IMPACT UNIT

wissenschaft im dialog

Impact Unit

Impact and Evaluation in Science Communication

Ricarda Ziegler, 13 July 2021, ICRC Conference

GEFÖRDERT VOM

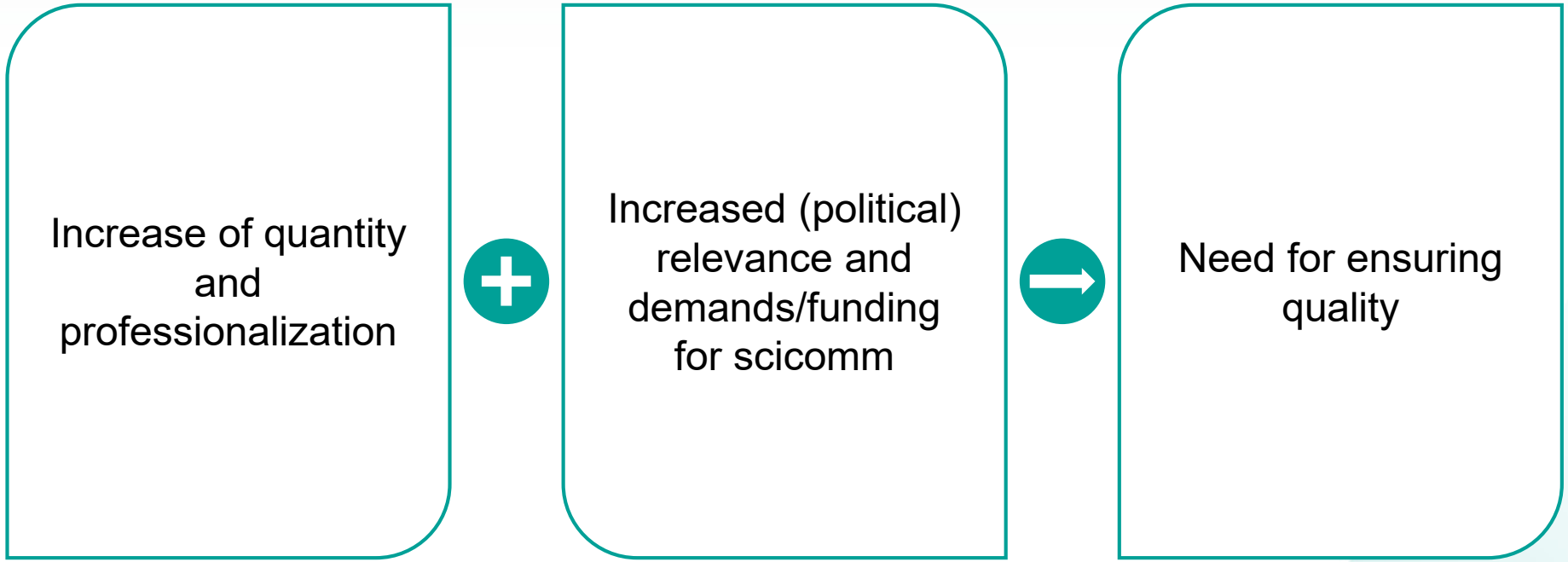
Bundesministerium
für Bildung
und Forschung

Many facets of…

… science communication, science education, science outreach, public engagament with science, science and society relations, open science, responsible research and innovation, …

… taking place in a variety of formats

Current situation



Our vision

- **impact-oriented science communication**

  -> What are we aiming for? -> reflecting on goals, objectives (and target groups)

- **meaningful evaluation practice** in science communication

  -> What does evaluation has to offer for science communication practice?

