UK Research
and Innovation

Assessing UKRI's impact

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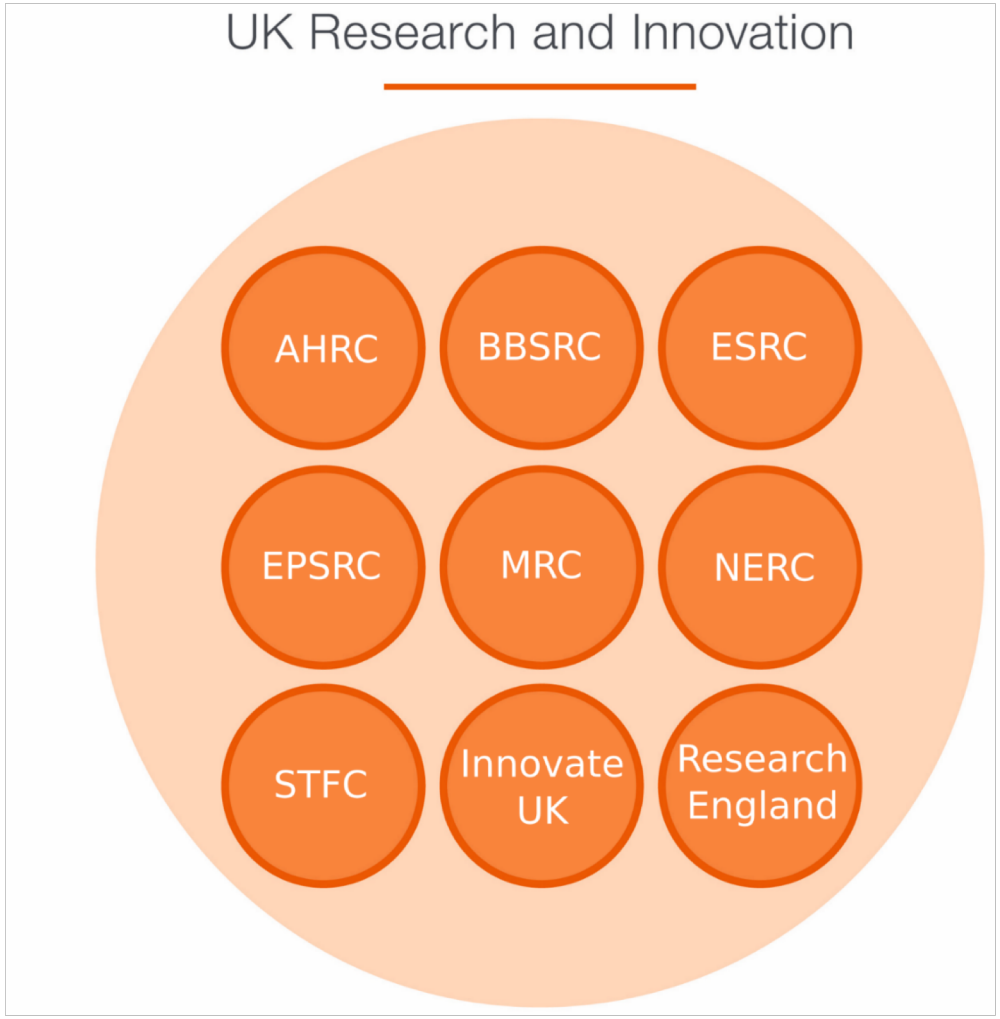
What I will cover

- What is UKRI, and what is its mission?
- Why is understanding UKRI's impact critical?
- What are the challenges to understanding R&I impacts?
- How does UKRI define and measure impact?
- What role does (or can) Researchfish data play in assessing UKRI's impact?

What is UKRI, and what is its mission?

What is UK Research and Innovation?

UK Research and Innovation is a new body which works in partnership with universities, research organisations, businesses, charities, and government to create the best possible environment for research and innovation to flourish. We aim to maximise the contribution of each of our component parts, working individually and collectively. We work with our many partners to benefit everyone through knowledge, talent and ideas.



