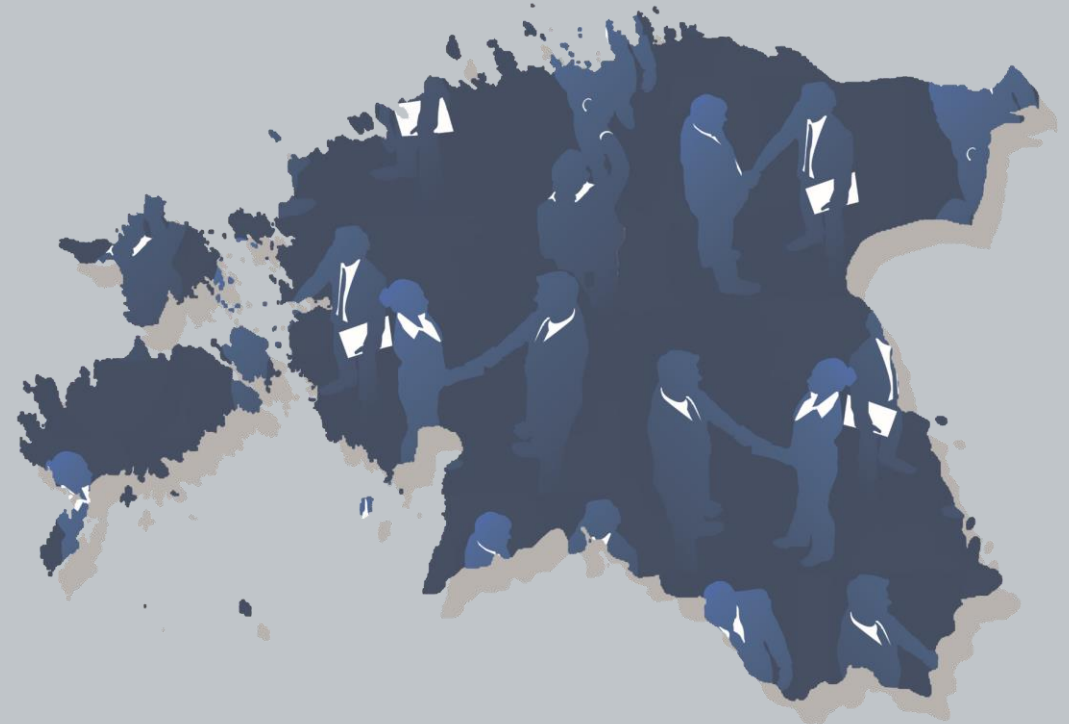


# State of University- Business Cooperation ESTONIA

## Business Perspective

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



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

### Partners



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# Executive summary

## Summary

This report seeks to contribute to our understanding of the business perspective on university-business cooperation (UBC). Examining the perceptions of a wide range of businesses provides positive signs for the future, with 99% of businesses that cooperate 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 initiatives and activities that can support their cooperation efforts, as well as in developing (actual and perceived) capabilities, particularly of those businesses not currently engaged in cooperation.

## About the study

The results presented in this report reflect the perceptions of business people in Estonia with respect to cooperation between universities and business. Data was collected by means of an online survey sent out via email to a business database that was developed from publicly available information, leading to a total of 30 responses. The study measured the perceptions of respondents with respect to their businesses and cooperation efforts.

## Businesses seen as the primary UBC initiators

Estonian businesses mostly engage in joint R&D (3.5) and consulting (3.4). All other activities are

considerably less developed. In particular, Estonian business representatives engage the least in valorisation and management activities. Exceedingly low is the development university support, with 80% of Estonian businesses not being involved in at all.

Similarly to academics who perceive themselves as the main actors reaching out for collaboration, Estonian businesses see themselves as the most proactive initiators of UBC. On the other hand, Estonian business representatives perceive university management and government as those stakeholders that initiate UBC less often .

## It's them, not us

Estonian business are considerably hindered by the lack of people with business knowledge within universities for cooperating with universities. Further high barriers identified by business respondents relate to the focus on producing scientific outcomes (e.g. papers) by universities and bureaucracy related to UBC in universities.

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 emerges as one of the top five facilitators, relationship related factors are much more prominent. Similarly to their HEI counterparts, Estonian businesses highlight the importance of a shared goal, mutual trust, prior relationship with the university partner and mutual commitment. These results indicate that any effort towards enabling business cooperation with universities should focus on the development of trustful relationships, potentially through networking events and other opportunities to build mutually beneficial relationships.

## **Less benefits for us**

Estonian business see much less benefits from UBC for themselves than for university stakeholders, including students and institutions. But what motivates them to cooperate with universities? The main motivators for Estonian businesses to undertake UBC are related to the access to new technologies and knowledge as well as positive impact on society. This aligns with the results reporting joint R&D as the most developed UBC activity.

## **Lack of supporting mechanisms**

Although almost half of Estonian business respondents report that their companies' top-management is committed towards UBC, there is less developed documented strategy for

collaboration with universities. Another highly developed mechanism, also reported by nearly half of Estonian businesses, is the one related to presentations, lectures or mentoring within university (40%). Employment fairs and funding of adjunct positions or Chairs within university are non-existent in Estonian context.

## **Not our responsibility**

Estonian businesses have a positive view of their abilities in undertaking cooperation. In particular, they state they know what universities generally want from the collaboration. They further identified their strengths in the ability to absorb the knowledge and technology coming from HEIs.

Yet, although claiming to be the initiator of UBC, Estonian businesses find themselves less inclined towards taking the responsibility to collaborate with universities in both education and training.

# 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

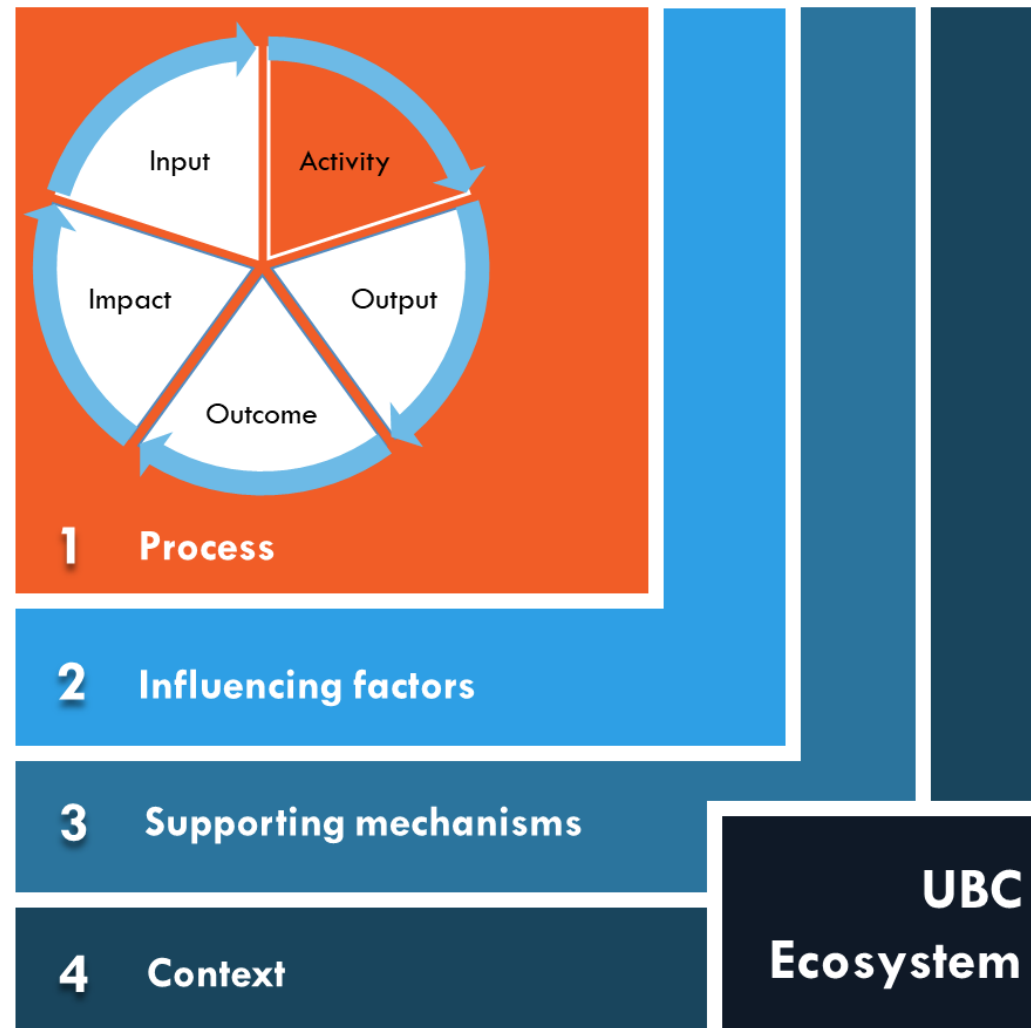
# UBC activities

## 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

The extent of Estonian UBC shows the signs of underdevelopment in several UBC activities. More than 50% of businesses do not collaborate with universities in almost all UBC activities.