- **evidence-based discussions** about science communication

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The Impact Unit

- A project by Wissenschaft im Dialog
- Funded by the Federal Ministry of Education and Research

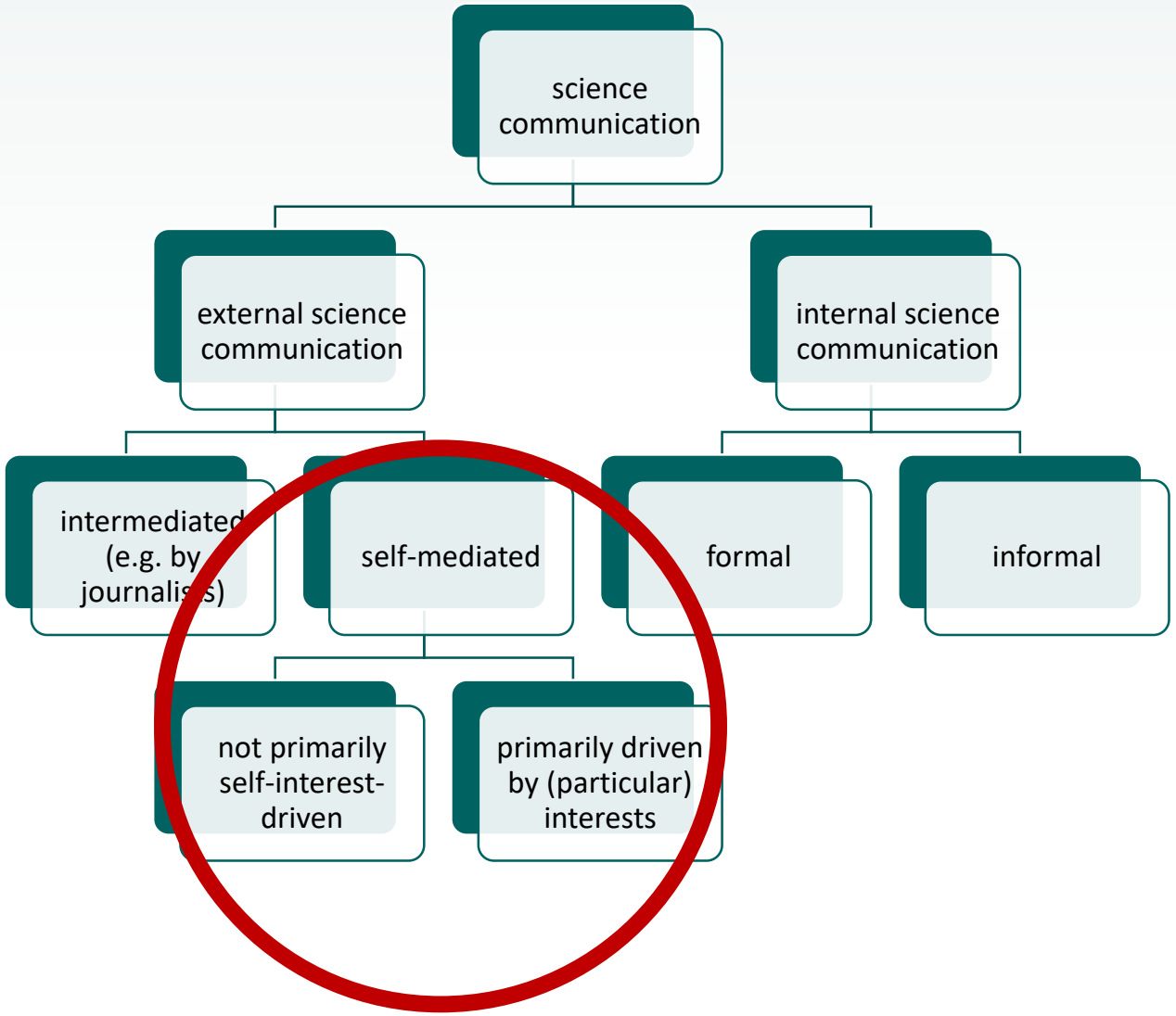
Goals

- Contributing to **meaningful evaluation practice** in German science communication
- Fostering **evidence-based discussions** about science communication
- Enabling **impact-oriented science communication** in Germany

