Sheffield Hallam University

Research Excellence Framework (REF) - Universidade de São Paulo

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RESEARCH EXCELLENCE FRAMEWORK (REF)

Dr Keith Fildes
Dr Danielle Miles

Sheffield, UK

"A dirty picture in a golden frame"

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Knowledge Applied

Thank you

Thank you for welcoming us to São Carlos.

We are very honoured to be here.

The partnership between our universities has already created exciting connections and important learning.

We hope our visit will further develop this relationship and stimulate new collaborations.

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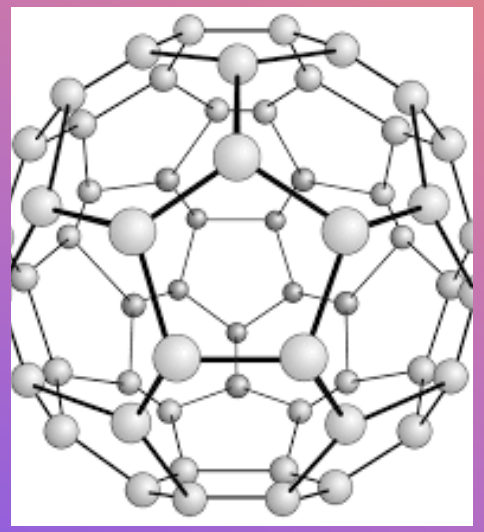
SHEFFIELD'S HISTORY OF SCIENCE AND COMPUTING

Stainless steel, 1913

Food that tastes of food, not cutlery



Buckminsterfullerene (Buckyballs; third type of carbon after diamond and graphite/first graphene and fullerenes; Harry Kroto), 1986

Computer game development (Gremlyn 1980s and 1990s, and Sumo Digital)

Our students

22,000 undergraduates,
10,000 postgraduates

Over 16% are international students

97% are from state schools

23% are from low participation neighbourhoods - (national average is 12%)

40% of the University's students come from within a 25-mile radius.

5th amongst all UK universities for the overall number of graduates in highly skilled employment or further study

Our staff

Our research and innovation is characterised by a focus on real-world impact.

Rapid expansion of research, doubling the submission size for the 2021 Research Evaluation Framework with 500 staff submitting work

72% of research is world leading or internationally excellent

78% of impact is world leading or internationally excellent

Top 10 in the UK for research impact in Planning, Sport and Art & Design

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Our partners

we work with...

