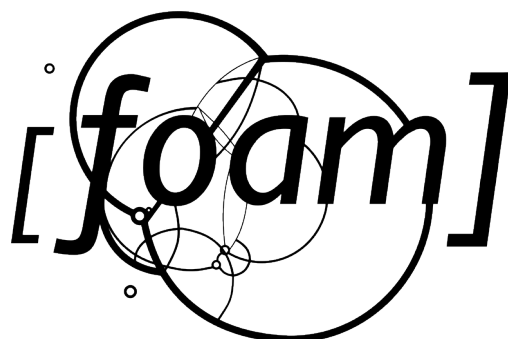


ACOFES

COLAB

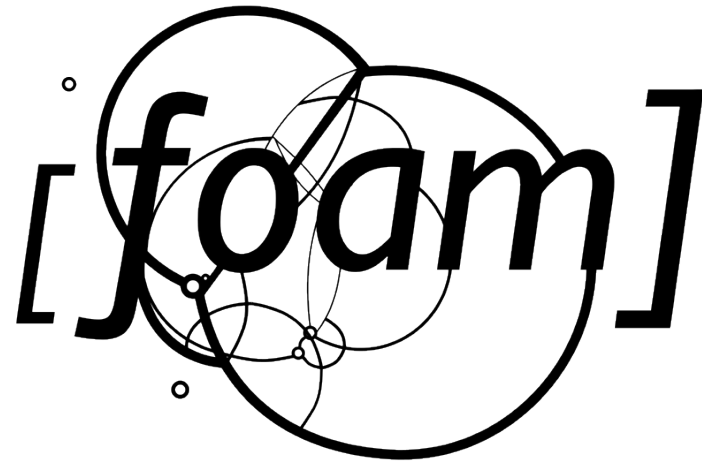


BRITISH
SCIENCE
ASSOCIATION

NERC
SCIENCE OF THE
ENVIRONMENT

What we are doing today

1. Basics of research culture - context.
2. Fact-checking media stories - basic steps.
3. Research in pairs - practice.
4. Try the workshop format - get feedback - design it better - roll it out.

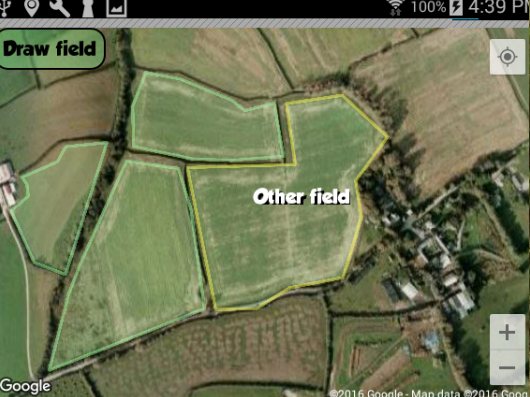


FoAM is a networked transdisciplinary lab: Kernow, Amsterdam, Brussels, Nordica, Filfla, Earth

We are generalists - people who work across disparate fields in an entangled, speculative culture

We are a non-profit organisation

We work open-source



©2016 Google - Map data ©2016 Goog

P_2O_5	K_2O
0	0

Soil N supply
N Kg/ha
61-80

Crop details

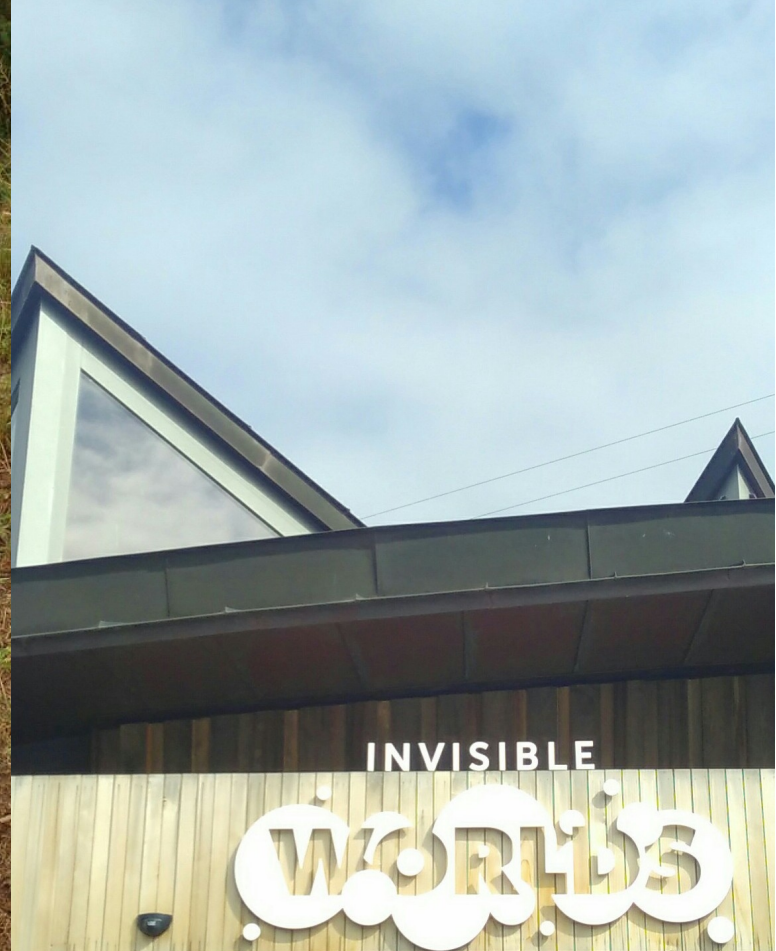
Previous crop type: **Low N veg**

Have you grown grass in the last 3 years?: **No**

Crop type:
Spring barley, straw removed

Crop nutrient requirements

N Kg/ha	P_2O_5 Kg/ha	K_2O Kg/ha
80	110	130



We work across disciplines and design ways to improve access to research.

Our tax pays for research, so we should all have access to it.

More diversity of people involved in research makes for better ideas.

Knowledge Inequality is a serious matter.



science



What is NERC?
Who are NERC?
Why NERC?



Copyright NERC 2010

NERC SCIENCE OF THE ENVIRONMENT

Who is NERC?



Who is NERC?

