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*CEO ScienceWorks*

**ECOOM DAYS**  
**2019**

# Measuring societal impact within different scientific disciplines

Brussels, Friday November 29<sup>th</sup>, 2019

# Today's presentation

1. **An introduction on ScienceWorks**
2. A short history on “valorisatie” and impact
3. Measuring impact; developments and challenges
4. Developing an institutional impact strategy

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Engineering and  
Rector of Honour, KU  
Leuven, Belgium



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Erasmus University,  
The Netherlands



**Frans van Vught**  
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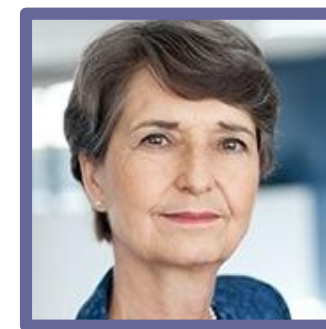
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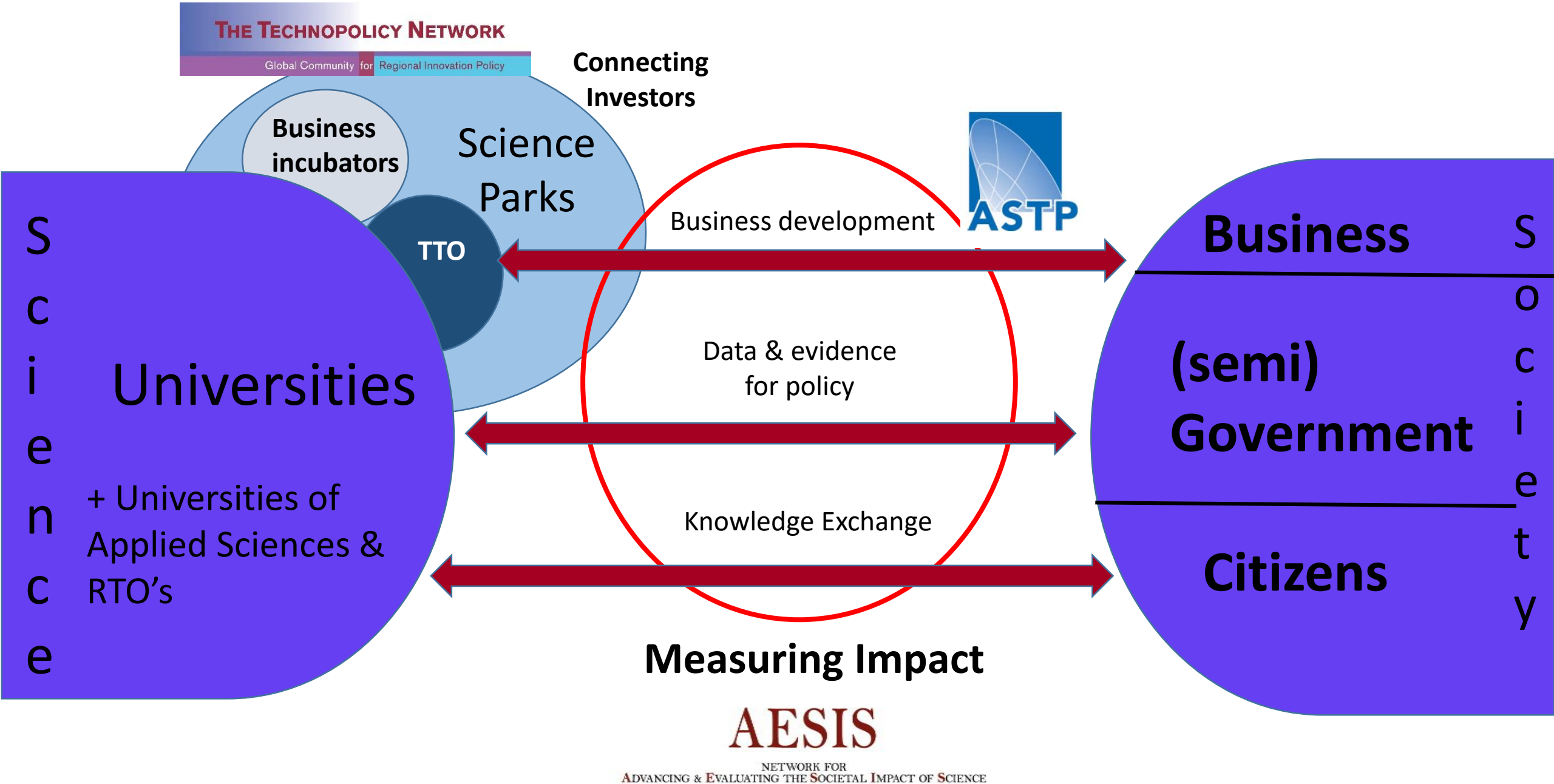


**Peter Nijkamp**  
Former president of NWO.  
Vrij Universiteit Amsterdam,  
The Netherlands

# ScienceWorks is an intermediary that...

- ...advises on connections between science & society
- ...organizes courses and conferences on the practical use of science
- ...assesses the “societal impact of Dutch universities” (Impact Ranking)
- ...established networks in these interfaces

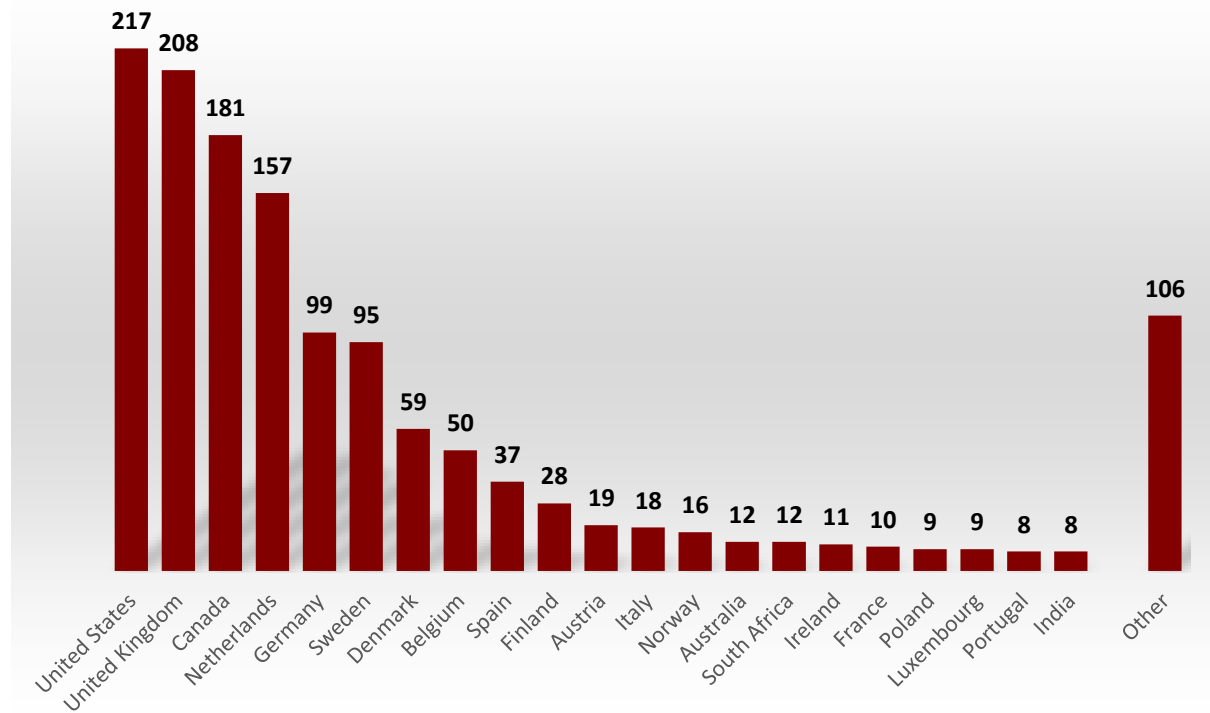
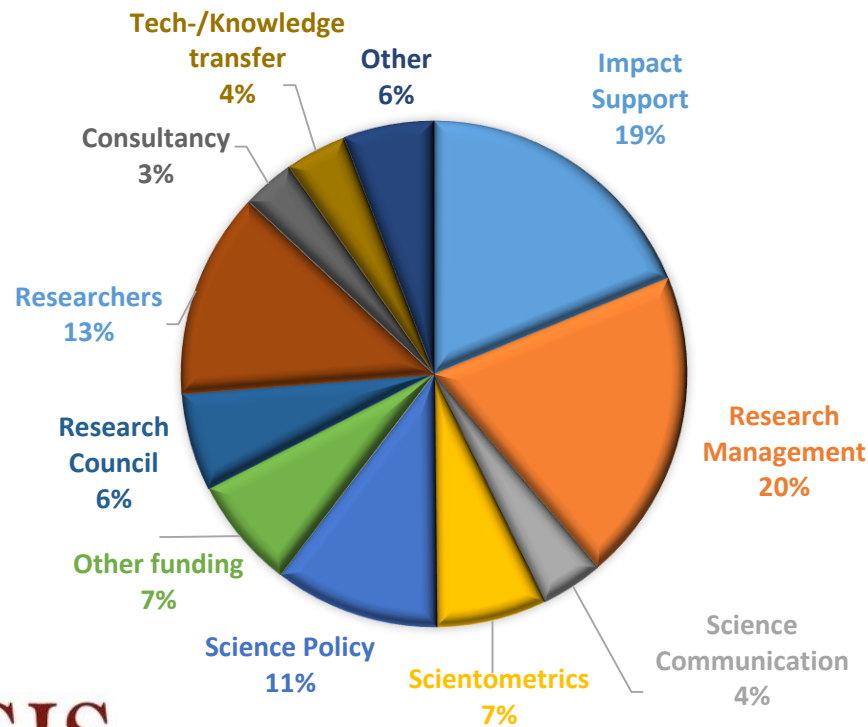
# Positioning of our mission and networks



