IMPACTO SOCIAL DE LA INVESTIGACIÓN

Anabel Sánchez
Responsable de impacto. CREAF

La carrera académica y científica en España
UIMP, Santander 6-8 Septiembre 2023

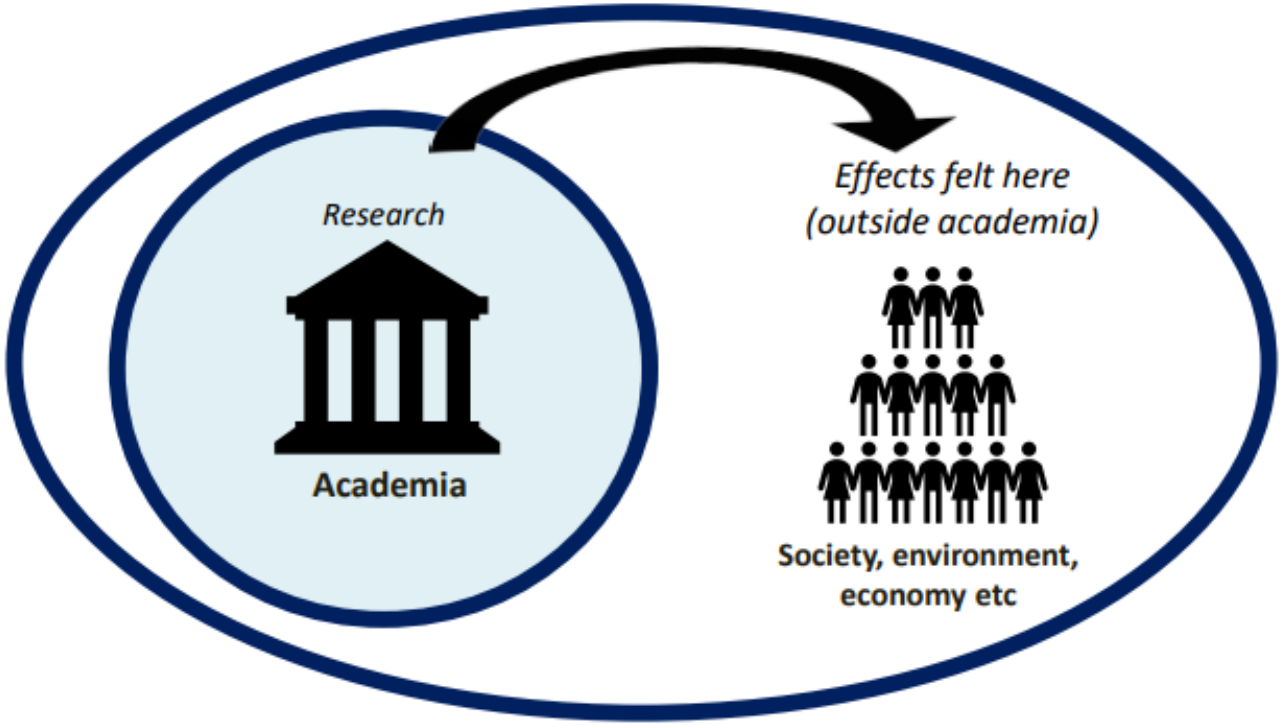
INDEX

1. WHAT IS RESEARCH IMPACT?

Research Impact is….

Provable **effects** (**benefits**) of **research** in the '**real world**'.

(J. Bayley, U. of Lincoln, UK)



Research Impact is….

The potential [for your research] to benefit society and contribute to the achievement of **desired society outcomes**.

US National Science Foundation

An effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, **beyond academia**.

UK Research Excellence Framework

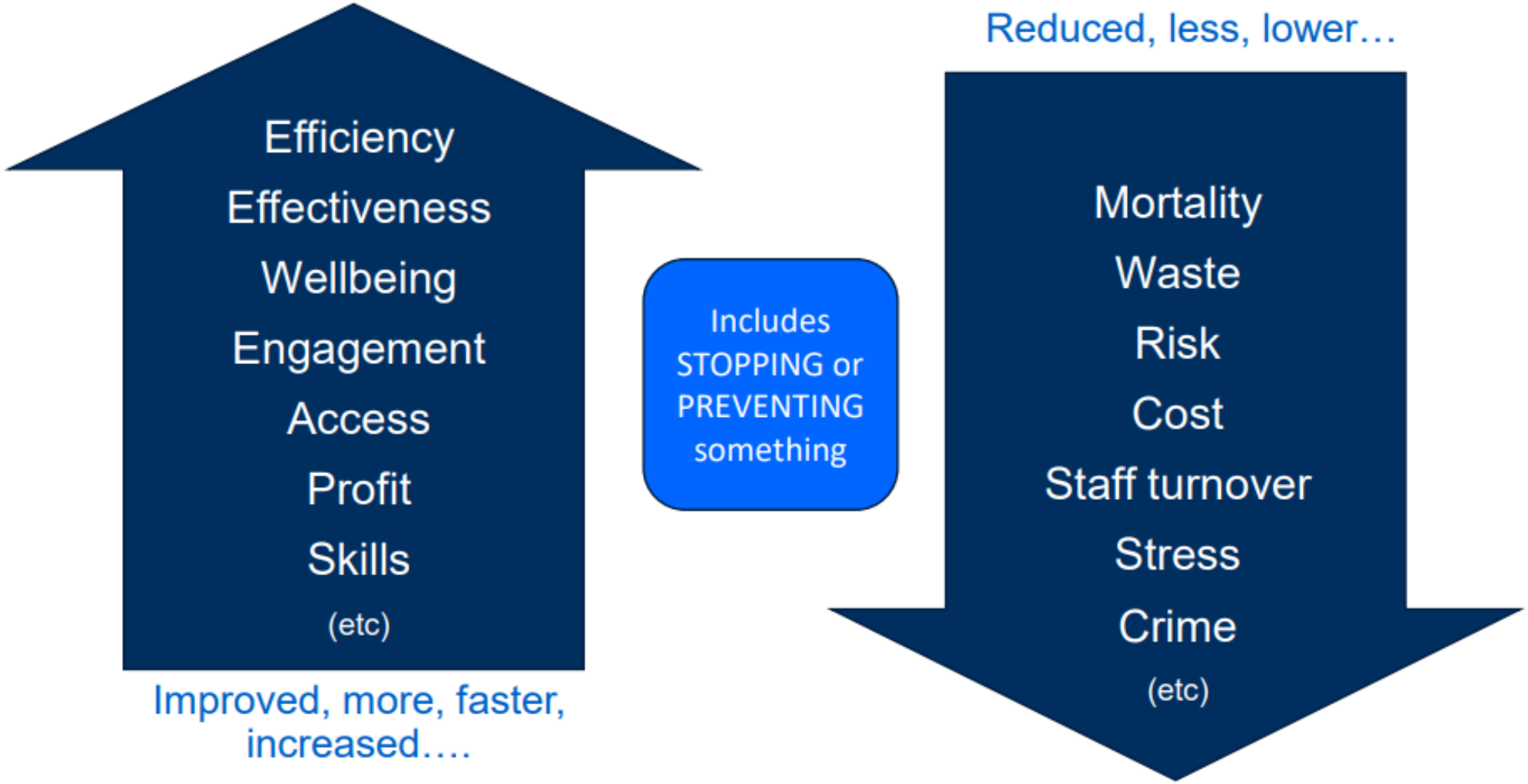
The **demonstrable** contribution that excellent research makes **to society and the economy**.

