



# **STFC External Innovations Programme**

## **Impact Funding Schemes**

**Industrial Applications of Astrophysics - 25 June 2014**

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# PRESENTATION

- **About STFC**
- **International Facilities** and Contract Alert Service / Procurement
- **Funding Schemes** - Helping Universities to Commercialise their STFC Funded Research in Collaboration with Industry
- **Innovations Club (Events & Newsletter)**



# Funding Mechanism

HM Government (and HM Treasury)



**BIS** | Department for  
Business Innovation & Skills



**RCUK Executive Group**



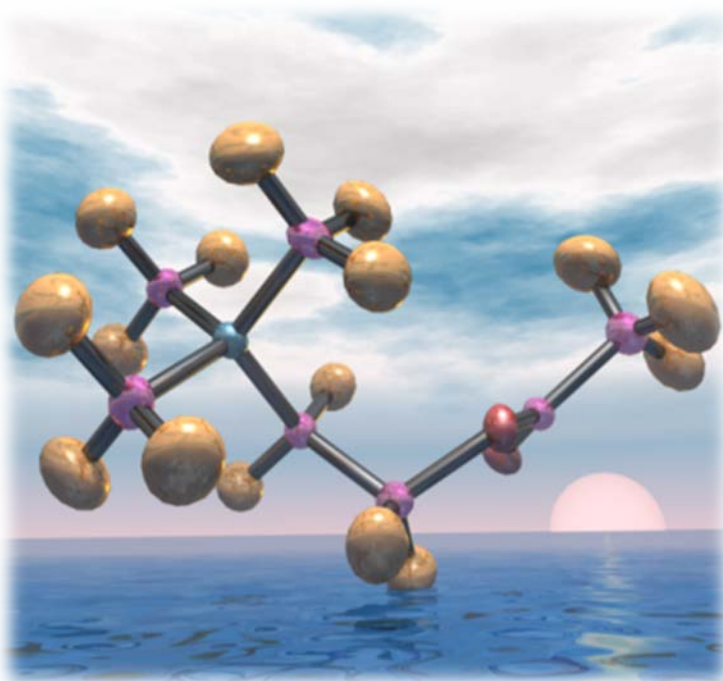
Arts & Humanities  
Research Council



# Science and Technology Facilities Council

STFC funds world class and world-leading research in

- **particle physics, astronomy, nuclear physics and space science**



- This research takes place in
  - **university groups**
  - **STFC sites/laboratories**
  - **international organisations**
- Providing access to world class **UK facilities and overseas facilities**
- **Funding university researchers**  
1,700 academic staff in 40+ UK universities



**UK Astronomy Technology Centre**  
Edinburgh, Scotland



**Polaris House**  
Swindon, Wiltshire



**Chilbolton Observatory**  
Stockbridge, Hampshire



**Isaac Newton Group  
of Telescopes**  
La Palma

**Daresbury Laboratory**  
Daresbury Science and Innovation Campus  
Warrington, Cheshire



**Rutherford Appleton Laboratory**  
Harwell Science and Innovation Campus  
Didcot, Oxfordshire



**Joint Astronomy  
Centre**  
Hawaii

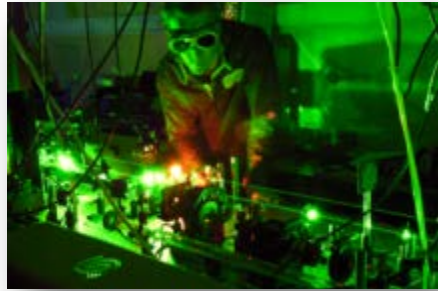




# STFC Runs and Funds Big Science for the UK

## Neutron Sources

Providing powerful insights into key areas of energy, biomedical research, climate, environment and security



## High Power Lasers

Providing applications on bioscience and nanotechnology and demonstrating laser driven fusion as a future source of sustainable, clean energy



## Light Sources

Providing new breakthroughs in medicine, environmental and materials science, engineering, electronics and cultural heritage



# International Partnerships



- CERN in Geneva
- European Southern Observatory (ESO)
- European Space Agency (ESA)

- European Synchrotron Radiation Facility (ESRF) in Grenoble
- Institute Laue-Langevin (ILL)
- New 'Research Infrastructures' include FAIR, SKA, ESS, E-ELT...and others



# Large Research Facilities / Institutes



**Particle Physics**

- National or **Inter-governmental**
- **Due to Scale and Complexity** – require substantial funds to build (~£1B), operate and maintain
- **Significant Procurement Budget**  
CERN, ESRF and ILL together represent a procurement budget of over **£390M** annually.
- **Source of New Technologies**