The Numbers

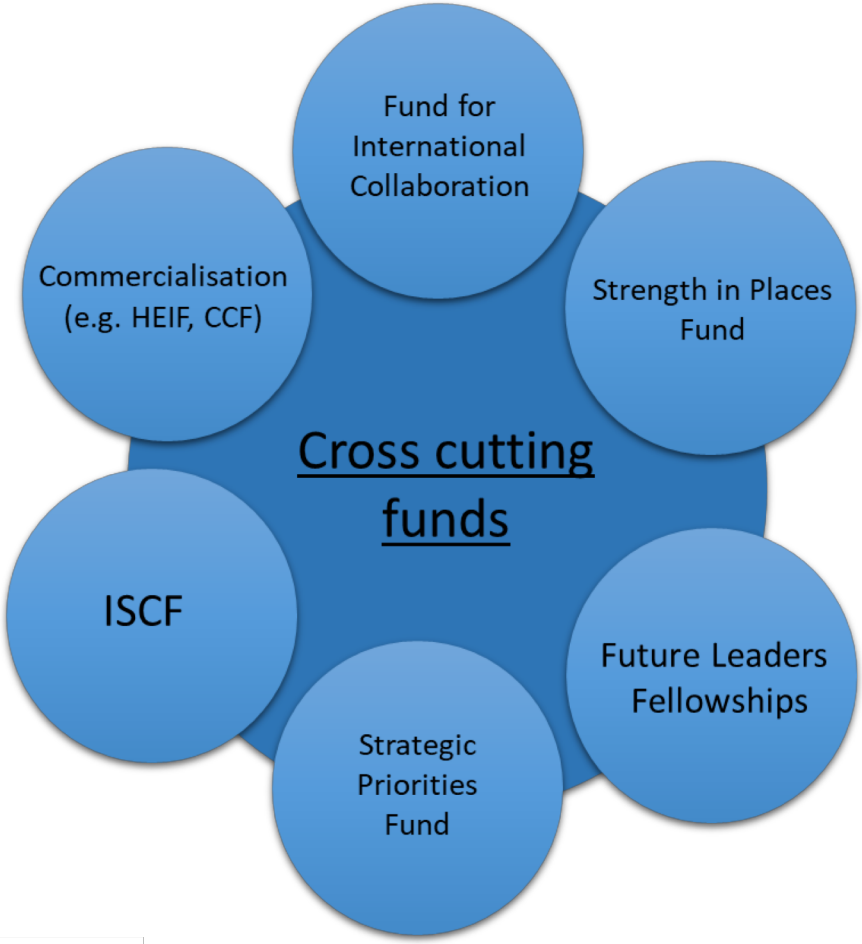
- UKRI has a **combined budget of around £7bn** per year
- **3,900** research and business grants issued every year
- **151** universities receiving research funding
- **38** institutes, laboratories, units, campuses and innovation catapults

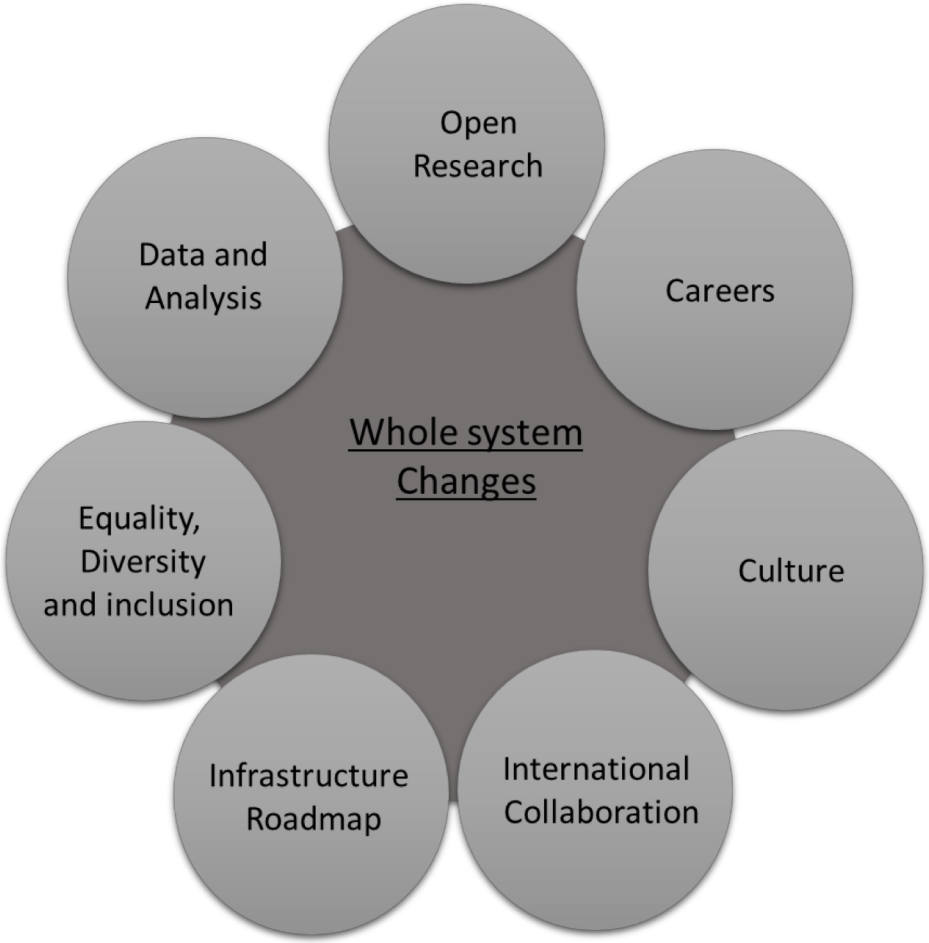
Mission

UK Research & Innovation: benefiting everyone through knowledge, talent, and ideas.