Analyses and research

Evaluation tools

Network building



own translation of chart by Mike S. Schäfer (2017): „Wissenschaftskommunikation ist Wissenschaftsjournalismus, Wissenschafts-PR … und mehr“, abgerufen unter: https://www.wissenschaftskommunikation.de/wissenschaftskommunikation-ist-wissenschaftsjournalismus-wissenschafts-pr-und-mehr-3337/

Goals, objectives (and target groups) in science communication

Challenges

- Goals and objectives are seldomly clearly identified and defined in science communication practice
- Structured approaches in science communication research are equally lacking

Defining goals and objectives

Goals

Abstract visions

Describe what a project aims to achieve in the broader (also societal) context

Objectives contribute to reaching the goals

Objectives

Concrete objectives

Describe what a project aims to achieve specifically in a way that can be quantitatively or qualitatively defined

Besley, J. C., Dudo, A., & Yuan, S. (2018). Scientists' views about communication objectives. *Public Understanding of Science*, *27*(6), 708–730.

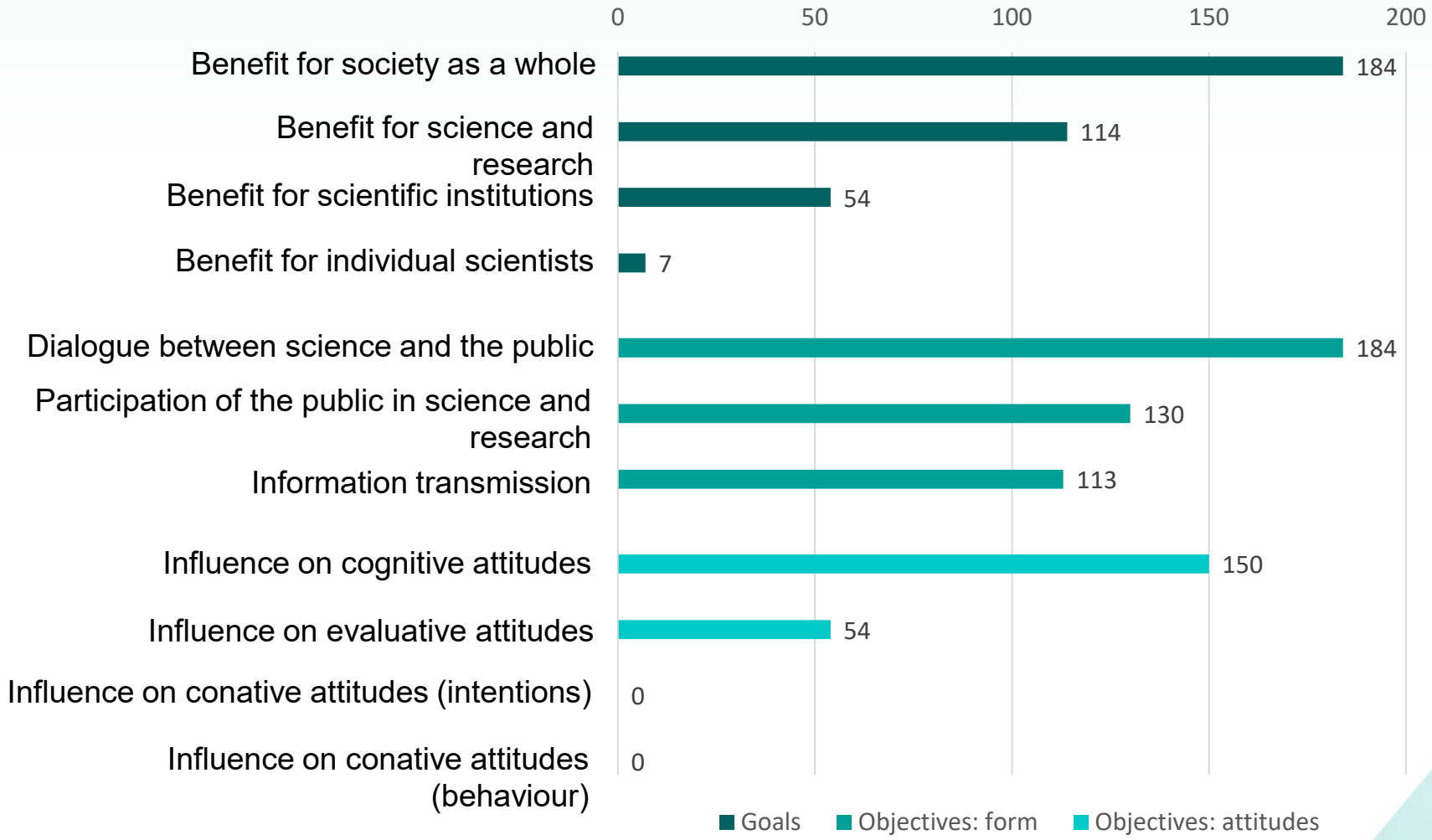
Hallahan, K. (2015). Organizational goals and communication objectives in strategic communication. *The Routledge handbook of strategic communication*, 244–266.

