



Engineering and
Physical Sciences
Research Council

Welcome





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Research Council

The Engineering and Physical Sciences Research Council: Opportunities for Early Career Engineers

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CPE Conference July 2021

Outline

1 Introduction to UKRI

2 EPSRC: Who we are & What we do

3 Opportunities for Early Career Engineers





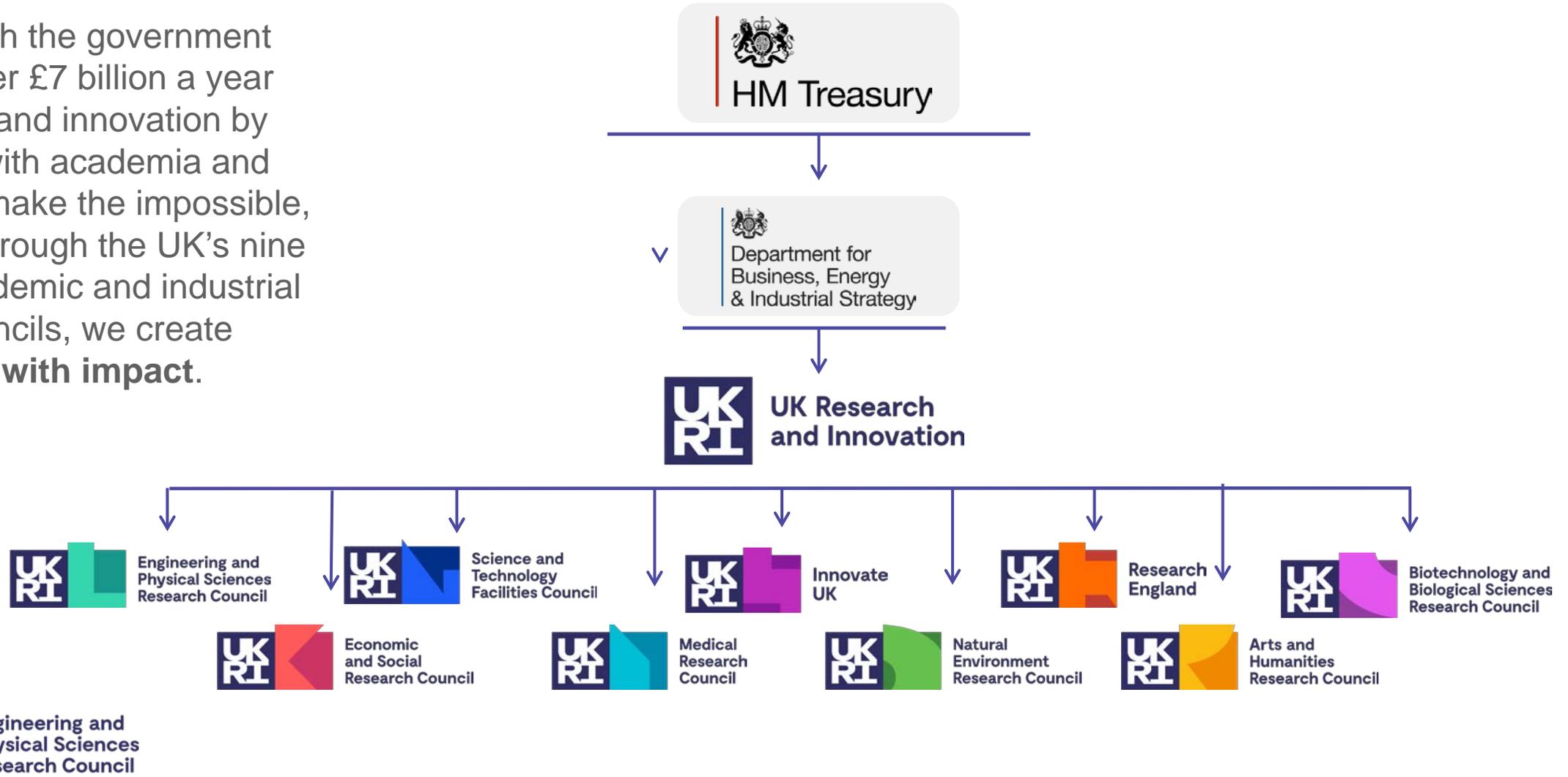
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Introduction to UKRI



UKRI

We work with the government to invest over £7 billion a year in research and innovation by partnering with academia and industry to make the impossible, possible. Through the UK's nine leading academic and industrial funding councils, we create **knowledge with impact.**



The story so far...



