



Sincrotrone Trieste

Social, Educational & Environmental Aspects

Laura Bibi Palatini
bibi.palatini@elettra.eu

- Not for profit Company
- Multidisciplinary international centre of excellence, specialized in generating high quality synchrotron and free-electron laser light and in applying it in materials science as a service for external users.
- 2 light sources: Elettra storage ring and new Fermi Fel.



4 Shareholders

Area Science Park

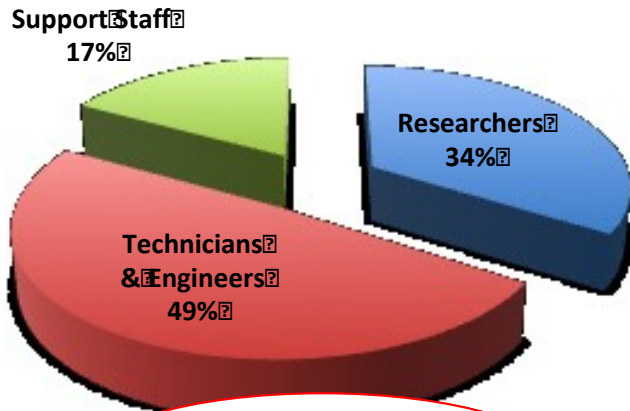
FVG Region

IOM-CNR

Invitalia

Its mission is to promote cultural, social and economic growth through:

- ✓ Basic and applied research;
- ✓ Technical and scientific training;
- ✓ Transfer of technology and know-how.



Total staff 355 (2012)

Training on the job:

Teamwork + International environment +
Internal Training programmes

Networking, Collaboration, Mobility

➤ Added values in Social capital

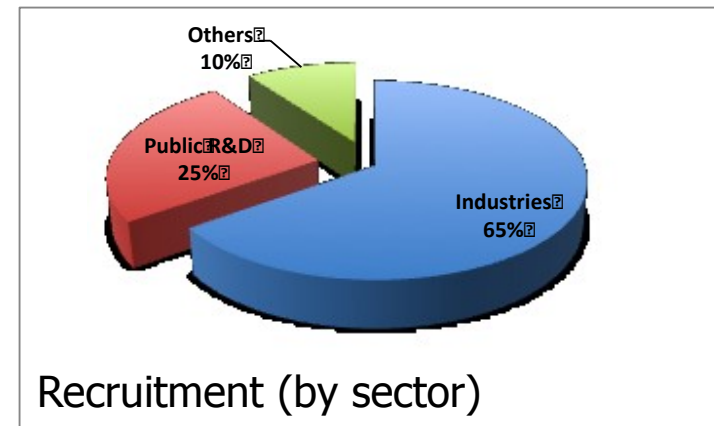
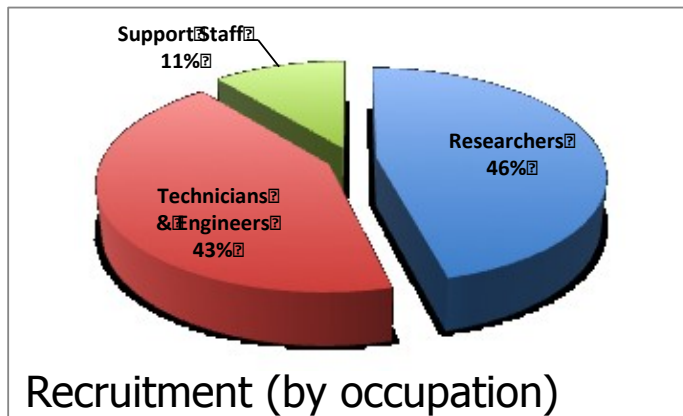
Workshops and conferences

(2006-2011: 50 conferences and workshops (co-)organised; about 50 seminars/year)

- ✓ After working at Elettra, most of researchers, engineers and technical staff find work places in other facilities & RIs or industries
- 96% researchers & 83% of engineers + ICT people + technical staff in industries, other facilities & RIs in Italy, Europe, Usa
- 70% administration & support staff work in Italy

data 2008-2012

- Recruitment for Fermi: 80 fixed-term full-time job (+ internal staff)
- ✓ Highly skilled: 76% of recruited staff with tertiary education
- ✓ Recruitment 65% from companies, 25% from public research
- ✓ Support staff and technicians mostly regional and national, researchers mostly international