More than

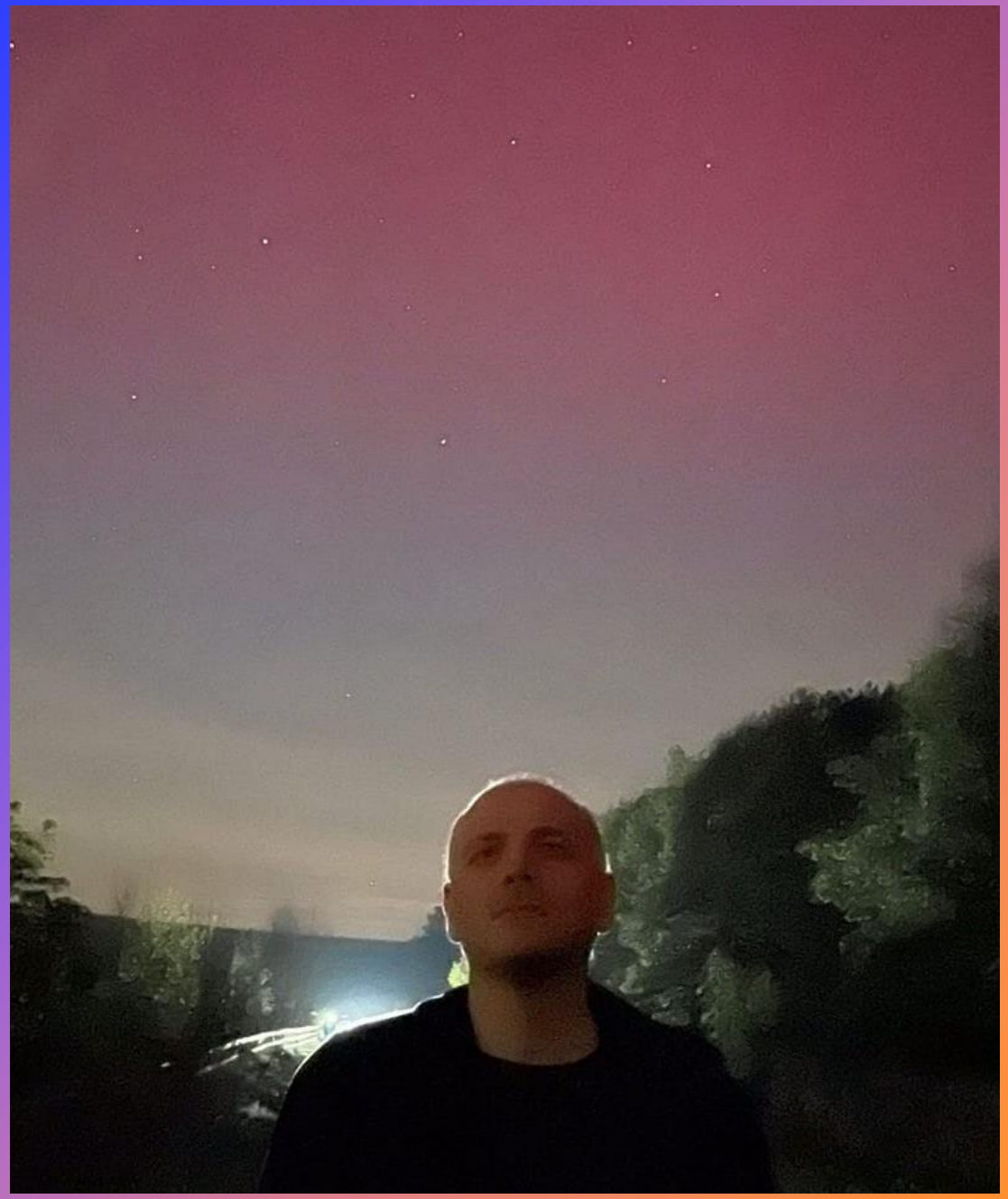
3,500

businesses to develop our courses.

Offer over

20,000

placements every year.



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About me

- History researcher
- Employability
- Leadership development
- Researcher training
- Research ethics
- Research assessment and excellence

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My role

- Professional services REF (research quality) lead

- Co-ordinated 2021 institutional submission and leading 2029 preparations

- Co-authored environment documents – university and disciplinary

- Co-authored impact case studies

- Selection of staff and publications for submission

- Systems

- Research ethics

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REF 2029

AGENDA

- About REF
- Components
- Maximising performance
- Case study of REF2021
- Future of REF
- REF and Sucupira/Qualis

History of REF

Began in 1986

To evaluate the quality of research undertaken by UK universities.

Submissions for each subject area (unit of assessment), with scores from a subject specialist peer review panel.

The rankings are used to inform the allocation of quality weighted research funding (QR) each universities receives.

Took place in 1986, 1989, 1992, 1996, 2001, 2008, 2014, 2021. Next 2029

Purpose of REF

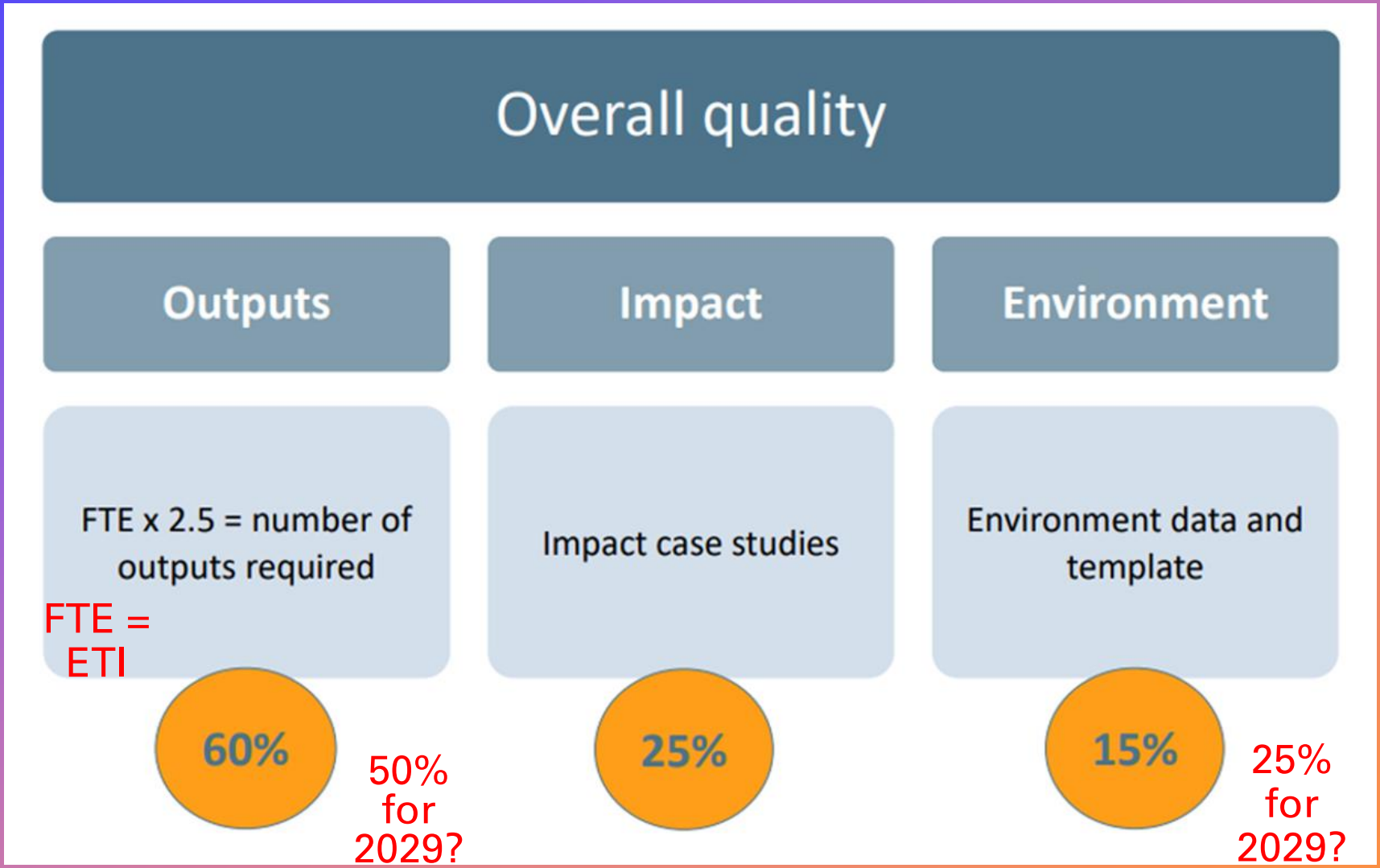
For the government:

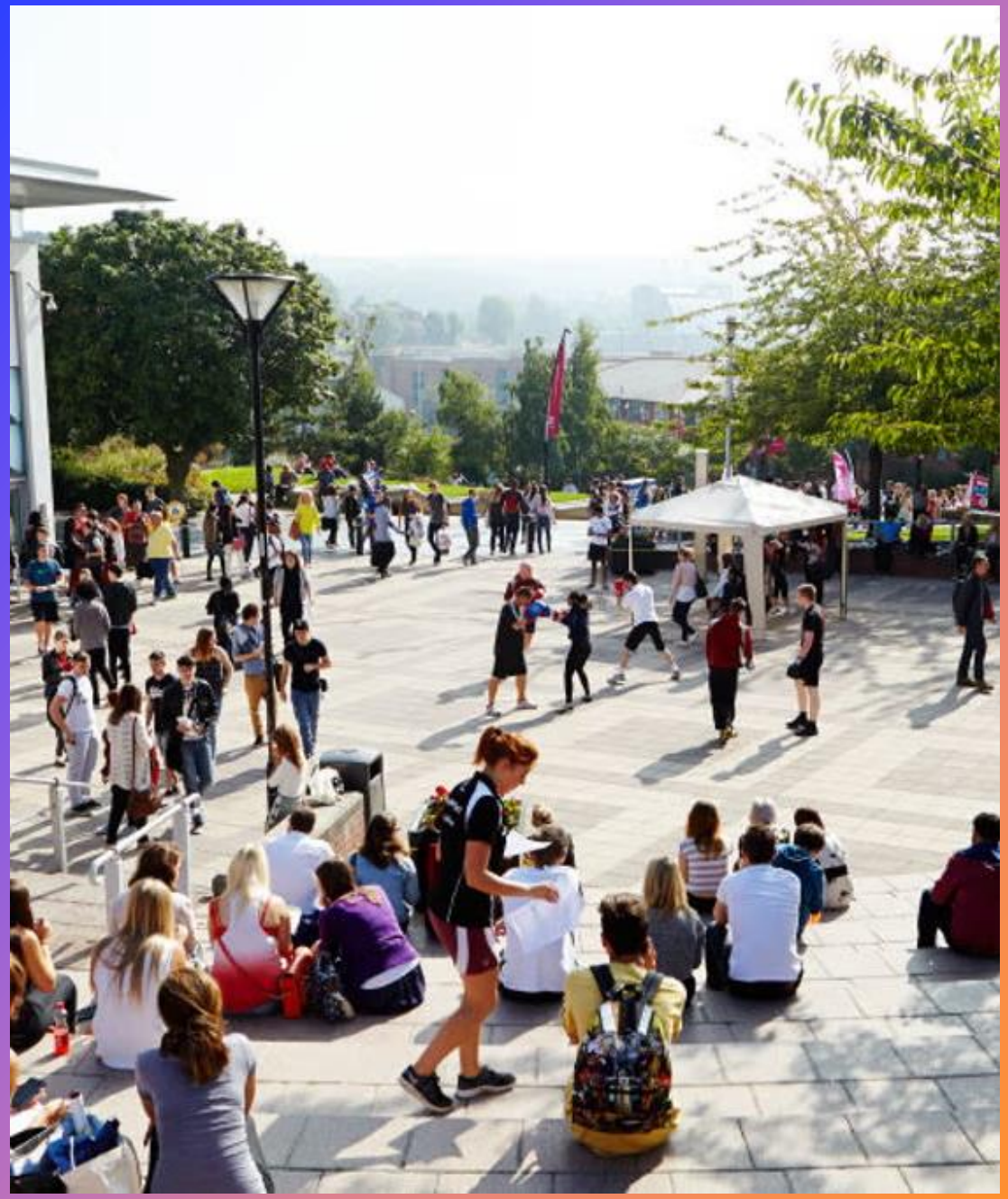
- Provide accountability for public investment in research and produce evidence of the benefits of this investment
- Provide benchmarking information for use within the HE sector and for public information
- Inform the selective allocation of funding for research
- Provide an evidence base to inform strategic decisions about national research priorities
- Create performance incentives for universities and individual researchers

For the University

- REF-related income accounts for approximately a third of the University's annual research funding (R$107,000 per staff per year)
- REF performance is also a strong determiner of rankings in university league tables (19% weighting)

