

# **The Societal Impact Instrument: Occupational Health & Safety Research (SII:OHSR)**

Developing an instrument to measure indicators of societal impact

Presentation at the 2021 AESIS course:

Assessing Impact of Science: Methods & Instruments

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# Measuring societal impact of research

- A definition of societal impact:

“research contributions to addressing current and/or future social, environmental, economic, and other needs outside academia”

Reale, E., et al. (2018) 'A review of literature on evaluating the scientific, social and political impact of social sciences and humanities research', *Research Evaluation*, 27/4: 298-308

- Our aim was to:

develop a quantitative instrument to measure societal impact at the programme or institutional level

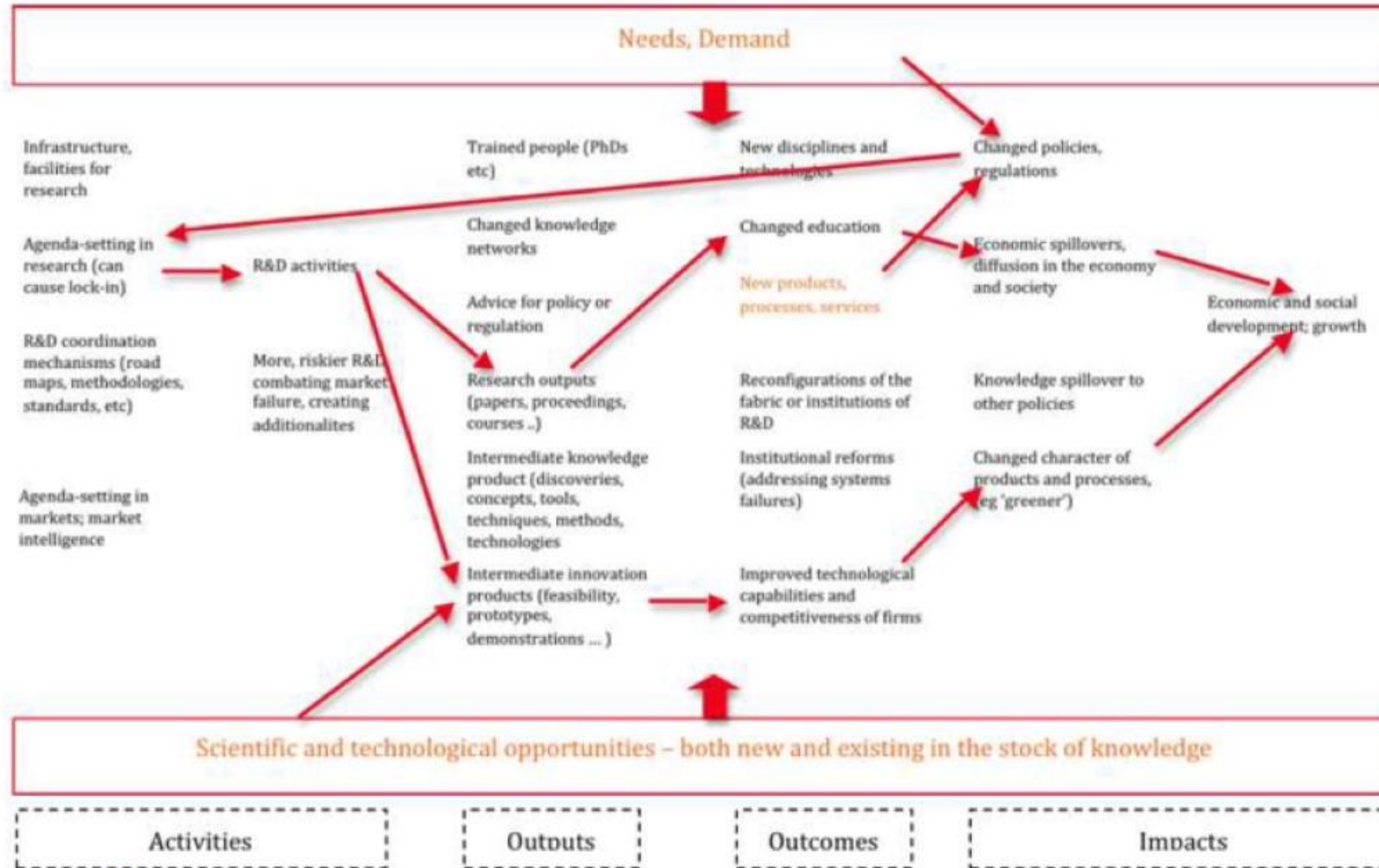
- Our reasons were to:

1. document the institutes societal impact (insurance policy)
2. identify improvement possibilities (learning)



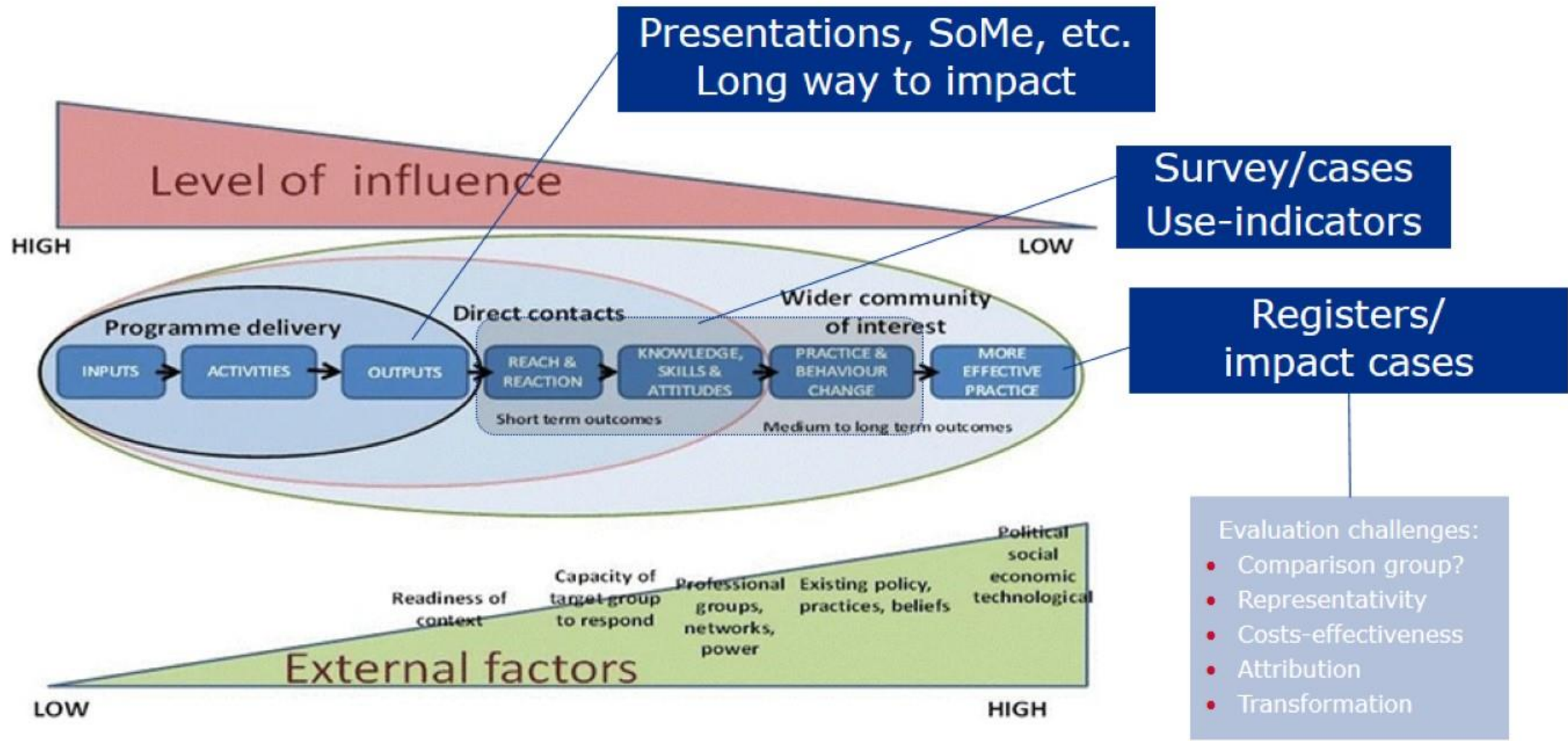
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# Complexity of impact pathways

