

Key facts

157

number of
UK universities
whose research
was assessed

1,878

submissions including:



76,132
academic staff



185,594
research outputs



6,781
impact case studies

34

expert
sub-panels
reviewed the
submissions

4

main
panels
overseeing
including:

900
academic
members

220
research
users

The overall quality of submissions was judged, on average to be:

41%

world-leading



43%

internationally
excellent



14%

recognised
internationally



2%

recognised
nationally



The REF was undertaken by the four higher education funding bodies for England, Scotland, Wales and Northern Ireland. REF 2021 was managed by the REF team based at Research England on behalf of these bodies. It was overseen by a steering group of representatives from these bodies.



Overall results

The results of the Research Excellence Framework (REF) 2021 provide a national picture of world-leading research produced across the breadth of university activity. For the first time, the assessment included all staff with a significant responsibility for research, leading to a 46% increase in the number of staff whose work was considered compared with the previous REF. The outcomes show strong performance across a diverse set of universities – three-quarters of universities have over 15% of research activity judged to be world-leading; the top quarter have at least 41% of research activity judged to be world-leading. Excellence is well-distributed across the four UK nations and English regions, all of which showed over 80% of submitted research activity to be world-leading or internationally excellent.

Excellence in outputs

157 UK universities submitted 185,594 pieces of research. These outputs were reviewed by 34 expert sub-panels, under the guidance of four main panels, who concluded:

- **36% of all outputs were judged as world-leading (4-star)**
- **47% were internationally excellent (3-star)**
- **15% were recognised internationally (2-star)**
- **2% were recognised nationally (1-star)**

Research produced by early career researchers, staff who took family-related leave, or with other equality-related circumstances, was rated equally highly in the assessment.

Changes to the submission rules since the previous REF have enabled universities to **present more of their world-leading research**. Excellence in outputs was noted across all types and forms of research.

Impressive evidence of impact

A vital element of REF is illustrating the benefits research delivers beyond academia, including how it brings tangible changes to aspects of society and life, and the public value it delivers. What's clear is that research continues to deliver impact at an exceptionally high level. 220 external users of research, working jointly with academic members, assessed impact across all the case studies:

- **50% of impact judged outstanding (4-star)**
- **38% judged very considerable (3-star)**
- **11% judged considerable (2-star)**
- **2% recognised but modest (1-star)**

The case studies reflect universities' productive engagements with a wide range of public, private and third sector organisations, as well as the public, leading to diverse benefits.

Environments supporting world-leading research and enabling impact

Our expert sub-panels' assessment of environment shows half (50%) of the submitted research population are working in environments with elements conducive to producing research of **world-leading quality and enabling outstanding impact** (4-star).

A further 37% are in those with elements conducive to producing research of internationally excellent quality and enabling very considerable impact. In the period 2013 to 2020, in total:

- **£46 billion research income reported**
- **162,000 research degrees awarded**

The impact of Covid

University research made a vital contribution in response to the Covid pandemic. Many of these significant early contributions were described in impact case studies and many more, currently in action saving and changing lives, may be captured in a future assessment.

In responding to the disruptive effects of the pandemic on the REF itself, universities and the expert panels showed considerable resilience and investment in the REF process. Responsiveness and flexibility in adapting to required changes has ensured the delivery of a robust assessment process.



Who we are and what we do

The REF provides a unique analysis of research across UK universities. We show where research stands in terms of quality and output on the domestic and global stage. Equally importantly, REF presents the real impact research has on our society and highlights the real-world benefits it brings. The REF was first conducted in 2014, replacing the previous Research Assessment Exercise. It is jointly conducted by the four UK higher education funding bodies: Research England (RE); Scottish Funding Council (SFC); Higher Education Funding Council for Wales (HEFCW); Department for the Economy, Northern Ireland (DfE). The REF team manage the process on behalf of the funding bodies. Our work is overseen by a steering group of representatives from the funding bodies.



Why do we need REF?

