

State of University- Business Cooperation

NETHERLANDS

Business Perspective

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



The State of Netherlands 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 The Netherlands. Having analysed the perception of the business representatives from a wide range of business fields, we observe a positive sign for the future. 98% of businesses that currently cooperate with higher education institutions (HEIs) plan to maintain or increase the intensity of their cooperation. Yet, more can be done, for example in supporting companies with the development mechanisms and activities that can foster their cooperation with universities, as well as in developing (actual and perceived) capabilities further.

About the study

The results presented in this report reflect the perceptions of business representatives in The Netherlands with respect to UBC. 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 125 responses. The study measured the perceptions of respondents with respect to their businesses and cooperation efforts.

University-Business Cooperation

The nature of cooperation activities between the Dutch businesses involved in this survey and universities generally follows the European pattern. Dutch businesses engage mainly in research activities such as collaboration in R&D (69,6%) and

consulting (52,8%). As for UBC in education, Dutch businesses undertake joint activities with universities in mobility of students, even though the development of activities connected with curriculum co-design and life-long learning is particularly low.

There is noticeable lack of development of other joint activities. Over 50% of Dutch businesses do not undertake any collaboration connected with valorisation and management. Particularly unpopular is business involvement in the governance.

Notably, Dutch businesses see themselves as more proactive actors in the initiation of UBC, with 61% reporting to have been the major initiators.

Differences in culture limit UBC

Dutch businesses see the variation in their cultural peculiarities with universities, such as different motivations and time horizons, as the major obstacles to collaboration. Dutch business representatives also note, that the lack of government funding and bureaucracy related to UBC in universities hinders the intensity or quality of joint activities. Different professional staff profiles in the business world and academia, and thus the lack of university staff with business knowledge is reported to serve as an important barrier for businesses to follow with UBC. Academics have been rarely engaged or had extensive experiences in business field due to their homogeneous career path at the university.

NOTE: This report provides a business on 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

People are the key in UBC

While funding to undertake cooperation emerges as the top factor that enables the UBC in the eyes of Dutch business representatives, the factors that are related to the relationships are not less prominent. Dutch businesses highlight the importance of a shared goal, mutual commitment and trust, and prior relationship with the university partner.

Benefits for others

Dutch business representatives see UBC much less beneficial for themselves than for other stakeholders. They see students and universities as the major beneficiaries of UBC, while themselves and the government as receiving the fewest benefits. Then, what is the major motivation for businesses to undertake UBC?

Dutch businesses are primarily driven to collaboration with universities for improving their own innovation capacities, namely obtaining new technologies, knowledge and new discoveries on an early stage.

Dedicating resources as the major UBC supporting mechanism

In general, the Dutch business representative report a low to middle level of the development of all UBC supporting mechanisms within their companies, not exceeding 50%. Mainly, Dutch businesses support their UBC by investing their resources, but also by engaging in presentations and mentoring programmes and student projects with the universities. It is, however, a much less structured system for Dutch businesses than for the European

ones on average – the systematic R&D programmes and a well-defined strategy for co-operation is not as well-developed according to Dutch business representatives. As well as that, the physical infrastructure (Science/Technology Park precincts), employment fairs and life-long learning programmes represent the least developed UBC supporting mechanisms that are significantly better represented in the European average. Lesser involvement and support of UBC in education and life-long learning is co-related with Dutch business representatives' perception on their already strong human resources profile.

Sufficient capabilities for UBC

Dutch businesses follow an overall European trend in seeing themselves as rather supportive of collaboration with universities. In particular, Dutch businesses are certain of their own capability to absorb knowledge and technology from universities, and they indicate a higher level of UBC support within their businesses than the European average shows. Dutch business representatives report they have sufficient university contacts, skills and knowledge of UBC and what universities want from collaboration.

Notably, Dutch business representatives do not see cooperation with universities in delivering and developing education and training activities as their responsibility. Therefore, as mentioned earlier, those joint activities in education are much less widespread in the UBC overall landscape in The Netherlands.

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 Netherlands 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, threaten 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

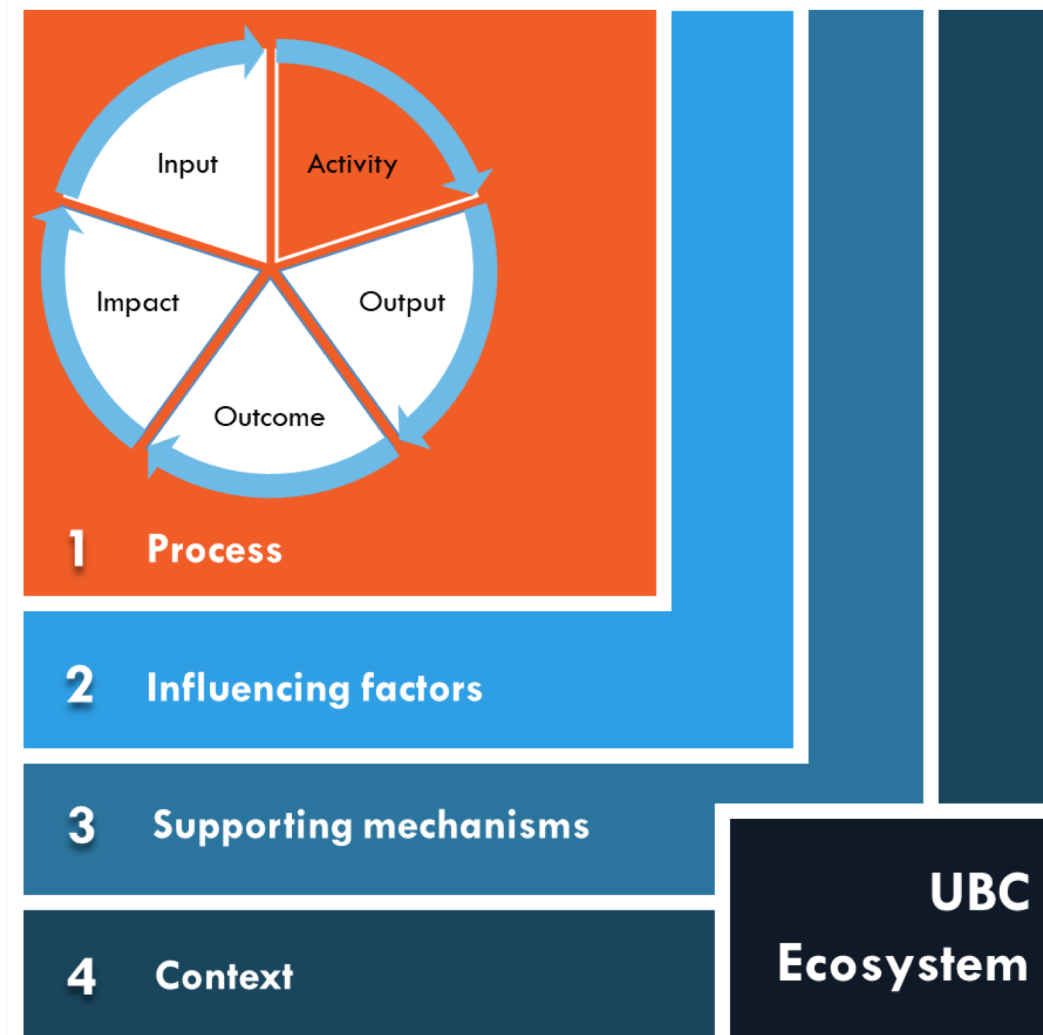
UBC activities

UBC Ecosystem Framework™

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

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

Development of UBC activities

In comparison with the development of the UBC activities for European business, the extent of UBC in the Netherlands is very similar.

Dutch businesses engage mainly in research activities such as collaboration in R&D (5.9) and consulting (4.5).