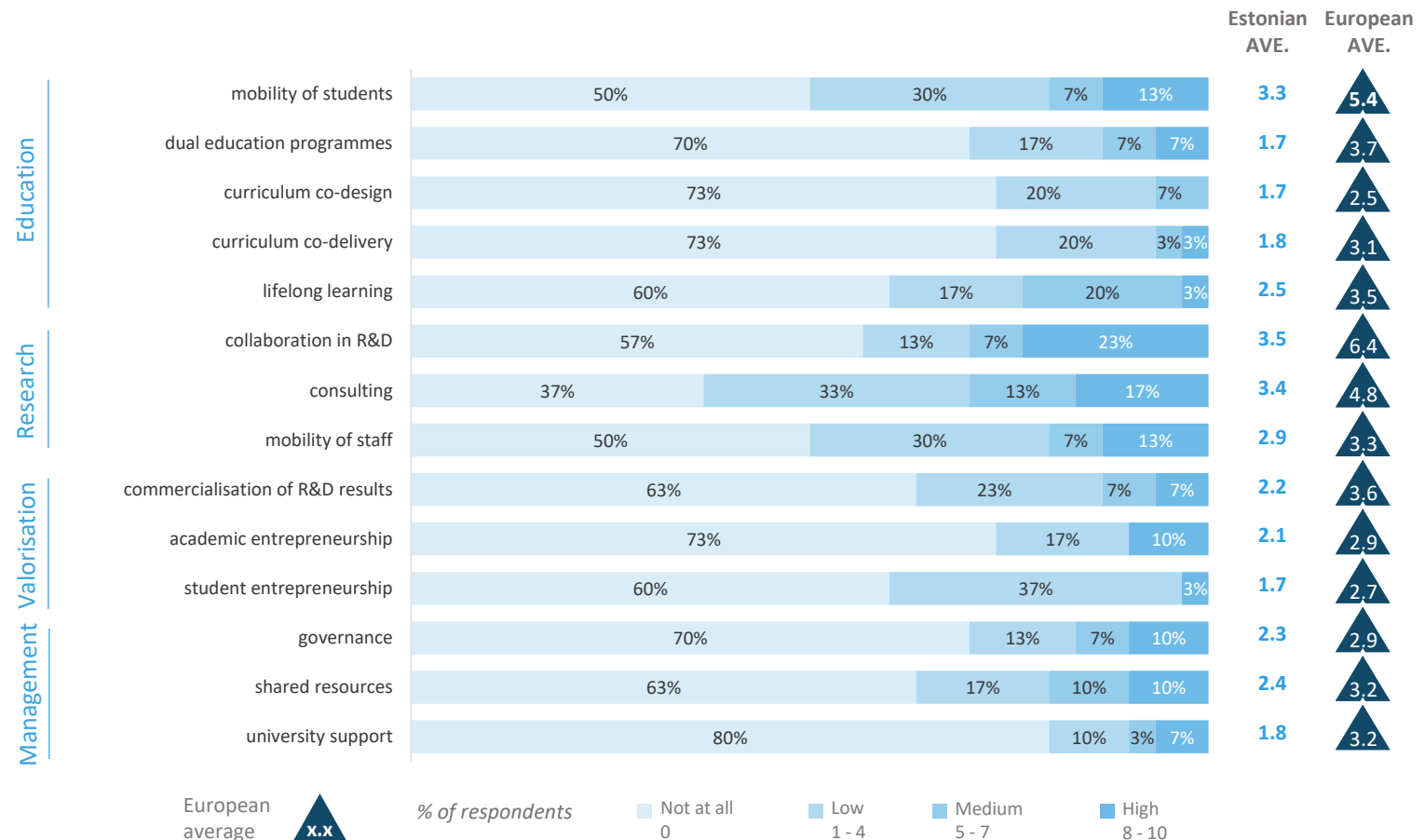
Within the different UBC modalities, based on national average research-related modalities such as collaboration in R&D and consulting show the largest levels of development (3.5 and 3.4 respectively). This is due to the fact that universities in Estonia have a wide variety of labs and know-how which are extensively used by businesses to innovate and create novel approaches.

In the education dimension, the mobility of students is the most developed UBC activity with the average of 3.3. As Estonian labor market is limited businesses are trying to create relationships with students before they graduate. Businesses offer internship positions and expect students to come back for employment after they graduate.

The least developed activities are in the areas of valorisation and management. Especially underdeveloped is the university support where 80% of businesses do not engage. In Estonia, there is no such tradition that businesses actively participate in supporting universities due to lack of resources. Rather, they focus on supporting separate students who they see as a future employees than educational institutions themselves.

## UBC activities development

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

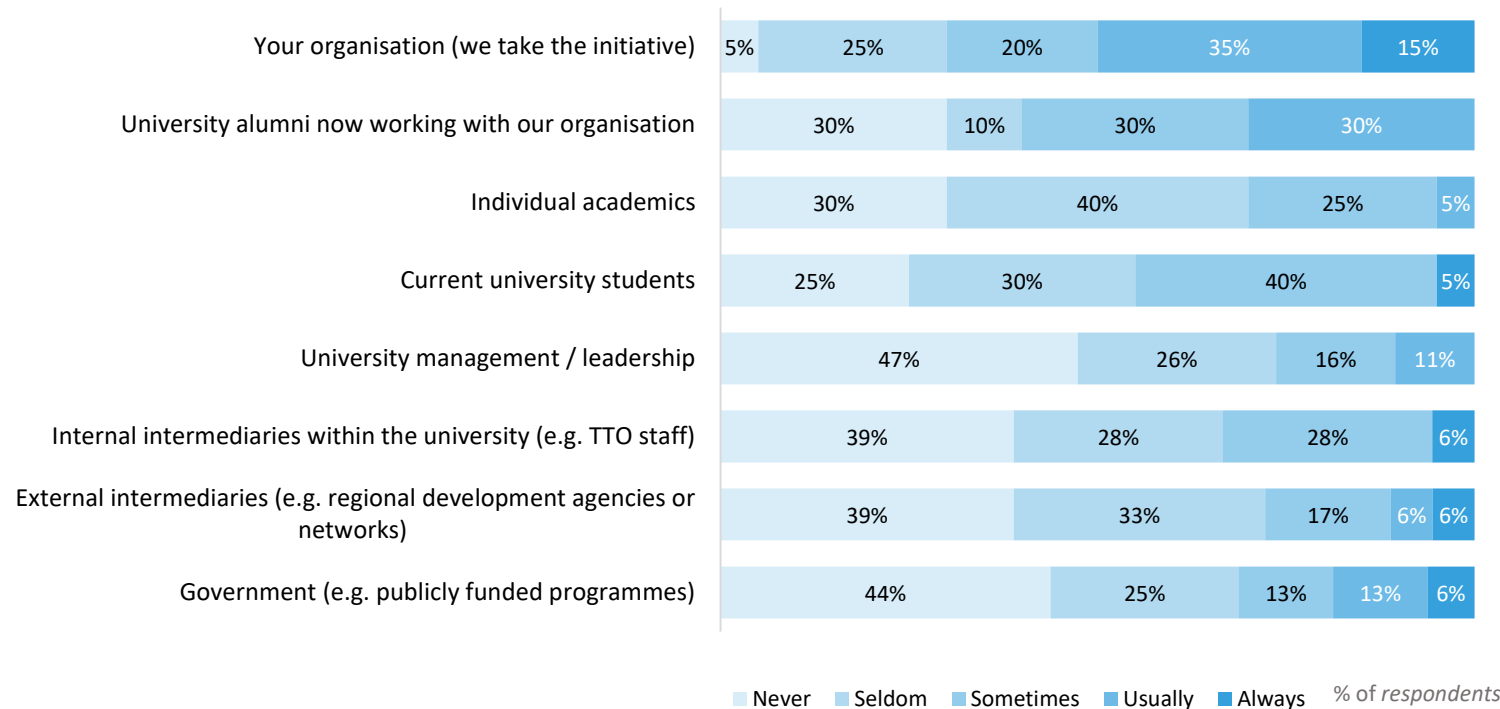




# Initiation of UBC

## How UBC is initiated

*'How often various stakeholders initiate UBC activities'*



Estonian businesses see themselves as the major initiator of cooperation with universities, with 50% of respondents indicating that they 'always' or 'usually' initiate cooperation, followed by the government and external intermediaries who initiate collaboration (29% and 12% respectively).

The lowest rated stakeholders are individual academics and university management with 70% and 77% of the respondents reporting that they 'never' or 'seldom' undertake any first actions towards UBC initiation.

