

The NERC/RCUK/UKRI Research Landscape

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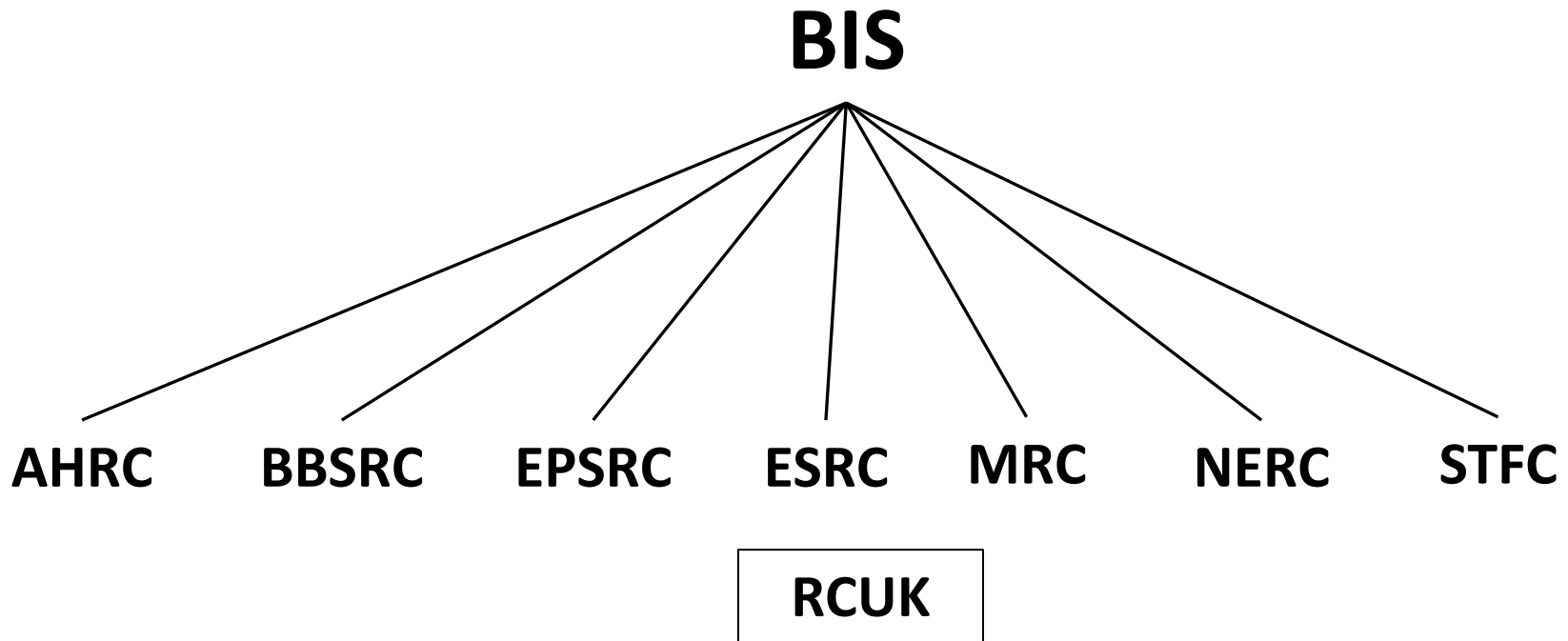


The NERC/RCUK/UKRI Research Landscape

- Introduction of UKRI – what does this mean?
- NERC strategy and Earth Science
- Routes to funding



Research Councils UK – past picture



Research Councils UK – moving to UKRI

BEIS

Innovate UK

HEFCE (research)

AHRC

BBSRC

EPSRC

ESRC

MRC

NERC

STFC

UKRI



UKRI – What we know

- UKRI will operate at arm's length from government - but the Minister will retain the ability to provide high-level direction on the allocation of funding;
- Appointments to the Board will be made by the Secretary of State;
- The majority of Board members will be non-executives;
- The Board will have responsibility for:
 - leading on overall strategic direction;
 - cross-cutting decision making; and
 - providing advice to the Secretary of State on the balance of funding between research disciplines.

