Introduction to EPSRC and Impact
“I still say basic research is what matters in the long run.”
Discover
EPSRC discovery-led research

Understand
EPSRC user-inspired research
EPSRC Centres

Integrate
Industrial research & technology programmes

Validate
Innovate UK research and challenge programmes
EPSRC Centres

Deploy
EPSRC Centres for Doctoral Training
EPSRC Industrial Doctorate Centres
EPSRC Fellowships
Innovate UK Catapults
Industrial research centres
Product-specific programmes

The UK Innovation Landscape
EPSRC is at the heart of discovery and innovation.

We invest in long-term, fundamental engineering and physical sciences research and training in the UK.

Committed to excellence and impact, we support the talented scientists, engineers and postgraduate research students who through their research, discover new knowledge, explore new ways of thinking and drive innovation.

Our research ranges from physics, chemistry and mathematics to materials, computing and engineering.

Our research provides underpinning knowledge that informs other fields such as the life and medical sciences.

Our research places the UK as a leading global research nation. It saves lives, creates prosperity, protects the environment and inspires future generations.
What EPSRC looks like
The Living With Environmental Change (LWEC) theme involves 22 partners across government that fund environmental change related research.

Partners work together across six challenge areas of **climate**, **ecosystems**, **resources**, **health**, **infrastructure** and **society** with the ambition of providing government, business and society with the knowledge, tools and foresight to be able to adapt to, mitigate and capitalise on environmental change.

The role of engineering and the physical sciences is particularly important in enabling progress in areas such as resilient **national infrastructure**, **water security** and protection against high impact extreme events, including **flooding**.
Science for a successful nation

PRODUCTIVE NATION
The future competitiveness of the UK economy requires the successful development of world leading products, processes and technology based on the discovery and innovation in the engineering, ICT, mathematical and physical sciences.

CONNECTED NATION
The UK’s success will be driven by whole new industries and services, as yet unimagined, as well as new, more cost effective ways of delivering existing services through the development of transformational technologies to connect people, things and data together, in safe, smart, secure, trustworthy, productive and efficient ways. This will drive growth across all regions and sectors of the UK. This will rely on discovery and innovation in mathematics, computing, engineering and physical sciences and is essential to deliver a knowledge economy.

HEALTHY NATION
A healthier society will be more productive and resilient, and better able to manage the impacts of an ageing population. Innovative technologies, will enable transformative improvements in the prevention, diagnosis and treatment of illness. This research will deliver higher quality care and better patient outcomes, will reduce the cost of healthcare and will drive UK growth.

RESILIENT NATION
Safeguarding our way of life requires an ability to anticipate, adapt and respond to changes, natural or man-made, short or long-term, local or global. UK prosperity depends on the smooth and sustainable functioning of complex infrastructures: roads and railways; communications networks; water, energy and waste utilities. Engineering, mathematics, ICT and physical sciences can lead the new thinking and innovation needed to build a truly resilient nation for the future.
Two goals……

RESEARCH and DISCOVER

RESEARCH and INNOVATE

Three strategies…..

Balancing capability

Building leadership

Accelerating impact

One vision……

Our vision is for the UK to be the best place in the world to research, discover and innovate

https://www.epsrc.ac.uk/newsevents/pubs/strategic-plan-2015/
Topics

- Why Impact?
- Why write a Pathway to Impact?
- Recent Changes to Pathways to Impact at Panel
WHY IMPACT?
The objects for which the Council is established and incorporated are:

- to promote and support, by any means, **high-quality basic, strategic and applied research** and related **post-graduate training** in engineering and the physical sciences;

- to advance knowledge and technology (including the promotion and support of the exploitation of **research outcomes**), and provide trained scientists and engineers, which meet the needs of users and beneficiaries **thereby contributing to the economic competitiveness of Our United Kingdom and the quality of life**;

- in relation to the activities as engaged in by the Council under (i) and (ii) above and in such manner as the Council may see fit:
  - to generate public awareness;
  - to communicate research outcomes;
  - to encourage public engagement and dialogue;
  - to disseminate knowledge; and
  - to provide advice.
A few other reasons to consider Impact

Some answers we have been given by various people in the Engineering and Physical Sciences Community:

- Be accountable to the use of public money.
- Be proud of the research you do.
- Be an advocate to the government and other stakeholders for what you have achieved using EPSRC (and collaborators) money.
- Be a legacy so that others can develop your research outputs.
- Be ready to see where else your research idea could lead you.
WHY WRITE A PATHWAY TO IMPACT?
Isaac Newton struggles to write the economic impact section of his ‘gravity’ proposal.
IMPACT IS A GROWTH JOURNEY.....
Consider Impact at the beginning

Pathways to impact should be part of the **earliest consideration** for a research grant.