Research Council UK

The contribution that research makes to the economy, society, environment or culture, **beyond the contribution to academic research**.

Australian Research Council

Research Impact is… change

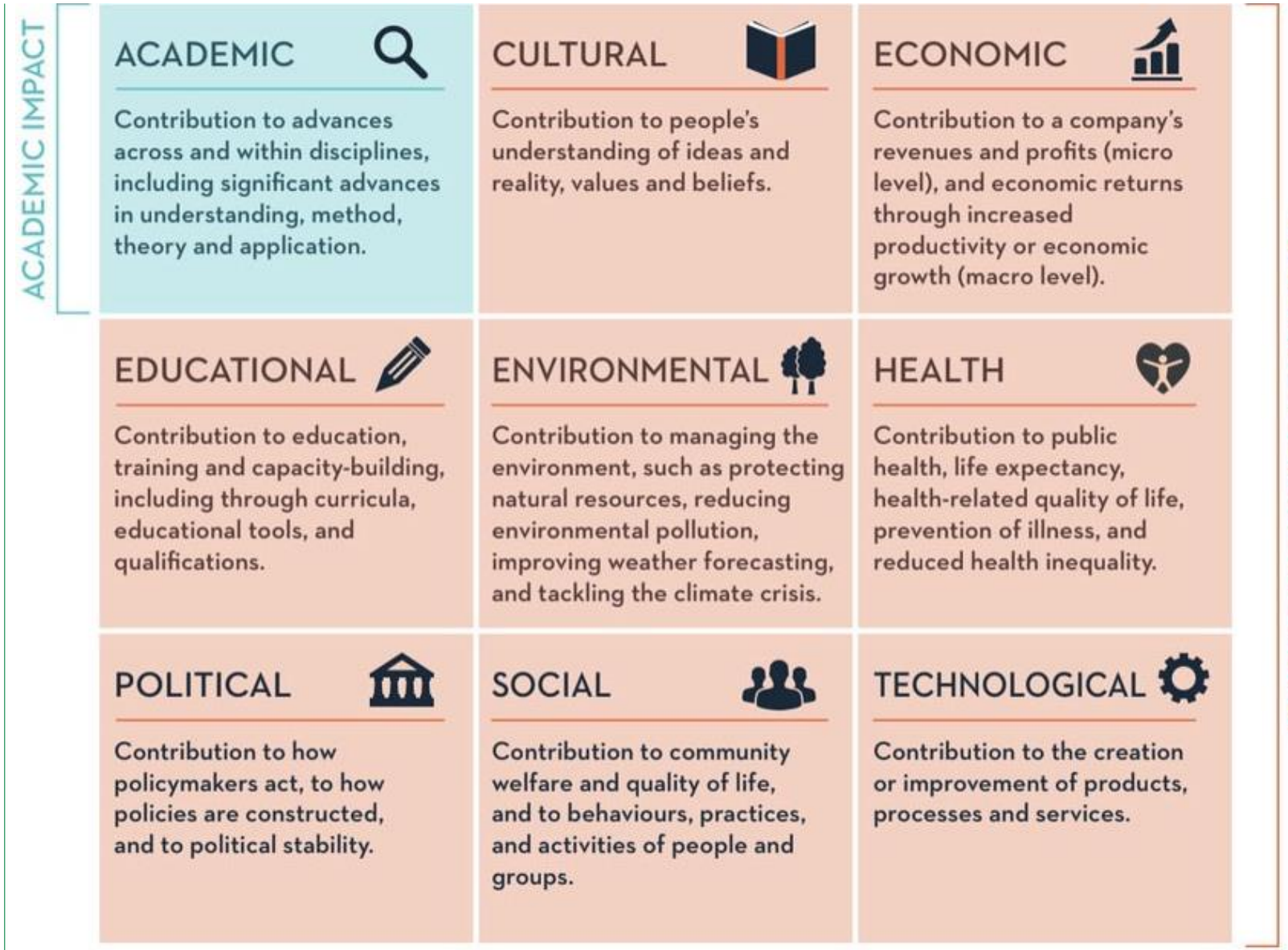


(J. Bayley, U. of Lincoln, UK)