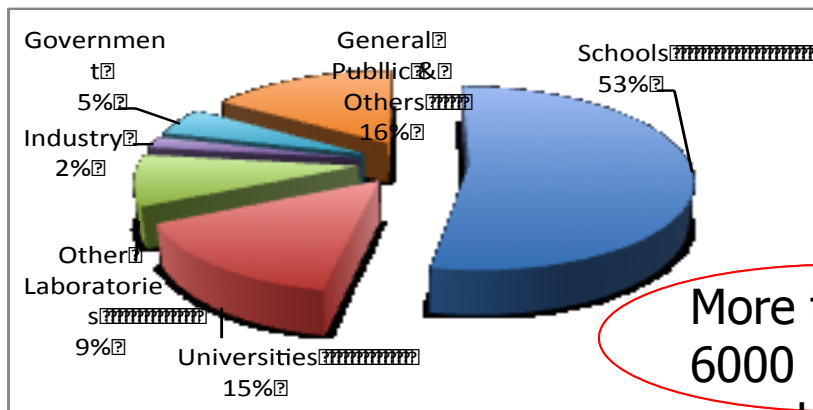
Educational, Cultural & Socioeconomical impact

Students from Italy and abroad involved every year in several activities

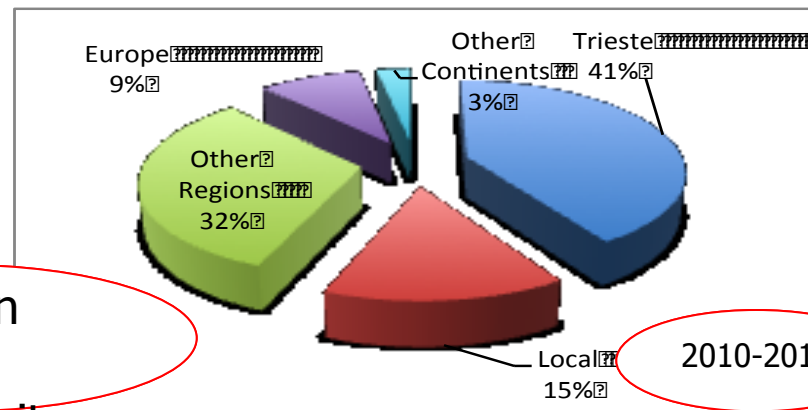
- PhD & Master degrees: 40
- Technical-Scientific training for postgraduated: 48
- Training for upper secondary school & undergraduated students: 42

