IPOG
UKRI and NERC update

4 October 2019

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NERC is the UK’s leading public funder of environmental science. We invest £330M each year in cutting-edge research, postgraduate training and innovation in UK universities and research centres.
We support

• 3,000 scientists and over 1,500 PhD students

• 1,000 research projects and 60 UK or international programmes

• 55 universities and 20 research institutes

• UK national capability: 3 ships (plus 1 being built), 6 aircraft, 6 polar bases, the NERC Data Service and 11 community research facilities
Evolving research & innovation landscape

UK Research and Innovation
To be an outstanding organisation that ensures the UK maintains its world leading position in research and innovation

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<th>Knowledge</th>
<th>Economy</th>
<th>Society</th>
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<td>Push the frontiers of human knowledge</td>
<td>Deliver economic impact and create better jobs</td>
<td>Create social impact by supporting our society to become stronger and healthier</td>
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Autumn Statement 2016

• “Mr Speaker, we do not invest enough in research, development and innovation.

• £4.7bn of additional funding for R&D was announced over the period 2017/18 to 2020/21 with a rising profile.

• Working towards R&D being 2.4% of GDP (currently 1.7%)
UKRI 2019 Delivery Plans

- The 2019-20 Delivery Plans highlight the areas of focus and key activities of UKRI’s nine constituent councils and its cross-cutting themes.

- The plans have been developed with input from across UKRI’s research and innovation communities and build upon the Strategic Prospectus, published in May 2018, which outlined UKRI’s vision, mission and values.
NERC Delivery Plan

- Recognises the transition to UKRI and NERC’s role within a new agile organisation
- Highlights the importance of interdisciplinary working and global partnerships to respond to environmental challenges
- Articulates NERC ambitions for the future and identifies eight priority areas
NERC Priority Themes

Environmental Solutions
- Champion the importance of environmental solutions in contributing to clean growth across UKRI, and create initiatives that meet this aim.

Productive Environment
- Promote research and innovation to enable a shift to a circular, resource-efficient economy, working with partners to translate research into effective business models.

Resilient Environment
- Increase understanding of environmental hazards, environmental change and their interactions, to plan for and manage vulnerability, risk, response and recovery.

Healthy Environment
- Increase understanding of the benefits of a healthy environment to health and wellbeing, and of feedback mechanisms between environmental systems and a healthy economy, society and culture.
NERC Priority Themes

Pushing the frontiers of understanding
- Maintain the UK’s considerable breadth of expertise across environmental science, to prepare for the unknown challenges of the future.

Global Environment
- Provide leadership in, and bring UK expertise to bear on, global challenges, aiding international development and responses to environmental emergencies.

Digital Environment
- Use cutting-edge technology to advance environmental outcomes, taking advantage of machine learning, miniaturisation, battery technology and wireless communications.

Best Environment for R&I
- Ensure a talent pipeline in environmental science that has the skills and expertise to resolve future unknown challenges and to lead and influence broad, systemic thinking for environmental solutions.
Generating strategic R&I programmes

Generate ideas
NERC SDP ambitions vs existing portfolio – gap analysis, Council priorities
Partnerships and opportunities – Executive engage and shape
Open portal for ideas – ‘Crowd-sourcing’?

NERC strategic R&I budget
- Strategic R&I programmes
  - AO based on Council priorities (Exec)
  - Assess proposals (Science Committee)
- Highlight topics (Science Committee)
- Partnerships & opportunities (Exec)

UKRI collective funds
- Open call for SPF prog ideas (Exec)
- Generate programme proposal then business case to UKRI (Exec plus ‘rotators’)

Strategic research and innovation

i. Strategic programme areas
Large scale complex programmes that take time to develop and deliver. Typically range in size from £5m to £20m depending on their scope and partnership funding.

ii. Highlight topics
Focus strategic research on defined topic areas. Can be worth up to £4m and last up to four years.

iii. Partnerships and Opportunity
Provides a timely response to opportunities for NERC to partner with other research funders. Size and scope will vary according to the opportunity.
New Cross Council funds

- **Strategic Priorities Fund (SPF)**
  - Support for new strategic priorities that aren't covered by other more specific funding streams
  - Incentivising inter-disciplinary work
  - Links to cross-departmental R&I priorities
  - NERC Priorities:
    - Clean Air; Landscape Decisions; Digital Environment; UK Climate Resilience
    - Space Weather (NEW – announced September 2019)

- **Fund for International Collaboration (FIC)**
  - UKRI and BEIS developing new International Research and Innovation Strategy
  - Focus initially on countries we have Science, Technology & Innovation agreements. £110m UKRI (2017 Autumn statement)
New Cross Council funds

- **Industrial Strategy Challenge Fund (ISCF)**
  - Launched 2017 following Industrial Strategy white paper
  - Industry led, Grand Challenge focus:
    - Clean Growth
    - Artificial Intelligence & Data Economy
    - Ageing Society
    - Future of Mobility
  - Wave 1 - £485m & Wave 2 - £725m
  - Wave 3 – Up to £500m: 9 shortlisted bids:
    - Industrial decarbonisation (£170m)
    - Manufacturing made smarter (£121m)
    - Smart Sustainable plastic packaging (£60m) – NERC led
  - Wave 4?
New Cross Council Funds

• **Strength in Places Fund**
  – Launched in 2018
  – Competitive £115m UKRI Fund (in partnership with devolved funding bodies).
    Run by UKRI team
  – Collaborations between universities, research organisations, businesses, local government and LEPs in England and relevant agencies in devolved nations.
  – Demonstrate strong impact on local productivity
Invest in talent and skills – approx. £34m core annual investment through several funding streams
Talent and Skills

**National Productivity Investment Fund (NPIF)**
- Additional studentships
- UKRI CDTs
- Innovation placements
- Industrial strategy short courses
- NPIF Fellowships

**Fund for International Collaboration (FIC)**
- MITACS – Canada Globalink exchange programme

Invest in talent and skills through collective funds – approx. £7m (variable per annum)
Working with you

• To facilitate and convene – help you to access the science
• To listen – what solutions can science help you deliver?
• To respond – help inform future R&I programmes

...over to you!