Research and researcher assessment: International initiatives to shift the dial

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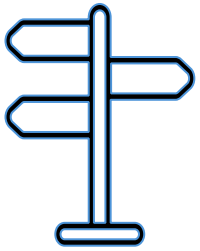
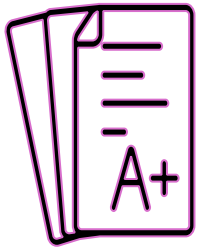
What I will cover...

Emergence and impact of research assessment



International initiatives

CoARA and its working groups



UK CORI Research Integrity Indicators Project

Timeline of research assessment evolution

1960s

Science Citation Index

Impact Factor embedded as a tool to select journals to cover but became synonymous with ‘quality’ of the journal

1980s

Assessing research sector

UK Research Selectivity Exercise (1986) first national assessment of a public sector research base

1990s-2000s

Widespread adoption

Hong Kong (1993), New Zeland (2003), Australia (2009), but approaches differed.

Web-based databases become widely accessible 2002-2005 (Web of Science, Scopus, Google Scholar).

2005 H-index introduced.

2000s-2020s

World University Rankings

University rankings introduced (ARWU 2003, QS 2004, THE 2009) and others followed (URAP, Leiden, Reuters) using different approaches.

Web-based tools (e.g. InCites and SciVal) made institutional comparison easy.

What's the problem we are trying to solve?

We are not using the right metrics of quality and achievement

- Reliance on bibliometric indices as proxy measures for the performance of researchers is deeply flawed.
- The JIF says nothing about the quality of individual papers, driving a publishing market based on reputation rather than science
- Despite this, institutions, policymakers, and research funders alike use quantitative metrics as proxies for research quality, but they measure outputs rather than research quality or impact *per se*.
- At the core of the challenges is a broken incentive system rewarding novelty and publication in a small number of highly selective journals.

Journal rank does not equal quality

frontiers in
HUMAN NEUROSCIENCE

REVIEW ARTICLE
published: 24 June 2013
doi: 10.3389/fnhum.2013.00291

Deep impact: unintended consequences of journal rank

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The authors looked at the relation between journal rank (derived from impact factor) and various indicators, such as reported effect sizes and statistical power.

- The only thing journal rank strongly correlates with is the proportion of retractions and frauds.
- Rather than increasing, methodological quality and, consequently, reliability of published research works in several fields may be decreasing with increasing journal rank.
- The predictive power of journal rank on future citations is quite small

A very uneven surface

- Demographic inequity in distribution of highly cited journals (81.6% in Global North, 18.4% in Global South)
- Multilingual environment poorly supported (English language journals higher ranked)
- The high cost of APCs disadvantages resource-poor researchers and risks splitting the international research community
- The dominance of bibliometrics as incentives for institutions has diminished the value of other forms of scientific work
- Researchers who have already succeeded are more likely to succeed again (the 'Mathew effect')
- Disadvantages some disciplines (e.g. engineering, HSS) whose modes of communication are different

International initiatives to move the dial

DORA

The San Francisco Declaration (DORA) advocates for:

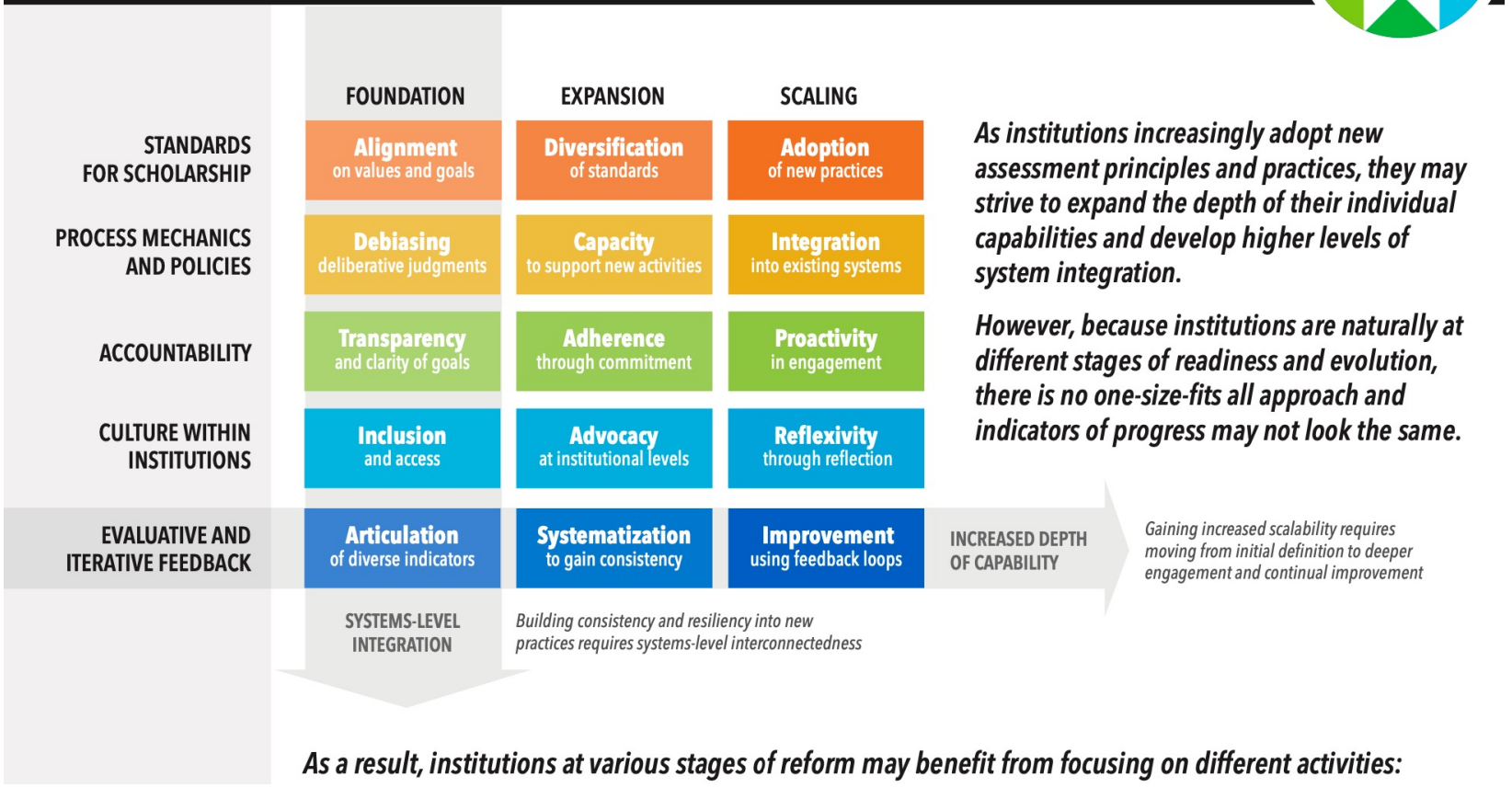
- eliminating the use of journal-based metrics, such as JIF
- assessing research on its own merits rather than the journal in which it is published
- capitalising on the opportunities of online publishing – e.g., no limits on number of words, figures, or references
- exploring new indicators of significance and impact.

24,941 individuals and organisations in 167 countries have signed DORA to date.

RETHINKING RESEARCH ASSESSMENT

S.P.A.C.E. TO EVOLVE ACADEMIC ASSESSMENT

A RUBRIC FOR ANALYZING INSTITUTIONAL PROGRESS INDICATORS AND CONDITIONS FOR SUCCESS



As institutions increasingly adopt new assessment principles and practices, they may strive to expand the depth of their individual capabilities and develop higher levels of system integration.

However, because institutions are naturally at different stages of readiness and evolution, there is no one-size-fits all approach and indicators of progress may not look the same.

As a result, institutions at various stages of reform may benefit from focusing on different activities:

Reformscape
Discover what's possible

A resource that can be used by:

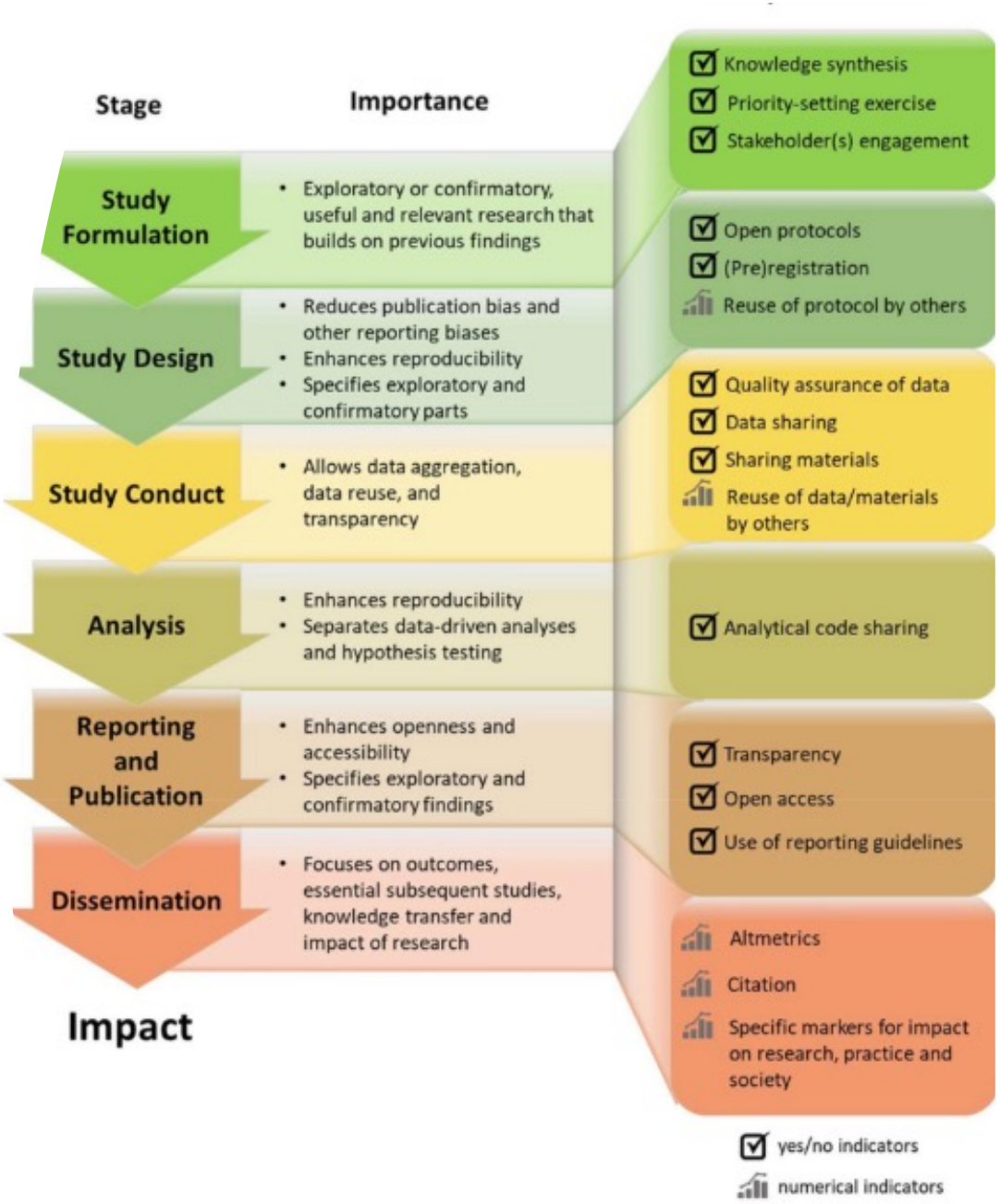
1. **Senior academics**, and people in a position to change assessment policies, looking for detailed examples of what others have done to learn what might work for their institution.
2. **Early and mid-career researchers** looking for evidence and case studies to help make a case for change.
3. **Staff that manage the assessment process** who want to benchmark their institution's approach within the wider landscape of reform or browse assessment practices to draw inspiration from others.
4. **Research assessment or DORA working groups** looking for good practices and an easy way to share and celebrate progress.
5. **Funders and initiatives** wanting to keep informed of what institutions are doing, track changes and trends.

Hong Kong Principles

Five principles

1. assess responsible research practices
2. value complete reporting
3. reward the practice of open science
4. acknowledge a broad range of research activities
5. recognise essential other tasks like peer review and mentoring

Links assessment to research integrity



"Publish or perish' and metrics have led us into a blind alley. Let's start recognizing the full breadth of value created by researchers."

Commitment to ensure that their research assessments will:

- recognise and reward the plurality of contributions researchers make to academic life (not just publishing and bringing in grant money)
- respect epistemic differences between research fields
- reward new (or newly emphasized) quality dimensions such as open science (broadly defined), research integrity, and societal relevance, when evaluating individuals, institutions and research proposals.

CoARA

Moving from principles to practice

- As of 3 May 2024, there are 638 CoARA member organisations worldwide
- 13 Working Groups looking at various aspects of assessment
- National Chapters (including Ireland): dedicated to assisting CoARA members in implementing the Agreement in a national/regional context.

The UK Committee on Research Integrity (UKCORI)
Indicators project

Established to deliver on recommendations by the House of Commons Science and Technology Select Committee.

Why and what is the project assessing?

- To support UK HEIs to monitor RI and improve
- To provide UK CORI with evidence at UK scale.
  - Consider HEI size, resources, academic discipline
  - Consider internal and external environment (political, economic, regional, international).

For the purposes of this project, an "indicator" is defined as a quantitative or qualitative factor that provides a reliable means to evaluate achievement, to reflect the changes connected to an intervention, or to help assess the performance or state of play of an actor or system.

Conditions for research integrity and framework for identifying indicators

Domain = An area over which HEIs have control that can influence research integrity and are set in a context of internal/ external factors.

The project has used the iNORMS SCOPE model as a framework

Lessons in cultural reform

Lessons learned from the registered report revolution
(Prof Chris Chambers)

Lesson 1

"How" and "why" arguments transcend "should"

Lesson 2

Don't make the perfect the enemy of the good

Lesson 3

Amplify the message outside conventional channels

Lesson 4

You cannot change "culture" without changing everything else first

Lesson 5

The revolution never ends

Thank you for listening!

“In academia, culture is the shadow created by the machine of rules, norms, mandates and incentives that drive everyday decisions.

If we want to fix the machine, it makes no sense to direct our efforts at the shadow.

We must instead replace the parts, one by one, and eventually – if necessary – the entire machine. If we succeed, the culture will have changed, but only because we changed everything else.”

Prof. Chris Chambers

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