



STFC External Innovations

Impact Funding Schemes

Applications for Detectors from CERN - 25 February 2016

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Funding Mechanism

HM Government (and HM Treasury)



BIS | Department for
Business Innovation & Skills



RCUK Executive Group

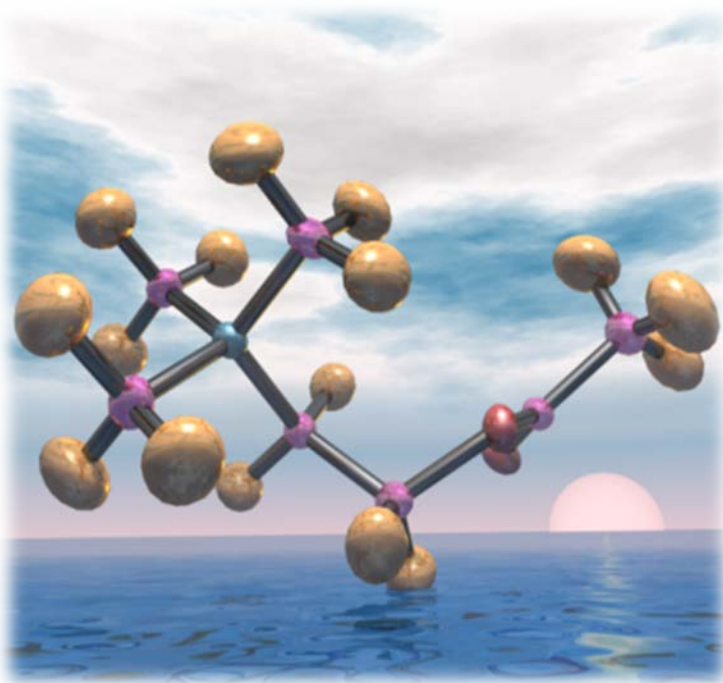


Arts & Humanities
Research Council



Science and Technology Facilities Council

STFC PD 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



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



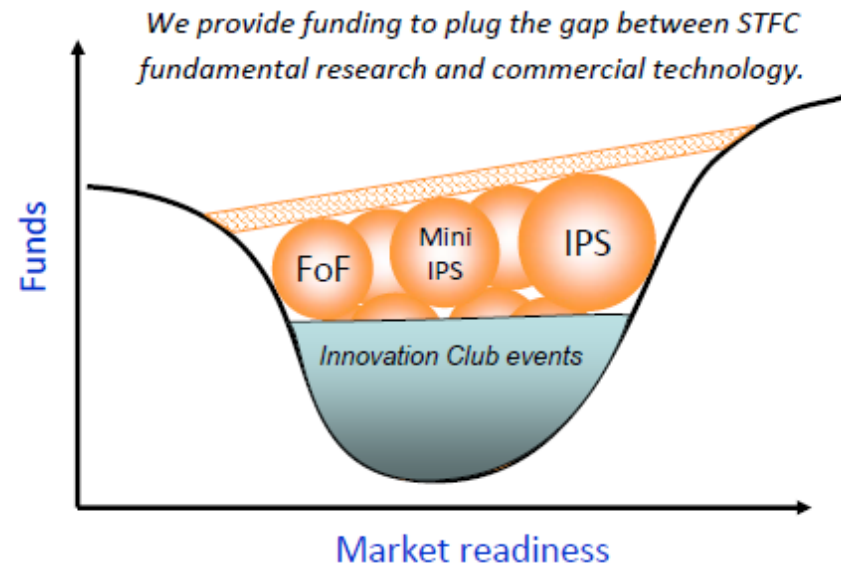
External Innovations Funding Schemes

□ Provide funding support to help to bridge the 'commercialisation gap'