# The AESIS Network

1350+ members from 65 countries

FIELD OF WORK



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# Why are universities here to stay?

- World’s oldest institutes and best survivors
  - “A university is, first and foremost, a social undertaking to create a social good”  
*President Amy Gutmann, University of Pennsylvania*
- Or:
- An institute that produces and disseminates new knowledge for its students, its researchers and its environment
  - What is the essence of a university?



# A short history of Impact

	80's	90's	00's	10's
Goals	Birth of the start-up culture	University Entrepreneurship	3rd mission	Impact
Instruments	TTO's	Holdings Incubators	Valorisatie Strategies	National Policies & KEO's
Visibility	Start-ups	Scienceparks	Soc. Challenges Reg. ecosystems	Unicorns & SDG's
Involvement	Technology & Industry	Innovation clusters	University management	Including all stakeholders

## Why and how did “Valorisatie” evolve

- A Francophile Minister brought “valorisatie” from the *Pôle de Compétitivité* to the Netherlands
- The economic output needed a *less commercial* carrier towards universities’ third mission (but did it need to be the [full opposite](#)? Watch your English)
- A broad and flexible term for better inclusion of the social sciences and even the humanities
- But the Anglosaxons preferred “knowledge transfer” (later: Knowledge Exchange)

# Why and how did “Impact” evolve?

- Politicians wanted broader societal effects than only business output; birth of REF
- Definition of impact: **The effect of science on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia** (Research England, REF)
- The Research Excellence Framework had great impact on introducing Impact in science policy worldwide
- Challenging new players beside the usual suspects
- Impact is so all-inclusive that it takes away resistance

# But can you measure Impact?

- In the long term, effects of science can be measured.....
- ....but it's mostly impossible to connect this to specific research programs (Hill, Grant)
- Knowledge exchange or valorisatie can be measured as “the road towards reaching Impact”
- Let's see how we can measure this within different disciplines

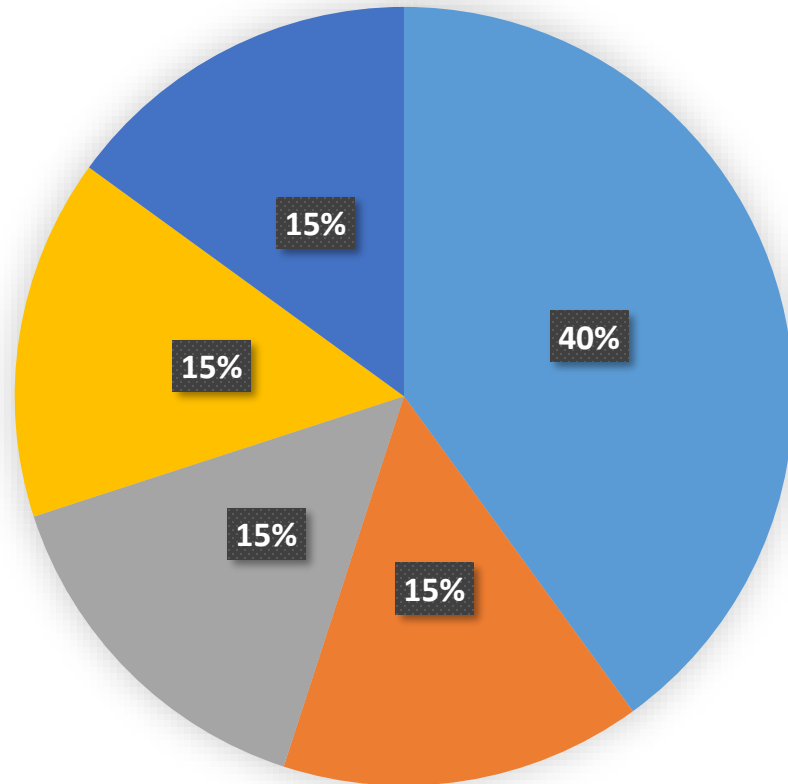
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# Measuring impact; developments and challenges

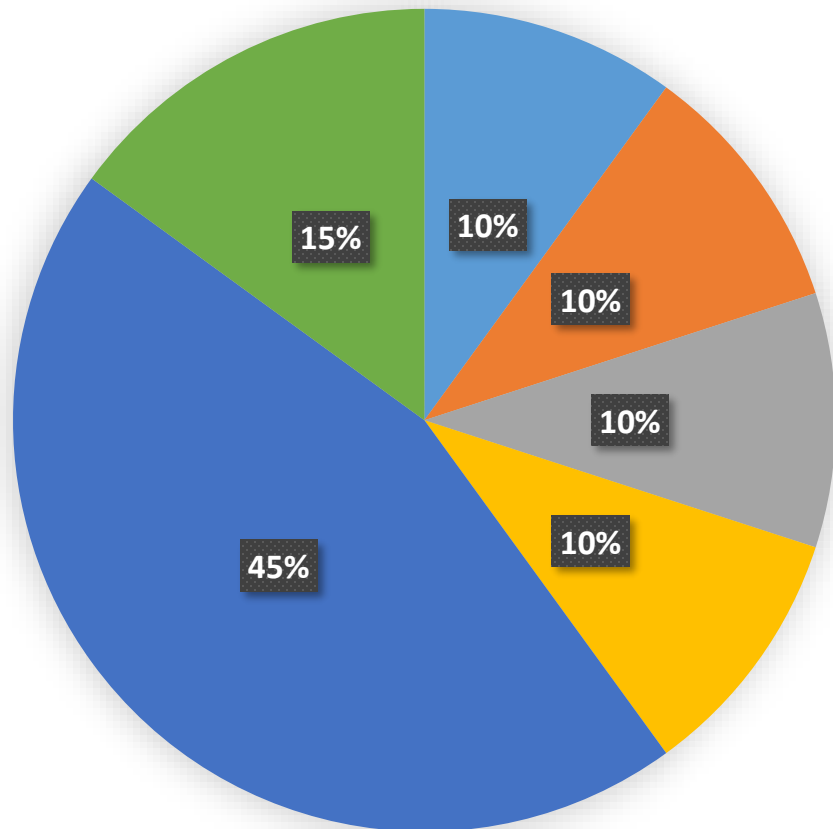
- In 2011, ScienceWorks made a first attempt to map the societal impact of Dutch universities through its bi-annual Impactranking
- 3 categories:
  - The entrepreneurial university
  - The cooperating university
  - The communicating university