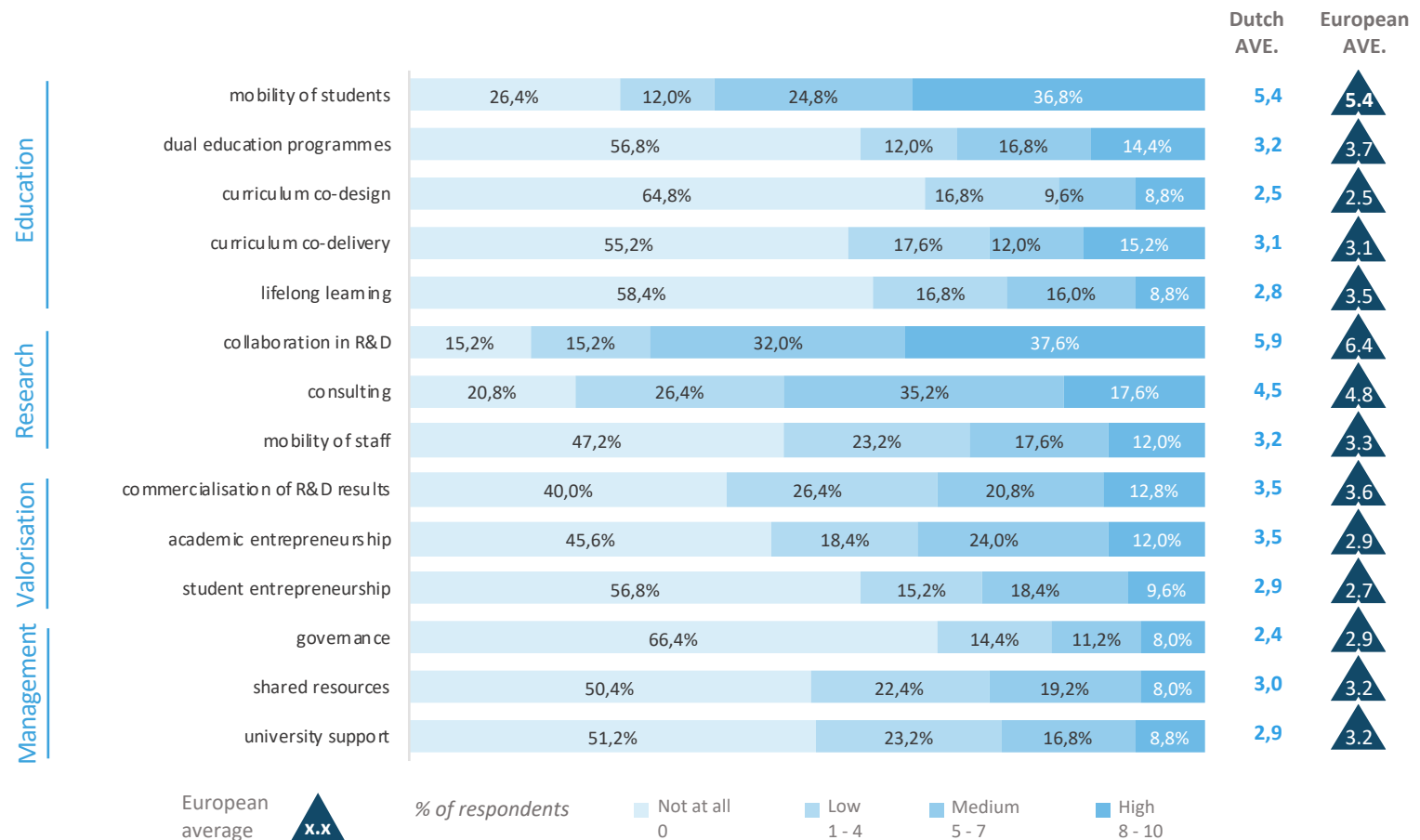
As for UBC in education, mobility of students (5.4) is the most developed activity as seen by Dutch business representatives. On the other end, the development of activities connected with curriculum co-design is particularly low.

The level of the development of valorisation activities including students and academic entrepreneurship is higher than European average.

More than 50% of Dutch businesses do not undertake any cooperation in management activities.

UBC activities development

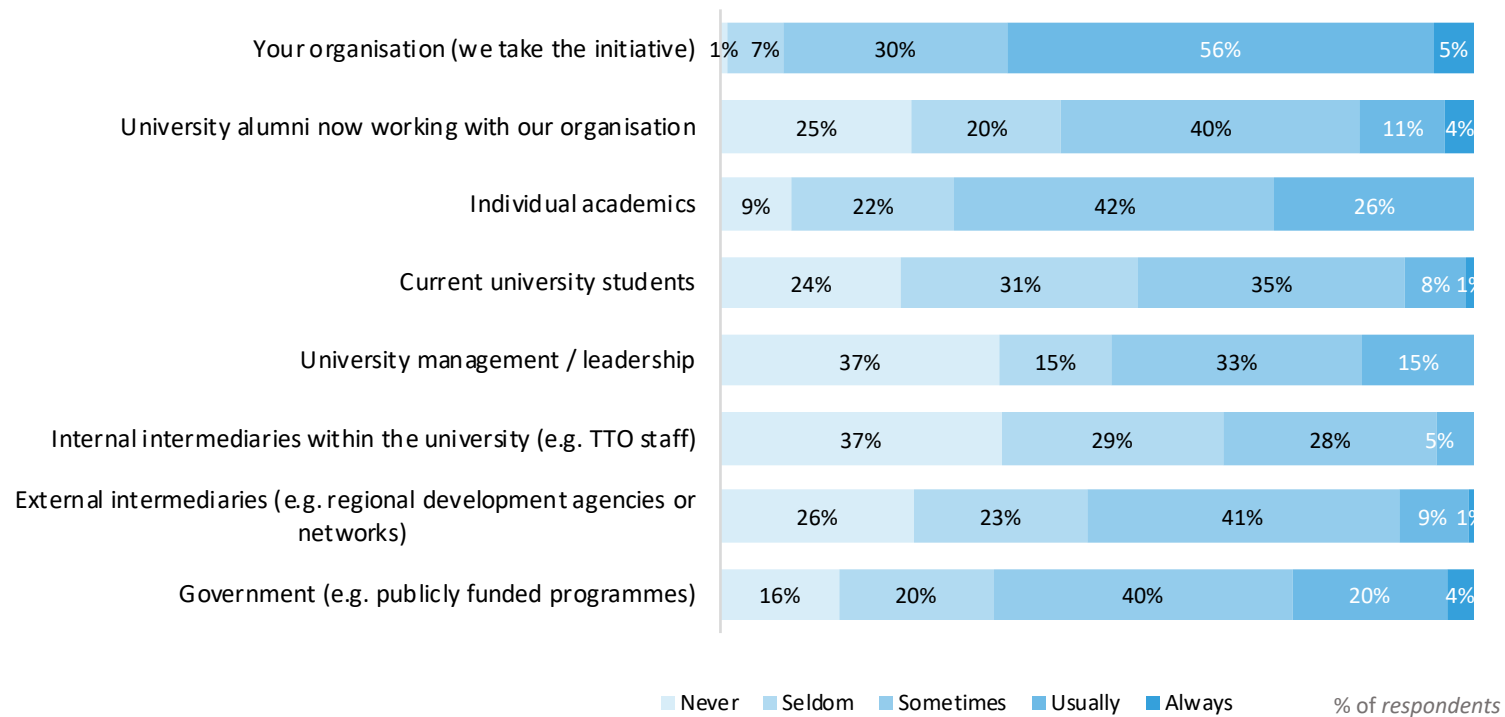
'Which UBC activities do you collaborate with universities in?'



Initiation of UBC

How UBC is initiated

'How often various stakeholders initiate UBC activities'



Dutch businesses clearly see themselves as the main initiators of cooperation with universities. 61% of business state that their organisation always or usually initiates UBC.

Businesses in the Netherlands indicate that the government and university alumni are also relatively active in initiating cooperation.

Internal intermediaries within the university and university management are perceived as passive in UBC initiation. 66% and 52% of the businesses report that they never or seldom undertake any first actions towards UBC initiation respectively.

Similarly, 49% of business state that the external intermediaries never or seldom initiate UBC.

