

Toward responsible assessment of science and scholarship



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*Beyond impact factor
conference*

Kursaal, Bern

21 November 2018



Ambitions knowledge creation coming decades?
What can you bring about *right now*?

→ Research evaluation:
Important bridge between policy and research

Academic incentive and reward systems

- *The Lancet*: " Funders and academic institutions do much to set the social and cultural context in which research occurs, and academia's reward and promotion systems shape the choices of scientists at all stages of their career." (Macleod et al. 2014, 103).



Thinking with indicators. Exploring the epistemic impacts of academic performance indicators in the life sciences FREE

Ruth Müller, Sarah de Rijcke

Research Evaluation, Volume 27, Issue 3, 1 July 2018, Pages 283,

<https://doi.org/10.1093/reseval/rvy014>

Published: 21 June 2018

Evaluation
can help
science
deliver its
promise to
society

*But
does
it?*

WORLD VIEW

A personal take on events



The pressure to publish pushes down quality

Scientists must publish less, says Daniel Sarewitz, or good research will be swamped by the ever-increasing volume of poor work.

The Matthew Effect



BBC

HOW CAN SCIENCE
FIX THE PLANET

Role of evaluation in science and scholarship?



Excellence



Relevance

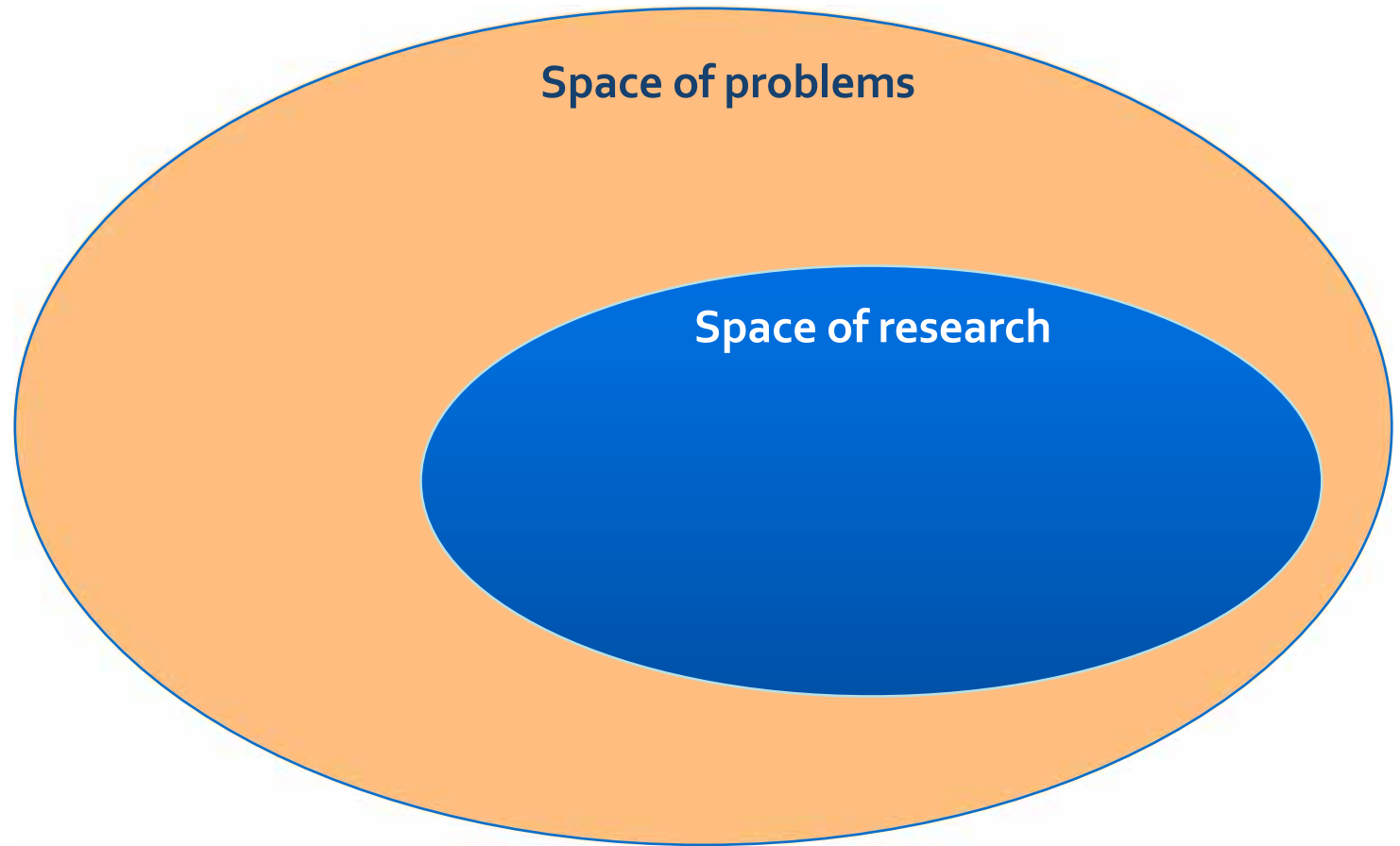
**Problems,
research and
indicators**



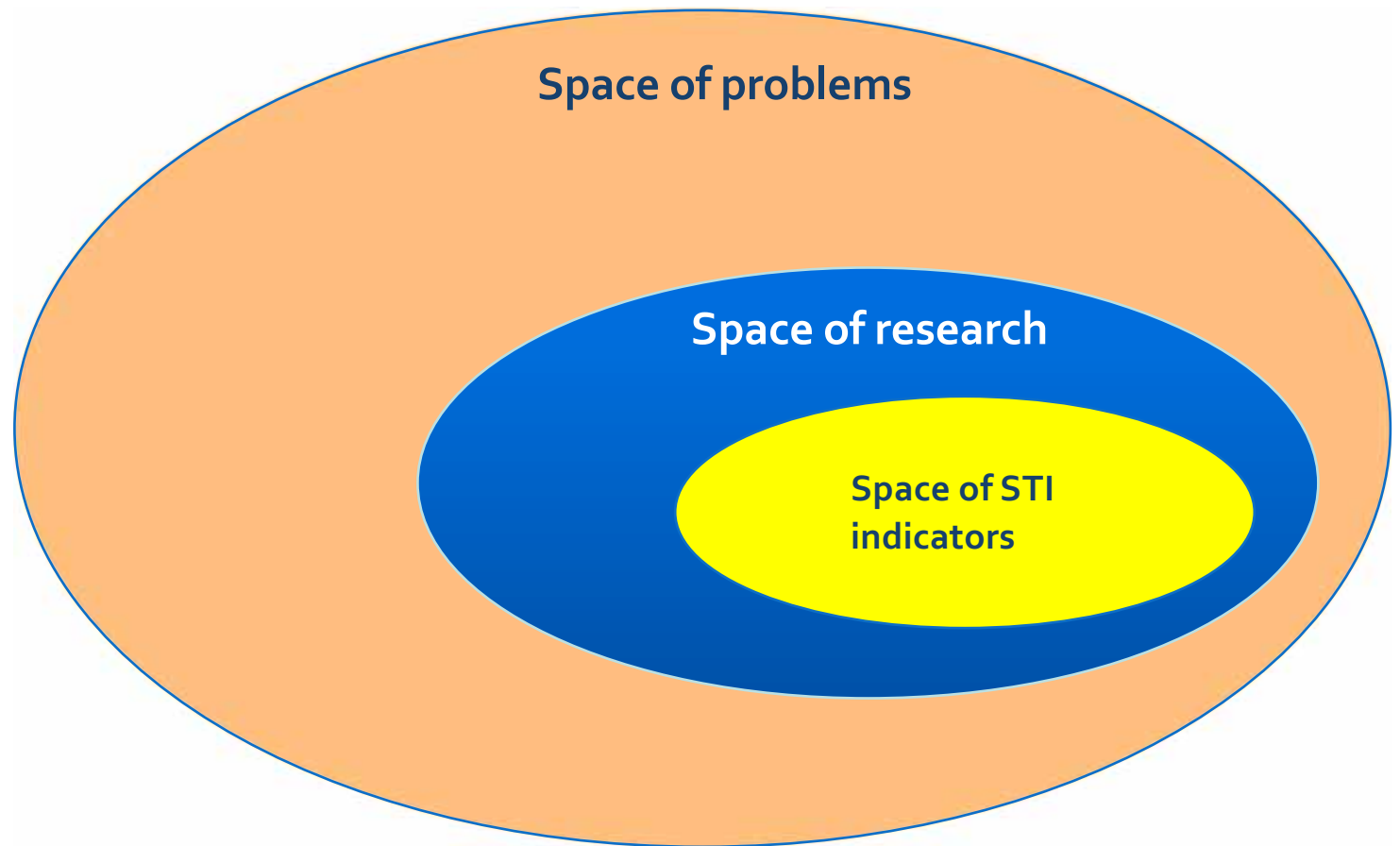
Space of problems

Slide credit: Ismael Rafols

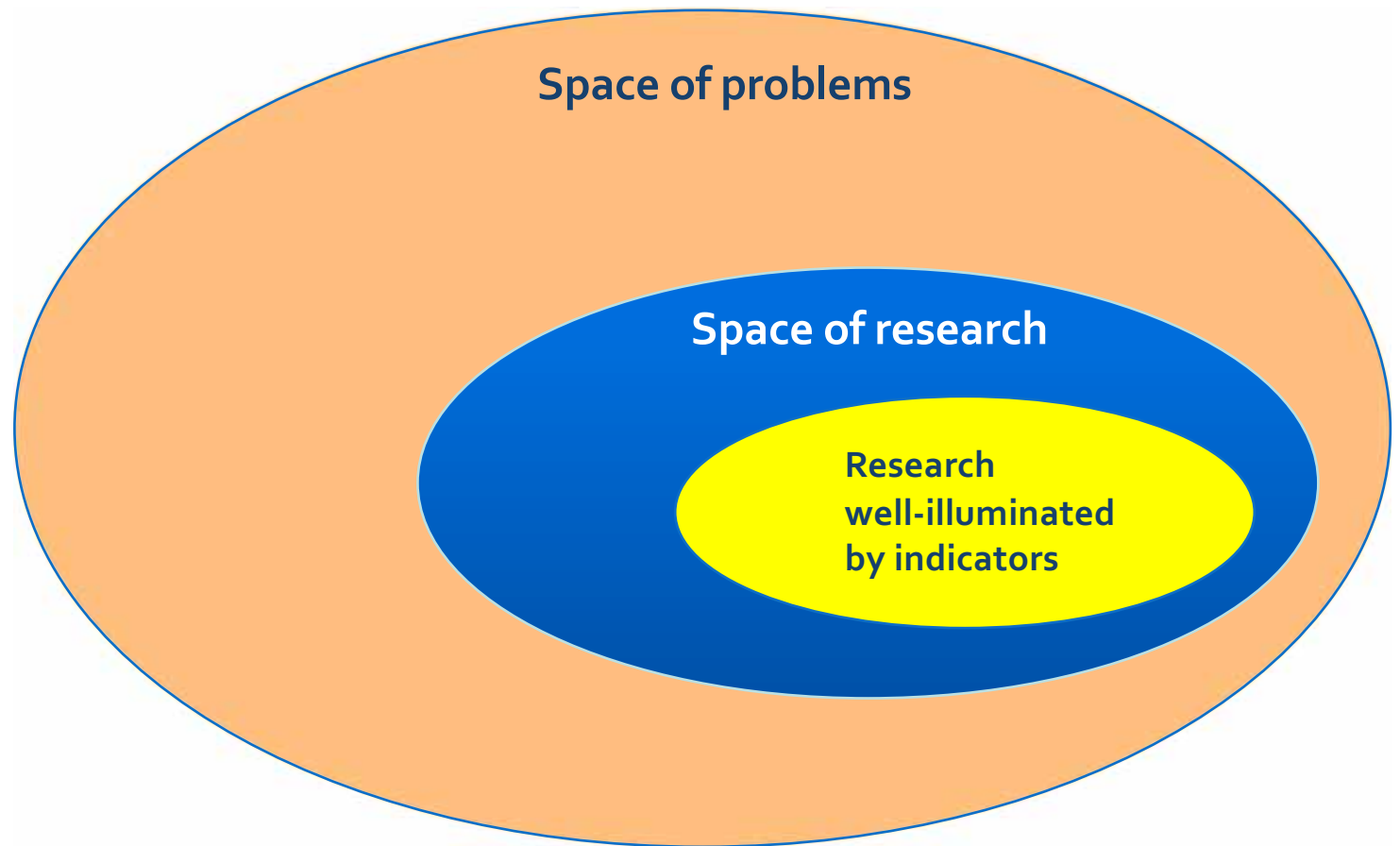
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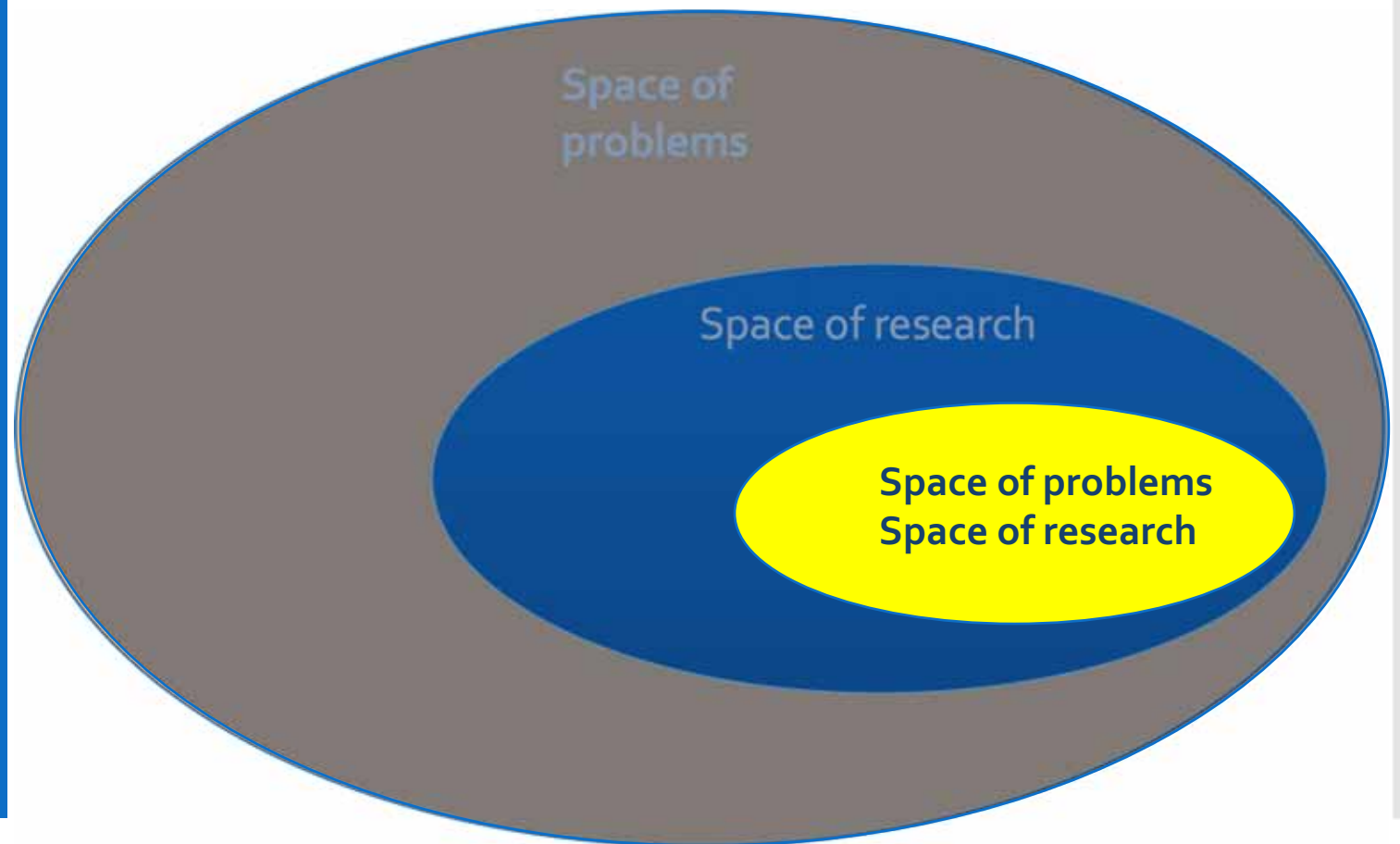
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**Problems,
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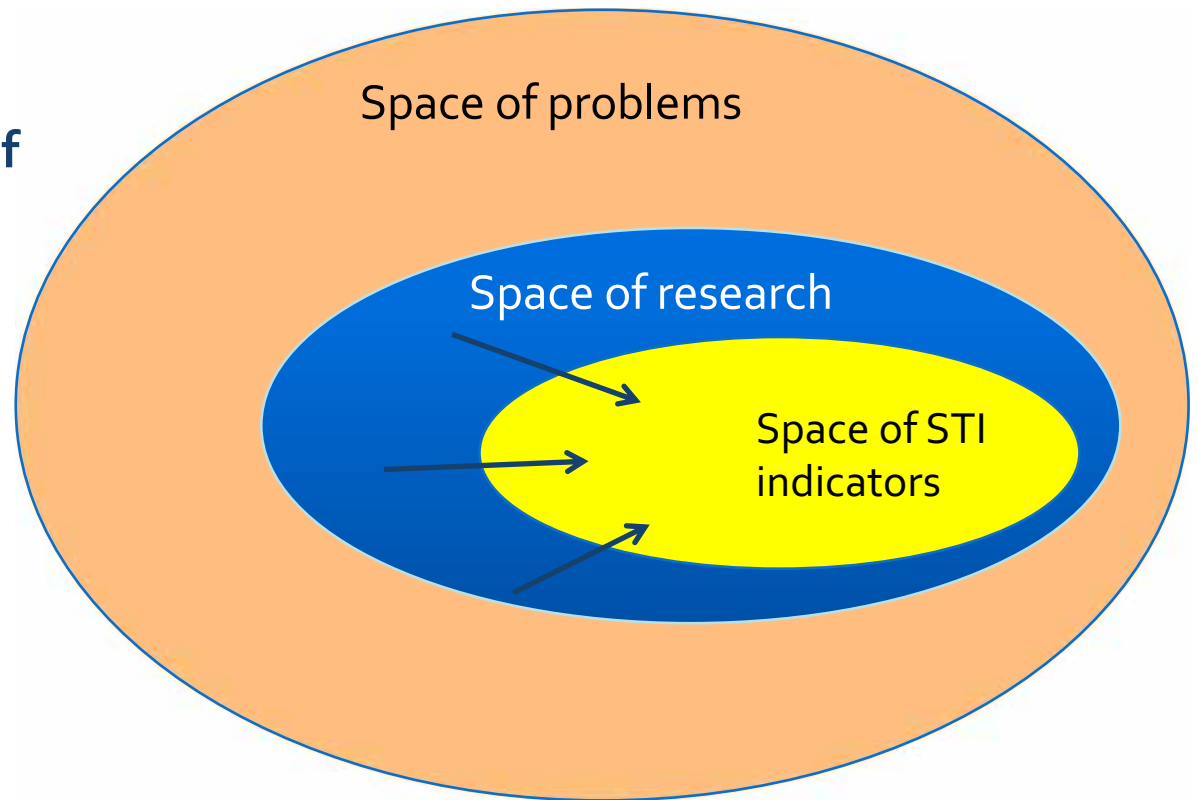


