



NEERI Helsinki meeting

**Utilizing the full Potential of Research
Infrastructures for Strengthening the ERA**

Sept 2009 – Hervé PERO, European Commission



Basics of the development of the European Research Area

The ERA concept combines:

- a European "internal market" for research, where researchers, technology and knowledge freely circulate;
- an effective European-level coordination of national and regional research activities, programmes and policies;
- initiatives implemented and funded jointly.




World-class research infrastructures

Key element of the Lund declaration adopted on 8 July 09

- Essential for Europe's researchers to stay at the forefront of research development
- Key component of Europe's competitiveness in "frontier" research

Key Challenges:

- *Overcoming fragmentation in Europe*
- *Coping with increasing costs / complexity*
- *Improving efficiency of (and access to) research infrastructures services, incl. e-infrastructures*



RIs of pan-European interest require professional management throughout their life-cycle (from preparation to decommissioning).

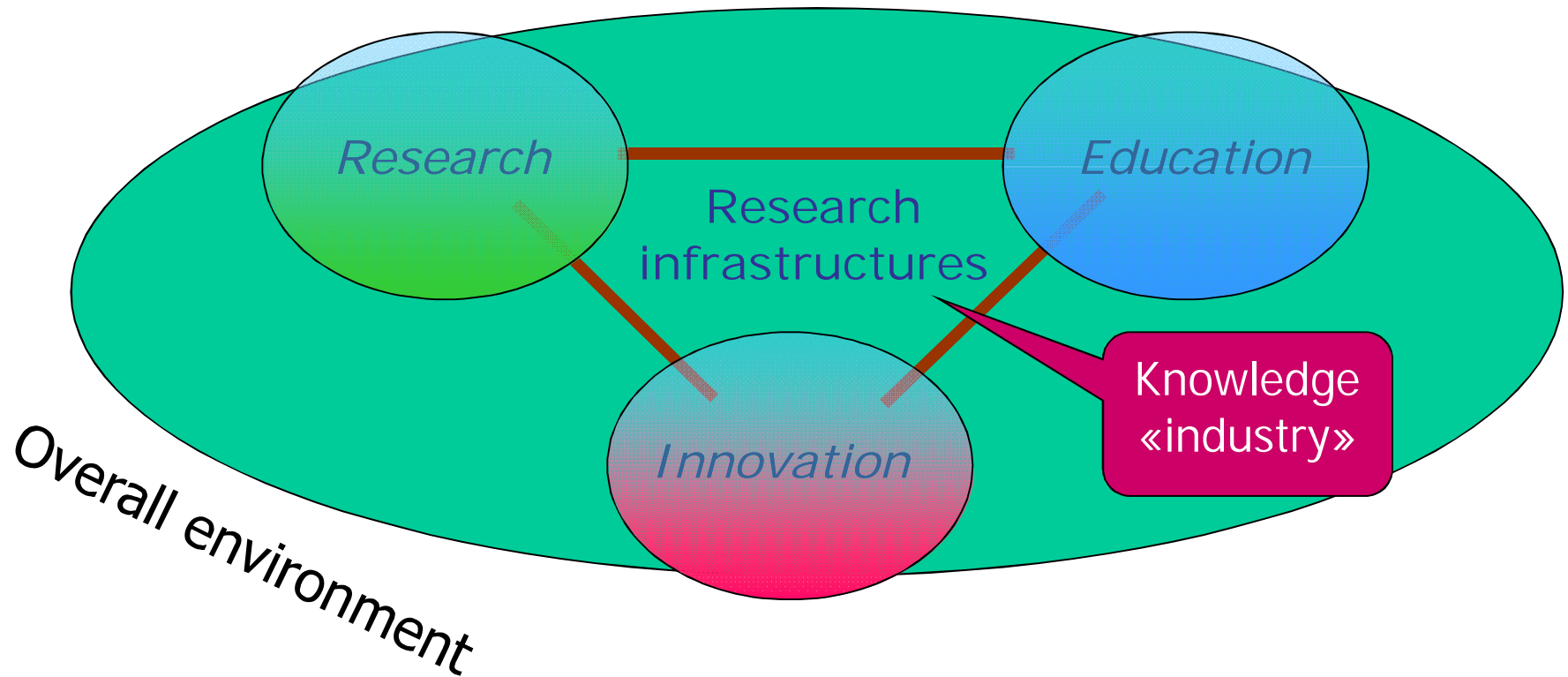
This entails a wide range of activities as RIs not only provide access to highly sophisticated equipment; they also train people, participate in technology development, and may be responsible for establishing standard operation procedures