Consideration of potential impact should be core to developing the proposal.

**But remember:** Academics do not usually deliver impact, but we do need to ensure it is visible.
Examples of eligible costs:
- People exchange
- Investigator time
- Training for RA’s
- Workshops, seminars, networking and engagement events
- Public Engagement costs (which are specifically relevant to the project)
- Anything that is eligible under FEC as long as it is specific to the project and is justified....
- Not patent and IP costs.
Some Examples of Impact

- Further Research – citations, invited presentations etc.
- Economic – cost savings, new businesses, additional sales
- Policy – legislation
- Environmental – energy saving, reduced emissions, resource use, flood management
- Societal- education, poverty relief, safeguarding children, healthcare, security
Insights from the Reviewer Guidance

We ask reviewers to comment on:

- How complete and **realistic** are the identified impacts?
- How **effective** are the identified activities and resources to realise the impact?
- How relevant and **appropriate** are the beneficiaries and collaborators?
- How **convincing** is the described impact activity?

*Note that Impact and National Importance are two separate concepts....*
National Importance or Impact?

**National importance:**
- Encourage applicants to articulate why it's important for their research to be supported by the UK taxpayer so that the UK remains internationally competitive.
  - why the research might benefit the UK economy,
  - why it may lead to advances in a different academic discipline,
  - why it's important that an internationally leading group continues to be supported.

**Impact:**
- Focuses how you might accelerate the route to making it happen
  - what activities are you proposing to ensure that the potential beneficiaries have the opportunity to benefit?
  - Impact is about who the beneficiaries of the research might be and how you are going to work with them to shorten the time between discovery and use of knowledge.
“I see journal articles, patents, legal fees and then... nothing.”
PATHWAYS TO IMPACT – CHANGES IN APRIL 2015
RCUK has harmonised its approach with respect to Pathways to Impact (PtI) in order to emphasise the importance of a strong PtI document as part of a good research proposal.

From 1\textsuperscript{st} April 2015, the following principle will apply to all RCUK research proposals:

“A clearly thought through and acceptable Pathways to Impact is an essential component of a research proposal and a condition of funding. Grants will not be allowed to start until a clearly thought through and acceptable Pathways to Impact statement is received.”

Guidance to applicants on what a carefully considered PtI statement should include is available on our website.
Proposals will be reviewed as usual by postal peer review

At panel, introducers should comment on the proposals as usual providing a score for impact which reflects the reviewer comments

Ranking of proposals should continue as usual using secondary criteria where two proposals are ranked with equal quality/excellence of research

The panel chair should pose specific questions to the panel as outlined by EPSRC to facilitate discussions about all aspects of the proposal

This discussion should deem if a Pathways to Impact statement is acceptable.
Once funding decisions have been made, if a proposal that is to be funded has an unacceptable Pathway to Impact (PtI), the applicant will be emailed.

The applicant will need to submit a new PtI to EPSRC. No further funds can be requested for Pathways to Impact activities at this stage.

The updated PtI will be emailed to the Panel Chair (or suitable Introducer) for approval.

If the updated PtI is not received, the grant will be suspended until it has been received.

https://www.epsrc.ac.uk/funding/howtoapply/preparing/writing/resourcesimpact/
The research grant application process.
The Peer Review Process

Proposal → Portfolio Manager → Reviewers: One from Proposer Two (from College) → EPSRC College → PI Response → Supportive

Unsupportive → Rejection

Peer Review Panel → Rank Order

Supportive → Budget from Council → Theme Lead → Fund

Not Fund
STANDARD GRANTS

Who can apply?

Anyone who is **eligible** to hold an EPSRC grant

When can I apply?

There is **no deadline**. You may submit proposals anytime but they are batched 3-4 times a year

What areas can I apply in?

Open to **any topic** with EPSRCs remit

What are the key features?

- There are **no limits** on duration or resources.
- You may request the package of resources necessary to complete the research

Myths and Misconceptions

- Cheaper grants are more likely to be funded
- There is an ideal time span for a grant
- Only safe grants get funded
- EPSRC can’t handle multidisciplinary proposals
- Some areas are more fundable than others
FIRST GRANTS

Who can apply?

