

Role of Research Infrastructures for Industry: The Case of the European Synchrotron Radiation Facility

**Ed Mitchell,
Head of Business Development
Honorary Professor Keele University**

The ESRF Business Development Office

Responsible for all industrial activities

- Industrial access to beamlines, facilities, and expertise
- Technology transfer through licensing, patents, spin-off
- Manufacturing
- FP7 and national funding opportunities with industry

About 4 FTE + other resources as we can grab!

2 x structural biology Industry Scientists

2 x imaging Industry Scientists

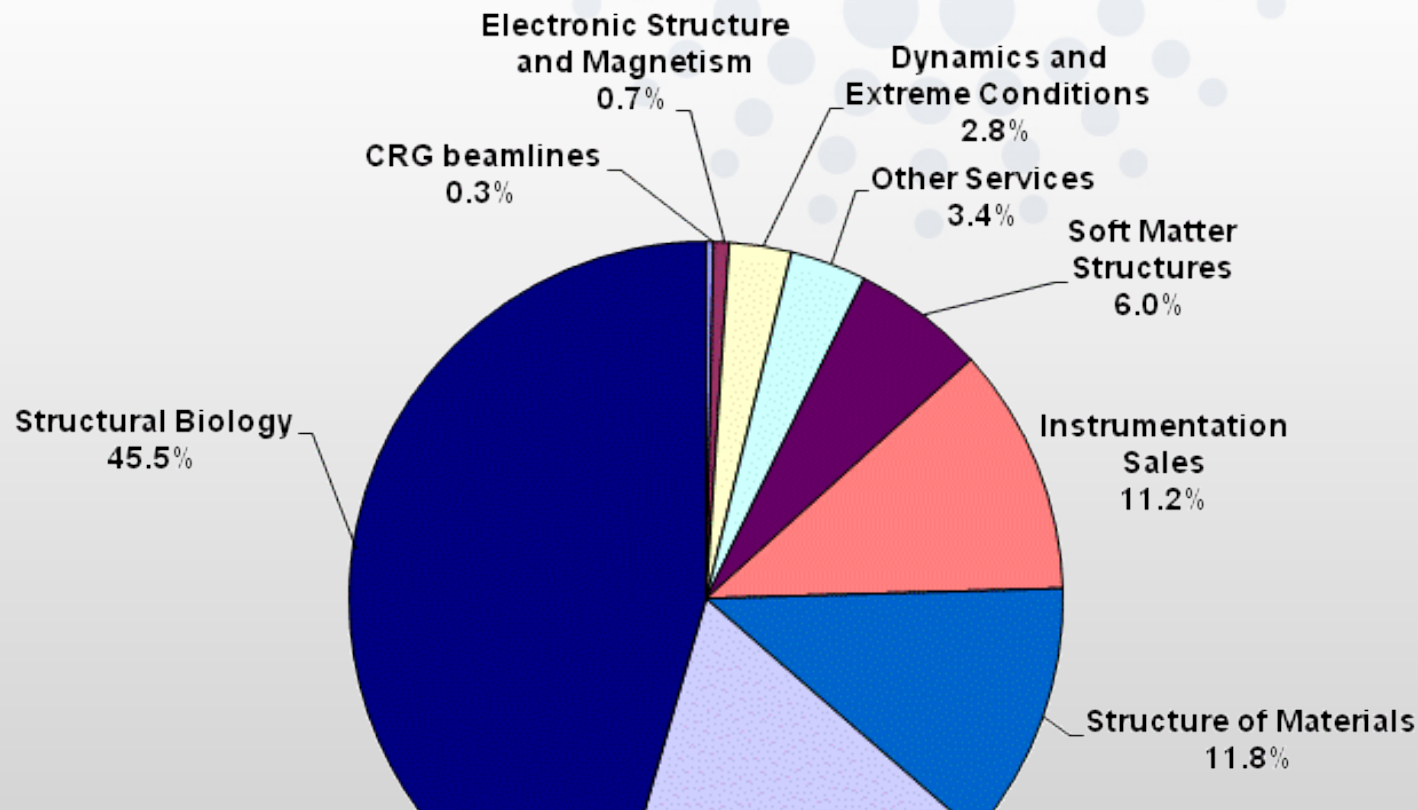
1 x soft matter Scientist

1 x instrumentation Engineer

1 x Administrative Coordinator

1 x Head of Business Development

Industry as a User



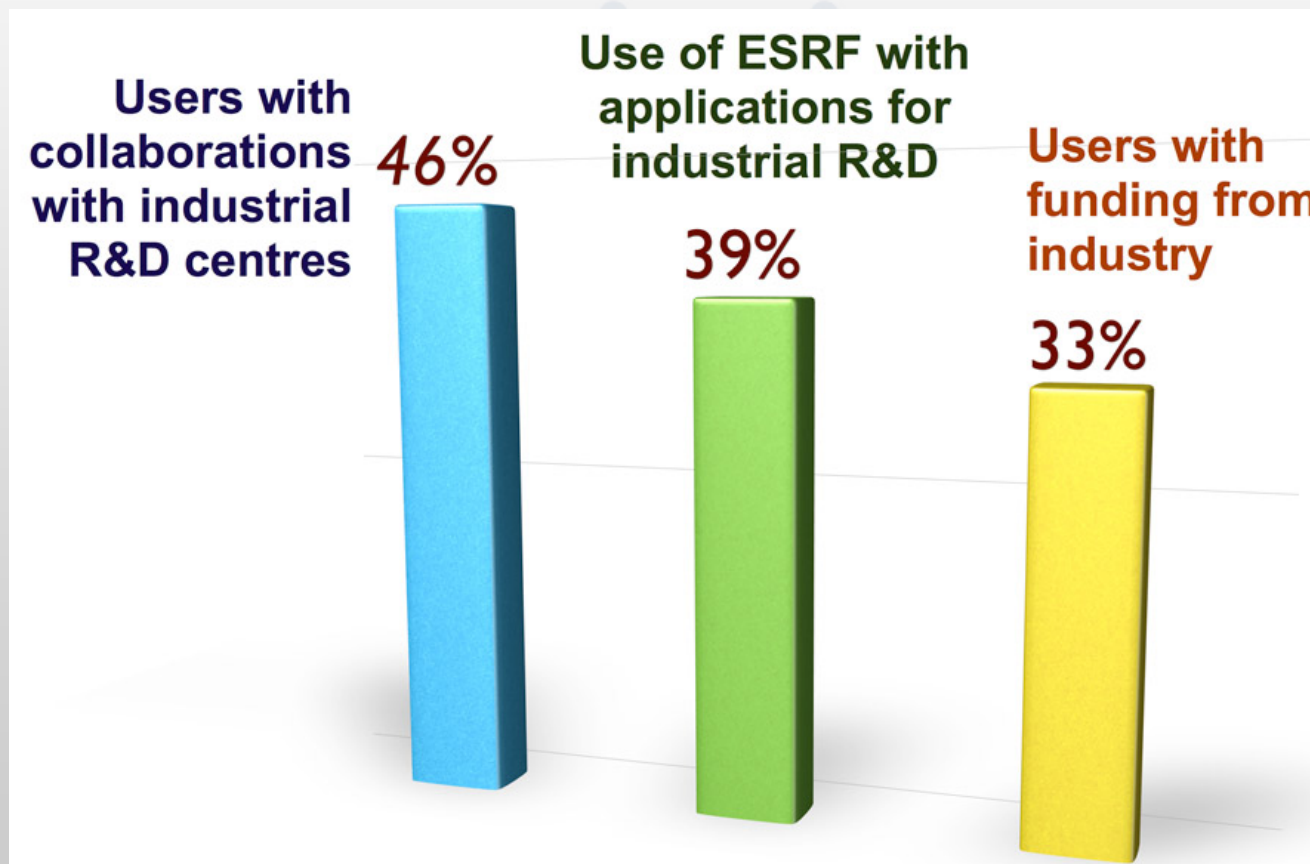
**Generated
>25MEuros**

**Used to
fund staff
positions,
purchase
new
equipment,
fund
beamlines**

- 2011: 2.2MEuros income generated
- Proprietary beam access represents about 2% of beam time capacity; but about 10% of allocatable income

Industry via the Peer Review Programme

All Peer Review experiment IP belongs to the users.