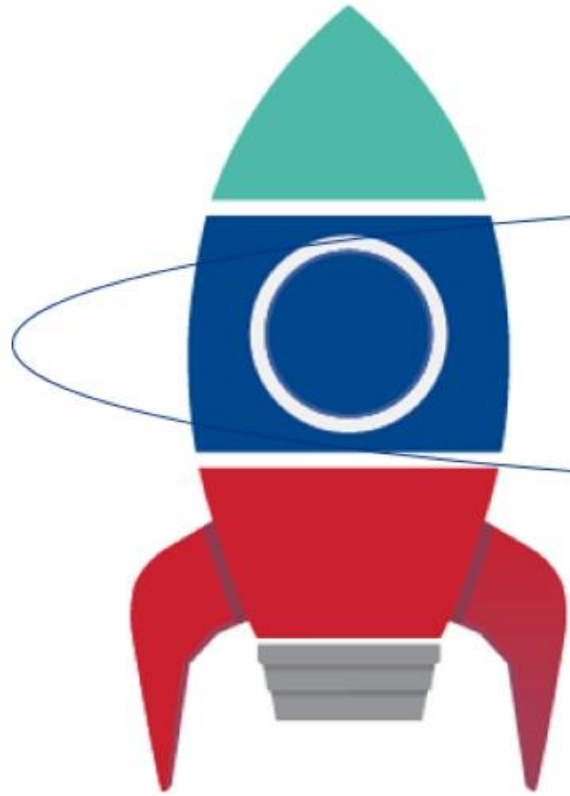


Source: (Arnold, 2013)

# Attribution is more and more difficult down the translation chain



# NFA impact instrument – intermediate outcomes at institute-level



## 3 Change (long term)

- Case-based natural experiments and planned effect studies (RCT, quasi...)
- Qualitative case-studies (impact-pathways, fidelity, reach...)

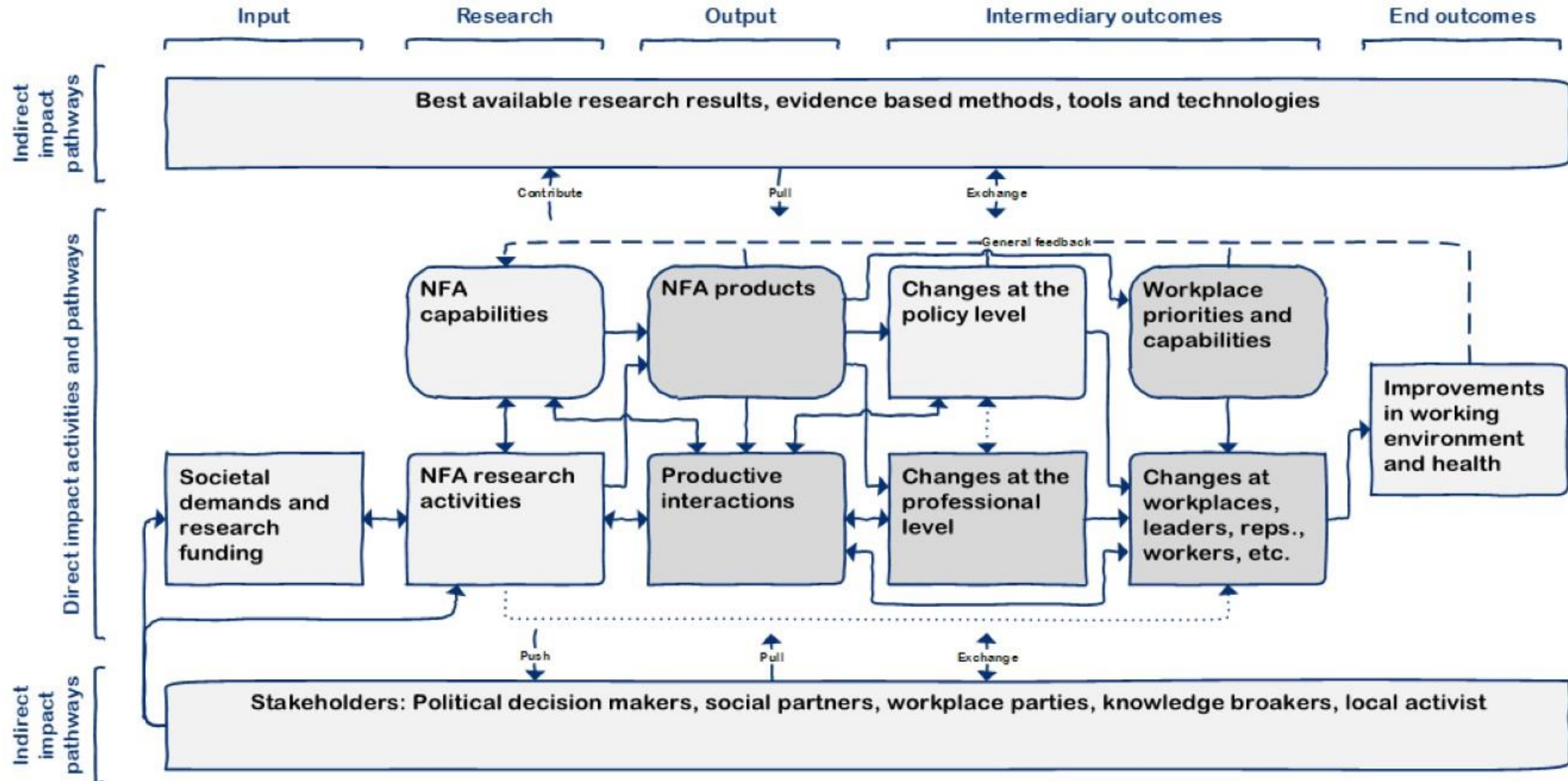
## 2 Use (intermediate)

