

Effects and Impacts of Innovation Norway and The Research Council of Norway

Rune Andersen
Counselor for Science and Technology
Innovation Norway
The Research Council of Norway



Who we are and what we do
Where we measure
What we find, selected



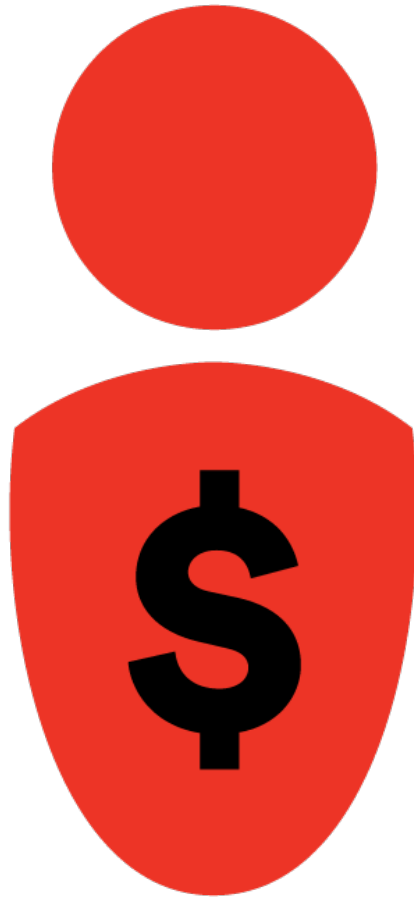
Purpose

Innovation Norway is the government's most important instrument for innovation and profitable business development throughout Norway

Main Goal

Innovation Norway's programs and services are intended to

- 1 create successful entrepreneurs,**
- 2 more enterprises with capacity for growth and**
- 3 more innovative business clusters**



