

# RI-PATHS IMPACT ASSESSMENT FRAMEWORK

Dr. Matías Barberis Rami  
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# THE PROJECT

- Implementation period:  
January 2018 - June 2020 (30 months)
- MISSION
  - Give policy makers, funders and RI managers the **tools to assess RI impact** on the economy and society.
  - The goal is to improve the understanding of long-term **impact pathways** of various types of RIs.



# TOWARDS A FRAMEWORK

- RI-PATHs “Framework” does NOT mean
  - a mathematical model
  - a ‘tool’ to generate exact numbers or impact figures
- Impact Assessments will be focused according to funders’ and RIs’ decisions
  - we cannot & should not decide for them
- The framework should guide RI managers and funders through the right pathways and INDICATORS



# WHAT IS AN IMPACT PATHWAY?

- Understood as a process, each pathway allows to recognize concrete socio-economic impacts of RIs along the time.
- Every RIs willing to perform a Socio-Economic Impact Assessment may build and adapt the impact pathways to one or more close to the purpose of the assessment.
- The last step on this process consist on a reporting for future decision making including the results of the indicators analysis translated in a pragmatic and constructive ways for RIs managers, policy makers or the targeted group of the IA.

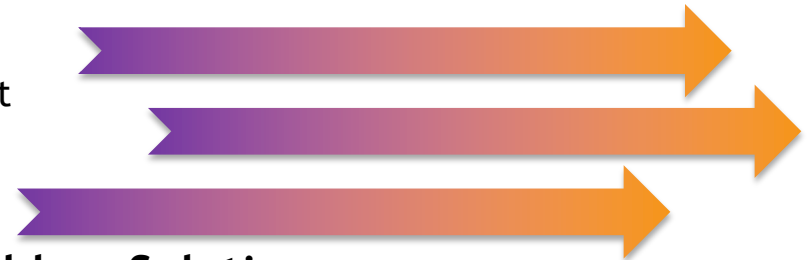




# IMPACT PATHWAYS

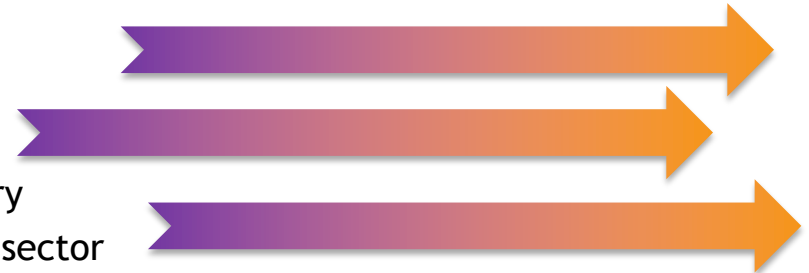
## Impacts as a Result of RIs Pursuing their Primary Mission - Enabling Science

- employment & standardised procurement
- publication-citation-recognition (incidental spillovers)
- technology transfer & licensing (supported spillovers)
- learning- and training-through-specialised procurement
- generic learning- and training-through-usage
- Training and higher education cooperation



## Impacts as a Result of RIs Interacting for Problem Solution

- interactive industrial problem solution
- interactive public sector problem solution
- other interactive societal problem solution
- provision of specifically curated/edited data to industry
- provision of specifically curated/edited data to public sector



## Impacts through Shaping the Fabric of Science and Society

- changing fundamentals of research practice
- contribution to formal standards in science
- creating and shaping scientific networks and communities
- creating and shaping networks between science and society
- communication, outreach and engagement



# IMPACT AREAS



## **ECONOMIC IMPACT**

Industry, Innovation,  
Labour Market,  
Productivity, Regional  
Economy...