A typology of goals and objectives

Goals	Objectives: Form Dimension	Objectives: Attitude Dimension
Benefit for **individual scientists** (e.g. reputation)	**Information** transmission	Influence on **cognitive attitudes** (e.g. knowledge or skills)
Benefit for **scientific institutions** (e.g. visibility)	**Dialogue** between science and the public	Influence on **evaluative attitudes** (e.g. opinions)
Benefit for **science and research** (e.g. legitimacy)	**Participation** of the public in science and research	Influence on **conative attitudes** (behavioural intentions)
Benefit for **society** as a whole		Influence on **conative attitudes** (behaviour)

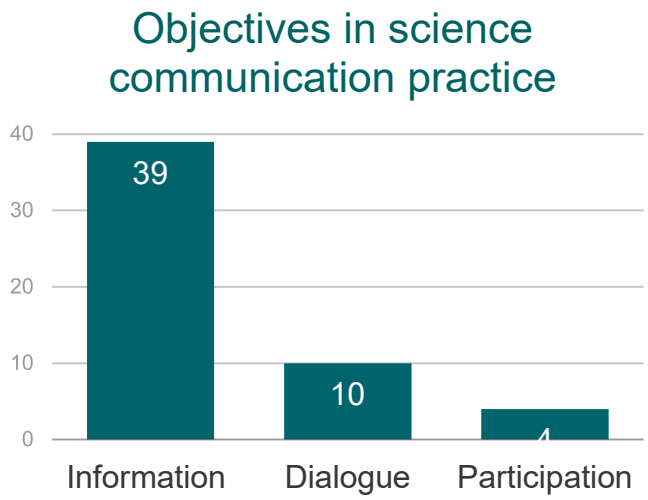
A pilot study of strategic science communication goals in Germany

Results: Goals and objectives



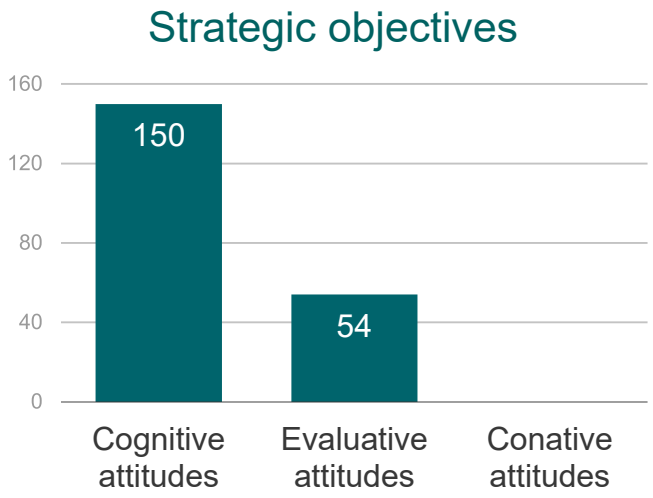
Comparison between objectives in strategy and in practice