6000

loans and grants every year

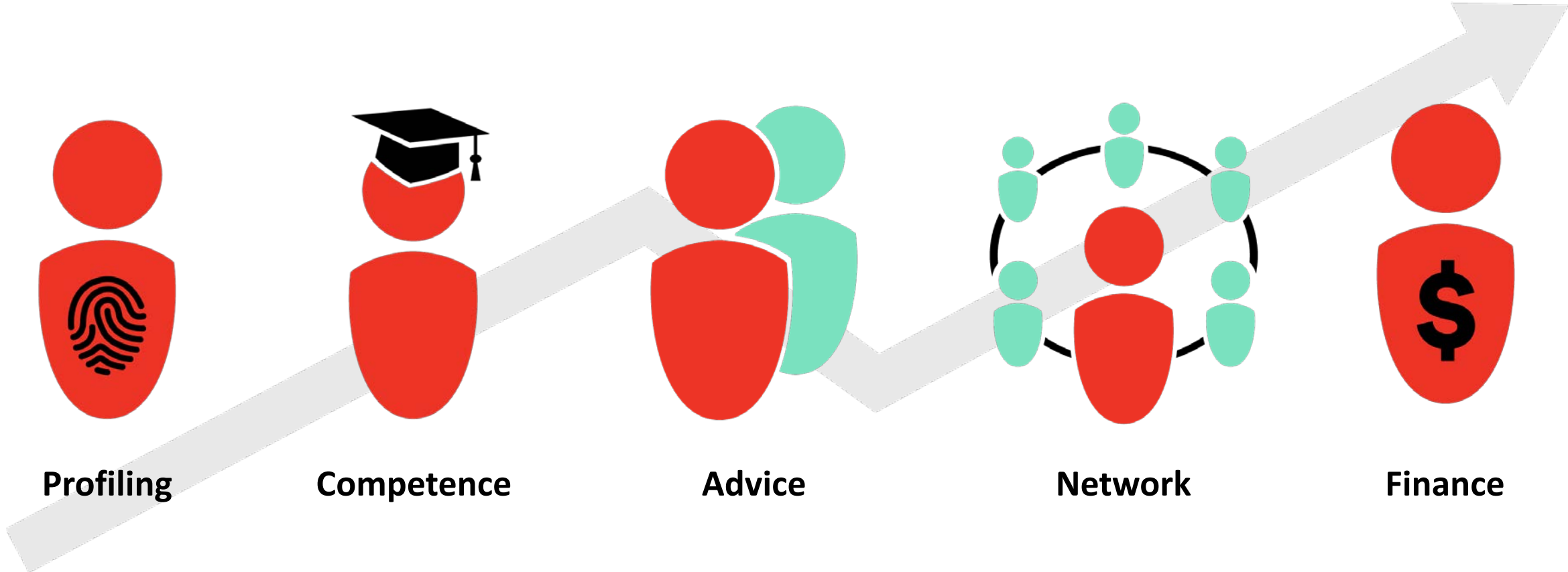
3,5 billion

NOK as loan

2,5 billion

NOK as grants

Innovation Norway deliver several services



The RCN contribution to quality, capacity and risk reduction

The Research Council



9,3 bill. NOK 2016

tax incentive, regional funds, international incl Horizon
2020

Higher
education
sector



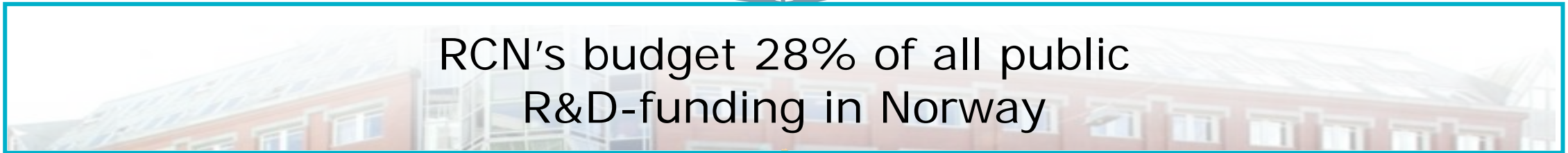
Research
performing
organizations



Industry



The strategic role of The Research Council



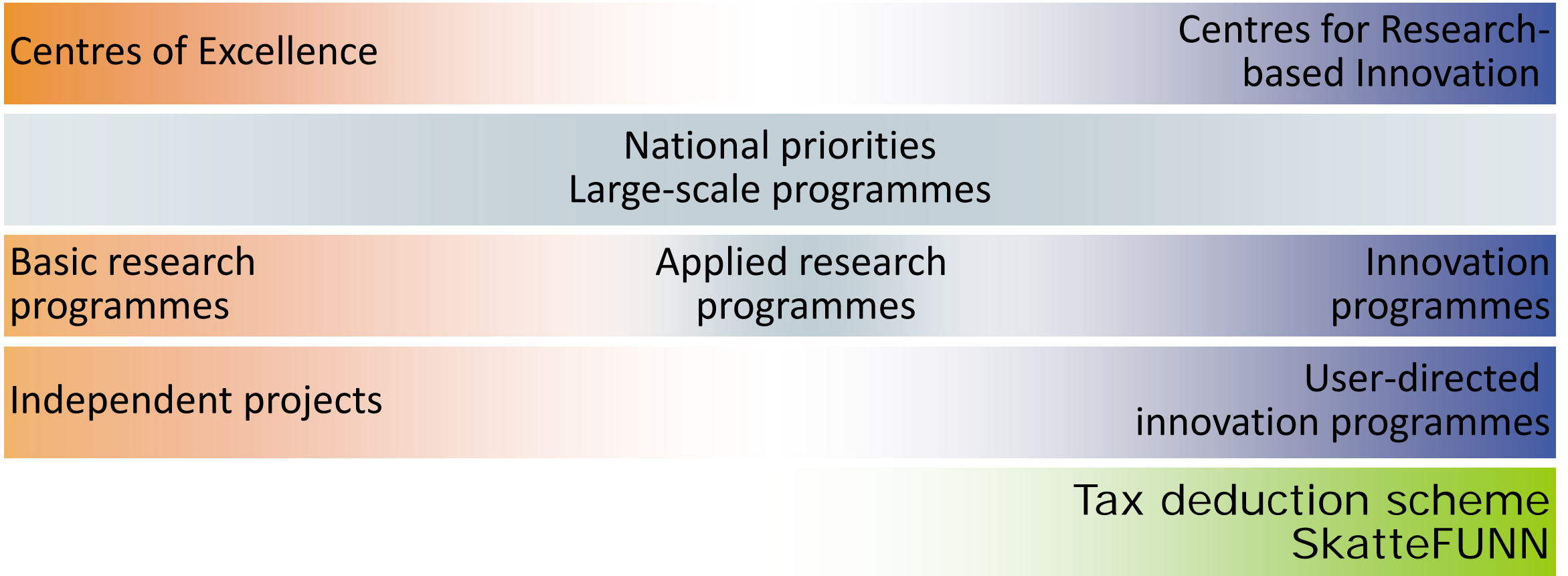
1.3 bill. NOK
for **Industry**

3 bill. NOK
for **Research
Institutes**

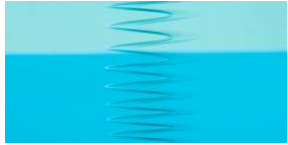
2.6 bill. NOK
for **Universities**



RCN funding schemes



Research and innovation programmes for industry



BIA

User-driven research based innovation



MAROFF

Maritime activities and offshore operations



IKTPLUS

ICT research and innovation



ENERGIX

renewable energy, efficient use of energy, energy systems and energy policy



PETROMAKS 2

development and optimal management of Norwegian petroleum resources within an environmentally sustainable framework



Eurostars (alle EU)

International innovative projects led by R&D-performing SMEs



TRANSPORT2025

Research and innovation within the transport domain.



BIONÆR

Sustainable Innovation in Food and Bio-based Industries



HAVBRUK

Sustainable growth in Norwegian aquaculture



NANO2021

Nanotechnology and Advanced Materials

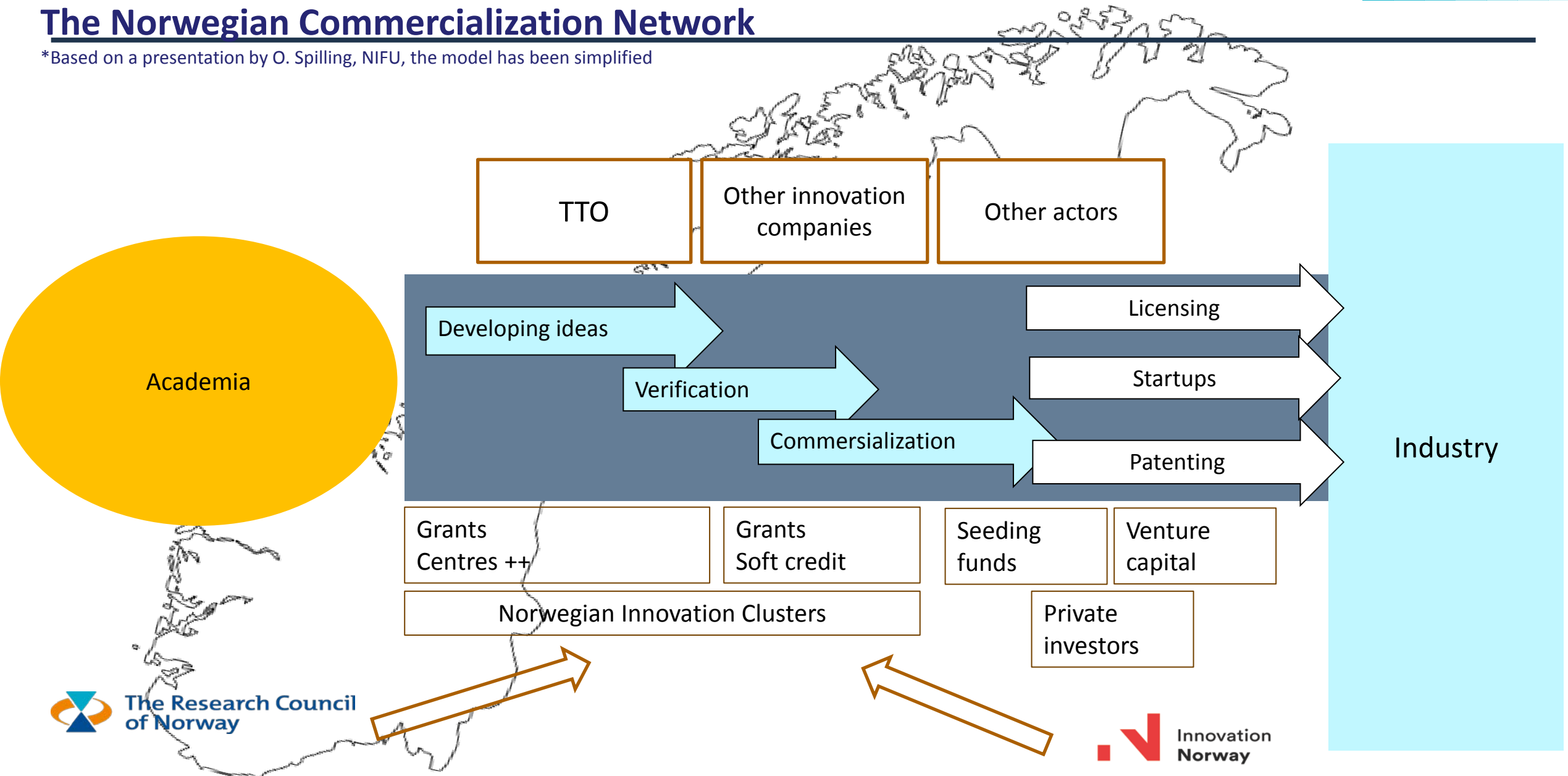


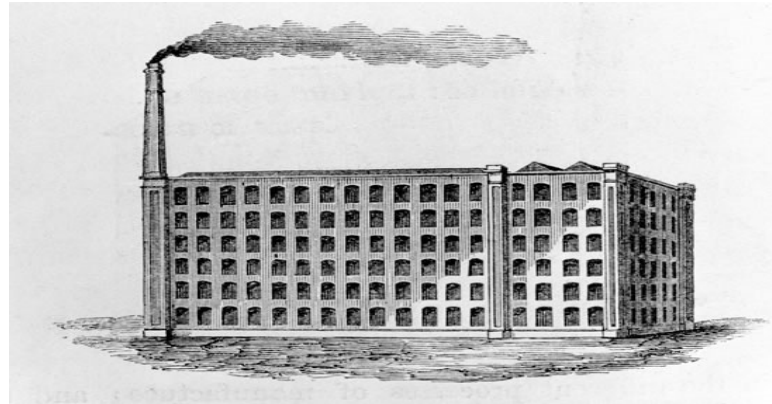
Biotek2021

Biotechnology for innovation

The Norwegian Commercialization Network

*Based on a presentation by O. Spilling, NIFU, the model has been simplified





R&D-investments

Research

economic growth



Where we measure



The measurements are connected to our objectives.

