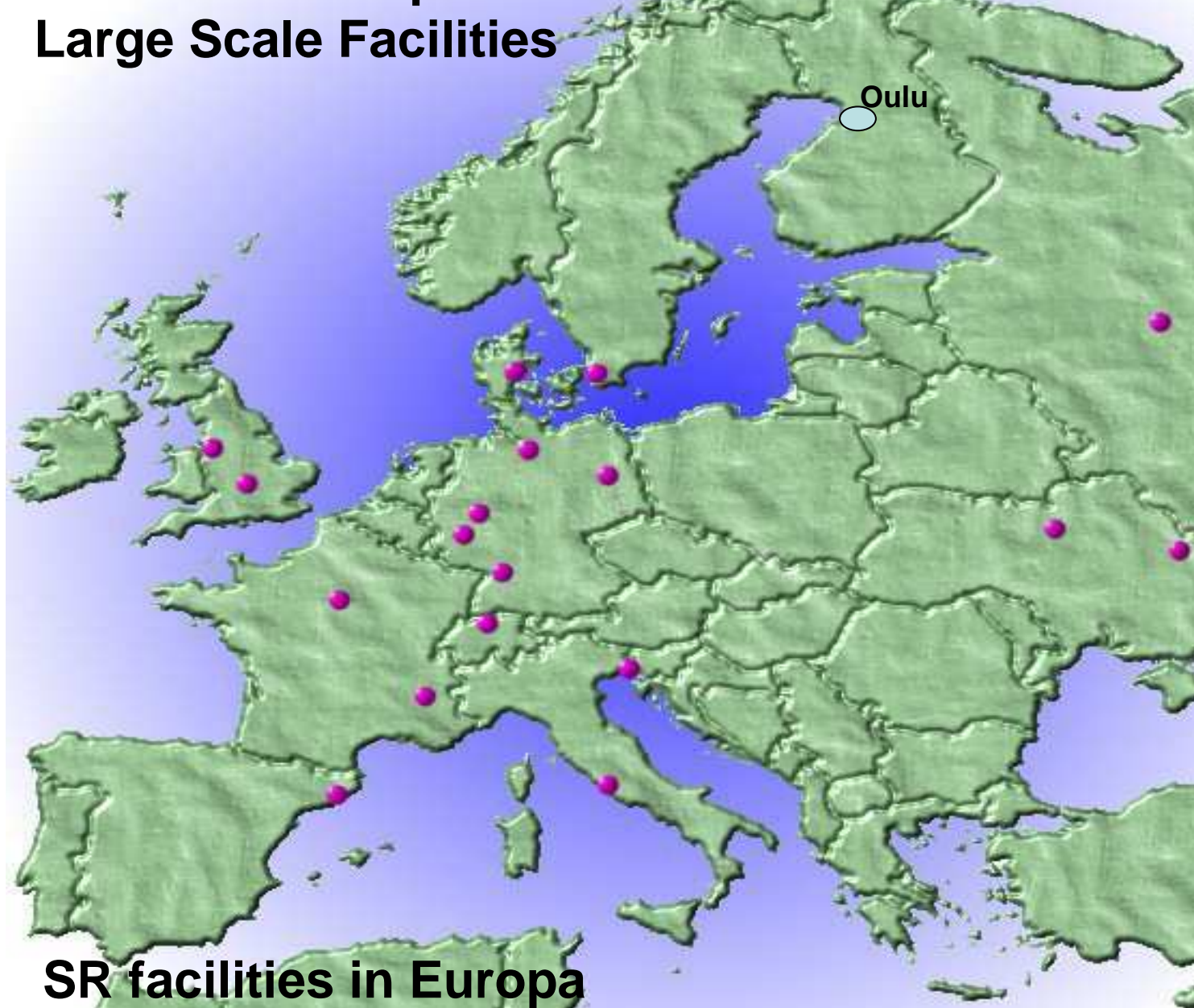


How can European countries which have no facilities get access

Helena Aksela
Department of Physics
University of Oulu
Finland

Access to European Research Infrastructures: Large Scale Facilities



T H E E U R O P E A N L I G H T S O U R C E

Members	Contribution
France	27,5
Germany	25,5
Italy	15
UK	14
Spain	4
Benesync	6
Nordsync	4