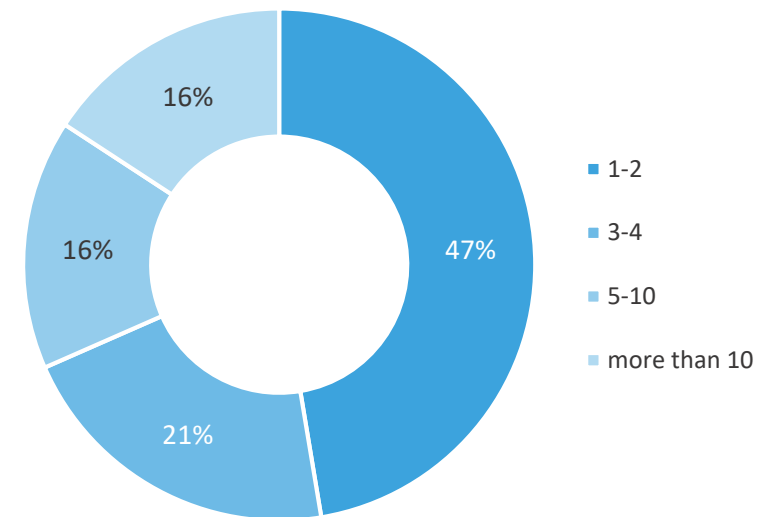
# Geographical location still matters

## Location of university partners

Percentage of cooperating businesses with...	
universities in their region	90%
universities in their country	95%
universities outside their country	37%

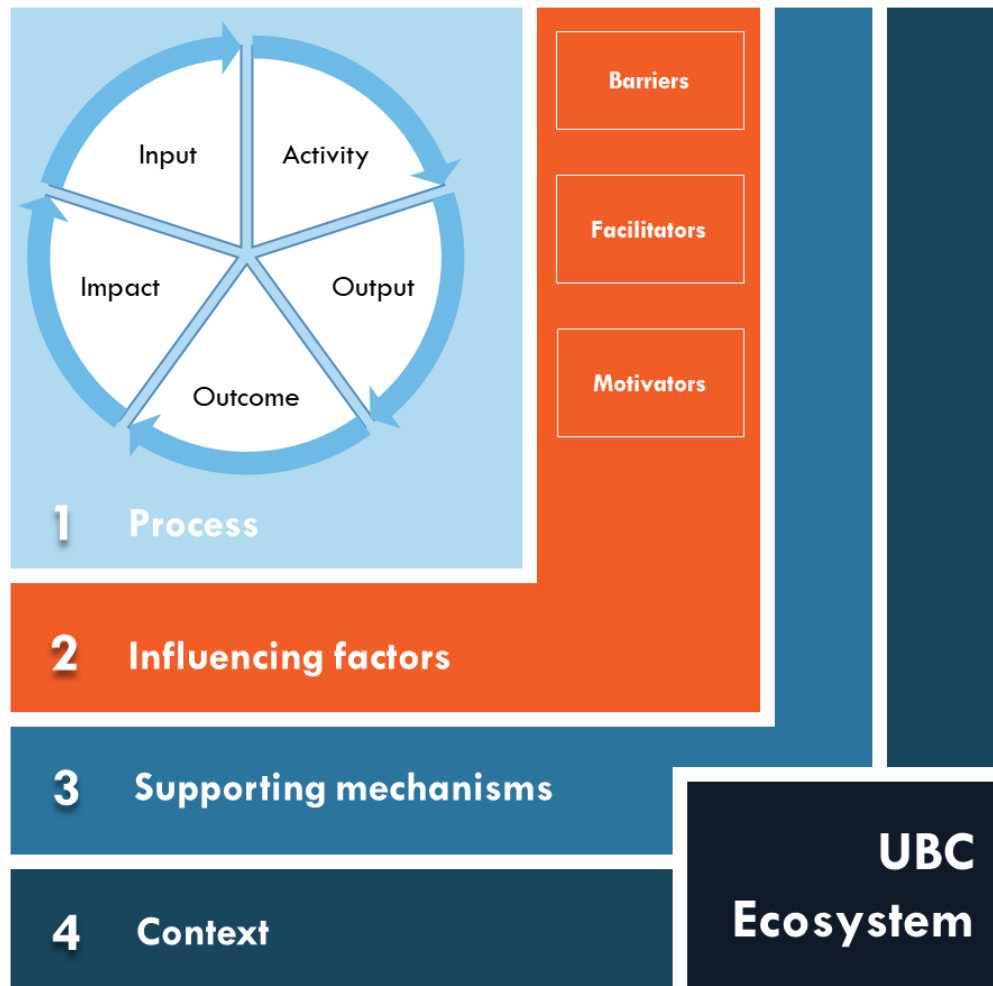
While most Estonian businesses cooperate with Estonian universities (95%), the results also report high percentages for universities from the region 90%. However, Estonian businesses cooperate to a small extent with international universities (only 37%).

## Number of university partners



With respect to the number of university partners, 47% of Estonian business respondents cooperate with 1 to 2 HEI partners. While 21% of businesses cooperate with only 3 or 4 partners, 16% have established relations with 5 to 10 universities and further 16% 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

## Barriers

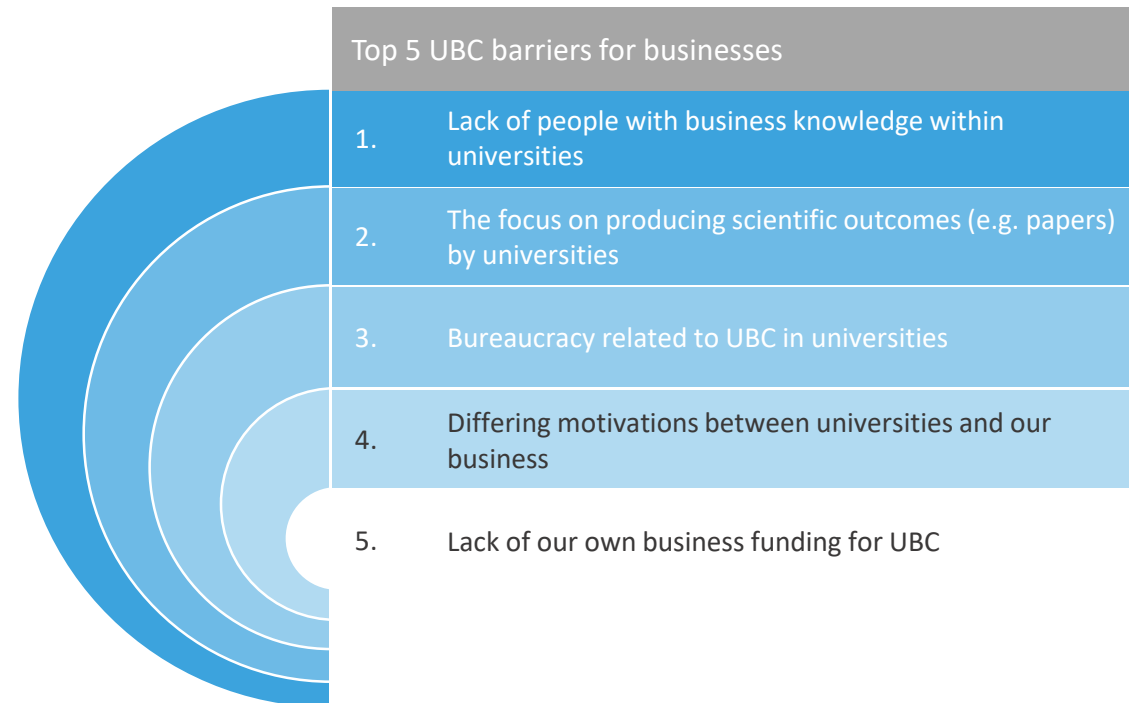
*'What is inhibiting your cooperation with universities?'*

For Estonian businesses the top five factors inhibiting their cooperation with universities pertain to different areas.

Lack of people with business knowledge within universities emerges as the top barrier for collaboration with universities. Often, scientists in Estonia have excellent set of discipline-related competencies, but they lack knowledge about matters such as finances, marketing, business modeling, etc.

The focus on producing scientific outcomes (e.g. papers) by universities is a further obstacle. The performance of the scientists in Estonian universities is measured by the number of publications in high-ranking International journals. Thus, one motivation of scientists for collaboration is the publication opportunity. If collaboration offers modest scientific outcome, the involvement of academia might be obstructed.

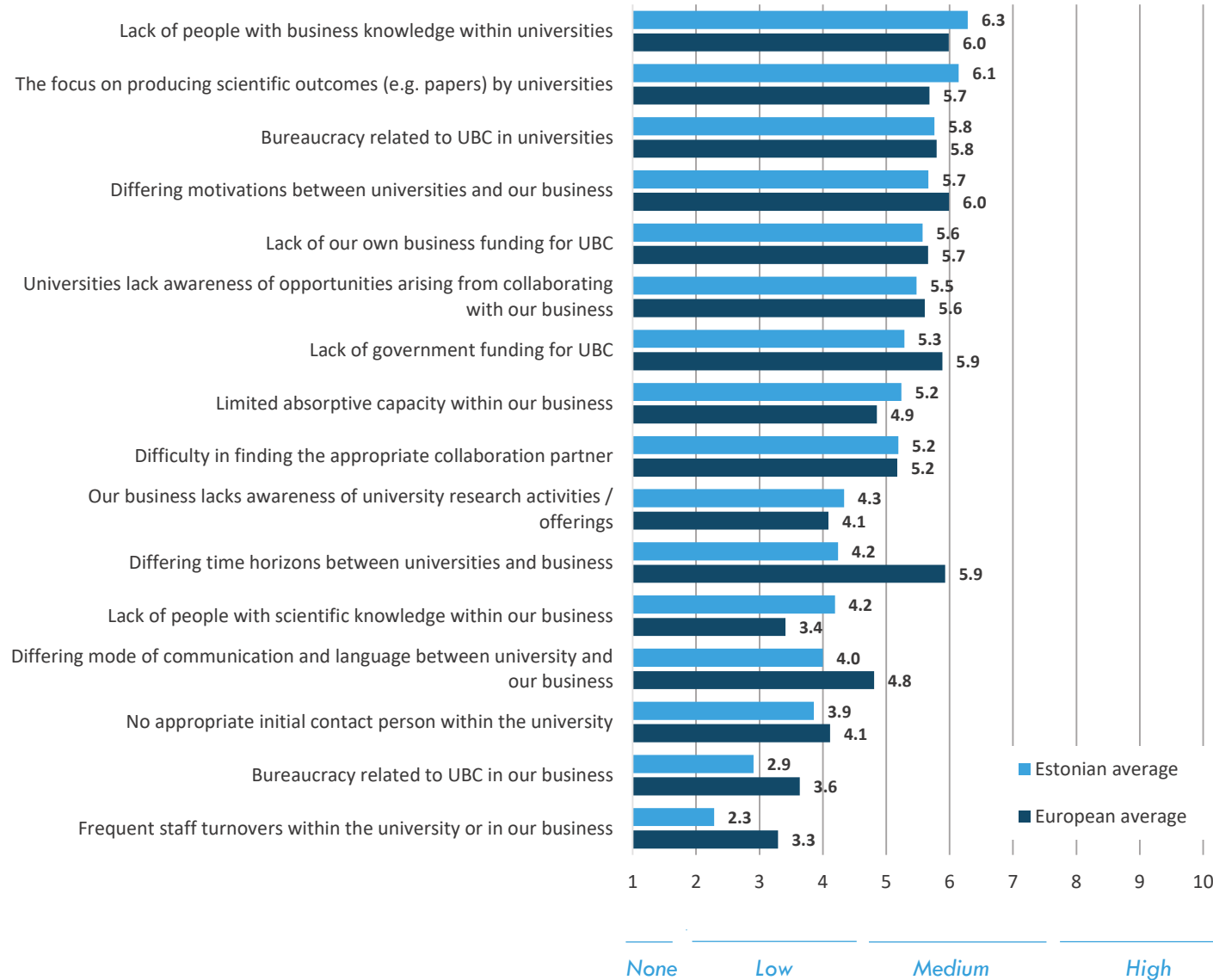
Further barriers topping the list include bureaucracy related to UBC in universities, differing motivations and lack of business funding for UBC. Despite the favorable business environment in Estonia, there is bureaucracy in UBC which manifests itself in long decision-making process and approval chains, rights of fund distribution within the universities and thus restricted human resources allocation.