Early Priorities for UKRI

Delivering UKRI's vision and the Government target of 2.4% of GDP spend





Why is understanding UKRI's impact critical, and how are we approaching this?

Understanding UKRI's impact is critical, enabling us to develop more effective policy for research and innovation support

In the narrowest sense, understanding the impact of UKRI is vital to:

1. Demonstrate value for money of public investment in R&D
2. "Make the case" for continued or increased funding for R&D
3. Inform policy/funding decisions

By obtaining a rich, reliable understanding of its impact, UKRI can use this evidence base to greater effect, including to:

- effectively drive developments in the R&I landscape;
- take risks in order to pick 'winners';
- evaluate what works and what does not work;
- assess whether a programme is VfM;
- exploit and build on previously funded programmes.

The challenges in evaluating the impact of research are well-understood; effective ways of overcoming them less-so

- Additionality
- Deadweight
- Displacement
- Lagged effects
- Low observability of impacts
- Fluidity of researchers, businesses and innovators

Experimental, quantitative evaluation methods can be used to 'get at' the additionality, deadweight and displacement obstacles

They cannot overcome the fact that basic ('fundamental') research often has lagged, marginal (though crucial) impacts which are difficult to track

There are some positive examples of experimental and quasi-experimental evaluation within UKRI, largely of innovation support programmes

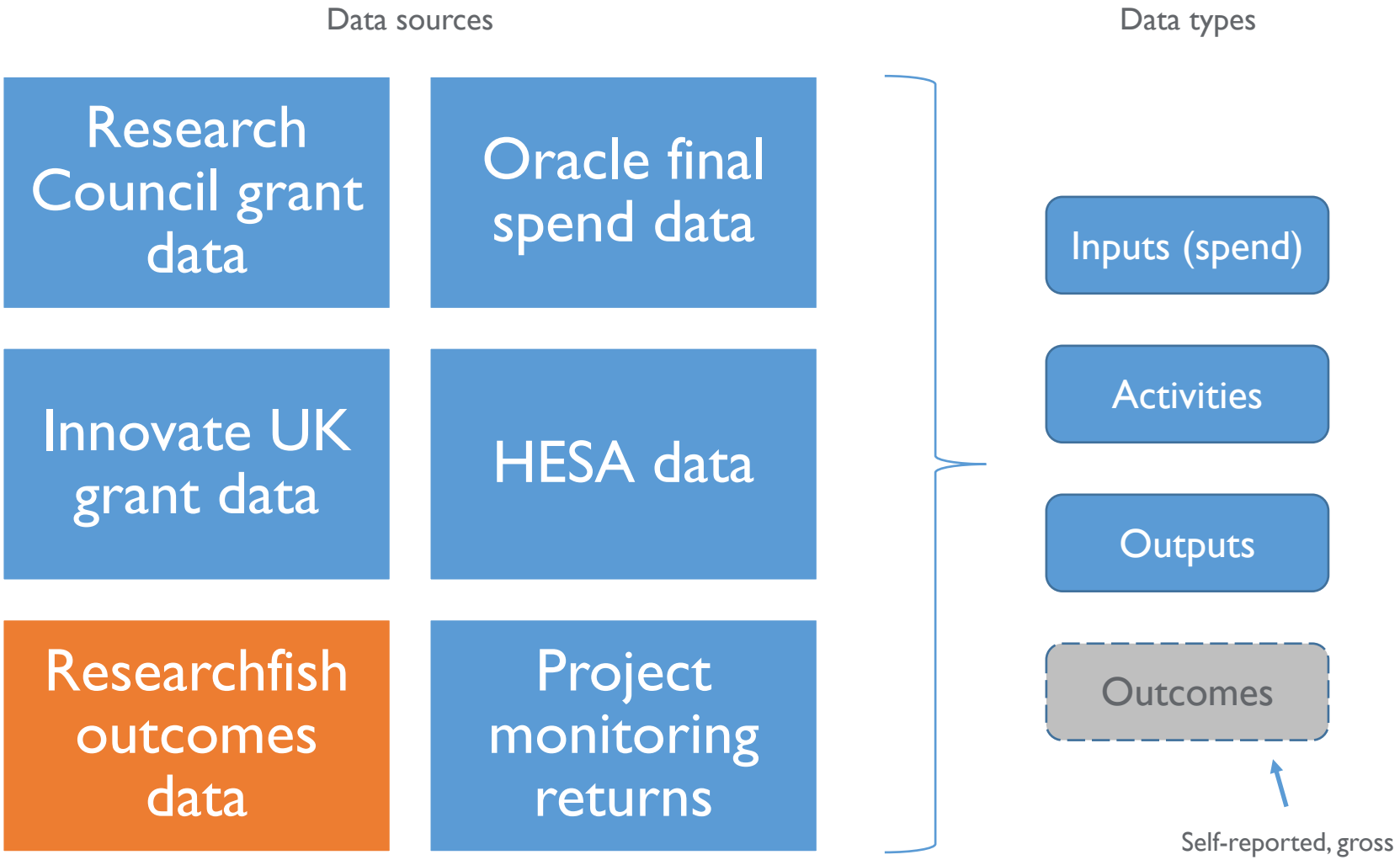
UKRI's approach to assessing impact is based around recognising key differences in its activities and focusing on *relevant* impacts

