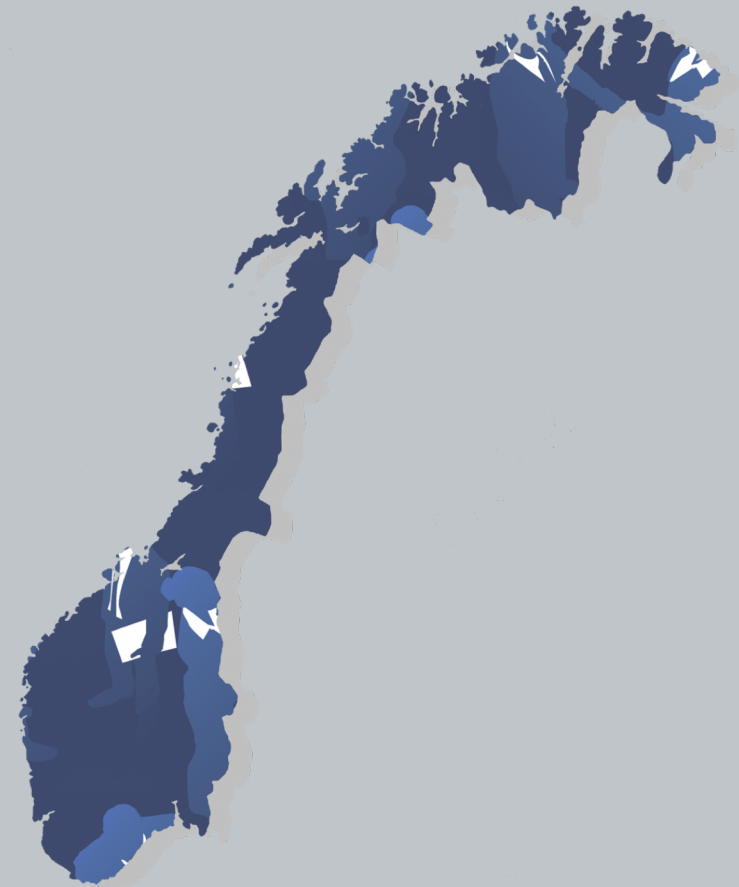


# State of University- Business Cooperation NORWAY

## Business Perspective

Study on the cooperation between  
higher education institutions and  
public and private organisations





## The State of Norway University-Business Cooperation: the business perspective

### Partners



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# Executive summary

## Summary

This report aims at contributing to our understanding of the business perspective on university-business cooperation (UBC) in Norway. Examining the perceptions of a wide range of businesses provides positive signs for the future, with 98% of Norwegian businesses that already established relationships with universities planning to maintain or increase their cooperation in the future. Yet, more can be done, for example in supporting businesses with the development of strategies that can support their cooperation efforts beyond research initiatives (e.g. lifelong learning, dual education programmes, industrial PhDs, etc) and the creation of incentives and rewards system.

## About the study

The results presented in this report reflect the perceptions of business representatives in Norway with respect to cooperation between universities and business. Data was collected by means of an online survey sent out via email to a European business database that was developed from publicly available information for 33 countries during October-November 2016, leading to a total of 71 Norwegian business responses. The study measured the perceptions of respondents with respect to their businesses and cooperation efforts.

## University-Business Cooperation

Norwegian businesses mostly engage in joint R&D, mobility of students and consulting.

Valorisation and management activities are considerably less developed with over 50% of businesses not undertaking these types of cooperation at all. Particularly low are also the educational activities of curriculum co-design and co-delivery.

Norwegian businesses perceive themselves as the main actors reaching out for collaboration. In the same way, they also see government and university alumni as proactive initiators of UBC. This demonstrates the willingness of Norwegian businesses' to cooperate with universities, but also highlights the opportunity to do more.

On the contrary, Norwegian business representatives identify university management as well as internal intermediaries as those stakeholders that less often initiate UBC.

## It is them, not us

The strongest barrier identified by respondents relate to the differing motivations between universities and businesses.

Norwegian businesses also point out the university's lack of people with business knowledge, their focus on producing scientific outcomes, and their lack of awareness of opportunities arising from collaboration as factors hindering UBC. However, business respondents also recognise that the lack of their own funding for UBC represents a significant barrier.

**NOTE:** This report provides a business on university-business cooperation UBC, drawing on a survey of European higher education institutions, academics and businesses. While acknowledging limitations relating to the generalisability of the results due to the non-random nature of the sample, the results provide positive signs both of the present and for the future, while also providing an indication as to areas that require future development.

# Executive summary

## **Relationships matter**

While funding to undertake cooperation is indicated as the top five facilitators for Norwegian UBC, factors related to the individual relationships emerge to be essential. It is the existence of a shared goal, trust and commitment that facilitate cooperation for businesses in Norway. These results indicate that any effort towards enabling cooperation between businesses and universities should focus on relationship development as a basis for successful collaboration. The commercial orientation of the university is also considered a UBC facilitator in Norway.

## **Pragmatic approach to UBC**

When engaging in cooperation with HEIs, Norwegian businesses are driven by innovation and competitiveness related motivations. Getting access to new technologies and discoveries, enhancing their innovation capacity, accessing better qualified graduates and obtaining funding are those motivators that stimulate cooperation for Norwegian companies. Notably, the willingness to impact society through collaboration is not considered as a motivation by Norwegian businesses.

## **Strategy first**

Strong emphasis has been placed on the development of UBC supporting mechanisms by universities, and yet little is known about such mechanisms in the business realm. This study indicates that the strategies are those mechanisms that have the highest development, with a third of the of respondents indicating the dedication of

resources to support UBC, the existence a strategy for collaborating with HEIs and a top-level management committed to cooperation.

Notably, the existence of cooperative research institutes and co-working spaces is significantly higher in Norway than in Europe. However, compared to the European average, UBC supporting mechanisms such as presentations, lectures or mentoring within the university and the practise of recruiting PhD students are considerably less developed in Norway.

The most underdeveloped supporting UBC mechanisms in Norway include lifelong learning programmes and recognition for UBC activities.

## **Room for improvement in education activities**

Norwegian businesses perceive themselves to be supportive towards UBC. They report having the capability to absorb knowledge and technology from universities and recognise the important role played by HEIs in their innovation efforts. They also consider that their business has a lot to offer to universities in terms of research.

Yet, Norwegian businesses are less supportive towards UBC in education and find themselves least inclined towards taking the responsibility to collaborate with universities in this field. Generally, they are significantly less satisfied with collaboration in education than in research.

# Introduction

## About the study

The study focusses on the cooperation between higher education institutions (HEIs) and public and private organisations in the 28 European Union Member States and 5 associated countries.

The State of European university-business cooperation (UBC) study is executed for the DG Education and Culture at the European Commission (EAC/10/2015) by a consortium led by the Science-to-Business Marketing Research Centre (S2BMRC), in Germany from January 2016 until November 2017.

The aim of the study is to get a more profound, comprehensive and up to date understanding of the state of UBC in Europe: what is the state of play of a wide range of UBC activities in the different countries, what are the main drivers and barriers for the different stakeholders and at what levels; what is the regulatory framework and socio-economic conditions and what kind of measures/initiatives exist on a national level to support the development of UBC. The project investigates UBC from the perspective of both university and business.

## Main activities

The main components of the project were a series of expert interviews with 23 recognised UBC experts, 52 good practice case studies, a UBC policy and indicators review as well as a major quantitative survey of stakeholders within both HEIs and business. The survey was translated into 25 languages and sent to all registered European HEIs (numbering over 3,000) in the 33 countries during

October-November 2016. Through this, a final sample of 17,410 representatives from within HEIs and business was achieved. This makes the study the largest international study into cooperation between HEIs and business yet completed.

## Why care about university-business cooperation?

- UBC is considered to be the engine towards knowledge-based societies and economies
- UBC is specially needed in the European context, threatened by increased global competition, with ongoing economic and social problems and high levels of youth unemployment
- UBC helps to create a more connected and functioning relationship between government, business and HEIs, which is at the core of EU funding schemes, such as Horizon 2020 and Erasmus+.
- UBC direct outcomes include:
  - improving the competitiveness of business,
  - increasing the relevance and innovativeness of research and teaching in HEIs,
  - improving the future job prospects of students and graduates,which can in the longer term:
  - create jobs,
  - stimulate economic growth,
  - increase living standards,
  - reduce hindrances to good living.

## Study Objectives

The specific objectives for the study are:

- Chart the current state of play and provide an in-depth analysis of UBC in the countries covered by this study, from the HE and business perspectives
- Deliver 50 case studies of UBC (representative sample, balanced distribution among countries and organisations, balanced distribution of HEI and business led cases);
- Review indicators measuring UBC and propose possible scenarios for the implementations of UBC monitoring in Europe;
- Provide policy conclusions and recommendations for the furthering of UBC and the best approaches to take.