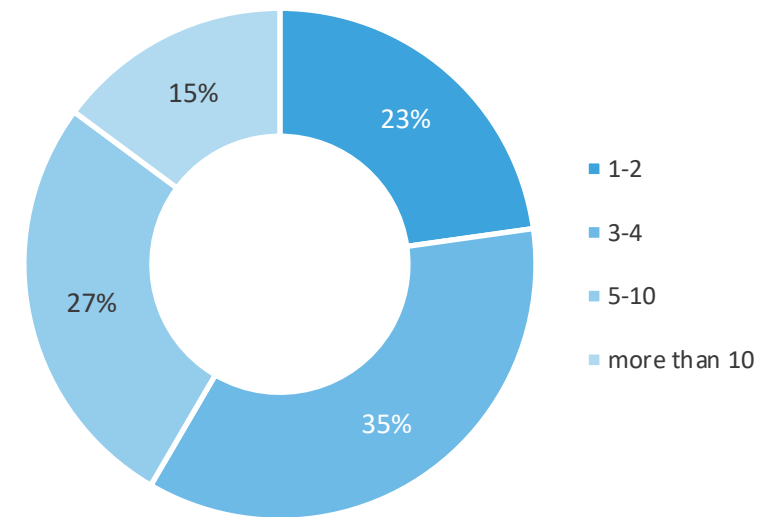
Geographical location still matters

Location of university partners

Percentage of cooperating businesses with...	
universities in their region	89%
universities in their country	96%
universities outside their country	94%

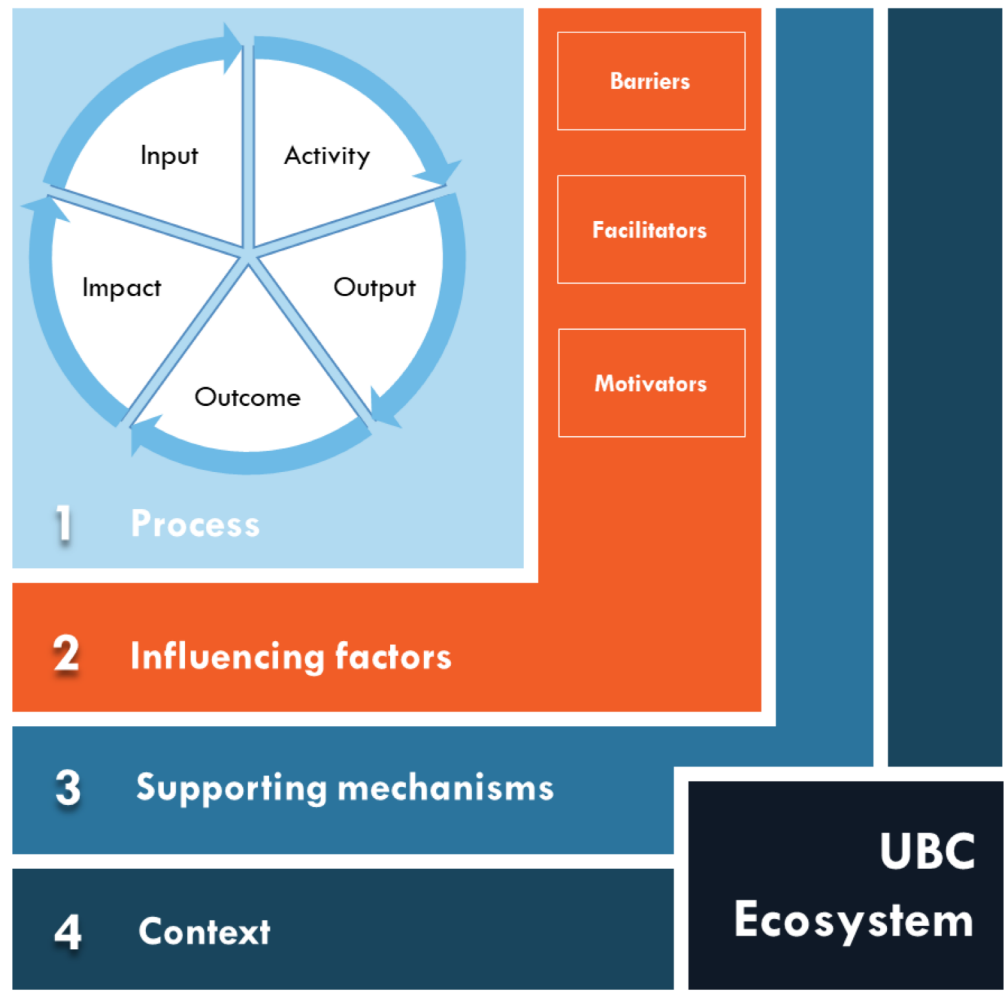
While most Dutch businesses cooperate with national universities (96%), the results also report high percentages for international and regional universities with 94% and 89% respectively.

Number of university partners



More than half (58%) of the Dutch businesses cooperate with less than 4 university partners. 27% have established relations with 5-10 universities and 15% 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

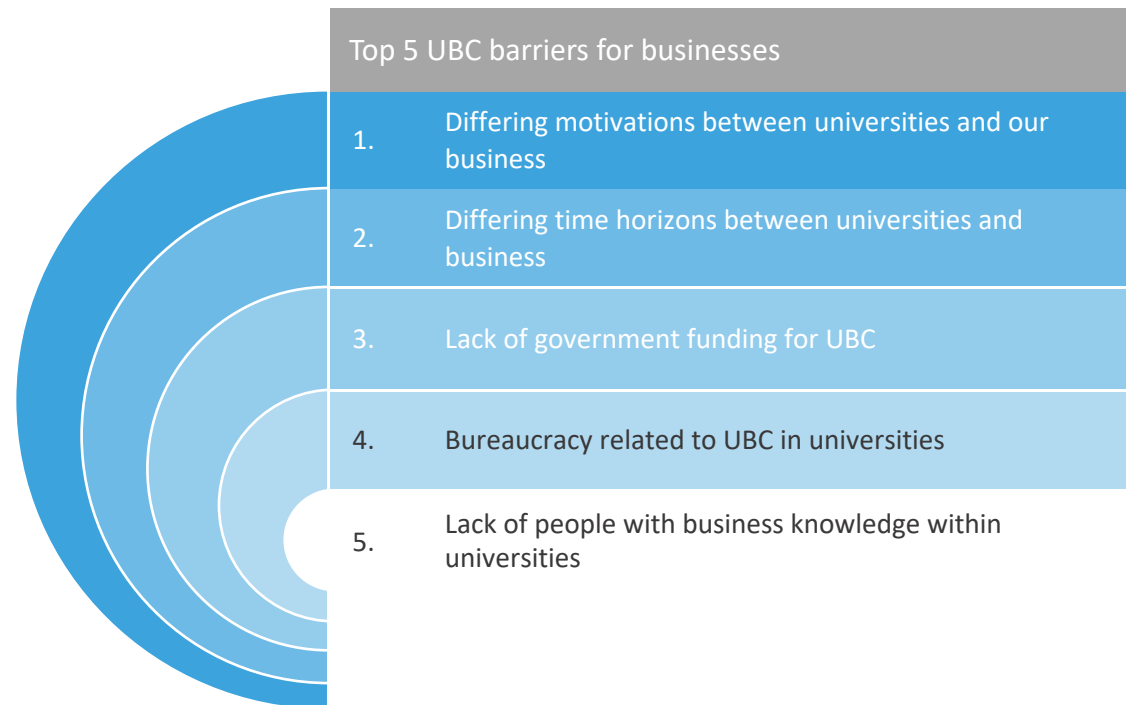
‘What is inhibiting your cooperation with universities?’

The top five factors posing the barriers to Dutch businesses for cooperation with universities are diverse.

The main barriers are related to cultural issues such as the perceived differing motivations and time horizons between universities and business.

Furthermore, Dutch business are hindered by the lack of government funding for UBC. As publicly funded institutions, universities are not allowed to “invest” in private companies or offer individual companies support or access as this would count as government support. Companies, on the other hand, are not always willing to pay the market fee for universities offers, but rather choose the consultancy firms instead.