Streetlight
effect:
mistaking
light with
'problems'

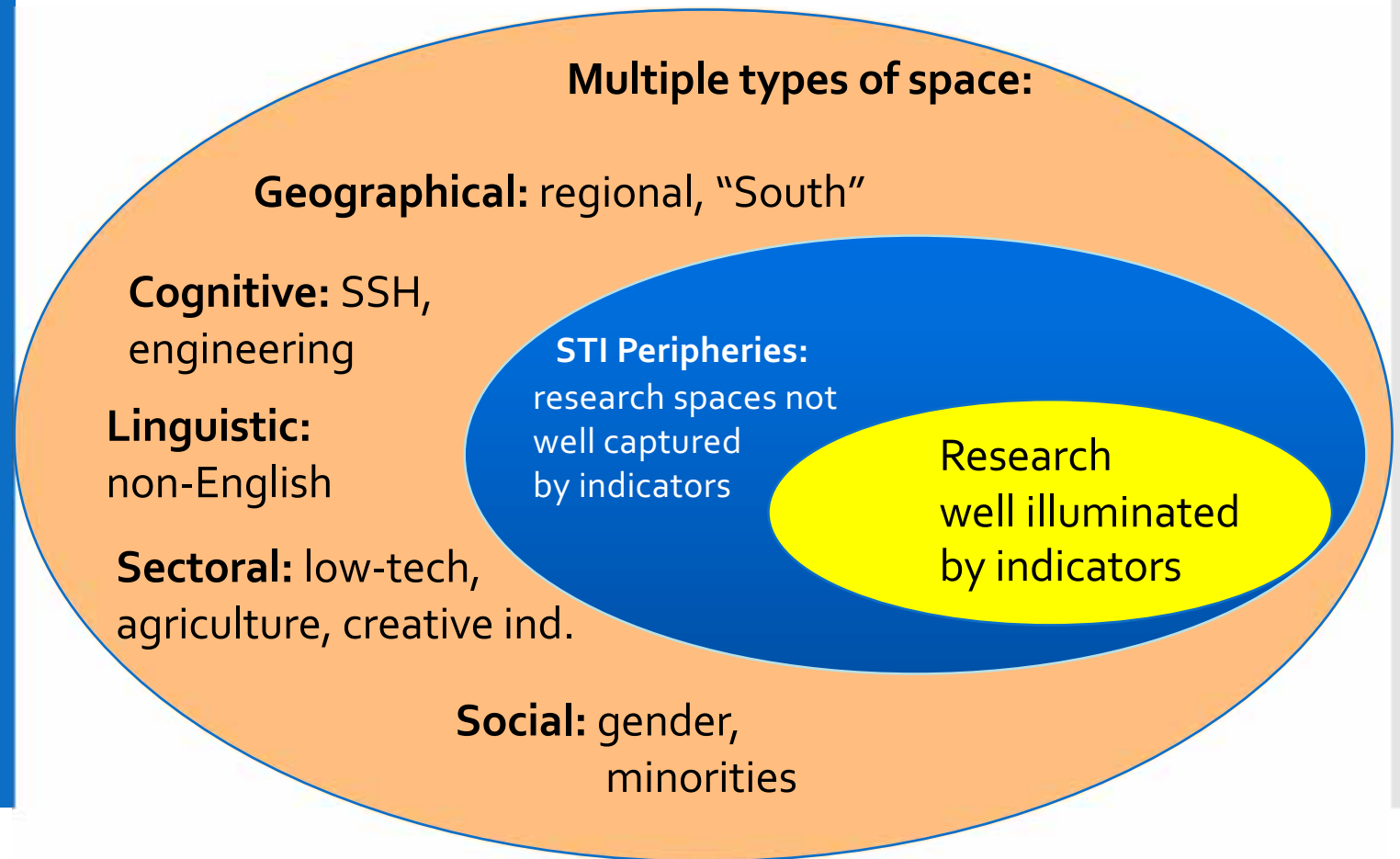


**Reduced
diversity of