People

3000 researchers

1000 PhD students

Research

1000 research projects
60 UK or international
programmes

55 universities
20 research institutes

Infrastructure

4 ships

7 aircraft

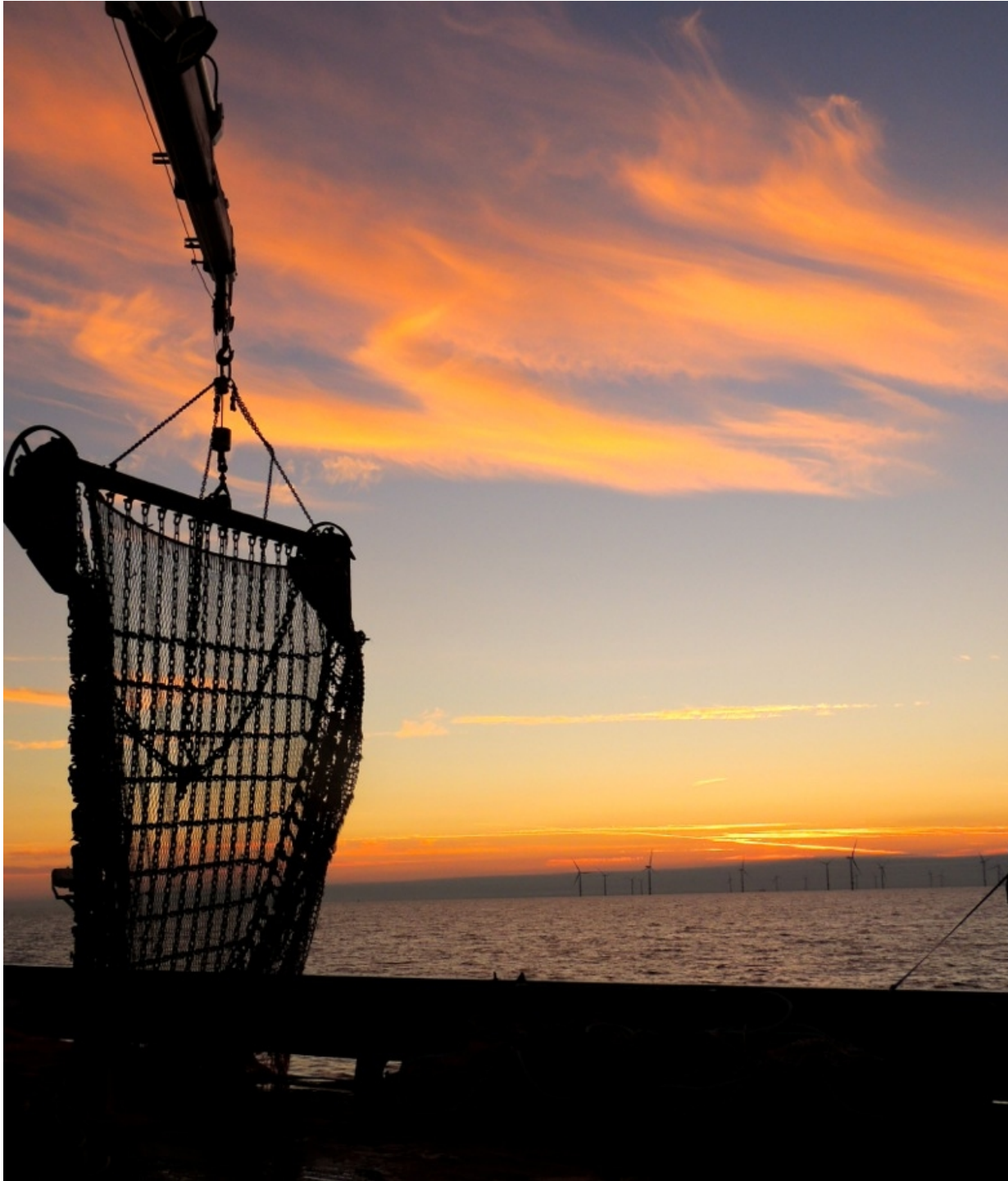
6 polar bases

6 data centres

32 community facilities



Why NERC?





Why NERC?

Impact on economy & society...

For example: how we benefit from natural resources

Large, long-term benefits

Productivity and competitiveness

Safer, wealthier and more secure

Why NERC example:

- What can satellite data do for aquaculture?

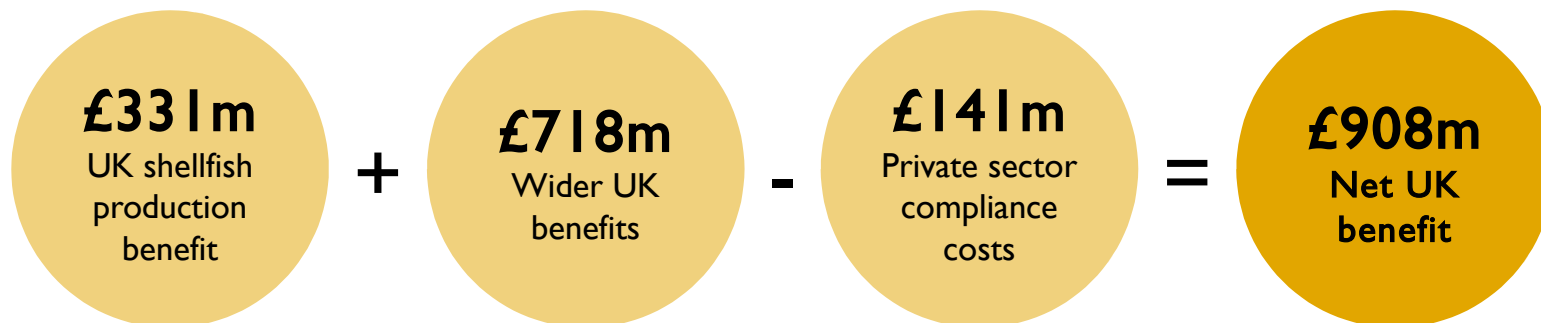


Researcher Dr Peter Miller (left) and fisher Gary Rawle

Why NERC example:

NERC science boosts UK shellfish industry

- Britain's seas are important, and under pressure:
 - UK households spent £6.3bn on seafood in 2015
- Decades of NERC-funded research enabled scientists to:
 - identify that the use of anti-fouling agents on boats and ships was causing severe harm to shellfish and other marine life
 - provide the evidence underpinning government bans.
- Marine life has now recovered, generating UK benefits worth over £900m:



Why are we doing this?

- Science affects many aspects of life.
Should I vaccinate my kids? What should I eat?
- Peer-reviewed literature, in scientific journals, is a primary source of information.
- We want to help people access this resource.

Current situation

Global scientific output doubles every 9 years
- now ~2.5 million papers/year published in scientific journals.

About 28% of published research is Open Access (~19M papers). The rest is behind paywalls (~£20-100/article).

Left ventricular non-compaction cardiomyopathy

Information needed - can you help?

I am a patient recently diagnosed with LVNC. I am looking for all papers related to my condition.

Requested by an anonymous user on 12/07/2018

Knowledge, attitude, and practices related to hepatitis B virus infection among Nigerian obstetricians and midwives

Information needed - can you help?