X *Not dissemination, academic interest or reputation, citations, attention*

Impact domains

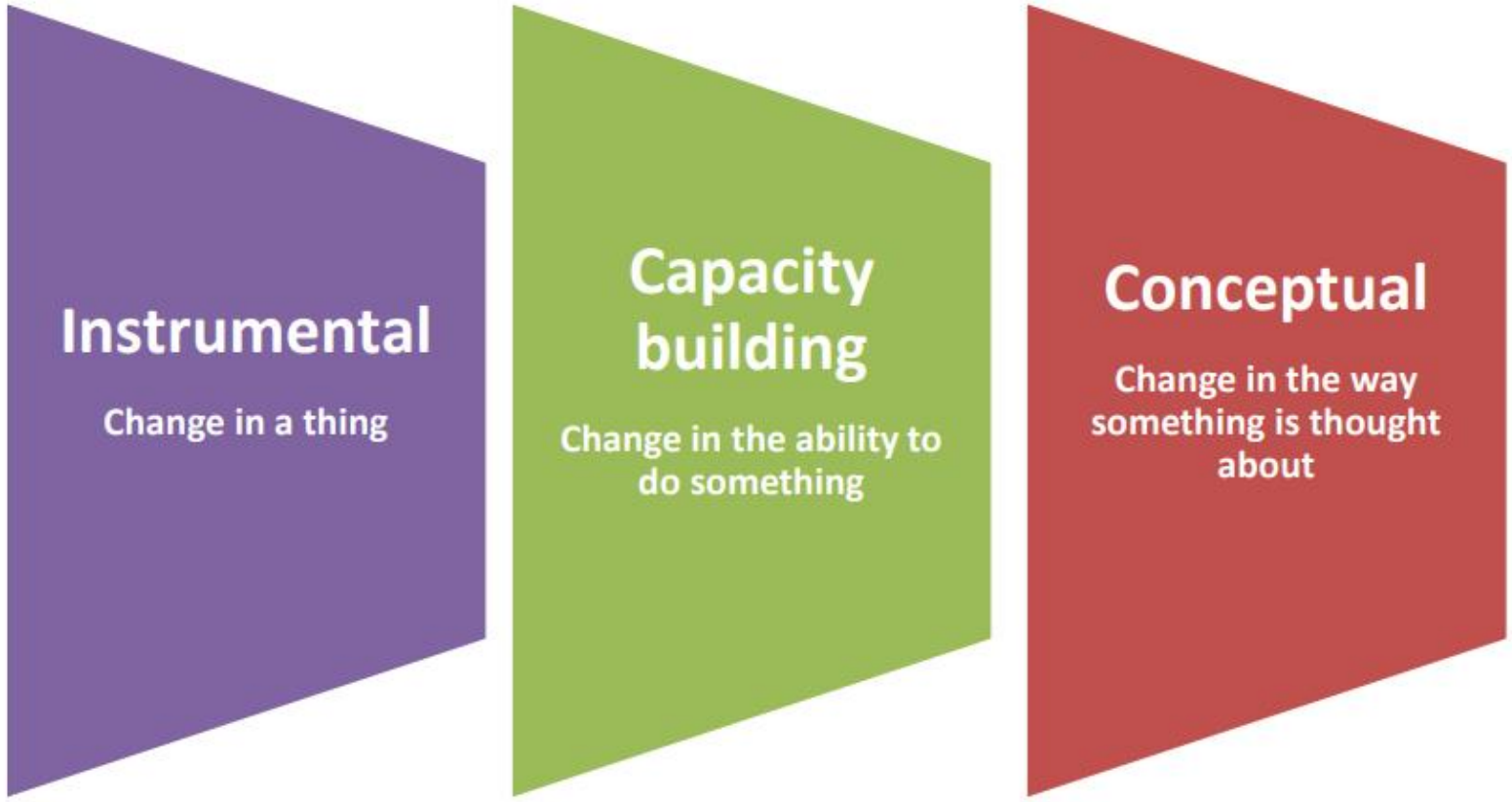
Impact has **different categories** which attempt to reflect the rich **variety** of **contributions** of science to society.



UCD Impact Toolkit

Impact types

Depending on the **nature** of the **element** that changes.



See: https://esrc.ukri.org/research/impact-toolkit/what-is-impact/

Impact of research arises

From findings: new knowledge somehow leading to change.

From the research process: where the practice of research (eg. co-creation, citizen science) can be a catalyst for change itself.

It can happen at **any time,** from **any type of research,** through **any route,** be **local** or **global, big** or **small**.

2. WHY IS IMPACT IMPORTANT?

Personal/system motivations

Reform of research assessment

2012 — DORA

2015 — The Metric Tide / The Leiden Manifesto for research metrics

2019 — THE HONG KONG PRINCIPLES FOR ASSESSING RESEARCHERS

2022 — CoARA

- Focus on the **quality** rather tan on the quantity.
- **Reduce bias** in evaluation through responsable research assessment.
- Evaluate a **broader range of contributions** to science and society.
- Help promote **diversity** in science and career paths and a more **inclusive** research culture.
- Focus on the **impact of research** rather that only the outputs.

Research Assessment exercises

What?
How?

UK

New Zealand

Canada

Netherlands

Hong Kong

Australia

USA

Chile

6 A's: Analysis, Advocacy, Allocation, Accountability, Acclaim, Adaptation

Parks et al. 2019

Reserch Assessment excercises

Six ‘A’s as reasons for impact research assessment

Analysis	To understand why, how and whether research is effective, and how it can be better supported.
Advocacy	To demonstrate the benefits of supporting research, and enhance the understanding of research and its processes among policymakers and the public.
Allocation	To determine how to distribute funding across the research system.
Accountability	To evidence that money and other resources have been used efficiently and effectively, and to hold stakeholders to account.
Acclaim	To compare and recognise the value of higher education institutions and the research conducted within them.
Adaptation	To steer change in organisational structures, behaviours and cultures, and research activities and priorities.

Parks, Sarah, Daniela Rodriguez-Rincon, Sarah Parkinson, and Catriona Manville, The changing research landscape and reflections on national research assessment in the future, RAND Corporation, RR-3200-UKRI, 2019. https://www.rand.org/pubs/research_reports/RR3200.html

European context: Research skills

ResearchComp: the European Competence Framework for Researchers

Emergency of Narrative CV's

e.g. Resumé for Researchers
Royal Society, UK. 2020

European context: Research funding

1. Creating high-quality new knowledge
2. Strengthening human capital in R&I
3. Fostering diffusion of knowledge and Open Science

Scientific Impact

4. Addressing EU policy priorities & global challenges through R&I
5. Delivering benefits & impact via R&I missions
6. Strengthening the uptake of R&I in society

Societal Impact

7. Generating innovation-based growth
8. Creating more and better jobs
9. Leveraging investments in R&I

Economic/ Technological Impact

HORIZON EUROPE

Article 50 & Annex V *'Time-bound indicators to report on an annual basis on progress of the Programme towards the achievement of the objectives referred to in Article 3 and set in Annex V along impact pathways'*