Target Area 1. **Greater scientific merit**

Target Area 2. **Greater value creation within trade and industry**

- Strategic area: Increased competitiveness in new and existing trade/industry
- Strategic area: Increased ability for change in Norwegian economy
- Strategic area: Improved interaction and transfer of knowledge between R&D environments and trade/industry

Target Area 3. **Address major societal challenges**

- Strategic area: Modernizing public sector, and improved and more efficient welfare, health and social services

Target Area 4. **A well-functioning research system**

Target Area 5. **Sound advice**

Mission of Innovation Norway: contribute to change and restructuring of Norwegian industry

- More successful entrepreneurs
- More companies with growth potential
- More innovative business environments (clusters)

These are connected to our Key Performans Indicators and where we the effects are measured

Point of departure - Whitepaper on Innovation Norway in 2012

- In 2013 a new management governance system for Innovation Norway was put in place.
- IN contracted Statistics Norway in 2014 to come up a methodology and to analyze effects of support from Innovation Norway on firms (beneficiaries)
 - Start-ups/newly started firms (younger than five years)
 - Established firms
 - Firms that are a part (member) of a cluster project



What has Statistics Norway done

1. They receive a list with all firms that have received support from Innovation Norway («VAT-id.code»)
2. They do a quality check
3. They then try to find a «look-a-like-firm» that has not received support from Innovation Norway
4. They then compare (using Diff-in-Diff) the development of the firms having received support with the one that has not and if the difference in development is statistically significant

If a firm has received support from more than one scheme/program in a three year period, the effect is attributed to the program that has given the most support to the firm.



How do we Measure our Effects?

- Cooperation with Statistics Norway
- 7000 Enterprises
- Control group
- Period of three years

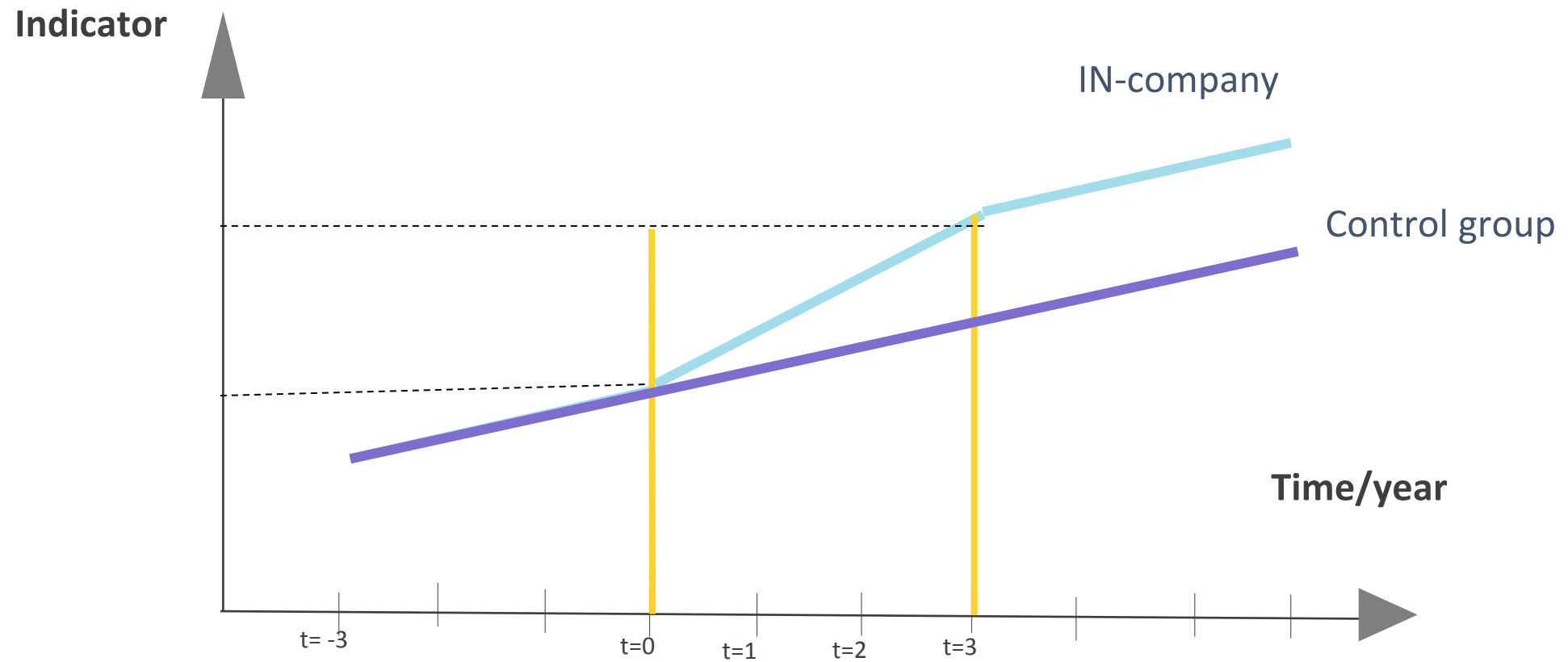


Indicators

- Sales/turnover
- Value added
- Number of employees
- Value added per employee
- Return on total assets



An illustration



Analyses of effects

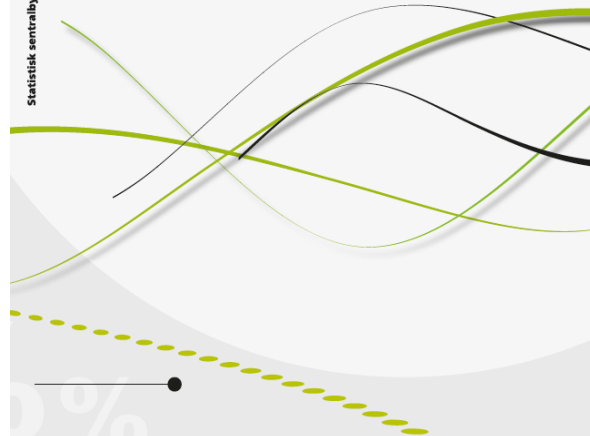
$$\Delta Y_{\text{year}} = \Delta m_{\text{year}} + \frac{\sum_{i=1}^m (\tau_i^{(N_{it})} + \delta_i^{(N_{it})})}{m} \times I(\tau = I_i^{(N_{it})} + j) + \theta_g(I) \eta_{\text{year}}$$

Statistisk sentralbyrå
Statistik Sentralbyrå

Rapporter
Reports
2015/35

Ådne Cappelen, Erik Fjærli, Diana Iancu and Arvid Raknerud

Effect on firm performance of support from Innovation Norway



Statistisk sentralbyrå
Statistik Sentralbyrå

Rapporter
Reports
2016/12

Ådne Cappelen, Erik Fjærli, Diana-Cristina Iancu, Marit Klemetsen, Andreas Moxnes, Øivind Anti Nilsen, Arvid Raknerud og Marina Rybalka