There is no *one-size-fits-all* approach to evaluating research and innovation programmes. UKRI is developing an overarching evaluation strategy which:

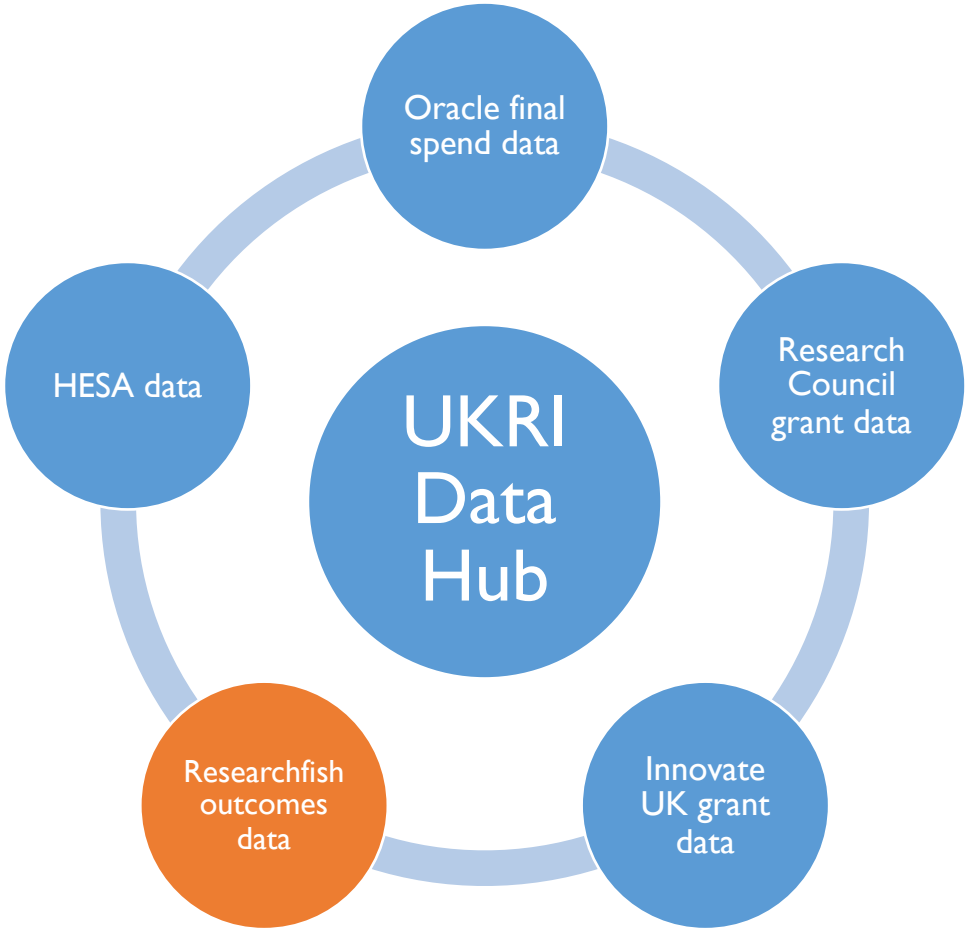
- Is systematic, evidence-based and dynamic;
- Assesses impact beyond counting citations;
- Does not privilege one discipline over another because its outputs are more tangible and/or immediate;
- Understands that there is a lag between funding and realisation of impact;
- Understands that impact may not be in the form of a product or tool, but contributing towards a web of knowledge which allows for further understanding/work to be done; and
- Makes a convincing and robust case for impact, utilising effective tools and methods for assessing impact.