# Barriers hindering UBC

## Barriers

'What is inhibiting your cooperation with universities?'



The majority of barriers perceived by Estonian businesses who are involved in UBC, and their European counterparts are to some extent similar. However, when comparing their perspectives notably the Estonian businesses are found to perceive the barriers slightly less stronger than the European average, with a few exceptions.

Based on the responses received from Estonian businesses and their European counterparts, the two strongest barriers emerged for both groups are related to the cultural issues, lack of people with business knowledge within universities and the focus on producing scientific outcomes by universities.

Interestingly, according to the results for businesses from both Estonia and Europe the frequent staff turnover within the university or in the business is seen as the weakest barrier.

# Drivers stimulating UBC

The top five UBC facilitators perceived by Estonian businesses cooperating with HEIs are found to be related to the relationship factors and one funding related driver.

Thus, the existence of a shared goal, mutual trust and commitment top the list of what facilitates the cooperation with universities. Those businesses which find mutual goal and interest within the UBC framework, commit to the joint activity and have a trustful and open relationship. When the UBC is mutually valued it improves the image and credibility of the business and brings universities closer to practice.

This is followed by the funding opportunities and flexibility of a university partner. Businesses that apply for external funds for UBC purposes (e.g. innovation voucher grant from Enterprise Estonia) are actively seeking cooperation opportunities and offer joint projects.<sup>1</sup>

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

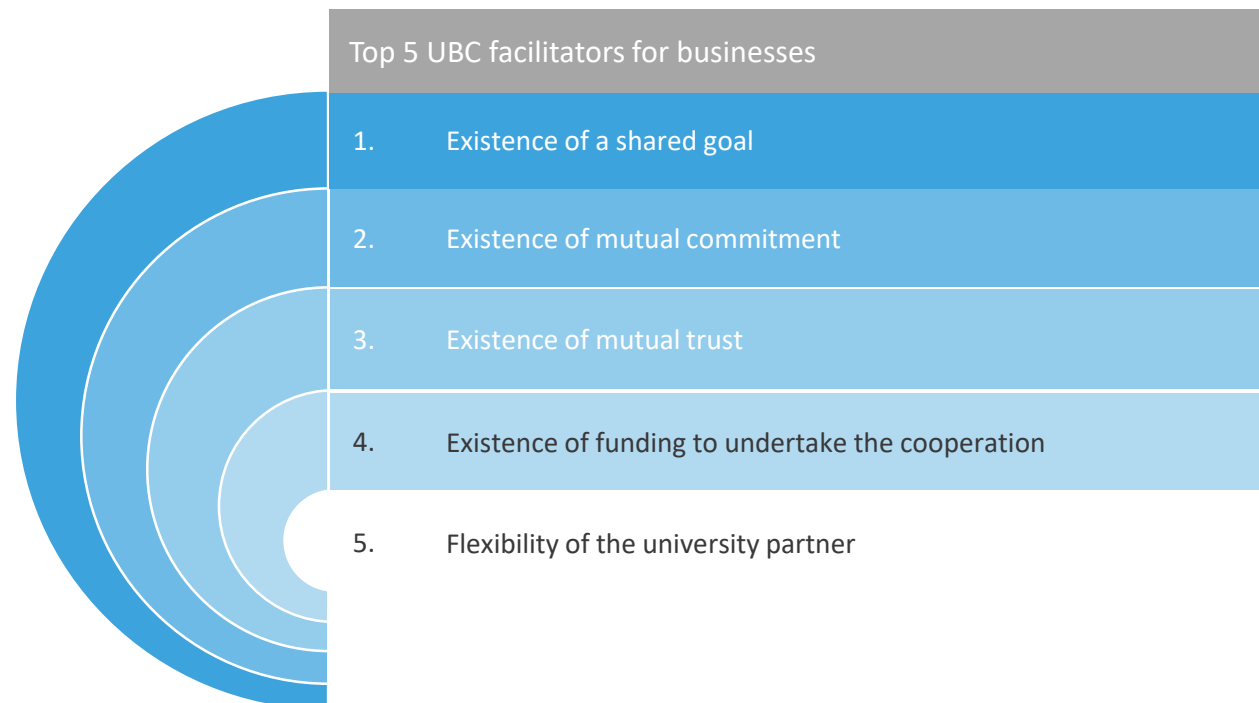
1. **Facilitators** – factors that enable or ease cooperation
2. **Motivators** – incentives or benefits that the respective stakeholders would like from the cooperation

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?'*

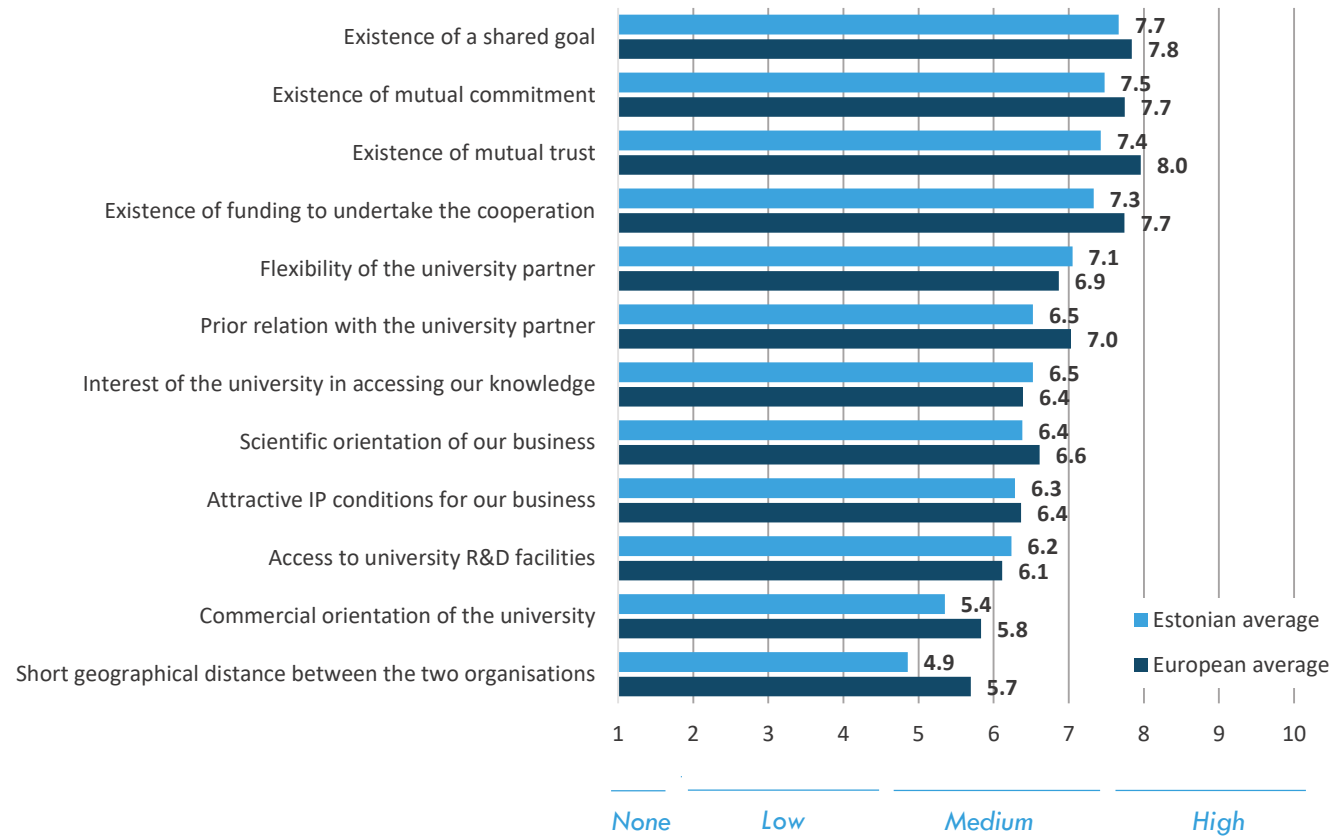


<sup>1</sup>Enterprise Estonia (2019). Retrieved from: <https://www.eas.ee/teenus/innovation-voucher/?lang=en>

# Drivers stimulating UBC

## Facilitators

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



Personal relationship facilitators bear considerable importance in the development of UBC for both Estonian and European businesses.