# Composition 'the entrepreneurial university'



- number of spin-offs
- pre-seed capital
- seed capital
- number of patent applications
- FTE employment in Science Parks

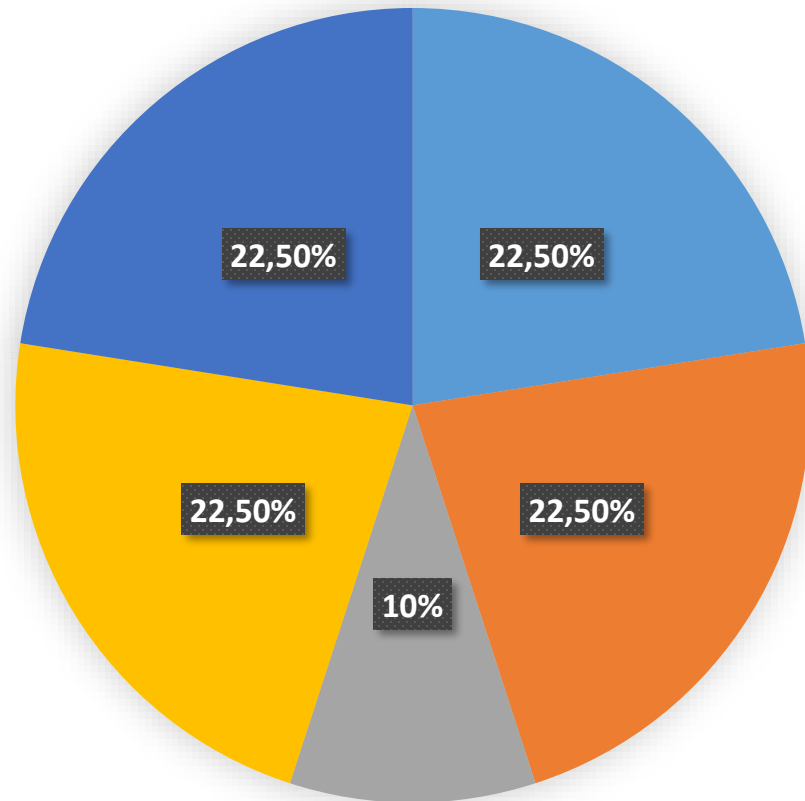
## Composition 'the cooperating university'



- co-publications with business
- TTW researches
- participation in TKI's (Topsectors)
- participation in NWA-consortia
- third party income
- license income



# Composition 'the communicating university'

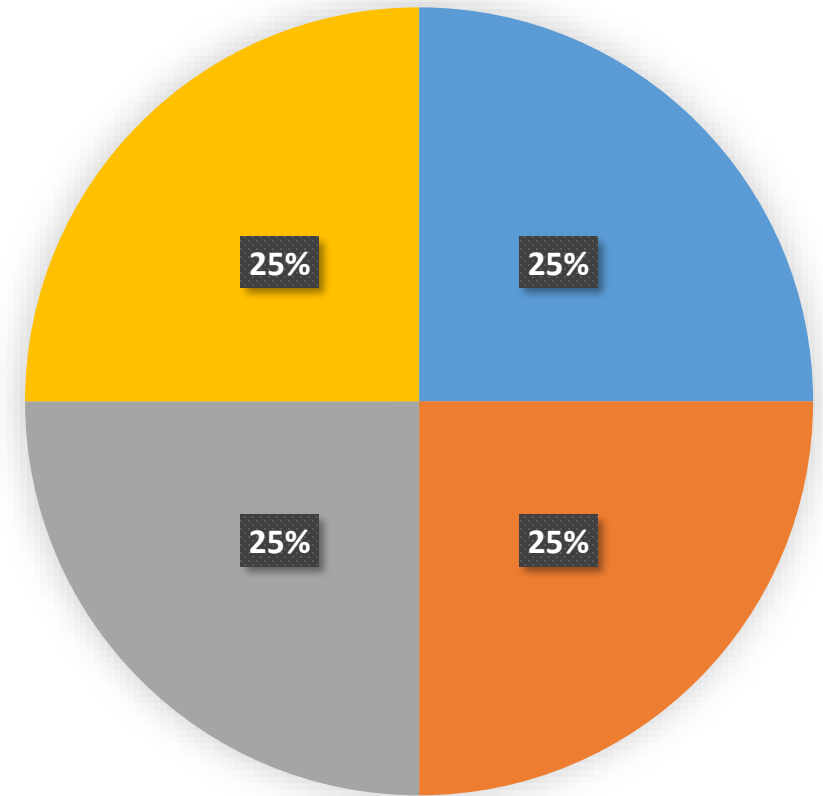


- mentions in national newspapers
- mentions on radio and TV
- mentions of 'impact' in the annual report
- mentions in international newspapers
- online reach

# Impactranking 2017

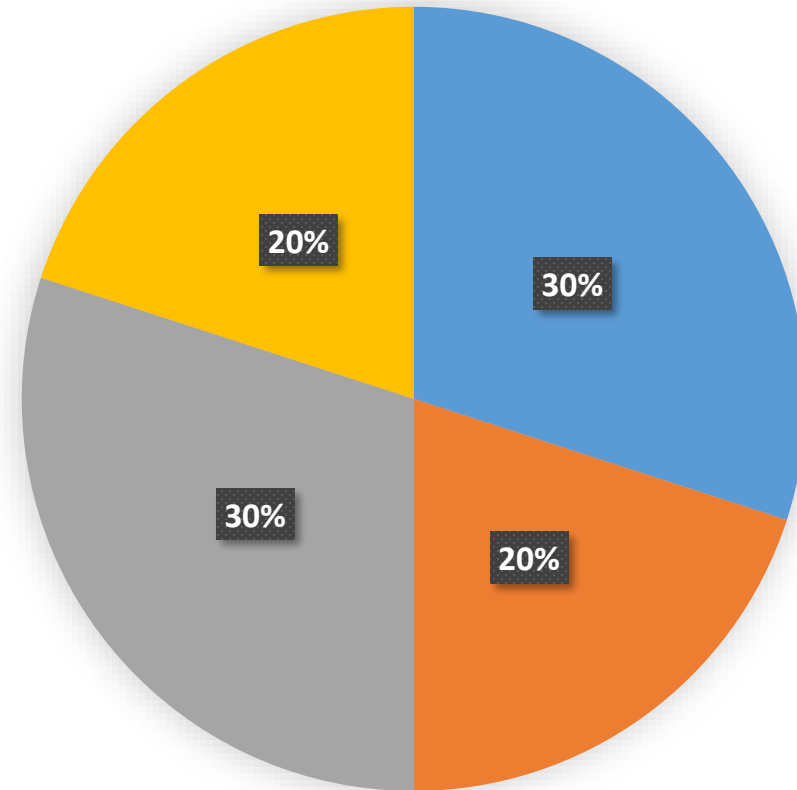
➤ New category 2015: the societal university → policy impact