Extract of the 2007 ERA expert group





Efficiency of Research Infrastructures at the centre of the knowledge triangle relate to a favourable environment





New Research Infrastructures a new Community legal framework

- Recent entry into force of ERIC (Aug 09)
- Based on art. 171 EC Treaty, that allows the Community to set up European entities necessary for efficient execution of Community RTD programmes
- The regulation provides an easy-to-use legal tool:
 - ... having legal personality recognized in all MS
 - ... having a spirit of a truly European venture
 - ... being flexible enough (one size doesn't fit all)
 - ... with some privileges / exemptions



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Community research

e-Infrastructures interconnecting communities



Digital Research Data

- Due to technological advances, volume and complexity of the digital research data collected or produced by Research Infrastructures is - since some years - sharply increasing
- An improved access to research data allows better exploitation, thus protecting and enhancing investment in research
- We need to define coherent and harmonised policies/practises/standards for whole data lifecycle.

Data management

1) It is at the core of a Research Infrastructure project

- avoiding “re-inventing the wheel”
- adoption of common standards and practises
- ex-ante evaluation of the different options

2) It is a key issue within the implementation phase of the research infrastructure

- needing specific human resources & procedures
- needed to evaluate capacity & performance
- linked with research-innovation issues

3) *It is key for efficient relations between and with other organisations (users, clients, suppliers, int'l partners)*

- related with access and research services
- related with other users (e.g. policy makers)
- related with suppliers
- related with other knowledge-based org.
- ... in particular at international level

4) *It is key for a sustainable use and preservation of the acquired knowledge*

- preservation of data and information
- advanced services for virtual collections
- communication issues (internet in particular)



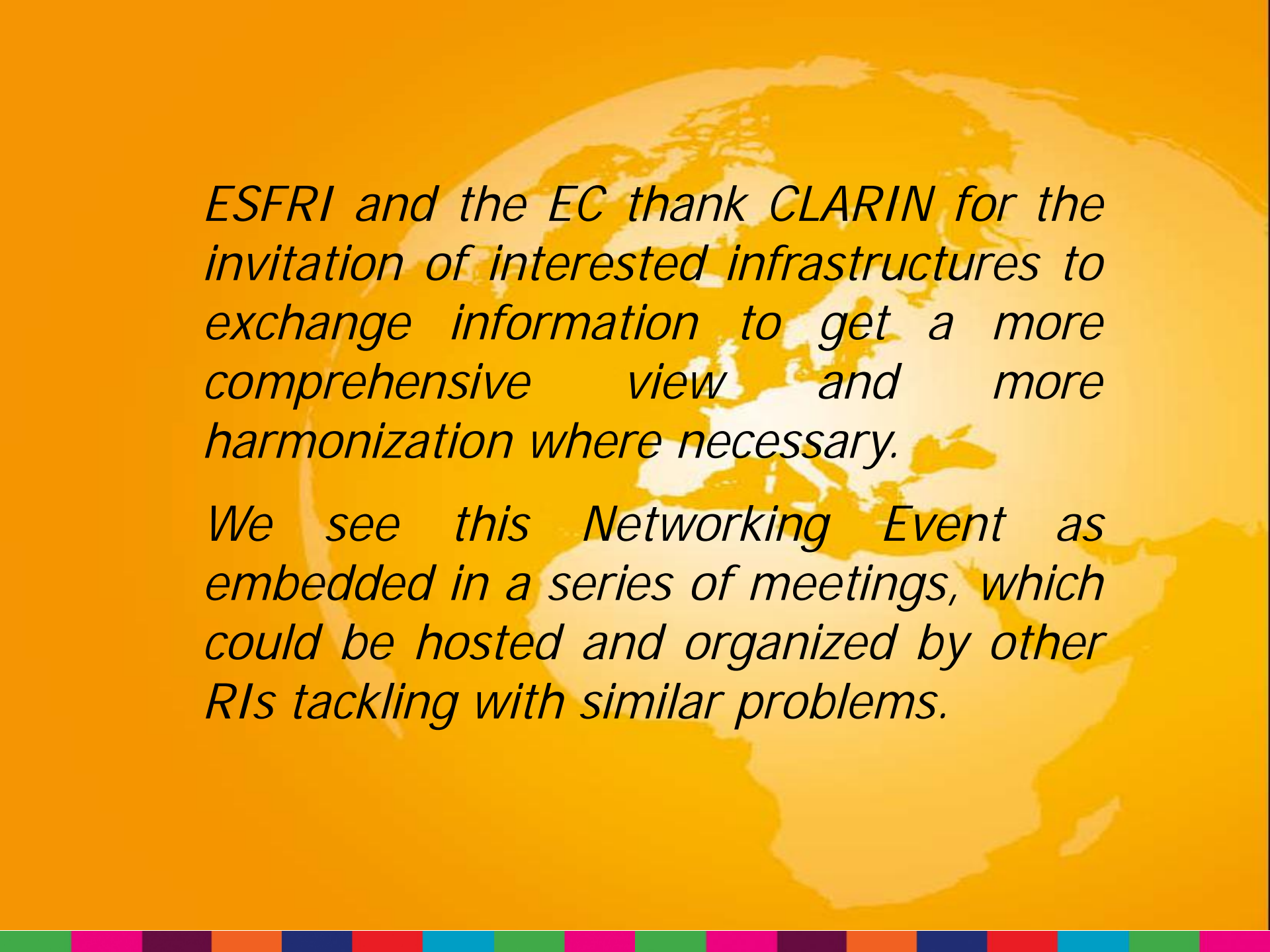
"CLARIN (as many other infrastructures) needs to implement a service providing federation that will make contracts with the emerging national identity federations. Despite some activities by horizontal organizations we miss a more comprehensive picture which will be essential for moving to a more coherent European eInfrastructure scenario"

