

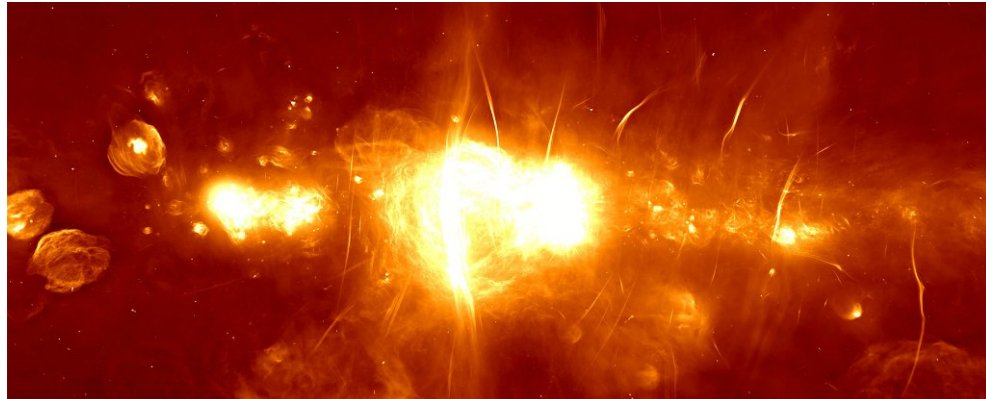


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# PPAP Meeting : July 2018

## Update from STFC

**Mark Thomson**  
Executive Chair STFC



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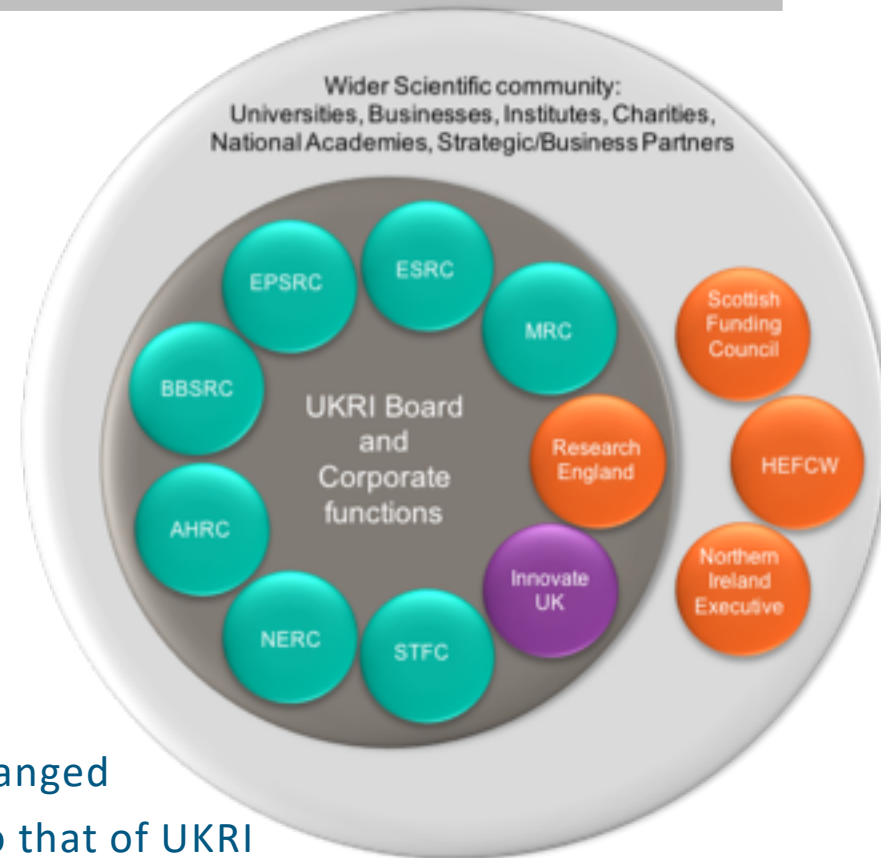
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# UK Research and Innovation (UKRI)

