

IRUVX-PP WP6

Collaborations with Industry

S Webb STFC

A Kvick MAX lab



Objectives of work package

- Identify and organise long term collaboration between IRUVX-FEL Consortium and industry
- Improve the economic impact of consortium and scientific exploitation of individual facilities
- Coordinate approach to suppliers to maximise efficiency in use of national resources



Definition of industry sectors involved (1)

- Identification of key industry sectors
 - Participate in facility construction
 - Procurement/tender opportunities
 - prototyping
 - Collaborative R&D
 - Benefit from exploitation of IRUVX-FEL facilities
 - Already working through procurement /R&D
 - New companies to exploit CLAs and technologies



Definition of industry sectors involved (2)

- Key industry sectors vary depending on stage of construction/usage
 - Accelerator, detector, magnet, cryogenics and ultra-high vacuum, instrumentation industries etc
- Scientific exploitation
 - Semi conductor, nanotechnology, energy, security, environment, pharmaceutical, healthcare etc.




Establishing communication tools with industry

- Tools to interact with industry
 - Database of companies so we can search companies and companies can search each other for partners
 - Opportunities bulletin for tenders to be sent through e-alert
 - Workshops for meet the buyer and technology transfer – general knowledge exchange



Establishing communication tools with industry (2)

- Liaison with industry
 - Best practice
 - Partner institutions
 - Other institutions such as CERN, ESRF, ITER
- Industrial advisory board (IAB)
 - What role?
 - Formal relationship between IAB and partner organisations



Definition of common procurement needs and supplier criteria for the construction of new facilities

- Common procurement needs for partners
- Coordinated approach to supplier to maximise negotiating strength
 - Establish relationship with suppliers
 - Work in partnership
 - Collaborative R & D
- Supplier selection criteria
 - Preferred supplier list
 - Company turnover, number of employees, past history



Protecting IPR in technology transfer

- Opportunities for technology transfer
 - Technology market evaluations – identify suitable markets
- Ensure proper IP protection
- IPR built into R&D contracts



Working group suggestions

Long term collaboration
with Industry

1. Definition of industry sectors group