**UNIVERSITY-BUSINESS**  
COOPERATION IN EUROPE

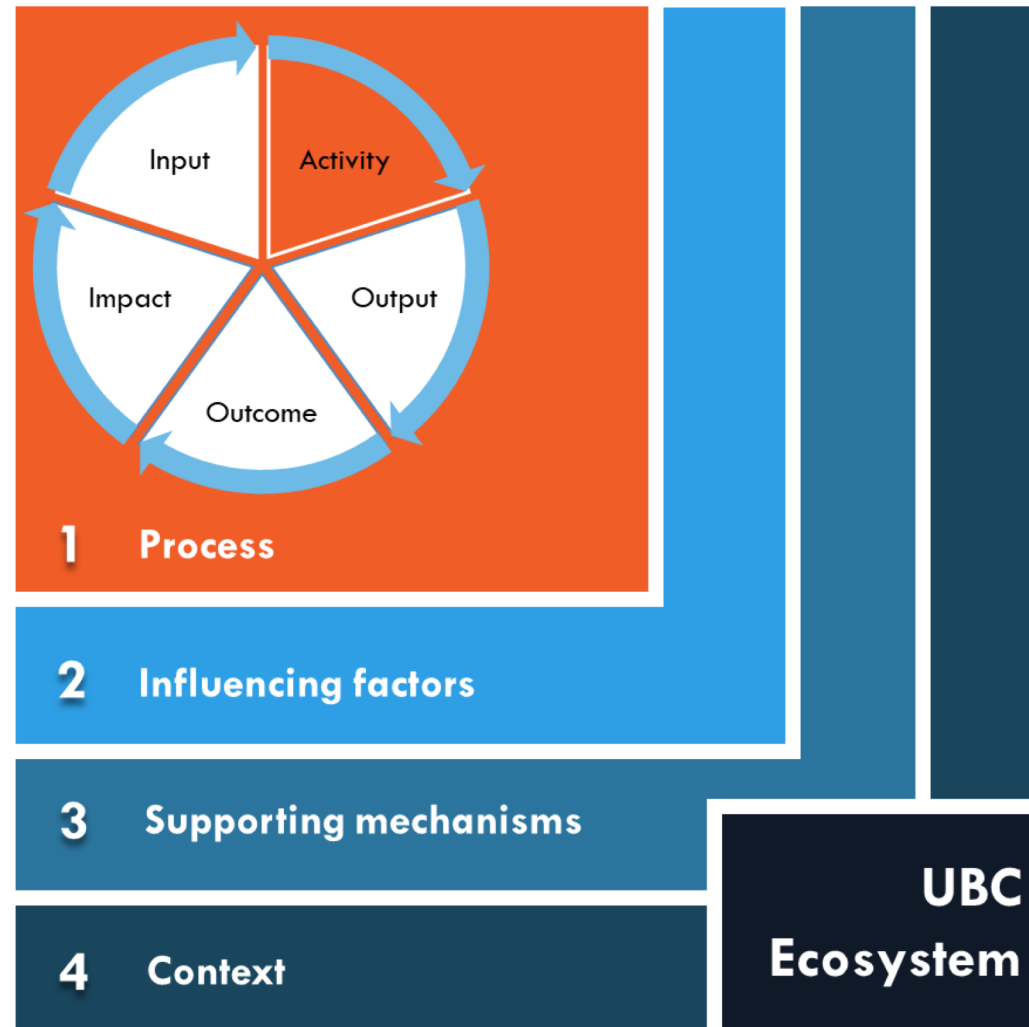
# UBC activities

## UBC Ecosystem Framework™

In order to best organise the project results, a project conceptual framework was chosen.

The UBC Ecosystem Framework possess a number of interrelated elements including the process of undertaking UBC, factors that are influencing UBC, mechanisms supporting UBC and finally the context in which UBC occurs.

The framework ties together the respective project activities, providing a common thread for reporting results and making recommendations.



Source: Galán-Muros, V.; Davey, T. (2017) *The UBC Ecosystem: Putting together a comprehensive framework for university-business cooperation*. *Journal of Technology Transfer*. <https://doi.org/10.1007/s10961-017-9562-3>



# UBC activities

Fourteen UBC activities are recognised, commonly categorised into the areas of education, research, valorisation and management.

Area	Activities
<b>Education</b>	<ol style="list-style-type: none"><li>1. curriculum co-<u>design</u></li><li>2. curriculum co-<u>delivery</u> (e.g. guest lectures)</li><li>3. mobility of students (i.e. student internships/placements)</li><li>4. dual education programmes (i.e. part theory, part practical)</li><li>5. lifelong learning for people from business (e.g. executive education, industry training and professional courses)</li></ol>
<b>Research</b>	<ol style="list-style-type: none"><li>6. joint R&amp;D (incl. joint funded research)</li><li>7. consulting to business (incl. contract research)</li><li>8. mobility of professionals (i.e. temporary mobility of academics to business and vice versa)</li></ol>
<b>Valorisation</b>	<ol style="list-style-type: none"><li>9. commercialisation of R&amp;D results (e.g. licencing/patenting)</li><li>10. academic entrepreneurship (e.g. spin offs)</li><li>11. student entrepreneurship (e.g. start-ups)</li></ol>
<b>Management</b>	<ol style="list-style-type: none"><li>12. governance (e.g. participation of academics on business boards and businesspeople participation in university board)</li><li>13. shared resources (e.g. infrastructure, personnel, equipment)</li><li>14. industry support (e.g. endowments, sponsorship and scholarships)</li></ol>

# Development of UBC activities

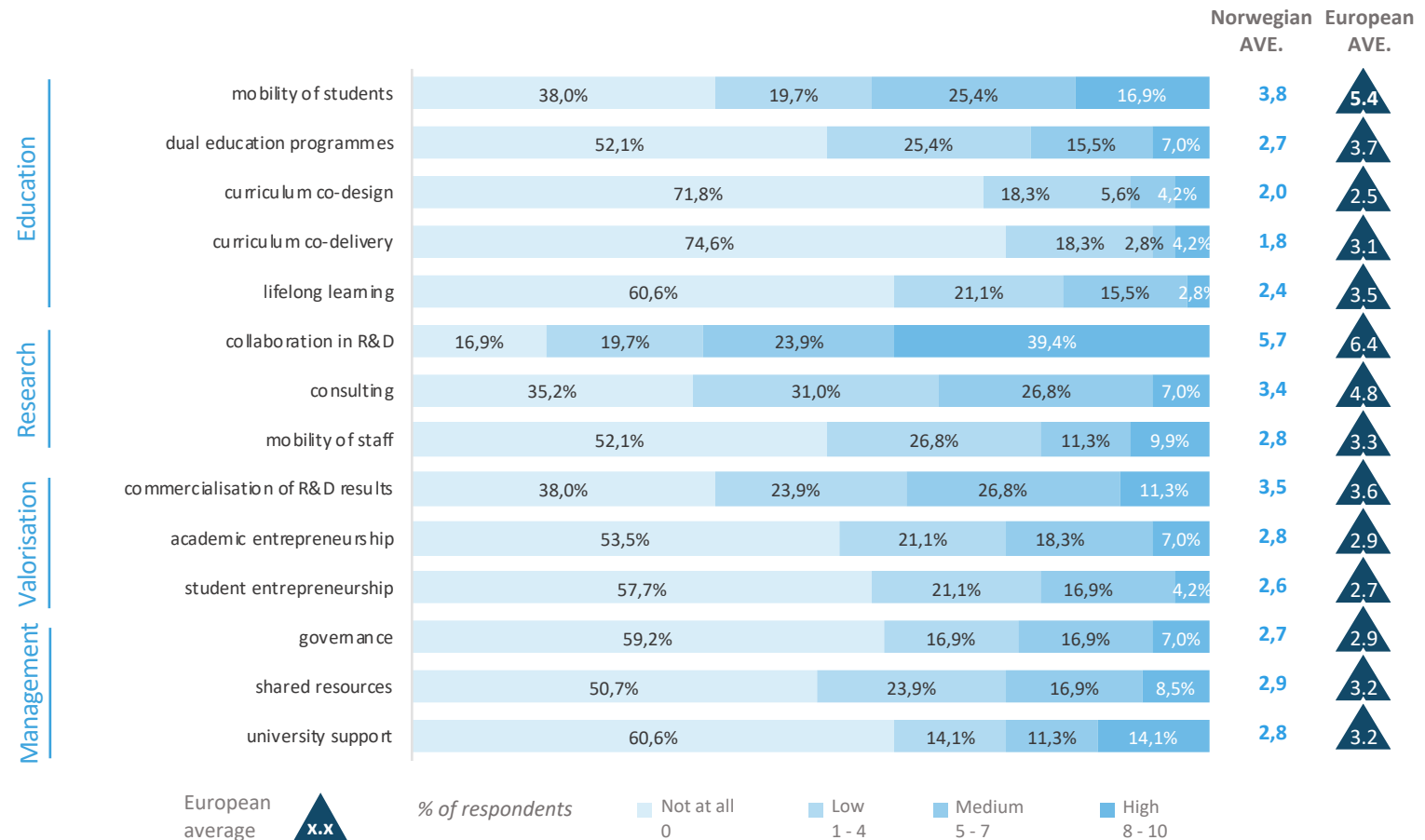
Norwegian businesses engage mainly in research and education UBC activities, like collaboration R&D (5.7), mobility of students (3.8) and consulting (3.4). However, the activities of curriculum co-design and curriculum co-delivery are particularly low.

More than 50% of businesses do not undertake any management or valorisation related collaboration (with the exception of commercialisation of R&D results).

Overall, the development of UBC activities in Norwegian businesses is lower than in European businesses.

## UBC activities development

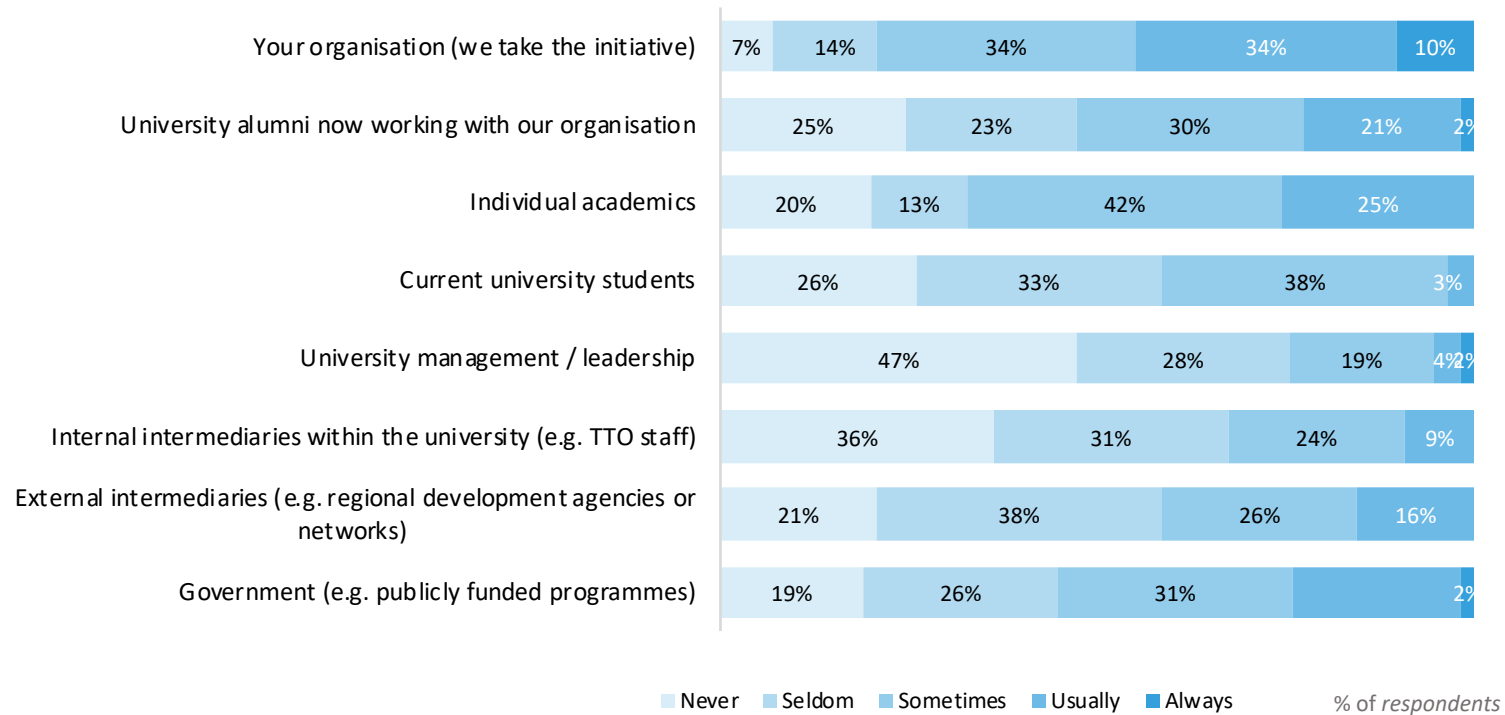
*'Which UBC activities do you collaborate with universities in?'*



# Initiation of UBC

## How UBC is initiated

*'How often various stakeholders initiate UBC activities'*



Norwegian businesses see themselves as the main initiators of cooperation with universities. 44% of business state that their organisation always or usually initiate UBC.