Greetings, I am a medical student in Lagos, Nigeria carrying out a study on Knowledge, attitude and risk factors of hepatitis B among waste scavengers in Lagos State. I would appreciate access to your study in order to use it in my literature review. Thank you in anticipation of a favourable response.

Requested by an anonymous user on 15/07/2018

How we got here

For centuries publishing has been how scholars share their research.

Until relatively recently, this was paid for by sponsors, with peer-review done by research community or uni presses.

During Cold War, research expanded internationally, university sector grew, and funding grew – publishing became highly profitable.

Since 1980s, increased demands for accountability led to a culture of metrics. Academia grew into a 'prestige economy' operating on symbolic capital generated by publications.

How we got here

In last 25 years, there's been a growing divergence between the roles of academic publishing:

- Disseminating validated knowledge.
- Symbolic capital for academic career progression.
- Profitable business enterprise – 35-40% profits.

Tax-funded academics do the research, write the papers, make the figures, do the editing roles, do the peer review – all for free, sign over the copyright to publishers who then sell it back to them, typeset.

CHANGE IS HAPPENING

Awareness that accessibility of research is a serious issue (led by funders).

Awareness that prestige of specific journals is primarily a marketing tactic by the publishers.

Open Access Journals
Non-Profit Journals (incl. Uni Presses)
Various work-arounds to access papers



Aaron Swartz was bankrupted by legal fees, faced \$1 million in fines and 35 years in prison, for downloading academic journals.

1986-2013.

Alexandra Elbakyan is in hiding due to the risk of extradition.

Elsevier was granted a \$15 million injunction against her.

~600,000 papers
downloaded/day.



PLAN S

Requires researchers who benefit from state-funded research organisations to publish their work open access by 2020.

12 Countries: Austria, Finland, France, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Slovenia, Sweden, UK.

Universal Declaration of Human Rights, Article 27:

'Everyone has the right freely to
share in scientific advancement
and its benefits'

ACROSS

YOLAB

Scientific Research Funding

Hannah King, NERC



What is NERC?
Who are NERC?
Why NERC?

How do we decide what to fund?

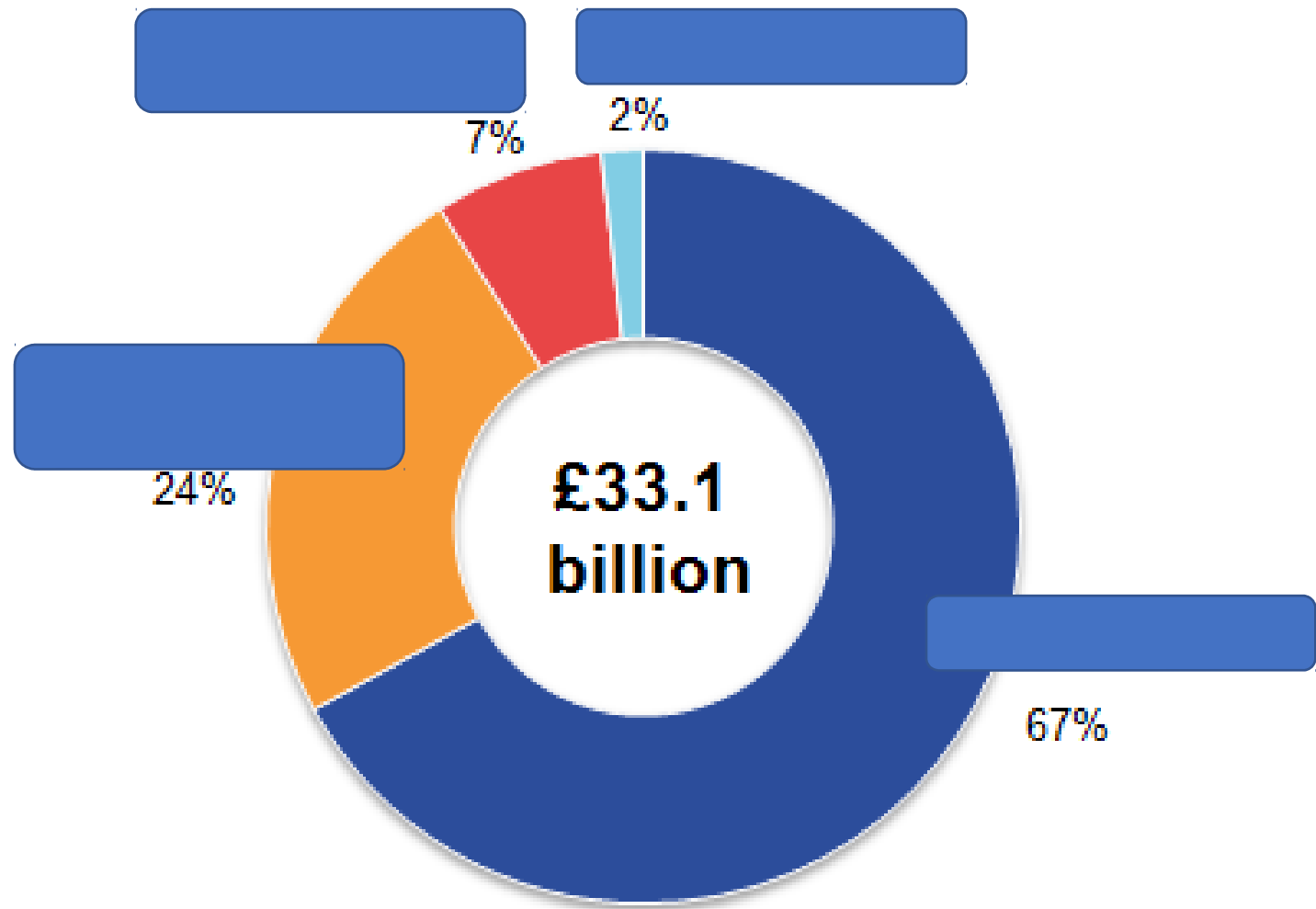


‘Strategic science’ (top down)