2. Communication tools with Industry
 1. website
 2. Database classification
 3. Database construction
3. Common procurement needs and supplier criteria
4. IPR in technology transfer
5. Workshop delivery

Contact persons at
each facility

Workgroup leader



Contacts

28.03.2008

bold= WP leader

italic = WP deputy

New Work Package No.	Descriptive Title	BESSY	STFC	DESY	ELETTRA	MAX-Lab	INFN	PSI	SOLEIL	POLFEL
WP0	Management of the Project			Josef Feldhaus; Ute Krell; Matthias Kreuzeder						
	Non technical									
WP1	Construction of the IRUVX-FEL Consortium	Wolfgang Eberhardt, Eberhard Jaeschke	Mike Dunne Marion Bowler	<i>Josef Feldhaus</i> Ute Krell	Albin Wrulich Fabio Mazzolini	Sverker Werin	Luigi Palumbo Giuseppe Dattoli/ENEA	Marco Pedrozzi	JP Caminade	G. Wrochna
WP2	User Policies	Olaf Schwarzkopf, Wolfgang Eberhardt	Paul Vernon	Rolf Treusch	Giorgio Paolucci	Ulf Johansson	Maurizio Benfatto	<i>Heinz Weyer</i>	P. Morin	
WP3	Coordination and consolidation of joint technical developments	Wolfgang Anders, Torsten Kamps	Elaine Seddon	<i>Christopher Gerth</i>	Paolo Craievich	Gunnar Ohlwall	Alessandro Gallo Gian Piero Gallerano	Rene Bakker	JP Caminade	
WP4	Development of Human Resources	Christian Jung	Pat Ridley	Elke Ploenjes	<i>Andrea Crivelli</i>	Svante Svensson	Patrizio Antici	Albin Wrulich	JP Caminade	
WP5	Communication and Dissemination	<i>Olaf Schwarzkopf</i>	Jane Binks	<i>Matthias Kreuzeder</i> Ute Krell	Bibi Palatini	Annika Nyberg	Luolano Catani	Heinz Weyer	JP Caminade	
WP6	Collaborations with Industry	Walter Braun	Liz Towns-Andrews	Holger Schlarb	Riccardo Tommasini	Åke Kvik	Claudio Sanelli	Volker Schlott	JP Caminade	
	Technical									
WP7	Photon Beamlines and Experiments	Daniel Schoedelmeier	Frances Quinn	Kai Tiedtke Hubertus Wabnitz	Daniele Cocco	Svante Svensson; Jorgen Larsson	Valerio Rossi Albedini Roberto Cimino	Rafael Abela	P. Morin	
WP8	FEL Source	Torsten Quast	Jim Clarke, Steve Jamison	Holger Schlarb; Axel Winter	Laura Badano Anton Rohlev	Sverker Werin	Massimo Ferrario, Luca Giannessi	Volker Schlott	M. E. Couprie	
	General Assembly Delegate									
		Jens Knobloch <i>Hermann Dürr</i>	Marion Bowler <i>Elaine Seddon</i>	Elke Plönjes <i>Holger Schlarb</i>	Albin Wrulich	Nils Martensson <i>Sverker Werin</i>	Massimo Ferrario <i>Luigi Palumbo</i>	Marco Pedrozzi <i>Volker Schlott</i>	M. E. Couprie <i>P. Morin</i>	G. Wrochna