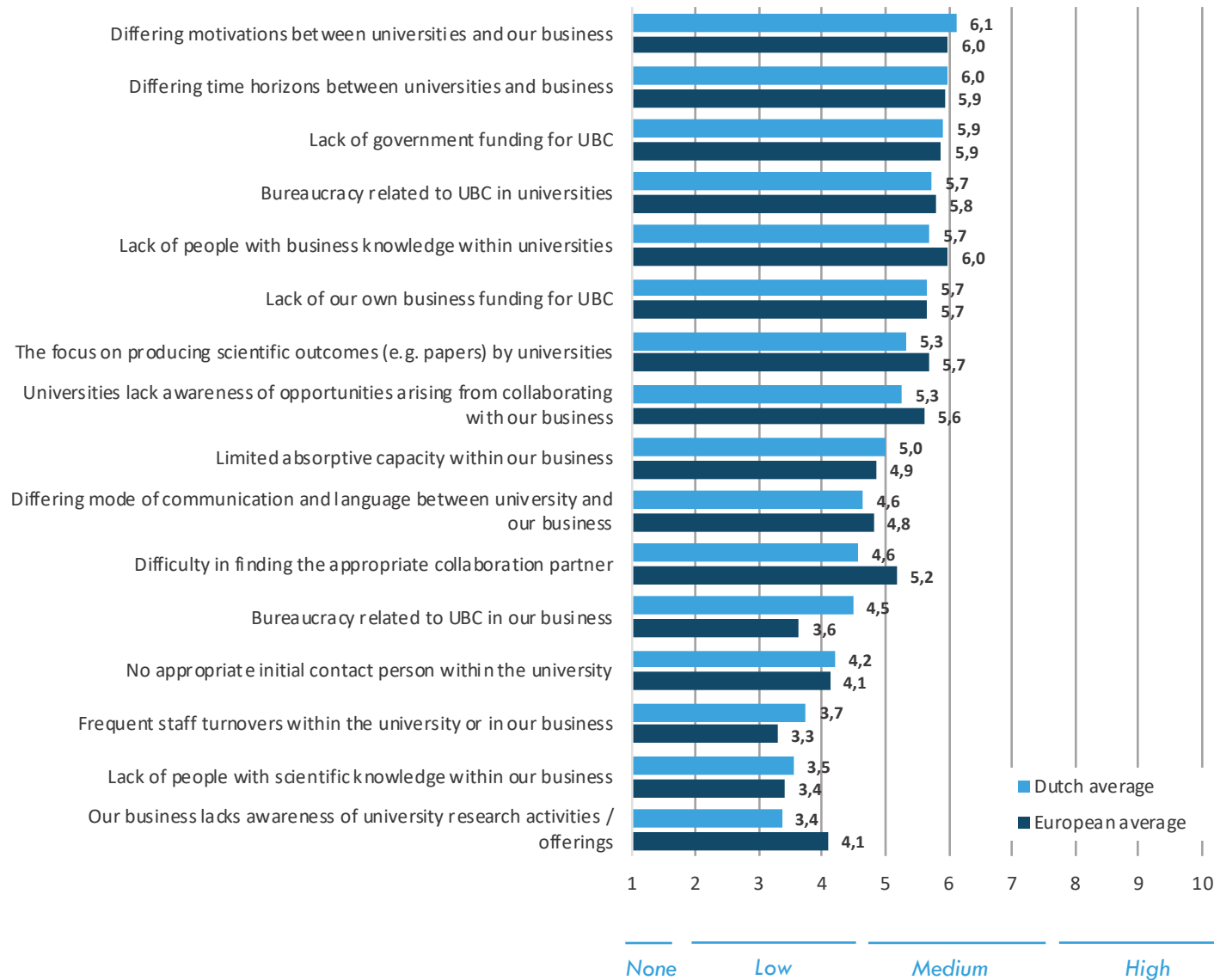
Bureaucracy related to UBC in universities is also an important factor limiting the cooperation for Dutch businesses. The lack of people with business knowledge within universities is another limitation for Dutch businesses to cooperate. Typically, the academic career track is limited to university work, and in the Netherlands, it starts early on. Rarely, academics have been actively engaged or had extensive experiences in business field.



Barriers hindering UBC

Barriers

'What is inhibiting your cooperation with universities?'



The majority of barriers perceived by cooperating Dutch businesses and their European counterparts are similar. However, Danish business representatives perceive most barriers to be present to a lower degree.

The most commonly referred barriers are related to the cultural issues such as differing motivations and differing time horizons between universities and business. They are followed by the lack of government funding.

Factors such as 'the university focus on producing scientific outcomes', their 'lack of awareness of opportunities arising from UBC' and the 'difficulty in finding the partner' seem as more inhibiting UBC opportunities for European businesses on average than for Dutch businesses particularly.

Contrary, Dutch businesses are more hindered by the bureaucracy related to UBC within their organisations than their European counterparts.

Drivers stimulating UBC

The main factors facilitating the business cooperation with universities in the Netherlands are related to personal relationship and funding.

The existence of funding to undertake UBC is the main facilitator for Dutch businesses enabling UBC.

A relationship based on a shared goal, commitment and trust underlie smoother and more successful cooperation with universities for Dutch businesses.

The existence of a prior relation with the university partner also plays a crucial role in facilitating UBC.

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

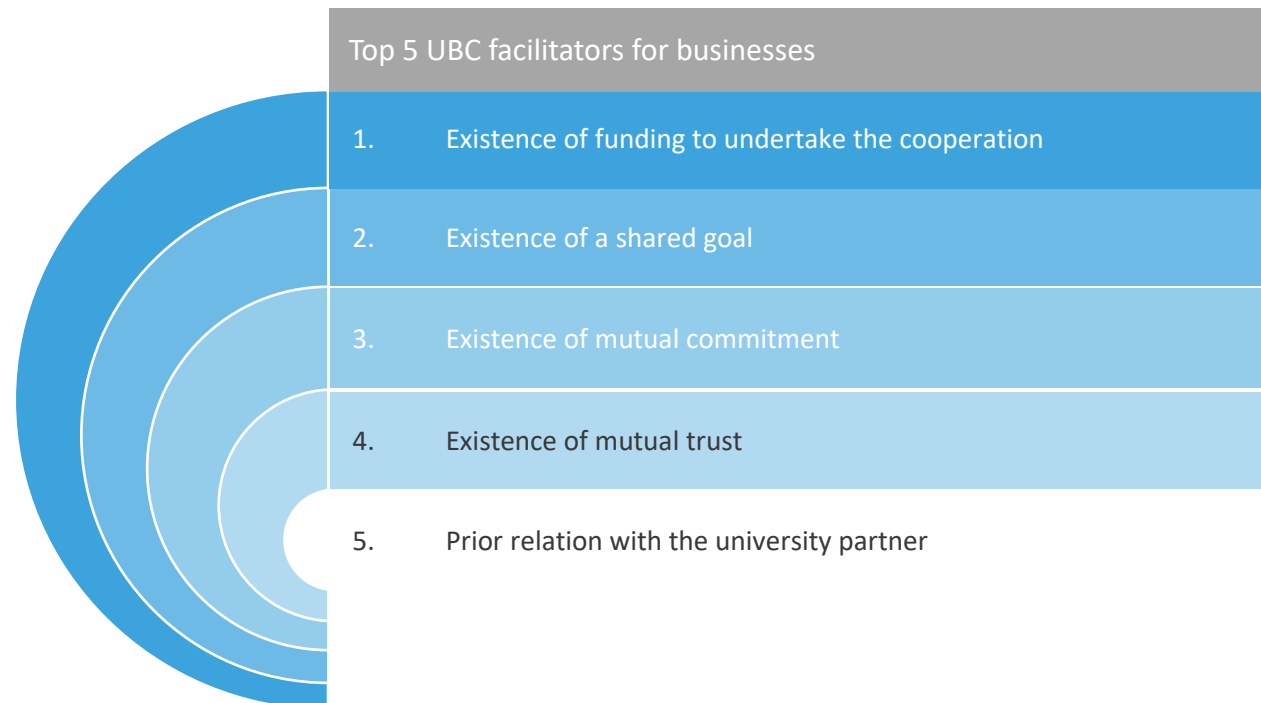
1. **Facilitators** – factors that enable or ease cooperation
2. **Motivators** – incentives or benefits that the respective stakeholders would like from the cooperation