Innovasjons- og verdiskapingseffekter av utvalgte næringspolitiske virkemidler

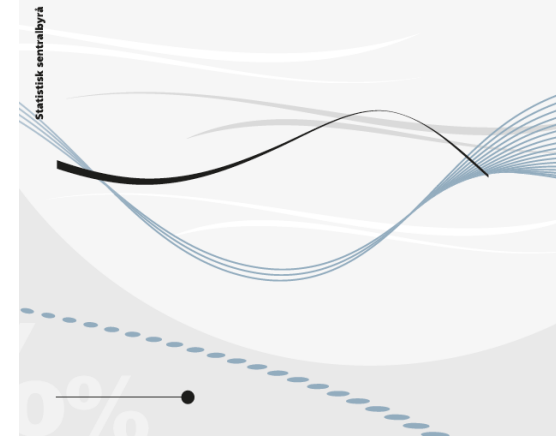


Statistisk sentralbyrå
Statistik Sentralbyrå

Discussion Papers
Statistics Norway
Research department
No. 830
December 2015

Marit E. Klemetsen

The effects of innovation policies on firm level patenting

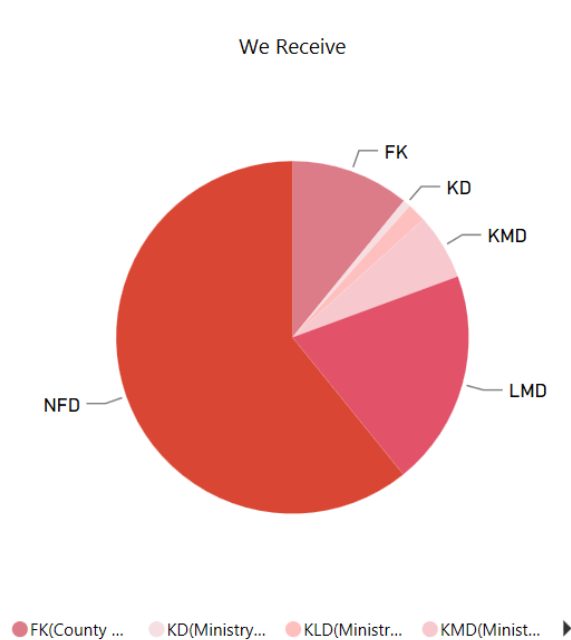


Effects on innovation and value creation of selected instruments in industrial policy



What we find, selected

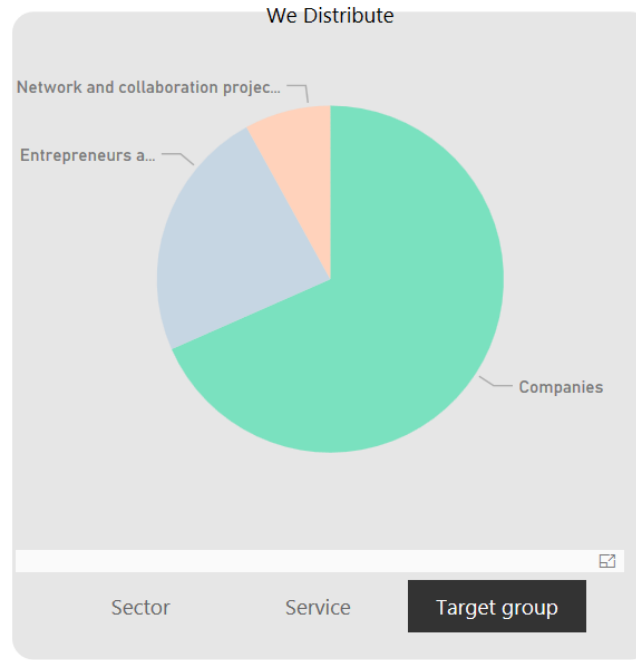
How we make public funding grow. Trigger effect.



3.7 billion.

From Parliament and County Council

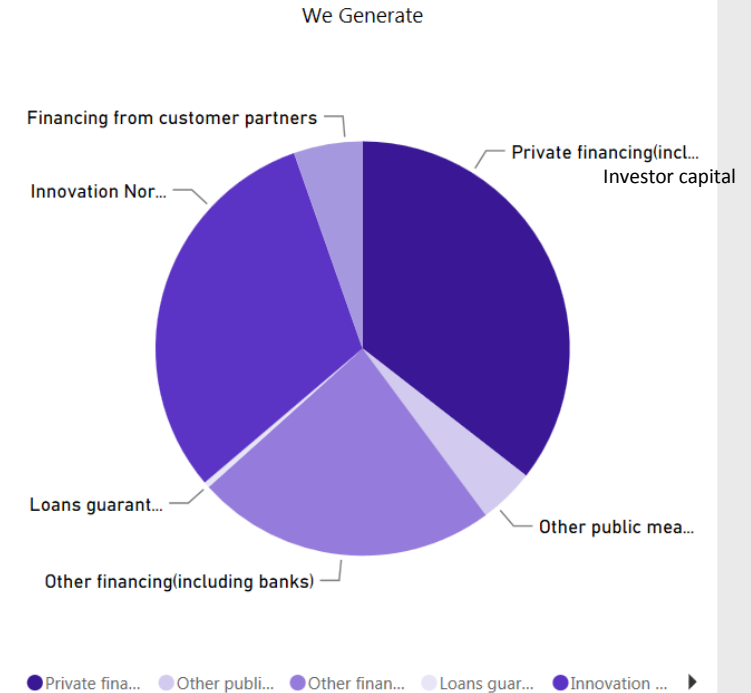
Through Innovation Norway, The Parliament and County Council granted 3,7 billion NOK in 2016 for the support of value-creating industry development all over the country (Corresponding number for 2015 was 3.4 billion NOK).



6.7 billion.

To business and industries

The grants from Parliament and the counties, together with loan schemes, provided a total business-oriented effort of NOK 6.7 billion through Innovation Norway. The charts show the breakdown by service, target group and sector.



20.1 billion.

Triggered

The support from Innovation Norway contributed to triggering this much effort from the business community. Including the money from Innovation Norway, 20.1 billion NOK was invested into innovation activities in 2016 (Corresponding number for 2015 was 16.3 billion).

Evaluations 2015, Statistics Norway



1 000 000

Supporting companies through
a tax refund scheme give



1,2 til 1,7

New
employments



1 800 000

Increased value creation per year



1 500 000

Support above 1,5 mill NOK
give higher effects



7 %

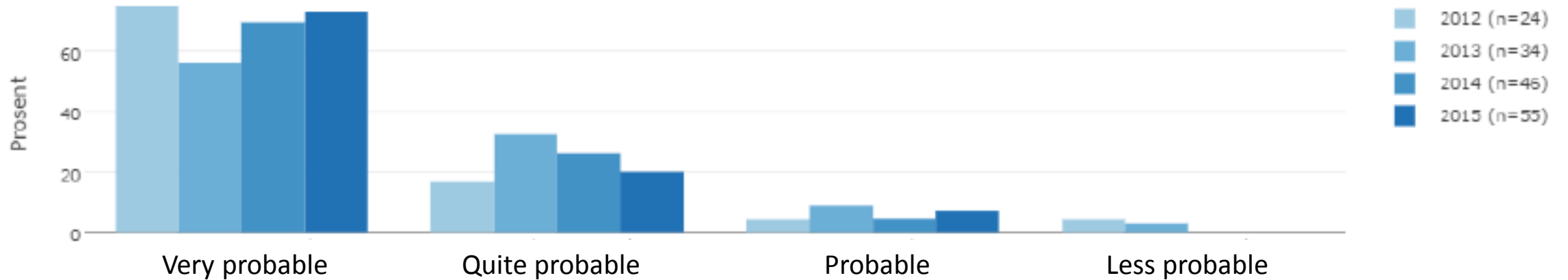
Net return of public financed
FoU investments

Funding program: User-driven Research based Innovation (BIA)

Strategic area:

Improved interaction and transfer of knowledge between R&D environments and trade/industry

Q: How probable is it that the R&D project will get results that can be implemented and be useful for the company?



