

Rathenau Instituut



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# ■ Societal impact of research infrastructures in context

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## Today

- ACCELERATE: societal impact of Research Infrastructures
- Recap on project, political context of RIs and evaluation of societal impact of RIs
- Insights over time
- Test phase of our societal impact protocol
- Implications in a wider context / reflections



## Context: ACCELERATE

- The H2020 ACCELERATE project:  
“[supports] the long-term sustainability of large scale research infrastructures (RIs) through the development of policies and legal and administrative tools for a more effective management and operation of RIs”
- Rathenau Instituut involved to develop a societal impact approach for RIs that can be used by RIs themselves
- No lack of studies dedicated to societal impact (of specific RIs) and several ongoing efforts
- Apparently, the impact methods available do not suffice



## ACCELERATE members

- All members represent largescale research infrastructures
- They enable materials research: characterisation of matter, from subatomair to supramoleculair scale
- The research is done with equipment (beamlines, instruments) that is connected to a powerful source (accelerator, spallation source, laser)
- Members are:
  - CERIC-ERIC Central European RI Consortium – IT
  - ESS European Spallation Source ERIC – SE
  - ELI-DC Extreme Light Infrastructure Delivery Consortium
  - HZG Helholtz-Zentrum Geesthacht – DE
  - FRM II Research Neutron Source Heinz Maier-Leibnitz Munich Technical University – DE



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## Recap from Eu-SPRI 2017 & 2018

2017: “This large infrastructure will benefit our region” – but how?

- How to take into account the diversity of requirements and impacts of RIs?
- What approach to develop that can be used by RIs?
- Answers: Theory of change / impact pathways / indicators are indications

2018: Understanding impact first, deciding on indicators last

- Impact of a RI / ERIC is highly context dependent: phase, aim, scope, responsibilities, funders, stakeholders, intentions, expectations
- It is key to understand what a stakeholder/funder accepts/expects as evidence of impact
- It is important to understand the evaluation context / practice / requirements / question
- Answers: start with identification of relevant actors and proceed from there



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## The larger policy context of RIs in Europe

- Increased attention for RIs, both on the national as well as the European level – policies, roadmapping, dedicated organizations
- Policy developments have literally put RIs “on the map”
- Definitions emphasize what an RI *can* be instead of what it *cannot* be; Definitions are broad/inclusive rather than restrictive
- RI is a dynamic concept that is being negotiated and expanded  
“Everything can be a Research Infrastructure”
- Yet policies call for coherence



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## The specific policy context of an RI

- For most RIs: stakes are high, many partners (at local, regional, national and supranational level; scientific as well as otherwise; funders, members, local communities, users) involved, large investments
- Perspectives go beyond the idea of an RI as a research enabling facility
- Differences between and within stakeholder “groups”
- Perspectives and expectations can change overtime
- What an RI is, is not evident, nor is it evident what the societal impact of an RI is
  - “A Research Infrastructure can be anything”
- What an RI is, is/can be discussed and negotiated among an RI and its stakeholders



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## How about existing impact of RI methods?

- No lack of projects and studies on impact of RIs
- Studies dedicated to a specific RI
  - who determines what impacts to report on?
- Projects dedicated to develop a generic approach
  - “no one size fits all”
  - Yet: who determines the choice of impacts?
  - Often unclear what the indicator indicates





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## Evaluating research in context

- Conventional evaluation criteria for quality and impact of academic research are not suitable, since they focus on the academic research and the academic community
- In mission-oriented, co-creation, participative initiatives, science is not a goal in itself, it is a means
- Academic peers are not the only users, on the contrary, the research is aimed for use by others than academics
- Societal quality and or impact does not only relate to the research only, on the contrary, it relates to a change in a societal situation or practice
- Evaluation as a means to determine together the vision, the process, quality





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## ACCELERATE approach - I

- What is an RI (current trend: objectives and context are relevant)
  - ACCELERATE: Yes. More precisely: different stakeholders, funders, members, shed different lights on a RI - less obvious images become apparent. This is our starting point and we use it consistently
  - ACCELERATE asks: what perceptions or expectations of the RI are important, given the organisations/stakeholders involved in or addressed by the evaluation? Given the goal of the evaluation?
- It lacks a shared understanding of impact, both conceptually as well as concrete.
  - ACCELERATE addresses: What is meant by impact? In an evaluation, by a stakeholder, by the RI itself?



## ACCELERATE approach - II

- Every impact process can be modelled. An impact narrative can be based on the model. The model provides meaning to indicators.
  - ACCELERATE: What is the overarching impact narrative? What assumptions are included in the narrative?
  - What indicators provide evidence? What evidence do these indicators provide?
- In general, impact is a major effect, or a change, that is preceded by a complex and iterative process.
  - ACCELERATE: Is the focus of the evaluation on the effect/change, or on the process?
  - ACCELERATE: What is expected of an RI regarding an impact? What is the accountability ceiling?



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## Testing the protocol: the proof of the pudding

- A draft protocol describes design choices and presents some basic impact pathways
- Protocol is being tested by five partners of ACCELERATE, who each write an impact report
- “Who are key stakeholders?”
- “How do they perceive the RI? What do they expect?”
- “What is the core mission of the RI?”
- “What is the bigger picture?”



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## ... is in the eating

- Expectations and interpretations vary amongst stakeholders
  - Discussion with stakeholders brings this to the table
- Societal impact is part of the bigger strategy of an RI and relates to many, if not all, aspects
  - The approach is useful for one member who develops a societal impact vision and decides on indicators for monitoring
- In some contexts, societal impact seems not relevant at all
  - Coincidentally (?) 2 RIs from same country, both part of larger organization
- Users are unfamiliar with words and concepts like impact, evaluation, assessment, indicator, societal, protocol
  - What do they mean when we are not around?





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## how did it taste? I

- The approach (i.e. negotiate, discuss, define, articulate what the RI is, internally as well as with external stakeholders; what impact to expect; what indicators to use to indicate what?) seems to cover and address a broad range of issues that have so far been under-appreciated
- It is applicable to the range of partners
- It is useful to develop an impact strategy and to assemble a set of impact monitoring indications as well as for writing an impact (self-)report



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## how did it taste? II

- There are (sometimes huge) expectations regarding societal impact of RIs and ERICs, however in practice for most members it is a rather exotic topic
- Members, funders etc have their own expectations and practices regarding impact/evaluation, or not
- “Impact” + “evaluation” is often interpreted as “indicators”, skipping the narrative, vision, strategy, assumptions of how the RI aims to impact, as well as neglecting the meaning of the indicator





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## To conclude – and reflect on our community

- There are expectations and promises of contributions and impacts of RIs that are convincing and hypothetical, that in practice seem not urgent
- The choice of impacts and indicators matter, since they (implicitly) define and value what an RI is and what to expect
  - What is the role of our community?
- Concepts that our community is familiar with, are not always familiar to those who it applies to in practice
  - Does that matter?



**Thank you!**

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