UKRI response to COVID-19

- Coronavirus has changed life for everyone and will be a factor for the foreseeable future
- UKRI has funded projects to address the key challenges of coronavirus, from understanding how the disease spreads, its impact on our bodies and how to treat it, to the widespread consequences that everyone is experiencing - from isolation, mental health and economic consequences. We are also supporting innovative businesses to create new ways of working
- Our research is informing the policy decisions being made, helping to limit the outbreak and to protect life and also to shape our recovery and rebuilding for the future

UKRI response to COVID-19

- Business as normal – we are still processing grants as per our usual processes
- Delay start dates – e.g. all EPSRC standard mode and fellowships applications can delay the start of their projects by 6 months
- Extensions – Costed Vs Non-costed
- CV-19 Rapid-Response Call

www.ukri.org/our-work/tackling-the-impact-of-COVID-19/

A screenshot of the UKRI website page titled 'Tackling the impact of COVID-19'. The page has a white header with the UKRI logo and navigation links: 'Apply for funding', 'Our work', 'News', 'About us', and 'Our councils'. A search bar is on the right. Below the header is a large red banner with a white graphic of a virus particle. The main content area is white and contains the following text:

Home > Our work > Tackling the impact of COVID-19

Tackling the impact of COVID-19

UKRI is supporting hundreds of projects that are addressing the key challenges of coronavirus: we have invested more than £400 million in new research and innovation, which tackles the COVID-19 pandemic and its many impacts on business, the economy and society.

This includes major breakthroughs such as:

- identifying the world's first treatments for COVID-19
- leading the global effort to find a vaccine
- accelerating the UK's vaccine manufacturing capacity.

We are also funding a diverse range of projects that address the wider consequences – from mental health issues to economic and environmental impacts – as well as helping innovative businesses through these tough times.

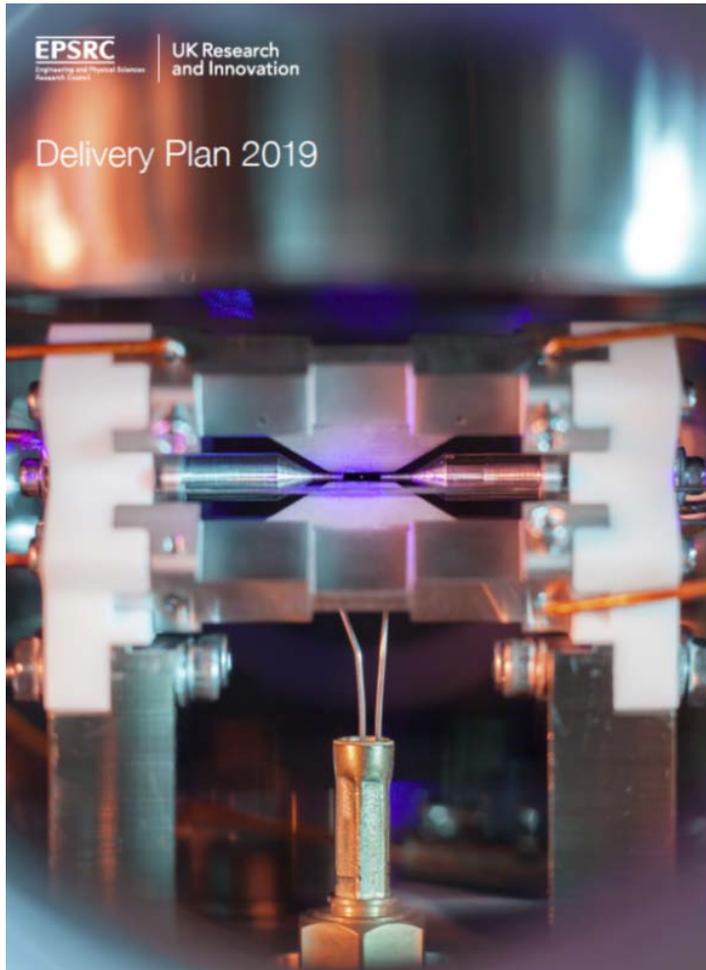
Our impact is built on the strength of the UK's world-class research base and the long-term support from our councils. This is a collective endeavour, with UKRI playing a key



