

HORIZON-CL6-2023-GOVERNANCE-01-11:
Reducing observation gaps in the land-sea interface area

Impact

Societal impact of science

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for Advanced Studies
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ICOS

••••
Integrated
Carbon
Observation
System



KNOWLEDGE **WITH GREAT**
POWER
COMES GREAT
RESPONSIBILITY.

-SPIDERMAN

What impact? Societal impact related to science

Impact are the changes that can be made to society that are the result of the output and outcomes from research activities.

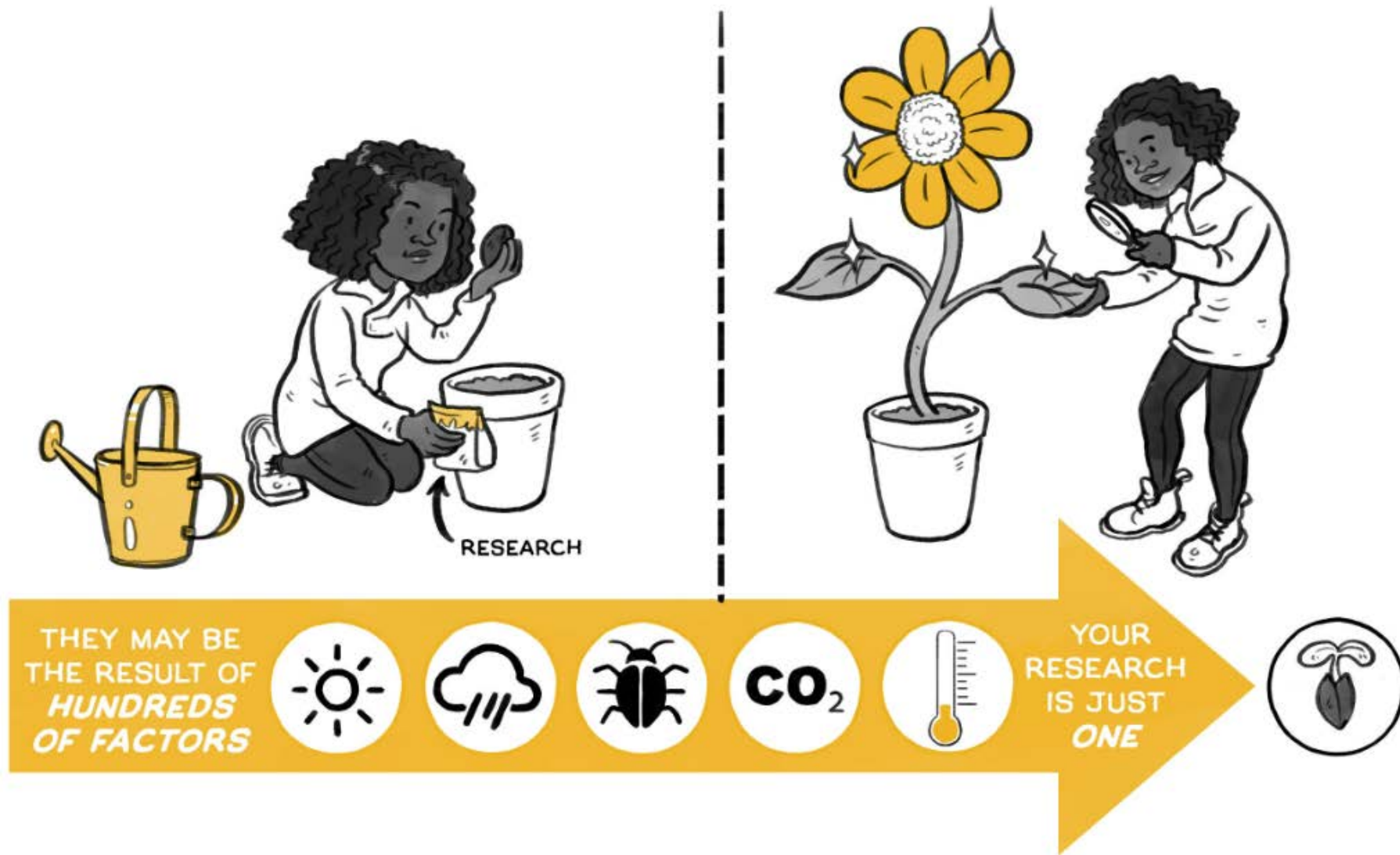


Impact pathways: working towards societal impact

Understanding, measuring and communicating the short and long term contributions of (applied) research to positive societal change, e.g. in terms of social, economic or environmental benefits.