research
efforts...**

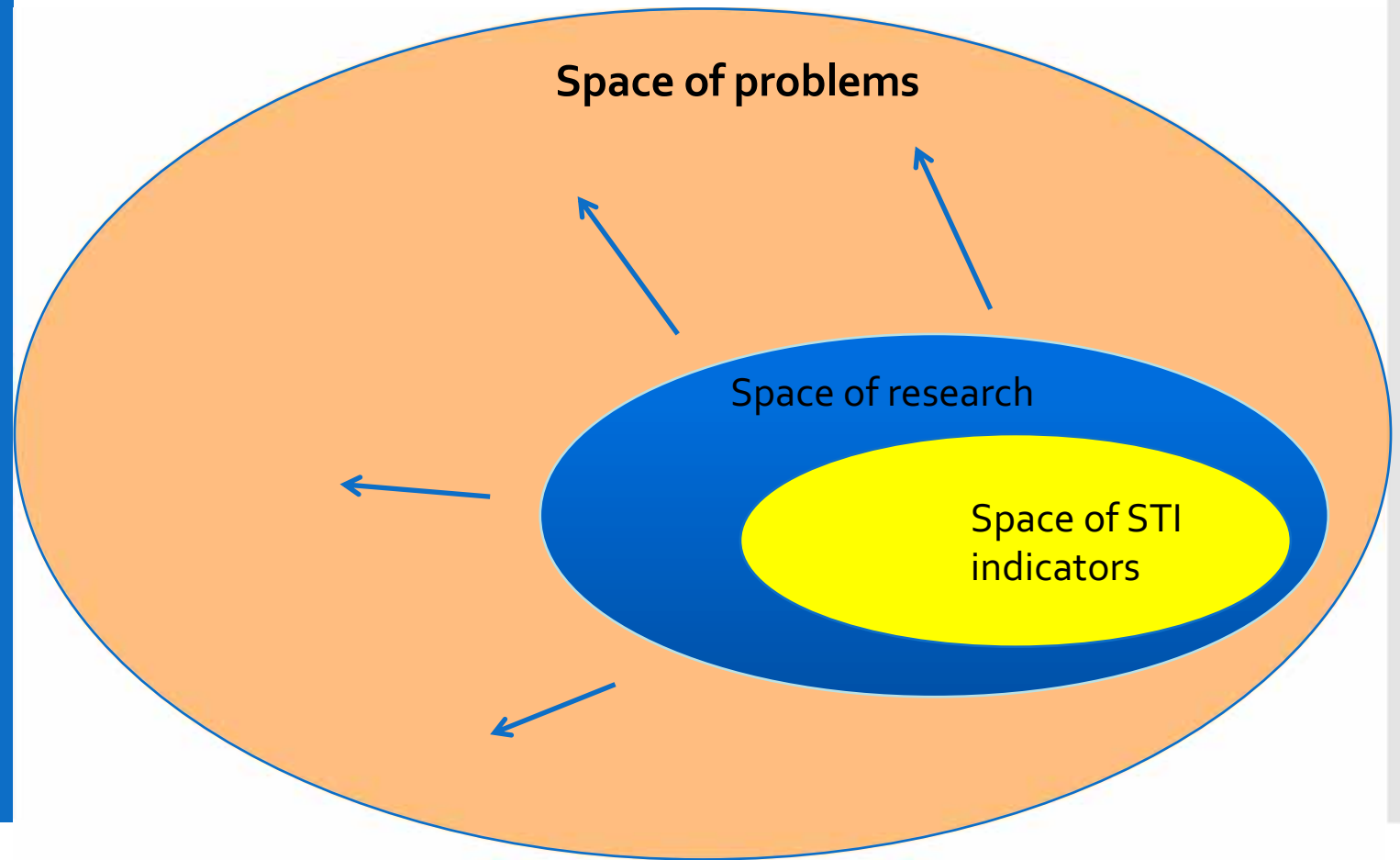
**...reduced
coverage
of societal
needs**