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EPSRC: Who we are & what we do

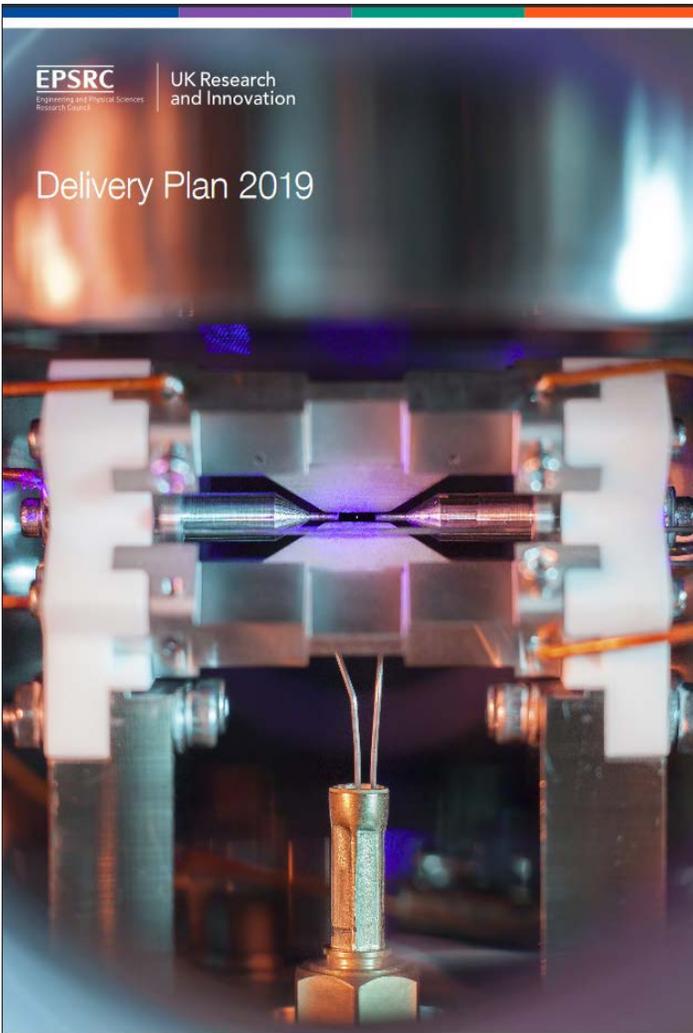
EPSRC's Vision: Delivery Plan 2019



To make the UK recognised as the place where the most creative researchers can deliver **world-leading engineering and physical sciences research**

To work within the research ecosystem of UKRI, the R&D base within business, SMEs, government departments, charitable organisations and international **partnerships** to identify and tackle new research challenges and **deliver societal and economic impact** from our research base

To build on our **strong working partnerships with business** to play a leading role within UKRI, particularly working in **partnership with IUK**, in delivering economic prosperity to the UK (and hence the government's target of 2.4% of GDP invested in R&D by 2027)



EPSRC
Engineering and Physical Sciences
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UK Research
and Innovation

Delivery Plan 2019

EPSRC Strategic Delivery Plan: The Priority Framework

Delivering economic impact and social prosperity



Productive
Catalysing growth



Connected
Enhancing future digital technologies



Healthy
Transforming healthcare



Resilient
Ensuring adaptable solutions

Realising the potential of engineering and physical sciences



#1
Promoting excellence in research



Realising excellence in people



Connecting the research landscape to accelerate impact



Enhancing business engagement

Enabling the engineering and physical sciences to deliver



Managing our portfolio and priorities



Future-proofing state-of-the-art research infrastructure



Accessing talent through equality, diversity and inclusion



Inspiring, attracting and interacting with the public

**Discovery Research
in Engineering and Physical Sciences**

UK
RI

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EPSRC's Vision: Beyond 2020-21

We aim to make the UK the global destination of choice for the highest quality and most creative researchers to deliver world-leading engineering, mathematical and physical sciences research.