Businesses in Norway consider government and university alumni now working with their organisation also active in initiating cooperation.

Conversely, university management as well as internal intermediaries are perceived as passive in UBC initiation. 75% and 67% of the businesses report that they never or seldom undertake any first actions towards UBC initiation respectively.

59% of business state that the current students and external intermediaries do never or seldom initiate UBC.

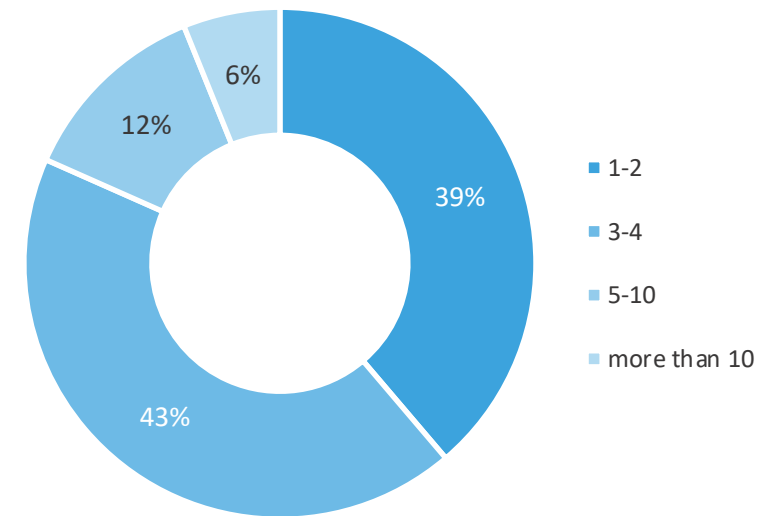
# Geographical location still matters

## Location of university partners

Percentage of cooperating businesses with...	
universities in their region	85%
universities in their country	86%
universities outside their country	90%

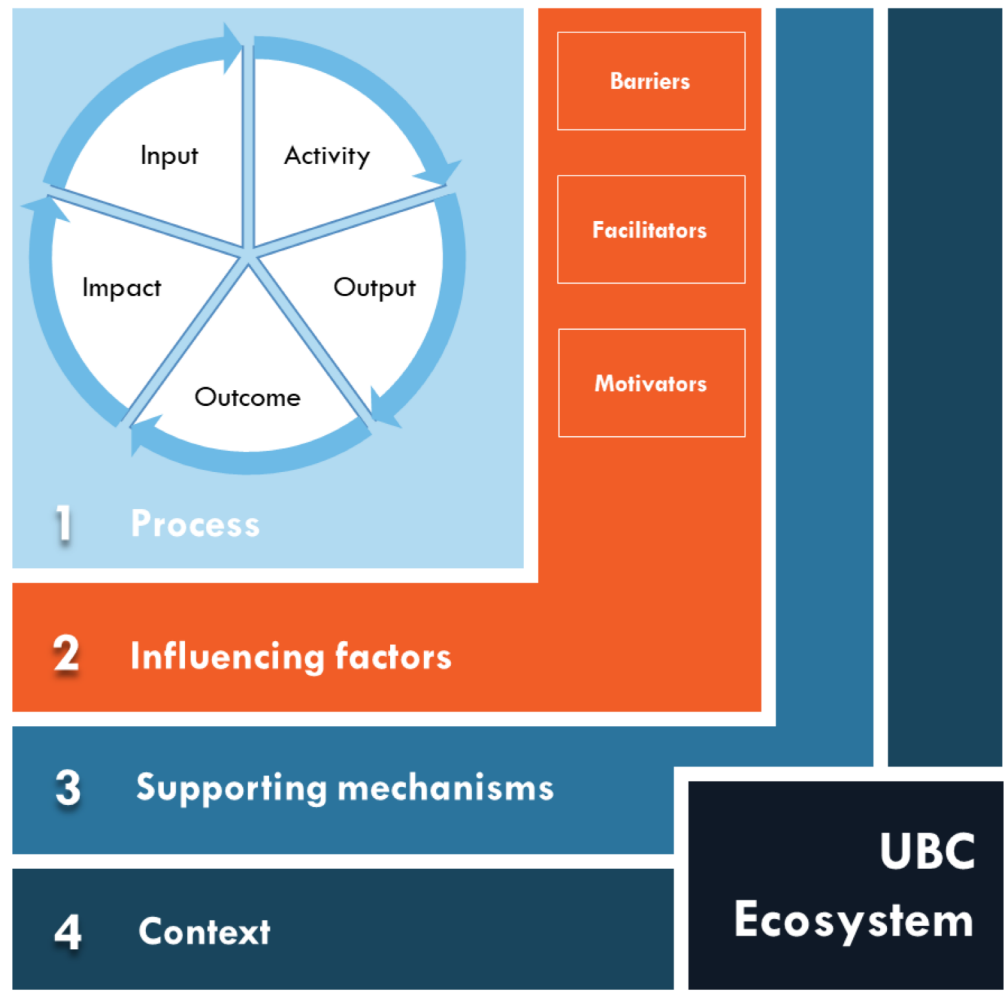
While most Norwegian businesses cooperate with international universities (90%), the results also report high percentages for national and regional universities with 86% and 85% respectively.

## Number of university partners



More than 80% of Norwegian businesses cooperate with less than 4 university partners. 12% have established relations with 5-10 universities and only 6% has more than 10 partners.

# Factors influencing UBC



This section outlines the extent to which various factors affect UBC.

Generally, a barrier provides a hindrance or obstacle to do something. Drivers comprise facilitators, which enable or ease the process, and the motivators, which triggers the starting of an activity and are often related to the expected outcome(s).

At the European level, this study has found that removing a barrier does not necessarily create UBC but rather it makes UBC possible. Instead, it is the facilitators and motivators (drivers) that initiate UBC.

For example, even when a lack of funds is often named as a major barrier to cooperation, the presence of funds may not be enough for cooperation to happen if the perceived facilitators or motivators are not sufficient.

# Barriers hindering UBC

The main five factors inhibiting Norwegian businesses to cooperate with universities are diverse.

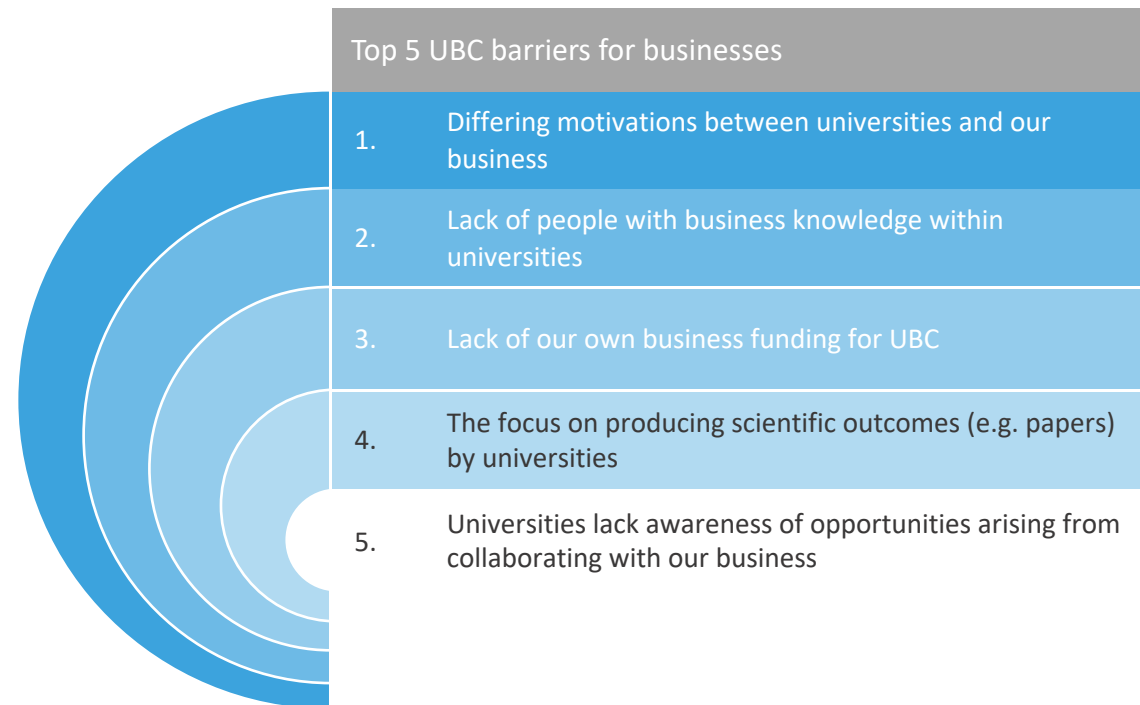
The main ones are related to differing motivations between universities and business and the lack of people with business knowledge within universities.

The lack of own business funding emerges as the only financial barrier.

The university focus on producing scientific outcomes as well as their lack awareness of opportunities arising from collaborating with business are also important barriers for businesses in Norway.