While the factors short geographical distance between the two organisations (4.9) and commercial orientation of the university (5.4) scored lowest as facilitators of cooperation in Estonia, they are considered of medium importance for European businesses with scores of 5.7 and 5.8 respectively.

# Drivers stimulating UBC

The UBC motivators rated most highly by Estonian business respondents can be classified into two meta-groups, namely innovation and competitiveness.

The results show that businesses cooperate with universities primarily for their own innovation related purposes, with the top three motivators ranked as to 'get access to new technologies and knowledge', 'improve our innovation capacity', and 'obtain a customised solution for our business'.

The possibilities to gain 'access to better qualified graduates' and to 'obtain funding/financial resources' are also considered by businesses as a motivation towards collaboration with universities.

*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?'*

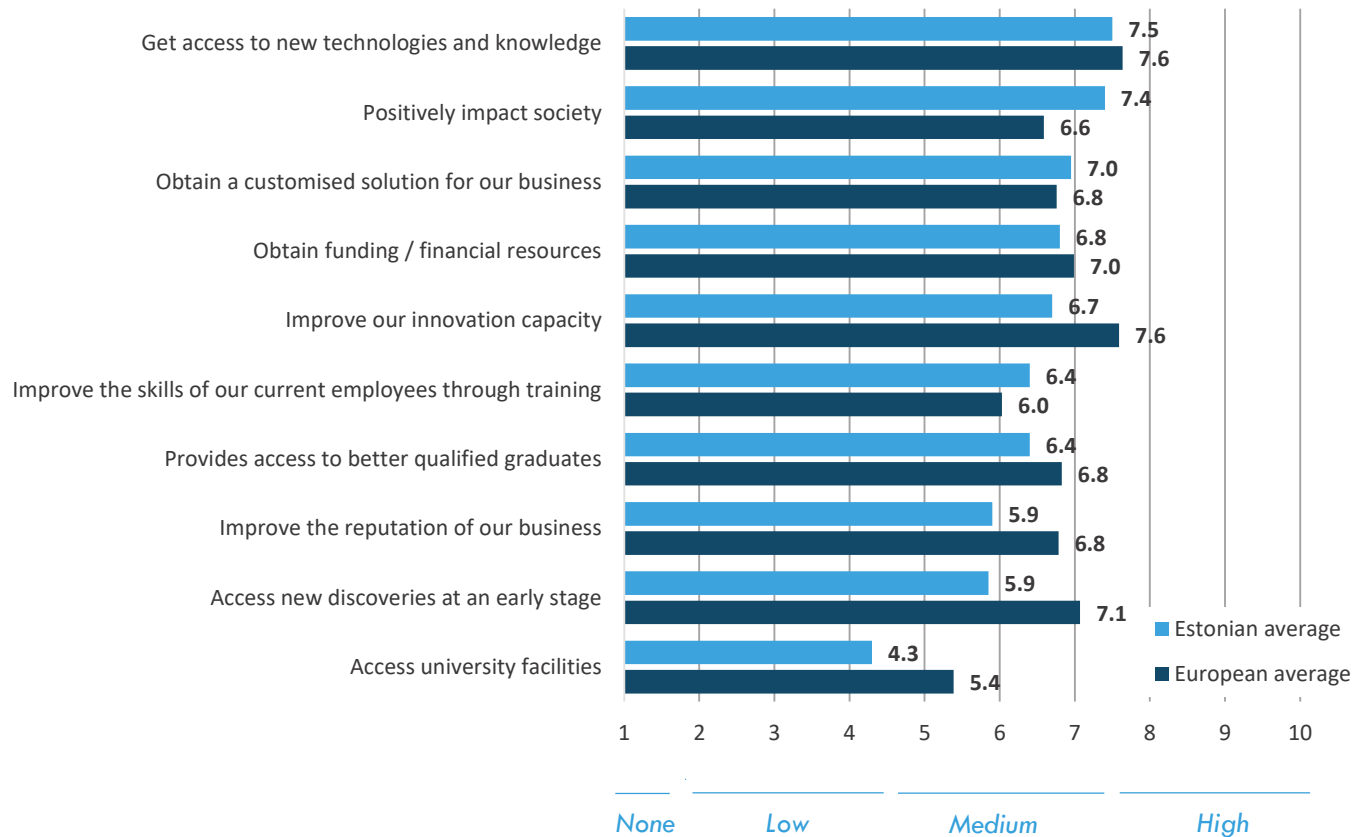




# Drivers stimulating UBC

## Motivators

'What motivates you to cooperate with universities?'



The motivators rated most highly by businesses are classified into three meta-groups, namely research, society and funding.

In particular, Estonian as well as European businesses are motivated to cooperate with universities in order to get access to new technologies and knowledge and to positively impact the society. Similarly, factors such as obtaining funding and a customised solution for their business are in the top 5 of both groups.

On the other hand, access to the university facilities and and new discoveries at an early stage are the least developed and substantially less developed than the EU average. Access to new discoveries is limited due to various reasons: first of all, scientific discoveries are published in academic journals or presented in academic conferences where businesses are rare guests/readers. Secondly, universities are offering patenting support for scientists to protect their discoveries which does not allow disseminating results of the discoveries at the early stage. The laboratory equipment in universities is expensive and thus the access is restricted and usually is not open for unsupervised utilization.

# Benefits of UBC

Estonian businesses have been asked to what extent various stakeholders receive benefits from UBC. According to the results, students are considered the main beneficiaries by both Estonian and European respondents.

Conversely, Estonian businesses consider society and universities to be the second and third benefactor.

Both groups perceive government/public authorities as benefiting from UBC the least.


*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?'*

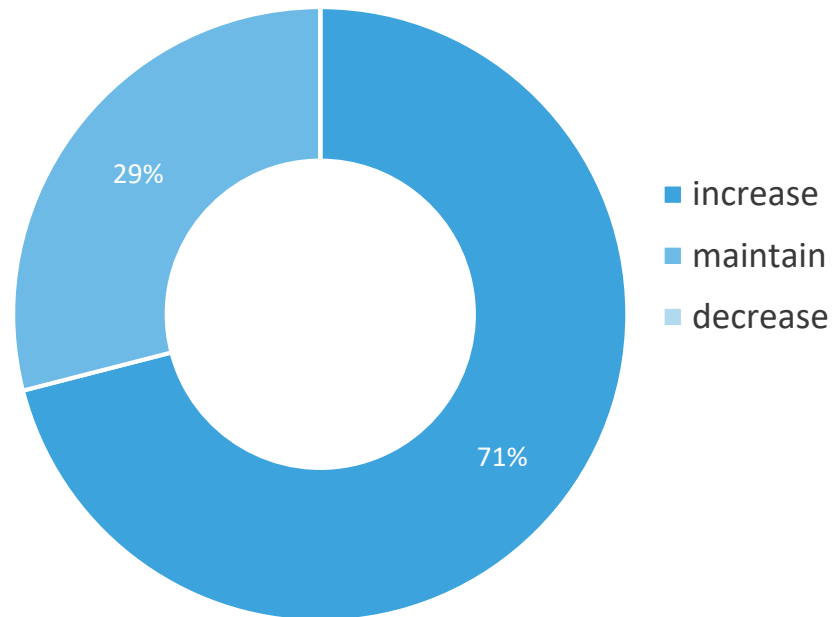


	Estonian businesses	European businesses
1.	Students	Students
2.	Society	Universities
3.	Universities	Businesses
4.	Business	Academics
5.	Academics	Society
6.	Government/public authorities	Government/public authorities

# Future intentions

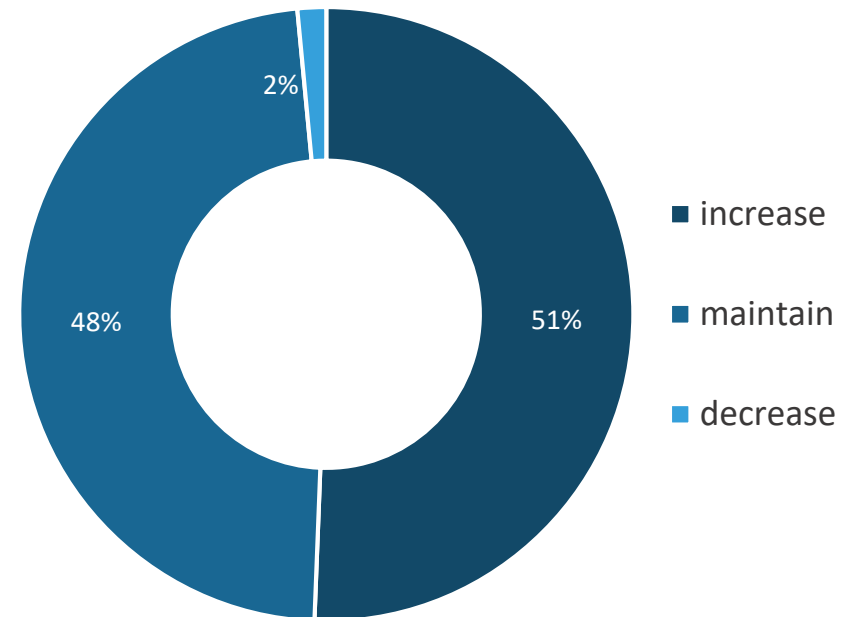
## Future UBC intentions – Estonia

*As answered by Estonian businesses*



## Future UBC intentions – EUROPE

*As answered by European businesses*



In a vote of confidence in UBC, 100% of businesses in the Estonian sample that cooperate with universities indicate positive outlook towards UBC. 71% of them plan to increase while 29% of them plan to maintain their cooperation with universities.

