their interests
- ▶ Description
 - Interfacing with the (testing) user
 - Platform setup
 - Pre-conditions or assumptions, Triggers, Steps, Non-functional requirements
 - Results acquisition
 - Post-conditions expressing success, failure, minimal guarantees

Template for use cases (II)

▶ **Expected impact**

- Research on the future Internet (FIRE, GENI...)
- The future ICT and telecommunications market
- The evolution of a facility in the form of an independent entity