- mentions in parliamentary papers
- mentions in policy documents
- mentions in European Parliament
- membership advisory boards national government



# Composition ranking

- the entrepreneurial university
- the communicating university
- the cooperating university
- the societal university



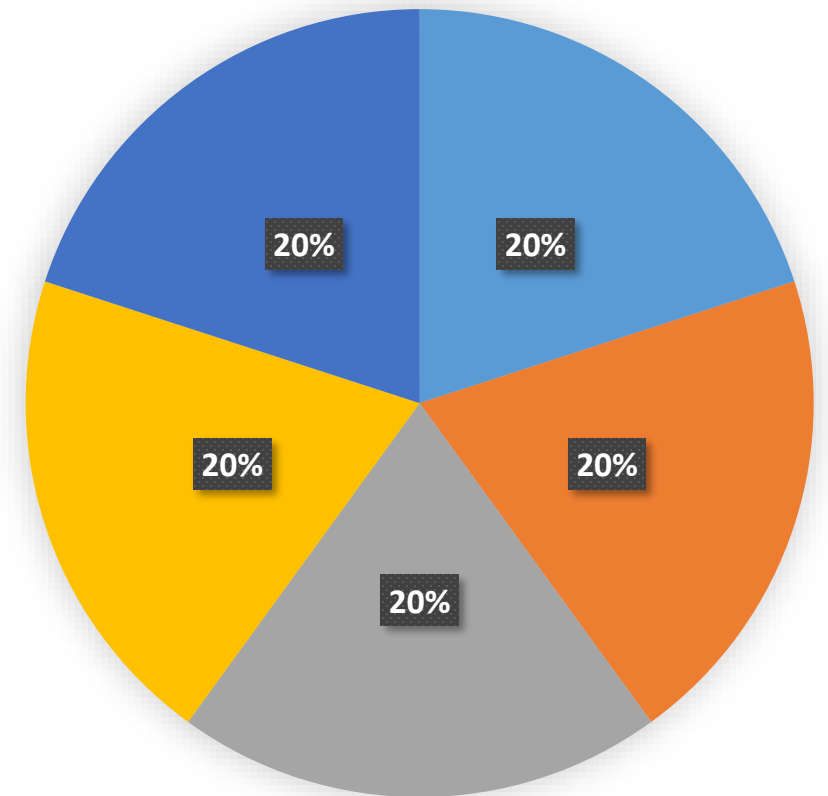
# Impactranking 2019



➤ New indicator 2019: contribution to the Sustainable Development Goals (SDGs)

## Composition 'Societal' 2019

- mentions in parliamentary papers
- mentions in municipal papers
- mentions in European Parliament
- membership advisory boards national government
- contribution to SDGs



# Impact performance Dutch universities

## Technical universities vs general universities (2017)

4TU.

TU Delft

WAGENINGEN  
UNIVERSITY & RESEARCH

TU/e

UNIVERSITEIT  
TWENTE.