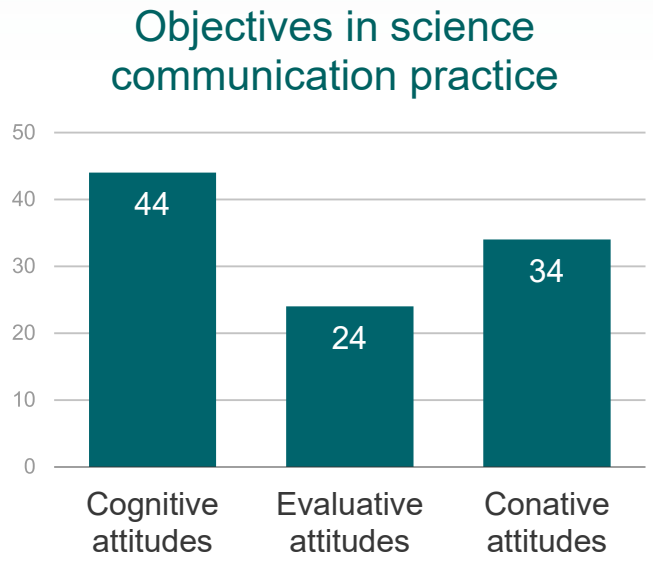
n(institutions) = 39, n(documents) = 120, n(quotes: goals) = 724



