Collecting Research Impact Evidence

Best Practice Guidance for the Research Community

The 2014 Research Excellence Framework (REF2014) was the most recent development of the UK's cyclical Research Assessment Exercise (RAE), first implemented across the higher education (HE) research base in 1986 and repeated in five subsequent exercises.

Descriptions of impact were captured in case studies authored within a prescribed template. Each case study included information about the research underpinning the described impact, the impact itself and a list of corroborating

claims of impact (an indicative maximum of

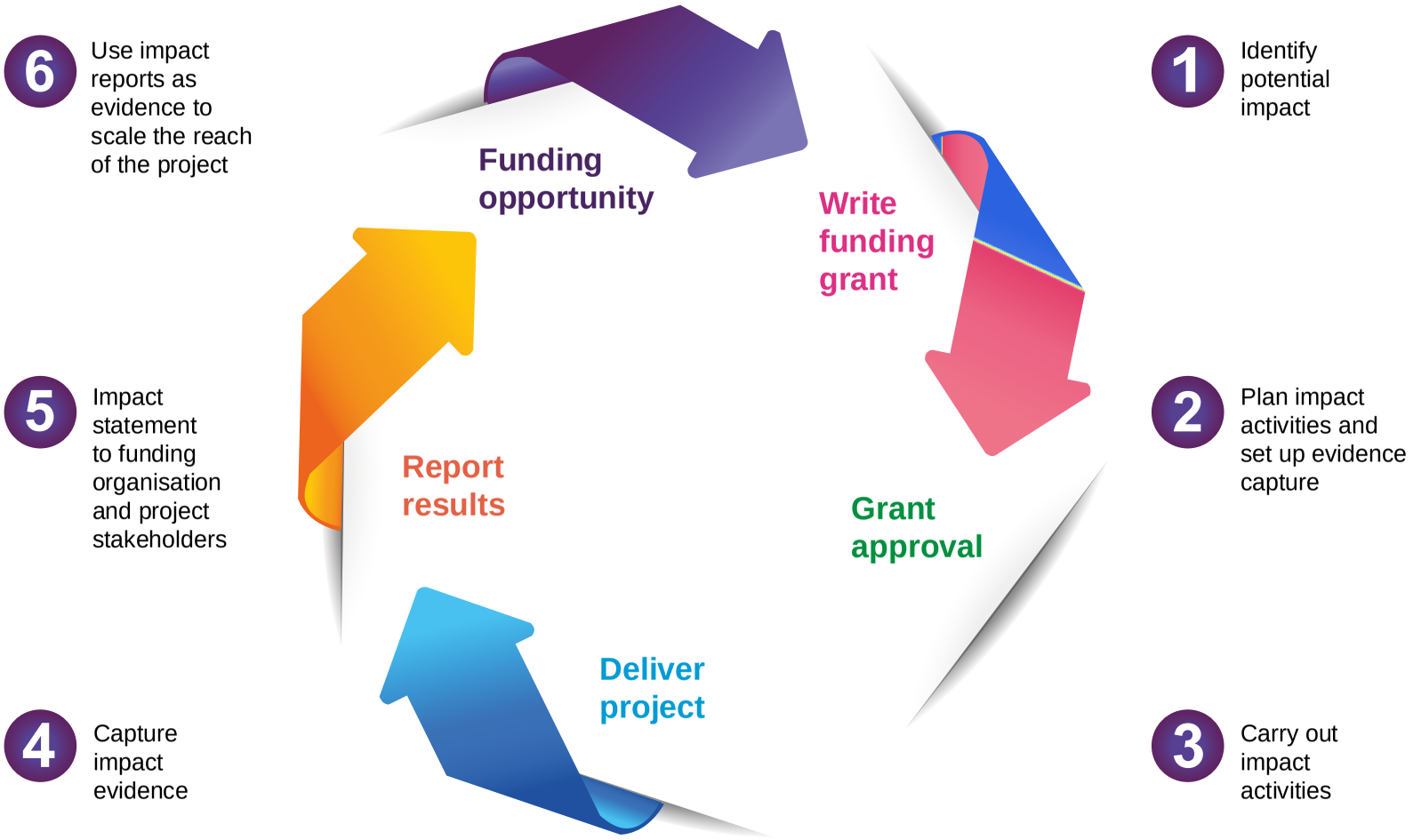
external to the submitting HEI. Each **corroborating source** needed to be linked