## Barriers

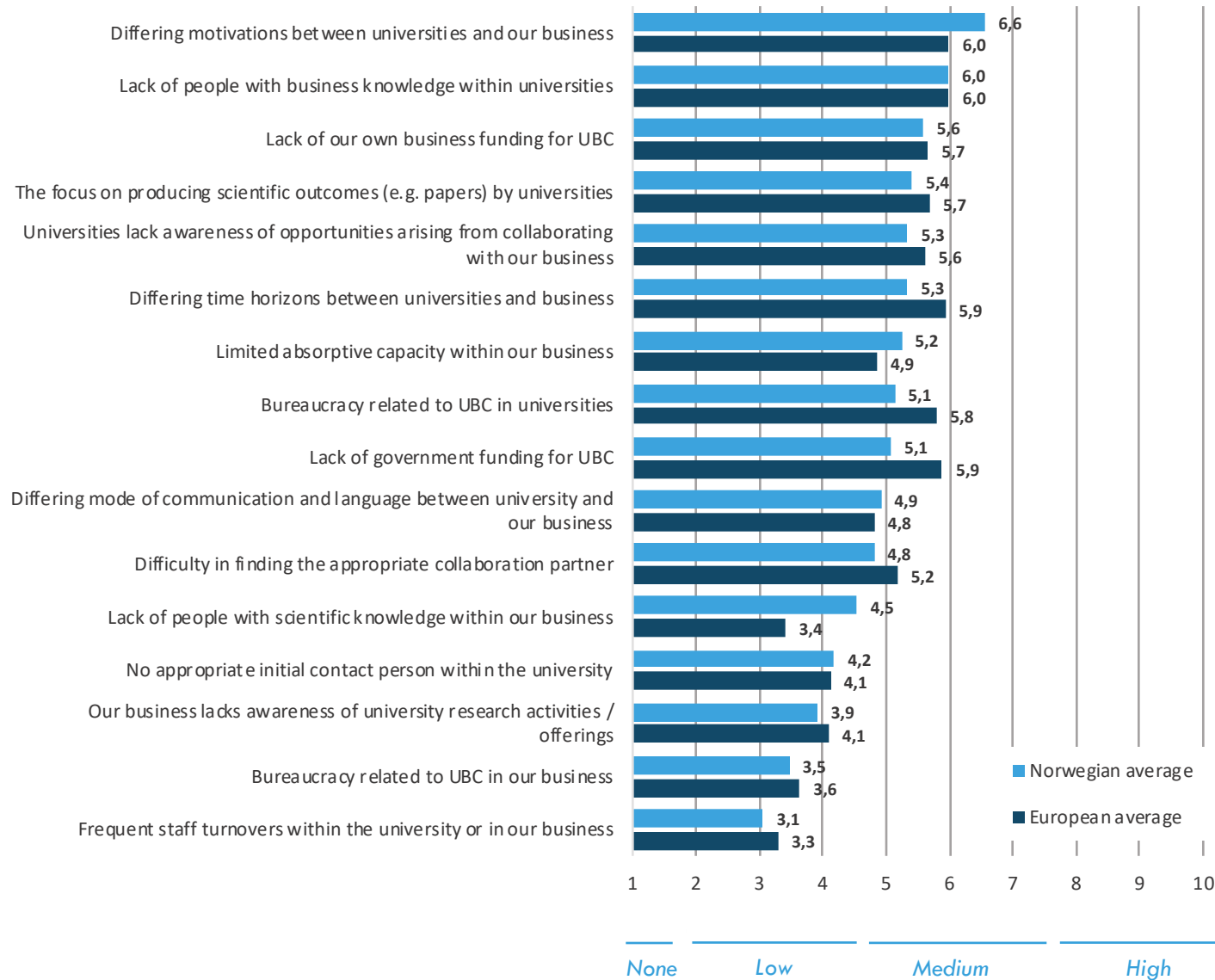
*'What is inhibiting your cooperation with universities?'*



# Barriers hindering UBC

## Barriers

'What is inhibiting your cooperation with universities?'



The majority of barriers perceived by cooperating Norwegian businesses and their European counterparts are to some extent similar.

The strongest barriers for both groups are the differing motivations between universities and business and the lack of people with business knowledge within universities.

The differing time horizons between universities and business, bureaucracy related to UBC in universities and the lack of governmental funding are higher barriers for European businesses than they are for Norwegian ones.

Frequent staff turnovers within the university or business is the weakest barrier.

# Drivers stimulating UBC

The main factors facilitating Norwegian business cooperation with universities are related to relationship and funding factors.

The existence of funding to undertake collaboration plays a crucial role in facilitating UBC.

Additionally, a relationship based on a shared goal, trust and commitment highly facilitates cooperation for Norwegian businesses, resulting in smoother and more successful collaboration with universities.

The commercial orientation of the university is also likely to facilitate UBC in Norway.

*Drivers* are those factors that encourage businesses, academics or HEIs to engage in UBC. Drivers of UBC are divided into two factors:

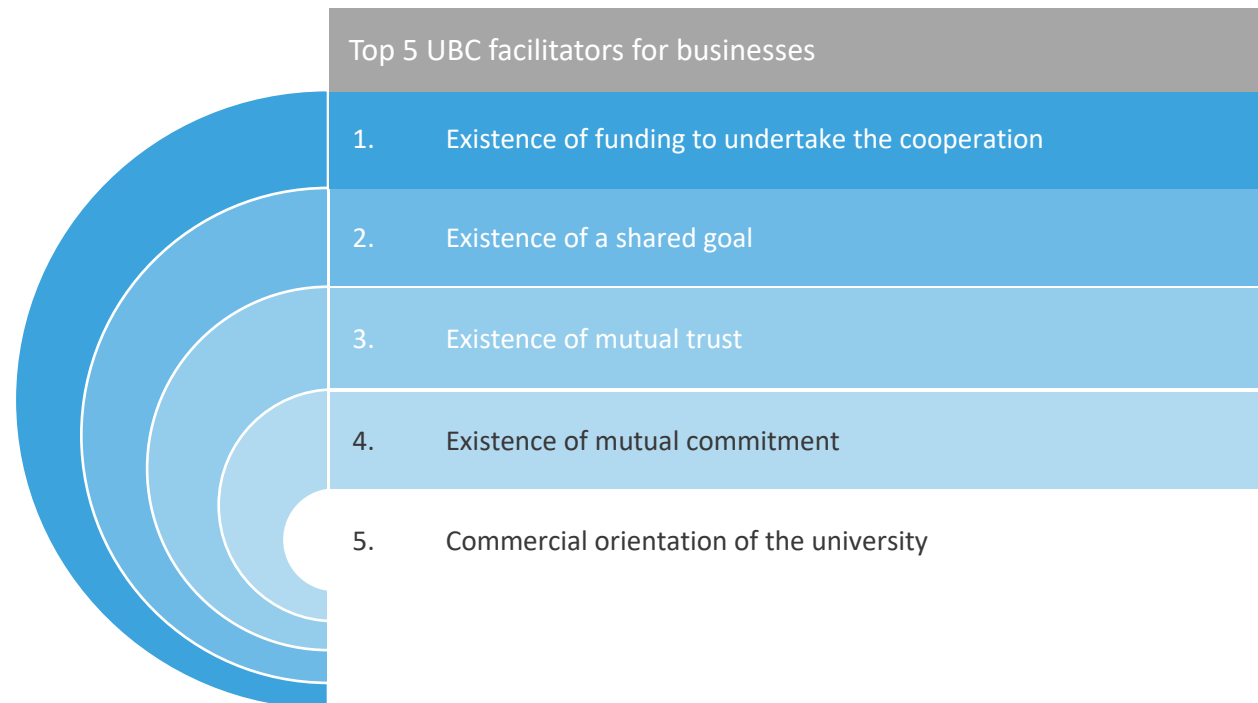
1. **Facilitators** – factors that enable or ease cooperation
2. **Motivators** – incentives or benefits that the respective stakeholders would like from the cooperation

Together, these two factors provide a comprehensive picture of what compels businesses to cooperate.

The 2010-11 State of European UBC study showed that for European universities the existence of strong UBC drivers can overcome the presence of barriers to UBC.

## Facilitators enabling UBC

*'What is facilitating your cooperation with universities?'*

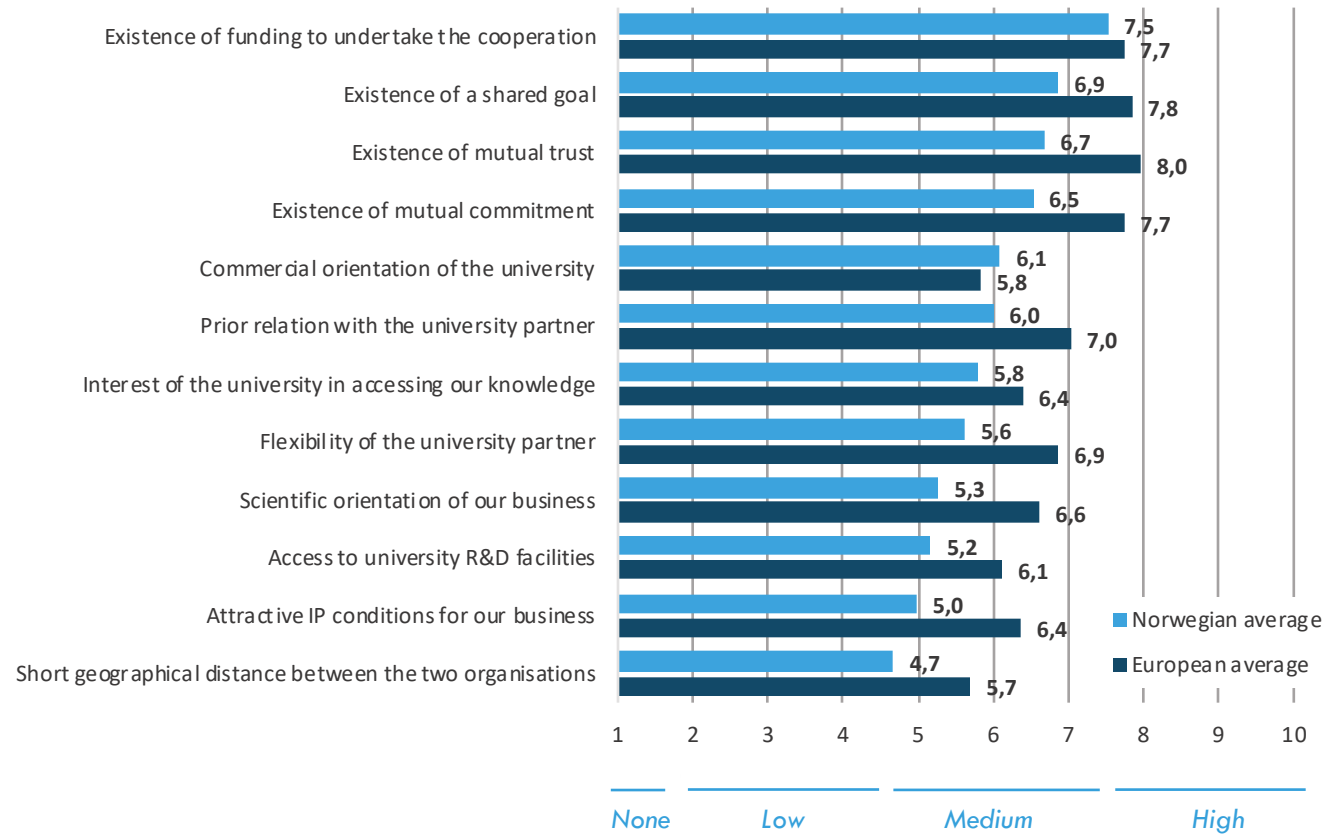




# Drivers stimulating UBC

## Facilitators

*'What is facilitating your cooperation with universities?'*



UBC facilitators are perceived lower by Norwegian businesses than by their European counterparts.