Act towards impact!

ALTHOUGH THE IMPACT OF SOME RESEARCH IS APPARENT STRAIGHT AWAY, IT CAN OFTEN TAKE **YEARS**, EVEN **DECADES**, FOR IMPACTS TO EMERGE





I called you all here because
I need you to stop helping people.
It's really messing up my impact assessment.

Challenges of societal impact

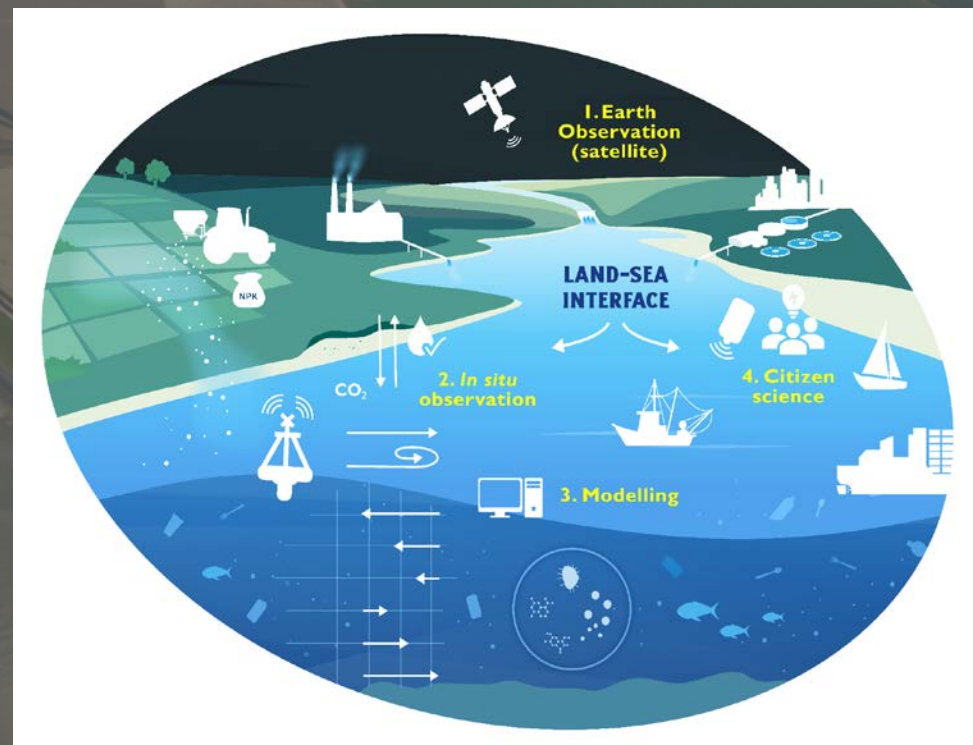
- **Time lag** – Often it can take a while before impact becomes visible
- **Attribution of impact to specific research** – Often more research is done so what is the impact of one research

Awareness that impact is difficult to influence.
Focus on outcome?