Utrecht University

VU UNIVERSITY  
AMSTERDAM

TILBURG UNIVERSITY



UNIVERSITY OF AMSTERDAM

Radboud University  
Nijmegen, the Netherlands



Maastricht  
University



university of  
 groningen

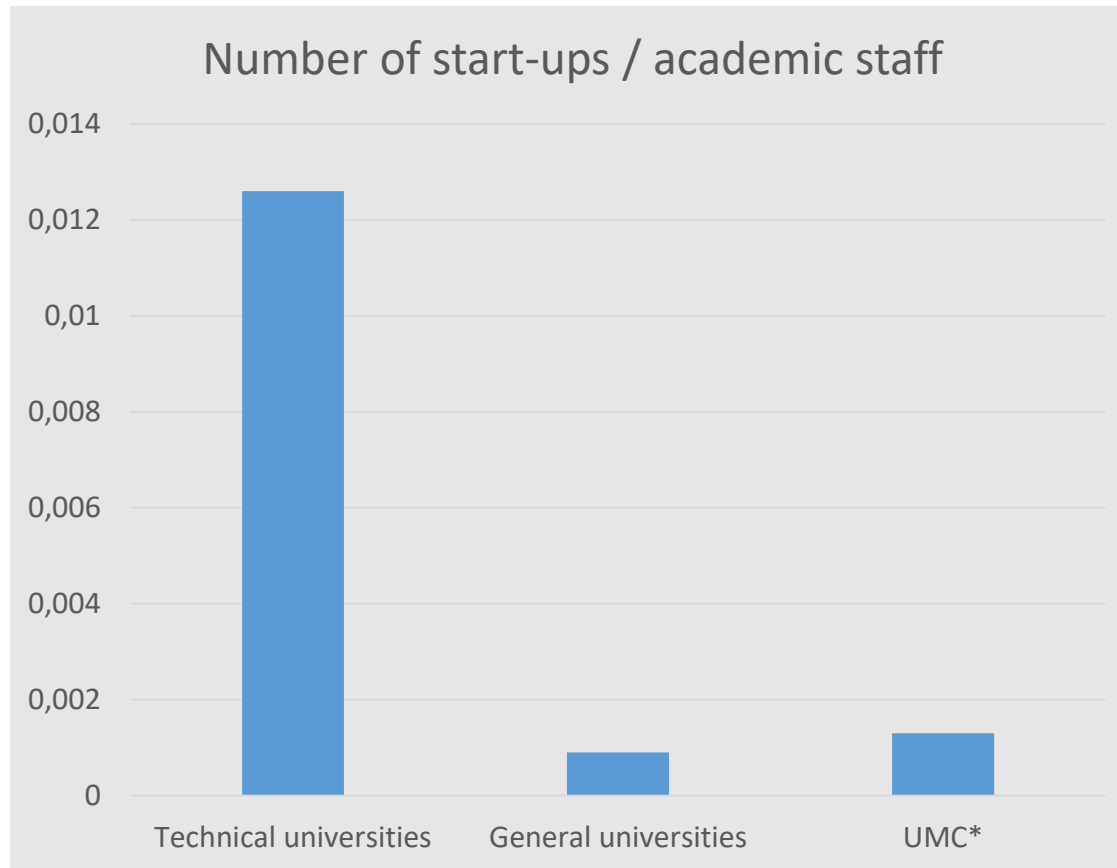
Erasmus  
University  
Rotterdam

Erasmus



Universiteit Leiden