# STFC External Innovation Programme

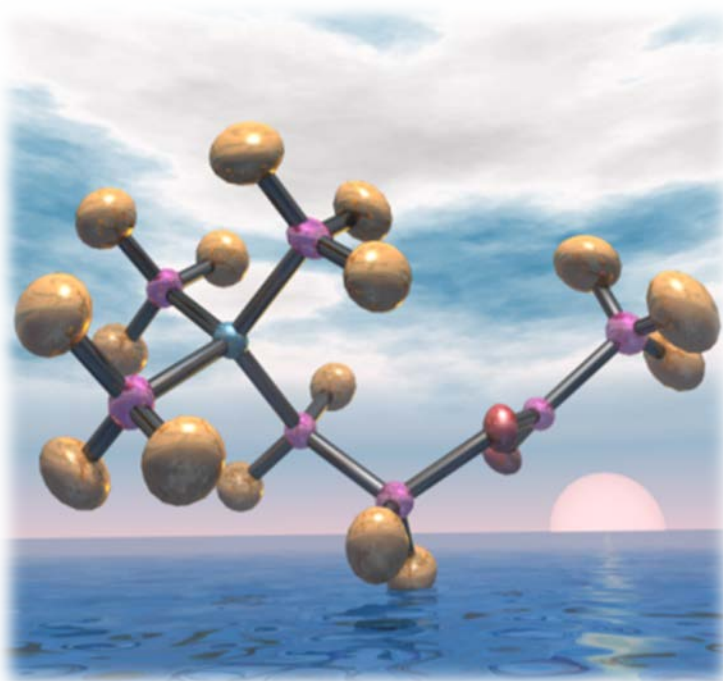
## Programmes Directorate

- **Manage collaboration with industry**
  - Intergovernmental Organizations - unique rules for procurement
  - Interface between the RIs such as CERN, ESRF, ILL and the UK companies to help them to tender for contracts from these facilities
- **Our ILO is asked to find and recommend UK manufacturers or service providers to respond to tenders**
  - contract alert service (free)
- Register at: [www.stfc.ac.uk/tenderopportunities](http://www.stfc.ac.uk/tenderopportunities)



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# Technology to underpin science

Developing and delivering innovative technologies in STFC laboratories and in collaboration with University groups

## Key Technologies

- Accelerator technologies
- Instrumentation
- Detectors and Sensors
- **Data Acquisition and Processing Systems**
- Microelectronics design
- High power lasers
- **High Performance Computing**



- **Significant industrial applications**
- Collaborative efforts



# STFC External Innovations Objectives

- To transfer knowledge to diverse technological sectors
- Promote interdisciplinary collaborative research with industry leading to commercialisation (schemes, networking, proposals)



## Eligibility for STFC External Innovations Funding

- Eligibility arises from STFC funded research as the source of knowledge (academic lead)
- Funding schemes open to STFC Labs, HEIs and international subscriptions (CERN, ESO)
- Other Universities or industry can participate provided that they collaborate with STFC funded partner



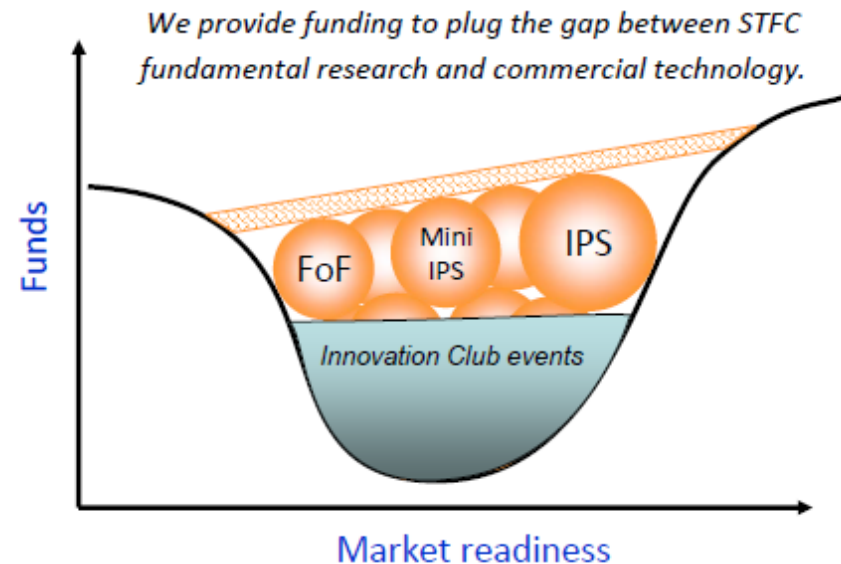
# External Innovations Funding Programme

□ **Generate impact** by providing funding support to help bridge the 'commercialisation gap'

□ **Key aims**

- ❖ Transfer
- ❖ Partnership & Collaboration
- ❖ Exploitation
- ❖ Economic Impact

Innovative technologies, industrial/economic advances, new skills, societal benefits...