Overall effects 2015 and 2016

KPIs:
Sales/turnover
Value added
Number of employees
Value added per employee
Return on total assets

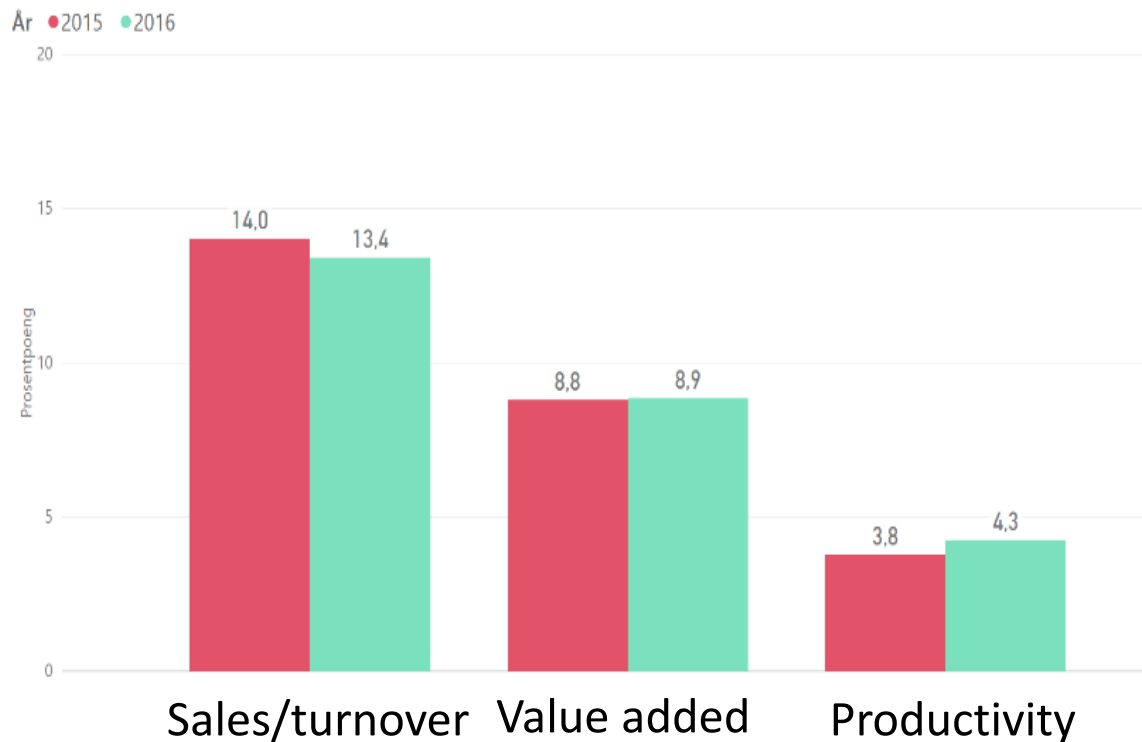


Ikke signifikante verdier settes lik 0

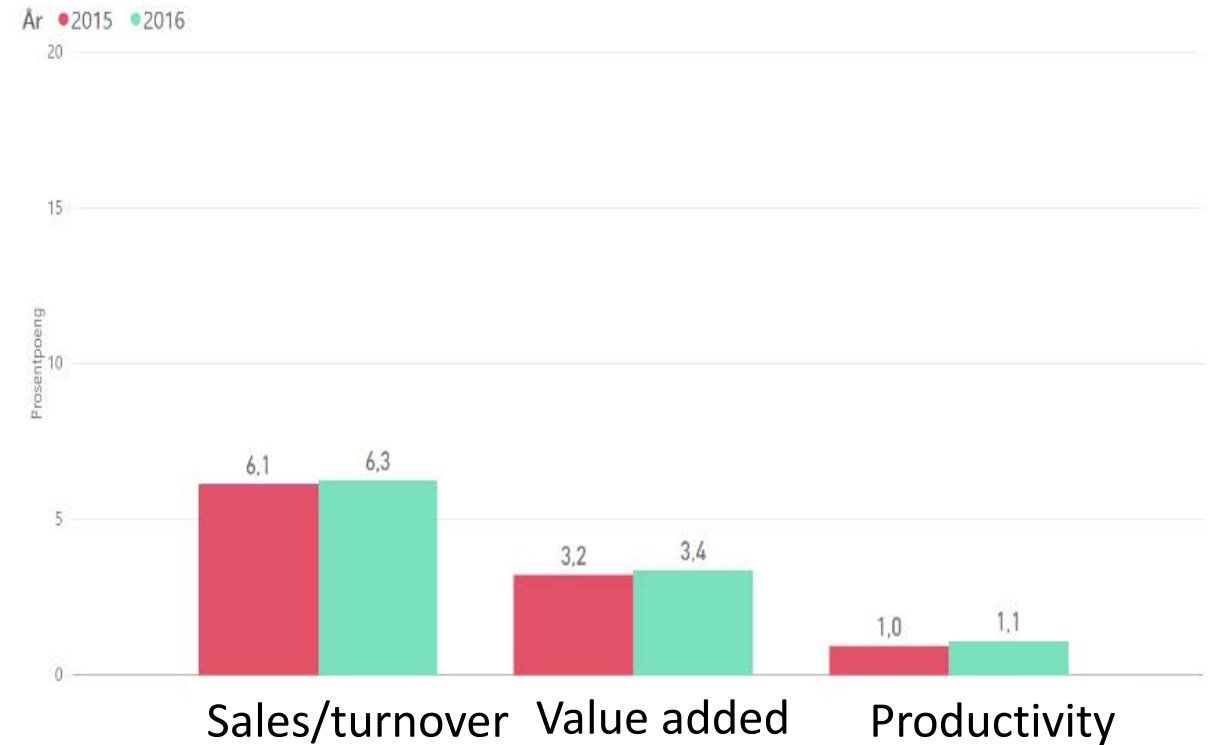
Kilde: [SSB Metoderapport](#) / Innovasjon Norge

Effects; sub-goal «More successful entrepreneurs» and «More enterprises with capacity for growth»