COMPONENTS

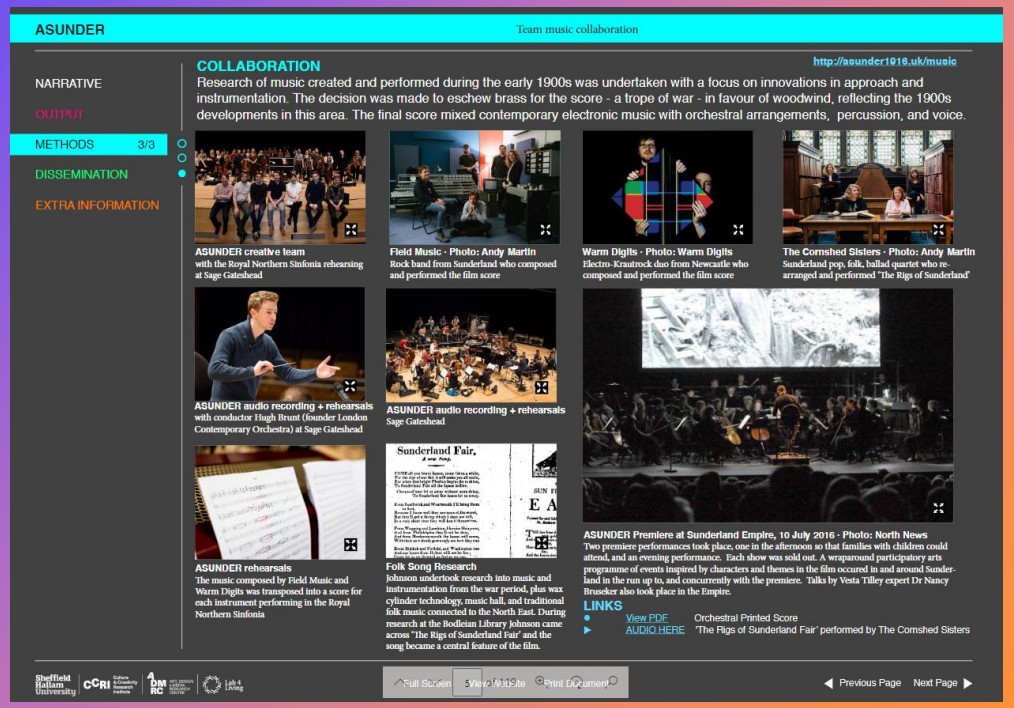

Overall quality
Outputs
Impact
Environment
FTE x 2.5 = number of outputs required
Impact case studies
Environment data and template
FTE = ETI
60%
50% for 2029?
25%
15%
25% for 2029?



Staff

All academic staff eligible. Cannot select. Instead, we submit those with ‘significant responsibility for research’. This means they are given the time, resources and objectives to do research. At least 20% of time. Selection has to be about inputs, not outputs.

Currently 30% of staff get submitted (500 of 1600). Had been 15%. Ambitions for 50%. Varies by discipline.



Outputs

Outputs means publications, plus creative portfolios, datasets, patents.

Disciplines need to submit 2.5 x the FTE of staff. Sheffield Hallam needed 1100 for the last REF.

Two selection criteria: 1) quality. 2) representativeness.

Much REF preparation is internally reviewing and scoring publication to understand the size of our pool and what are best quality ones.

Criteria

Assessment of research is based on three criteria – originality, significance and rigour (OSR)

Originality	The extent to which the output makes an important and innovative contribution to understanding and knowledge in the field. Research outputs that demonstrate originality may do one or more of the following: produce and interpret new empirical findings or new material; engage with new and/or complex problems; develop innovative research methods, methodologies and analytical techniques; show imaginative and creative scope; provide new arguments and/or new forms of expression, formal innovations, interpretations and/or insights; collect and engage with novel types of data; and/or advance theory or the analysis of doctrine, policy or practice, and new forms of expression.
Significance	The extent to which the work has influenced, or has the capacity to influence, knowledge and scholarly thought, or the development and understanding of policy and/or practice.
Rigor	The extent to which the work demonstrates intellectual coherence and integrity, and adopts robust and appropriate concepts, analyses, sources, theories and/or methodologies.

Assessment

Scoring of outputs is on a four-star scale, although half-point scoring between these is also common practice internally

4*	Quality that is world-leading in terms of originality, significance and rigour
3*	Quality that is internationally excellent in terms of originality, significance and rigour but which falls short of the highest standards of excellence
2*	Quality that is recognised internationally in terms of originality, significance and rigour
1*	Quality that is recognised nationally in terms of originality, significance and rigour
U	Quality that falls below the standard of nationally recognised work. Or work which does not meet the published definition of research for the purposes of this assessment

'World-leading', 'internationally' and 'nationally' in this context refer to quality standards. They do not refer to the nature or geographical scope of particular subjects, nor to the location of research, nor its place of dissemination.

Detailed Criteria

4*	• Outstandingly novel in developing concepts, paradigms, techniques or outcomes • A primary or essential point of reference • A formative influence on the intellectual agenda • Application of exceptionally rigorous research design and techniques of investigation and analysis • Generation of an exceptionally significant data set or research resource
3*	• Novel in developing concepts, paradigms, techniques or outcomes • An important point of reference • Contributing very important knowledge, ideas and techniques which are likely to have a lasting influence on the intellectual agenda • Application of robust and appropriate research design and techniques of investigation and analysis • Generation of a substantial data set or research resource
2*	• Providing important knowledge and the application of such knowledge • Contributing to incremental and cumulative advances in knowledge • Thorough and professional application of appropriate research design and techniques of investigation and analysis
1*	• Providing useful knowledge, but unlikely to have more than a minor influence • An identifiable contribution to understanding, but largely framed by existing paradigms or traditions of enquiry • Competent application of appropriate research design and techniques of investigation and analysis