The relationship facilitators bear greater importance in the advance of UBC in Europe than in Norway.

Similarly, the scientific orientation of the business, the access to university R&D facilities, attractive IP conditions, have lower importance for Norwegian than for European businesses.

The short geographical distance between the two organisations is the least important factor for both groups.

# Drivers stimulating UBC

The main motivators for Norwegian businesses to undertake UBC are related to innovation and competitiveness.

Businesses cooperate with universities primarily to get access to new technologies and knowledge and to improve their own innovation capacity.

Norwegian businesses are also motivated to get access to better qualified graduates and to obtain funding.

A less important but still relevant motivation is to access new discoveries at an early stage.

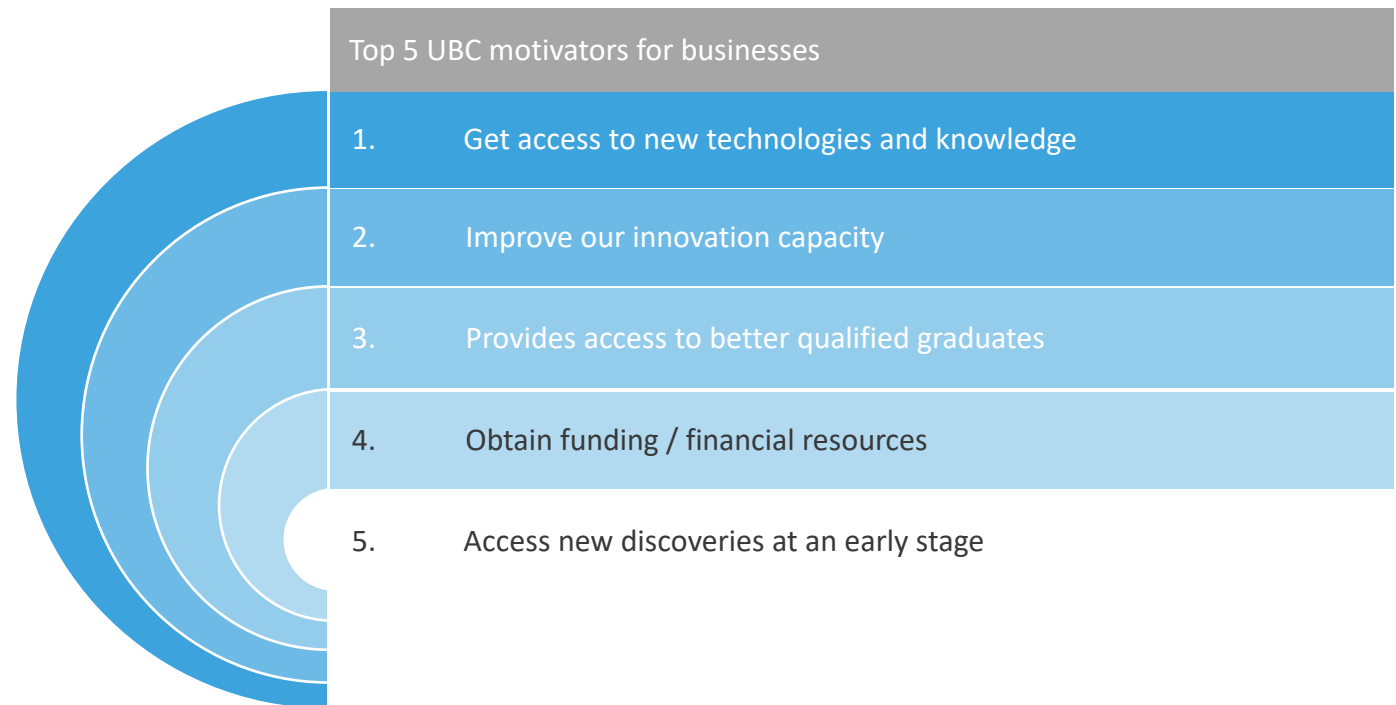
*Motivations for UBC* are the reasons why businesses collaborate with university.

They provide key information about the outcomes that the businesses seek from their collaborative activities relating to education, research, valorisation and management.

The ability of the collaboration to achieve these outcomes will have a substantial influence on the businesses' assessment of the success of their collaboration.

## Motivators

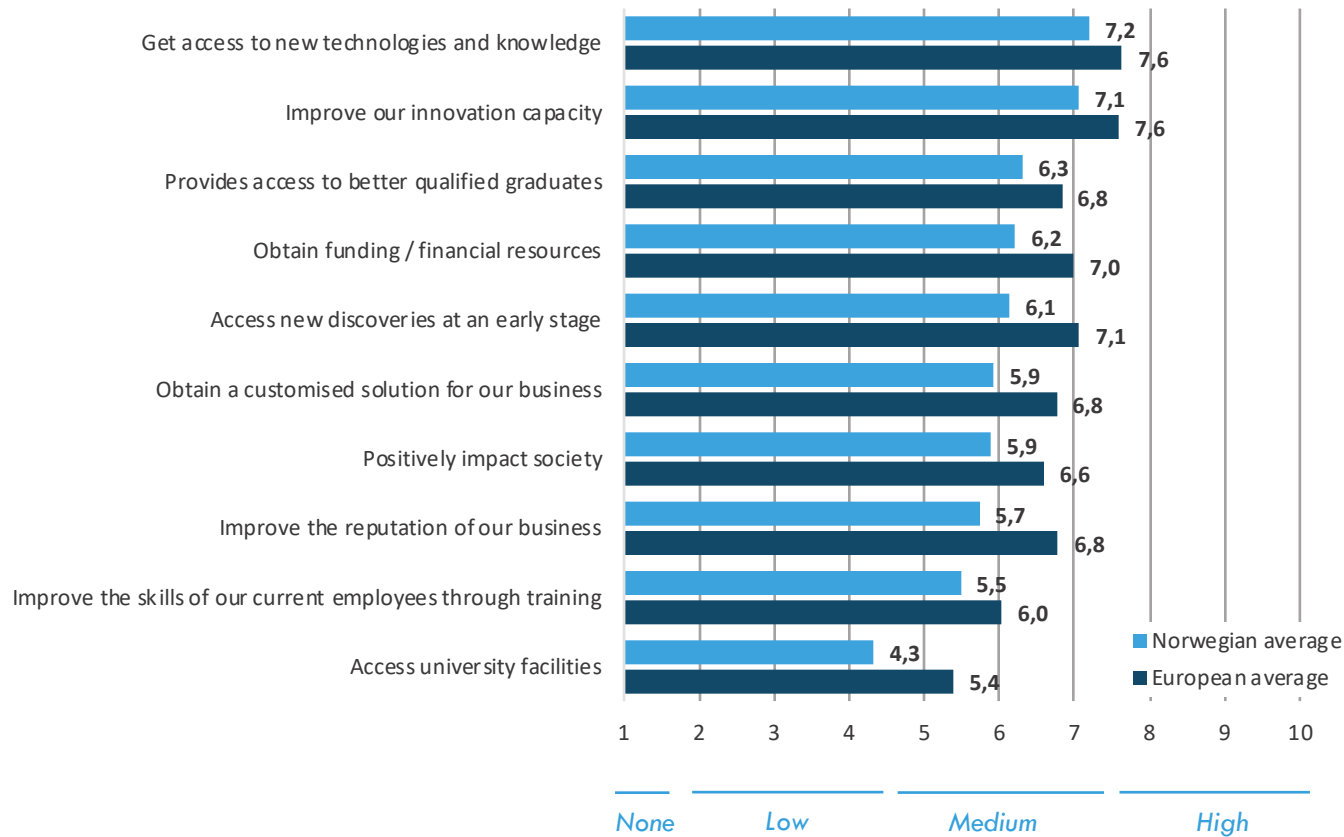
*'What motivates you to cooperate with universities?'*



# Drivers stimulating UBC

## Motivators

'What motivates you to cooperate with universities?'



Overall, the importance of the motivations is considerably higher for European businesses than for Norwegian businesses.

The most important motivations for both groups are getting access to new technologies and knowledge and improving their innovation capacity. However, these factors motivate Norwegian businesses to a lower extent.

Norwegian businesses are notably less motivated than European ones about improving the reputation of their business and accessing university facilities, which are the least relevant motivators for both of them.

# Benefits of UBC

Norwegian and European businesses have similar perceptions in respect to which stakeholder group benefits more or less from UBC.

Both groups see students and universities as the primary beneficiaries of UBC.

European businesses perceive themselves also as beneficiaries but to a slightly lower extent.

Norwegian businesses see more benefits for society than for themselves.

The lowest benefits are perceived by Norwegian businesses to be for government and academics.


*Benefits* are the perceived positive outcomes (financial and non-financial) from undertaking UBC as relevant for the different stakeholder groups that can potentially participate in UBC.

The perception regarding who benefits from such cooperation can influence the decision to increase or decrease their participation or

the involvement of other groups. For example, if academics perceive their own benefits to be low, they may refrain from engaging in UBC. Yet, if they perceive benefits for students to be high, they might undertake actions that contribute to students' involvement in UBC.