□ Key aims

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

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



Impact through innovation

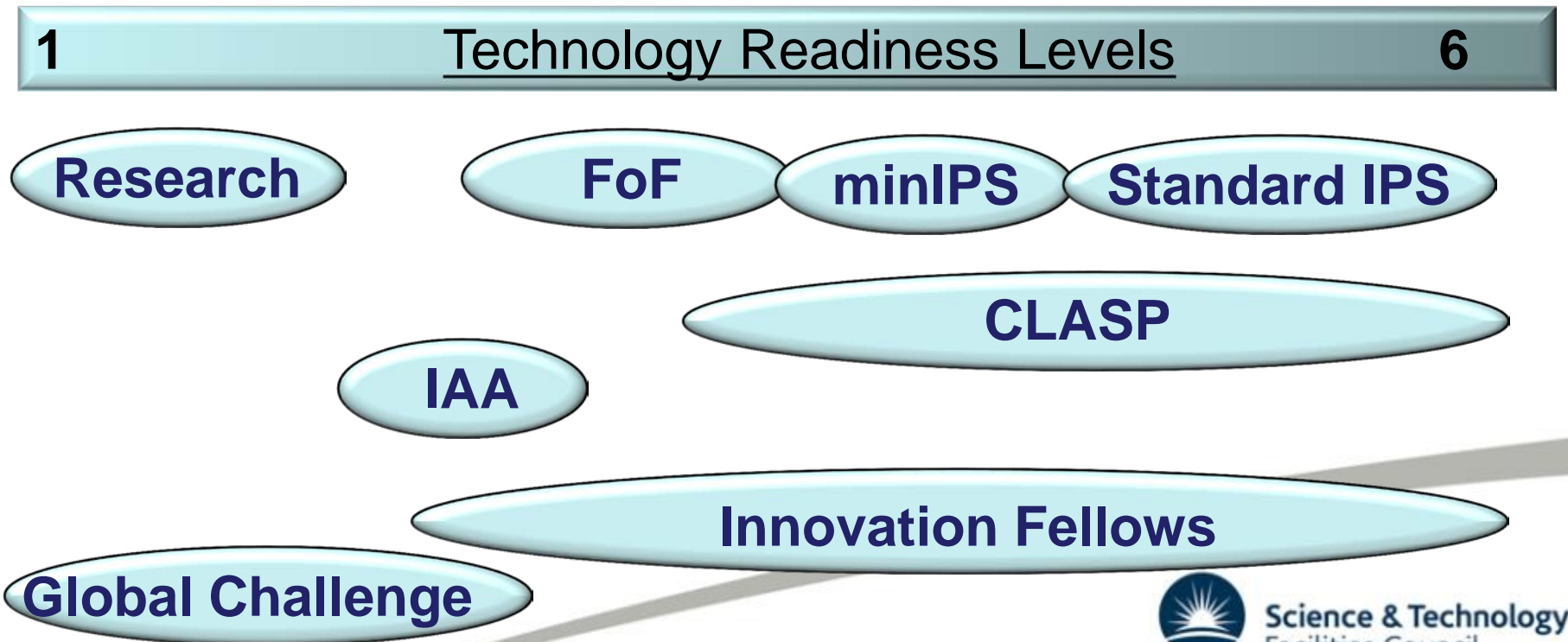
External Innovations Funding Schemes

- ❖ **IPS** - Innovations Partnerships Schemes – **3 calls/year**
 - Next deadlines - **04 May 2016 and 07 September 2016**
 - Follow on Funding (FoF)
 - IPS and Mini-IPS
 - **IPS Fellowships** - dedicated technology transfer staff
- ❖ **IAA - Impact Acceleration Account** for TTO at universities
- ❖ **CLASP** - Challenge Led Applied Systems Programme
 - Aligned to STFC Futures Programme
Energy, Environment, Healthcare, Security
- ❖ **Global Challenge Programme**
- ❖ **KTP** - Knowledge Transfer Partnerships - Innovate UK scheme
- ❖ **RSE Enterprise Fellowships**



External Innovations Funding Schemes - TRL

- **Responsive:** Follow-on Funding and IPS
- **Challenge-led:** Global Challenge and CLASP
- **Delegated:** Impact Acceleration Account and Innovation Fellows



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



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RSE Enterprise Fellowships

The Royal Society of Edinburgh

- Support to a researcher /entrepreneur to commercialise any STFC funded research - annual call (**deadline 5/2016**)
- 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