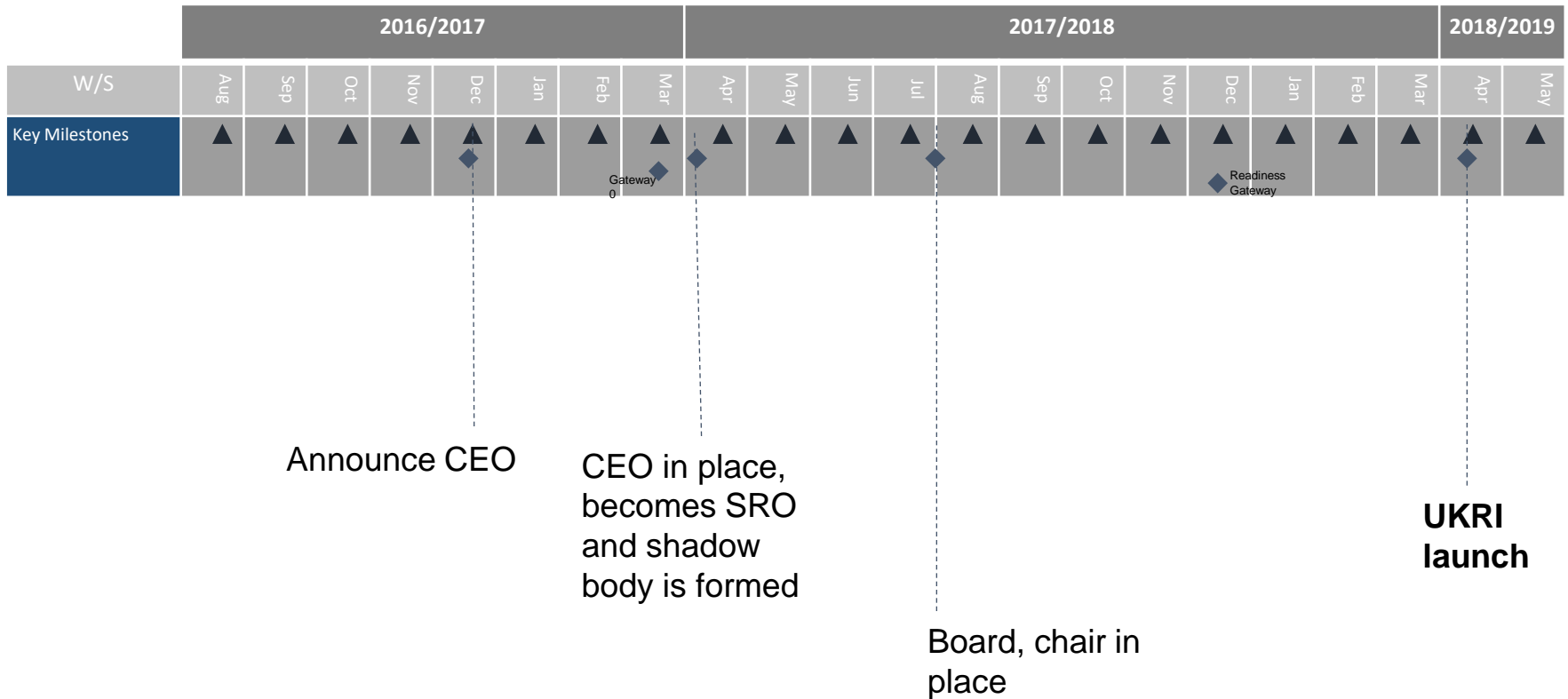


UKRI – What we know

- There will be **individual Councils for specific research discipline areas with delegated authority and autonomy;**
- Each Council will be led by an Executive Chair, reporting to UKRI's CEO and appointed by the Minister on the advice of the Board;
- Each Council will comprise 5-9 other experienced independent members appointed by the UKRI Board;
- The Secretary of State will set hypothecated budgets for each of the Councils, on advice from UKRI's Board, and will set out any funding flexibilities given to the Board



UKRI – timeline



Subject to change and parliamentary process

* The timeline between the launch of UKRI and the closure of existing bodies is yet to be determined. The timeline currently shown is an assumption.

UKRI

- There are still several areas that need clarity
- **NERC and other councils will maintain their 'identity'**
- Increased interface with other disciplines – more interdisciplinary research?



NERC Strategy and Earth Science





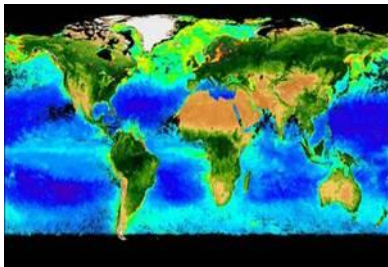
NERC vision

**To place
environmental
science at the
heart of
responsible
management of
our planet**



NERC goals

Fund excellent, peer-reviewed environmental science that helps us:



- understand and predict how our planet works
- manage our environment responsibly as we pursue new ways of living, doing business, escaping poverty and growing economies.