## Benefits of UBC

*'Who receives the benefits of UBC?'*

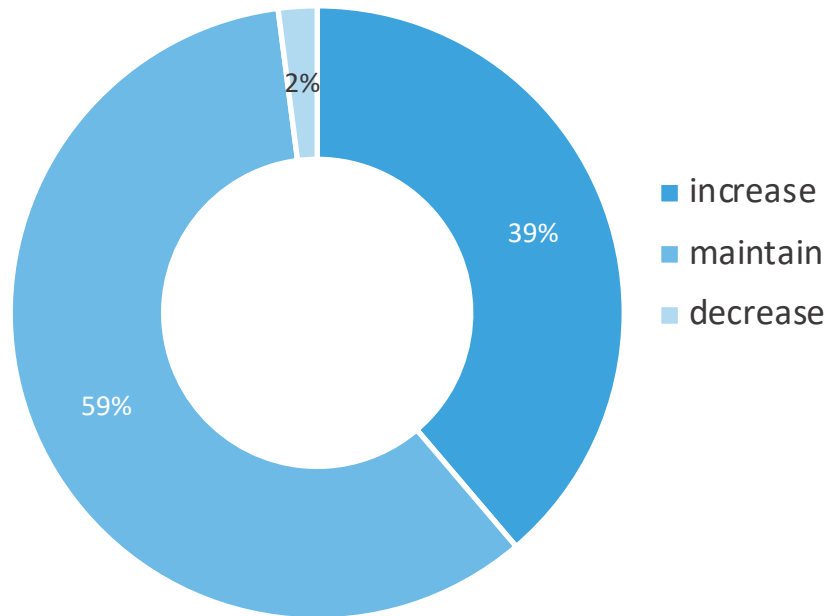


	Norwegian businesses	European businesses
1.	Students	Students
2.	Universities	Universities
3.	Society	Businesses
4.	Businesses	Academics
5.	Government/public authorities	Society
6.	Academics	Government/ public authorities

# Future intentions

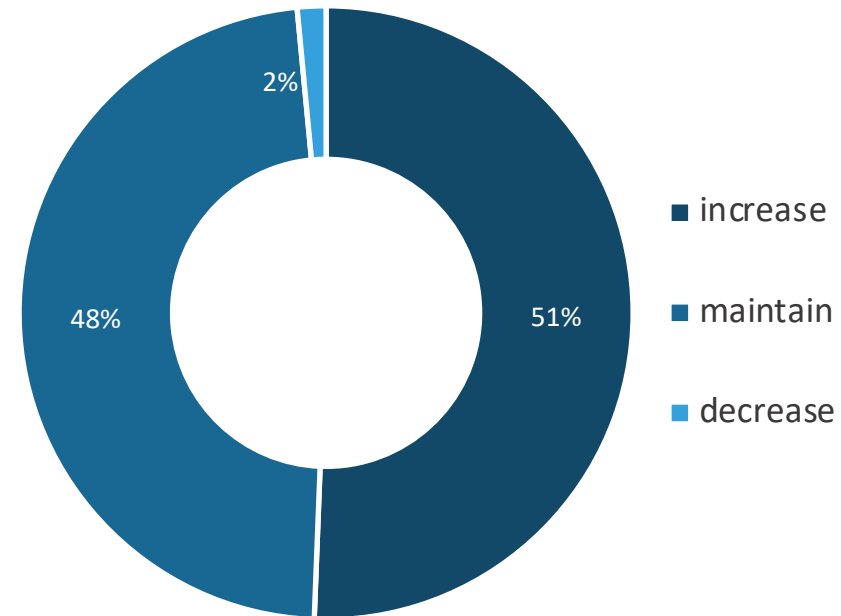
## Future UBC intentions – Norway

*As answered by Norwegian businesses*



## Future UBC intentions – EUROPE

*As answered by European businesses*



98% of Danish businesses that currently cooperate with universities plan to maintain or increase their cooperation, with only 2% intending to reduce it. This shows an important momentum for UBC in Norwegian industry.

European businesses seem to be also confident in their future intentions towards UBC as it can be observed through a higher percentage of business respondents (51%) that plan to increase cooperation activities.

# Willingness to recommend UBC

The willingness of Norwegian cooperating businesses to recommend to a colleague to engage in UBC highly varies depending on whether this cooperation is in research or in education.

Norwegian businesses are less satisfied with UBC in research than their European counterparts (NPS=17). While 40% of them will promote it positively, 24% would do it negatively.

Norwegian businesses are also less satisfied with their cooperation in education (NPS= -14). 30% would highly recommend it, whereas 43% will not recommend it at all.

Respondents were asked how likely it would be that they recommend to a business colleague to engage in UBC in the areas of R&D and

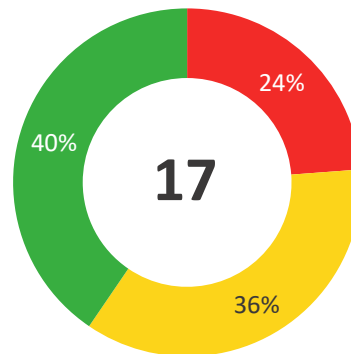
education and training (E&T). The *Net Promoter Score* metric offers a proxy for customer satisfaction.

## Willingness to recommend cooperation with universities in R&D or E&T

	Detractors	Passives	Promoters	Net promotor score
Business cooperating with universities in R&D	24%	36%	40%	17
Business cooperating with universities in E&T	43%	27%	30%	-14

## Satisfaction with cooperation with universities (net promoter score)

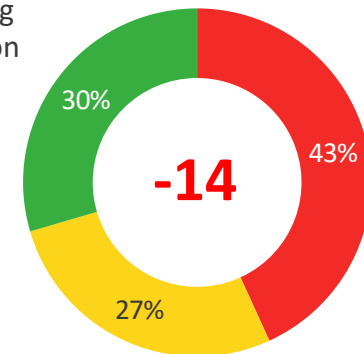
Business cooperating in research



■ Detractors ■ Passives ■ Promoters

European business NPS result: 28.2

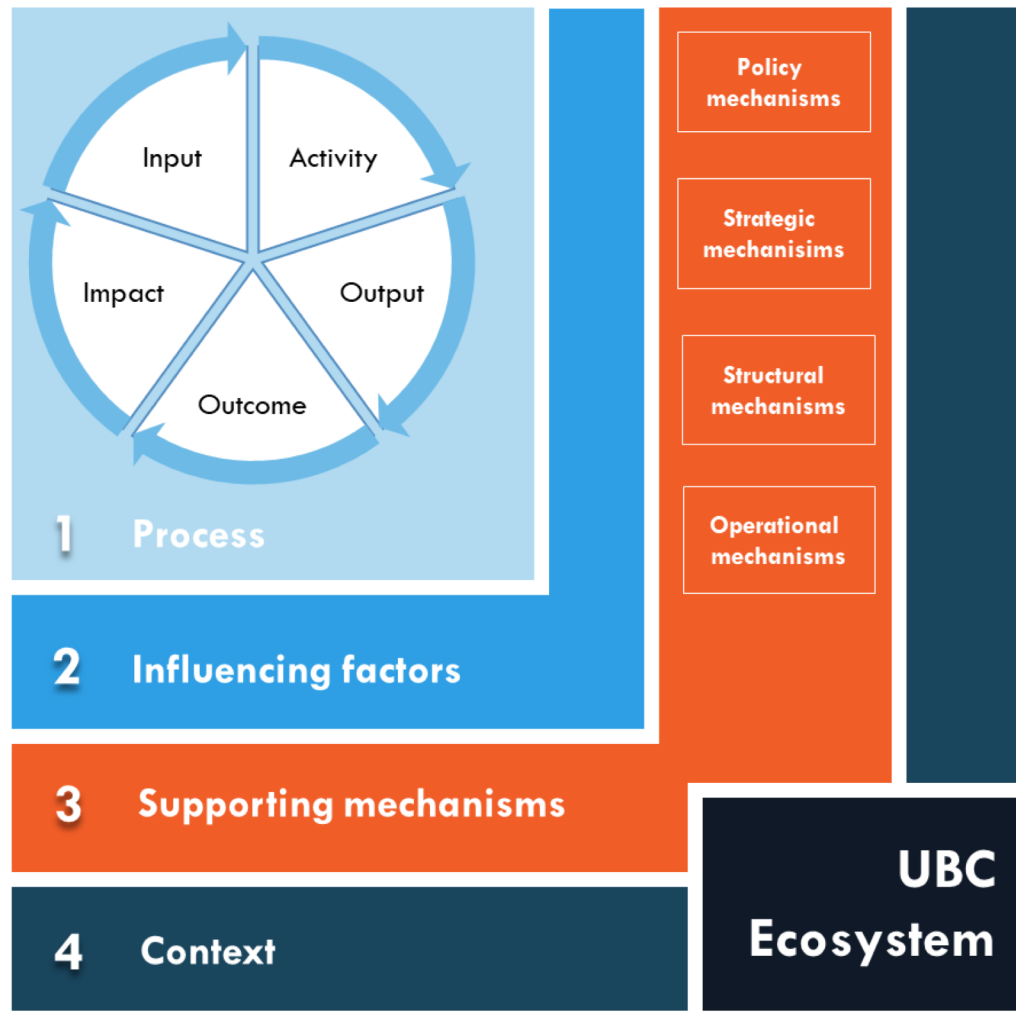
Business cooperating in education



■ Detractors ■ Passives ■ Promoters

European business NPS result: -2.1

# Supporting mechanisms for UBC



Supporting mechanisms are interventions designed to support the development of cooperation between HEIs and business.

There are four types of supporting mechanisms:

- Policy
- Strategic
- Structural
- Operational

This section outlines the extent to which UBC supporting mechanisms are developed in this sample from the HEI perspective.

At the European level, the extent of development of all these mechanisms significantly influences the extent of cooperation.