European Commission

Spanish context

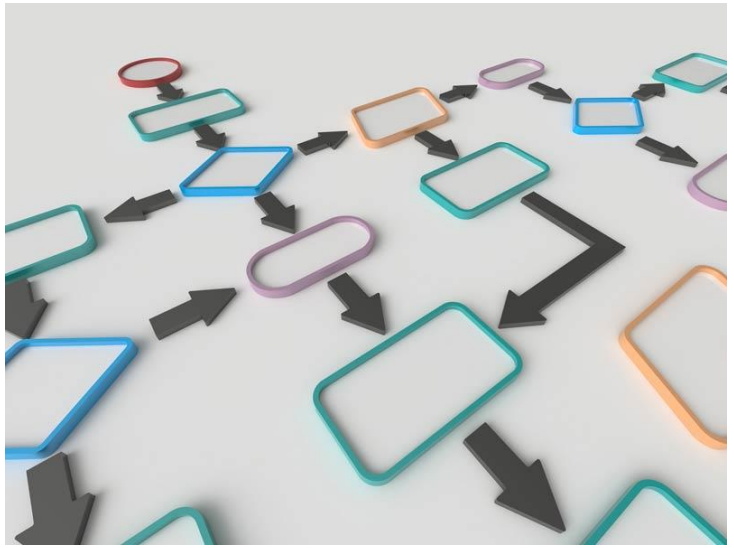
CAMBIOS LEGISLATIVOS mejora de prácticas académicas y científicas:

- 'Utilización de criterios que valoren la **diversidad de aportaciones** y el **impacto de los resultados** de la investigación **en la sociedad (ENCA)**'.
- 'Docencia, investigación y capacidad de **compartir y transferir ese conocimiento**… profundizando en su **inserción, significación y capacidad de servicio** con relación al tejido **social, cultural y económico (LOSU)**'.
- 'La ejecución de la actividad de **transferencia y los impactos que produzca** en los ámbitos **económico, social, sanitario y ambiental**, deberán considerarse **concepto evaluable** para el agente público de ejecución de cara a la asignación de recursos públicos **(LCTI)**'.

3. ACHIEVING AND MEASURING IMPACT

How do we achieve impact?