What role does (or can) Researchfish data play in assessing UKRI's impact?

We have access to a wealth of data which can use to obtain powerful insights about research outcomes…



We have created the *Data Hub*, which brings together outcomes data for UKRI's core grants, studentships and HESA data...



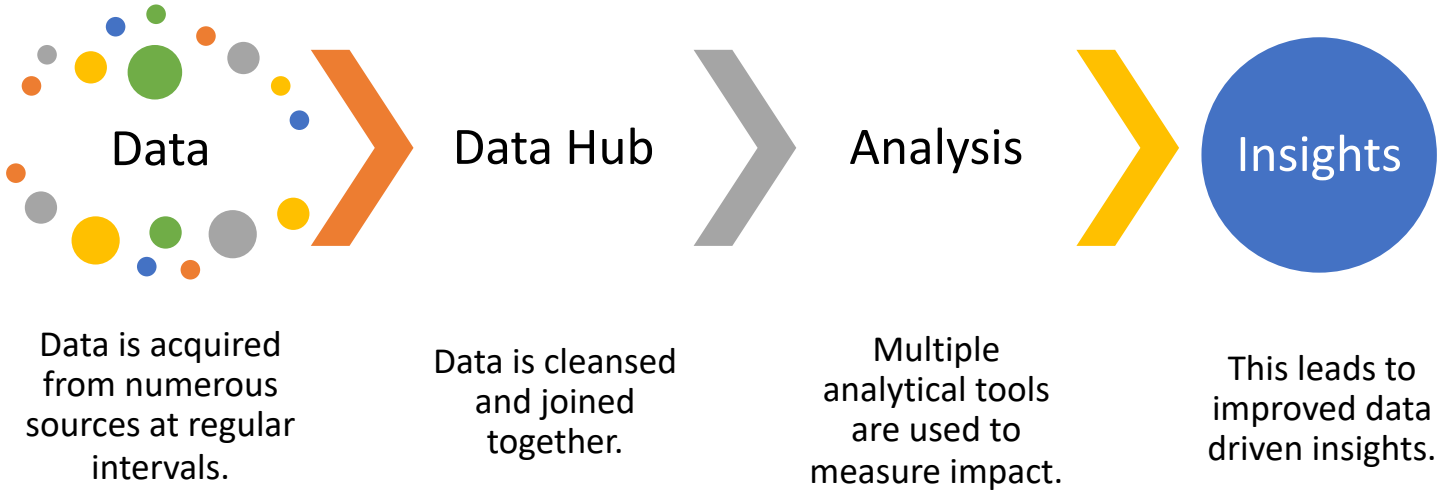
We have worked closely with UKRI's partner organisations to remove ambiguity and inconsistency in definitions

We have introduced a set of common standards across UKRI, to improve our ability to link and understand our datasets

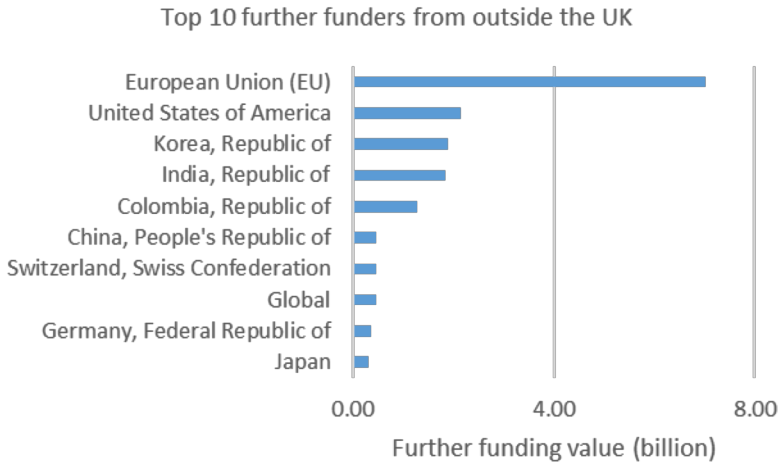
The Data Hub is not yet comprehensive. We are working to obtain more data and identify & drive out any remaining inconsistencies