Meeting society's needs



- Benefiting from natural resources
- Resilience to environmental hazards
- Managing environmental change
- Discovery science



NERC funding

Discovery Science Research driven by curiosity - asking fundamental questions about the planet we live on.

Strategic Research Providing the understanding to meeting the challenges faced by society.

Innovation Translating world-leading science and skills for industry, government and the third sector.

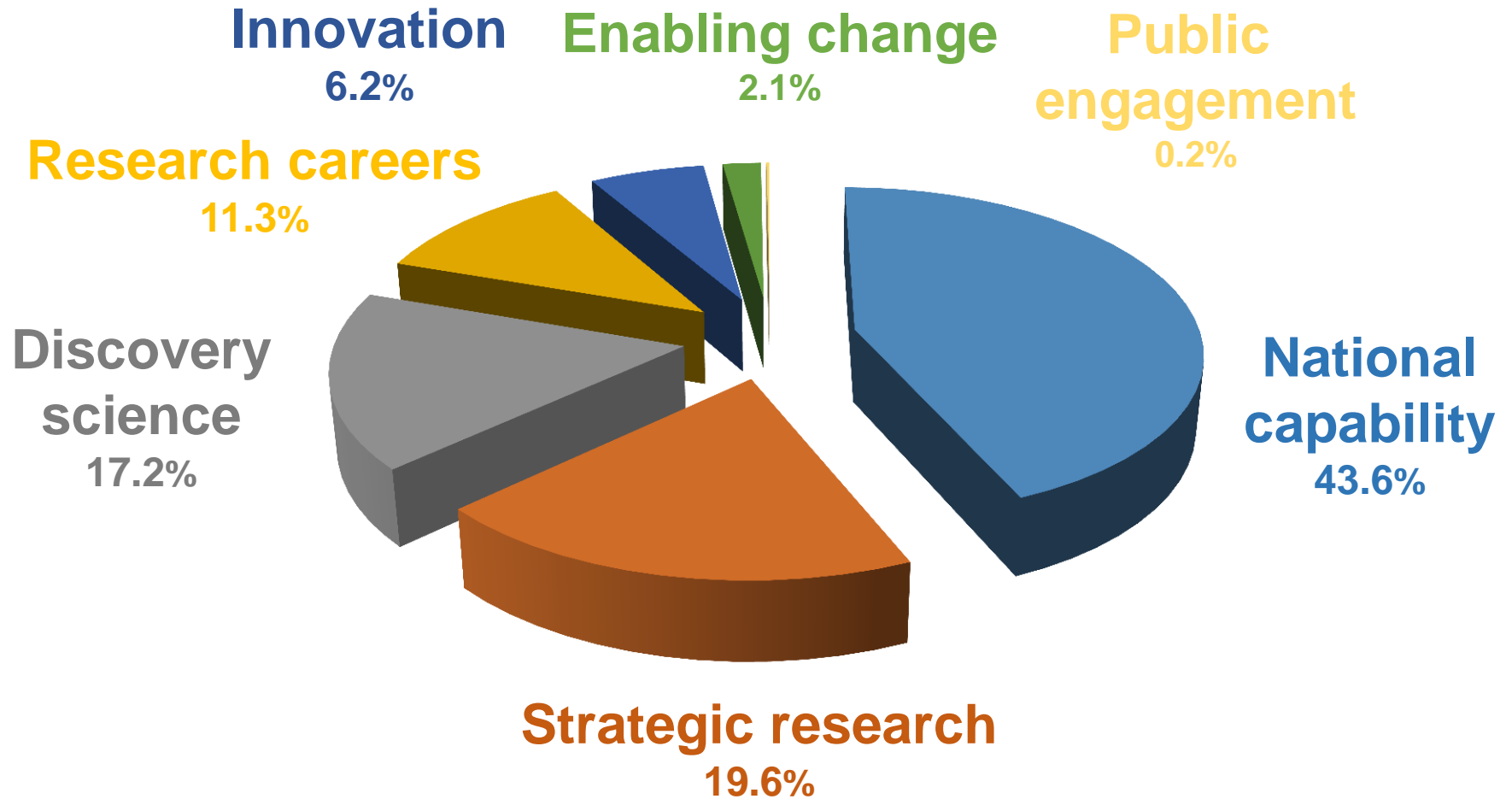
Training & Fellowships Developing outstanding scientists to become internationally recognised leaders in science, in academia, business, government, the public sector and civil society.