European businesses seem to be even more confident in terms of their future intention 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

Estonian businesses active in UBC were questioned about their willingness to recommend other businesses to cooperate with universities in R&D and Education and Training (E&T).

Cooperation experience matters, as businesses with experience in cooperation are more likely to promote R&D and E&T cooperation with universities. Using the *Net Promoter Score (NPS)* metric, a proxy for customer satisfaction, it can be seen that there is a wide gap in the level of support towards UBC between Estonian businesses engaged in R&D versus E&T, with research cooperation receiving a higher score of 11% than education related UBC with -6%. Education and training projects requested by businesses are often quite expensive (due to university overheads) short 1-2 days training sessions that might not deliver major results that are expected and this can be one reason for decreased satisfaction.

In terms of recommendation of R&D cooperation European businesses follow a similar tendency. As for education though, the Estonian businesses are more reserved and score a significantly lower NPS.

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

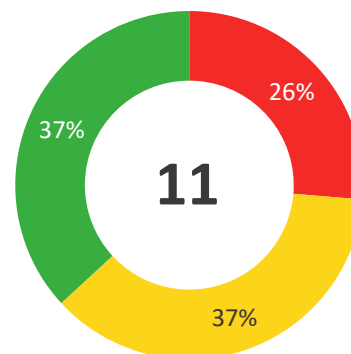
education and training (E&T). The *Net Promoter Score* metric offers a proxy for customer satisfaction.

## 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	26%	37%	37%	11%
Business cooperating with universities in E&T	31%	44%	25%	-6%

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

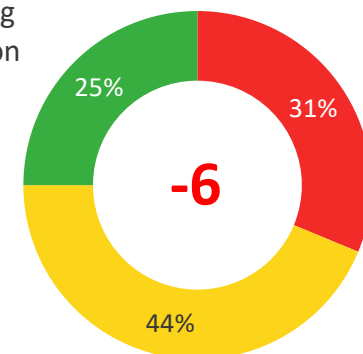
Business cooperating in research



■ Detractors ■ Passives ■ Promoters

European business NPS result: 28.2

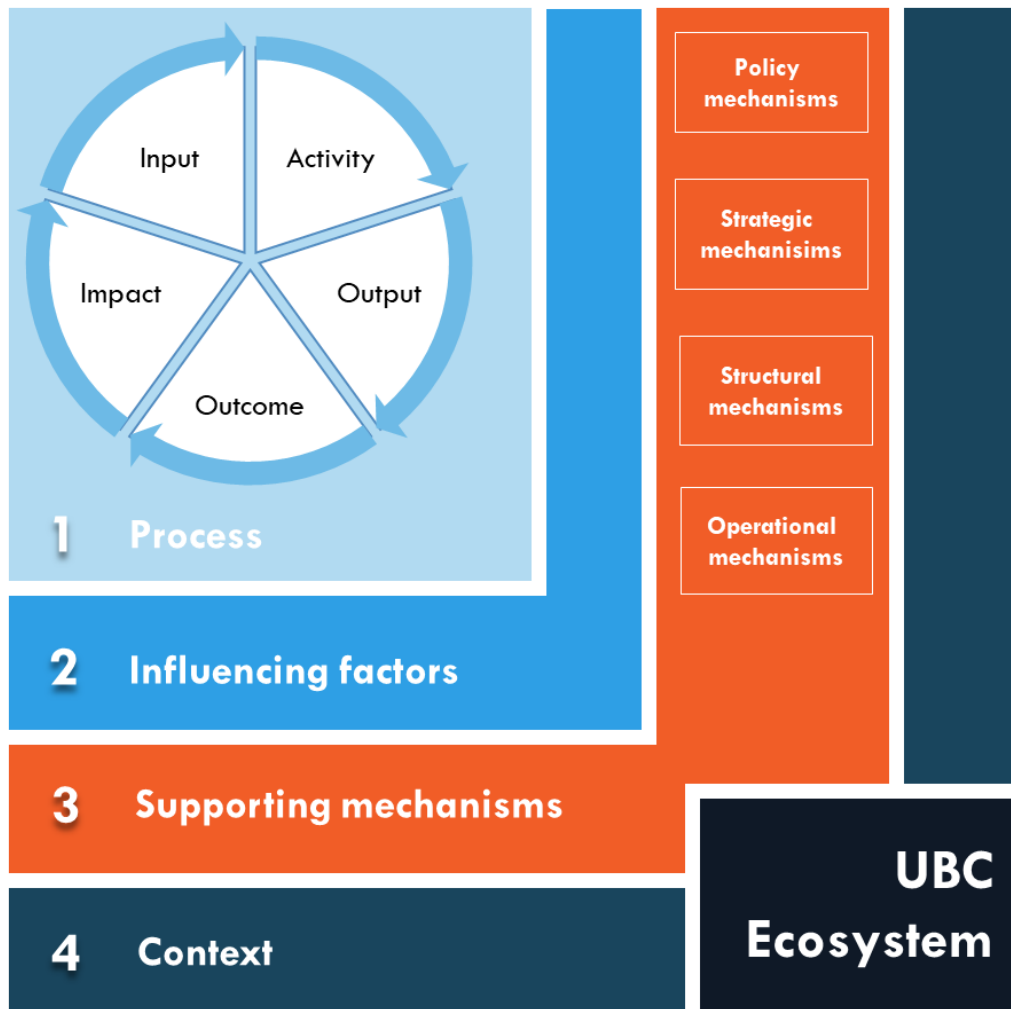
Business cooperating in education



■ 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

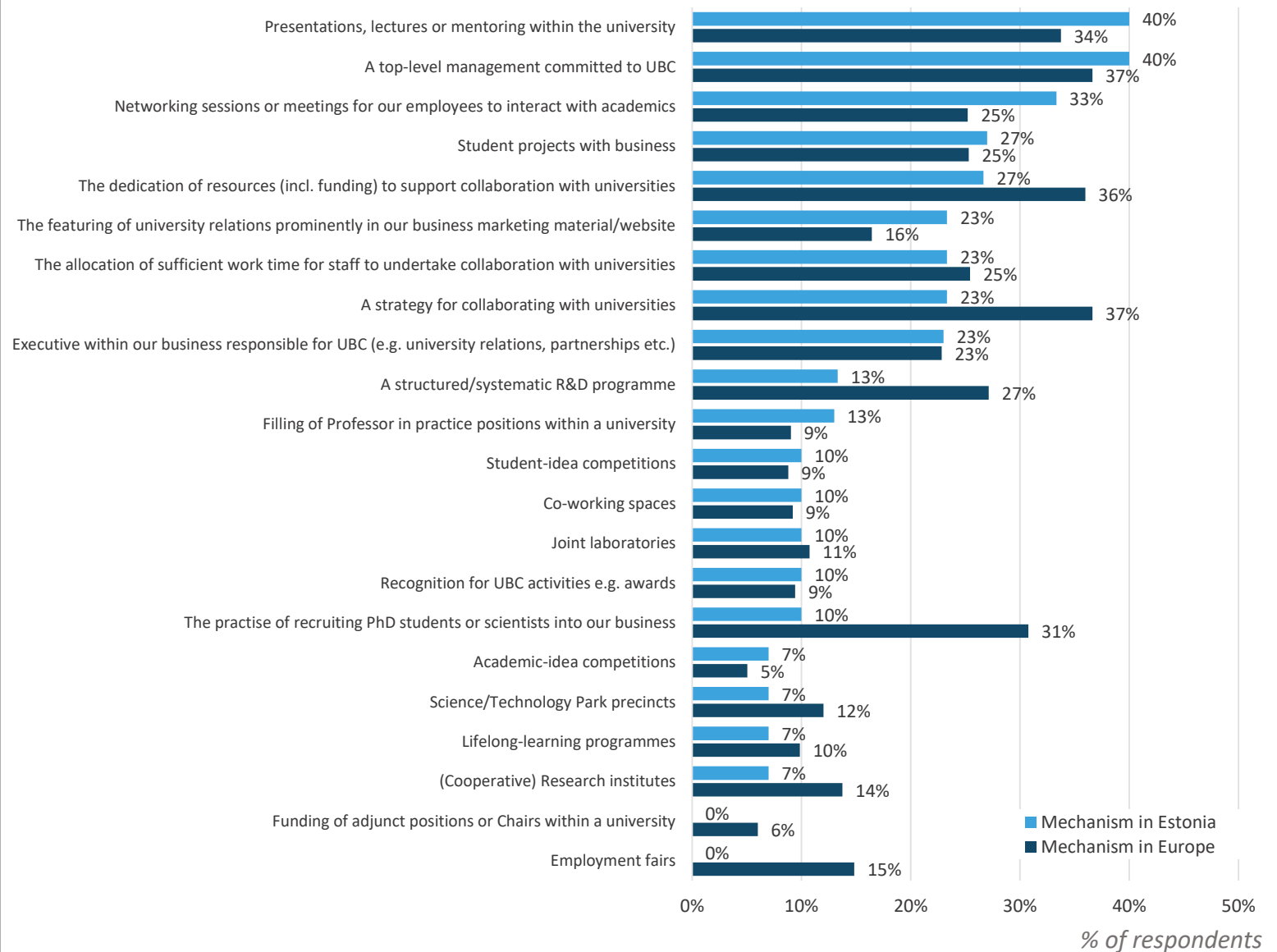
Estonian business respondents were asked to what extent various supporting mechanisms are developed in their organisations. These mechanisms comprise strategies, structures and activities.