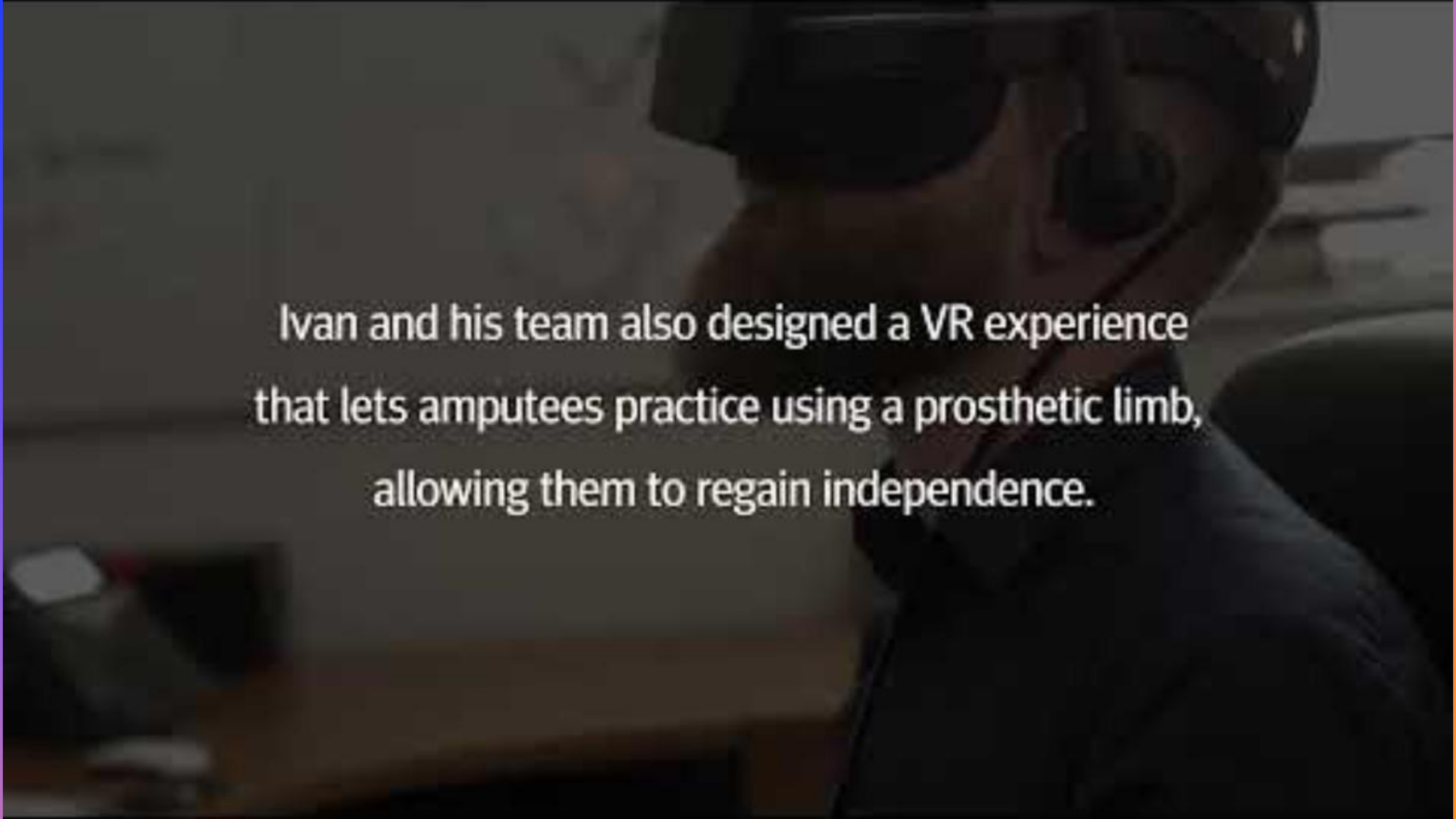
Impact

Impact is assessed via impact case studies (ICSs), which demonstrate the benefit of research on society and/or the economy, beyond academia. Disciplines submit approximately one ICS per 15 FTE of staff.

These are 5-page narrative documents which demonstrate some of the best areas of where university research has had a significant and far-reaching effect on society and/or the economy, beyond academia.

SHU ones can be explored at: https://www.shu.ac.uk/research/excellence/research-excellence-framework/impact-case-studies

As the world leaders in this technology, we have worked
with many companies, leading to hundreds of
millions of pounds of sales
— and creating many jobs.


Ivan and his team also designed a VR experience
that lets amputees practice using a prosthetic limb,
allowing them to regain independence.

Prof. Simona Francese
Department of Biosciences and Chemistry
do contain forensically relevant molecules,

Environment

Environment has traditionally assessed via a narrative statement that details the discipline's research strategy, impact strategy, staffing strategy, researcher development, infrastructure and facilities. Similar to Sucupira proposta.

Grant income and doctoral completions are key quantitative metrics in this element.

Currently the biggest unknown for 2029. Sector-wide consultations and pilots running/imminent.

Expecting diversification of measures and expansion into softer areas (people and culture, as well as income and infrastructure).

Concordats

National Concordats drive progressive behaviour. Usually optional, but engagement is rewarded in REF environment.

Concordats include:

Researcher Development - https://researcherdevelopmentconcordat.ac.uk/

Research Integrity - https://www.universitiesuk.ac.uk/topics/research-and-innovation/concordat-support-research-integrity

Knowledge Exchange - https://www.keconcordat.ac.uk/

Open Data - https://www.ukri.org/wp-content/uploads/2020/10/UKRI-020920-ConcordatonOpenResearchData.pdf

Maximising REF Performance

Growth ambitions for staff numbers – supporting junior staff (including co-authorship)

Pre-submission peer review of publication

Involving junior staff in peer reviewing

Continuous review to keep up-to-date with scoring data

Impact training and 1:1 surgeries

Progressive initiatives around culture (diversity, recruitment and promotion, open research)

Case Study REF2021 - Strategy

Ambitions

- Ambition to grow research significantly, while maintaining quality. Also to increase representation of emerging areas, both subject-wise and of individual emerging researchers