More successful entrepreneurs

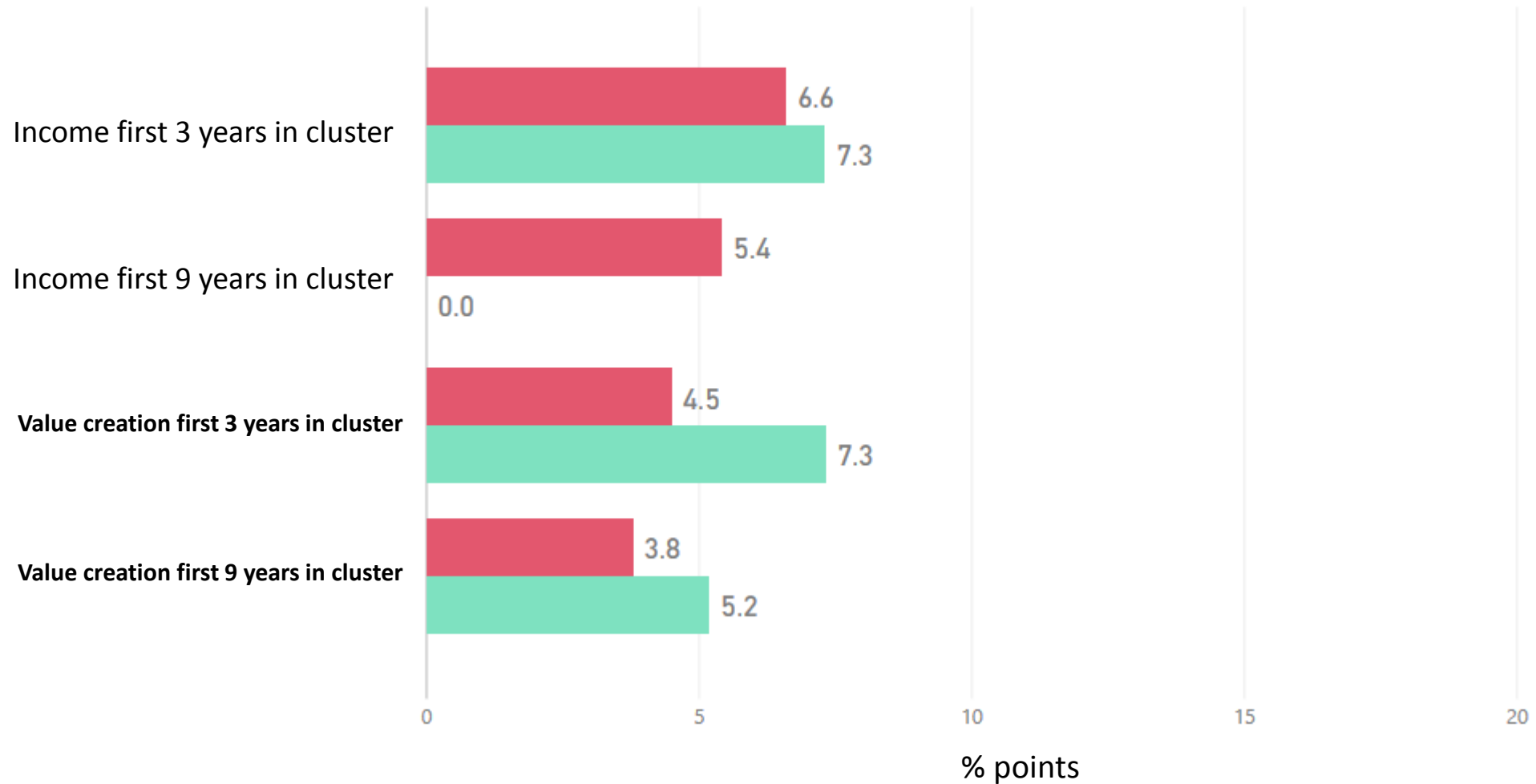


More enterprises with capacity for growth



More innovative business environments (clusters)