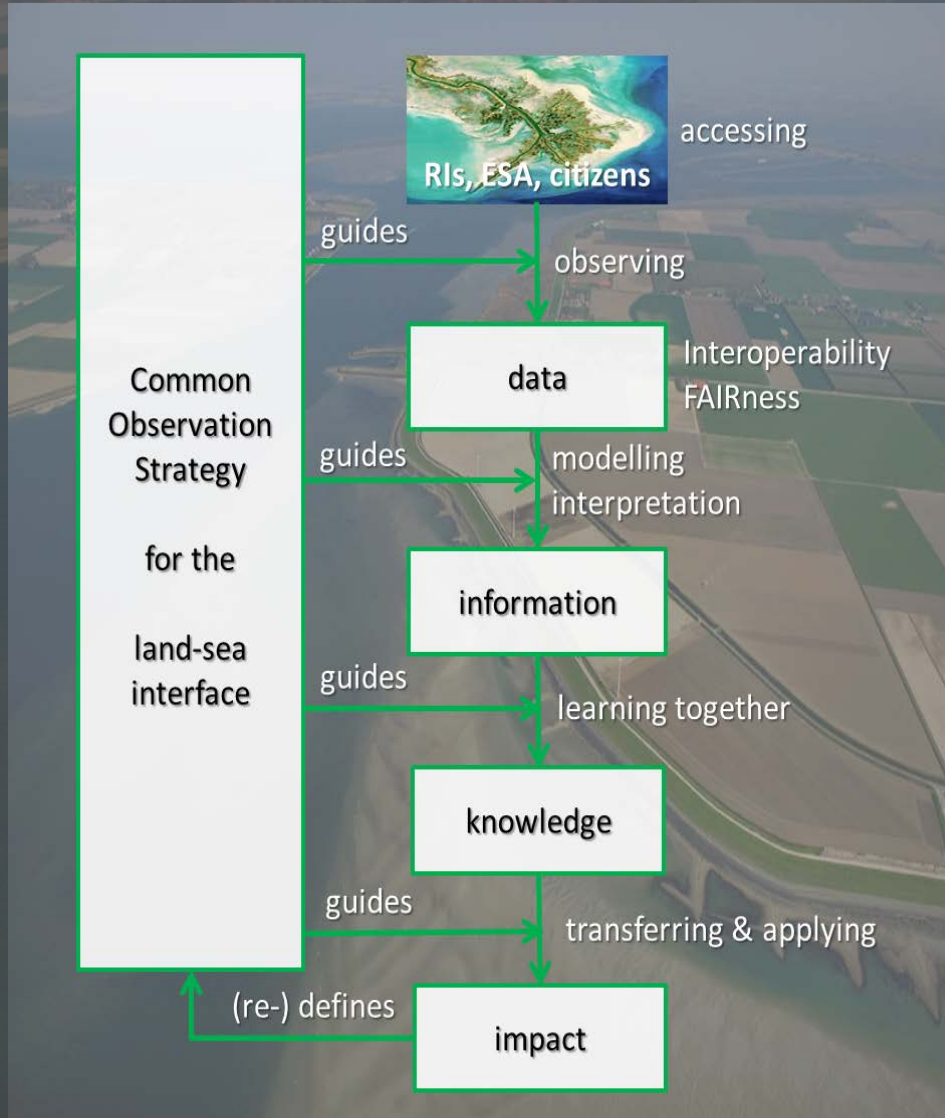


Objective: bring together interdisciplinary capabilities to study the Land Sea Interface (LSI)

- link together the best existing scientific expertise in various domains to co-design a strategy on how to observe the LSI
- involvement of all relevant stakeholders.
- better integration and collaboration between communities working in the LSI: *in situ* observations and citizen science with satellite observations and models.
- expand the number of *in situ* observations using also low-cost observation technology
- observational data and integrated information products FAIR through EMODnet, Copernicus and DTO



Pathway towards impact



LandSeaLot (LandSeaLot) aims to:

- create a new **innovative and strategic collaborative framework** for communities involved in observation, provision of data and information, knowledge building and its impact on societal challenges at the LSI.

By comprehensively addressing **observation** of the LSI and **FAIR data** flows, LandSeaLot will provide **fit-for-purpose information**, enhancing **knowledge** on key processes under various natural and anthropogenic pressures.

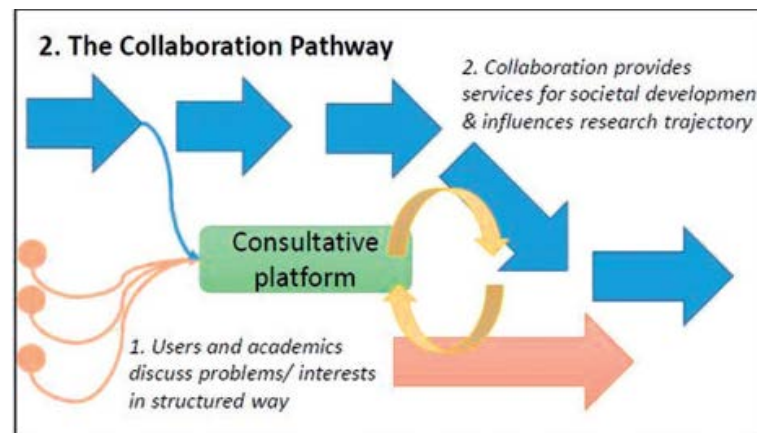
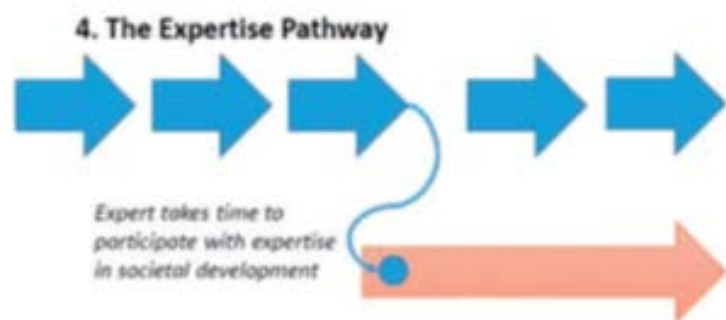
This knowledge on various challenges will be transferred to a broad range of stakeholders, thus **positively impacting science-based decision-making and policy development** related to the sustainability of the blue economy and environmental protection.

