

# Science of Science

All things science of science including scientometrics, measuring real world impact of scientific work and text mining scientific papers.

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- [Comprehensive Impact](#)
- [Tools and Metrics for Comprehensive Impact](#)

# Comprehensive Impact

Comprehensive Impact, as opposed to Academic Impact is an umbrella term for the impact of scientific work on society, economy and policy. Comprehensive impact covers a broad range of activities and is difficult - if not impossible - to define prescriptively. I coined the term

Comprehensive Impact in my 2017 paper [Measuring scientific impact beyond academia: An assessment of existing impact metrics and proposed improvements](#)

## Why Should We Study Comprehensive Impact?

### Why Scientists Care About Comprehensive Impact

[Lots of papers write about the effect that the UK's focus on comprehensive impact affects the quality of research and individual researchers](#)

### Why Research Funders Care About Comprehensive Impact

[For research councils, being able to illustrate how their research impacts the economy and society helps them to compete for and justify their continued funding.](#)

### Why The Public Care About Comprehensive Impact

### Shortcomings of Academic Impact and Where Comprehensive Impact Helps

Scientific papers are

## Related Definitions

# REF Definition of Impact

The Research Excellence Framework (REF) - a UK-wide scientometric instrument for research quality defines impact 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 - [REF 2011](#)

The REF definition of impact is ambiguous as it does not specify the type of impact - I would argue that generating lots of citations is still impact but limited to academia. That is why we specify the term "comprehensive impact" when we talk about this concept.

# Tools and Metrics for Comprehensive Impact

## Research Excellence Framework (UK)

### ResearchFish (UK)

ResearchFish is a tool used by many funding bodies in the UK as a way to track outputs and impacts of scientific work. ResearchFish is used almost universally by all public funding bodies in the UK. ResearchFish primarily a data collection tool into which [the scientific investigators enter data about their work and corresponding outputs](#) via a fine-grained question set. This information is fed back to the funding bodies. It is based on [early work within the RAND group led by Dr Steven Wooding](#).

In their [recent report](#) ([mirror](#)), the authors describe their definition of Impact as being the same as that of REF's.

They use the word output to describe both academic and wider (or [comprehensive](#)) impacts of research

**Figure 1:** Simplified view of outputs, outcomes and impact of research

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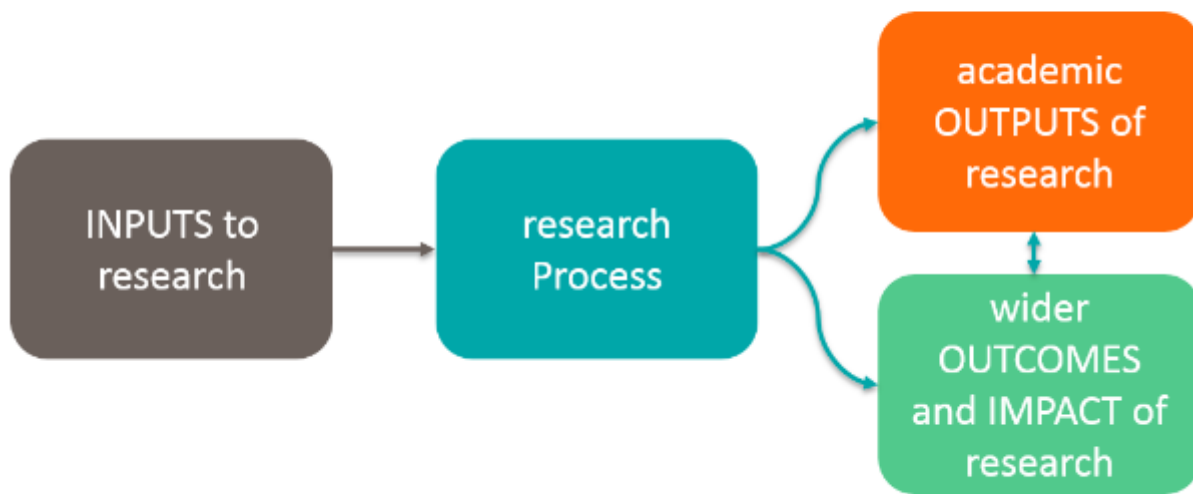


Figure 1 From ["Researchfish: A forward look."](#) Hinrichs, Saba, Erin Montague, and Jonathan Grant (2015).

## STAR Metrics (USA)