År ● 2015 ● 2016

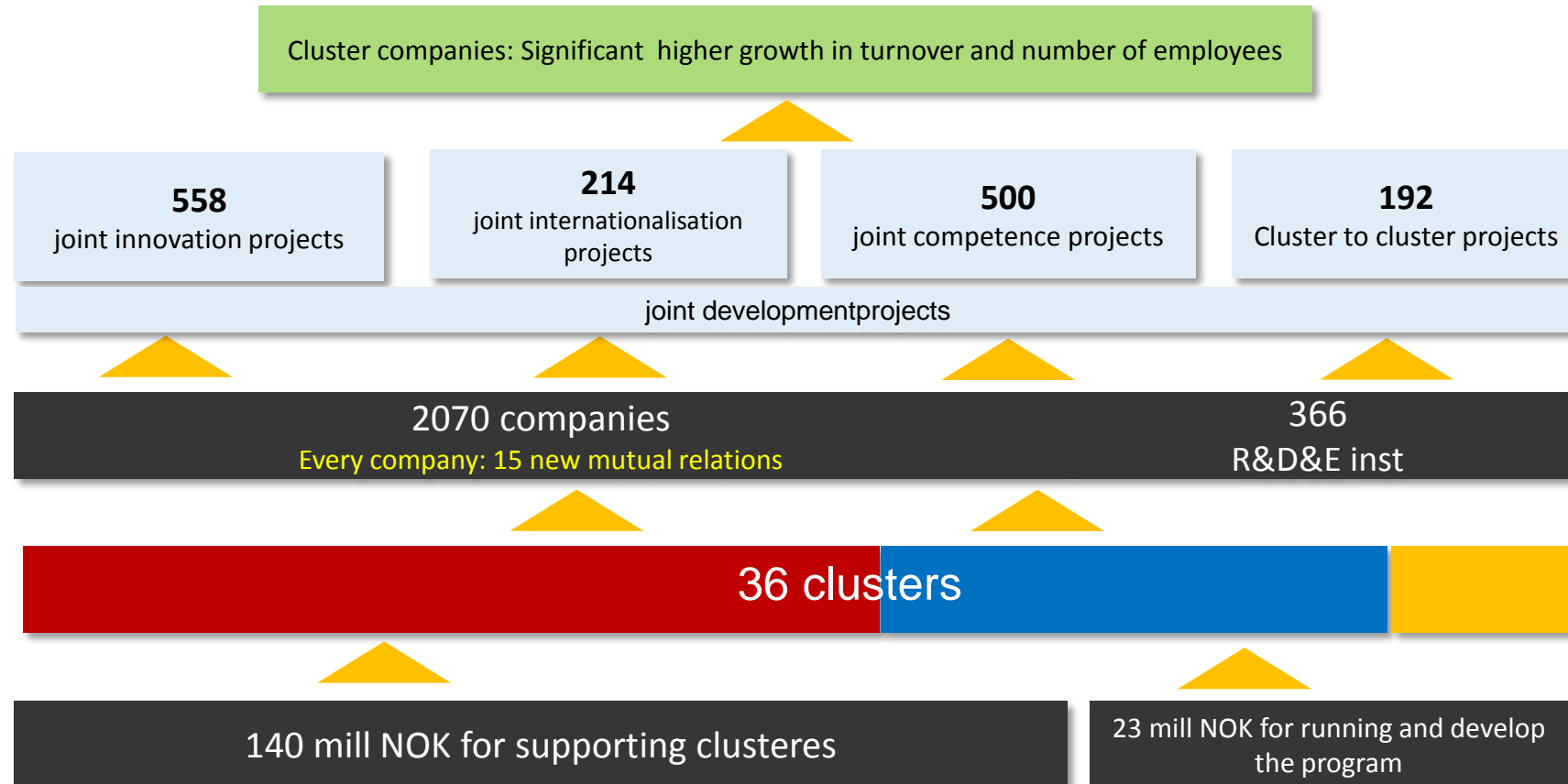


Not significant values = 0

Kilde: [SSB Metoderapport](#) / Innovasjon Norge

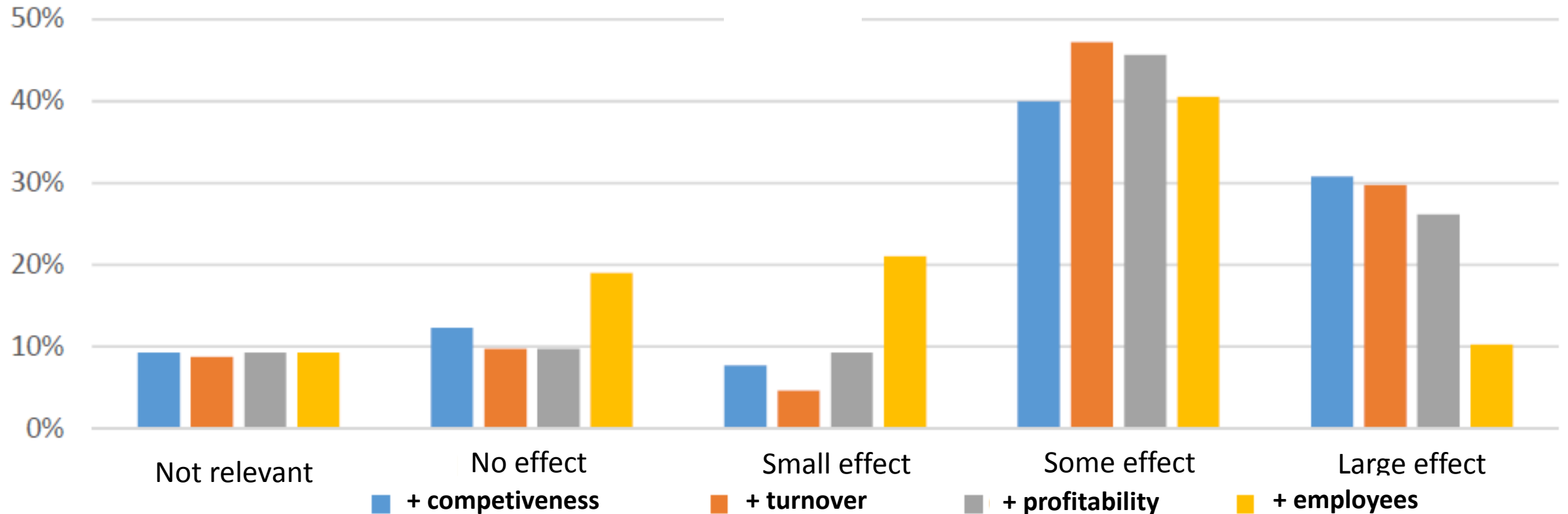
Funding program: Norwegian Innovation Clusters