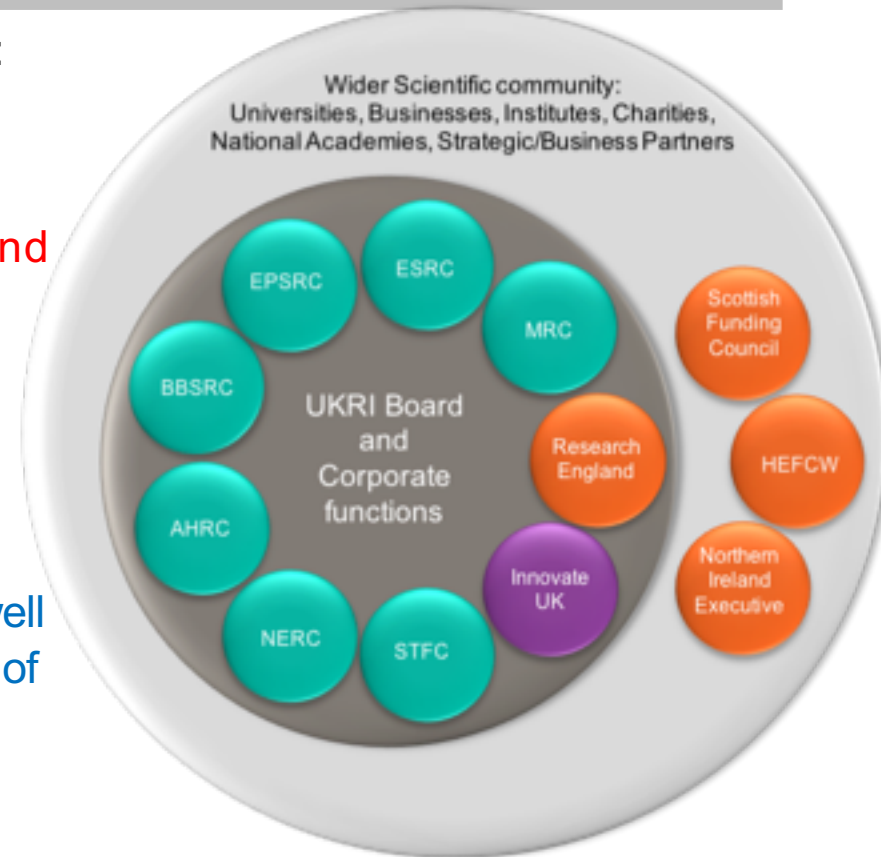
- UK Research and Innovation (UKRI) formed on **1 April 2018** as the new funding organisation for research and innovation in the UK
- It brings together the **seven UK Research Councils**, **Innovate UK** and a new organisation **Research England**
- Strengthens the connections between research disciplines
- STFC is part of a larger organisation but will retain much of its identity:
  - STFC's delegated budget remains unchanged
  - STFC's culture is already well-aligned to that of UKRI



# UK Research and Innovation (UKRI)

Brings many advantages and opportunities:

- Strengthened strategic approach to future challenges
- **Unified voice for the UK's research and innovation system**
- Improved quality of evidence on the UK's research and innovation landscape
- Amongst the immediate priorities:
  - **Engaging stakeholders to create a well informed roadmap to reaching 2.4% of GDP investment in R&D by 2027**
- In addition, enables a more coherent cross-discipline approach to R&I



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# New Opportunities

- Industrial Strategy Challenge Fund (ISCF) – Wave 2 challenges launched, open call for Wave 3 ideas
- Global Challenges Research Fund (GCRF) – up to £200 million of the £1.5 billion total collective fund unallocated
- **Strategic Priorities Fund (SPF)** – £755 million over three years, bids from any BEIS-funded research and development organisation
- Talent Fund – £300 million over three years
- Commercialisation Fund – £108 million
- Strength in Places Fund – £115 million over three years for collaborative bids between research organisations and business to support regional growth
- **Fund for International Collaboration** – £110 million over three years

# Strategic Priorities Fund **Wave 1**

## Aims

- Multi-disciplinary programmes
- National strategic priorities and emerging technologies
- **Strategic cross-cutting research and development areas aligned with Government priorities**

## Criteria

- Support from the research or innovation community and/or alignment with a key Government priority
- Cannot be funded from the bidders' core budgets and cannot be funded from other government departments core departmental research and development budgets
- Quality assurance

# Strategic Priorities Fund **Wave 1**

STFC submitted five bids for Wave 1 (spend starting in 2018/19)

- **Artificial Intelligence for the National Facilities at Harwell:** £11.62 million
- **CLARA:** £29.1 million
- **Digital Twinning:** £19.43 million - STFC £13.4 million
- **DiRAC-3:** £36.85 million
- **Extreme Photonics Applications Centre:** £81.2 million, including £10 million from MOD

In addition, we were required to submit evidence on why it is not feasible to fund these from our existing programme



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# Fund for International Collaboration

## Aims

- Strengthen existing partnerships and form new bilateral and multilateral ones
- Collaborate with the best international partners to carry out world-leading research and innovation which delivers new knowledge, and societal and economic impact
- Support BEIS and wider Government objectives, including science diplomacy

## Criteria

- Quality of research and innovation
- Clear commitment from an international partner(s)
- Additionality - alignment with BEIS/UKRI strategic international goals and priorities