Associate members

Austria	1
Israel	1
Poland	1
Portugal	1
Czech	0,47
Hungary	0,2

The ESRF >
LEADING SCIENCE FOR EUROPE



A joint European facility

- access via membership
- if your country is not a member – no access



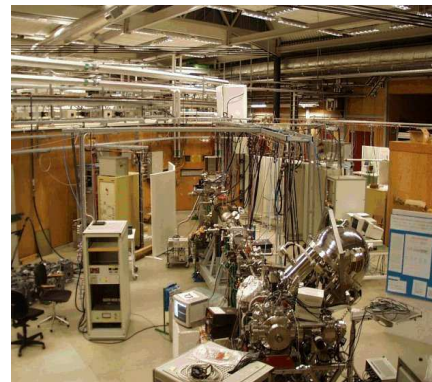
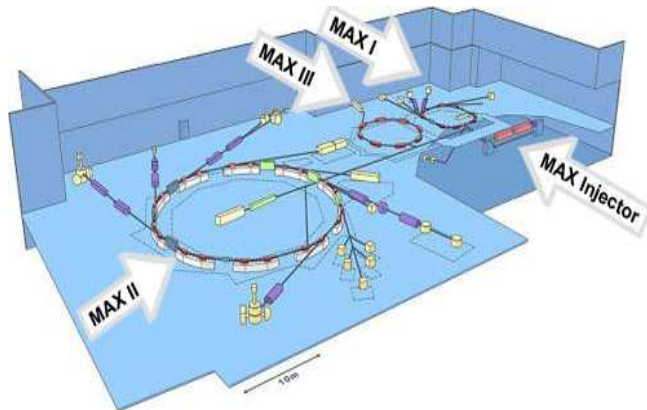


A national facility

- in home country
 - easy access
- somewhere else
 - access via contract/
 - open access policy
 - doors open for nonmembers of an European facility

Access via contract with a national facility, an example:

- Contract between MAX-lab and a Finnish consortium setted to contribute in developing and using the MAX beamlines
- Both parties benefit: manpower for MAX-lab; training and reasearch opportunities to Finland which has no facility
 - not easy to convince the decision makers in Finland, extra **travel support** is needed (➡ open access funding)



Open access to national IR:s

Strategy - Funding

- The Open Access projects (like I3-SFS and ELISA) support
 - the transnational use of national facilities
 - the development of instrumentation
 - networking
 - best projects



very wellcome from the point of
countries which have no facilities

I3 :: Integrating Activity on Synchrotron & Free Electron Laser Science (IA-SFS)

I3
IA-SFS



I3 :: European Light Sources Activities (ELISA)

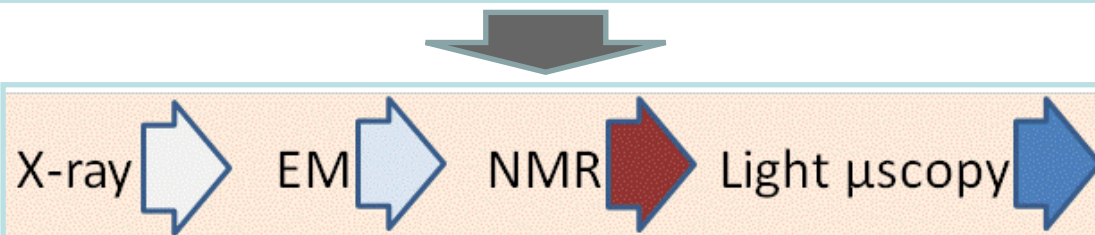


Transnational access is crucial for researchers from countries which have no facilities

An Integrated Structural Biology Infrastructure for Europe

INSTRUCT www.instruct-fp7.eu

Protein production in prokaryotic/eukaryotic systems




Will provide pan-European access to high-end technology for scientific objectives that need an integrated approach, using several platforms (e.g. protein production, X-ray, EM, modelling)

- no or low cost at the point of access
 - training programs
- emphasis on seamless integration of techniques providing information in different resolution ranges and timescales.
- **INSTRUCT is seen by the EC as the vehicle for coordinating / leading the development of structural biology in Europe.**



Evaluation of applications → selection of best projects

- **Transparent**, based on published evaluation criteria
 - scientific quality and innovativeness of the plan
 - competence of applicant/research team
 - feasibility of the plan
 - significance of the project for researcher training
 - Applicants should be notified of the decision
- 
- Tighter co-operation between IRs in developing decision criteria would be needed

Profit from open access

- National facilities benefit from manpower/ideas
- Open competition improves the quality of research
- Networking helps
 - to speed the development
 - to complete each others
 - to avoid waste of resources
- Prevents brain immigration from Europe
 - especially from countries which have no facilities
- Guarantees maximal profit of human and material resources in Europe

Worldwide competition is real
How to keep EU IRs attractive?