Deliverables

N°	Name of activity	Year 1				Year 2				Year 3				Q1
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
WP 6	Collaborations with Industry													
6.1	Definition of industry sectors involved													
D6.1	Agreed list of key industry sectors													
6.2	Establishing communication tools with industry													
M6.1	Industry workshop 1													
M6.2	Industry workshop 2													
D6.2	Report on liaison with industry													
6.3	Definition of common procurement needs and supplier criteria													
M6.3	Agreed list of common procurement needs													
D6.3	List of criteria to be used to determine supplier status													
6.4	Protecting IPR in technology transfer													
M6.4	Draft list of knowledge to be shared													
D6.4	Handbook for IPR													

Experience of Knowledge Exchange and Industrial Collaboration

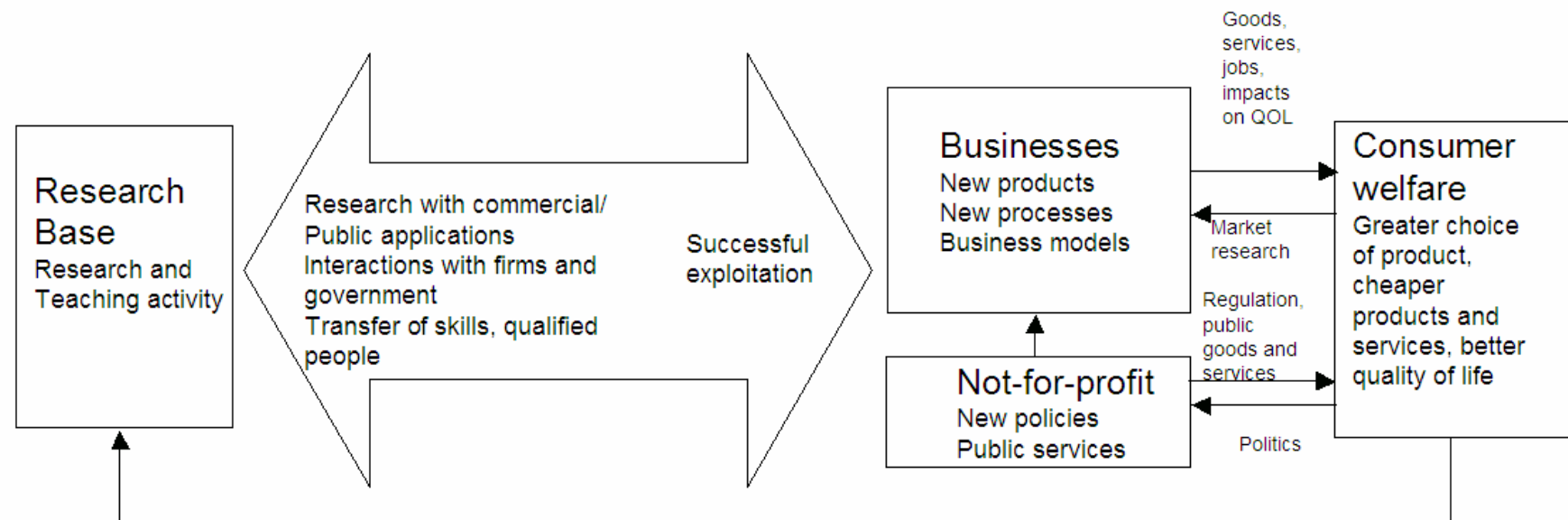


What is Knowledge Exchange?

- Within a modern, knowledge driven economy, knowledge exchange is about the multi-way transfer of good ideas, research results and skills between universities, other research organisations, business and the wider community to enable innovative new products and services to be developed.