Capital Investing in new technologies, equipment, infrastructure, facilities and estates.

National Capability Research centres, ships, aircraft, polar stations, data centres, and community facilities



NERC's science budget 16/17



NERC remit

- NERC's remit includes earth, energy, atmospheric, terrestrial, marine, freshwater and polar sciences, science-based archaeology, and Earth observation.
- Earth Science is a core part of the NERC remit

...Not forgetting support and funding from other research councils...



Routes to Funding



Routes to Funding

- Strategic Research – NERC funding
- Industrial Strategy Challenge Fund (ISCF)
- Global Challenges Research Fund (GCRF)



Strategic research – three mechanisms

i. Strategic programme areas

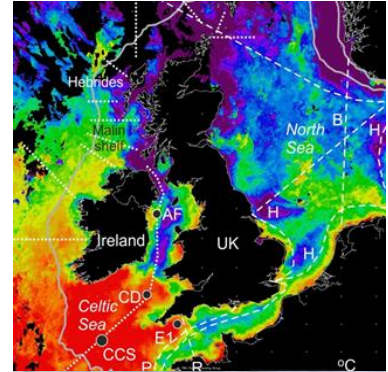
Large scale complex programmes that take time to develop and deliver. Typically range in size from £5m to £20m depending on their scope and partnership funding.

ii. Highlight topics

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

iii. Joint strategic response

Provides a timely response to opportunities for NERC to partner with other research funders. Size and scope will vary according to the opportunity.



Ideas

- **Ideas are scientific advances that will, over time, contribute to addressing the challenges in NERC strategy**
- Ideas can be sent to NERC at any time and can come from any individual or group
- NOT a proposal for research
- Call for ideas is always open with periodic cut offs
 - next HT idea cut off 16 May 2017
 - next SPA idea cut off to be announced
- Ownership of the idea transfers to NERC



Industrial Strategy Challenge Fund



One part of the Industrial Strategy

- **Industrial Strategy**
- Government has published the Industrial Strategy Green Paper which is open for consultation

- **Industrial Strategy Challenge Fund**

- Programmes delivered by the fund will be industry-led and powered by multi-disciplinary research and business academic collaboration.
- It will help identify and develop UK industries that are fit for the future, driving progress in technologies where the UK can become a world-leader in research and commercialisation.