THEORY OF CHANGE

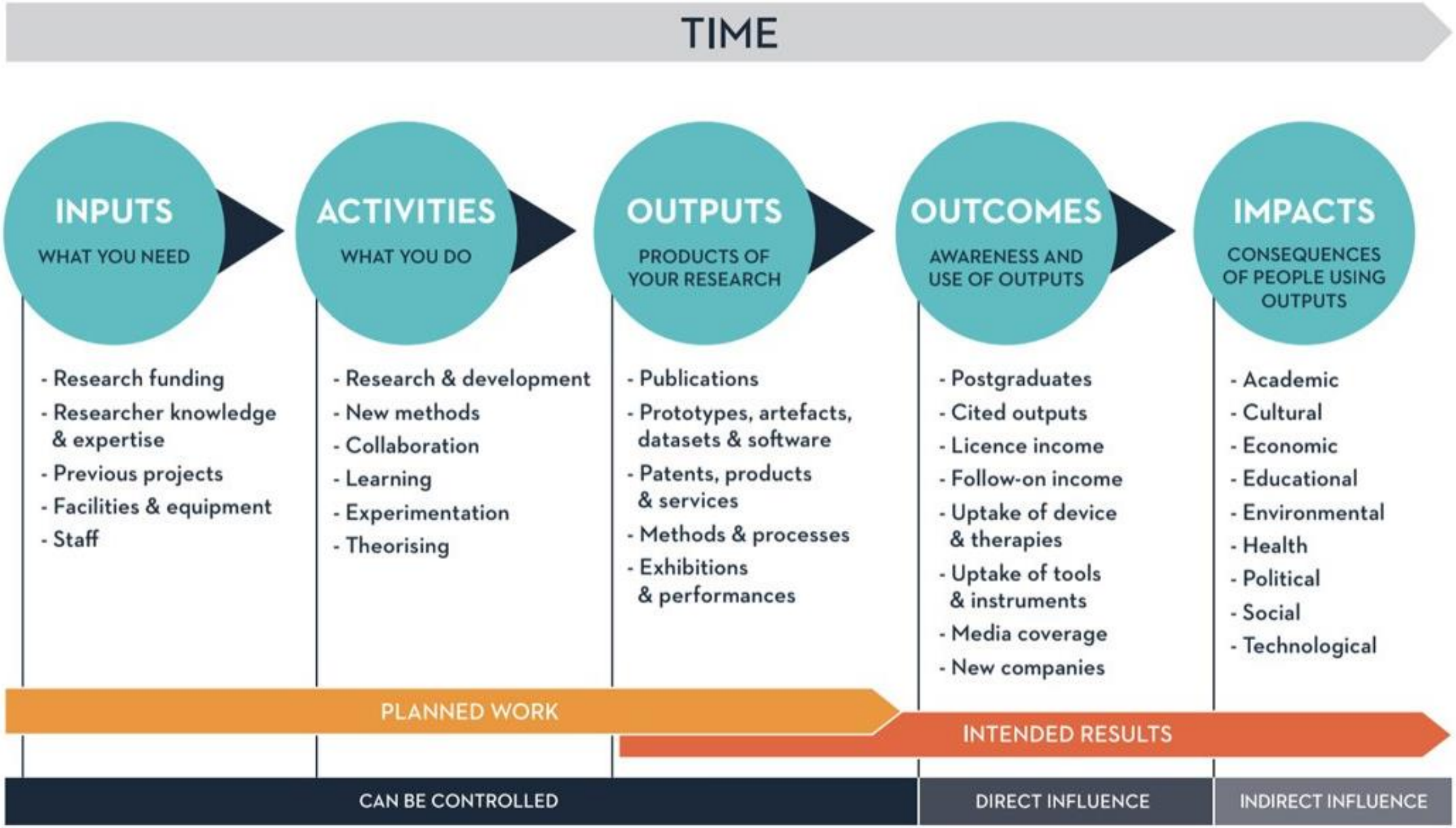


LOGIC MODELS

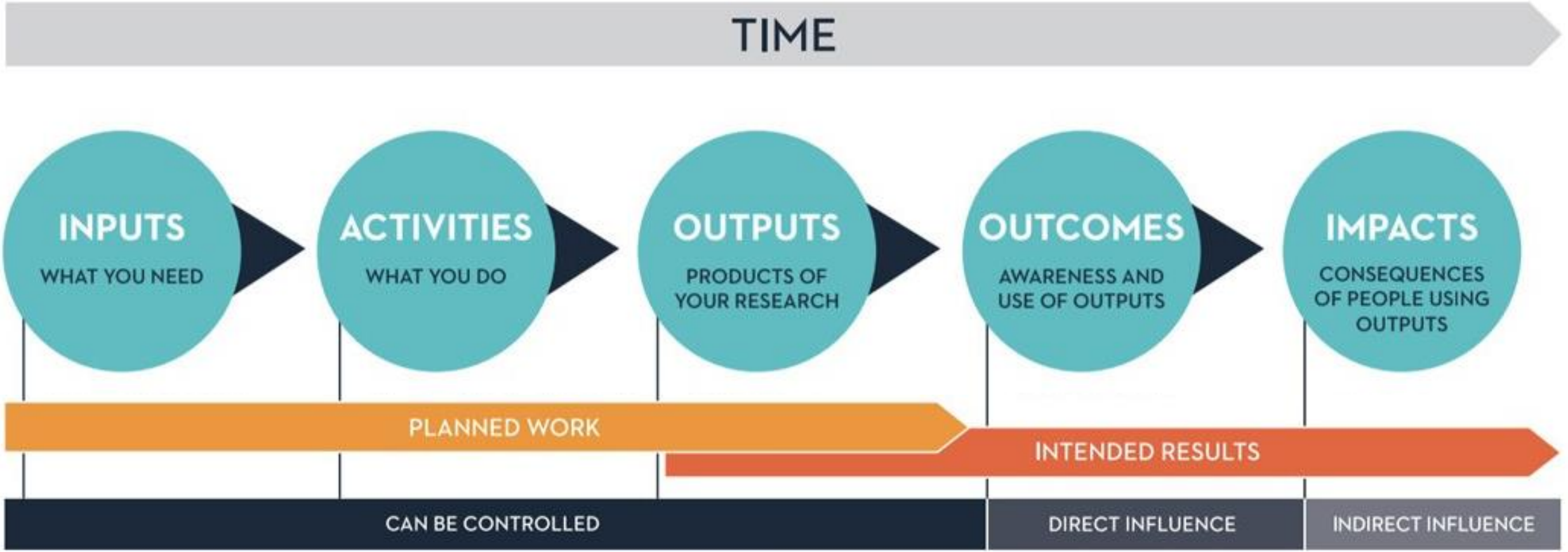
IMPACT LITERACY

Impact pathways

Impact Toolkit. UCD



Impact pathways



Impact pathways

MAGIC ???

Impact pathways

EXAMPLES OF IMPACTS

- Contributing to **increasing public awareness and decrease** of gender-based violence in a region.
- Contributing to **evidence-informed policy making** in Spain leading to **change in biodiversity conservation practices** and ultimately **halting biodiversity loss** of a species.
- Changing **practice of health** profesionals.
- Creating a **technological solution** for clean electricity generation.
- **Changing** the **behavior** of a small rural community towards healthier habits.
- Contributing to **increasing revenues** of SMEs of the food sector.

Impact literacy

WHAT changes and also:

- **WHY?**

  Which **reasons**, motivations, **values**…

- **HOW?**

  Methods which will work to achieve impact (**process**).

- **WHO?**

  Impact is about **connecting** with people.

Measuring and Evidencing impact

Measuring and Evidencing impact

REF 2014, UK

https://www.kcl.ac.uk/policy-institute/research-analysis/nature-scale-beneficiaries-research-impact

Measuring and Evidencing impact

REF 2014, UK

- What changes?
- How will you know?
- How can you prove it?
- How will you record it?

EVIDENCE:

- is used to ensure impact claims are accurate, corroborated and verifiable.
- can be qualitative or quantitative.
- usually consist of different parts which together verify the claim

SOURCES:

Own data /Institutional webpage/ Press releases /Almetric /PlumX /Overton/ Official documents on governamental websites…

Measuring and Evidencing impact

Impact Type	Example Impact Evidence
Health and wellbeing	• Reports on changes in Quality Of Life Years (QOLYs). • Statistics reflecting changes to the number of admissions, presentations at hospital facilities over time. • Patient surveys. • Testimonials from clinical staff.
Commercial and economic	• Company reports, e.g. annual reports. • Company websites. • Licence agreements. • Cost savings reports over time. • National government statistics showing changes over time.
Public policy	• Policy documentation. • Regulation and standards documents. • Public meeting minutes. • Social media 'shares' over time. • Legal documentation. • International non-governmental organisation policy briefings.
Societal and cultural	• Audience surveys. • Testimonials from influential cultural figures. • Media coverage statistics such as readership.
Environmental	• Government reports. • Charity reports. • Independent reports or reviews on improved functionality of machines.

Impact Case Studies/Narratives

Common elements of impact case studies

- Details of the research
- Details of engagement, knowledge mobilisation & uptake
- Details of the impact(s)
- Corroborating evidence

(J. Bayley, U. of Lincoln, UK)

Impact Narrative example

BeeSafe – a toolkit to predict and avoid negative effects of current and future pesticides on bees

REF 2014, UK

Download case study PDF

Submitting institution	University of Exeter
Unit of assessment	5 - Biological Sciences
Summary impact type	Technological

1. Summary of the impact

Research by the University of Exeter (UoE) has established at the molecular level why managed bee pollinators, worth more than £650 million to the UK economy each year, are very sensitive to certain pesticides, such as the neonicotinoid imidacloprid, but highly tolerant to others. This knowledge has been **translated into tools** (the BeeSafe toolkit) which have been used by Bayer, a world-leading agrochemical company, to: (1) **rapidly screen for and accelerate the development of new insecticides that have low toxicity to bees**; (2) **predict and avoid harmful pesticide-pesticide interactions**; and (3) **support registration of specific pesticide combinations** that are safe for bees. The BeeSafe toolkit was integral to Bayer receiving **regulatory approval for a new insecticide** in Germany **with benefits to pollinators and oilseed rape production**.

(J. Bayley, U. of Lincoln, UK)

4. IMPACT AT CREAF

A public consortium

CREAF is a **public research consortium** created in **1988,** dedicated to terrestrial **ecology** and **territorial analysis**. We produce **knowledge** and **methodologies** for **conservation, management** and **adaptation** of the natural environment to **global change**.