51 evaluation reports, 55 science communication projects

Comparison between objectives in strategy and in practice



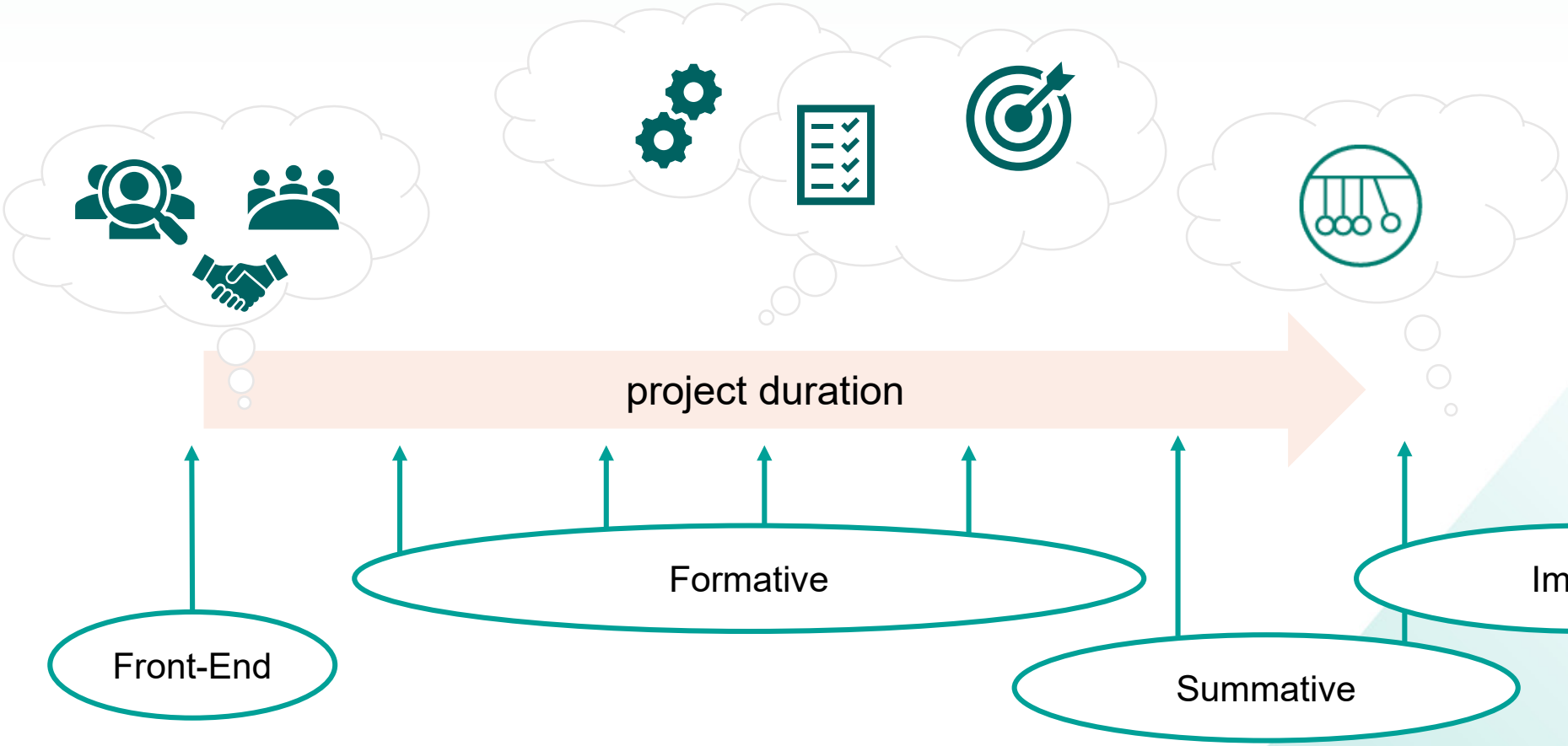


Intro to Evaluation

Why evaluate science communication?

Motives for evaluation

Variety of evaluation



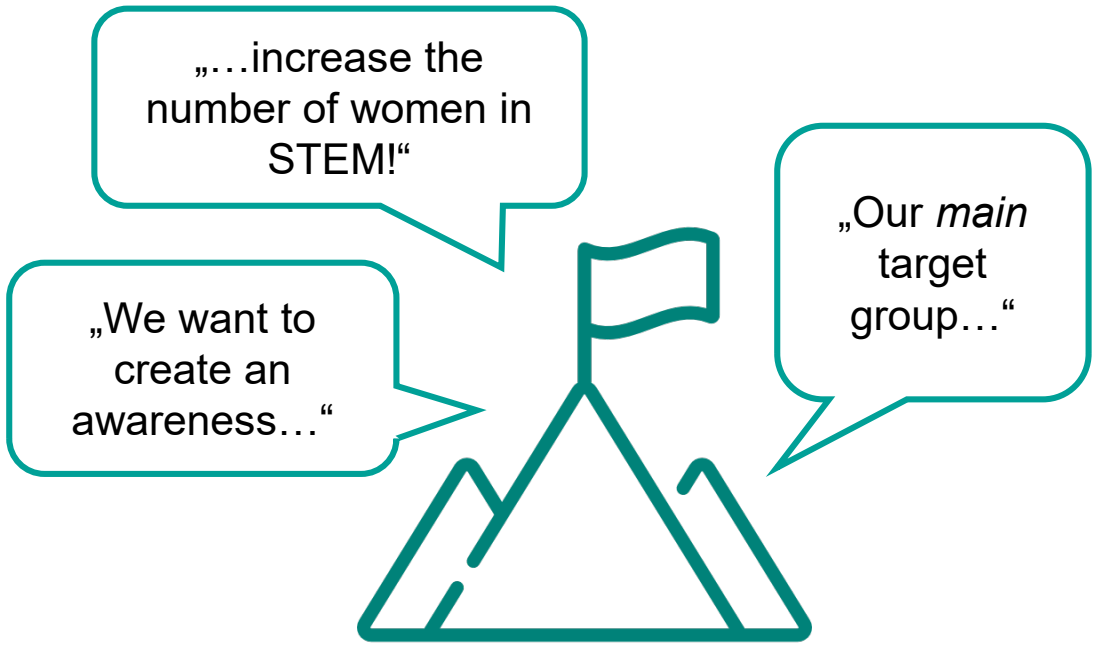
The perks and perils of evaluation

- Evaluation can address all of these motives
- Can be adapted to any budget, project and interest