FP7 funded European synchrotron and FEL network

- Coordinated by ELETTRA

Networking Activity “European light sources for industrial innovation”

- Budget of 100kEuros, ESRF WP coordinator

Industry as a user of light sources

- Industrial Advisory Board and workshops with industry throughout Europe

Industry as a technology transfer partner

- Linking with JRA of Calipso on Advanced Detectors



ELEC.

“Large-scale facilities offer unequalled performance to characterise advanced nano- and micro-electronics”



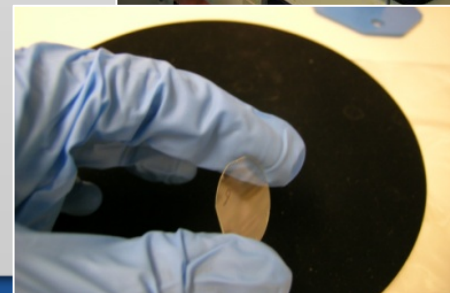
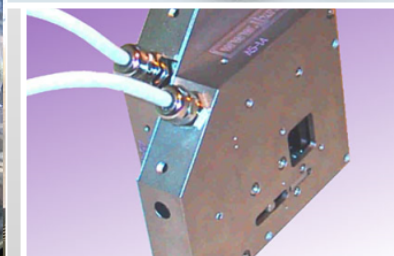
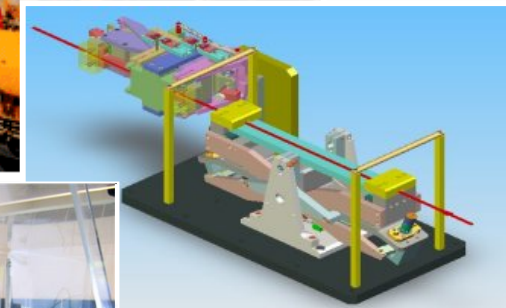
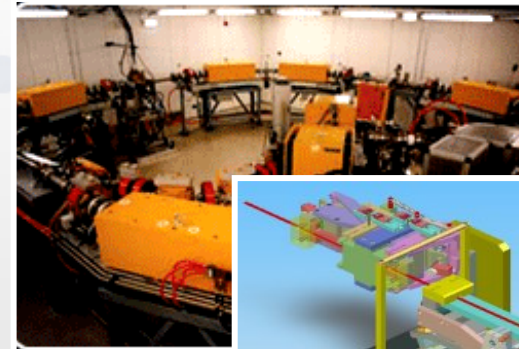
The French PPP “NanoElec” has funded a Pathfinder Programme with a budget of 6.5M€ to create an improved interface between the ESRF and ILL and industrial nano/micro-electronics R&D.

- 1. Define preparation and characterisation protocols** for industry needs
- 2. Perform test cases** put forward by NanoElec partners, and further afield
- 3. Build a durable** business case
- 4. Training, dissemination & communication**

Exploiting ESRF IP

- **Licensing** instrument designs
- **Manufacturing** unique equipment for sale to other RI
- **Consulting** engineering design
- **Patents** are not our favourite tool
- **Our software** is open source

Key part to play in our role as nursery for developing and transferring synchrotron technologies



TANGO control software: a commercial product?

- Collaborative development amongst light sources
 - ESRF core driver
- Open source
- Already multi-million Euro market in supporting TANGO at RIs and supply of TANGO-ready hardware

Exploring routes for deeper industrial exploitation with local incubator support (cash and expertise)





Could do better?

- **More diversification** beyond structural biology
- **Develop technology procurement strategies**
- **Co-innovation and pre-tender openness** (e.g. PCP)
- **Better leveraging of** our intellectual property & skills

Thank you for your attention.

ESRF Business Development Office

Grenoble, France

industry@esrf.fr

www.esrf.eu/Industry

mitchell@esrf.fr +33 (0) 476 882 664