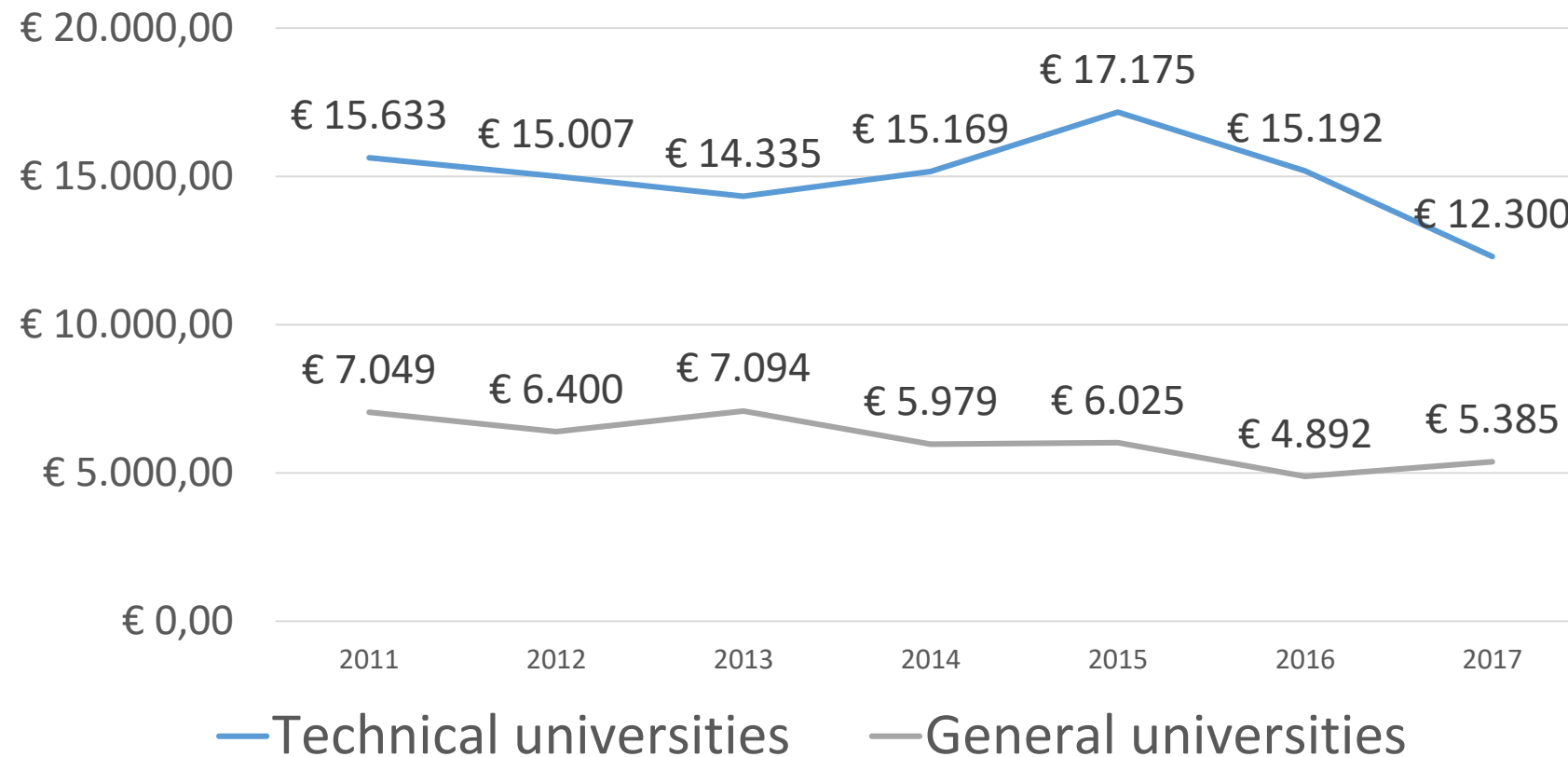
# The entrepreneurial university



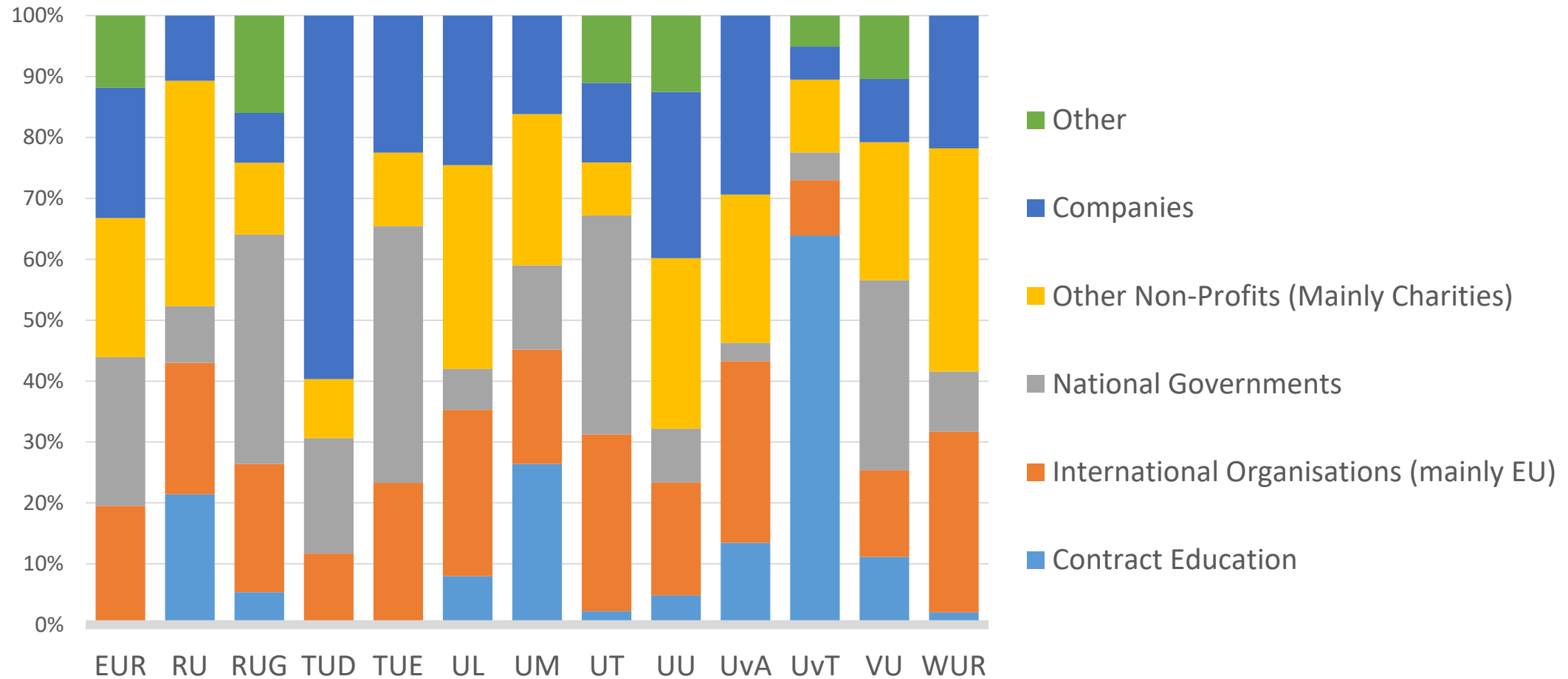
\*University Medical Centre

# Business investments

## Business investments / academic staff

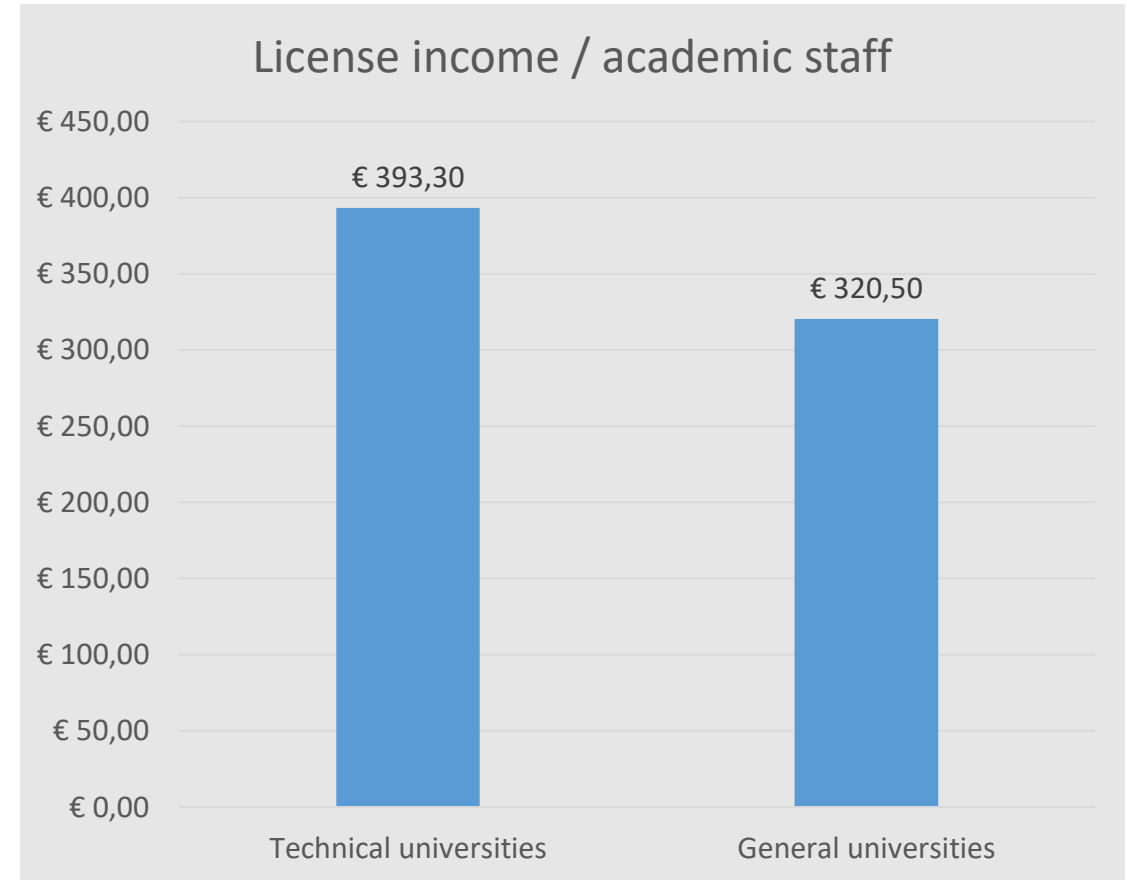
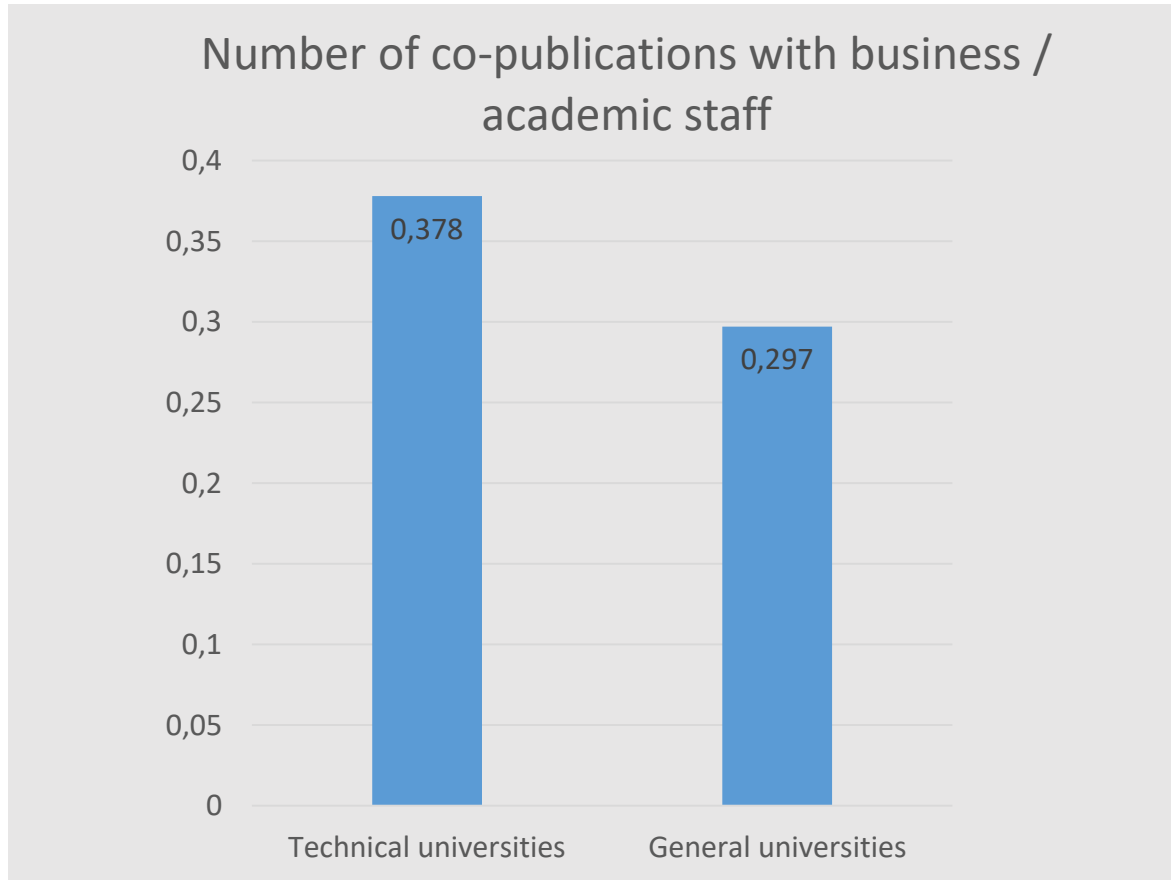