CREAF people

Research areas & crosscutting issues

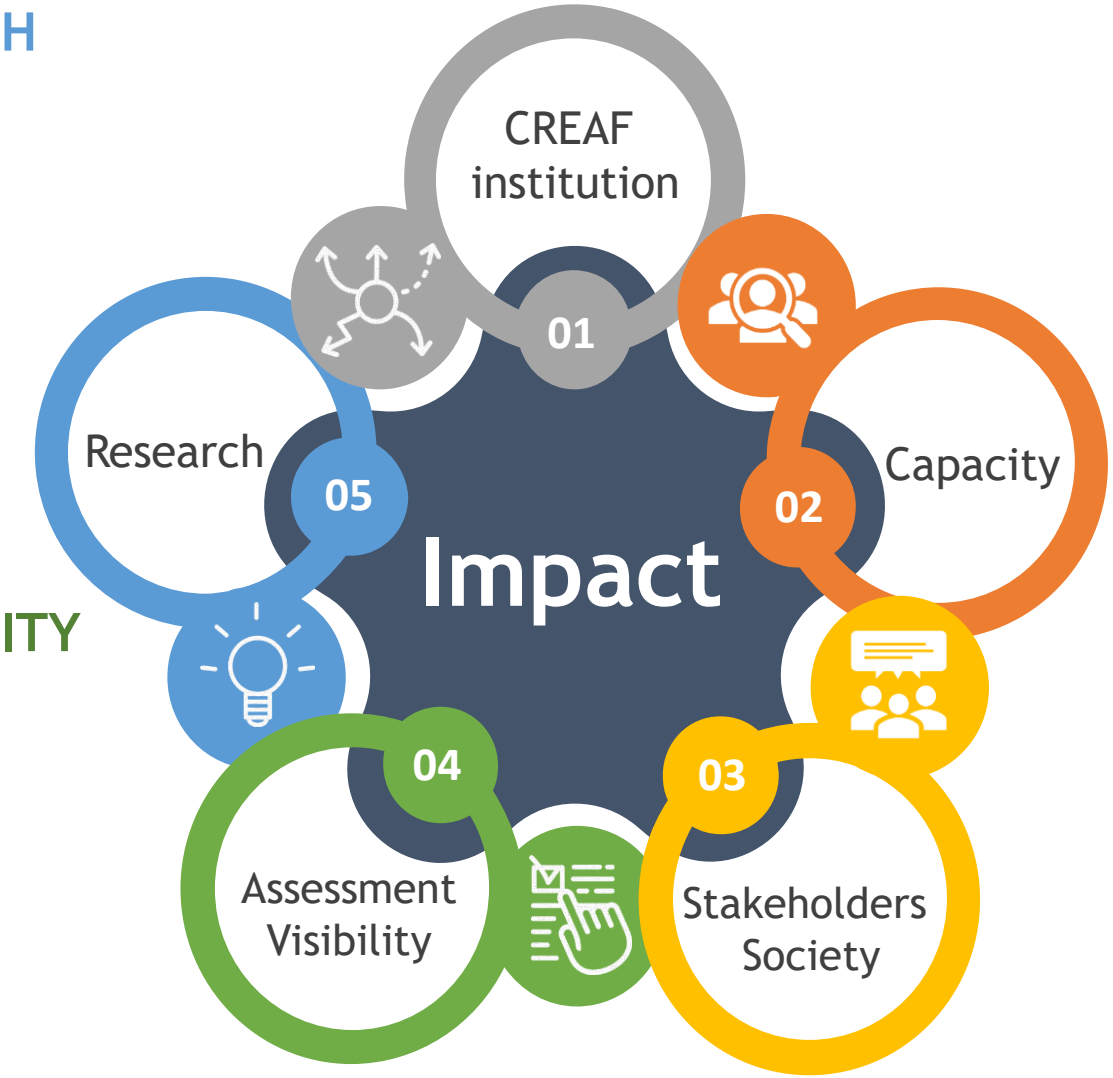
CREAF's Impact strategy

PROJECTS & RESEARCH

To **embed impact** from the **initial stages** of **research** inception and **analise** information on **impact achieved** by **previous research**.

ASSESSMENT & VISIBILITY

To **value, assess** and give **visibility** to the benefits CREAF's research brings to society beyond academia.



CREAF INSTITUTION

To foster the mobilisation and **impact** of research into the non-academic world as an **institutional commitment and mission**.

