


A decorative graphic consisting of a grid of colored squares in shades of orange, brown, and blue, arranged in a pattern that frames the central text. The squares are of varying sizes and colors, creating a textured, abstract background.

Measuring Research Impact: Concepts, Methods, Limitations and Solutions

Munin Conference, 28-29 November 2018
Tromsø, Norway

Our mission

peningUP new
methods, indicators
and tools for
peer review,
dissemination
impact measurement



Citations are not impact.

Its like a finger pointing away to the moon.
Don't concentrate on the finger or you will
miss all that heavenly glory.



Impact of Basic Research



Impact Metrics

- Short term: downloads, views, presence in social media etc.
- Medium term: citations



Scientific Impact

- Improvements in knowledge of the physical, biological and social world



Publication, data, software, cell lines, equipment, methodologies, theories



Funding



Basic Research

Impact of Applied Research



Impact Metrics

- Impacts are hard to measure and only apparent decades after investment



Societal, Financial, Health, and Environmental Impact

Products, treatments, technology components

Funding



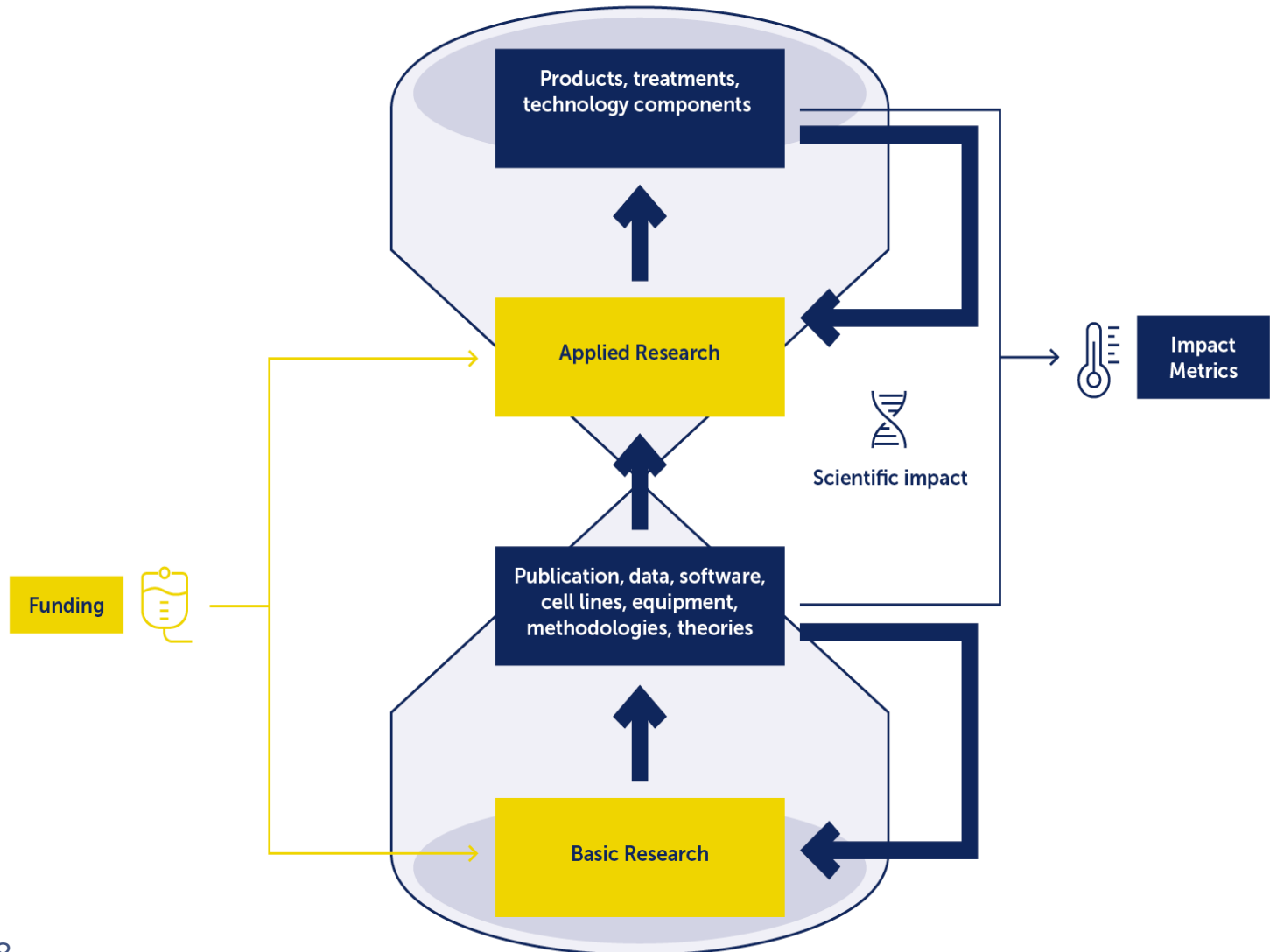
Applied Research



The big picture..



Societal, Financial,
Health, and Environmental Impact



Uses of research metrics

- **Researchers:** guiding their research, and careers
- **Institutions:** managing and developing strategies for research, to compete for prestige, and to manage students, staff and resources
- **Policymakers:** evaluating public spending on higher education and research, allocating resources to institutions and projects

Metrics providers today

- Short term: views, downloads, media attention



- Medium term: bibliometric data



- Medium to long term: patents, grants, policies



- Limited view of the reality of scientific impact.
 - Distorted incentives
 - Easily gamed
 - Incentive for publication bias
 - Counts only publications (no data, software, etc.)
- Small number of metrics providers, no role for scientific communities
- Lack of easy reproducibility

Impact Data Services Platform

- **Open Metrics** – free access to data and tools allowing anyone to create their own impact metrics
 - **Data collection** – data required to calculate impact metrics including meta-data
 - **Increased coverage** - includes data not used in current metrics
 - **Standards based, and methods to link data** – uses existing citation standards, and creates new standards where required

Next steps..

- Continue conceptual framework, design, collaborations and discussion.
- Implement through H2020 Framework Programmes
 - Enhancing the EOSC portal and connecting thematic clouds and related programmes (?)

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