# Supporting mechanisms for UBC

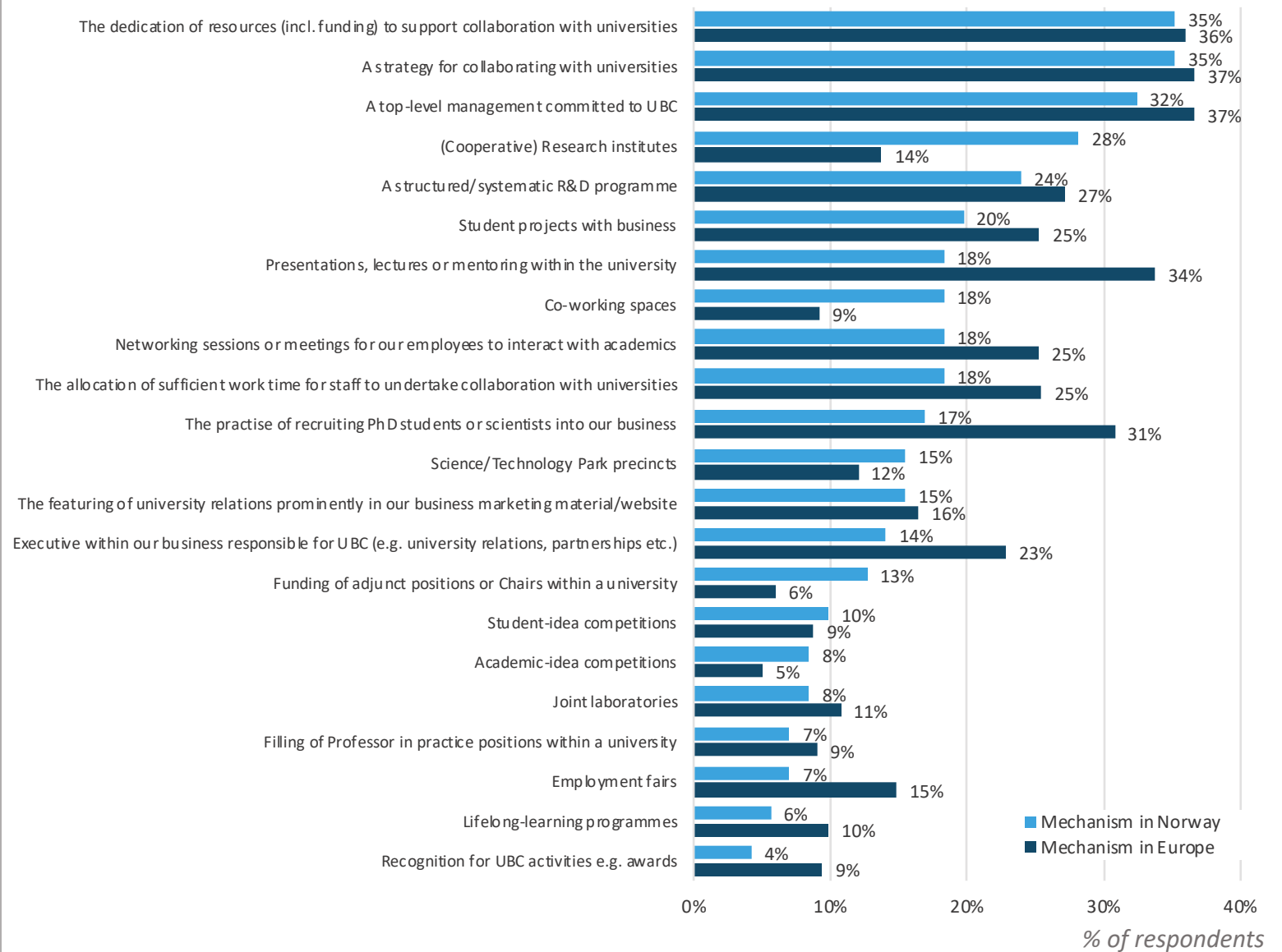
Norwegian businesses can adopt a range of supporting mechanisms in their interaction with universities. Most of them are present in about a third the businesses.

The most developed mechanism in Norway is the dedication of resources to support collaboration with universities (35%), followed by a strategy for collaboration (35%) and a committed top-level management (32%).

Compared to the European average, UBC supporting mechanisms such as presentations, lectures or mentoring within the university, the practise of recruiting PhD students, an executive responsible for UBC are considerably less developed in Norway.

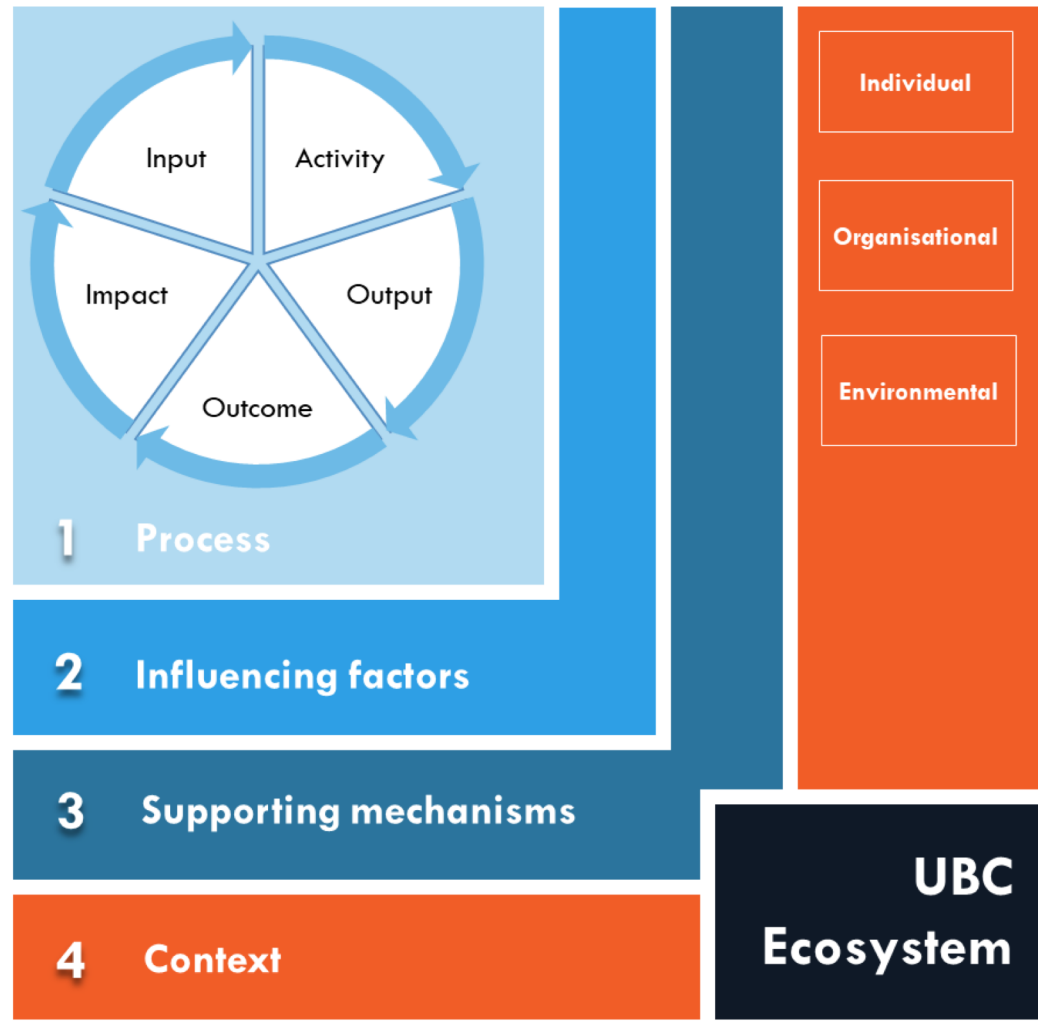
## Mechanisms supporting UBC

*'Do these supporting mechanisms for UBC exist in your business?'*





# Context



The degree to which UBC takes place is influenced by a set of elements present in the context of the organisation that cannot be changed in short term.

These include the characteristics of individual actors involved, the institutional factors relating to the university and business, as well as by a set of broader environmental factors (political, economic, social, technological, etc.).

This section outlines how some contextual factors influence UBC in the country.

# Context

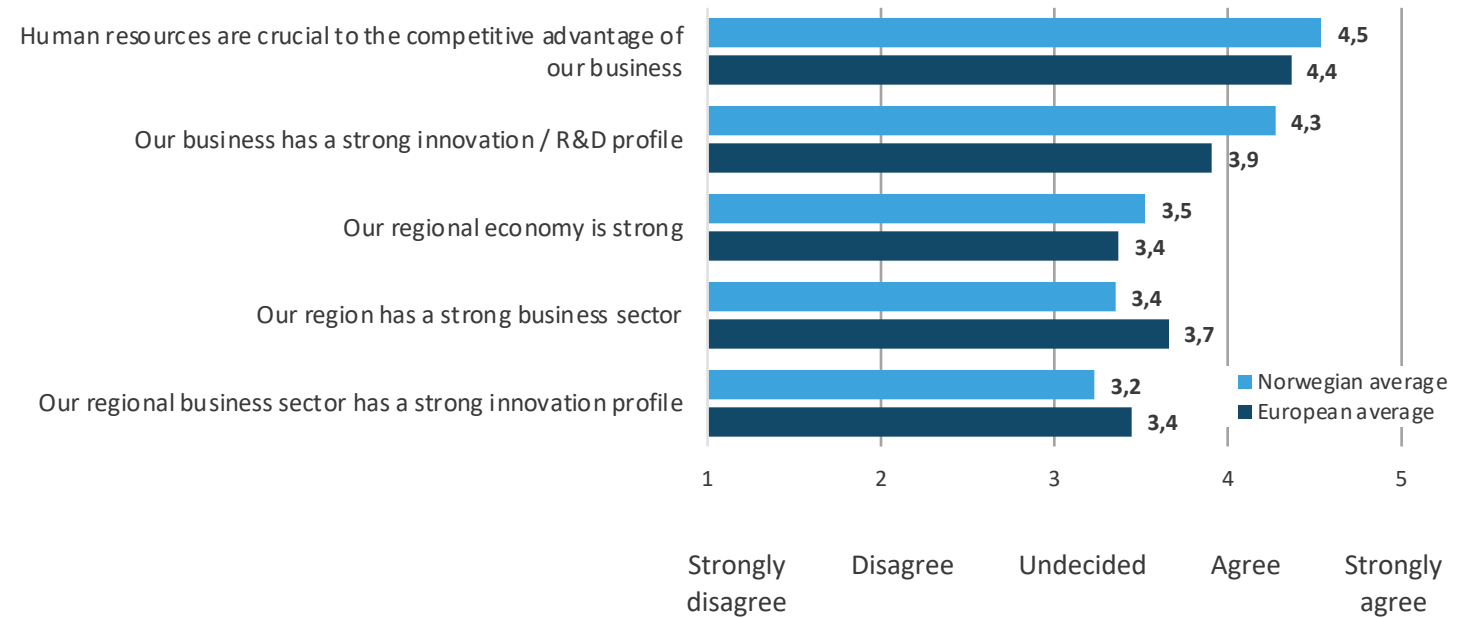
Norwegian businesses cooperating with universities perceive their context similarly to European cooperating businesses.