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

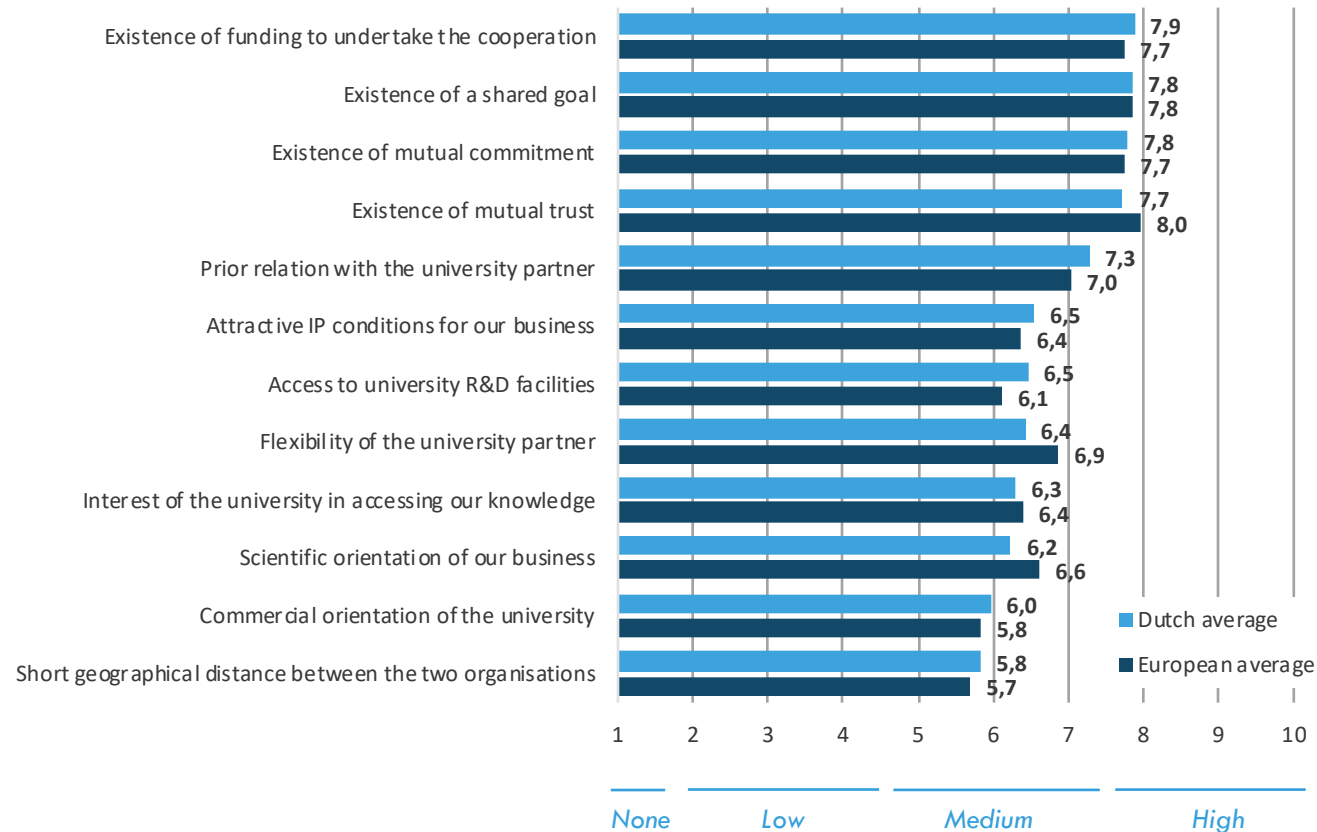
'What is facilitating your cooperation with universities?'



Drivers stimulating UBC

Facilitators

'What is facilitating your cooperation with universities?'



Most facilitators are perceived similarly by Dutch and European business representatives.

Funding and personal relationship facilitators bear great importance in the advancement of UBC the Netherlands and Europe on average.

However, the flexibility of the university partner and the scientific orientation of the business are slightly less important for Dutch businesses than for their European counterparts.

Short geographical distance seems to play the least important role for the Dutch businesses. The higher education landscape is relatively even in the Netherlands, with the universities delivering rather similar quality outcomes in terms of quality. Additionally, the Netherlands is a geographically concise country, where the distance does not present to be an issue.

Drivers stimulating UBC

The main motivators for Dutch businesses to undertake UBC are related to innovation.

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

Dutch businesses are also motivated to access new discoveries at an early stage and improve their reputation.

A less important but still relevant motivation is to obtain funding.

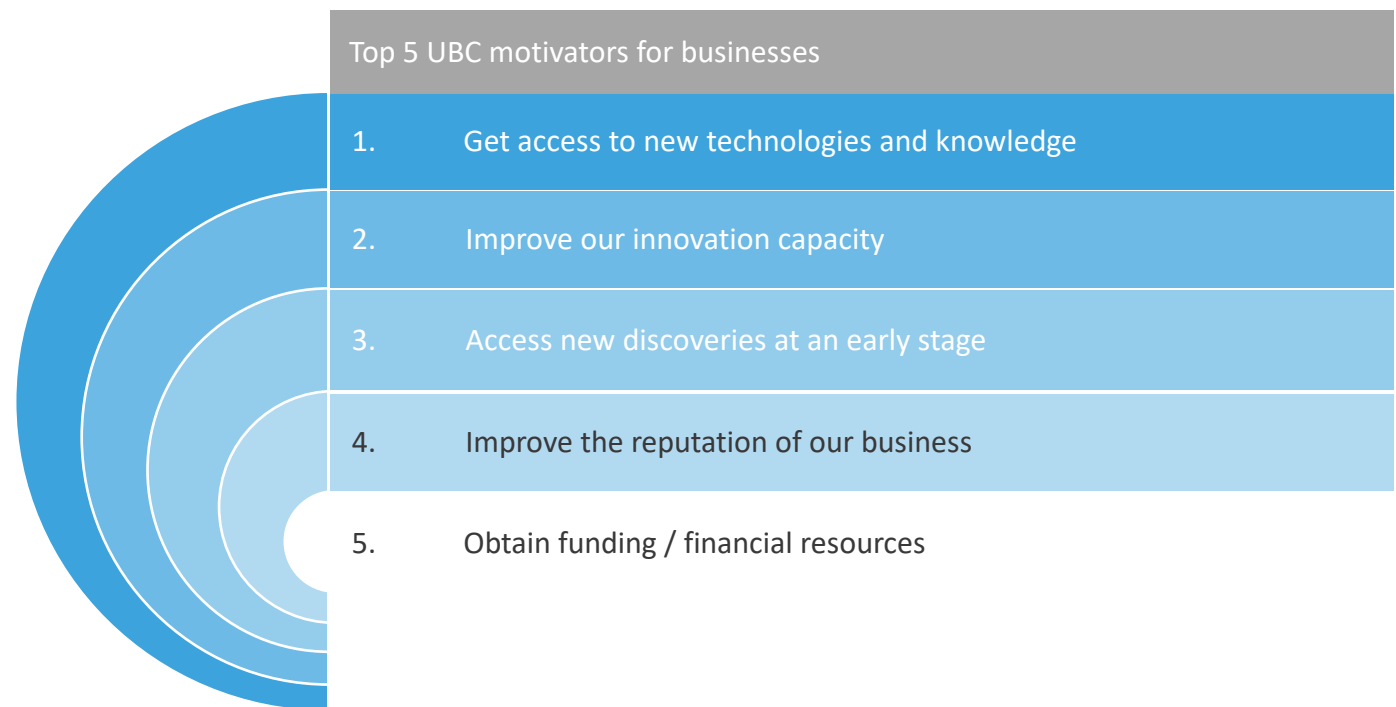
Motivations for UBC are the reasons why businesses collaborate with university.