Figures reported for 2015

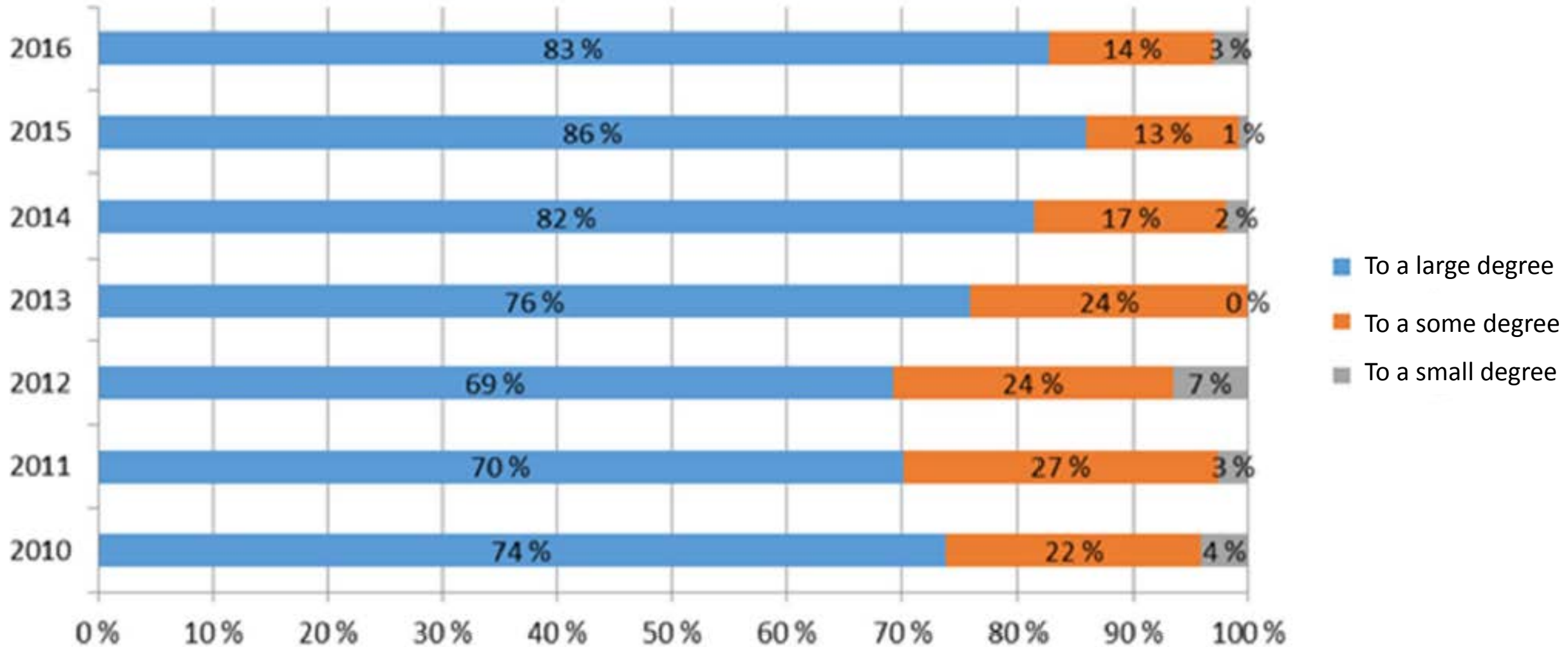


More innovative business environments

2016 Which and how large effects do the companies expect from cluster participation the coming years.



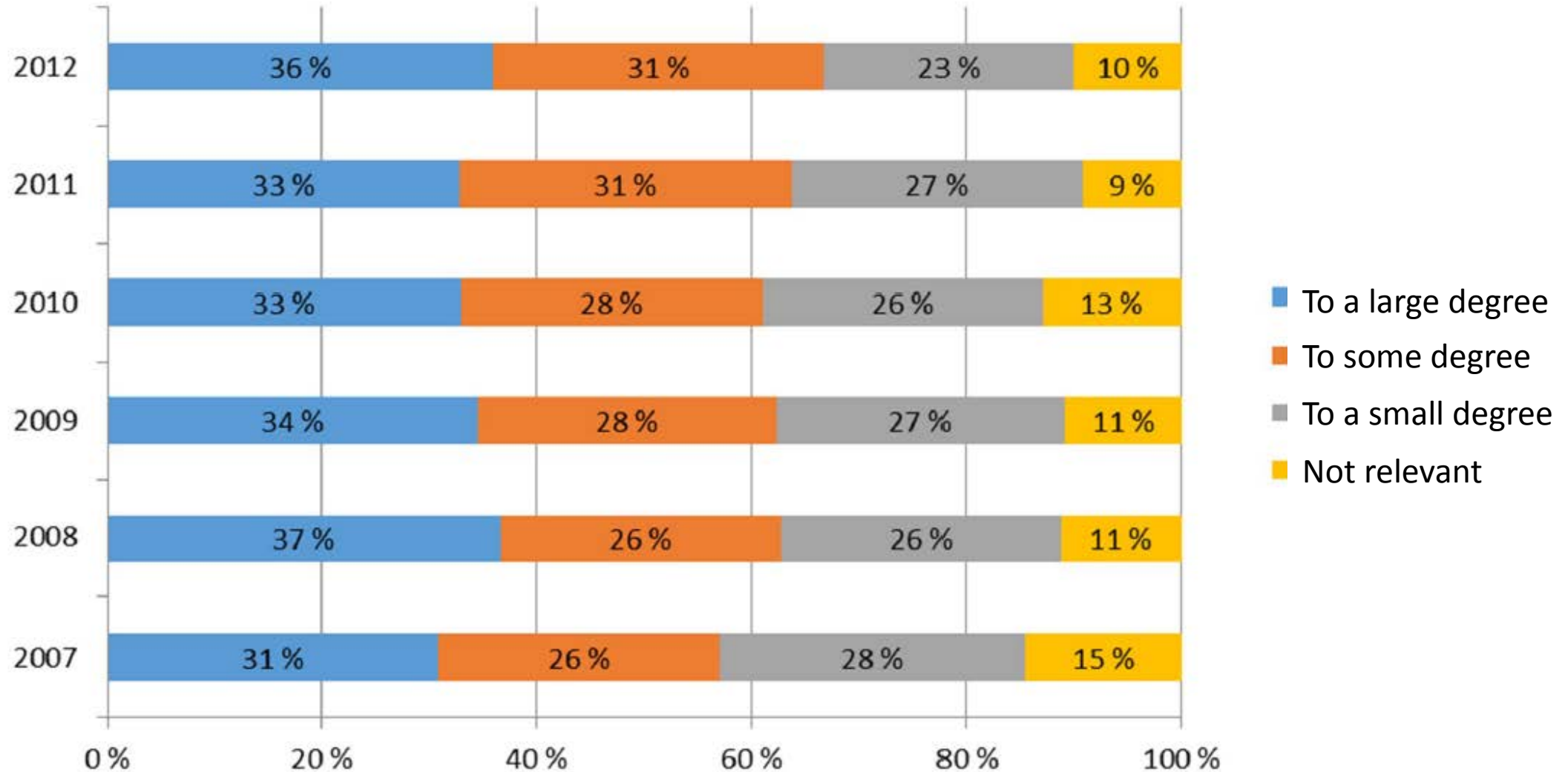
Funding Program: Innovation Contracts contribution to competence





The combination of funding and advice, experienced companies

Q: Is company know-how increased?



Some challenges...

- “Hard” and “soft” support - and effects
- The interaction between different programs and schemes
- *Long-term effects and impact*
- *Spill-overs/wider impact*
- *The amount and timing of the support*

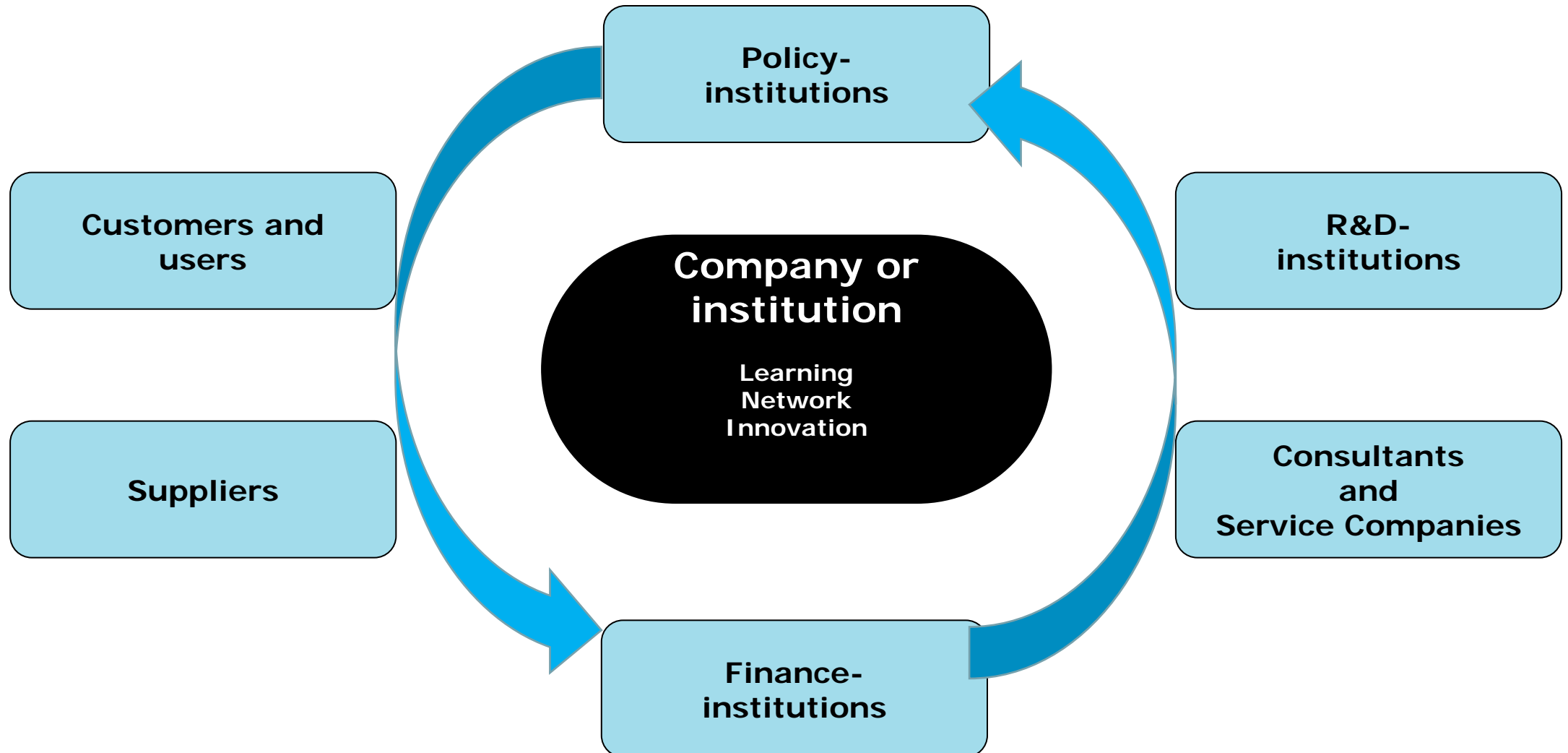


Difficulties when evaluating

In addition to the general difficulties often faced in evaluation, we have considered carefully some other difficulties that we face in our evaluation and which may be of relevance to other researchers:

- How long does it take before participation in a program has any effect?
- How long does the effect last?
- How should we treat repeated support and support that lasts more than one accounting period?
- When does one treatment stop and another start?
- How do we classify the type of treatment if we observe multiple treatments in subsequent years?

Our ability to solve problems depends on the interplay between the actors



Thank you for your attention