Clarín announcement, summer 2009

CLARIN

Common Language Resources and Technology Infrastructure





ESFRI and the EC thank CLARIN for the invitation of interested infrastructures to exchange information to get a more comprehensive view and more harmonization where necessary.

We see this Networking Event as embedded in a series of meetings, which could be hosted and organized by other RIs tackling with similar problems.



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This is even more true if we want an 'eco-system' of Research Infrastructures within ERA

- a) Large (single-sited) facilities
- b) Distributed European Facilities
- c) Network of national facilities

Based on

- a) a consistent roadmap
from the European stakeholders
- b) Links with universities & schools
- c) Network of industrial suppliers / users



We need a more research and
innovation intensive, integrated
and attractive
European Research Area
Excellent Research Attracts



CLARIN should be more than just a portal...
How should CLARIN help developing this eco-system?

ESFRI and the EC welcome this conference where most of the selected topics are relevant for other research infrastructures, dealing with efficient services to researchers :

- *approaches to overcome interoperability problems*
- *metadata frameworks to register resources and services and to make them visible to researchers*
- *technologies for access, authentication, authorization, grids, web services etc.*
- *nature and relevance of persistent identifiers*
- *long term preservation; virtual collections*
- *how to handle legal / ethical / trust issues*



Europe faces two main challenges...