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

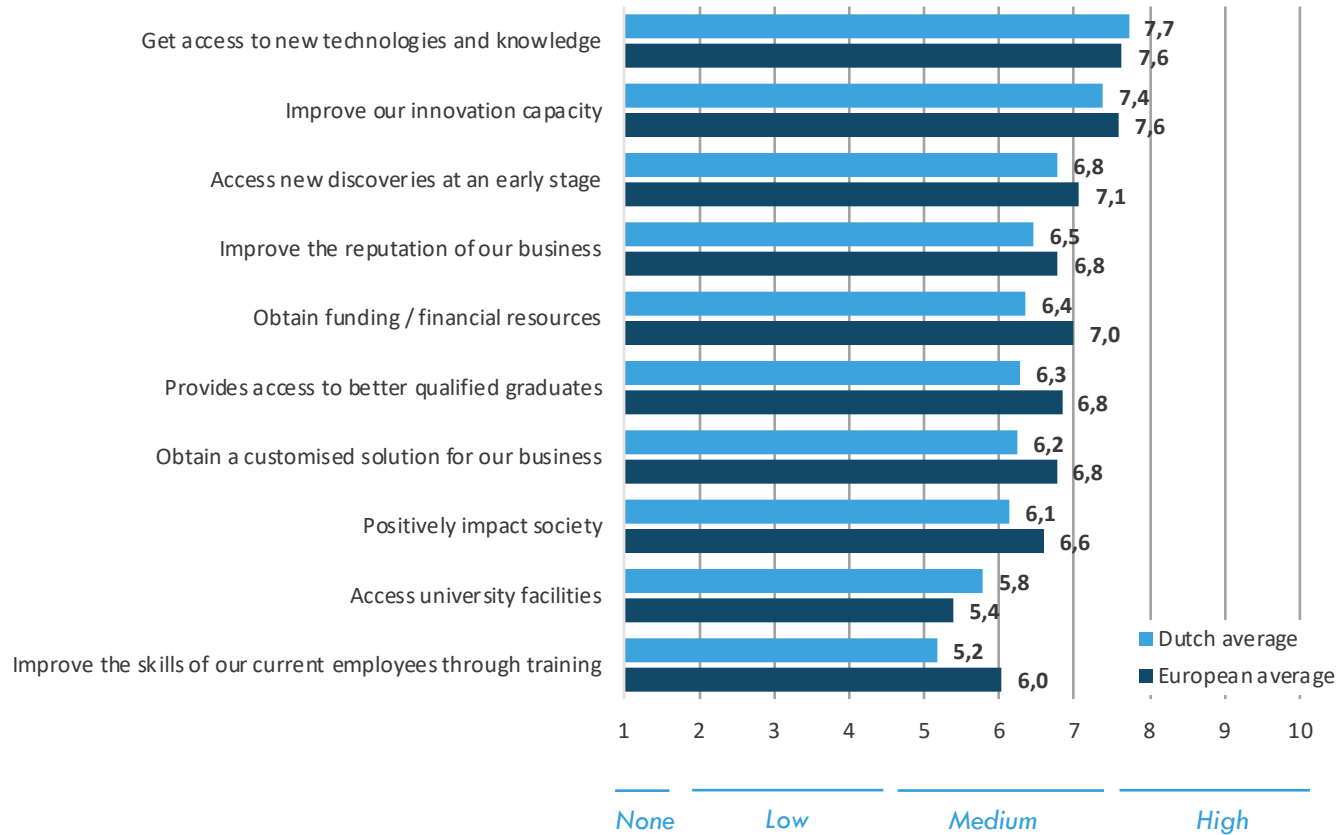
'What motivates you to cooperate with universities?'



Drivers stimulating UBC

Motivators

'What motivates you to cooperate with universities?'



Overall, Dutch businesses perceive the motivators lower than European businesses. The only exception is the motivator related to the access to university facilities, which is higher for Dutch businesses.

The most important motivations to engage in UBC for both groups are related to the willingness to access new technologies and knowledge as well as to improve the innovation capacity.

The least important motivator for Dutch businesses is to improve the skills of their employees through training, whereas for European businesses on average it is the willingness to access university facilities.

Benefits of UBC

Dutch and European businesses have similar perceptions on which stakeholder group benefits more or less from UBC.

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

Dutch businesses see fewer benefits for themselves than their European counterparts, and place themselves beyond nearly all other stakeholders.

The government is thought to benefit the least from UBC activities.


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?'

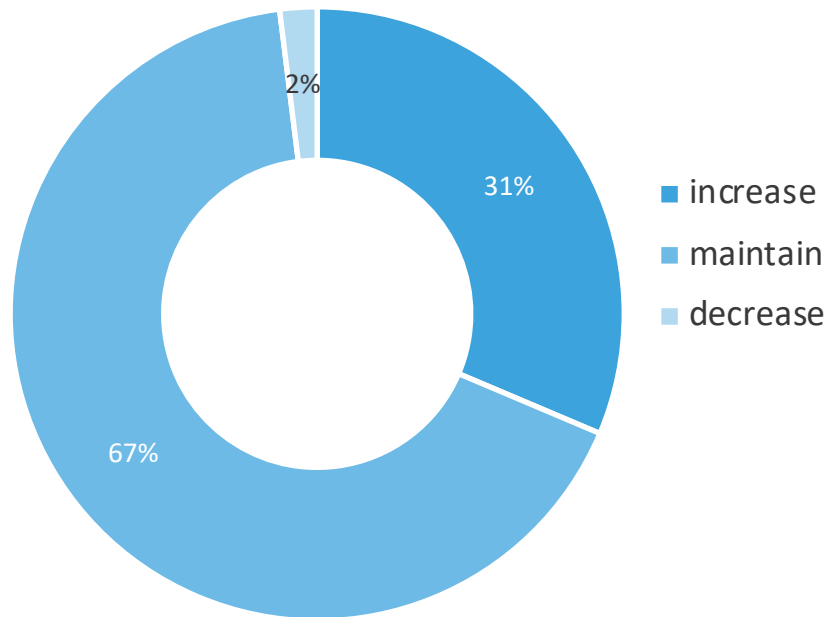


	Dutch businesses	European businesses
1.	Students	Students
2.	Universities	Universities
3.	Academics	Businesses
4.	Society	Academics
5.	Businesses	Society
6.	Government/public authorities	Government/public authorities

Future intentions

Future UBC intentions – Netherlands

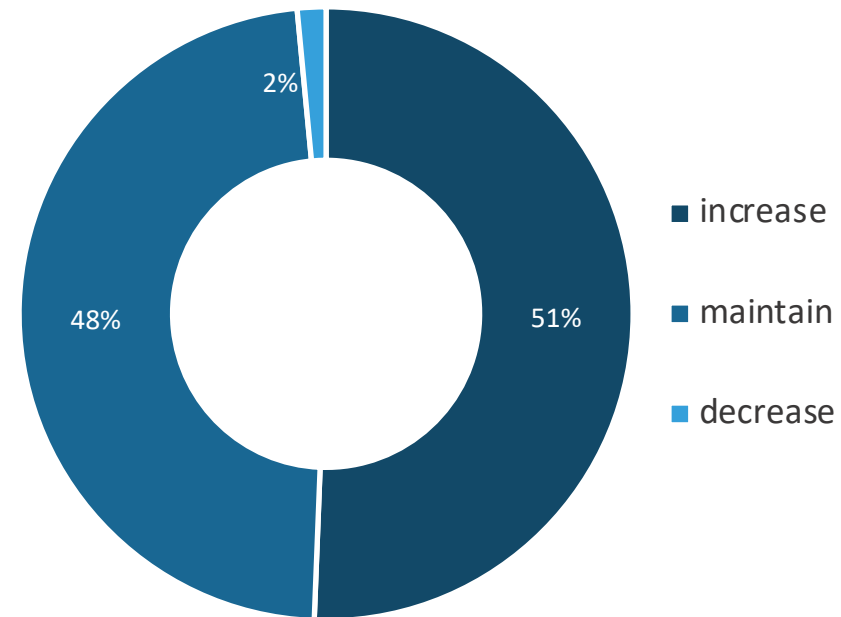
As answered by Dutch businesses



98% of Dutch 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 Dutch industry.

Future UBC intentions – EUROPE

As answered by European businesses



European businesses seem to be confident in their future intentions towards UBC as it can be observed through a high percentage of business respondents (51%) that plan to increase cooperation activities. Yet, it is noticeably lower than the Dutch average.