Human resources are essential for their competitiveness and the business innovation and R&D profile is seen as strong.

A lower perception emerges regarding the characteristics of the regional business sector and economy.

## Contextual factors affecting UBC

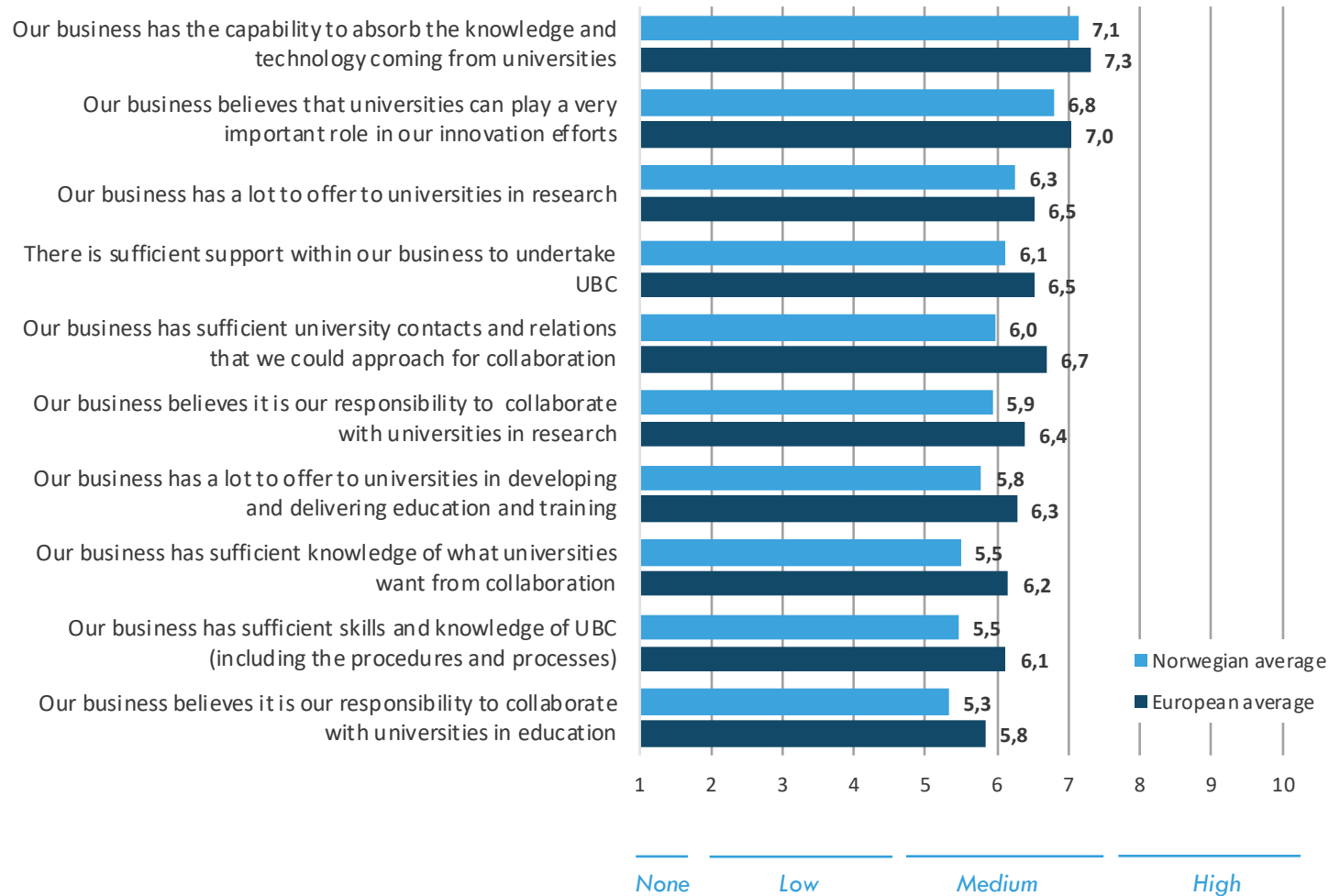
*'To what extent do you agree with the following statements?'*



# UBC capabilities and beliefs

## Supportive UBC environment

*How supportive are your organisation and environment for UBC?'*



Norwegian businesses perceive themselves as supportive towards cooperation with universities.

In particular they have the capability to absorb knowledge and technology from universities, whereas universities in turn play a very important role in the innovation efforts .

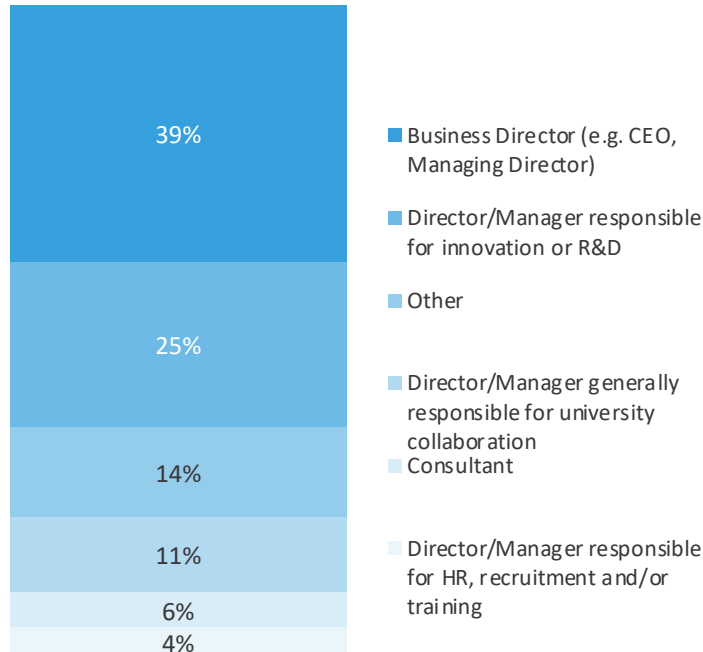
Yet, Norwegian businesses are less supportive towards UBC in education.

Norwegian businesses state that they have support within the business as well as sufficient university contacts, skills and knowledge in order to undertake UBC.

Overall, Norwegian businesses perceive themselves in a less positive way in comparison to European average.

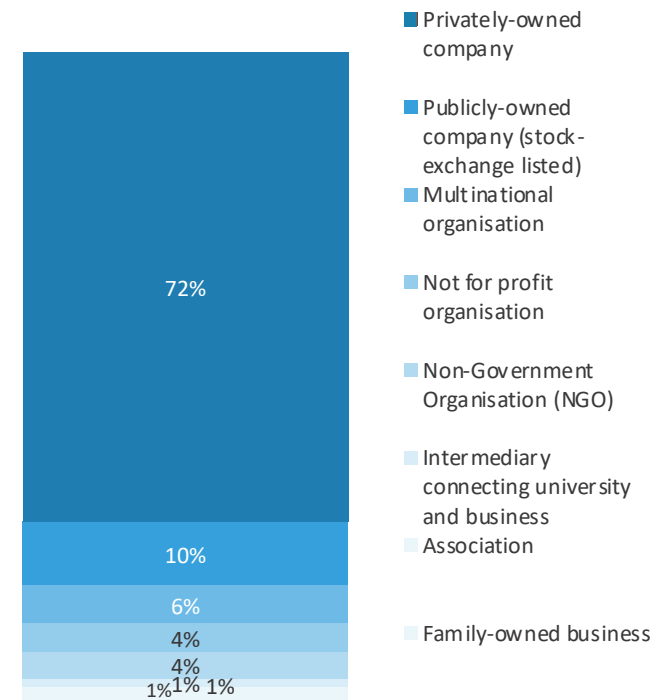
# Respondents profile

## Position of respondent



Business directors represent the largest group of Norwegian respondents (39%), followed by directors responsible for innovation or R&D (25%). The remaining respondents identified themselves as directors responsible for university collaboration (11%), consultants (6%), and directors of HR, recruitment and training (4%). 14% of Norwegian business respondents hold 'other' positions.

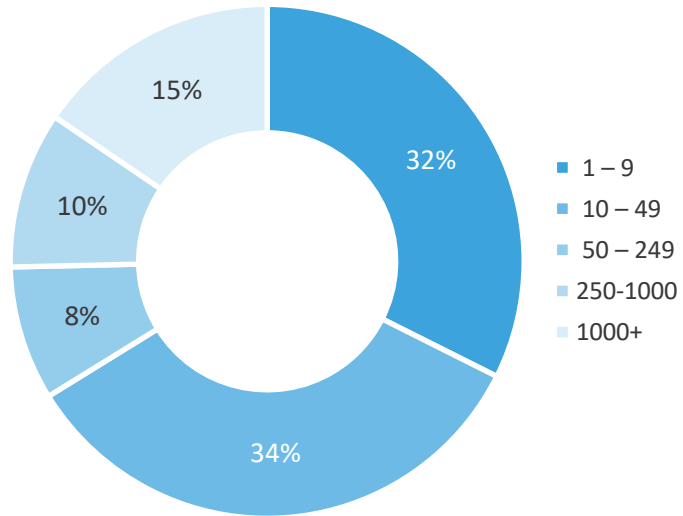
## Type of business



A wide variety of businesses were represented in the Norwegian sample, with privately-owned companies forming the largest group (72%). The type of businesses with 10% or less representation included publicly-owned companies, multinational organisations, associations, not for profit organisations, NGOs, intermediaries connecting university and businesses and Family owned businesses.

# Respondents profile

## Business size



Sample Size	
Norwegian business representatives	n = 71
European business representatives	n = 3.113

Two thirds in the Norwegian business sample is comprised by small firms (under 49 employees). Only 8% work for medium-sized companies, while large companies (250 to 1000+ employees) are represented by 25% of the business respondents in the sample.

# Contact us

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This report is part of the DG Education and Culture study on the University-Business Cooperation in Europe: drivers, challenges and opportunities in Europe EAC/10/2015. Further information can be found at [www.ub-cooperation.eu](http://www.ub-cooperation.eu)

This report is also part of the Global University-Business Monitor initiative, a global study into university engagement and cooperation between university and business. Further information can be found at [www.uni-engagement.com](http://www.uni-engagement.com)