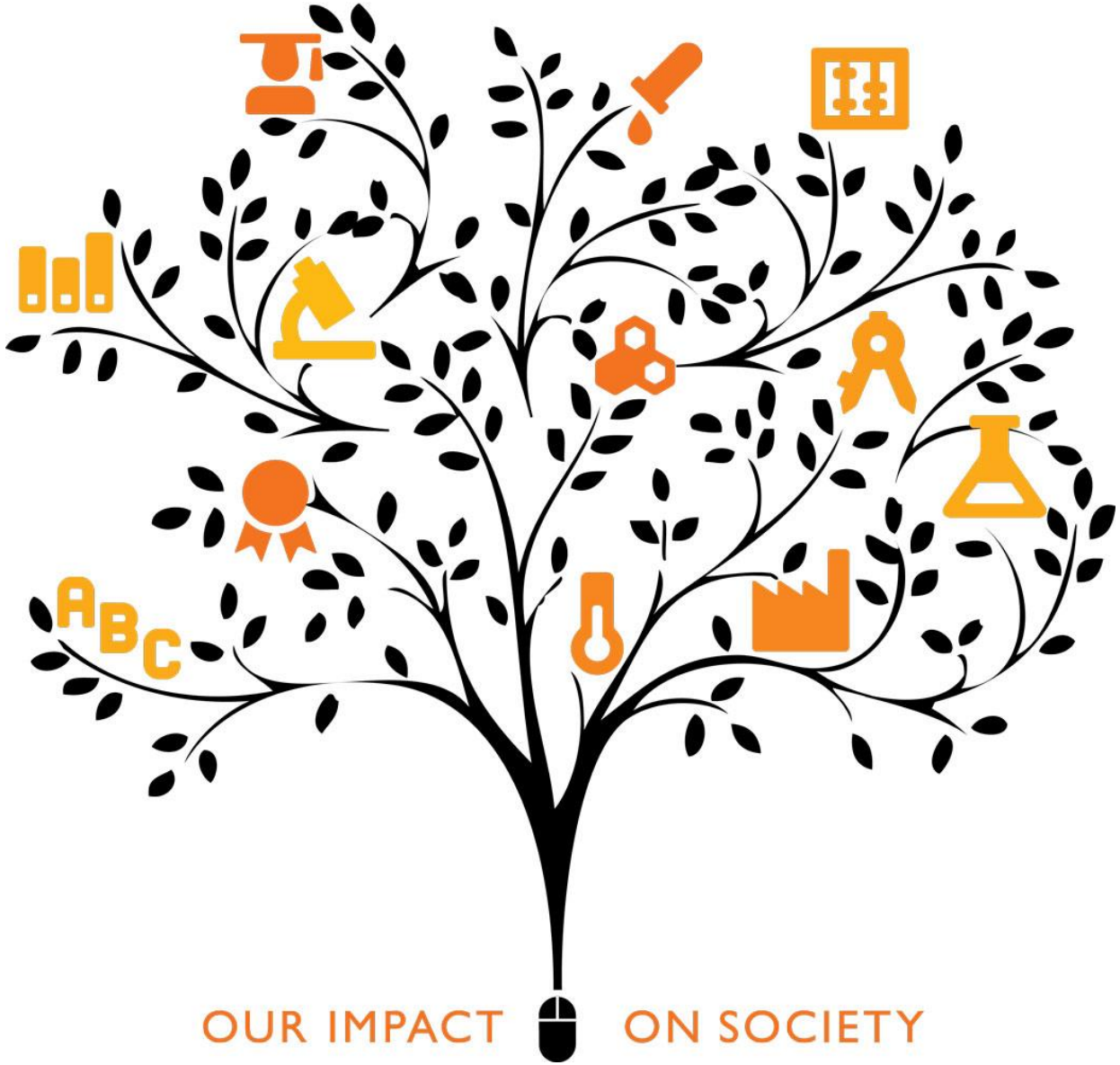
CAPACITY

To build and nurture **staff impact literacy** and competencies.

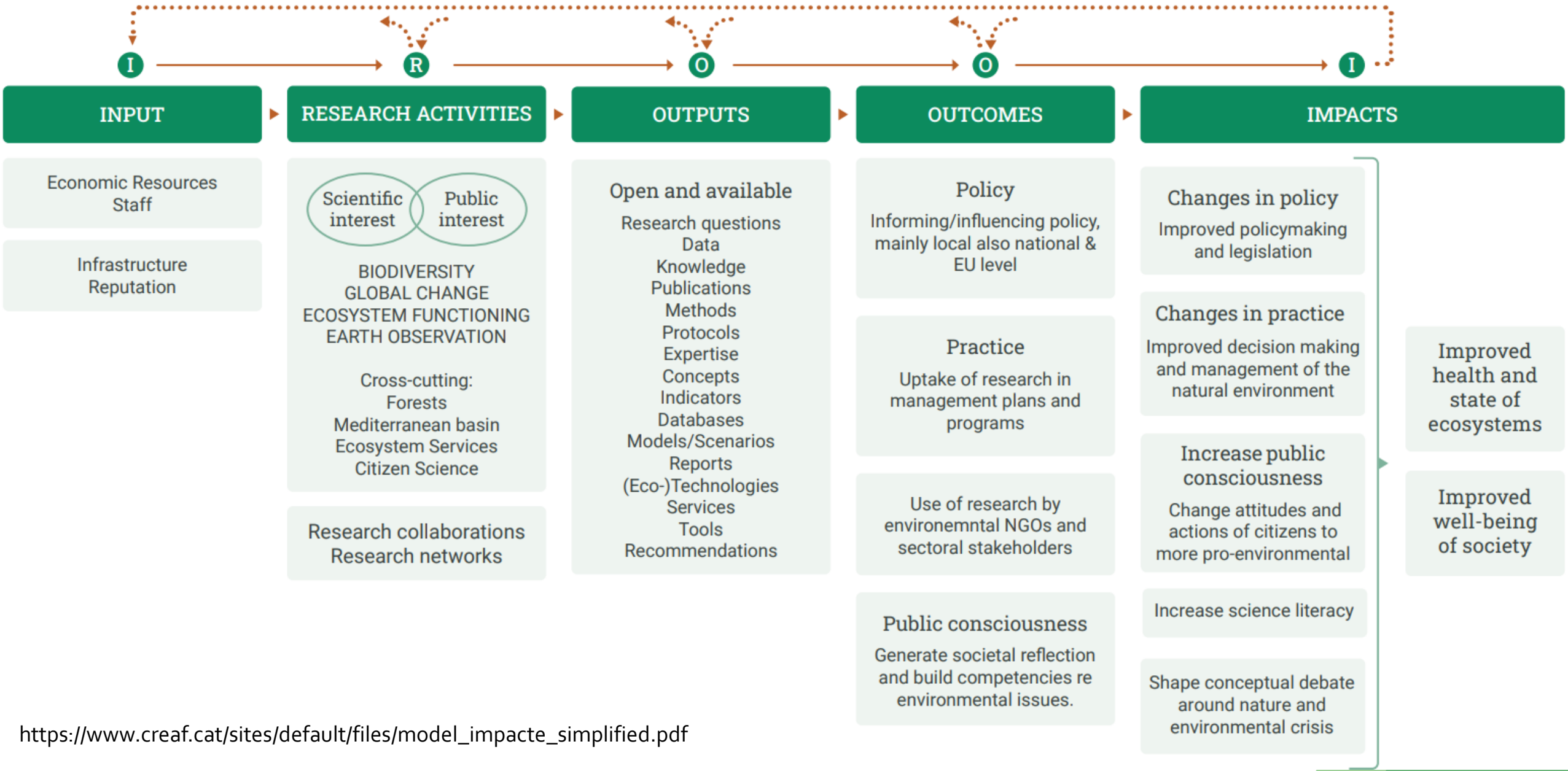
STAKEHOLDERS & SOCIETY

To establish direct and meaningful **interaction** and **engagement** with public administration, key stakeholders and citizens.