# STFC's FIC bids – Wave 1

## AIT/Watchman (£8.5 million)

- Build capability in using neutrinos to detect activities at nuclear power plants
- International partners are both DOE Laboratories in the USA: Lawrence Livermore National Laboratory and National Nuclear Security Administration
- Builds on planned \$33 million investment from the DOE at Boulby Mine

## ALIGO+ (£10.7 million)

- Upgrading LIGO to increase capability and detection
- International partners are the National Science Foundation and the California Institute of Technology in the USA, the Australian Research Council and LIGO India
- The total capital cost of the project is approximately \$30 million, with 2/3 of the funding being provided by the US

# Approach to future funds/waves

For wave 1 of SPF/FIC essentially ran with existing ideas - insufficient time for a broader consultation

Approach for **future** UKRI funding calls:

- **Focus on excellence** – don't be driven by nature of funding calls
  - Develop bids that are closely aligned with goals of STFC and stakeholders
  - Community led process
- **Launched consultation on “Future Opportunities”:**
  - Develop portfolio of highest priority potential future projects at different scales L, M, and S
  - For Particle Physics want 4 “highest priority” projects (at least one L, M and S)
  - There is no earmarked – STFC will try to match/mould potential projects to fit new funding opportunities

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# Research and Innovation Infrastructure Roadmap

- **This is an exciting time for UK science:**
  - Government's Industrial Strategy highlights the importance of Research and Innovation to the UK economy
  - Already seeing significantly increased investment in Research and Innovation
    - Goal of 2.4% of GDP by 2027
  - Formation of UKRI provides the opportunity to strengthen connections between different research domains
- **Currently developing the “UK R&I Infrastructure Roadmap”**
  - First exercise of its type in the UK
  - Will provide an evidence base of current research infrastructures and future research needs

# Research and Innovation Infrastructure Roadmap

## STFC is leading the UKRI work on the UK RII Roadmap

- SRO (Executive Chair of STFC) and Project Leader (**Bryony Butland**)
- Challenging timelines, but progress is generally good

## Main Outputs

### Interim Report (November 2018)

- summary of landscape analysis
- themes within sectors

### Final Report (April 2019 ) covering

- landscape (what we have got)
- future needs (what the research and innovation community needs)
- options for meeting future needs with narrative

Factual resource that  
may be used to  
inform policy



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# Strategy

STFC is now part of UKRI and our strategy needs to be aligned with the bigger picture



## UKRI Strategic Prospectus: Building the UKRI Strategy

- The UK Research and Innovation Strategic Prospectus, launched on 14 May, sets out how the Government has put research and innovation at the heart of its modern Industrial Strategy
- Committed additional funding of £7 billion by 2021/22 and sets out an ambition to increase total research and development expenditure to 2.4% of GDP by 2027



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# STFC Corporate Strategy

- Refreshed Corporate Strategy repositioned as **‘Strategic context and future opportunities’**
- New emphasis on STFC as part of UKRI
- Aligned with the existing STFC Strategy
- Agreed with UKRI CEO that it would act as a stepping stone in the development of STFC’s new **Strategic Delivery Plan**



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# STFC Strategic Delivery Plan

- All of UKRI's Councils are required to produce a Strategic Delivery Plan by **April 2019**
- Two main components
  - Forward strategic look (5-10 year vision)
  - Shorter-term delivery plan (2018/19 and 2019/20)
- Replaces STFC's current Corporate Strategy and previous Delivery Plan
- The challenges (in my opinion):
  - Address the question **"where does STFC want to be in 10 years"**
  - Develop a bold and ambitious vision
    - This is a major opportunity



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# CERN Impact

Direct industrial return to the UK from CERN remains sub-optimal...

- It is essential that we make progress in this area



STFC has commissioned a broader **Impact Evaluation** on the scientific, economic and societal benefits to the UK

- Technopolis are running an independent evaluation from June 2018
- STFC Impact Evaluation team and Programmes are our internal contacts
- Input will be sought from key CERN stakeholders

This is important, but will not address direct industrial return



# Current PP Issues

Flat-funding pressure on “core” continues to restrict possibility of funding new projects and R&D

- Strategic Delivery Plan is an opportunity to make the case for an uplift
- STFC is starting work on the economic case built around the need to continue to innovate

Grants round will be challenging due to flat-funding in “core”

Many things in play at the moment

- PA Programme Evaluations happening now, PP Programme Evaluation starts in the Autumn, European Strategy, Priority Projects
- A lot to do – but trying not to duplicate work

# A few recent PP Highlights

Funding for ATLAS upgrade approved !

- Took longer than expected, probably due to UKRI/BEIS transition

CMS upgrade has been through PPRP and Science Board

Progress with UK-T0 computing - IRIS

- More joined-up and cross-disciplinary approach
- Strong tie in to Infrastructure Roadmap



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