Problems, research, indicators and marginalisation



*This is the
move we
should
facilitate:*



- 
- 
- Effects most likely vary per discipline
 - Not effective: universal measures or fixes
 - Effective: generic principles for assessment
 - raise awareness

Wouters, in press

ACUMEN portfolio



nature

The Leiden Manifesto for research metrics

Use these ten principles to guide research evaluation, urge [Diana Hicks](#), [Paul Wouters](#) and colleagues.



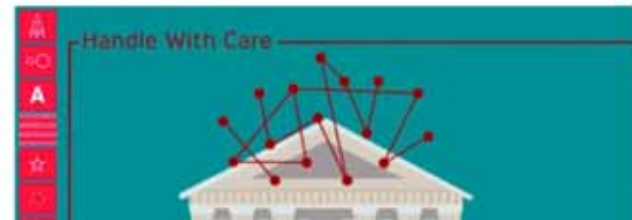
CWTS Leiden Ranking
Meaningful metrics

Leiden University CWTS CWTS B.V.

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Responsible use

University rankings should be used in a responsible manner. Below we present ten principles CWTS that are intended to guide the responsible use of university rankings. These principles apply to university rankings in general. They are not restricted to the Leiden Ranking. The principles were introduced and published in 2017. A summary of the principles was published in [Research Europe](#). The principles are summarized in the animation provided below.



Information

- > Data
- > Universities
- > Fields
- > Indicators

A Portfolio Template

Narrative

Links expertise, output, and influence together in an evidence-based argument; included content is tailored to the particular evaluation

Expertise

- scientific/scholarly
- technological
- communication
- organizational
- knowledge transfer
- educational

Output

- publications
- public media
- teaching
- web/social media
- data sets
- software/tools
- infrastructure
- grant proposals

Influence

- on science
- on society
- on economy
- on teaching



Evaluation Guidelines

- aimed at both researchers and evaluators
- development of evidence based arguments (what counts as evidence?)
- expanded list of research output
- taxonomy of indicators: bibliometric, webometric, altmetric
- guidance on use of indicators
- contextual considerations, such as: stage of career, discipline, etc.

Step 1. Broaden out

Best practice: A portfolio approach

- A suite of indicators that include evaluations of structure and process
- Move toward more advanced and next generation indicators (open science, RRI, societal relevance) – work in progress

Step 2. Open up

Best practice: A portfolio approach

- Focus on content and quality – responsible, inclusive
- Bibliometrics can be reductive
- But: not everyone has vocabulary to...
 - ... apply less quantified dimensions → ‘bibliometric creep’
 - ... use metrics in interesting ways → as ‘tin openers’
- Formalise (partly) qualitative indicators and a narrative in a portfolio, and apply interesting metrics where possible
- ‘open up & broaden out’ what can be discussed in evaluations (including societal relevance!)