A simple model of the Economic Impact of Knowledge Exchange





Why is Knowledge Exchange Important?

- In parallel with increasing investments in science, there needs to be an effective two way link between research and the market to ensure that good research becomes good business.
- A country's long-term competitiveness demands increased productivity, invention and innovation and exploitation of the science and engineering base plays a vital role in driving up productivity.
- Knowledge Exchange also generates a return on the investment of public funds in the science research base.
- Research facilities and Universities are increasingly recognised as being among the world leaders in the development of new scientific knowledge. Knowledge is recognised as either tangible (e.g. IP) or intangible (e.g. People).

Measuring Economic Impact

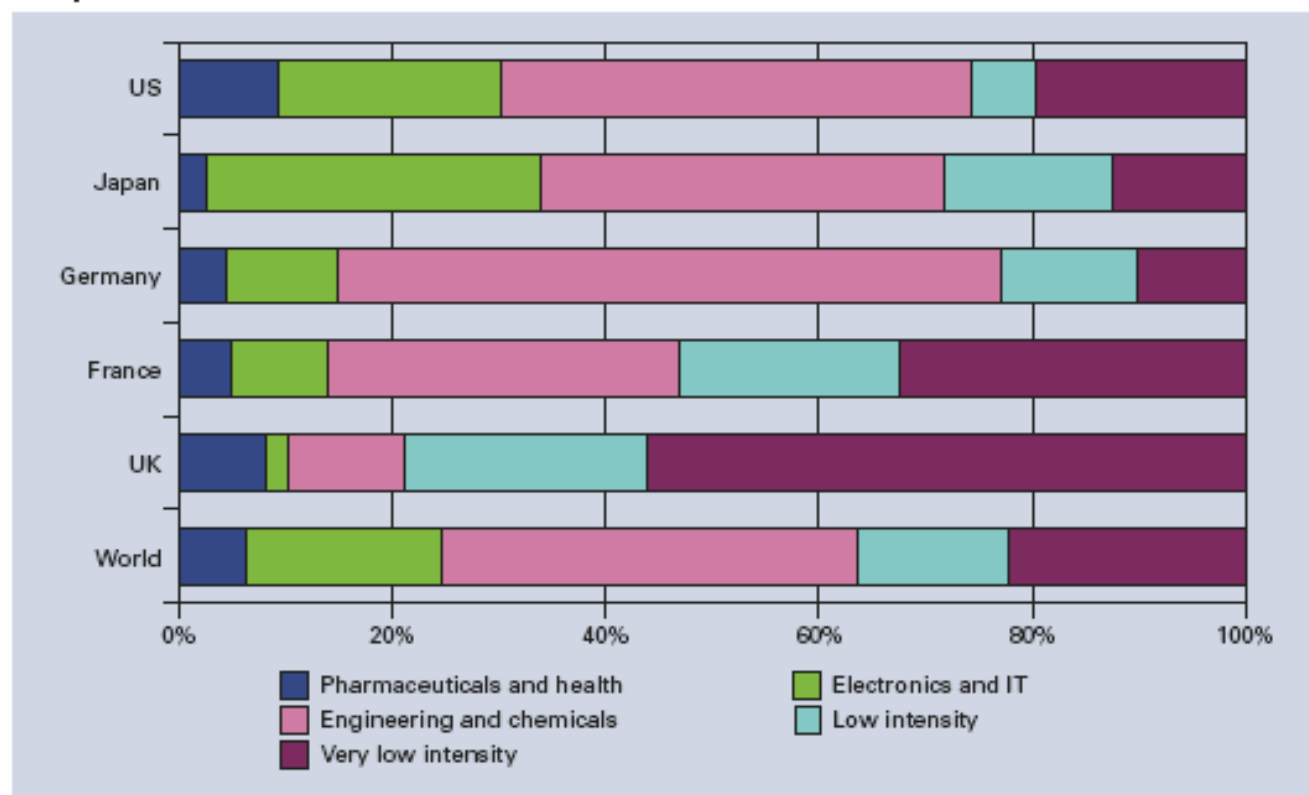
- Governments want to see a return on investment
- Crucial to establish baselines for where we are now, so be able to demonstrate the added value of IRUVX