2010-2011

✓ Visitors distribution: type of institution



✓ Geographical breakdown

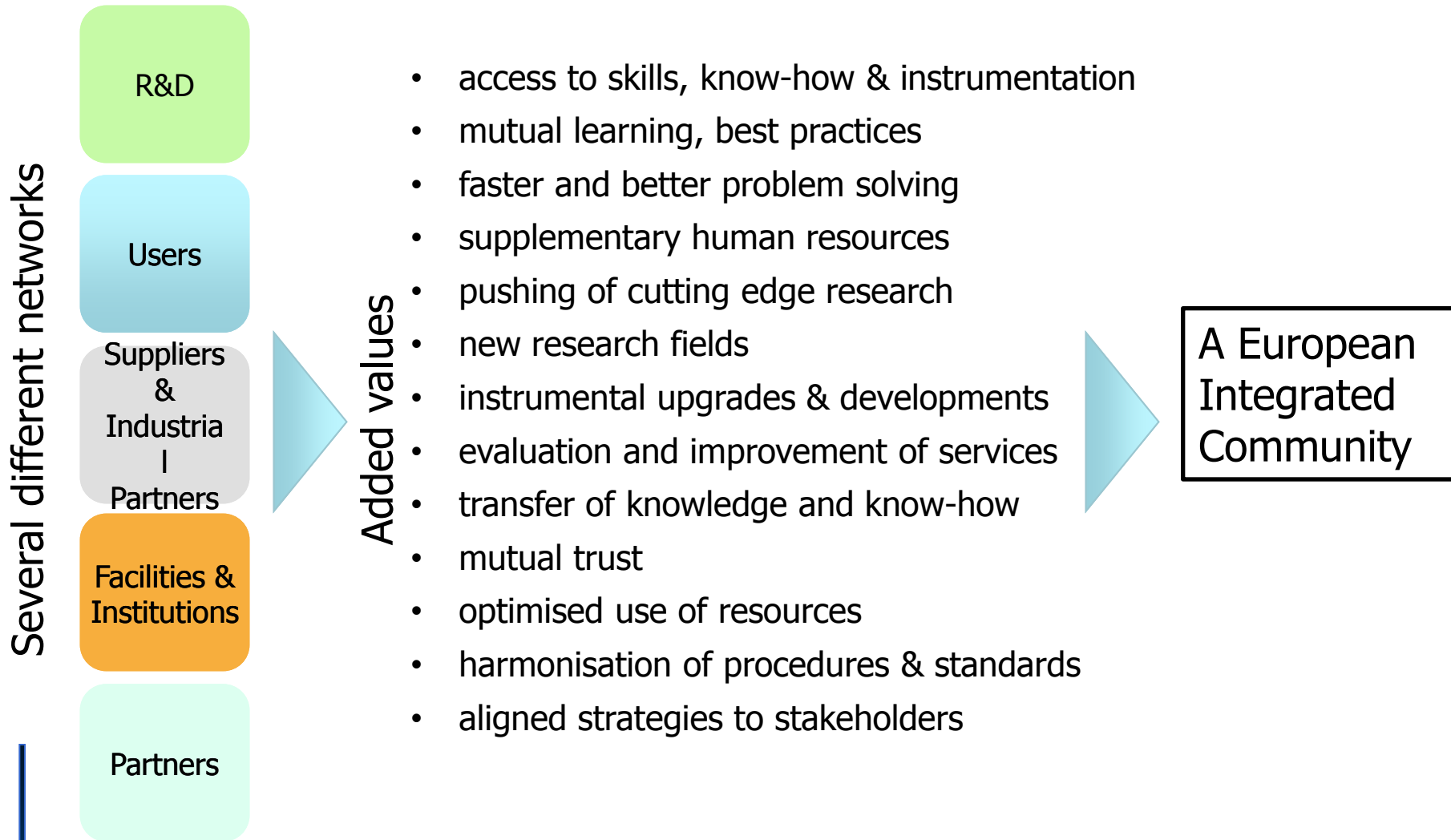


More than
6000

yearly visitors

2010-2011

- Main catalyser of development of AREA Science Park (largest Technology Research Park in Italy; +60 Industrial Companies; 1500 people total staff)
- Development of local infrastructures: hotels, restaurants, shops



R&D

- ✓ Coordinator in the development of:
 - TWINMIC: European multipurpose transportable X-ray microscopy
 - EUFELE: European FEL at Elettra
 - TIMER: time-resolved spectroscopy of nano-scale dynamics in condensed matter physics at Fermi (EU Research Council Starting Grant)

Users

- ✓ About 1000 users yearly, from 37 countries (24 EU + 13 extraEU) (*2011)
20% of users interact with industries; (70% total access: "free open access").
- ✓ Industrial Liaison Office (2004)> products and services to private users (up to 30% beamtime for industrial proprietary research)
- ✓ Construction of Fermi: development of new devices and technologies

Suppliers & Industrial Partners

- ✓ ILO: development of instruments, components, and technologies with high-tech industrial partners (pre-procurement)

Facilities & Institutions

- ✓ Several projects dedicated to coordination, support, and training activities
- ✓ Coordination of I3 Projects– Integrated Infrastructure Initiative: IA-SFS (Integrating Activity on Synchrotron & FELs - FP6) selected as one of the 40 FP6 “success stories”, and ELISA (European Light Sources Activities of Synchrotrons & FELs - FP7)
- ✓ RAMIRI: training and networking programme for people involved in managing international RIs

Partners

- ✓ Long experience: beamlines & research groups of Austria and Czech Republic + INFN-CNR
- ✓ India, ICTP-UNESCO.
- ✓ Attraction of new partners
- ✓ Italy-Slovenia cross-border cooperations

Strategic plan 2011-2012:

- ✓ Define and implement reduction of impact on the environment
- ✓ Optimize the use of energy□

✓ **Tri-generation plant** to reduce environmental impact of Fermi and CO₂ emission

- - 3000 tonnes CO₂ per year
- Combined production of electric power, heating and cooling from methane
- Doubling the efficiency of energy vs a conventional plant
- New in Italy for a Research Laboratory, one of the first examples in Europe
- A second plant soon operating



Environmental Aspects: Ecological impact

- Fermi: Natural environment of particular interest
- Richness of species and presence of absolutely rare types of high conservational interest (mammals, amphibians and reptiles, birds).



- Gradual transformation of the area into a semi-urban park
- Measures to reconstruct the relevant habitats
- Ecological impact study by external experts: preserve the trees in the construction zone, small lakes created onsite in order to protect some kinds of amphibians.



Thank you!