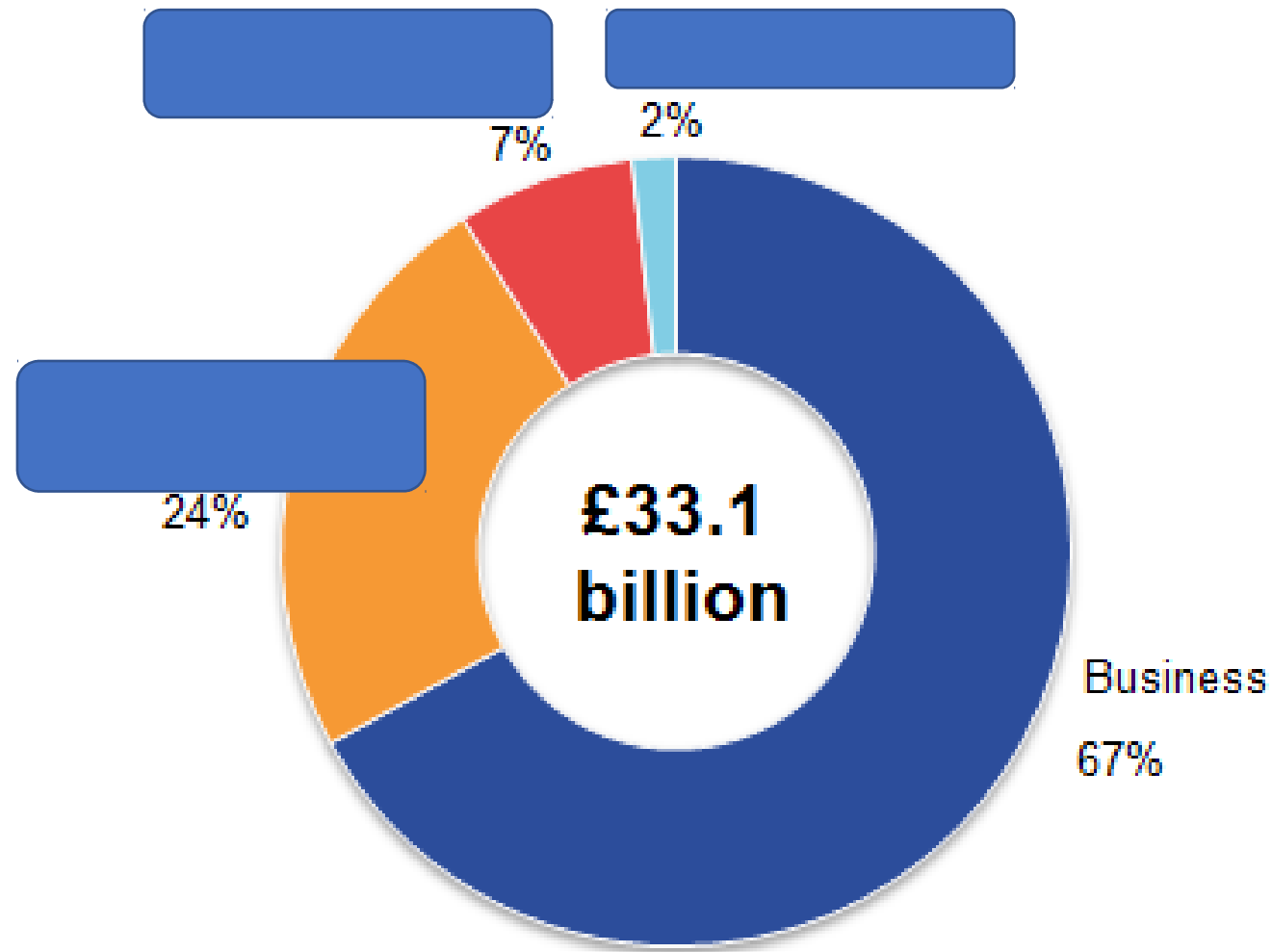
‘Discovery science’
(bottom up)



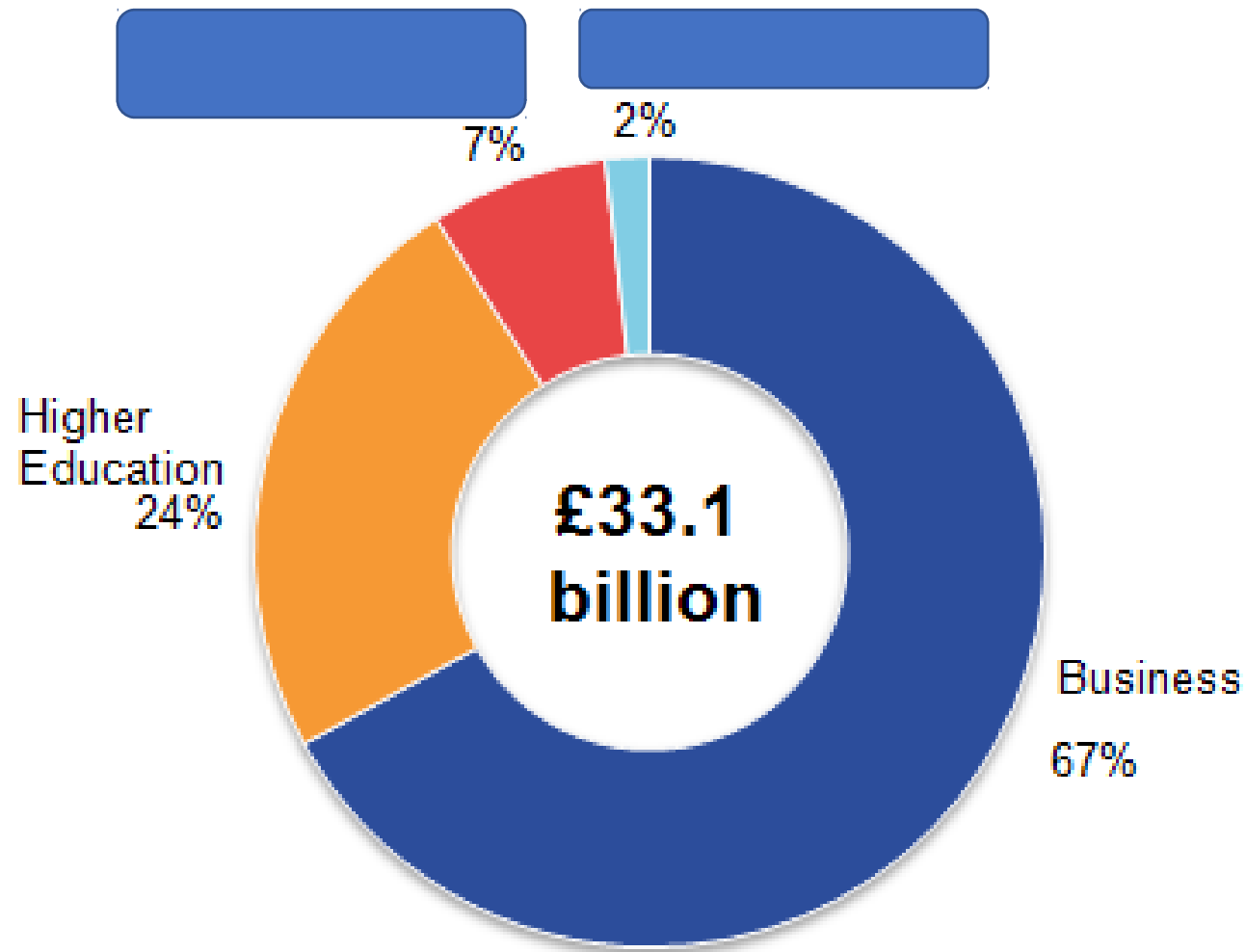
Who funds science (R&D)?