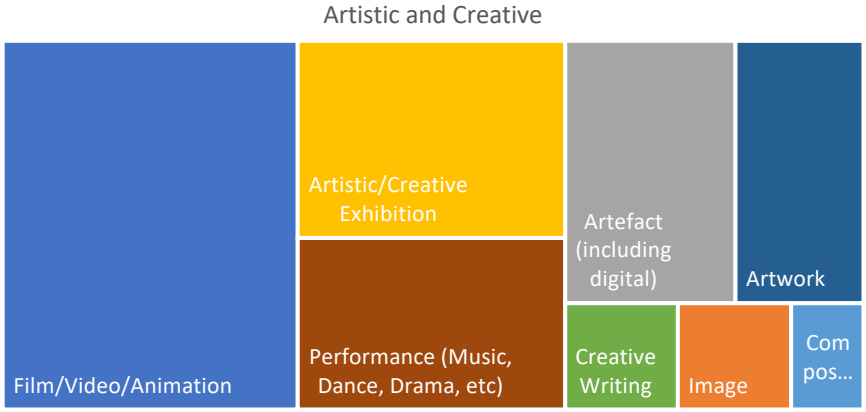
Key to improving UKRI's use of data is establishing a set of procedures and tools that streamline the use of data

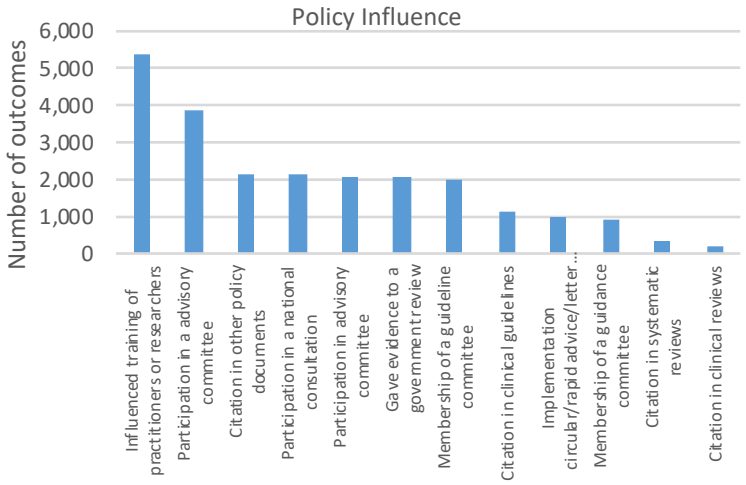
Improving the use of our data

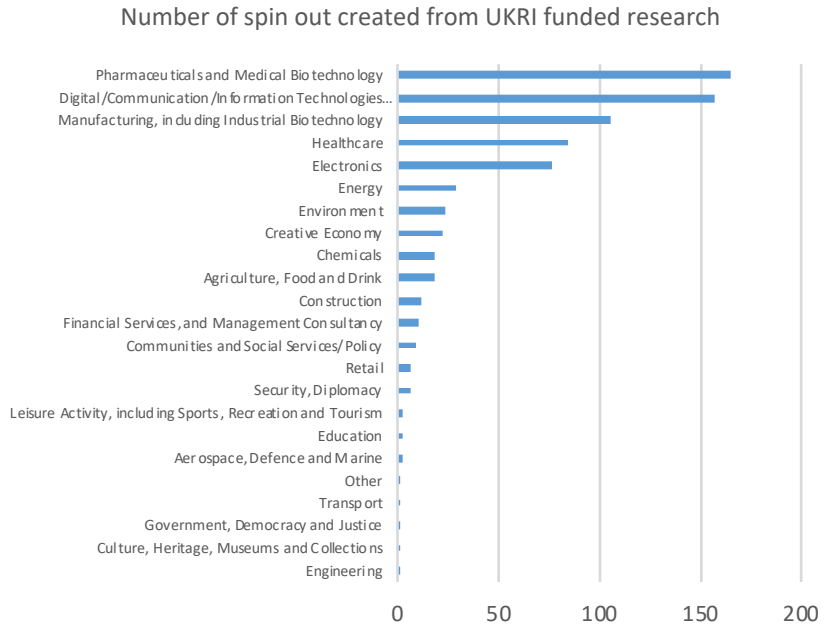


Early, provisional use of the UKRI Data Hub: research outcomes since 2010

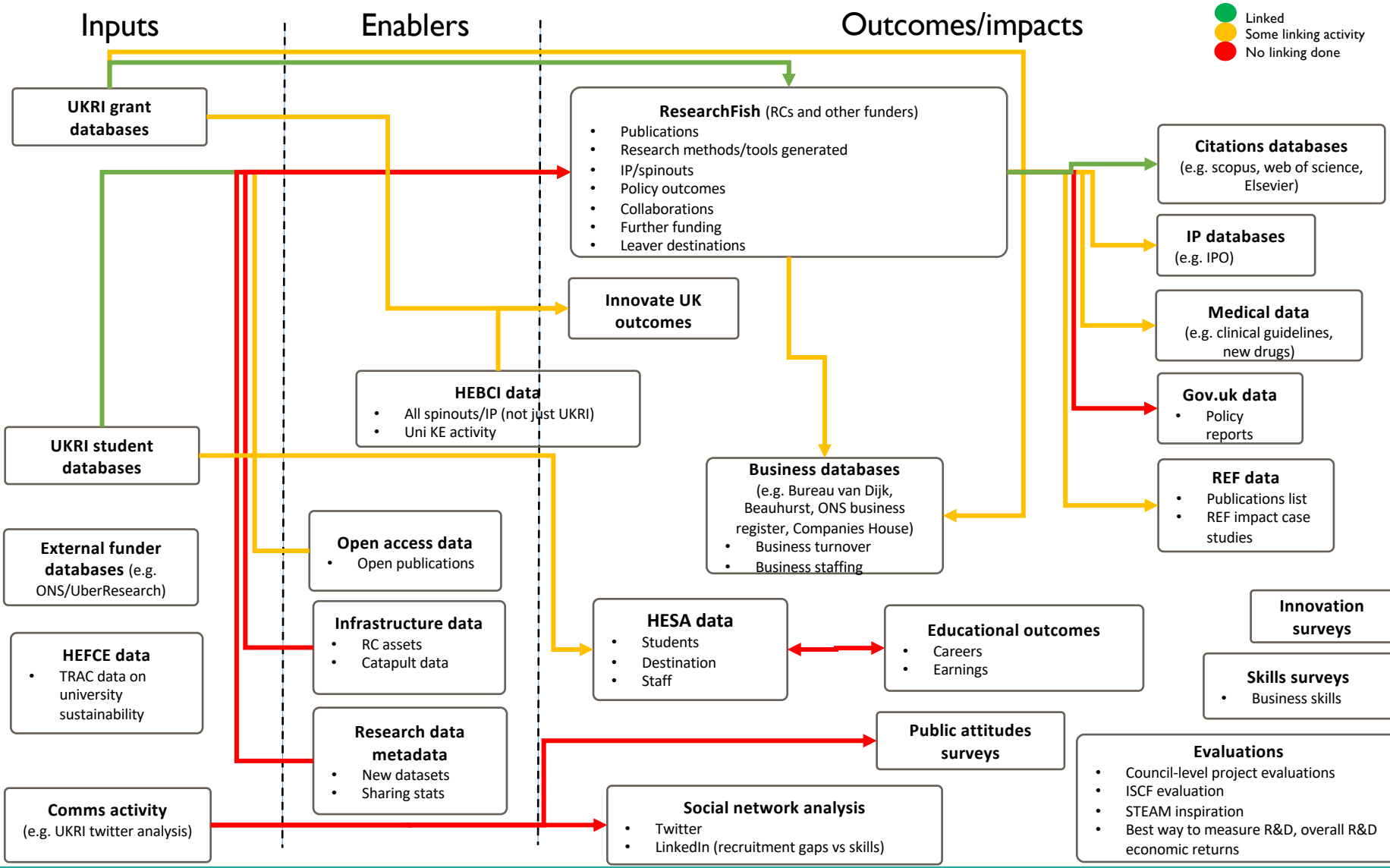








We're using data from many places to enrich what we learn from Researchfish, and better understand the journey from output to impact



Where has Researchfish data supported UKRI evaluation to date?

Case study: Evaluation of the National Prevention Research Initiative

Evaluation aim

- Assess whether the NPRI has achieved its aims
- Assess extent to which outputs have been, or could be, used to inform policy and practice
- Assess overall legacy

Approach to assessing impact

- **Analysis of Researchfish outcomes data**
- Interviews with 57 award holders

Impact findings

- By August 2014, the NPRI had generated between 4 and 5 scientific papers per project on average
- 13 studies produced evidence to underpin policy or medical practice change which had been effectively disseminated
- NPRI raised profile of public health research and influenced ability to form new scientific and policy/practice networks

Other approaches to evaluating impact in UKRI (1of 2)

Case study: Evaluation of collaborative R&D programmes

Evaluation aim

- Assess economic impact of CR&D
- Assess outputs, outcomes and wider benefits of CR&D
- Assess lessons that can be learned for developing similar progress in future

Approach to assessing impact

- Analysis of monitoring returns and MI
- Surverys and interviews with 336 CR&D participants
- Interviews with comparison group firms
- Univariate regression analysis to estimate statistical significance

Impact findings

- CR&D is likely to generate a total of 13,350 net additional full time equivalent (FTE) jobs.
- Of these, 8,900 jobs arise directly from CR&D with a further 4,450 arising from the wider supply chain jobs and linkages.
- The cost per net additional job is £36,000 (in 2010 prices)
- CR&D is likely to generate net additional GVA of £2.9bn. For each £1 of CR&D grant, there will be an increase in GVA of £5.75 (in 2010 prices).