SR facilities in the world

The Department of Energy's synchrotron radiation sources



The Message we* bring:

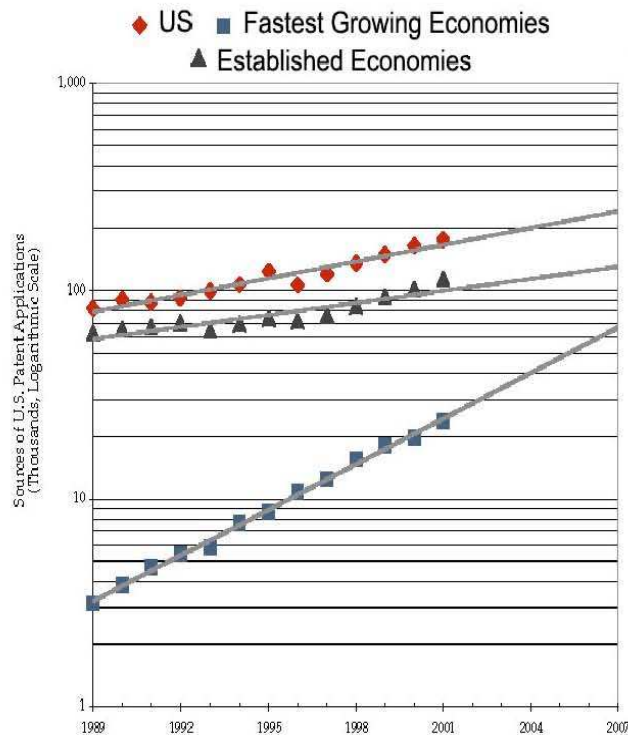
- The Synchrotron User community
- Why are Synchrotrons unusually important facilities?
- Examples of Synchrotron Science
- The Value to the USA of fundamental science
- Losing our assets: what budget trends will mean



*Prepared by the chairs of the four users organizations.

Results of underfunding, especially when other nations are accelerating comparable efforts, are erosion in leadership fields, and loss of innovative ability and competitiveness

Patent Applications: Fastest Growing Economies gaining on US rapidly



Source: National Science Foundation, *Science and Engineering Indicators 2004*, Appendix Table 6-11.
 Compiled by the APS Office of Public Affairs

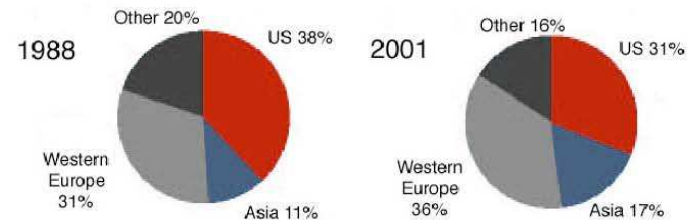
Established Economies:

Canada, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, U.K.

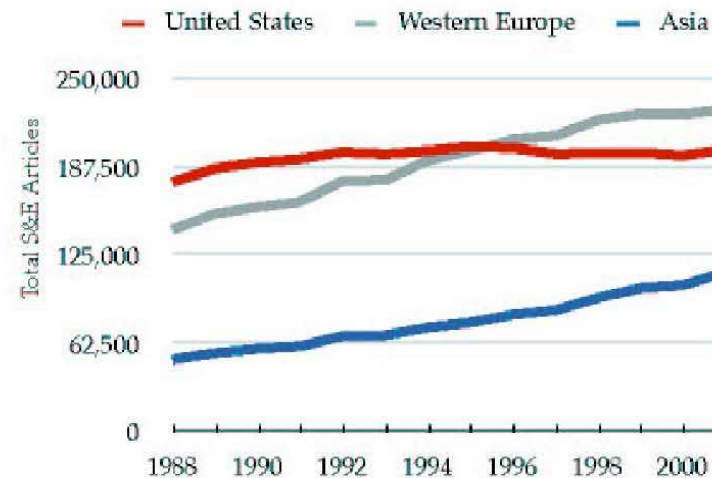
Fastest Growing Economies:

China, Hong Kong, India, Ireland, Israel, Singapore, S. Korea, Taiwan

S&E article distribution



S&E Articles: US Already passed by Western Europe with Asia rapidly closing



Source: National Science Foundation, *Science and Engineering Indicators 2004*, Appendix Table 5-35.
 Compiled by the APS Office of Public Affairs.

To keep the future leadership in Europe

- **How to improve?**
 - long-lasting open access funding
 - more support to develop and to maintain the IR's
- **For future success:**
 - education of new user groups
 - networking with experienced groups
 - post docs at facilities
 - education of next generation
 - joint degree programs
 - practical training of master and PhD students
- **Access of countries which have no facilities**
 - investment to the future