DESIGNING A SOCIO-ECONOMIC IMPACT FRAMEWORK FOR RESEARCH INFRASTRUCTURES

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THE RI-PATHS PROJECT

A quick overview of the aims and process to develop an impact assessment methodology
THE RI-PATHS PROJECT

• Implementation period: January 2018 - June 2020 (30 months)
• 8 project partners, including 4 RIs who co-design and pilot the impact assessment methods
• Effort: 122.5 person months
• Budget: € 1.49m
MISSION

Give policy makers, funders and RI managers the tools to assess RI impact on the economy and contribution to society.

The goal is to improve the understanding of long-term impact pathways of various types of RIs.
RI-PATHS timeline

- **April 2018**: Working note on RI typology
- **January 2018**: Project set up & running
- **January 2019**: Stocktaking results & initial IA framework
- **June 2019**: Results from participatory workshops
- **September 2019**: Validated IA framework
- **February 2020**: Outcomes of testing the IA framework
- **June 2020**: Project outcomes (IA handbook, interactive web-based guide) presented at the final public event
HIGHLIGHTS OF THE APPROACH

✓ IA model is developed using a modular approach - a generic core model and more detailed sub-models

✓ The model reflects the whole lifecycle of RI development

✓ Systemic perspective is applied; attention on the interrelations and complementarities between various impact pathways

✓ Developed in consecutive stages in a participatory co-design manner
  • Participatory workshops for charting, contesting and validating impact pathways and respective KPIs
Stakeholder engagement
Key milestones

Completed

• D3.1 Working note on RI typology - April 2018
• D3.2 Report on stocktaking results and initial IA framework - January 2019
• D4.1 Concept note on the modular IA framework - February 2019

Upcoming

• D4.2 Consolidated report on the participatory workshop results - June 2019
• D5.1 Validated IA model - October 2019
• D5.2 Updated MERIL database module - April 2020
• D5.3 Web-based IA guide and D5.4 Methodological handbook - May 2020
FINDINGS AND LESSONS TO DATE

A multi-faceted world of impacts and pathways to measure the impact of research infrastructures
WHAT IS IMPACT?

- Positive and negative, primary and secondary long term effects produced by an [intervention], directly or indirectly, intended or unintended (OECD)
  - not immediately attributable to actions
  - materialise in various, in part seemingly distant domains
  - ‘stretched out’ chains of causality
  - various pathways of causation and accomplishment
- Various activities cause various impacts
IMPACTS ARISING FROM THE CORE MISSION VS. THOSE ARISING FROM RI AS A SOCIO-ECONOMIC ACTOR

• Impacts caused by a Research Infrastructure pursuing its core mission IN SCIENCE
  – Contribution to long-term (or also short-term!) problem solution
  – Qualification of scientists
  – Impacts on innovation and productivity in the economy
  – Opening up of new perspectives in the policy discourse
  – Outreach and popularisation of knowledge in society,…

• Impacts caused by a Research Infrastructure as a SOCIO-ECONOMIC ACTOR
  – Employment effects
  – Wages paid and multipliers
  – Qualified procurement effects with impact on innovation
  – Procurement of standardised, off-the-shelf goods
  – Qualification effects for technical staff,…
A variety of types of impact

- A core set of very concrete impacts in the monetary domain
- Various impacts beyond the monetary and monetisable
A plethora of pathways

- RIs in broad interaction with society, not just churning out papers
- Multiple and overlapping knock-on effects
Findings on Pathways

• Socioeconomic Impacts of Research
  ➢ triggered by all RIs following their primary mission – conducting research

• Conscious Use of Research for a Purpose
  ➢ triggered by (some) RIs following a further mission – solving problems in and for industry & society

• Shaping Research’s Foundations & Environment
  ➢ triggered by RIs engaging beyond the research domain – changing S&T communities and their position in society
Pathways I: Socioeconomic Impacts of Research

- demand-side regional impact pathway
- publication-citation-recognition pathway (incidental, undirected spillovers)
- technology transfer & licensing pathway (actively supported spillovers)
- learning- and training-through-procurement pathway
- learning- and training-by-users pathway
Pathways II: Conscious Use of Research for a Purpose

- user interaction and industrial problem solution (in projects) pathway
- user interaction and societal problem solution (in projects) pathway
- benefits of data editing and preparation
Pathways III: Shaping Research’s Foundations & Environment

- changing fundamentals of research
- contribution to standards
- communication and outreach pathway
- increased societal participation
- networking and community creation

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PATHWAYS AND IMPACT DOMAINS

define what you can contribute

Performance of Science

Interaction for Problem Solution

Co-Creation & Outreach

define what you should be doing

Economic & Innovation

Human Capital

Societal (problem-solution)

Public Opinion (legitimacy of science)
Assigning indicators - relevance and feasibility guiding the choice!

- Compiled all relevant indicators into a (preliminary) integrated long-list
  - Drawing on all relevant studies/past-work: OECD, ACCELERATE, CSIL CBA Methodology, ESFRI
Next steps: designing and testing a modular IA framework
Summing up

- RI managers want an easy-to-use framework that helps them identify the sort of questions an IA exercise can answer and what data needs to be collected.
- The workshops suggest most impact areas and many impact pathways are relevant across all types of RIs - even if the emphasis varies.
- IA may address three main types of impact:
  1. Quantifiable impacts that can be captured through quantitative metrics available e.g. in economic analysis
  2. Non-quantifiable impacts the assessment of which can, however, be supported by quantitative means (e.g. social network analysis, dedicated surveys)
  3. Complex network effects captured through exploratory approaches which require qualitative methods such as narrative case studies.
HOW TO ENGAGE?

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