Other approaches to evaluating impact in UKRI (2 of 2)

Case study: Evaluation of the ISIS Neutron and Muon Source

Evaluation aim

- Assess the economic and social impact of the ISIS neutron and muon source

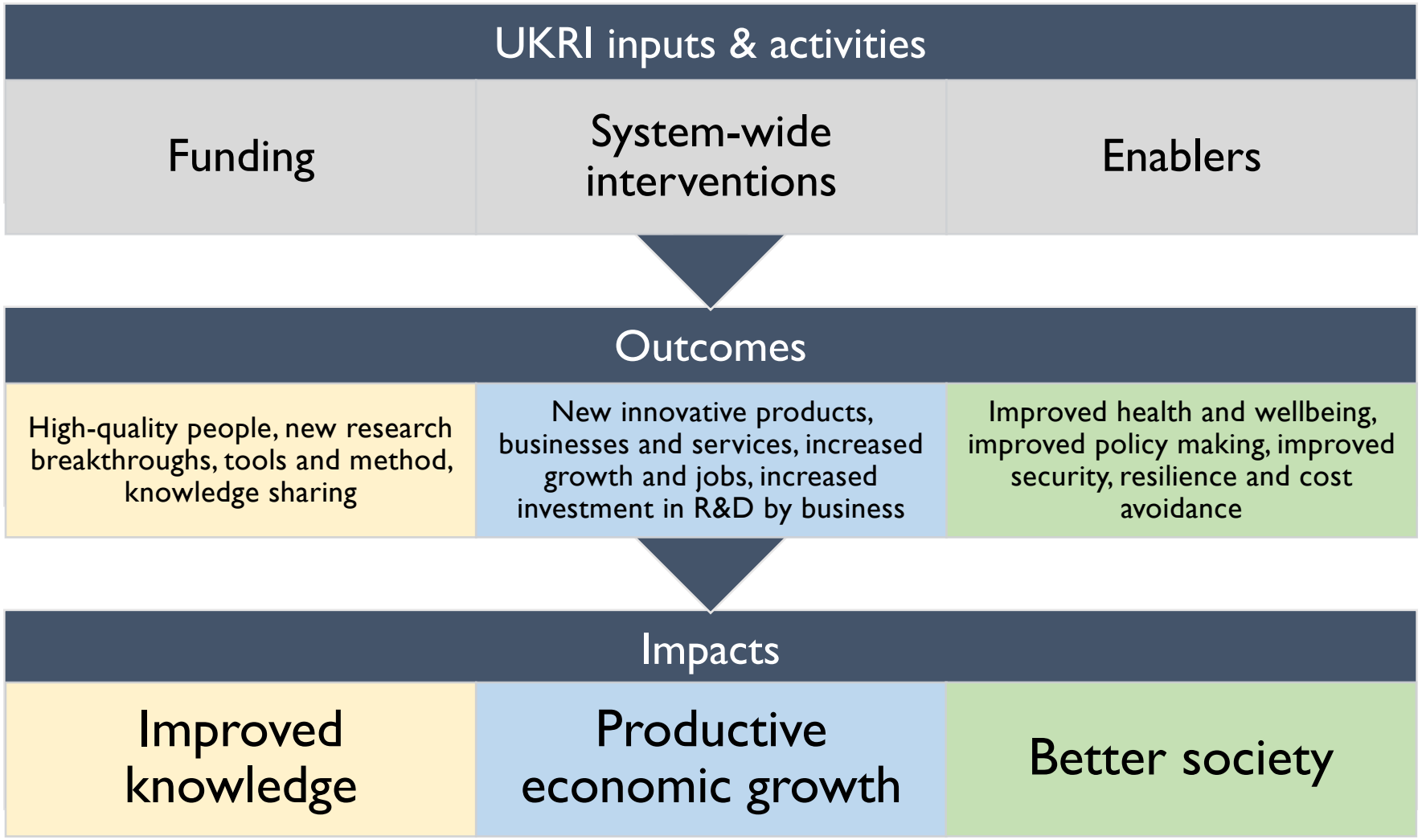
Approach to assessing impact

- Analysis of existing data and reports
- Online surveys of academics, companies and suppliers who use or work with ISIS
- Case study development
- Bibliometric analysis

Impact findings

- ISIS publications outperform UK average → not uncommon for ISIS derived publications to receive several hundred citations within 3-year window.
- Survey respondents suggested ISSI is critical to their scientific understanding, research quality and experiment skills; and to that of the UK as a whole.
- Without the existence of ISIS, numerous research applications and new technologies may have gone unexplored both in the UK and internationally.
- ISIS estimated to have delivered wider economic impact of around £340m over the lifetime of the facility.

UKRI defines 'impact' so as to reflect the diversity of its activity, focusing broadly on knowledge, economy and societal impacts



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