# Composition of contract income per university

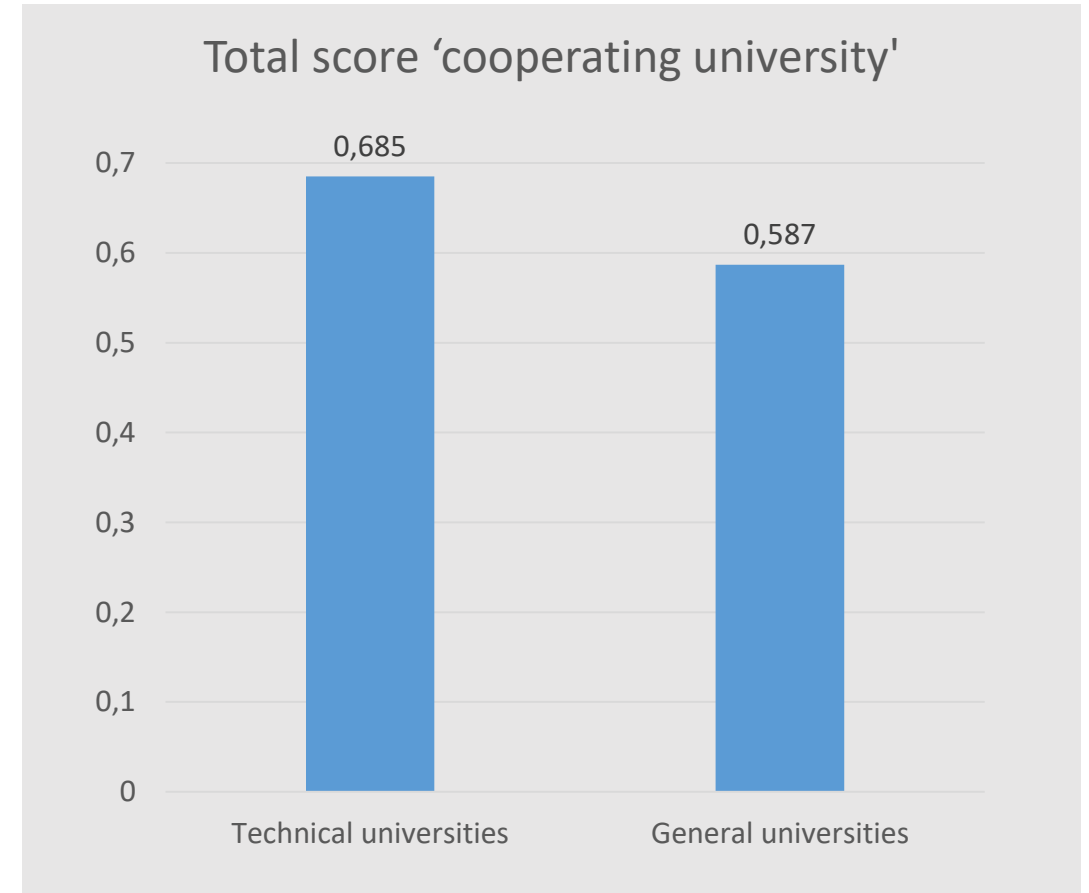
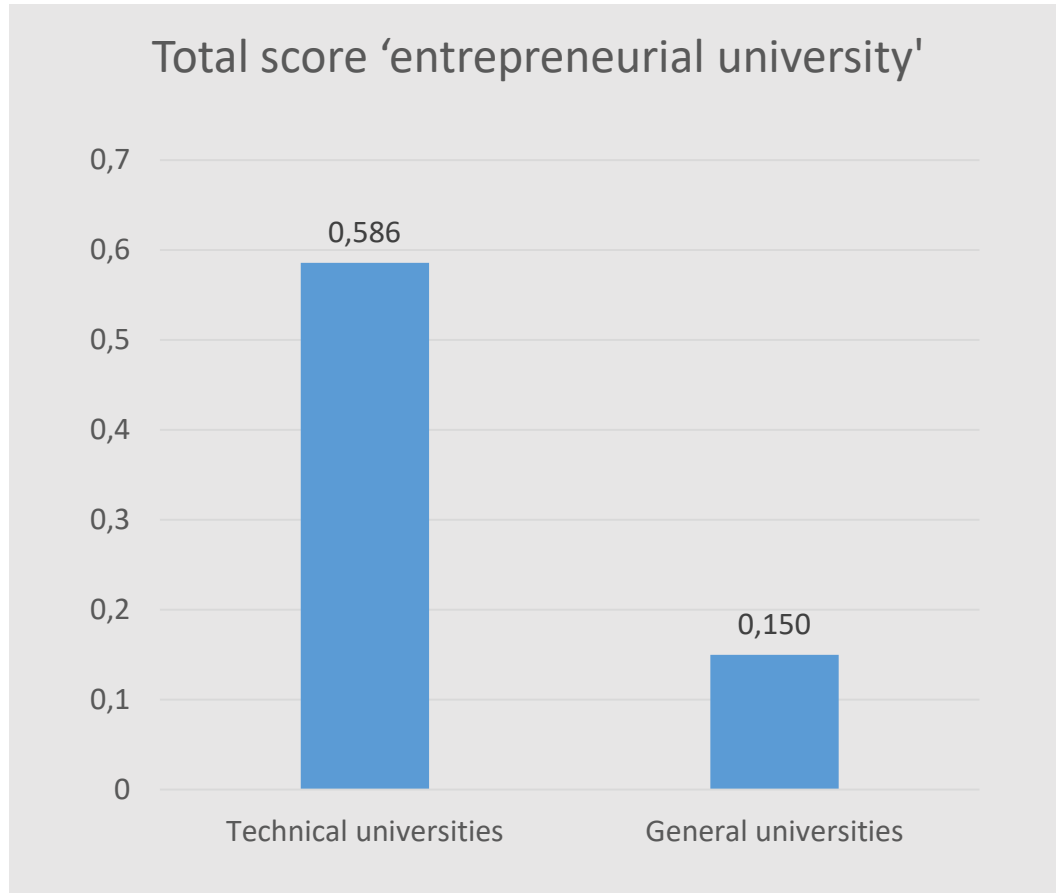




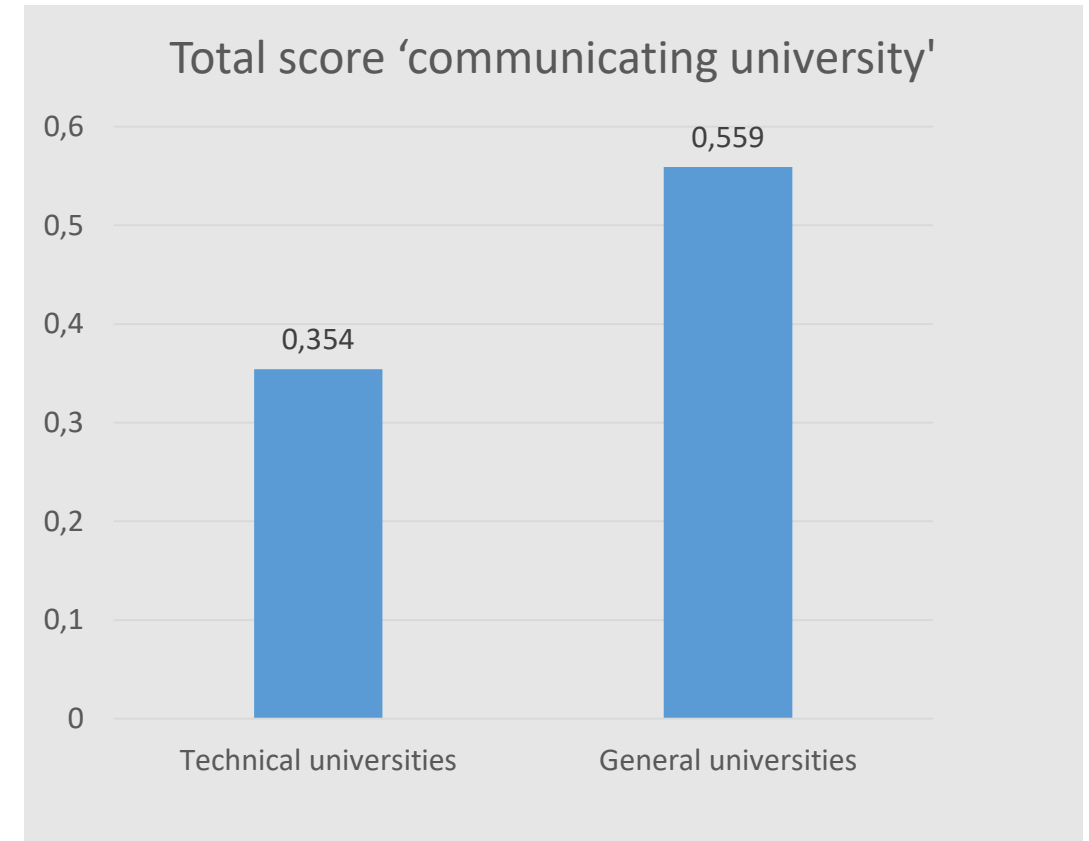
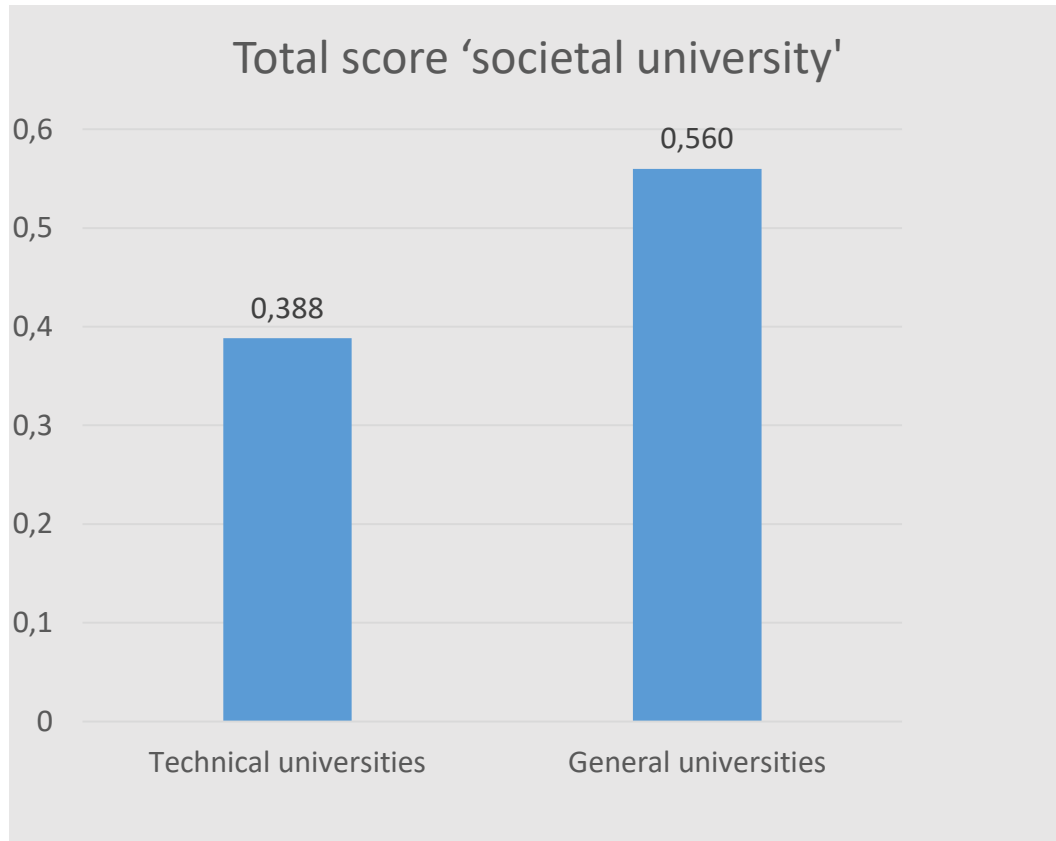
# The cooperating university