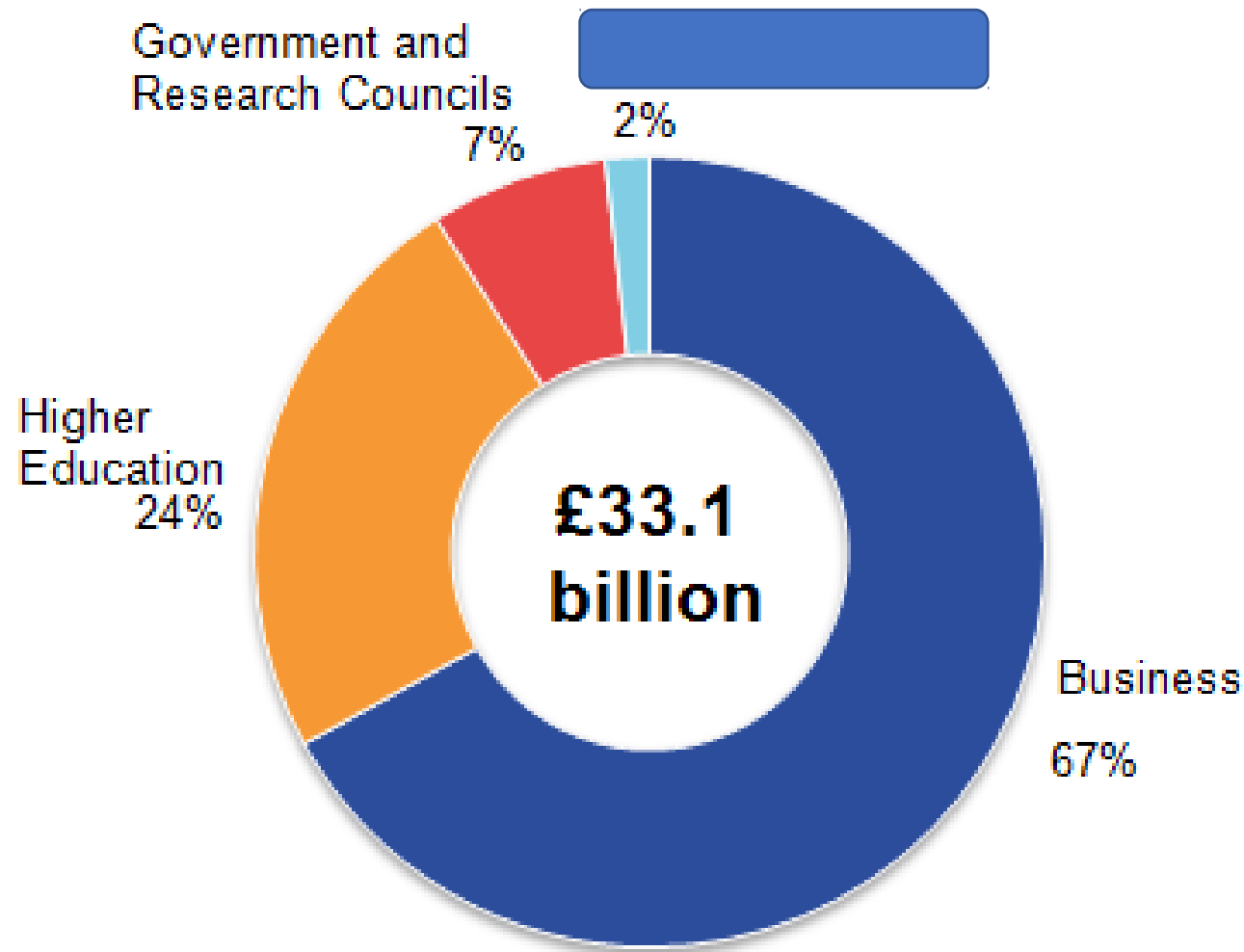
Who funds science (R&D)?



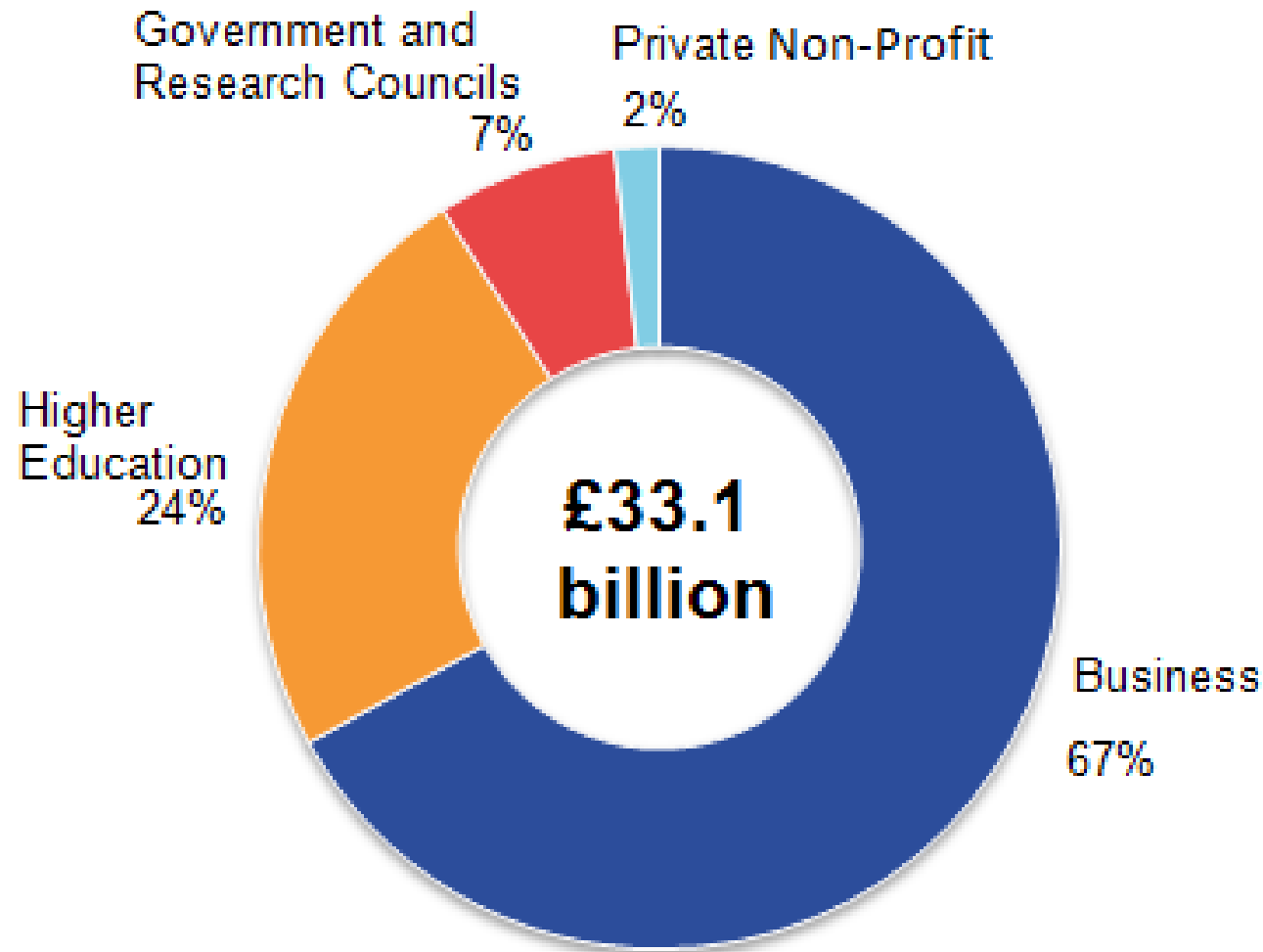
Who funds science (R&D)?