Targets/KPIs

- Double the size from 16% of academic staff included to 30%
- At least maintain output profile GPA (was 2.71), but aim for ≥ 3.00
- Increase research power ranking (determiner of QR income)
- Improve inclusivity and representation in the submission

Case Study REF2021 - Submission

UoA No.	UoA	SRfR Headcount	ECR Headcount	SRfR FTE	Intensity % eligible FTE	Outputs Required	Impact Case Studies Required
3	Health	35	4	31.6	14%	76	3
4	Psychology	18	4	17.6	35%	40	2
5	Bioscience	36	5	33.5	65%	84	3
11	Computing	27	6	25.6	31%	61	3
12	Engineering	49	9	48.6	41%	116	4
13	Planning	43	10	38.7	37%	92	4
17	Business	29	3	24.9	15%	62	3
20	Social Policy	22	4	20.6	19%	46	3
23	Education	45	7	41.6	27%	104	4
24	Sport	67	11	64.15	42%	149	5
27	English	35	4	31.51	91%	79	3
28	History	16	0	15.41	100%	39	2
32	Art and Design	39	3	31.25	32%	78	3
34	Communications	39	4	33.2	50%	80	3
	SHU	**500**	**74**	**458.22**	**32%**	**1106**	**45**

Case Study REF2021 - Results

Targets

- Double the size from 16% of academic staff included to 30%
- At least maintain output profile GPA (was 2.71), but aim for ≥ 3.00
- Increase research power ranking (determiner of QR income)
- Improve inclusivity and representation in the submission

Performance

- 32% of staff were included. Submitted to three new subject areas
- Output profile of 2.86 (overall profile 2.93)
- Moved up 10 places in the national research power league table (to 55/157, up from 65th)
- 47% female staff and 15% people from an ethnic minority background

REF2021 - Results

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	Overall Quality Profile				
	4*	3*	2*	1*	U
2021	24	48	26	2	0
2014	18	47	29	5	0

All %

Outputs (60%)				
4*	3*	2*	1*	U
18	53	25	3	0
16	46	31	6	1

Impact (25%)				
4*	3*	2*	1*	U
43	35	21	1	0
22	50	24	4	0

Environment (15%)				
4*	3*	2*	1*	U
16	47	35	2	0
18	47	31	4	0

Implications

QR income from 22-23 is set by a funding formula determined by the REF 2021 quality profile. These will then though remain fairly stable for the next 6-7 years - QR is recurrent block research funding. QR income for Sheffield Hallam increased by £2.2m (R$ 15 milhões) per year for this next cycle (c.2022-29)

University league tables are affected by these results – knock-on on student/staff recruitment and potentially eligibility to apply for external funding.

Changes REF 2021 to 2029

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The REF constantly evolves, with major changes to its design taking place between each exercise

The key changes from 2021 to 2029 are:

- Impetus – to further change the emphasis from the performance of individuals to the 'contribution institutions and disciplines make to healthy, dynamic and inclusive research environments'
- The weighting for environment is likely increasing from 15% to 25%, at the expense of outputs
- Full decoupling of staff and outputs
- No minimum or maximum requirements per person (just a statement on representativeness)
- New discipline-level structured statements on outputs and impact (more on process, not just outcomes)

Sheffield Hallam's Preparations

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- Big overhaul of research and innovation planning. Annual plans submitted and reviewed online. This clearer overview will help identify those with REF aspirations who are not currently 'significant responsibility for research'
- Publication reviews happening continuously. Reinforcing expectation that all 2021 to 2024 ones will be up-to-date by early 2025.
- Ongoing impact support, including plans to run discipline-level sessions with all potential/long-list authors.
- More detailed operational plans in preparation, to cover 2025-28.
- Staff selection and environment more bound by/awaiting external developments.

REF and Researchers

Being returned to REF is important currency for researchers in terms of recruitment and progression.

However, REF is a collective assessment, not an individual one. No one knows what their actual specific contribution was. Particularly in the case of internal co-authorship, the attribution is arbitrary, so is never shared. No one ever knows what their outputs scored

Publication metrics and place of publication are never used as proxies for assessing research quality. All outputs are always freshly peer reviewed. This is both in internal processes and by the REF review panels themselves

Internal REF processes are principally used for developmental purposes – staff receive constructive feedback on how to score higher in their future work. They are also used to optimise submissions. But they are not used systematically in other areas of university business, e.g. they will not be provided to promotion panels (although individuals may present their own scores)

REF and Doctoral

REF is often criticised for not including doctoral work satisfactorily, despite this work being the 'lifeblood' of our system.

REF measures doctoral contribution in Environment - through completion numbers (3.75% weighting) and a portion of the People section narrative (part of 1.875% weighting)

Doctoral publications can go into REF, but only if there is a staff co-author. Doctoral researchers can be named on impact projects, but again cannot be based on their outputs if the supervisor not a co-author

Doctoral quality is measured in other ways too – processes (QAA) and experience (PRES)