- Impact instrument that measure indicators of knowledge use and reach

## 1 Dissemination (short term)

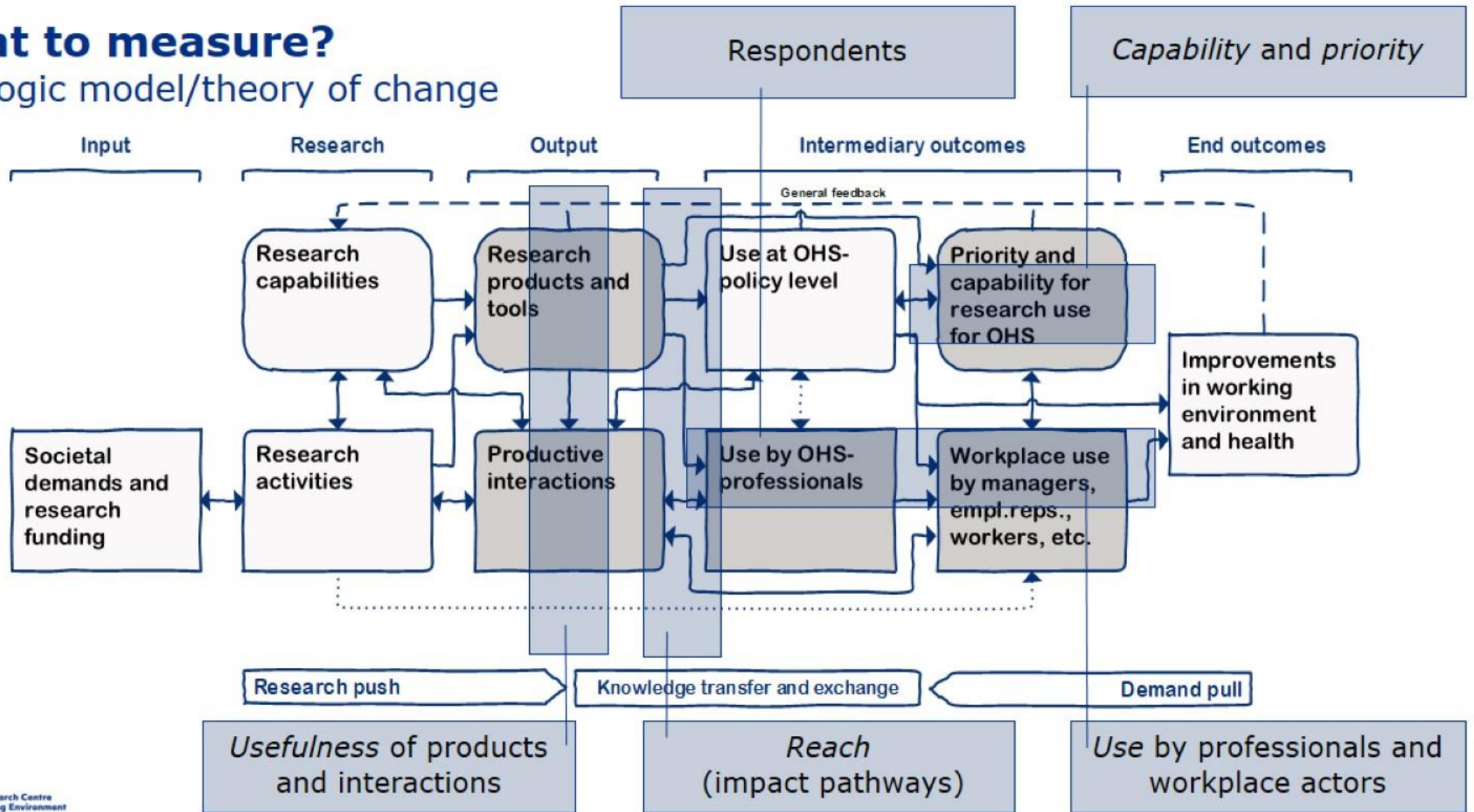
- Registrations of publications, events, SoMe experiments and tracing, qualitative evaluations...