Industry sector comparisons

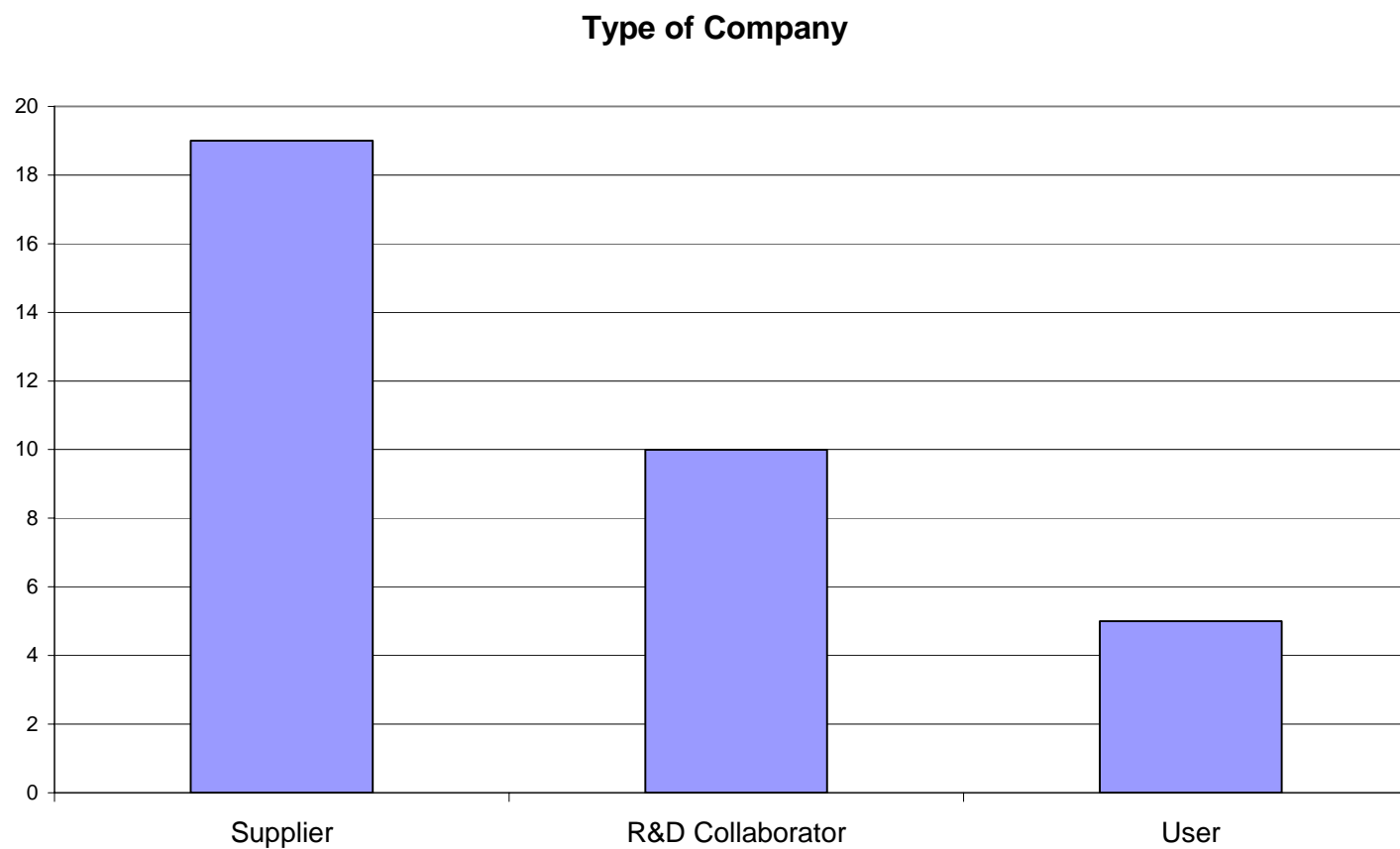
Proportion of sales in each sector



Source: DTI R&D Scoreboard 2004



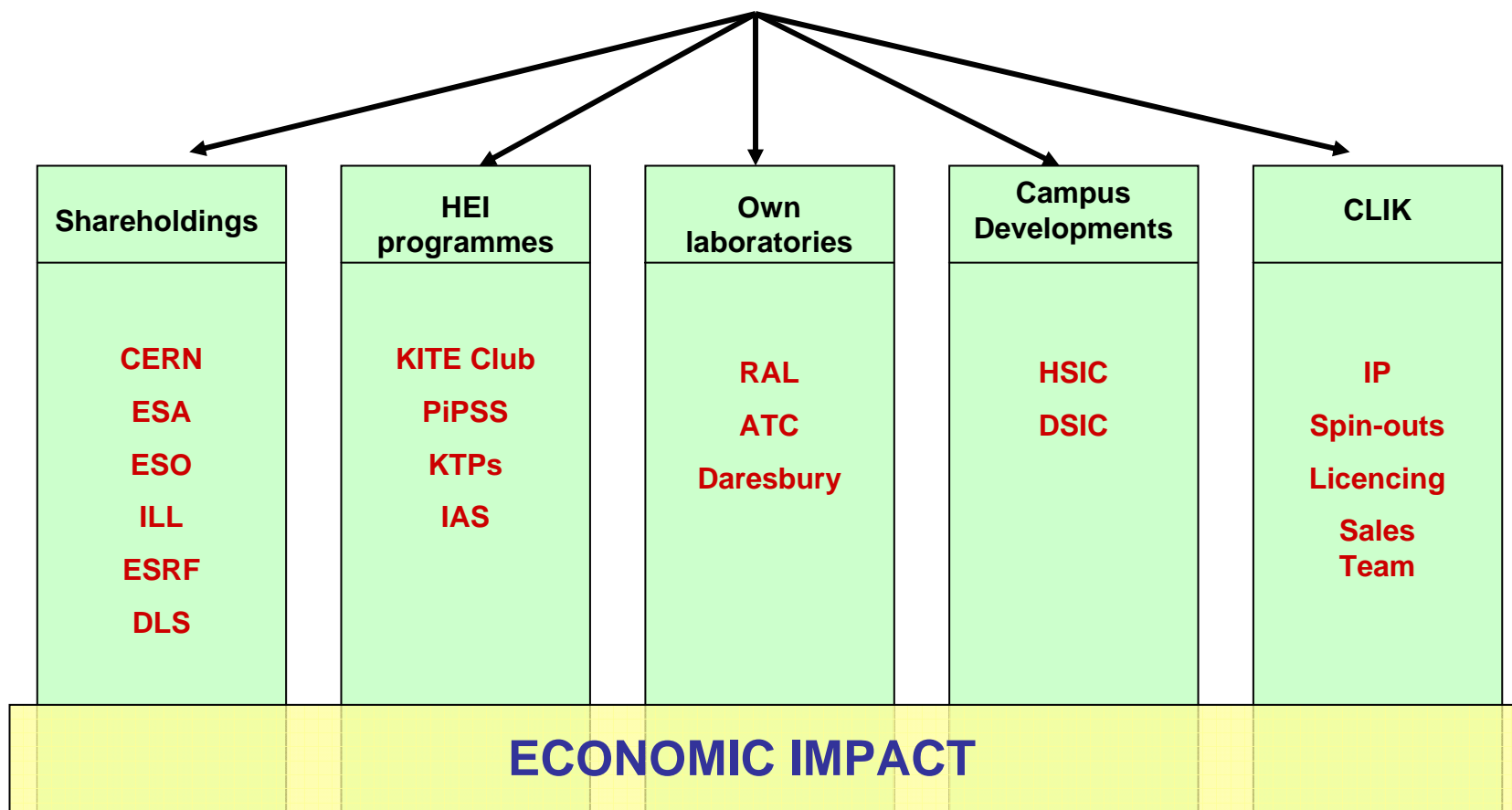
Companies that use RFs



STFC KE activities



STFC KE Programme Areas





KITE Club

STFC KITE Club programme of workshops and events for the benefit of academics, industrialists and research and technology organisations.

Aims are to:

- Encourage entrepreneurship amongst the STFC academic community
- Act as gateway to information about STFC programme and external activities
- Provide opportunities for networking
- Increase number of active partnerships working in areas of mutual interest

Topics covered can include:

- Focus on specific technology themes
- Core science projects
- Business advice.



PIPSS

- Industrial programme support scheme
- A KT scheme that supports the development of effective, long term collaborations between UK Universities, CERN, ESO, ESA, UK industry and research sector organisations, with the aim to:
 - Promote co-ordinated technology development within the Council programme and with other partners;
 - Encourage researchers to be aware of the possibilities for exploitation;
 - Raise awareness in industry and other research sectors of the technological strengths and opportunities afforded by the Council's science;
 - Encourage collaboration between UK companies and the research community;