Who funds science (R&D)?



Who funds science (R&D)?



Basic science funding – 2 examples

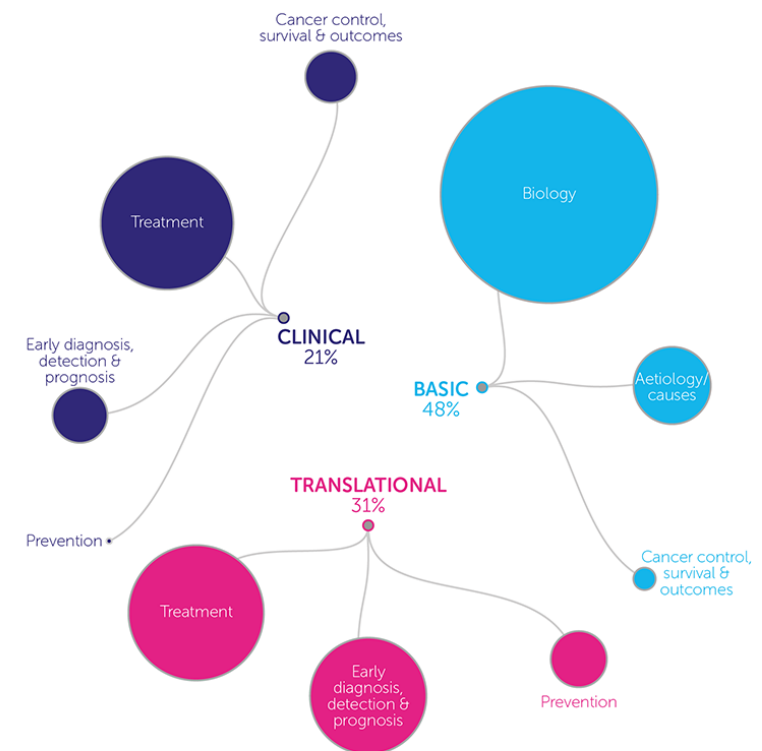
Government

Table 3: Planning Allocation by organisation

(all amounts in £m)	2017-18	2018-19	2019-20 ¹⁵
UK Research and Innovation			
Arts and Humanities Research Council (AHRC)	110	124	167
Of which: Fund for International Collaboration ^{16,17}		10	45
Biotechnology & Biological Sciences Research Council (BBSRC)	446	438	445
Engineering and Physical Sciences Research Council (EPSRC)	1,052	1,148	1,110
Economic and Social Research Council (ESRC)	210	224	211
Medical Research Council (MRC)	727	717	746
Of which: Future Leader Fellowships ¹⁶		3	46
Natural Environment Research Council (NERC)	445	441	404
Science and Technology Facilities Council (STFC)	674	725	697
Innovate UK	714	829	906
Of which: Wave 2 ISCF ^{16,18}		91	211
Research England ¹⁹	2,013	2,217	2,355
Of which: Strength in Places Fund ¹⁶		2	32
Total UKRI²⁰	6,390	6,865	7,040
Other Investments			
UK Space Agency	397	370	446
National Academies	153	176	195
Public Sector Research Establishments	230	234	244
BEIS Programmes	400	346	329
Total Other Investment¹⁷	1,180	1,126	1,213
To be allocated²¹	-	71	456
Total R&D Investment²²	7,570	8,062	8,710

Charities (e.g. CRUK)

Funding across the research pipeline



How do scientists choose their research?

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They follow where the
money is...

...or follow their interests!