2.3 Impact Summary



SPECIFIC NEEDS	EXPECTED RESULTS	D & E & C MEASURES	TG	OUTCOMES	IMPACTS
<p>Advancing multidisciplinary knowledge on river-coastal processes and drivers of change</p> <p>Defragmenting LSI communities</p> <p>Reducing observation gaps at the LSI (spatio-temporal coverage, methods and availability)</p> <p>Capability of integrating multidisciplinary data across aquatic domains and observing communities</p> <p>Integrated observations and services fitting the needs of improved simulation of the land-sea continuum (digital twin - “what-if” scenarios)</p> <p>Inclusive governance models to address environmental resilience and sustainable blue economy</p> <p>Observation for better informed decision-making in EU (EEA, Regional Conventions, national authorities, MSFD, WFD) and globally (GEOSS, UN Ocean Decade and Decade for Ecosystem Restoration)</p> <p>Long lasting observation capacity in LSI</p>	<p>Improved knowledge on lateral carbon fluxes, climate-related threats, pollution and their impacts on ecosystems and biodiversity (D4.2, D5.1, D5.2, D5.3);</p> <p>A common ontology (D2.4), methodologies (D3.3) and a mature cooperation framework linking communities (D2.3).</p> <p>A complete overview on needs, gaps, data landscape and solutions, suggestions for future steps for improving interoperability (D2.2, D3.1, D3.2, D4.1, D6.1); an effective citizen science contribution (including via marinas) towards observing the LSI (D4.3, D4.4, D7.3); <u>best practices</u> for fit-for-purpose use of low-cost technologies in LSI observations (D4.3, D4.4).</p> <p><u>Best practices</u> for integration of multi-sourced observations (D3.3, D4.4, D5.3); New data exchange <u>Standards</u> (river & low-cost - D6.3, D6.4, D6.5) and interoperability solutions (<u>Best Practices</u>) (D6.2).</p> <p><u>Best practices</u> on common use of observations and models (D3.3, D5.3, D6.6).</p> <p>A <u>CoP</u> committed to implement the LCOS (D7.1, D2.4);</p> <p>Increased <u>Awareness</u> on the benefits of closing the observation gap for policy-support and the EU Green Deal (D2.3, D7.2, D7.5);</p> <p>Common strategy on joint services (D2.1, D2.4, D7.4)</p>	<p>C&D: Communications & Outreach to promote, engage and disseminate results across SGs [+5K visits to website; +2K materials distributed; +1K video views; +500 stakeholders]</p> <p>C&D: LCD Forum to engage key RIs and EU services & initiatives towards exploitation [+40 ext stakeholders]; C&D: 4 “LandSeaLot Weeks” organised to connect communities, discuss common approaches & advance collaboration [+250 pax]</p> <p>C&D: +20 Meetings with local & regional stakeholders to onboard them on LILs [+180 participants]</p> <p>E: A standardised approach to feeding LSI data flows into EU aggregators</p> <p>D: Citizen Empowerment Forum to sustain and upscale LSI citizen science efforts beyond project end [+120 pax]; D: A Catalogue of Technologies & Communities for dissemination of low-cost tech/good practices</p> <p>D: Training materials openly available in Zenodo [+200 downloads]</p> <p>D: New methods for integration of multi-sourced FAIR data into models, transferred to key DT initiatives (EDITO) and disseminated via OBPS & WWQA</p> <p>D: Toolkit to transfer citizen science know-how to marinas across Europe [+50 marinas, 2 nautical trade shows]</p> <p>D: 2 data visualisation dashboards</p> <p>E: LCOS & Policy Brief communicated broadly [+1 Pledge, MoUs, SLAs]</p>	<p>SG.1</p> <p>SG.2</p> <p>SG.3</p> <p>SG.4</p> <p>SG.5</p> <p>SG.6</p> <p>SG.7</p> <p>SG.8</p> <p>SG.9</p> <p>SG.10</p> <p>SG.11</p>	<p>One Common Strategy and One Community of Practice</p> <p>FAIR river, low-cost and citizen data available in EU aggregators</p> <p>Increased interoperable multi-sourced observation data across the LSI, in support of better management and reporting</p> <p>Best Practices on data management, integration and observation, supporting science, monitoring and policies</p> <p>Empowered citizen science community, supporting the Mission</p>	<p>- Provision of the common strategy and CoP around LSI innovative new observations, data integration and citizen involvement to further innovative governance models of involved communities.</p> <p>- Enhanced value of FAIR environmental observations in support of the EU Green Deal (e.g., Blue component), of UN Agenda 2030 SDGs and supporting enhanced competitiveness of EU industry & SMEs; for shaping future Copernicus services and integrate ESA products</p> <p>- Solutions for improved observation and modelling, enhancing harmonization and interoperability (support to CoastPredict UN ocean decade action); Dedicated dissemination actions towards GEOSS and the UN ocean decade office at IOC;</p> <p>- Increased LSI observation capacity strengthening science-to-policy interfaces and further rooting EU leadership in international policy frameworks</p>

