



ICOS

● ● ●
INTEGRATED
CARBON
OBSERVATION
SYSTEM

SOCIO-ECONOMIC IMPACT ASSESSMENT: CASE STUDY 5, ICOS ERIC

EVI-CARITA RIIKONEN, ICOS ERIC

ACCELERATE, ERIC Forum and RI-PATHS workshop on
impact assessment, evaluation and monitoring of research infrastructures

Dec 16-17, 2020

Purpose of the impact assessment

To analyse ICOS' impact in a broad approach including scientific, societal, and economic aspects, comprising ICOS data, results and services:

1. To develop a **comprehensive framework for the analyses** of the impact of distributed research Infrastructures in general and specifically the ICOS RI;
2. To develop a **set of relevant and usable Key Impact Indicators (KIIs)** enabling ICOS to evaluate its impact
3. To provide ICOS with the knowledge and capacity to **determine the value of these KIIs** and the relationship amongst them;
4. To give ICOS relevant advice, based on prior experience with RI and the research undertaken during this assignment, on a strategy **to improve ICOS' impact and performance.**

Effort needed from ICOS

- **Procurement** of external service provider to conduct the assessment (budget 100000 €)
- **Meetings and planning** with external service provider (Technopolis) during the duration of the assessment (6 months)
- **Input from the whole RI and stakeholder (GA)** in terms of answering surveys and participating in interviews

Approach

1. Framework development & impact mapping
2. Development of Key Impact Indicators (KII)
3. **Impact analysis:**
 - ICOS stakeholder mapping
 - Online survey: 278 people; response rate of 37%
 - 25 in-depth **interviews with stakeholders**: impact pathways and achieved impacts
 - Publication and citation analysis of ICOS **publications** provided by ICOS HO
 - Review of potential policy impacts from ICOS publications
 - Desk study on impact of **traditional media** using Meltwater (a commercially available reputation analysis tool)
 - Analysis of **social media** data provided by ICOS
 - Impact **case studies** within each of the 4 components of distributed RI

Results

- 17 key impact indicators were identified and aligned with ICOS strategy

Findings from the analysis:

- ICOS is able to produce standardised high-precision long-term observational data and stimulate scientific studies and modelling efforts
- ICOS provides a platform for data analysis and synthesis
- ICOS communicates science-based knowledge towards society and
- ICOS contributes timely information relevant to the GHG policy and decision-making

Experience & usefulness

1. It is crucial to differentiate between **performance and impact**
2. The type (**single-sited or distributed**) of the Research Infrastructure is the key starting point
3. The **field** of the RI is also crucial
4. The **time span** within which performance and impact are considered can vary tremendously between different type of RIs.
5. The **mission and strategy** of an RI needs to be well elaborated and communicated before any performance and impact related requirements are drawn together and implemented