REF and Bibliometrics

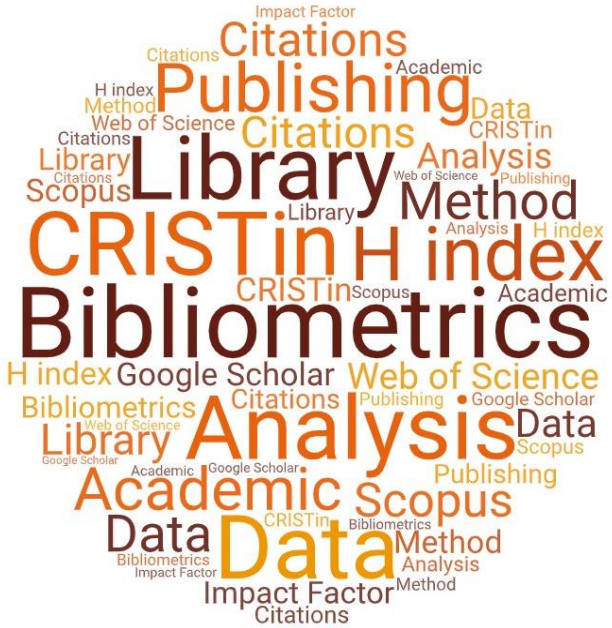
REF generally doesn't use bibliometrics.

We use bibliometrics (journal impact factor, Scimago, h-index citations etc.) to advise researchers where to publish.

But all REF assessment is fresh peer review.

In the UK some subject areas use REF grades to group journals e.g. "a 4* journal", like A1, A2 etc. with Qualis.

But our message is that it is the quality of the journal review that creates correlation, and try to avoid using it as a proxy for quality (we are signatories of DORA - https://sfdora.org/)

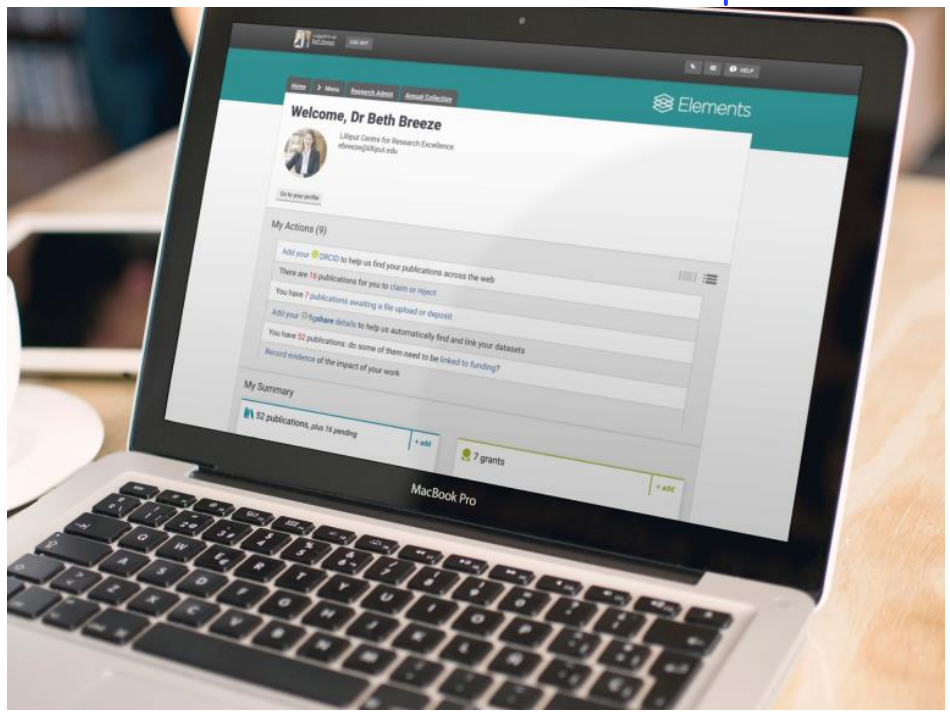


Systems

Symplectic Elements for people (publications, achievements, CVs, future-facing plans). https://elements.shu.ac.uk/. Automatically harvests Scope, WoS etc.

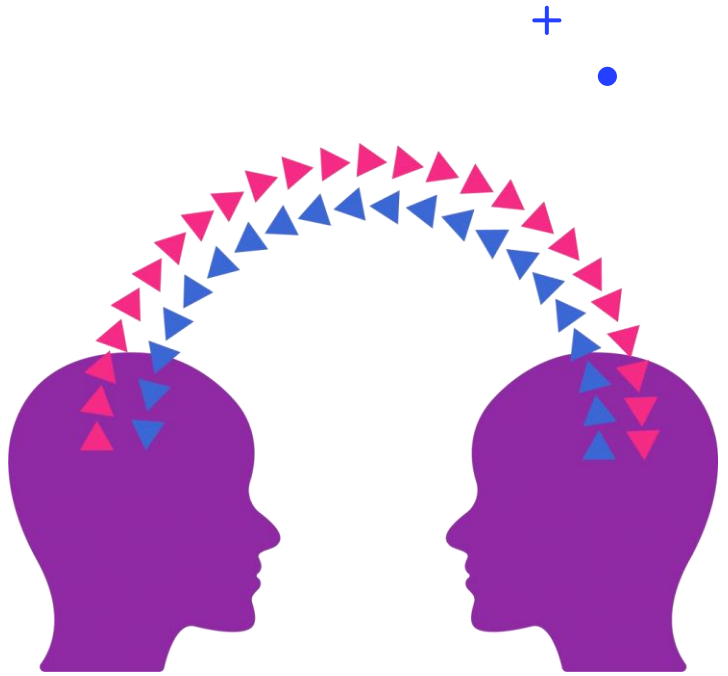
Hivve Impact Tracker for projects (impact). https://myvvid.com/

Similar scope to Lattes (with some Sucupira data). Happy to give demonstrations



Knowledge Exchange and REF

REF measures the application of research through impact. But knowledge exchange happens in parallel and is considered under a separate framework.