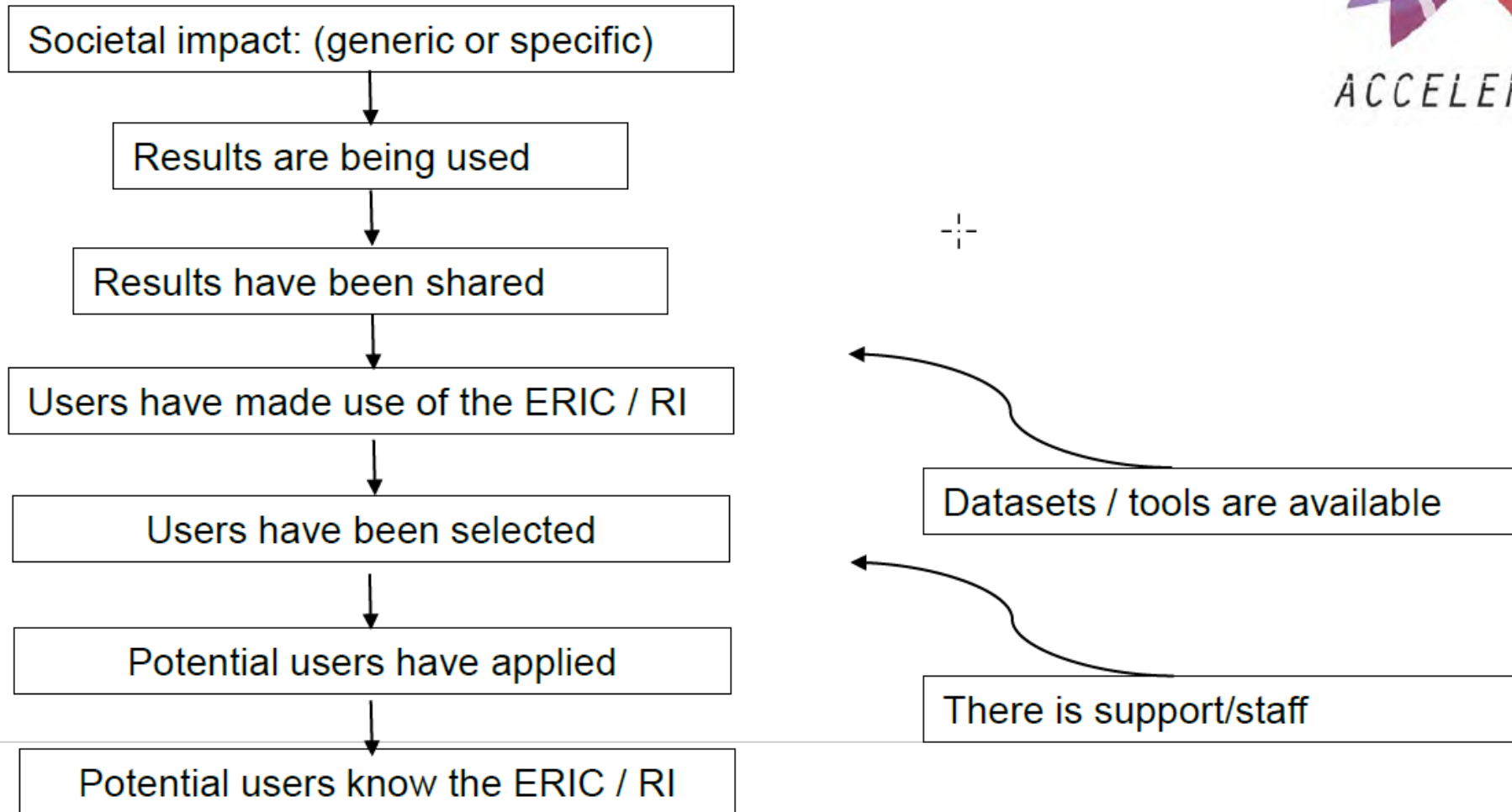
Theory of Change & Impact Pathways



Collaboration with stakeholders:
productive interactions

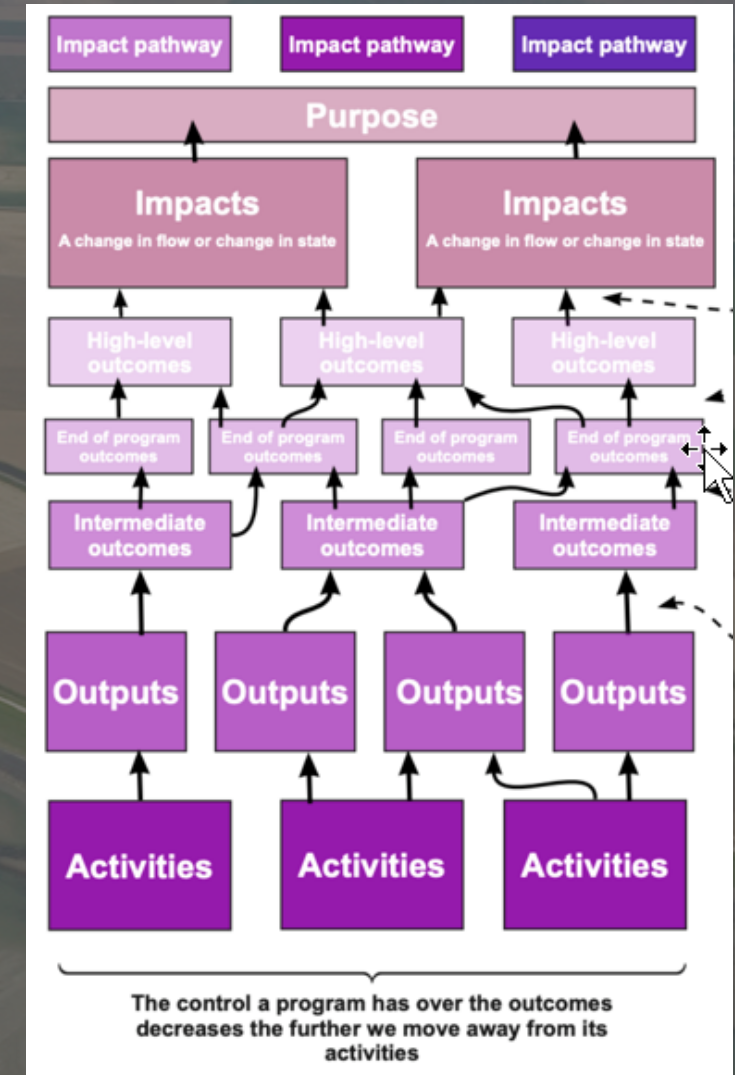
HOW and WITH WHOM?

Working back from impact: example



Concluding thoughts

- Use Theories of Change (work with stakeholders) to develop narratives on impact
- Identify the promises / goals / mission / impact
- Make clear and detailed impact pathways: how to reach the goals? what assumptions?
- Impact is what the RIs need to achieve, what is agreed with funders, what stakeholders expect...
- Impact is not a surprise and requires **intended action**
- Impact is a result of governance: of vision + choices + organization + activities
- Monitoring progress and evaluations with ToC and **learn** and define **new actions**
- Discuss on how 'the road to impact' can be organized and learn from good (and bad) practices
- And make sure to communicate on the impact
- We need you all!



IT'S ALL VERY WELL "MAKING DISCOVERIES",
"SAVING LIVES" AND "IMPROVING THE WORLD",
ROGER. BUT YOUR RESEARCH IS MAKING
BARELY ANY IMPACT ON SOCIAL MEDIA.



T *TO BE CONTINUED...*