Industrial strategy Challenge Fund

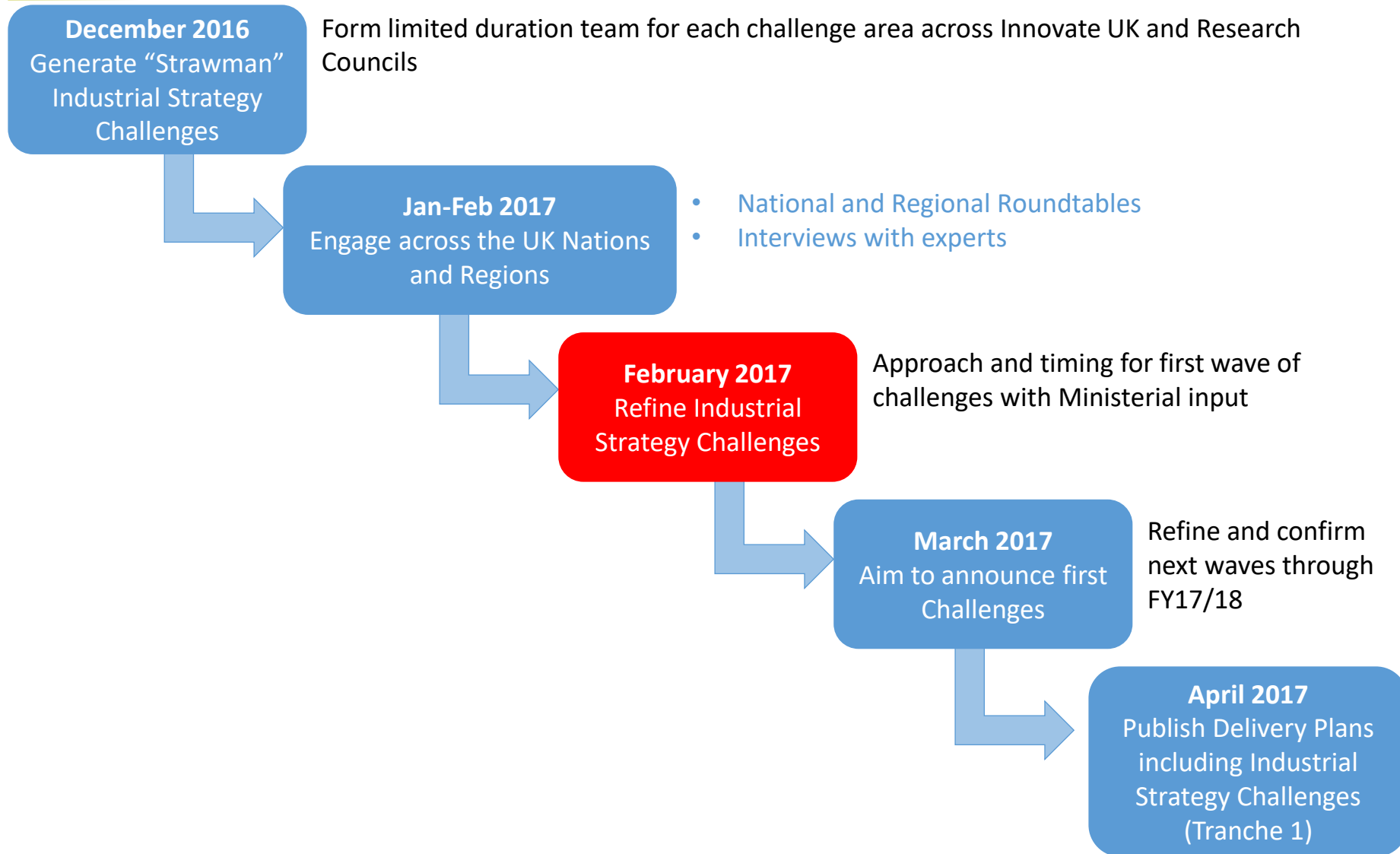


The Industrial Strategy Challenge Fund will focus on challenges where:

- the global market is potentially large, or fast growing and sustainable;
- the UK has capabilities to meet market needs in terms of research strength and business capacity;
- there are significant social and economic benefits; and
- there is evidence that government support will make a difference

ISCF will be delivered by RCUK and Innovate UK (and then UKRI)

Immediate timeline



Challenge Areas

Bioscience & Biotechnology

Increase UK self-reliance in food, energy and materials production.

Leading Edge Healthcare & Medicine

Improve patient outcomes through cutting-edge, personalised therapies and new antimicrobials and establish the UK as a world leader in the development and commercialisation of cell and gene therapies.

Manufacturing & Materials of the Future

Ensure that the UK leads the world in the sustainable manufacturing and delivery of the next generation of products and components.

New Energy Technologies

Become the global lead in solving the energy challenge of supplying clean, affordable energy securely to ever more-demanding societies around the world.

Quantum Technologies

To create UK economic wealth, and an economy that works for everyone, by overcoming challenges using next generation quantum technologies in areas such a sub-surface imaging, GPS-free navigation, advanced sensing and communications.

Robotics and Artificial Intelligence (RAI)

To create UK economic wealth, and an economy that works for everyone, by overcoming challenges using RAI technologies in areas such as hazardous environments, autonomous transport, health & social care and advanced decision making with AI.

Space and Satellite Technologies

To create UK economic wealth, and an economy that works for everyone, by overcoming challenges using satellite-based technologies in areas such communications, navigation and earth observation.

Transformative Digital Technologies

To create UK economic wealth, and an economy that works for everyone, by overcoming challenges using digital technologies such as data, AI/ML, cyber security, immersive, HPC, modelling and 5G.

Integrated & Sustainable Cities

Establish the world's best smart city demonstrator, introducing 5G technologies and applications, attracting global mobile companies to the UK.

Technologies for the Creative Industries

To create UK economic wealth, and an economy that works for everyone, by overcoming challenges to anchor and grow the UK creative sector and its contribution to wealth generation and society.

Industrial strategy Challenge Fund



**WATCH
THIS
SPACE....**

The NERC/RCUK/UKRI Research Landscape

- UKRI will continue to support the geosciences through NERC and other councils
- Earth Science is well supported by NERC and this will continue
- There will continue to be support from various funding routes (strategic programmes, ISCF)
 - Many of these are interdisciplinary in nature
 - We need to be responsive and willing to adapt