Willingness to recommend UBC

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

Dutch businesses are almost equally satisfied with UBC in research as their European counterparts (NPS=22). While 33% of Dutch business representatives will promote it further, only 12% would not recommend it.

Dutch businesses are however significantly less satisfied with their cooperation in education (NPS=-33). Only 14% would highly recommend it while 47% will not recommend it at all. This results is noticeably lower than the European average (NPS=-2).

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

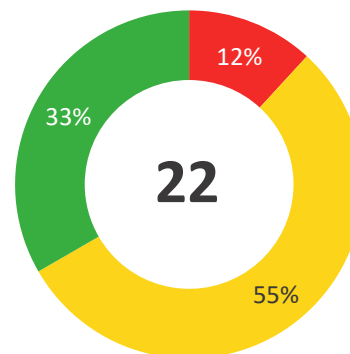
education and training (E&T). The *Net Promoter Score* metric offers a proxy for customer satisfaction.

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	12%	55%	33%	22
Business cooperating with universities in E&T	47%	40%	14%	-33

Satisfaction with cooperation with universities (net promoter score)

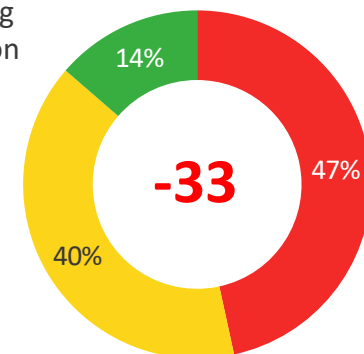
Business cooperating in research



■ Detractors ■ Passives ■ Promoters

European business NPS result: 28.2

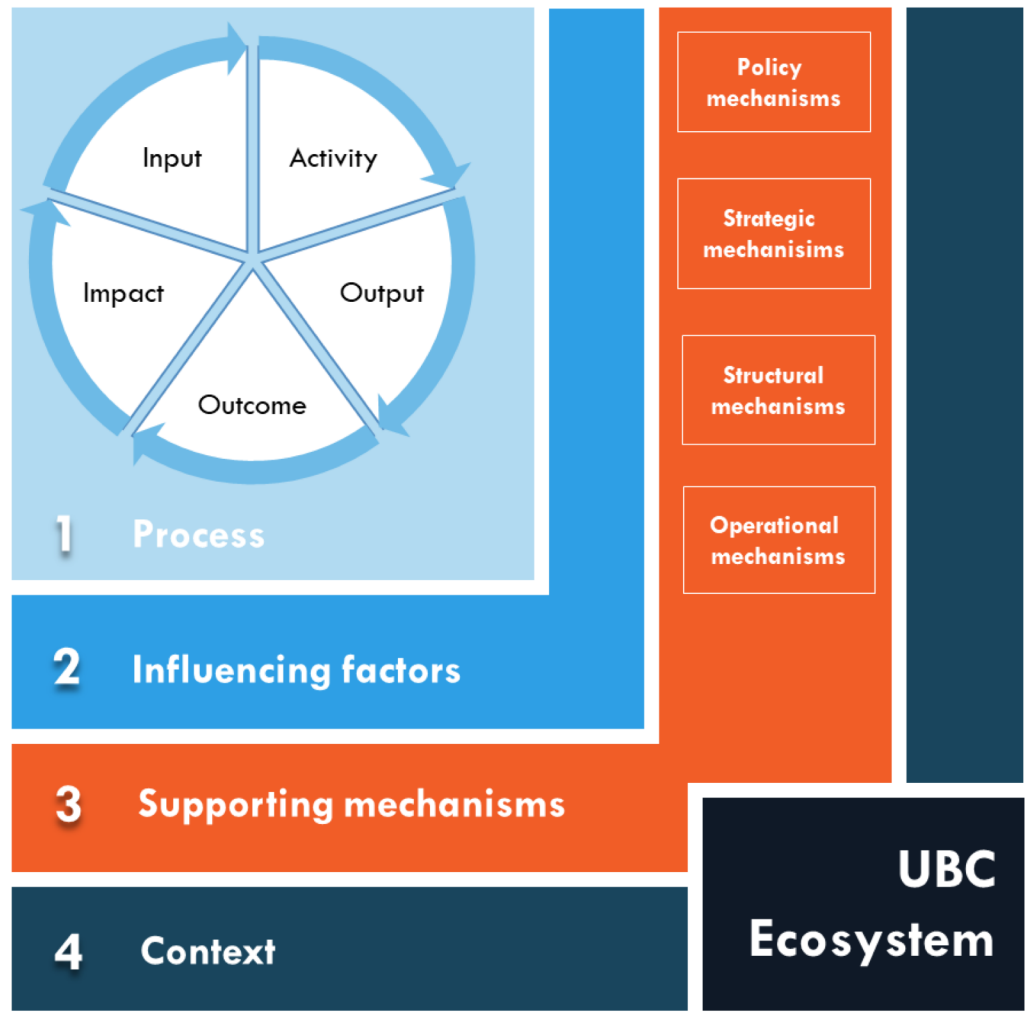
Business cooperating in education



■ 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

Dutch businesses can adopt a range of supporting mechanisms in their interaction with universities. Most of those mechanisms are found in about a third of the Dutch businesses.

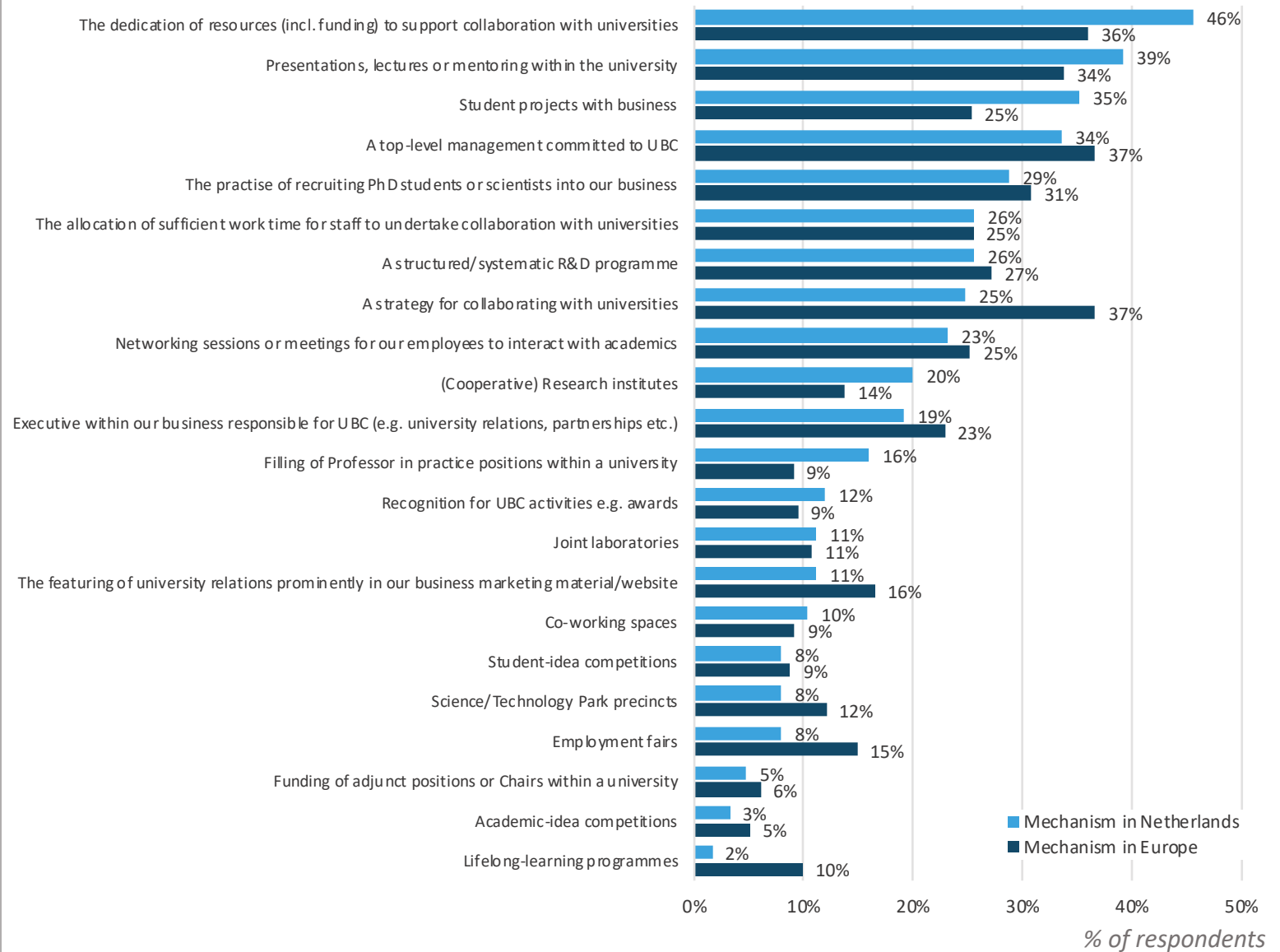
The most developed mechanism in the Netherlands and one of the most developed in Europe on average is the dedication of resources to support collaboration with universities (46%).