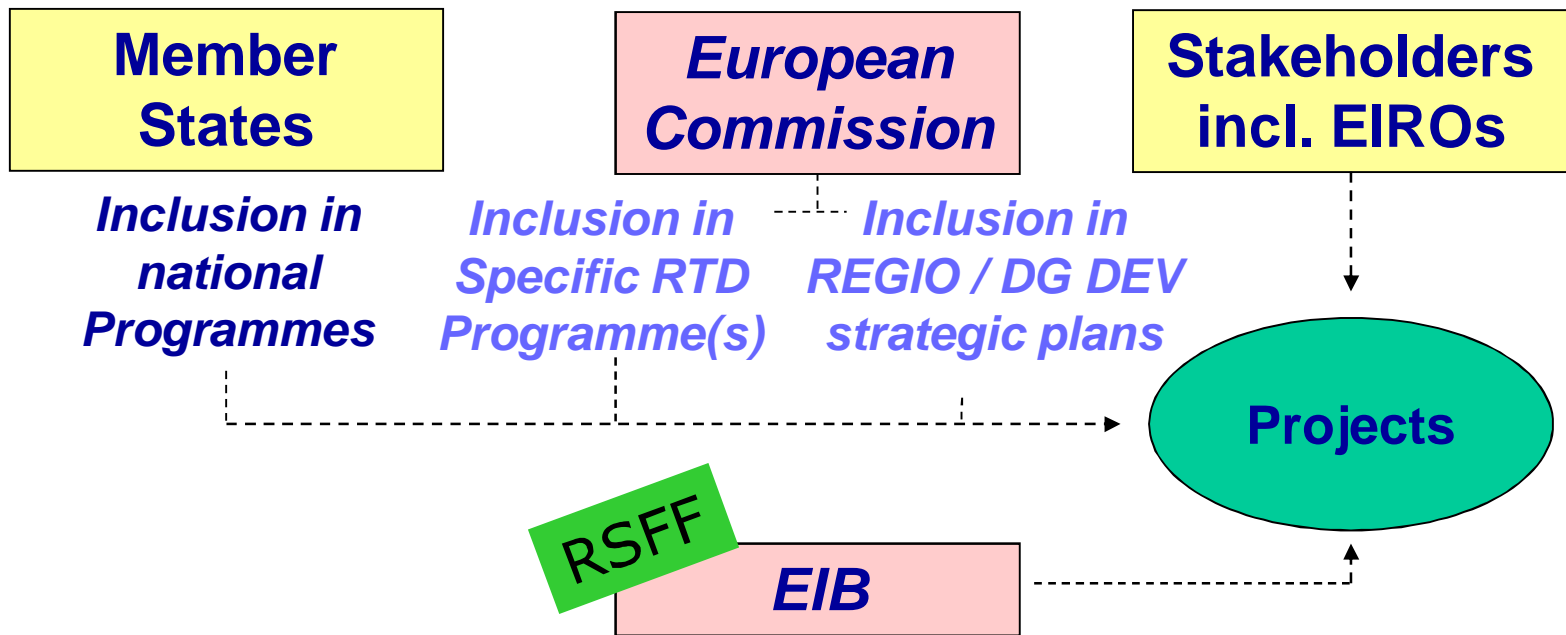
- Political willingness to develop RIs of pan-European (and international) interest...
- Critical mass (scale & scope) to raise attractiveness of ERA...