Hannah King

hannah.king@nerc.ac.uk

Public Engagement Officer

Scientific Research Publishing

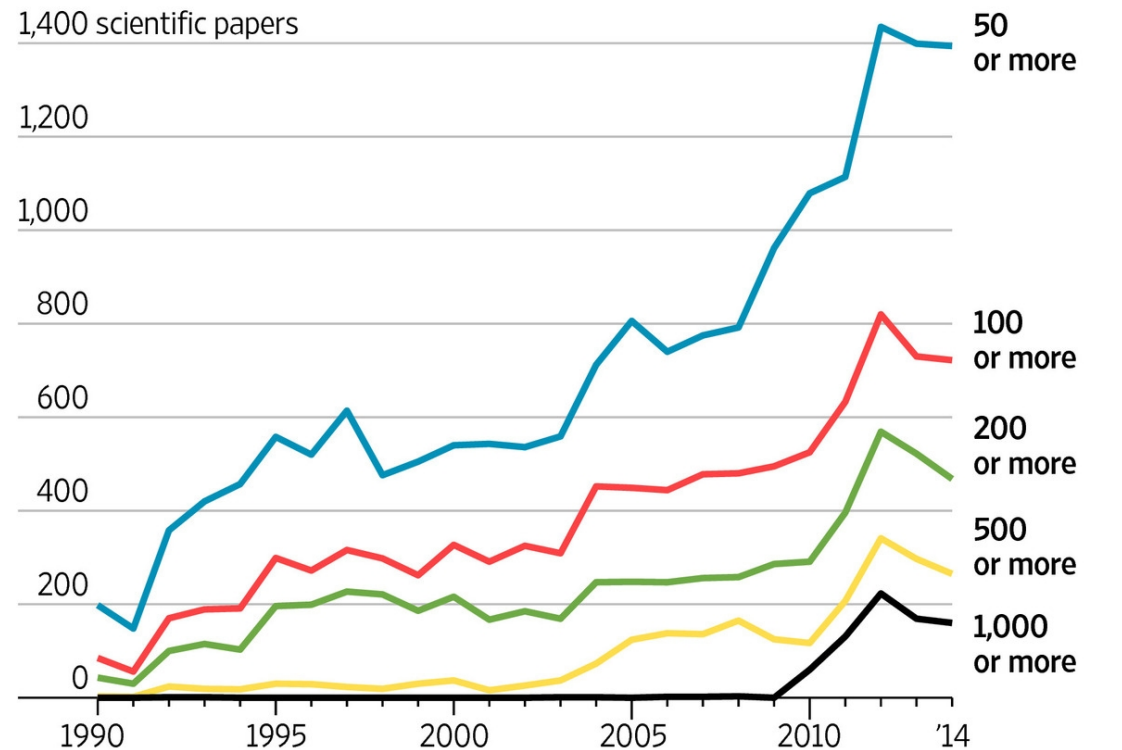
Clio Heslop, BSA

Science is collaborative

- When you read a piece of research, it's very rarely done by one person...
- Scientists work in teams of 1-1000!

Credit Inflation

More and more scientists are sharing credit as co-authors on research papers, with a sharp increase in reports whose author counts exceed 1,000 people.



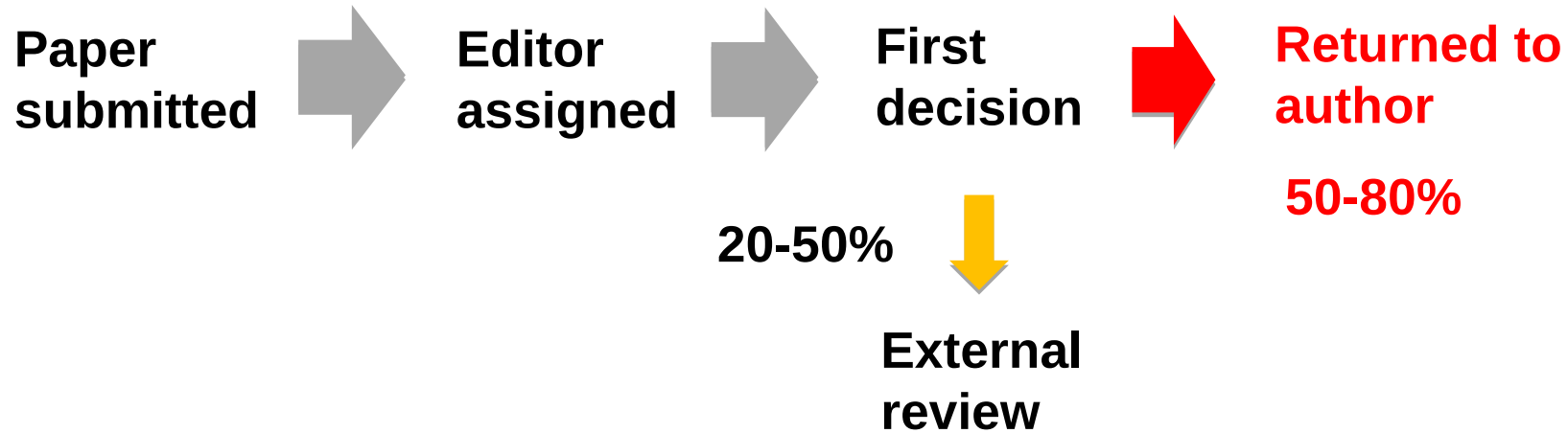
Source: Thomson Reuters Web of Science

THE WALL STREET JOURNAL.