CREAF EXCEL·LÈNCIA SEVERO OCHOA

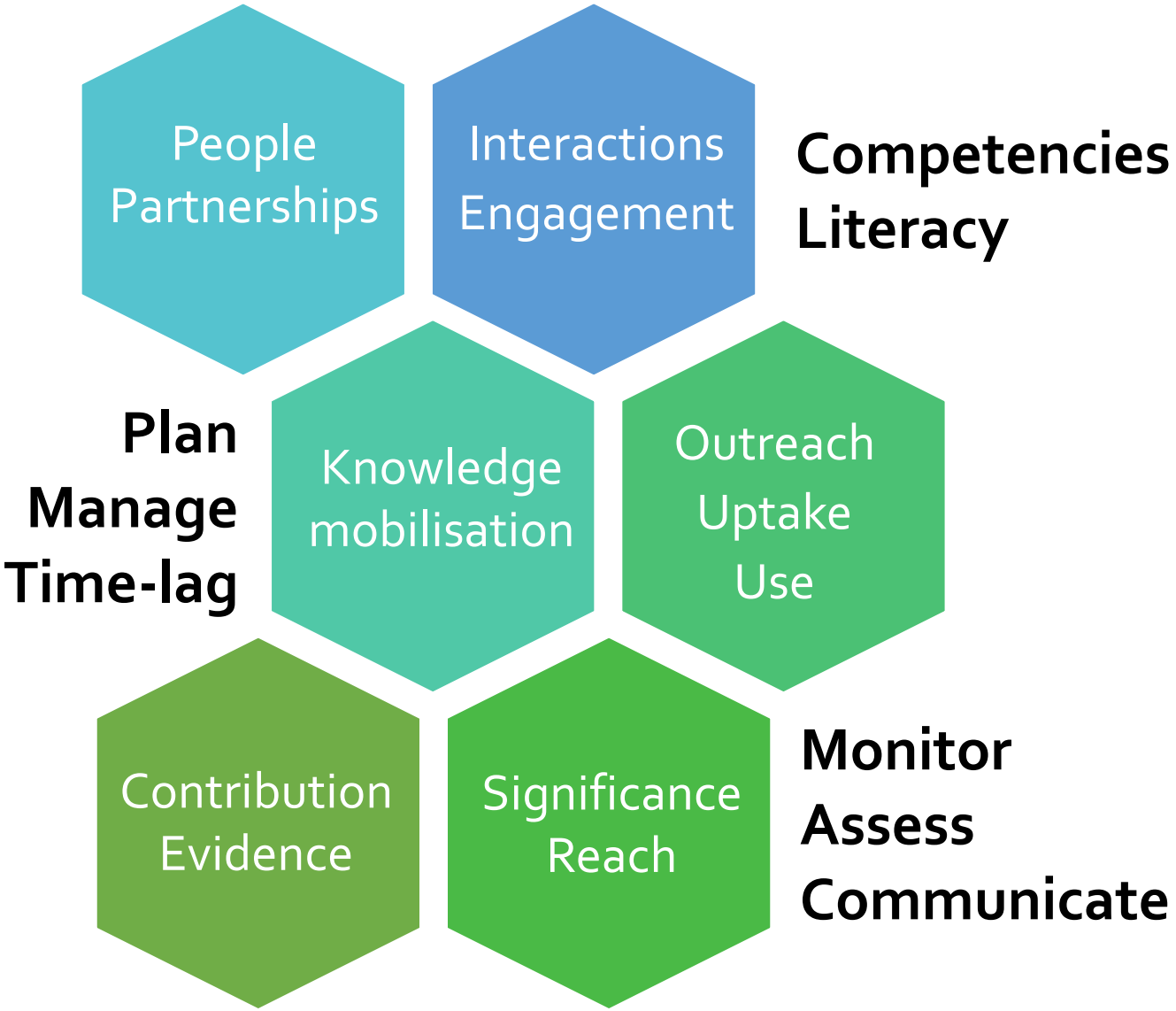


Impact Framework developed by CREAF



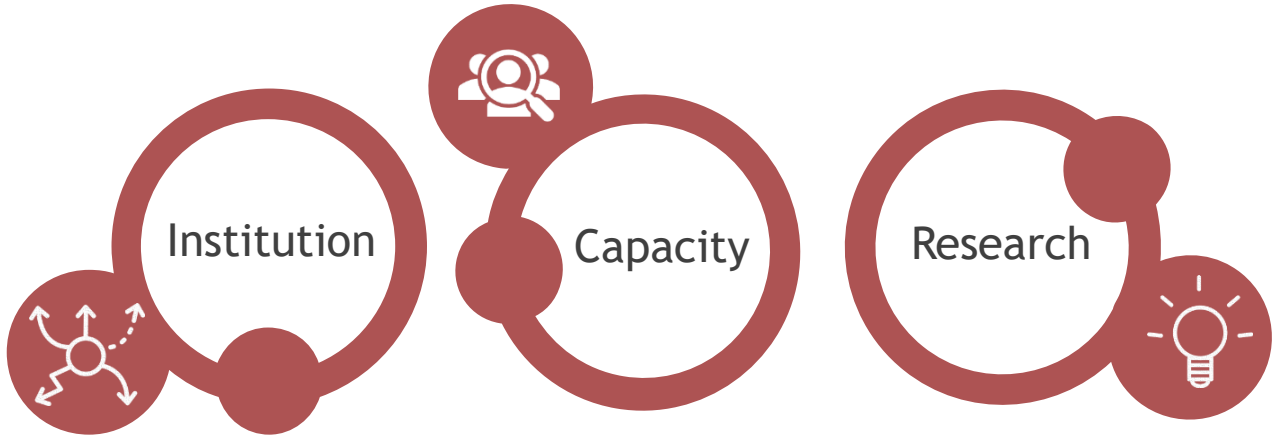
https://www.creaf.cat/sites/default/files/model_impacte_simplified.pdf

Impact Framework: key words



5. REFLECTIONS AND CONSIDERATIONS

Building an impact culture



- **Shared** and **common** vision. **NOT** a **one-person** effort. Impact facilitator
- Lean on **synergic** cultural changes (e.g. Open Science).
- **Tailor-made** capacity building.
- Beware of **Hopes**, **Fears'** & **Preconceptions.**
- **Spread change**: e.g. Transfer/Impact suggested definitions for **SOMMa**.
- Consider **infrastructure and support needed** (cultural change and not "box-ticking").

Working with external stakeholders

Enabling processes

- New **skills** needed**:** competency frameworks (per career stage).
- **Stakeholder needs** assessment and **relevance** (bidirectionality)**.**
- **Trust** and **authentic** collaborations. **Multiple** actors.
- **Dynamic** and **multidirectional** perspective.
- **Time and space** (and resources) for interaction and engagement.

Impact assessment
Individuals, teams and institutions

- Understand your **Impact framework.**
- Reflect on **Why** and **What** assess: Outcome-Process.
- **Learning** approaches + avoid **perverse systems.**
- **Reward** and **value** the cultural change.
- Learn from **existing experiences**: e.g. alliances of EU Universities (**ENLIGHT**-UPV, **ECIU**- UAB,…), CERCA RIACAT, EU nacional assessments.
- Promote **Open Impact** – CoP, DDBB…

Impact assessment
Institutions and Research System

- Explore defining **differentiated career paths.**
- Consider **individual** and **team** performance & **narrative CV's**.
- Combining **qualitative and quantitative** indicators (with **context**).
- **Alignment** among different institutions in the system.
- Consider **financial implications**.
- Provide **guidance**: instructions, templates, examples, training (both for applicants and evaluators). Time needs.


SHARE
iT

Thank you for your attention!

Anabel Sánchez
Impact Officer

a.sanchez@creaf.uab.cat