Collaborative Awards in Science and Engineering

Provide support for PhD students in collaboration with an industrial partner – annual call

- 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



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STFC Impact Acceleration Account - 2016

- **Enable Technology Transfer Offices to support commercialisation of STFC science**
 - **£50k for 12 months to STFC academics via TTOs at top 22 universities**
 - **Cambridge included**
 - Activities must support STFC-funded research outputs toward Impact
 - **Activities could include:**
 - Technology showcase to industry events
 - PoC funds
 - Technology audits / market surveys
 - Secondments to / from Industry
- www.stfc.ac.uk/IAA



CLASP

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

- ❑ **Two stage application process (Launch – May 2016)**
 - **Two page technical outline** should include impact, timescales, markets and work plan (**Deadline Sept. 2016**)
- ❑ **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**
 - 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) – currently not open**
- **Networks:** creating new multidisciplinary research communities (**call: 2015**)
 - Nuclear Security Science Network – launch 16 March 2016**
 - Advanced Radiotherapy Network – launch 22 April 2016**
 - Nuclear Data Network – launch 2016**
 - 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





managed by the Department for Business, Innovation and Skills - DBIS

Partner Countries

Brazil
Chile
China
Colombia
Egypt
India
Indonesia
Kazakhstan
Malaysia
Mexico
Philippines
South Africa and wider Africa
Thailand
Turkey
Vietnam

Department for International Development (DFID)

The Newton Fund aims to promote the economic development and welfare of either the 15 partner countries by strengthening their science and innovation capacity

Official Development Assistance (ODA): activities need to demonstrate that they are aiming to contribute to a reduction in poverty and improve the welfare

Funding: £75 million each year from 2014 for 5 years

<http://www.newtonfund.ac.uk/about/>



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The Newton Fund - Focus

The fund covers three broad areas:

- **People:** increasing capacity in science and innovation, individually and institutionally in partner countries.
- **Research:** research collaborations on development topics.
- **Translation:** creating collaborative solutions to development challenges and strengthening innovation systems.



STFC - Focus

- **Capacity building** through astronomy, particle physics, nuclear physics and large facilities:
 - STEM education in schools
 - Engineering through instrumentation development, robotics and advanced optics
 - Computing through astronomy data handling and analysis
- **Agritech** through satellite data and modelling
- **Facilities** training and use



Examples

- Developing, planned or existing RCUK or STFC Activities in:
 - Thailand (through astronomy)
 - South Africa (through SKA)
 - Mexico (through Instrumentation for Big Science)
 - Colombia (through Astronomy)
 - SE Asia (RCUK call in development).
- Contact Katharine Hollinshead
katharine.hollinshead@stfc.ac.uk



Global Challenge Fund - DFID

DBIS overall science budget

- **Department for International Development - DFID**
- **Distribution mechanisms not known yet**
- **£1.5 billion over spending review period – 5 years**
- **Official Development Assistance (ODA) funding will need to be spent on projects that are ODA-compliant**
- **Themes emerging:**
 - Health
 - Clean Energy
 - Sustainable agriculture
 - Foundations for Economic Development
 - Mitigating environmental change
 - Heritage Protection and Preservation



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...~ 1500 members
- **Membership is free**
- **www.stfc.ac.uk/innovationsclub**



STFC Innovations Club

- **Examples of events - audience academics and industry ~100**
 - **Nuclear Security Detection – 16 March 2016 London**
 - Novel Magnetic Sensors and their Applications – 12 March 2015
 - Industrial Applications of Astrophysics/Astronomy - 25 June 2014
 - Cherenkov Telescope Array (CTA) Event - 20 March 2014
 - Nuclear Physics Technology Showcase – 26 September 2013
 - The Square Kilometre Array (SKA) Workshop - 20 March 2013
 - SpaceTech 2012 - 5 & 6 November 2012
 - **www.stfc.ac.uk/innovationsclub**



Working with our Innovation Partners



PraxisUnico.



Find Your Collaborative Partners

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





www.stfc.ac.uk/commercialisation

www.stfc.ac.uk/workingwithindustry

Thank you