# Total scores entrepreneurial and cooperating university



# Total scores societal & communicating university



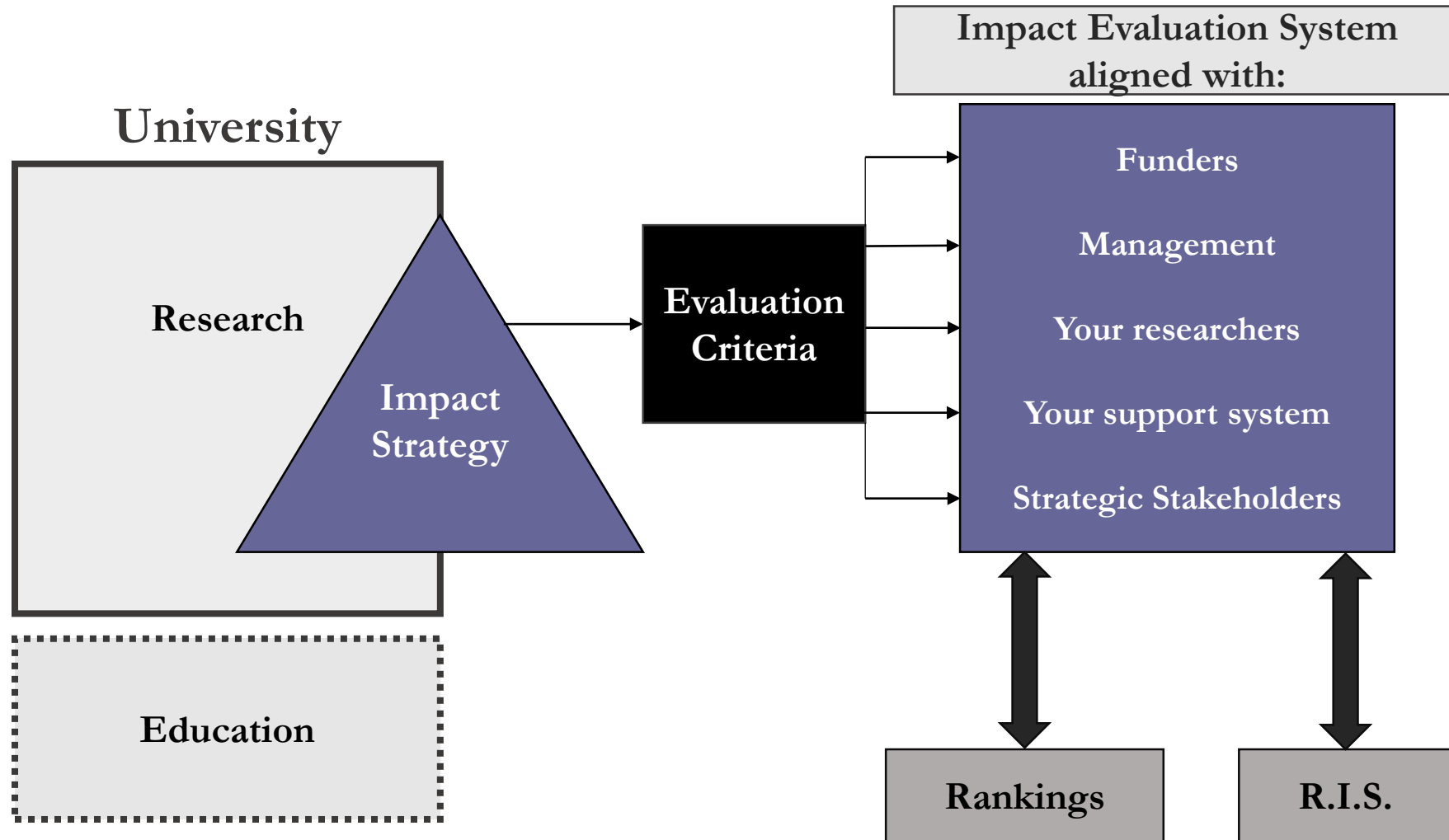
# Define your treasure before you measure...

- Government: Define a framework in which the economic, societal, environmental and cultural impact of universities can be demonstrated and awarded in different Impact portfolio's
- Strategic Stakeholders; try to get involved when your university wants to define their parameters for their contributions to society
- University: define your strengths and your characteristic societal profile before you start to develop your measurement tools.....
- ....as choices for your research agenda will also define your Impact profile en vice versa.

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## Developing an Impact Evaluation System



# Points of attention

- Societal Impact vs. Scientific quality?
- Align with the funders:
  - Ministry of Science vs. Ministry of economic affairs
  - Regional needs vs. (inter)national needs
  - Align with the national research councils priorities
- Management vision vs. Individual academic ambition; coping with resistance
- Outcome for the institute's strategy vs. rankings

# Creating a framework

How to create a framework for measuring impact that:

- Creates a balance between the needs of your national funders and regional stakeholders?
- Is aware of the impact of your framework on public funding and Rankings?
- Creates insight in the impact of your specific research priorities and area's?
- Can be integrated in your internal appraisal system?



# New Dutch approach: Appreciation with broader capabilities

- A new balance in appreciation adding Impact, academic leadership and patient care
- Every researcher creates his own profile based on its own strenghts
- Research institutes develop a portfolio of assessment criteria based on their profiles

Research councils will adapt their funding instruments to broader criteria

[VSNU, NFU, KNAW, NWO, NWO, ZonMW \(2019\). Position paper 'Ruimte voor ieders talent; naar een nieuwe balans in het erkennen en waarderen van wetenschappers.](#)

## Coping with resistance

- Be patient.. change leads to resistance!
- Vice president Jonathan Grant of King's College London during our 'Assessing Impact of Research' course in November: **“all resistance to impact has disappeared at our university”**

**Tip for governments, institutes and researchers:**  
*‘Je bent wat je plant’*

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