Science & Technology
Facilities Council

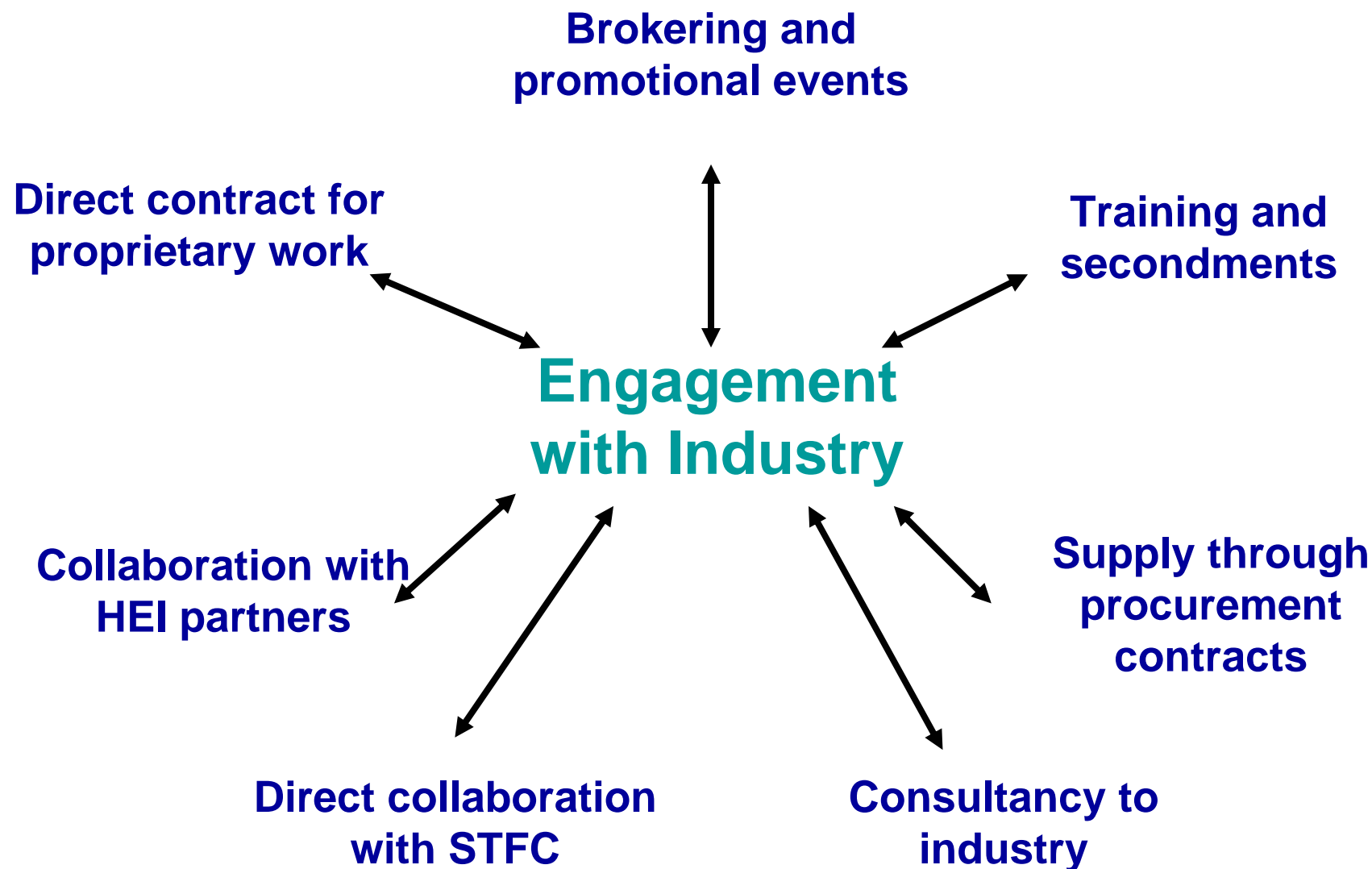


Wholly owned subsidiary for commercialisation and exploitation of STFC IP

- **Patents**
- **Licences**
- **Spin-out companies**
- **Innovation Advisory Service**
- **Wider Access Sales Team**



Engagement with Industry





Industrial Liaison

- CERN, ESA
 - Procurement opportunities
 - Technology transfer
 - PIPSS
- ILL, ESRF, ESO
 - Procurement opportunities