Engineering Net Zero for a Resilient Future

The Physical and Mathematical Sciences Powerhouse

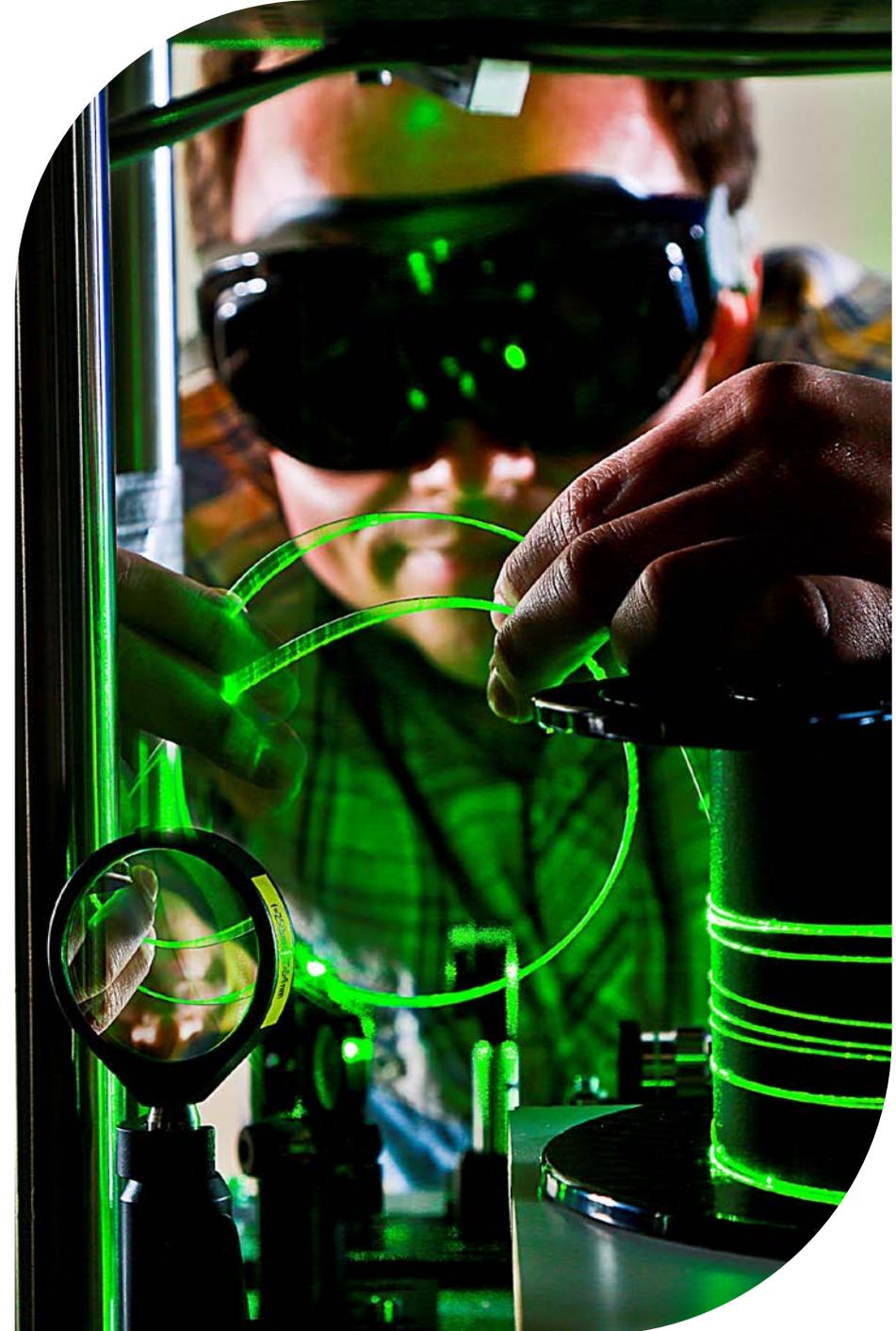
Future Computing Paradigms

AI, Digitalisation and Data

Frontiers in Engineering and Technology

Transforming health and healthcare

Through these priorities we will ensure that the engineering and physical sciences community fully play their part in building back a better post-Covid world.