The four UK higher education funding bodies use REF to inform the allocation of circa £2 billion in public funding invested in research annually. It provides accountability for this public funding, invested during the period covered by the assessment and producing key evidence of benefits. REF is also used for:

- **Benchmarking and establishing reputational yardsticks with peer institutions and departments**
- **Understanding institutional strengths for external communications**
- **Informing strategic university decisions**
- **Understanding larger sector-wide trends**
- **Attracting researchers and postgraduate students**
- **Learning more about a university or department you might want to work with**
- **Securing funding**
- **Understanding best practices for future REF submissions**



Our guiding principles

These set the framework for our work and that of our expert panels.

Equity

All research and research output are assessed on a fair and equal basis. Our panels define criteria and adopt assessment processes to this end. The REF aims to assess all types of research without distorting the activity measured or encouraging or discouraging any research. It aims to provide a general stimulus that enhances the UK research base's overall achievements.

Equality

Universities must comply with equality legislation in processes for submitting staff and outputs. They must also develop, document and apply an internal code of practice for identifying staff in scope for submission and selecting outputs. We provided guidance to help universities participate in REF in a fair and transparent manner. Research outputs from early career researchers, staff who took family-related leave, or with other equality-related circumstances, were rated equally highly.

Transparency

All criteria and procedures applied in the assessment are published in full, well in advance of submissions. Outcomes are published for each submission, with decision-making processes at main and sub-panel levels explained openly.

Value for money

The cost and burden of the REF should be the minimum possible to deliver a robust and defensible process. We estimate the cost of REF 2014 was less than 1% of the total public funding invested in research, over a six-year period of an assessment cycle.



How we conduct the assessment

The REF is a process of expert review across **34 subject-based units of assessment (UOAs)**. This is conducted by **34 expert sub-panels** working under the guidance of four main panels made up of **900 academic members - including 38 international members - from across 130 universities in the UK and worldwide, and 220 research users from a diverse range of sectors, including medicine and healthcare, industrial, energy and environment, media, voluntary, cultural and creative, education and public administration.**

International academic members, research users and interdisciplinary experts are represented across the main panels. This enables REF to provide assessment standards and benchmarking at a global level.

The panels assess the submitted material and form a sub-profile for each aspect (outputs, impact and environment), which shows the proportion of submitted activity judged at each quality level. The sub-profiles are combined to form an overall quality profile, which is the primary assessment outcome for each submission.

Our approach has three clear stages:

1. Preparation:

The funding bodies appoint the REF expert panels, consult the higher education sector and its partners, and publish criteria and guidelines for submission.

2. Submissions:

Universities make their submissions.

3. Assessment:

Our expert panels review all submissions and we publish results.

Outputs

60%

What was assessed

Outputs, 60% of the overall result. These are defined as any form of research published within the set time frame, including, but not limited to:

- Chapters in books
- Designs
- Exhibitions
- Journal articles
- Monographs
- Performance

Outputs are assessed against the criteria of 'originality, significance and rigour'. The assessments are based on expert reviews of outputs. Some panels consider citations as part of the assessment.

Impact

25%

Impact, 25% of the overall result. This is defined as an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia. Each submission includes:

- **A minimum of two impact case studies:** each case study is a five-page document that details impact(s) arising within the set timeframe. Impact needed to be

underpinned by high quality research produced by the submitting unit since 1 January 2000. Impacts are assessed in terms of their 'reach and significance'.

Research Environment

15%

Environment, 15% of the overall result.

Assessment is based on 'vitality and sustainability' and focuses on the strategy, resources and infrastructure that support research and enable impact. Each submission includes:

- A report detailing the submitting unit's:
- Context and structure, research and impact strategy
 - People
 - Income, infrastructure and facilities
 - Collaborations and contribution to the research base, economy and society

Statistical data covering the REF period on:

- Research income
- Number of research doctoral degrees awarded

These are based on data reported to the Higher Education Statistics Agency (HESA).

Information about the overall university strategy and resources to support research and enable impact was submitted.