The scheme has eligibility criteria, which include:
- Be within 10 years of completing your PhD
- Be with 36 months of your first UK academic appointment
If in doubt check your eligibility with us

When can I apply?

There is no deadline. You may submit proposals anytime but they are batched 3-4 times a year

What areas can I apply in?

Open to any topic with EPSRCs remit

Any hints or tips?

- Know when the next panel is so you can time your submission appropriately
- Think carefully about what you want to achieve from your first grant
- You don’t have to apply for a first grant, if the scheme constrains what you want to do apply elsewhere!!

What are the key features?

- Has to be your first application to EPSRC
- Capped at £125k full economic costing
- Limited to 2 years in duration
- First grants are only compared to other first grants at panel
OVERSEAS TRAVEL GRANTS

Who can apply?
Anyone who is **eligible** to hold an EPSRC grant

When can I apply?
There is **no deadline**. You may submit proposals anytime but they are batched 3-4 times a year in the Mathematical Sciences Theme

What areas can I apply in?
Open to **any topic** with EPSRCs remit

What can I ask for?
As well as **travel and subsistence costs**, the PI can request funds to cover **salary and indirect costs**. You cannot request estate costs.

What are the key features?
- Provide funding for **international** travel and subsistence to develop collaborations
- Usually **only a PI**
- No longer than 12 months on a single visit
- Has to be outside of UK

Any hints or tips?
- **Funding cannot be back dated** so think carefully about timings- recommend minimum of 16 weeks prior to travel.
- For smaller grants there may be the **option to fund outside of prioritisation panels** if reviews are sufficiently supportive, but this cannot be guaranteed.
WORKSHOP GRANTS

Who can apply?
Anyone who is eligible to hold an EPSRC grant

When can I apply?
There is **no deadline**. You may submit proposals anytime but they are batched 3-4 times a year in the Mathematical Sciences Theme.

What areas can I apply in?
Open to **any topic** with EPSRCs remit

What can I ask for?
Investigator time (PI and up to 1 CoI only), administrative support, travel and subsistence for keynote speakers, Venue hire, reasonable catering costs.
Up to 10% of the total cost may be used towards student support. EPSRC funded students must be given priority

Any hints or tips?
- Should focus on shaping future research directions or bringing together people from different disciplines
- Small number of participants (max 60)

Occasionally calls are publicised in specific areas, these have a deadline and may have additional criteria

- Check our [funding for workshops guidance](#), as proposal documentation is slightly different to standard grants
NETWORK GRANTS

Who can apply?

Anyone who is eligible to hold an EPSRC grant

When can I apply?

There is no deadline. You may submit proposals anytime but they are batched 3-4 times a year in the Mathematical Sciences Theme.

What areas can I apply in?

Open to any topic with EPSRCs remit

What can I ask for?

Investigator time (PI and up to 1 CoI if appropriate), travel and subsistence for members, workshops, administrative support

No funds for research-related activity.

What are the key features?

- Objective is to create new interdisciplinary research communities
- Limited to 3 years funding
- Funding will not be renewed beyond the original grant length

Any hints or tips?

- Check our guide to best practice for network grants to get a better idea of the principles behind network grants

Occasionally calls are publicised in specific areas, these have a deadline and may have additional criteria.
FELLOWSHIPS

Who can apply?

There are no eligibility rules in terms of postdoctoral years. The scheme has **three defined career stages** each with a **person specification**.

What areas can I apply in?

You may **only apply in certain priority areas**. Please note not all priority areas are open to all career stages. See next page for details.

What can I ask for?

- **A person specification** element to assessment
- The peer review process has an **additional interview stage** for shortlisted candidates
- **Flexible on the amount of time** you can request

When can I apply?

There is **no deadline**. You may submit proposals anytime but they **are batched twice a year** in the Mathematical Sciences Theme.

Resources available **differ by career stage**.

Key differences are:

- Postdoctoral fellowships are limited to 3 years and do not provide for staff. Early and Established may be up to 5 years in duration

Any hints or tips?

- Applicants can put any **start date** within a year of their submission, this is important to postdocs
Relevant Open Fellowship Areas

Engineering for Sustainability and Resilience- Post Doc and Early Career

Water Engineering – Early Career

End-use Energy Demand- Post Doc and Early Career

Complexity Science – Post Doc.

LWEC?
“Is it just me or are these review panels getting a lot tougher?”
http://www.ifm.eng.cam.ac.uk/research/grant-writers-handbook/cartoons/

All cartoon images © Eoin O'Sullivan
Thank You

david.holtum@epsrc.ac.uk