# Overall impact-model



# What to measure?

NFA logic model/theory of change



# How to measure

Conclusions based on quick scoping review of impact-measurement in the OHS-field

- No articles describes a quantitative instrument to measure societal impact of OHS-research on the programme or institute level
- The identified articles describe measurement of three types of outcomes:
  - dissemination and use of *specific research knowledge*/a campaign (3)
  - use of *evidence based practices* (3)
  - use of a *specified units of knowledge* (1)
- Specific vs context independent questions

Precondition (EBP)	Intermediate outcomes	"End" outcomes
Specific items for specific practices	Context independent questions related to specific units of knowledge	Tailored items for specific research results



# Our solution for for use-evaluation

## Basic use-concept

- Keme: A unit of evidence-based transferable knowledge

Kramer, D. M., et al. (2013) 'Did you have an impact? A theory-based method for planning and evaluating knowledge-transfer and exchange activities in occupational health and safety', *International journal of occupational safety ergonomics*, 19/1: 41-62.

## Types of knowledge

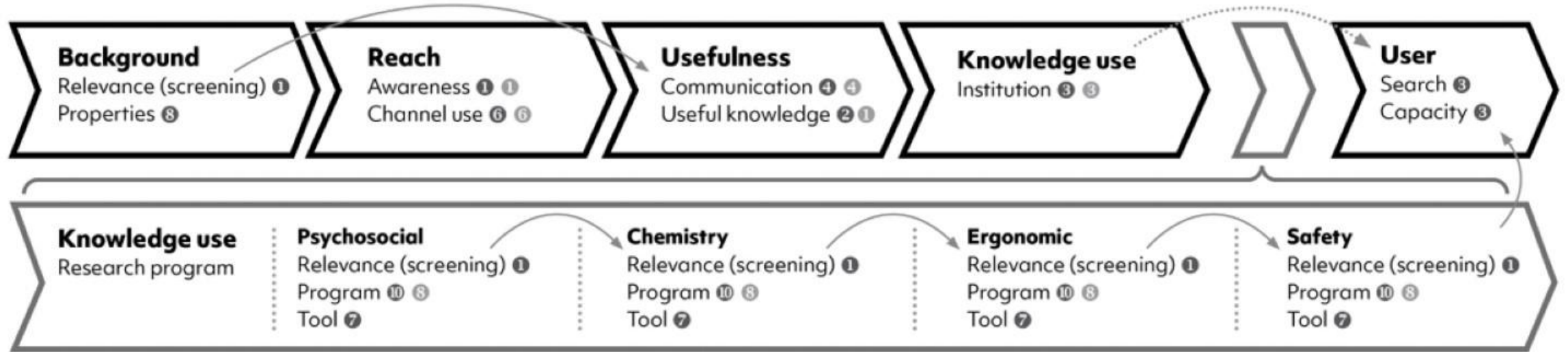
- *Conceptual use*: change and frame the understanding
- *Instrumental use*: new procedures, methods or tools
- *Strategic use*: influence new policies, procedures and processes