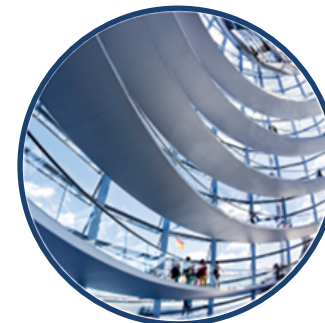
## **HUMAN RESOURCES IMPACT**

Career Development,  
networking and  
collaborations,  
competences and skills  
acquisition...



## **SOCIETAL IMPACT**

new solutions,  
technologies,  
knowledge benefits,  
public awareness,  
engagement...



## **POLICY IMPACT**

Policy, regulations,  
science diplomacy,  
sustainability, ethics  
and trust in science...



Own figure. Images: © istockphoto.com



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# MODULARITY

On the selection of proper indicators, some modular definitions could be done:

## 1. Scientific Area of RI

1. Life/Natural Sciences
2. Social Sciences and Humanities

## 2. Spatial Typology of RI

1. Virtual Facilities
2. Physical Facilities &
3. Single Sited Facilities
4. Distributed Facilities



# INDICATORS

- **ACTIVITY INDICATOR**
  - This is what an RI does and has more or less managerial control
- **OUTCOME INDICATOR**
  - Short-term effects of RI's activities, but RI has no control.
- **IMPACT INDICATOR**
  - Transformative manifest effects of an RI (short, mid and long term) on the economy and the society.

# INDICATORS

## **PATHWAY: LEARNING AND TRAINING BY USING RI's FACILITIES**

- *Number and duration of stays of Post-Docs/Professors*
- *Number and duration of stays of M.Sc./Ph.D. students*
- *Number and duration of (non-scientific) internships*
- *Number of (non-scientific) trainees*
- *Grants for trainees: Grants for trainees to follow RI trainings*
- *Number of technical staff*
- *Number of administrative/ research management staff*
- *Number of training measures for external users*
- *Number of higher education students trained within RI*
- *Number of long-term higher education training programmes*
- *Number of conferences/seminars hosted/organised by RI*
- *Number of students from local universities using the RI*
- **Satisfaction of people trained**
- **Academic career advances after leave (promotion, ...)**
- **Salary increase of researchers after leaving**
- **Career advances through technical/ administrative qualification**
- **Improvement on HR Science and Technology in the Region**

## **IMPACTS ON HUMAN RESOURCES**



# INDICATORS

## **PATHWAY: LEARNING AND TRAINING BY USING RI's FACILITIES**

- *Number of scientific users*
- *Hosting of (high-level) scientific events (eg conferences)*
- *Visits to (high-level) scientific events (eg conferences)*
- *School classes and or university courses visiting*
- **Use of open data (access and download)**
- **Satisfaction of scientific users**
- **Public awareness: Visitors on RI website**
- **Solution of societal challenges: Health, Ageing etc.**
- **Solution of public sector challenges: Culture, Admin,...**
- **Contribution to environmental sustainability: Energy issues**
- **Contribution to environmental sustainability: Waste issues**
- **Contribution to social sustainability: CSR**
- **Contribution to social sustainability: Social inclusion goals**
- **Contribution to Gender balance (employees, users)**
- **Increased trust in science**

## **IMPACTS ON SOCIETY**





# PILOT EXERCISES

Area of Interest	
ELIXIR	Networking effects, Staff Exchange
CERN	Procurement activities on innovation and firms' economic performance & socio-cultural impact of training programs and outreach activities.
ALBA	Innovation impacts generated by the experiments carried out by users
DESY	Interactions with users and suppliers
Global BioImaging*	Knowledge sharing and capacity building on local nodes
EATRIS*	Training activities of young researchers & translation of research outcomes into healthcare solutions and patient's well-being
CESSDA*	Impacts related to data provision to the research community and digital data management standards

*\* RIs that are not partners of the consortium but have expressed interest to participate*



# THANK YOU!



[www.ri-paths.eu](http://www.ri-paths.eu)



[contact@ri-paths.eu](mailto:contact@ri-paths.eu)



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