providing clear textual evidence of impact but for audit purposes. Sources could include, as appropriate to the case study, the following types of material:

- Reports, reviews, web links or ther documented sources of information in the public domain.

made available by the HEI if audited).

Figure 1: Impact in the research life-cycle ©Vertigo Ventures 2013



> This document summarises current practice in the collection, management and use of impact evidence as this is not only important to any future UK HE research assessment but is also relevant to the UK's Research Councils and the European Union's Horizon2020 (H2020) and is of increasing interest in Australia, Ireland and elsewhere. Communicating the difference that publicly funded research is making is key for national and international research funding organisations; similar pressures are faced by research-focussed charities who naturally want to demonstrate real outcomes to their donors. So, for the recipients of research funding, descriptions of research impact supported by appropriate and transparent evidence will be increasingly important. The increase in importance will drive the use of such evidence for internal analysis and management of research activity as well as for external assessment.

Impact assessment at the national level is complemented by assessment at the portfolio level as well as due consideration of enhancement at the project level. For

impact summaries and well planned/resourced impact pathways as part of their application process. Once a project is in progress evidence of actual impact is important to enable the developing, during and post project impact narrative to be appreciated and evidenced easily. The Research

processes allow researchers to record emerging outcomes, and to capture evidence to demonstrate progress.

For the H2020, some bids allocate up to 30% of the marks to impact assessment. Key objectives of the H2020 strategy are to boost industrial competitiveness and contribute towards the resolution of key societal challenges. Being able to demonstrate how impact has been achieved in this respect can help applications for funding stand out.

Beyond funders, impact evidence is important to HEIs and research institutes as a means of internal performance management. It helps institutions differentiate themselves in attracting collaborative partnership in industry, the public and voluntary sectors. Furthermore, impact evidence can be re-purposed to help attract talented researchers and students. Similarly, impact evidence is important

institutions can draw on impact-related criteria when hiring or for career progression.

Impact can occur throughout the research cycle, not just at the end of a project. Impact implementation and the collection of material useful as a source of impact evidence should be a continuous part of the process.

The REF2014 introduced the assessment of impact arising from excellent research, alongside the output and environment elements established in the previous RAE.

The assessment of impact was based on expert review of case studies, which could include any social, economic or cultural impact

assessment period. Whilst REF panels gave guidance about the various kinds of evidence considered appropriate, the onus was on individual HEIs to provide evidence to support the claims made in individual case studies. Weighting of 20% of the overall assessment outcomes in the REF2014 was assigned to the score for impact.

An analysis of Section 5 of the REF2014 impact case studies template (sources to corroborate the impact) shows the prevalence

> However, it must be remembered that this analysis is at the aggregate level and whilst 50% of case studies in the Arts and Humanities utilised testimonials as a form of evidence only 30% of the Medical Sciences did so.

This correlation analysis tells us nothing about the way in which individual sub-panels and panels assessed the case studies and/or appreciated different evidence types. For example, from this analysis we do not know whether the case studies were assessed differently across research communities.[7]

There may have been different practices, perhaps in the weighting of value for different source types, across subjects. We know that there is great variety in the impact case study database, and that there are many other differences between individual case studies. This variety may point to the surprises and outliers among the impact case studies as having particular value and interest. Having said that, the analysis certainly supports the original intention of the REF in encouraging diversity in content, rather than applying a formulaic concept of what good impact or good impact evidence looks like.