Weiss, C. H. (1979) 'The many meanings of research utilization', *Journal of public administration review*, 39/5: 426-31



Photo by [Héctor J. Rivas](#) on [Unsplash](#)

# The questionnaire in the instrument



① = Number of items in the original questionnaire (103)    ① = Number of items included in *the societal impact index* (47)    ↑ = Conditional skip pattern    ⤴ = Voluntary skip pattern

Use-item: Description of <X research>...

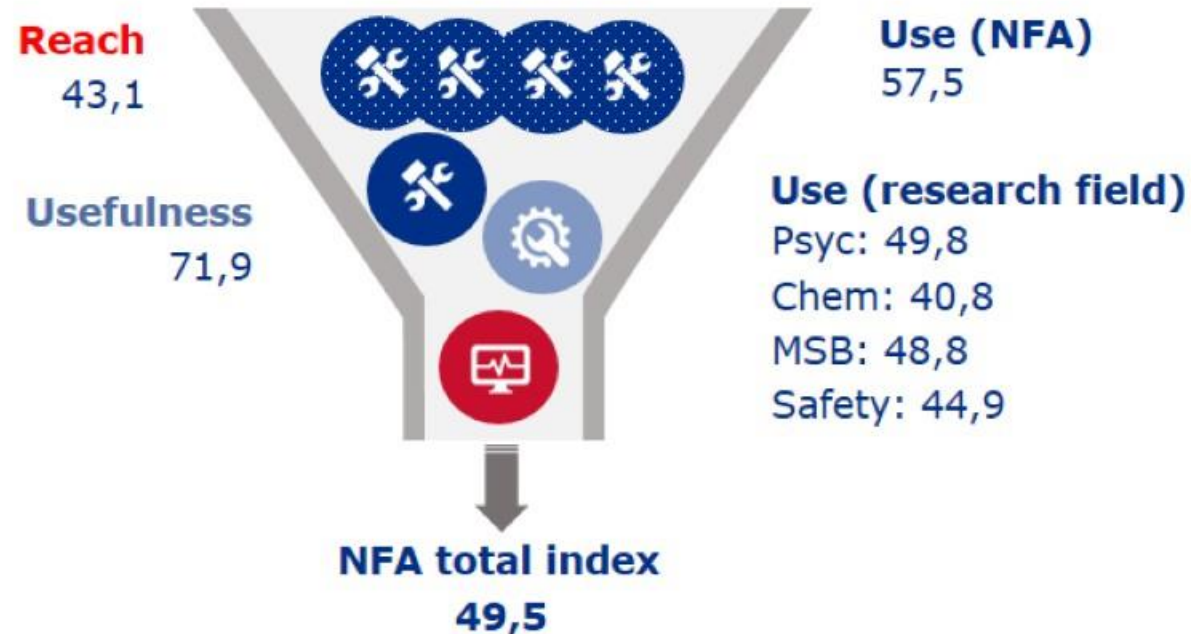
Can your knowledge of NFA's <X research> contribute to you...

- know what is important for the working environment?
- assisting to complete work improvements
- assisting to change OHS-politics and –agendas

# Societal index score

Global index 0-100 composed of 7 sub-indices

- Index would be 100, if all relevant respondents answered that:
  - they know and use NFA's communication (*reach*)
  - NFA knowledge and activities are useful to a very high degree (*usefulness*)
  - they use knowledge from NFA's to a high degree generally and for relevant research fields (*use*)



# Conclusion

- We developed and validated an instrument to measure *intermediary outcome indicators of societal impact at the programme/institution level in the OHS-area*

In press: Sørensen et al. 2021, Measuring societal impact of research – developing and validating an impact instrument for occupational health and safety, *Research Evaluation*

- Most questions are context independent  
Question framings are determine context
- Sampling strategy needs improvement
- The instrument should be expanded to measure upstream impact
- Test the instrument in other national contexts and research fields
- The significance of the descriptions of the “knowledge packages” should be determined