... but there is NO « one size fits all » solution



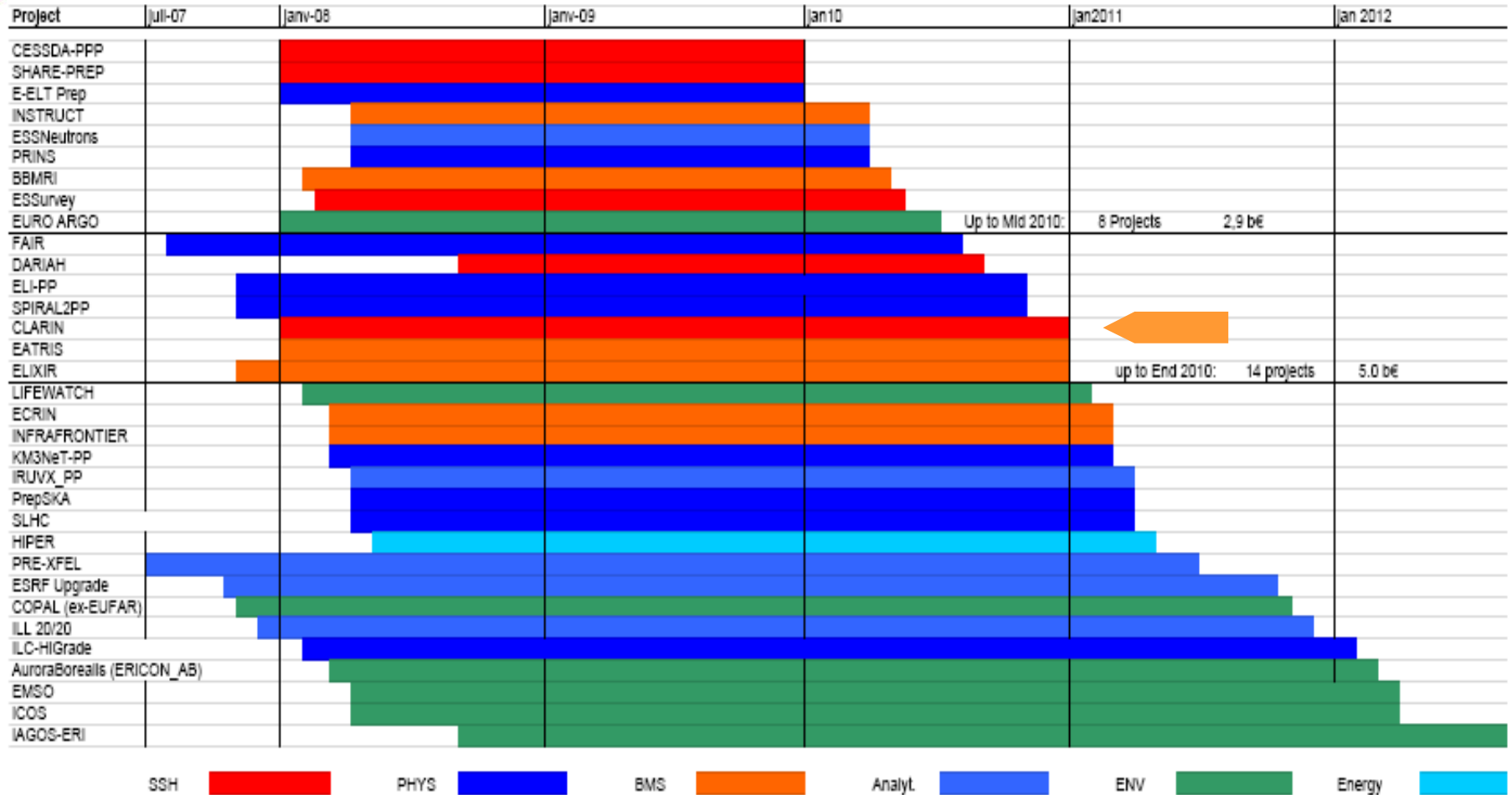
1) The Preparatory Phase help mainly facilitating pooling of resources for new research infrastructures



the e-infrastructure dimension is present in all projects



New Research Infrastructures current Preparatory phases





2) Integrating Activity also help the development of critical mass, distributed facilities all over Europe

- Collaboration of existing research infrastructures
- Three types of obligatory activities
 - ➔ *Networking Activities*
 - ➔ *Trans-national Access and/or Service Activities*
 - ➔ *Joint Research Activities*

EC funds ~250 M€/y
2,5% of EU needs
About 300 RIs
supported under FP



In all these actions, for new or existing RIs, the e-infrastructures pave the way towards an efficient research 'eco-system'

- a) Large facilities
- b) Distributed European Facilities
- c) Regional Partner Facilities
- d) Network of national facilities
- e) Linked with universities & schools
- f) Network of industrial suppliers / users



Without the joint involvement of the scientific communities and the actors on e-infrastructures, the EU will not succeed in developing an efficient management of this 'eco-system'



Vision: the renaissance of Europe

- A fully integrated, consistent, efficient ecosystem of Research Infrastructures, serving researchers in all S&T fields
- Based on European wide e-infrastructure
- Research Infrastructures as knowledge industry for the knowledge society and source of attraction for world scientists



Vision: the storm

- Other regions (world) have become much more attractive than Europe for researchers
- European research actions are loosing its scientific and technological relevance
- In addition, knowledge generated for years by European researchers is being exploited through the WWW by others



Another way

- may be more proactive -
- is to present key factors affecting the vision, e.g.

- Capacity (or not) to develop a *favorable environment* for EU research (not just national)
- Capacity (or not) to tackle *grand challenges* and to face research internationalization
- Capacity (or not) to strengthen relations with *education* and with *local users*
- Capacity (or not) to *work together* on increasingly complex problems / *co-creating* solutions

A stronger integrated approach needed



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CLARIN, a clear example of an EU research infrastructure fully integrating the EU e-infrastructures approaches