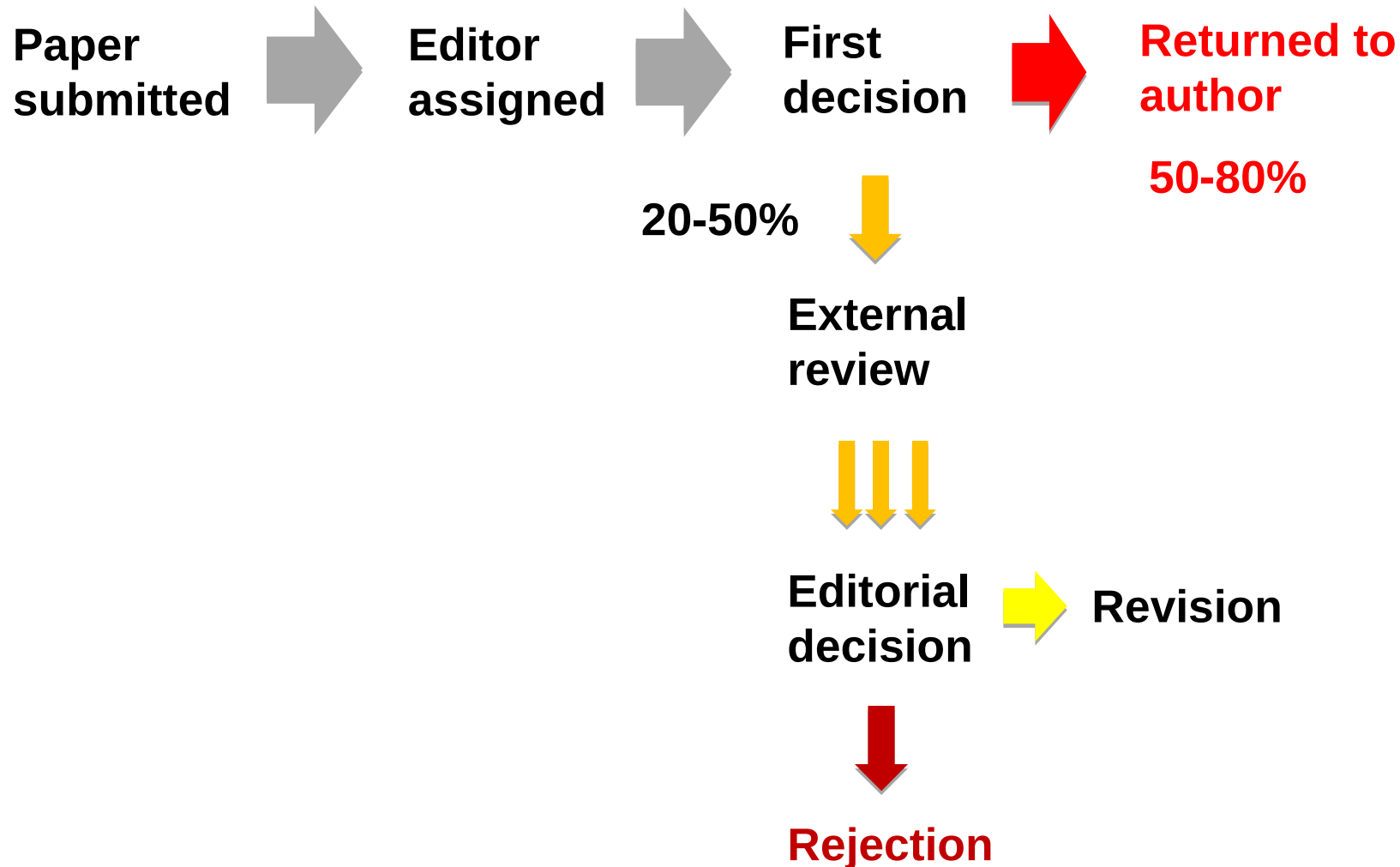
The publishing process



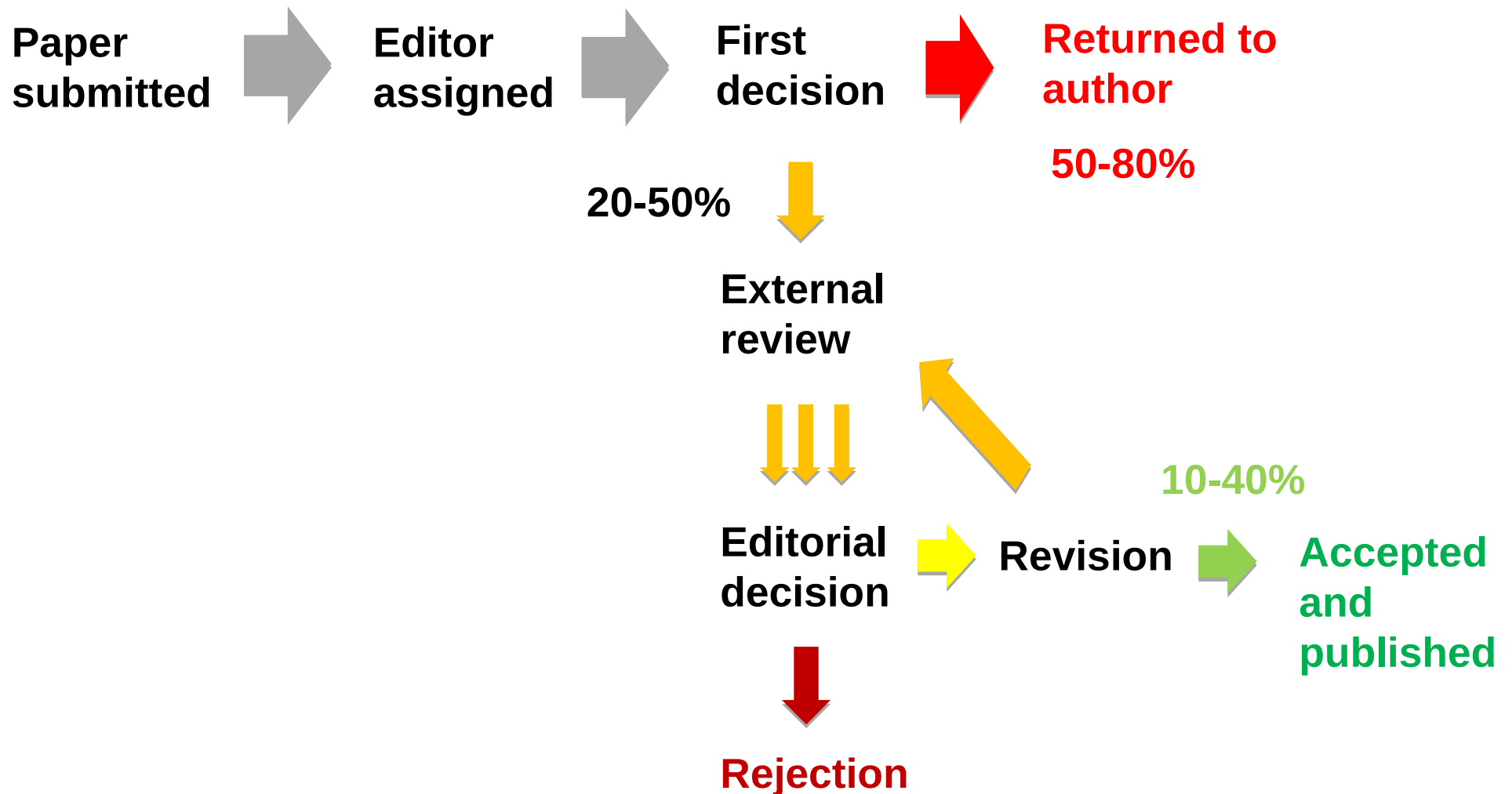
The publishing process



The publishing process



The publishing process



How is research assessed?

Research is checked by other scientists working in a similar field – peer review

- Scientists do not know who is reviewing their paper
- Scientists can suggest reviewers or exclude reviewers (within reason)
- There are trials with making peer review more anonymised, or more transparent

Who are reviewers?

Commonly 2-4 referees chosen by journal editors from a database

They answer two questions:

Who are reviewers?

Commonly 2-4 referees chosen by journal editors from a database

They answer two questions:

- Do I trust the data?

Who are reviewers?

Commonly 2-4 referees chosen by journal editors from a database

They answer two questions:

- Do I trust the data?
- Why do I care?

What is a review paper?

- Longer, more in-depth look at a research area
- Discussion of advances over past 2-3 years

Usually:

- Commissioned
- Written by a senior academic
- Contains more images and editorial input
- Read by lots of people

Is all research in journals?

Pre-prints

- Research can be put online before review as a “working copy”.
- There are hosting platforms organised by subject or by institution



Is all research in journals?

Author copies

- Some journals offer authors a link to share their work freely
- All articles will have a link to the lead author so you can contact them directly
- Remember – authors do not profit from articles!



The image shows a Google Scholar profile for Anne-Wil Harzing. The profile includes a circular photo, her name, and her title as Professor of International Management at Middlesex University. A red box highlights the '+ FOLLOW' button. Below the profile, a 'Follow this author' dialog box is open, showing three checked options: 'New articles by this author', 'New citations to this author', and 'New articles related to this author's research'. The dialog also shows an email address field with 'aaronray@gmail.com' and a 'Done' button.

Google Scholar

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Professor of International Management - [Middlesex University](#)
Verified email at mdx.ac.uk - [Homepage](#)
[International Business](#) [Expatriation](#) [International HRM](#)
[Research Evaluation](#)

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TITLE

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management of entry modes
AW Harzing

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