The most developed mechanisms pertain to presentations, lectures or mentoring within the university and top level management committed to UBC (40% each). The percentage also exceeds that of the European one. In general, it is prestigious to collaborate with universities and members of the top management and often graduates of the universities want to retain links one way or another. Top level management obviously sees more cooperation opportunities compared to the rest of the employees. The universities often offer opportunities for public lectures and presentations on various topics and invite the general public (incl. businesses) to participate.

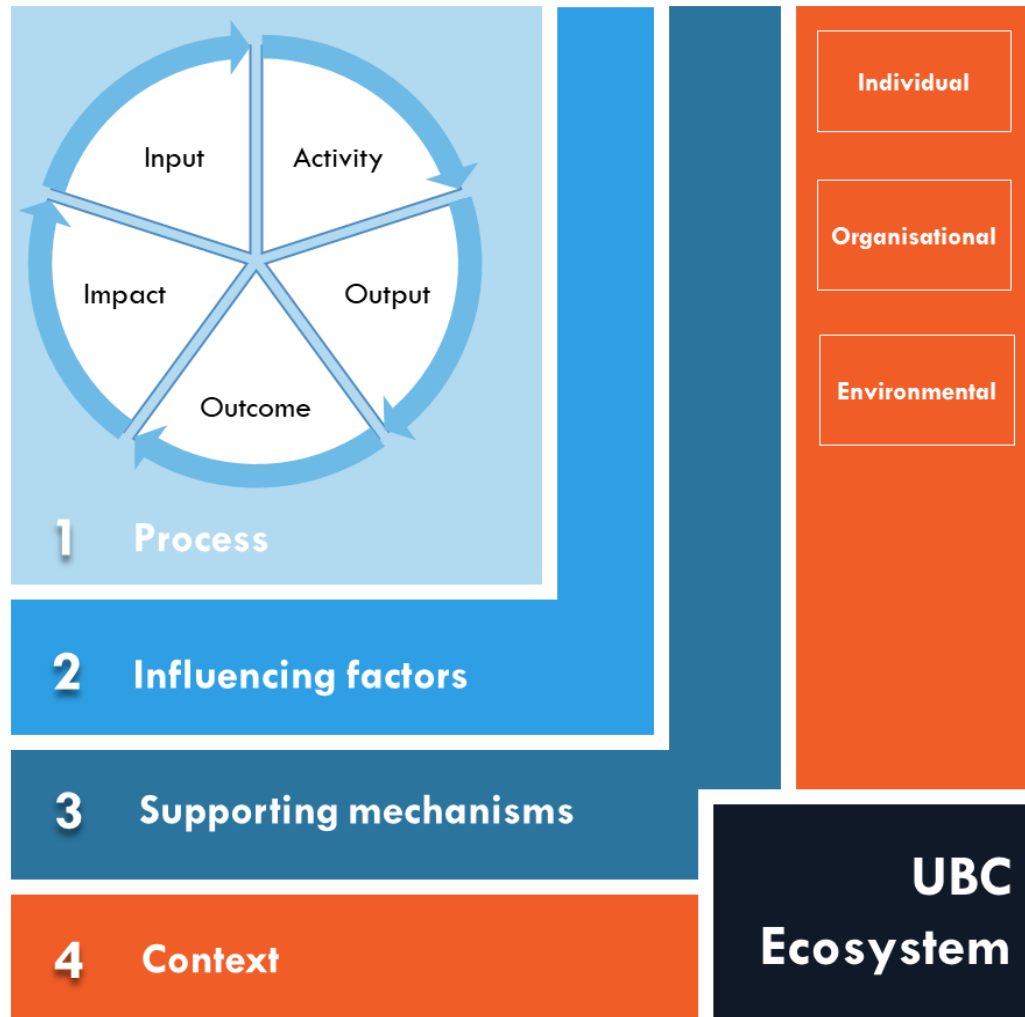
On the other hand, the least developed mechanisms are lifelong learning programs and cooperative research institutes (7% each), while employment fairs and funding of adjunct positions within a university are non-existent. The tradition of the businesses to fund adjunct positions within the university is absent in Estonia.

## 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

Estonian businesses were asked to indicate their level of agreement with a range of statements related not only to the UBC context, but also to their business profile.

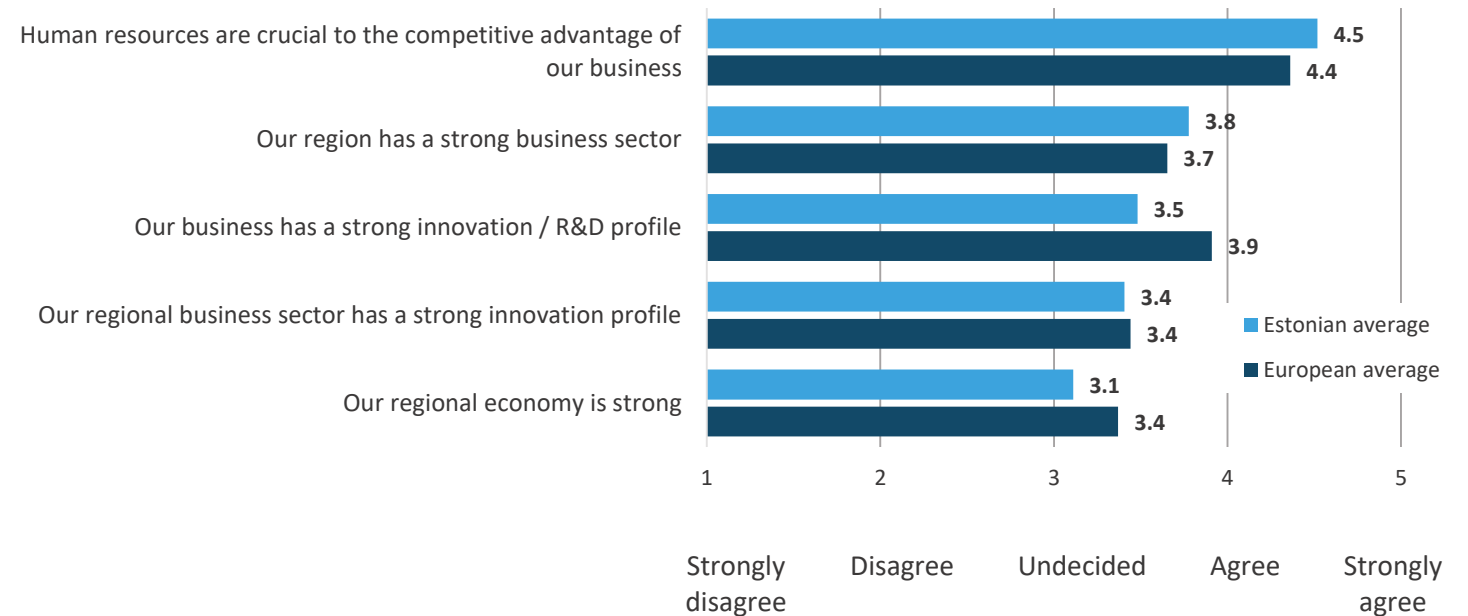
Estonian businesses cooperating with universities consider human resources to be essential for their competitiveness (4.5 on a 5-point scale). Estonian businesses are moving fast towards the knowledge-intensive solutions and thus employees and their competencies are crucial in succeeding.

Estonians also believe that their region has a strong business sector, similarly to the EU average.

On the other hand the Estonian businesses believe that their regional economy is not particularly developed (3.1), which is below the EU average. Estonia is situated on the edge of the EU and has its own geopolitical risks that somewhat diminish the full economic potential of the region.