Our definitions:

- Impact is the use of research, outside of academia. Always needs a clear connection to the research that underpins the impact

- Knowledge exchange is the process of building two-way relationships with non-academic partners. It is often a vehicle for impact. But knowledge exchange only leads to impact where there are resulting changes or benefits. And not all knowledge exchange is based on research – can also be teaching, CPD, graduate start-ups etc.

Knowledge Exchange is often 'upstream impact'. It is broader (doesn't need to be research-based) and doesn't usually have the same evidencing requirements (to demonstrates outcomes as well as outputs)

Knowledge Exchange Framework (KEF)

First run in 2021

It has so far been about collecting information (financial and output data related to knowledge exchange), whereas REF is about evaluation and performance-based allocation of funding.

KEF is based quantitative indicators, for example income derived from various types of knowledge exchange and collaborative or contract research. Income is used as a low-burden proxy for the impact generated. Other measures proposed include academic staff time involved in delivery of activities, companies created, and proportions of publications that have non-academic co-authors.

The largely metrics-led approach of KEF contrasts significantly with the peer-reviewed case study approach of the REF. Impact is very much about outcomes, and because the case studies are selected, they represent the best and most exciting examples of impact.

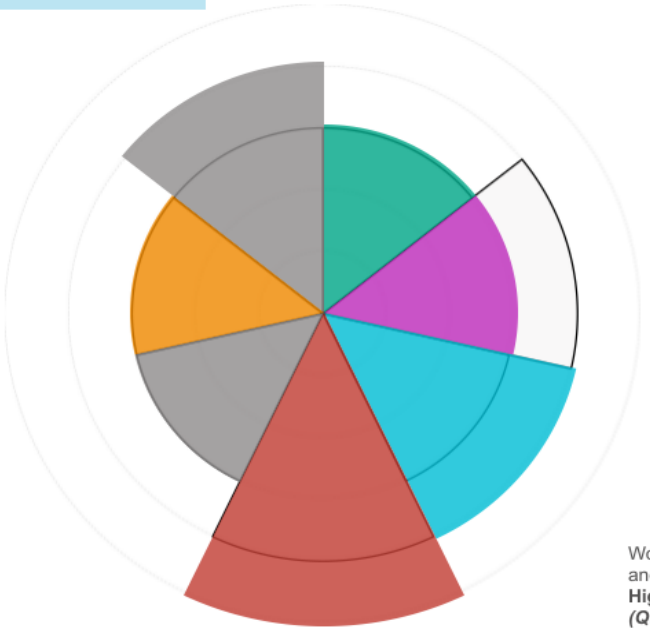
In contrast the focus of the KEF is the processes across a wide range of activity, so includes smaller and more diverse impacts too. Narrative element is increasing, based on self-assessment.

UKRI Research England
Knowledge Exchange Framework

https://kef.ac.uk/data/10005790

KEF Clusters

Each segment below shows the relative strength of the selected provider for each KEF perspective, compared against the average for the cluster they are a member of (as denoted by black quintile line). Tap or hover over a segment to show the links to the dashboard for each perspective. Segments are displayed using quintiles; for example, a segment that reaches the outer edge of the chart shows that the selected provider has very high engagement (quintile 5) for that perspective.



▲ **Supporting narrative statement avaliable**. Tap or hover over the chart segment to show a summary of the narrative, and a link to the full version.

Institutional Context

Our mission is simple: we transform lives. We give people from all backgrounds the opportunity to acquire the skills, knowledge and experience to succeed. Our research, teaching and partnerships are characterised by a focus on real world impact, informed by local, regional, and national policy priorities; addressing the cultural, economic, and social challenges facing society today. We are ambitious for our communities, our partners and our city and region. Our ambitions align fully to this agenda, evidencing the application of knowledge in partnership with business and the wider community in which we reside. Our vision is to be the world's leading applied university; demonstrating what an institution genuinely focused on transforming lives can achieve in partnership with its location.

Read the full institutional context
(opens in new window)

Who are Cluster E ?

Large universities with broad discipline portfolio across both STEM and non-STEM generating excellent research across all disciplines. Significant amount of research funded by government bodies/hospitals; 9.5% from industry. Large proportion of part-time undergraduate students. Small postgraduate population dominated by taught postgraduates.

https://kef.ac.uk/dashboard

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REF 2029
Research Excellence Framework

PLATAFORMA Sucupira

QUALIS

REF and Sucupira/Qualis - Similarities

Mixture of data and narrative.

Expert review by disciplinary panels, co-ordinated by a national quango (Research England/CAPES).

Given ratings (REF 1-4*, Sucupira 1-7), which determine future funding and influence standing/student recruitment.

Publications, (societal impact) and contextual narrative form basis of assessment.

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REF and Sucupira/Qualis - Differences

Sucupira is orientated at program level, with postgraduates central. REF is staff orientated, with PG much less well integrated.

In REF impact is separated out into its own component and given more weighting.

Qualis outputs look at the volume and full distribution, whereas REF is based on a sample of the best quality ones.

Sucupira is more a continuous process whereas REF is an event (though that is changing). Sucupira also has more consistent indicators

THANK YOU

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- https://www.shu.ac.uk/research/excellence/research-excellence-framework
- https://www.shu.ac.uk/research/excellence/research-excellence-framework/impact-case-studies
- https://www.ref.ac.uk/
- https://2021.ref.ac.uk/

QUESTIONS