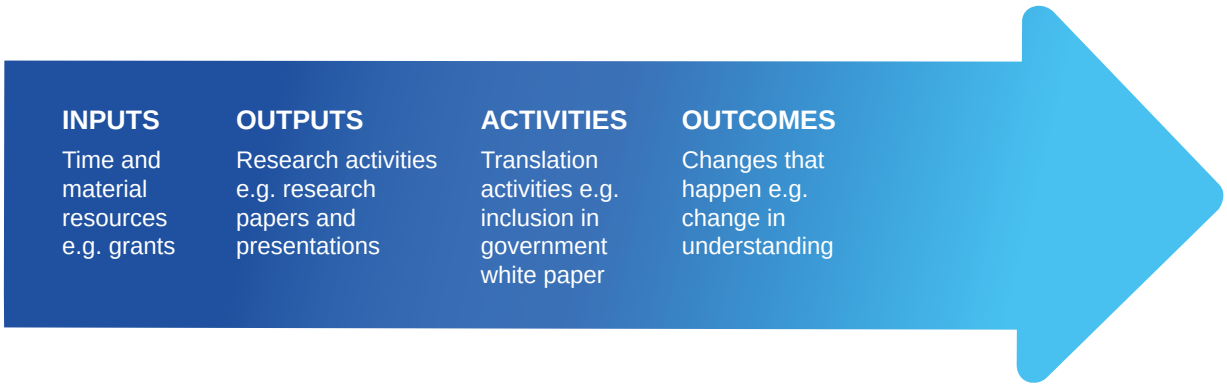
Table 1: Spearman correlation between the indicative score and the amount of various types of evidence; there is a column for each subject panel.

	A: Biological Sciences & Medicine	**B:** Physical Sciences & Engineering	**C:** Social Sciences	**D:** Arts & Humanities
Activity	-0.03	-0.02	-0.04	-0.06
Article	0.19	0.09	0.02	-0.01
Award	-0.06	0.01	0.01	0
IP	0.05	0.05	-0.01	0
Legal	-0.03	0	0	0
Media	-0.01	0.07	-0.07	0
Report	0.19	0.11	0.15	0.08
Testimonal	-0.15	0.04	0.08	0.17

A value of 1 implies maximal positive correlation, 0 no correlation, and -1 a maximal inverse correlation.

and the amount of a given evidence type are uncorrelated.)

[7] https://www.digital-science.com/blog/news/new-digital-research-report-global-research-impact-needs-evidential-support/


INPUTS
Time and material resources e.g. grants
OUTPUTS
Research activities e.g. research papers and presentations
ACTIVITIES
Translation activities e.g. inclusion in government white paper
OUTCOMES
Changes that happen e.g. change in understanding

3. Include simple narratives and empirical data where possible

Another key theme to emerge from the interviews was how varied the case studies

Online Impact Evidence Survey

In addition to the case studies analysis and interviews with main panel chairs a research impact Evidence Survey was widely advertised and open to all interested parties in the sector. A total of 66 participants from over 30 organisations contributed their views. Participants in the survey came from various disciplines and had a variety of job roles. Four key themes emerged from survey responses:

1. Using impact evidence to demonstrate the effects on stakeholders

Impact evidence provides a means of directly hearing from research users and stakeholders what they value about research and to what extent. As such, evidence is particularly valuable for all research funders and researchers themselves to gather throughout and beyond the project lifecycle, not only as a method of demonstrating worth but as a planning tool to understand how maximum value could be delivered to stakeholders. Independent evidence from those outside the supported research organisation itself is a tangible proof of impact, revealing who is using the research and how.