EPSRC

4 Directorates - Our directorates are the key route by which we define and deliver specific aspects of our mission. Teams regularly collaborate across directorates and no team or directorate works in a silo. For example, we often have cross directorate teams where there is a specific need (such as delivery of funding for Covid-19 initiatives).

RESEARCH BASE

EDI & People

Engineering

ICT

Infrastructure

Managing our Portfolio

Materials

Mathematical
Sciences

Physical
Sciences

CROSS COUNCIL

AI &
Robotics

Circular
Economy

Digital
Economy

Digital Twins

Energy and Decarb

Healthcare
Technologies

Manufacturing
the Future

Quantum
Technologies

PARTNERSHIPS

Business Engagement &
Partnerships

Impact

International

Regional Engagement

Universities

OPERATIONS



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Governance & Planning

Business Improvement

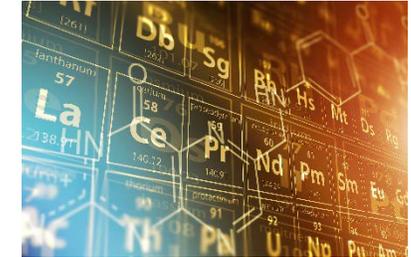
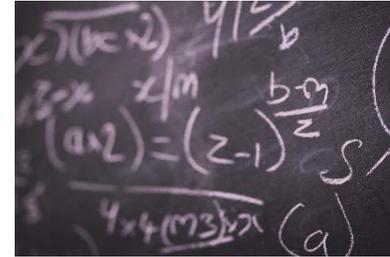
Performance & Evaluation

A snapshot of EPSRC's areas

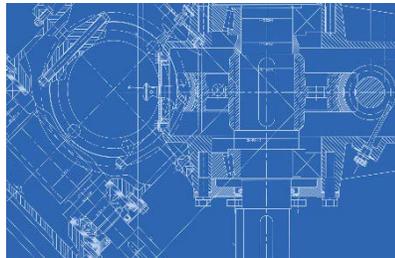
materials



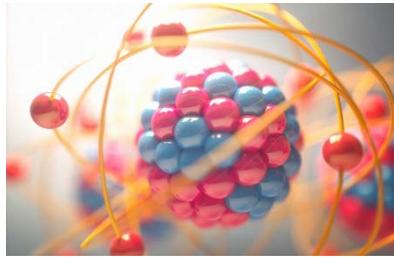
mathematics



engineering



physics



healthcare technologies



digital economy



cybersecurity



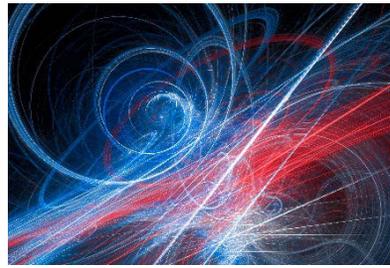
AI & robotics



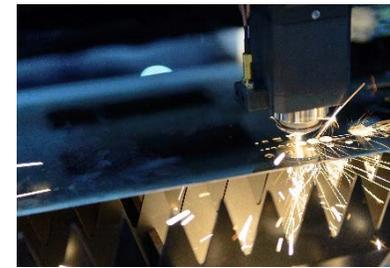
ICT



quantum technologies



manufacturing



energy & decarbonisation



EPSRC Remit

- Our remit covers engineering and the physical sciences: we fund research into chemistry, engineering, information and communications technologies, materials, mathematical sciences and physics.
- Though we do not have restrictions on application areas, the majority of research we support must be in engineering and the physical sciences.

Funding Opportunities by career stage

Career Stage	On-going Funding Opportunities
Postdoctoral Researchers	Postdoctoral Fellowship Researcher Co-I Named PDRA on an EPSRC grant
New Academics	New Investigator Award Open Fellowship Standard Grant
Early Career	Open Fellowship Standard Grant
Established Career	Open Fellowship Standard Grant Programme Grant

EPSRC Funding Opportunities

Investigator-led Research

New Academic:

Standard Grant
New Investigator Award

Previously Applied:

Standard Grant
Programme Grant
Prosperity Partnership
(business-led)

Develop Collaborations:

NSF Lead Agency
Network Grant
Workshop Grant
Overseas Travel Grant

Develop as a Leader:

Fellowship

Equipment:

Strategic Equipment Grant

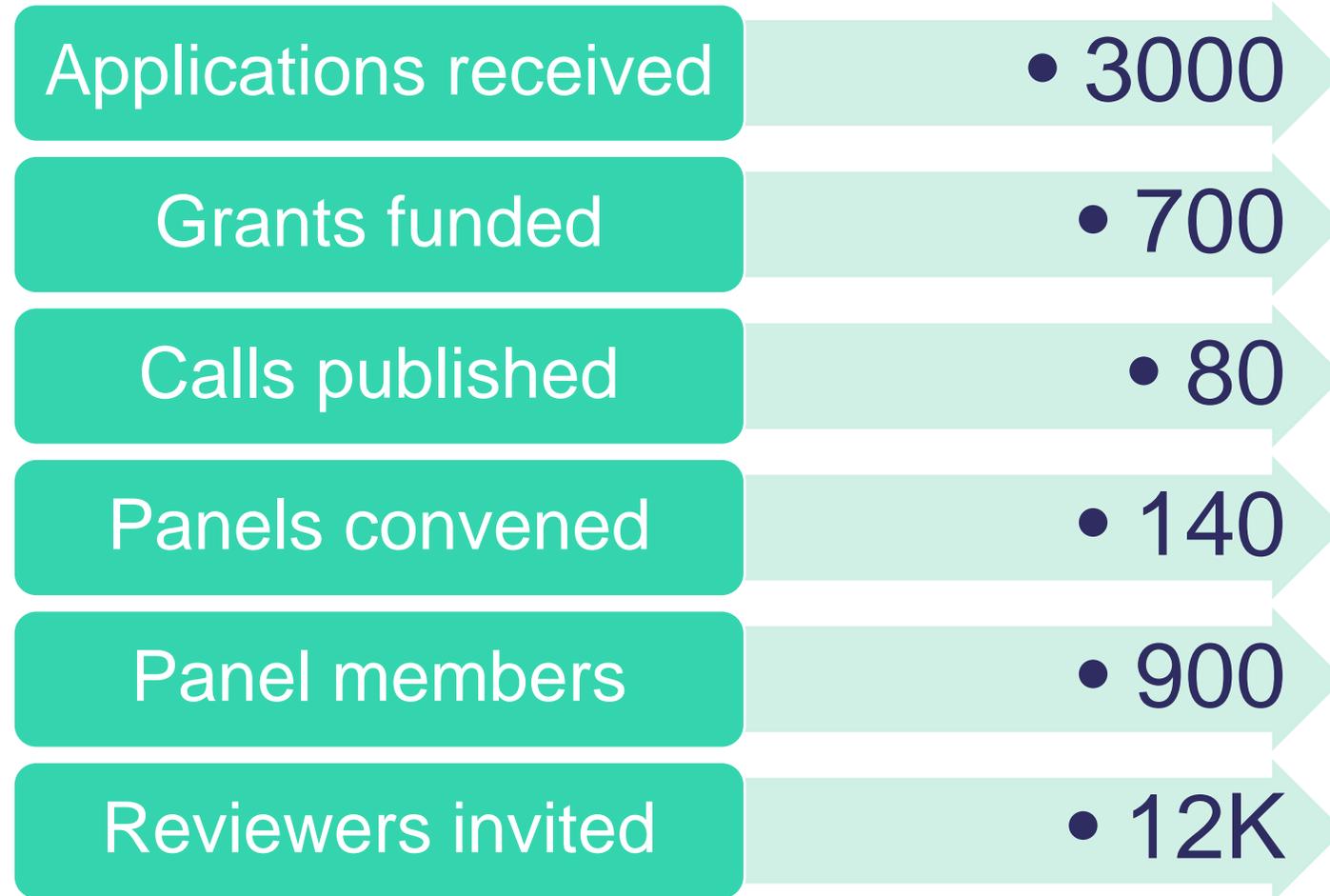
Doctoral training:

Doctoral Training Partnership (DTP)
Centre for Doctoral Training (CDT)
Industrial Cooperative Award in
Science and Engineering (ICASE)

Strategic funding:

EPSRC Calls
UKRI Calls

The scale of the task*





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Opportunities for Early Career Engineers