## Contextual factors affecting UBC

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

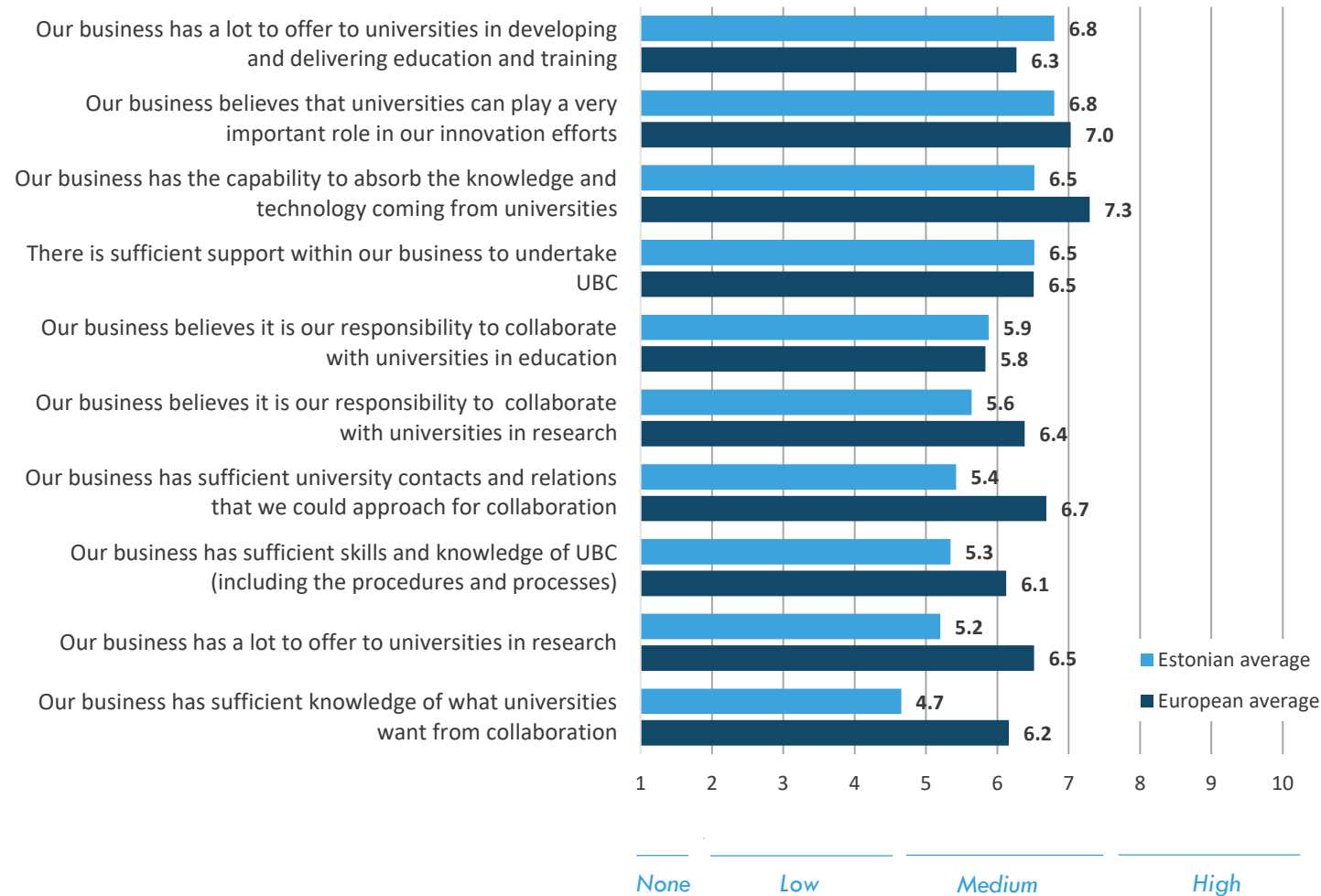




# UBC capabilities and beliefs

## Supportive UBC environment

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



Overall, Estonian businesses perceive most of their UBC capabilities to lie in the medium range.

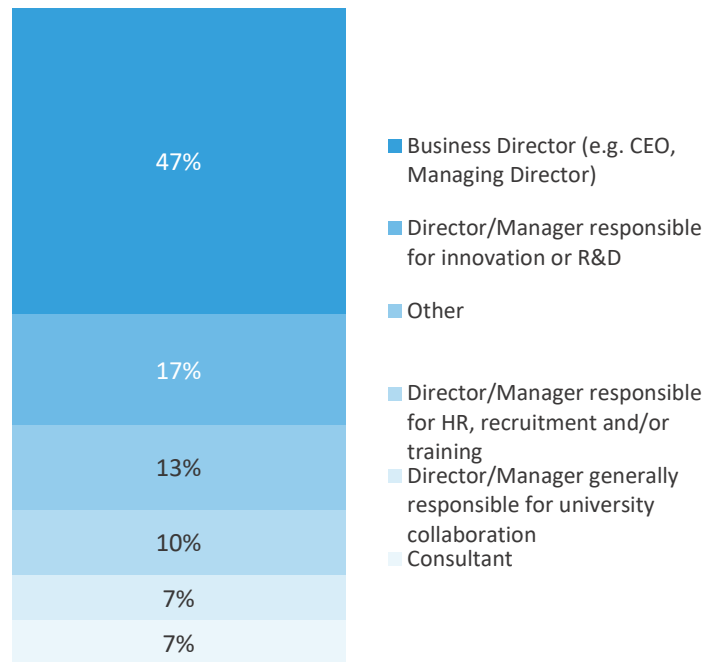
In particular, cooperating businesses see for themselves a clear supportive role for UBC, with the three highest statements relating to their belief in having a lot to offer to universities in education and training, belief that universities play an important role in business's innovation efforts and belief in the capability to absorb the knowledge and technology coming from universities.

Yet, the results indicate that there is not enough dialogue between businesses and universities. Namely, the lowest aspect that businesses rank themselves on pertains to sufficient knowledge of what universities want from collaboration.

In general, Estonian businesses perceive UBC capabilities to be lower than the average European business.

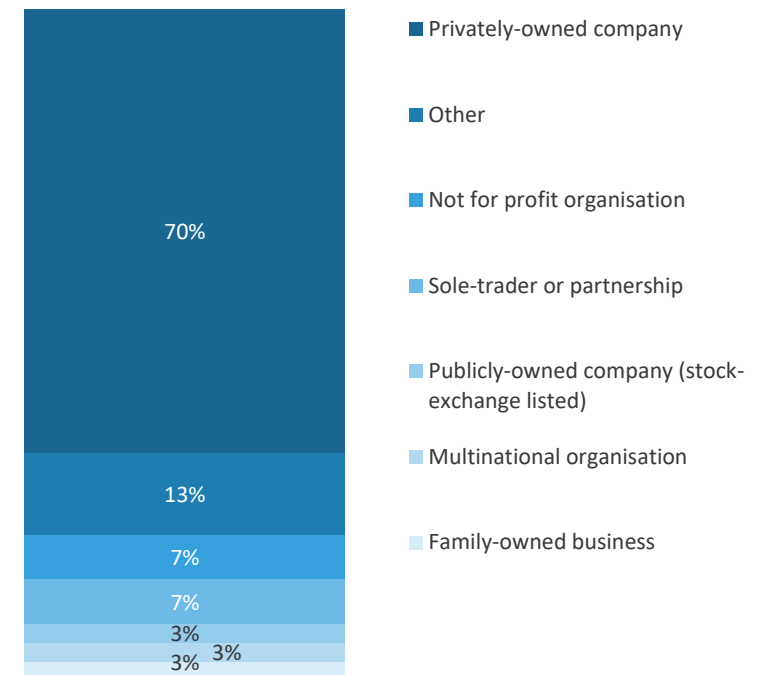
# Respondents profile

## Position of respondent



Business directors represent the largest group of Estonian respondents (47%), followed by directors responsible for innovation or R&D (17%). The remaining respondents identified themselves as directors responsible for HR and recruitment (10%), directors responsible for university collaboration and consultants (7%). 13% of Estonian business respondents indicated that they hold 'other' positions.

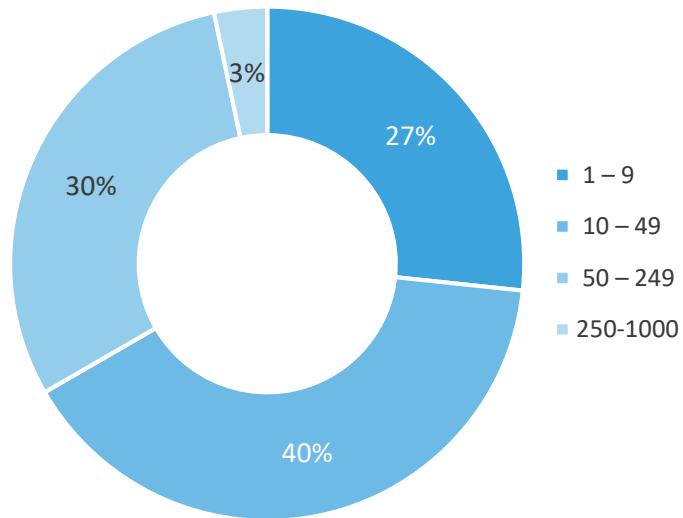
## Type of business



A wide variety of businesses were represented in the Estonian sample, with 'privately-owned companies' forming the largest group (70%), followed by not for profit and sole-traders (7% each). 3% each in the sample are representing publicly-owned companies, multinational organisation and family-owned business. 13% of the sample is in the 'other' category.

# Respondents profile

## Business size



Sample Size	
Estonian business representatives	n = 30
European business representatives	n = 3.113

Businesses are clustered into four groups according to the number of staff they employ. 67% of the Estonian sample is comprised by small firms with 1 to 49 employees. Respondents indicating that they work for medium-sized companies accounted for 30%. Large companies with 250 to 1000 employees are represented with 3%.

# 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.ubc-monitor.com](http://www.ubc-monitor.com)