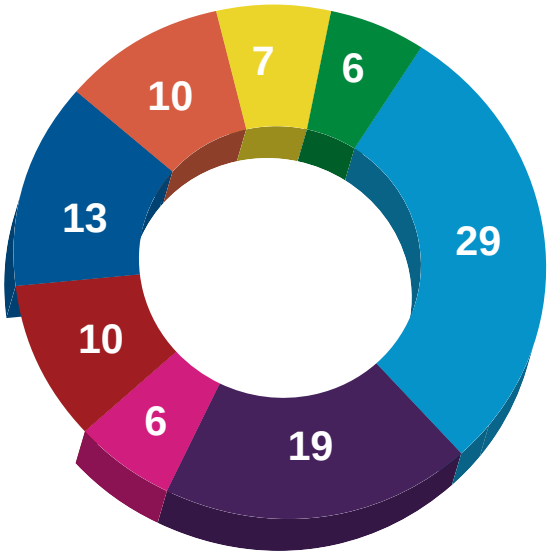
2. Tracing the pathway from research

3. Using empirical data as impact evidence

Where possible and useful, assessors wanted

practical in all cases and therefore there are challenges with an approach that would only utilise indicators, not least being able to clearly attribute the impact to a particular research output. Empirical impact evidence has been and is being used by researchers across the disciplines to show how their research

Impact Evidence Workshop



Conference contribution

Contribution to debate

Cultivating links with skateholder organisations(s)

Industry collaboration

Meetings and events for skateholder groups

Parliamentary debate in House of Commons

Academic collboration

Cultivating links with skateholder organisation(s)

Independent consultancy

Meetings and events for skateholder groups

Papers published

Press material

Public sector collaboration

Research open days

Subject area workshops

Web-based resources

Collecting Impact Evidence throughout the Research Project

1. Identify potential impact

From the conception of the project it is valuable to consider what types of impacts may occur as a result of the research. This may be done explicitly, for example in Pathways to Impact Statements and when planning the activities

2. Plan activities and set up evidence capture

Identify methods to collect data about these activities and introduce means to support with collecting the data over the long term. For example, this may be having an up-to-date database of industry contacts. These activities

identifying these will allow researchers to apply for the appropriate resources to increase impact and be able to capture the data.

3. Carry out impact seeding activities

Collecting information such as the contact details of collaborators can help researchers to later provide impact evidence. This is also

impact evidence such as survey responses or to gather ex-ante data.

4. Capture impact evidence

Using the data gathered previously, record the difference that has been made. Online resources such as Hansard[9] can help to show policy impacts. Google Alerts can support with monitoring the web for mentions of research both within and external to the academic community. The important factor is to collect the information in an ongoing way, keeping an open mind as impacts may occur in a variety of ways and serendipitously rather than strictly to plan.

5. Provide impact statements to research funders and stakeholders

Use a compilation of the impact evidence gathered to share a narrative about the impact that has occurred.

6. Re-purpose the impact information for different audiences

The table below summarises examples of impact evidence as discussed by delegates at the Research Impact Evidence Workshop. It was clear that whilst some disciplines may have instances of certain types of impact, for example health impact occurring from clinical research, these are not the only impacts that may occur. Researchers do well to consider, as they did in REF2014, the many different stakeholders and potential impacts that may occur from one output or activity. For example, research outputs like musical compositions could have cultural impacts such as

as well as commercial impacts through the licensing of such music and concert ticket sales.

This list provides examples of impact types and corresponding examples of evidence; it is not exhaustive.