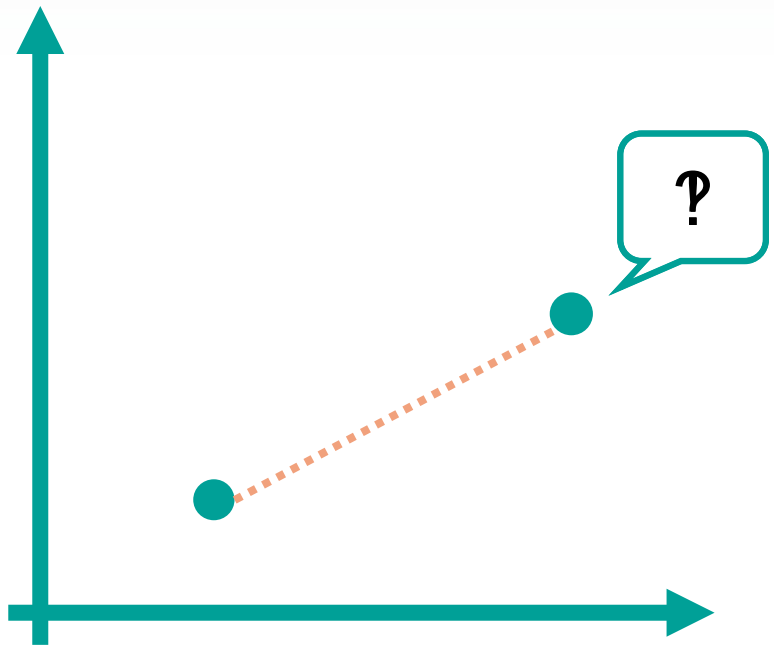
There is no perfect recipe

Current issues in scicomm practice and evaluation

1. Imprecise goals and target groups to begin with…



Current issues in scicomm practice and evaluation



1. Imprecise goals and target groups to begin with…
2. Missing evidence and unfitting study designs for detecting change

Current issues in scicomm practice and evaluation

36 %

of science communicators state they evaluate often, if not always…

… to reflect within the team (79%)

or pass them to supervisors (65%)

1. Imprecise goals and target groups to begin with…
2. Missing evidence and unfitting study designs for detecting change
3. The image of evaluations as success stories or internal secrets

Our vision for meaningful scicomm evaluation

Evaluation is understood as an important learning process

Evaluations become more honest, constructive, impact-oriented

We can start evidence-based discussions around potentials and limits of scicomm

Better project designs based on previous experience and trustworthy information

- Less pressure for practitioners, more room for curiosity
- Clear guidelines for funders on what works and how to improve projects
- Allies for scientists of science communication
- Better scicomm for its target audiences

Need help? Information and tools

- soon on www.impactunit.de (unfortunately only in German)
- CAISE/NSF evaluation tools: https://www.informalscience.org/what-evaluation-0
- Queen Mary University and NCCPE Evaluation Toolkit: https://www.qmul.ac.uk/publicengagement/goodpractice/evaluation-toolkit/
- Evaluation Support Scotland - Evaluating at distance: https://evaluationsupportscotland.org.uk/evaluation/evaluation-approaches/evaluating-at-a-distance/#CTRcasestudies
- Better evaluation Australia – Overview on methods and processes: https://www.betterevaluation.org/en/about-us

Evaluating science communication ONLINE

- often low response rates questionnaires/surveys etc. due to less intense interactions / relations between participants and ‚organisers‘

- but also
  - often possibility to contact participants via email before and after the event
  - sometimes possibility to ‚track‘ people and their behaviour
  - different online tools (mentimeter, kahoot, polleverywhere etc.) to get instant feedback from particpants -> include evaluation in the activitiy/treatment

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Ricarda Ziegler

ricarda.ziegler@w-i-d.de

@riziegler