New Investigator Awards

To support **newly appointed academics** get a grant early in their academic career

- Aims to support individuals who hold an academic lectureship position, have **not previously led** an academic research group or been the recipient of a significant grant.
- Project duration should be appropriate to deliver the objectives (typically **1-3 years**). PDRA time (1-3 years) can be requested if required to deliver the project vision.
- It should demonstrate your establishing an independent research group. **Co-Is from your own department are therefore prohibited.**

No closing date

NIA Eligibility Requirements

- The application to the New Investigator Award scheme must be the applicants first to EPSRC as a Principal Investigator with the following exceptions:
 - Industrial CASE Studentship
 - Overseas Travel Grant
 - EPSRC Studentship (through DTP or CDT)
 - Workshop Grant
 - Proposal that was rejected at the outline stage.

NIA Eligibility Requirements Contd.

- Investigators must be academic employees (lecturer or equivalent) of an eligible organisation
- Eligible organisations include all UK higher education institutions that receive grant funding from one of the UK higher education funding bodies, a number of research institutes, NHS bodies with research capacity and UKRI approved independent research organisations and Public Sector Research
- If you have a fixed-term appointment, you are eligible providing your contract extends beyond the end date of the proposed research and your host research organisation provides you with the support they would normally offer a permanent employee
- Current holders of postdoctoral level fellowships are not eligible to hold EPSRC research grants.
- If you are employed in a staff post on a research grant, you are not eligible to be a Principal Investigator unless you hold an early career fellowship and your University gives you the same stature as a permanent academic member of staff.
- Applicants must be resident in the UK

Host Organisation Statement

- Describes the university's commitment to developing the applicant's research career
- Commitment should be over and above salary, premises etc.
- Confirms the applicants appointment details
- Provides detailed explanations of:
 - applicant's fit within departmental strategy
 - support for applicant's progression
 - host organisation appraisal process
 - evidence for applicant's ability to manage resources
 - support over and above standard career development
- Insufficient host support may jeopardise application

Standard Research

Flexible funding route which supports a wide range of research programmes: including feasibility studies, instrument development, equipment to support a number of research projects, overseas travel grants, and long-term proposals to develop or maintain critical mass

- No limit on the value or length of the grant – maximum or minimum.
- No constraint on the field of research, providing the majority of it falls within our remit.
- Things to consider:
 - High Risk/High Return proposals are encouraged.
 - Embracing new concepts or techniques.
 - We actively encourage the involvement of collaborators from industry, commerce or other organisations on research base funding research proposals.

No closing date

Fellowships

- EPSRC's New Open Fellowship Scheme
 - Provides applicants with the flexibility and freedom to design a fellowship that works for them
 - Provides support for personal development and training
 - Can be across any topic in the EPSRC portfolio
 - To deliver high quality research with a focus on discovery science, innovation, instrumentation/technique development or software engineering (or a combination)
 - Visit <https://epsrc.ukri.org/skills/fellows/overview/> for more details

To get involved....

- Express interest in joining EPSRC Peer Review College (self-nomination)
 - Actively seeking members from minority ethnic communities
- Apply to join EPSRC Early Career Forums
 - Manufacturing
 - Mathematical Sciences
 - Engineering
- Participate in EPSRC Workshops/Strategy Development
- Apply to represent the wider community on EPSRC Strategic Advisory Teams (SATs) – currently open

Engineering Early Career Forum

The Purpose of the ECF:

- To identify and support promising early career engineers
 - These can be academics, from industry, or research users (such as policymakers or from the third sector)
- To act as an informal advisory stream to EPSRC
 - Offer insight on key strategies, plans and activities
- To have advocates of EPSRC in the early career community, proactively raising issues and disseminating information in both directions
- To be key source of information for the challenges that face the early career community

Engineering Early Career Forum

Forum expectations:

- To act as a “generous generalist”
- To consult the community as appropriate, and inform the community of EPSRC activities and strategies
- To take ownership of the Forum, including the suggestion of items for discussion alongside EPSRC’s topics
- To adhere to the Seven Principles of Public Life (e.g. integrity, objectivity, openness and honesty) and general ‘zoom etiquette’
- To attend 2-3 meetings per year and engage with EPSRC



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Thank you



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