Evidence Types	Guidance	Advantages	Disadvantages	Related evidence
Public policy	• Documentation directly mentioning or a series of documents showing a change as a result of researchers' advice.	• Public policy changes could have wide-reaching impacts for example on a wide geographical region or large population.	• It may be necessary to show how the policy changes are adopted and the difference this makes. • Challenges in creating impact maybe due to political environment.	• Further reports about the impact of the legal changes. • Testimonials relating the research to the changes. • Petitions data. • Campaigns data.
Practice Guidelines	• Provide a narrative that shows that research informed guidelines.	• The professional body offering the guidelines is often well respected and has a robust process e.g. National Institute for Clinical Excellence. • This can also be a good way to show the prevention of risky activity or behaviour.	• The guidelines may not be followed in practice.	• Data showing the take up of the guidelines in practice.
Reports published by organisations e.g. company report, statistical report	• These should be from an independent body, directly mentioning the research and how it has affected stakeholders. • Where reports mention audience evidence showing the difference made to the audience.	• These are independent and may include useful	• research has made.	• Testimonials may be needed to describe the link between the reported impacts and the research.
Social media	• Statistics on viral spread, followers, impressions or shares can help to show engagement with a particular	• This can show how awareness about a topic has been raised or informed public debate.	• This does not show what has changed as a result of this awareness. • Maybe seen as shallow.	• Quantitative reports e.g. market data showing increased purchases of technology.
Testimonials	• These should be from an directly mentioning the research work and how it has affected them. Where possible, the statement could impact.	• research led to the impact.	• Ideally these should be from senior • These can be seen as inherently biased in favour of the researcher.	• Quantitative reports showing the difference made.
Web Links	• The best examples of the use of web links are where they are independent, and there is meta-data showing their reach, for example in-page visits.	• Web links can show how effective public engagement has been. •	• They do not show what actions have been taken as a result of increased awareness.	• Meta-data about the numbers of views and potentially any purchasing data or data showing

Conclusion

Research impact evidence is an important aspect of any impact case study or statement. This report has taken lessons from the REF2014 collection of corroborating impact evidence, consultation with assessors and sector stakeholders to provide guidance for best practice in collecting this data.

- **It is important to consider impact throughout the research project**

In order to best achieve this, researchers need to plan to collect impact evidence at all relevant stages of research projects.

multiple projects as impact does not follow a neat one-to-one relationship.

- **It is beneficial to use mutually strengthening evidence and narrative**

There was consensus among survey respondents and interviewees that focussing on the whole case study, i.e. the combination of evidence and narrative, strengthens the appreciation of what has been achieved. There are advantages and disadvantages to using any one type of impact evidence but impact evidence is more compelling when it is from

to the research or researchers. Different impact evidence types can be used together in a complimentary way; variety is to be

reporting encouraged.

The guidance supports triangulating impact evidence to provide the most compelling impact narrative.

- **Researchers can do more to link their specific research with impact**

The best impact evidence is that which

that has been made, how the impact has occurred and explains the context in which it happened. Collecting impact evidence in this way also supports the understanding of and differentiation between activities leading to change and the impact itself. Demonstrating the pathway enables the most valuable routes to be recognised and correctly resourced.

- **Collecting impact evidence is valuable for internal purposes as well as funder assessment**

Early indicators from the workshop suggest that impact evidence is beginning to be used by internal management teams in research institutions in addition to offering funders useful insight into which users/

impact evidence needs to be collected and stored in a way which enables it to be presented for both audiences.

While the ways of reporting may change it is clear that impact and impact evidence will continue to be of importance to the research sector. As such, this guidance provides support for researchers collecting impact evidence to gather the most compelling information.

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About the Authors

Vertigo Ventures provides cutting-edge impact reporting tools and services for research teams in government-funded research organisations who lack the ability to manage impact information, across the organisation, ahead of regular funding applications, quarterly internal reporting and periodic government quality reviews.

VV-Impact Tracker is a cutting-edge, online, Software-as-a-Service tool developed by Vertigo Ventures Ltd and launched in 2014 with UK institutions to help researchers and HEIs to identify, store, validate, and organise impact information and evidence from funded and non-funded projects.

Digital Science develops and supports

It designs next-generation tools and software to

from simplifying processes and sharing data more easily, to rethinking how we measure and evaluate a researcher's impact on their community.

Vertigo Ventures wishes to acknowledge Digital Science's analysis and contribution for the chapter titled 'REF2014 Impact Evidence'.