*Impact through innovation*



# External Innovations Funding Schemes

- ❖ **IPS** - Innovations Partnerships Schemes – next deadline **September 2014 - 3 calls/year**
  - Follow on Funding
  - IPS and Mini-IPS
  - **IPS Fellowships** - dedicated technology transfer staff
  - **Impact Acceleration Account**
- ❖ **CLASP** - Challenge Led Applied Systems Programme
  - Aligned to STFC Futures Programme  
Energy, Environment, **Healthcare**, Security
- ❖ **Global Challenge Programme**
- ❖ **KTP** - Knowledge Transfer Partnerships
- ❖ **RSE Enterprise Fellowships**



# Follow on Funding

## Aim - To establish commercial feasibility on scientific and technical merit

- Proof of concept funding - £110k/year
- Undertaking further scientific and technical development of an idea
- Improving an intellectual property (IP) position
- Gaining further information about the market for the new products or process
- Identifying potential licensees or opportunities for joint ventures

**Not in partnership with industry**



# IPS / Mini - IPS

**Aim - Transfer technology and expertise to the marketplace in partnership with industry**

## Collaboration

- With industry or another academic discipline

**Range of activity** – up to £450 over 3 years (£150k/year)

- Feasibility studies to prototyping
- Route to market must be considered

## IPS is a State Aid Notified Scheme

- Funding can be given to industry partners in line with State Aid rules



# IPS Fellowships

This is a dedicated KE/technology transfer role - not a research fellowship

- Promote commercial exploitation and transfer of the technologies developed through STFC funding
- Host institution (or group of institutions) must be in receipt of substantial STFC funding
- Duration – up to 48 months
- STFC contribute 50% of cost – no maximum

[www.stfc.ac.uk/ipsfellowships](http://www.stfc.ac.uk/ipsfellowships)



# CLASP

**Annual calls in one of the STFC Futures Programme areas:**  
Energy, Environment, **Healthcare** and Security

- ❑ **Two stage application process**
  - **Two page technical outline** should include impact, timescales, markets and work plan
- ❑ **Shortlisted applicants**
  - **Will be invited to develop full proposals** with assistance and advice from STFC Innovations staff and panel members.
  - **Will be required to present** their final proposals to the Evaluation Panel
- ❑ **Typically £1.5M STFC funding available per call (2<sup>nd</sup> Sept. 2014)**
  - Any size of project
- ❑ **Industry can be included** in a project offering in-kind support or as a subcontractor for key tasks





# Global Challenge Programme

## Applying STFC-funded science to provide solutions to the Global Challenges in Energy, Environment, Healthcare, Security

- **Concepts:** call for **small scale demonstrator/proof of concept projects - (up to £50k) - deadline in October 2014 - typically £500k is available**
- **Networks:** creating new multidisciplinary research communities (**call: 2015**)
  - SEREN - Space Weather Network
  - GeoRepNet – Geological Repository Network
  - EnvRadNet – Environmental Radioactivity and the Environment
  - Network in Battery Science and Technology
  - Bioinformatics & Environmental Network
  - Network on Tropospheric Ozone
- **Studentships:** building capacity through interdisciplinary research training to support the transfer of research, science and technology

❖ [www.stfc.ac.uk/2938.aspx](http://www.stfc.ac.uk/2938.aspx)



Science & Technology  
Facilities Council

# Knowledge Transfer Partnership (KTP)

- **Collaborative project between business and knowledge base (KB)**
  - developing new products or processes
  - improving existing products or processes
- **KTP Associate employed by the KB to enable**
  - business to increase profitability and embed knowledge
  - [transfer research to industry](#)
  - opportunity for post-graduates to bridge the gap to industry
- Projects last 1 – 3 years
- **Programme run by TSB, sponsored by STFC + others**
  - support available from TSB during application
- ❖ [www.ktponline.org.uk](http://www.ktponline.org.uk) - to find local KTP adviser



# RSE Enterprise Fellowships

The Royal Society of Edinburgh

- **Support to a researcher /entrepreneur to commercialise any STFC funded research – annual call**
- A year's salary to develop your commercial proposition
- Business training to help you to prepare a viable business plan
- Access to networks of mentors, business experts and professional advisors
- **Spin out companies formed with help from Fellows**
  - IKinema (Surrey)
  - Cella Energy (STFC)
  - KEIT (STFC)



# STFC CASE Studentships

**Provide support for PhD students in collaboration with an industrial partner**

- Collaborative training projects delivering research of value to the company
- **Knowledge exchange between commercial collaborators and academic research groups - not just access to data, samples and equipment**
- Enhanced training experience for students through spending time in different research environments and industry
- [www.stfc.ac.uk/1468.aspx](http://www.stfc.ac.uk/1468.aspx)



# STFC Innovations Club

- **Set up to promote the opportunities for Knowledge Exchange** between STFC funded researchers, academics and industry
- **Organise workshops and events** (free to attend) to learn about recent developments and encourage networking and collaboration
- **Newsletter (monthly)** - provides organisations with information about funding calls and the opportunity to search for potential collaborative partners
- **Established business network** includes many sectors including defence, medical, security, aerospace, space sector...
- **Membership is free**
- **[www.stfc.ac.uk/innovationsclub](http://www.stfc.ac.uk/innovationsclub)**





# Find Your Collaborative Partners

- **Website**  
RCUK and TSB – [‘Gateway to research’](#)
- **Designed for companies to find**
  - potential collaborative partners and
  - new ideas
- **Contains details on all grants given by RCUK and TSB since 2007**
- ❖ <http://gtr.rcuk.ac.uk/>





[www.stfc.ac.uk/commercialisation](http://www.stfc.ac.uk/commercialisation)

[www.stfc.ac.uk/workingwithindustry](http://www.stfc.ac.uk/workingwithindustry)

**Thank you**