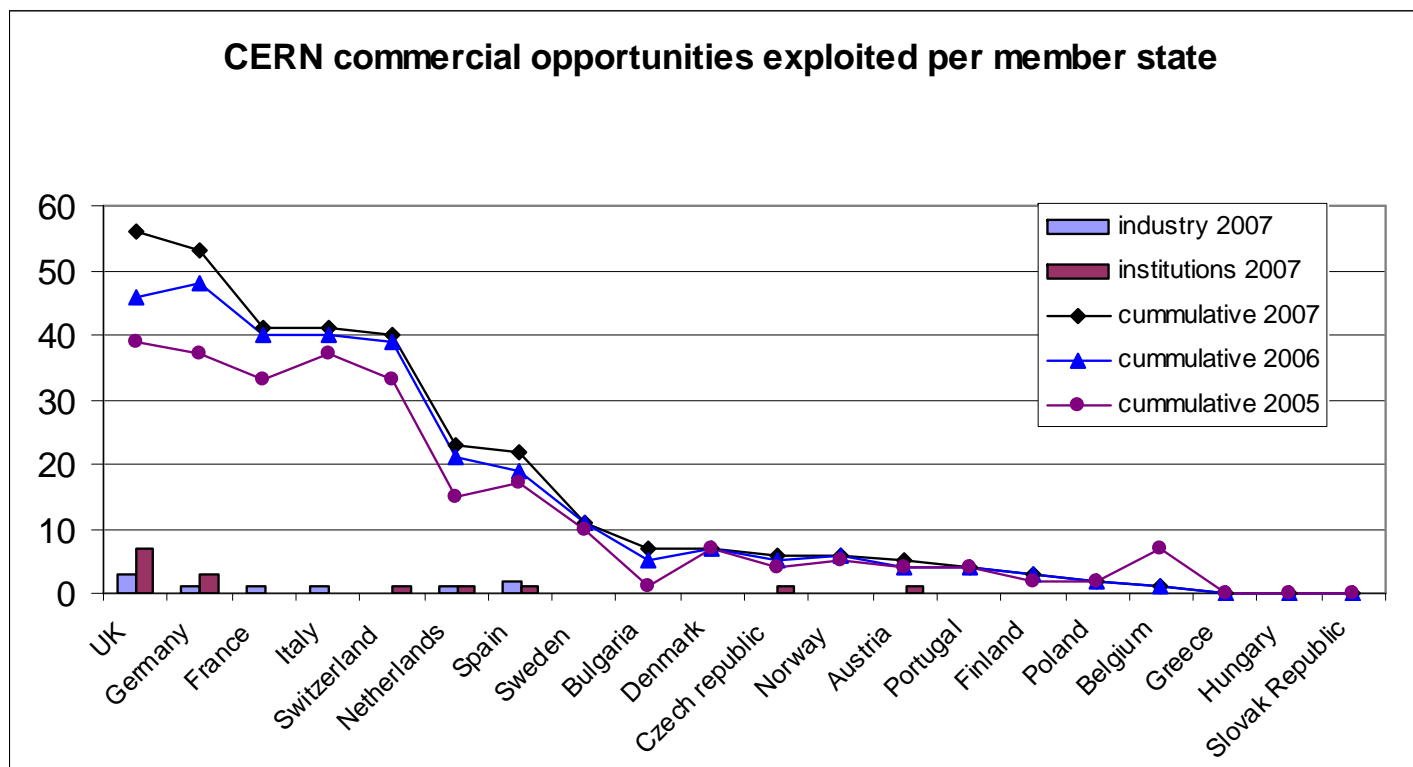


Industrial Procurement

- Access to database at research facility
 - Industry classification
 - Industry pre qualification criteria
- Communication tools and workshops – meet the buyer events
- IPR for joint R&D



UK at CERN





THE CAMPUS 'DIPOLE'





Science and Innovation Campuses

Vision

Inputs

Public investment in facilities
and science programmes

Co-location of HEI sci & tech
programmes

JV partner capital investment

CLIK Innovation & Wider
Access technical sales team

International public and private
inward investment

Masterplans which align with
STFC plans and regional
planning strategies

- Major contributor to UK's renowned scientific and hi-tech skills base.
- Projects providing new collaborative approaches to research, innovation and learning.
- Prime location for international R&D & key attractor for overseas researchers
- Co-location of small, medium & large public and private organisations
- Scientific and hi-tech commercial cluster in its own right
- Environment where scientists from wide range of disciplines collaborate and are mutually supportive
- High quality, sustainable environment best practice in imaginative design

Outputs

International recognition –
inward investment clearly evident

Whole industry lifecycle
represented on campus

Increased numbers of pub-
private partnerships leading to
joint patents, spin-outs

Collaborative training and
development initiatives leading
to greater pool of skilled people

Increasing number of HEI
institutes on site

Facilities emerge as business
sector leading to co-location

Increased use facilities by industry

Increased number of
international facilities &
scientists