Compared to the European average, UBC supporting mechanisms such as presentations, lectures or mentoring within the university and student projects with business are more developed in the Netherlands than the European average.

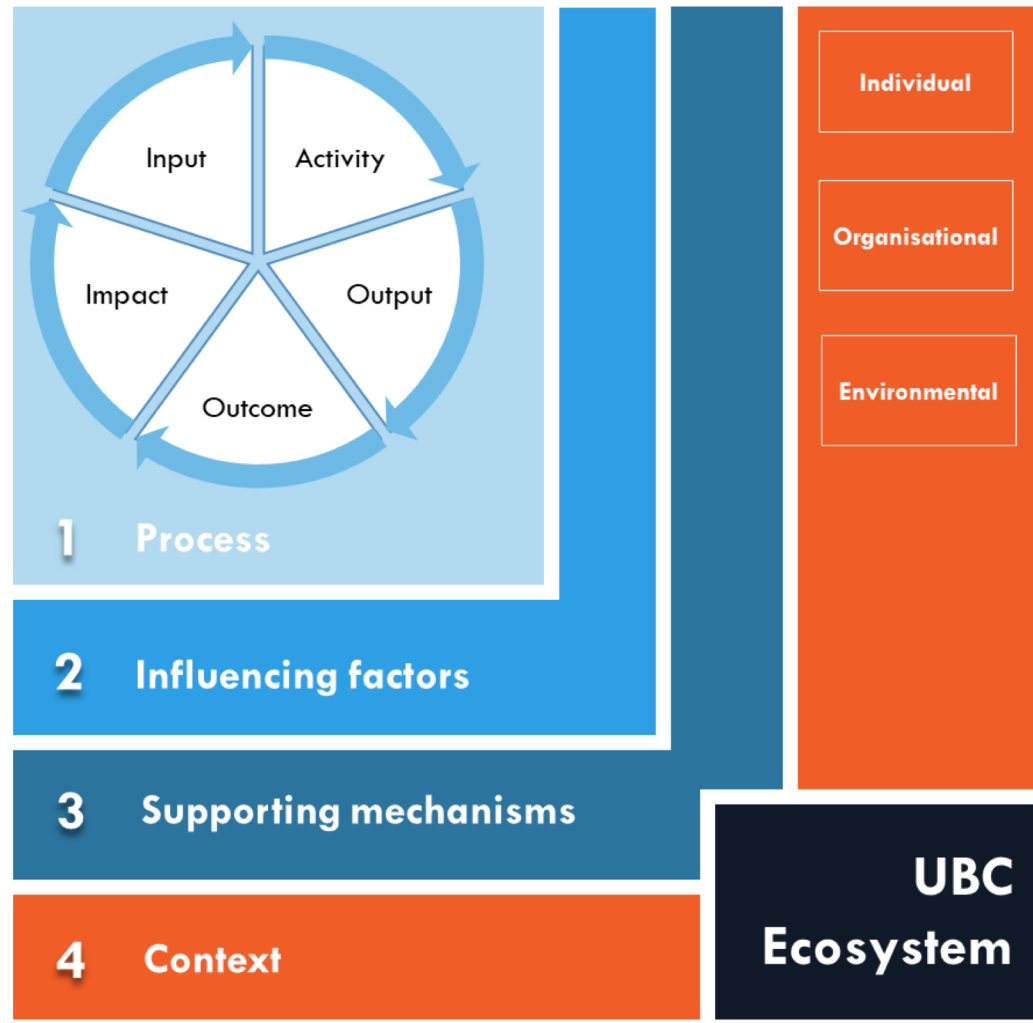
Conversely, the mechanisms such as a strategy for collaborating with universities, the featuring of UBC in the business marketing material/website, employment fairs and lifelong learning programmes are considerably less developed supporting mechanisms than the European average as reported by Dutch businesses.

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

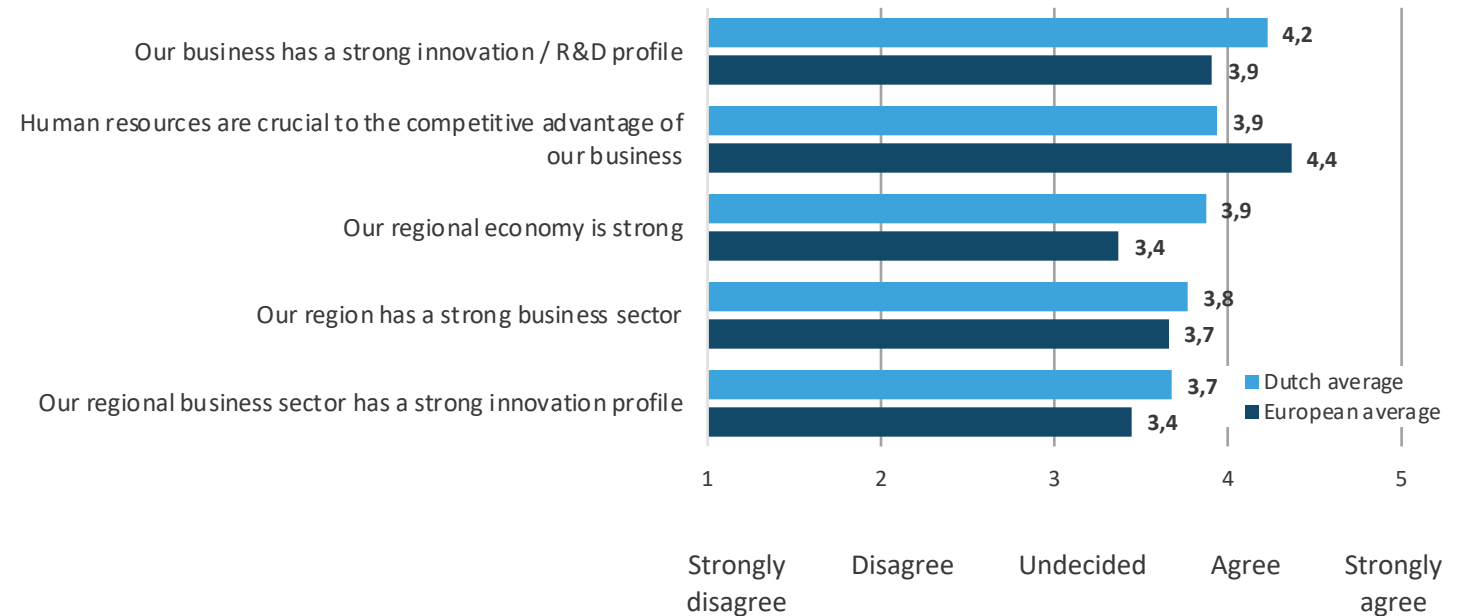
Dutch and European businesses cooperating with universities perceive their context differently.

While Dutch businesses are more certain about the strength of their innovation profile, their European counterparts report that human resources are more essential for their competitiveness.

A lower perception emerges regarding the characteristics of the regional economy and business sector, although still above European average.

Contextual factors affecting UBC

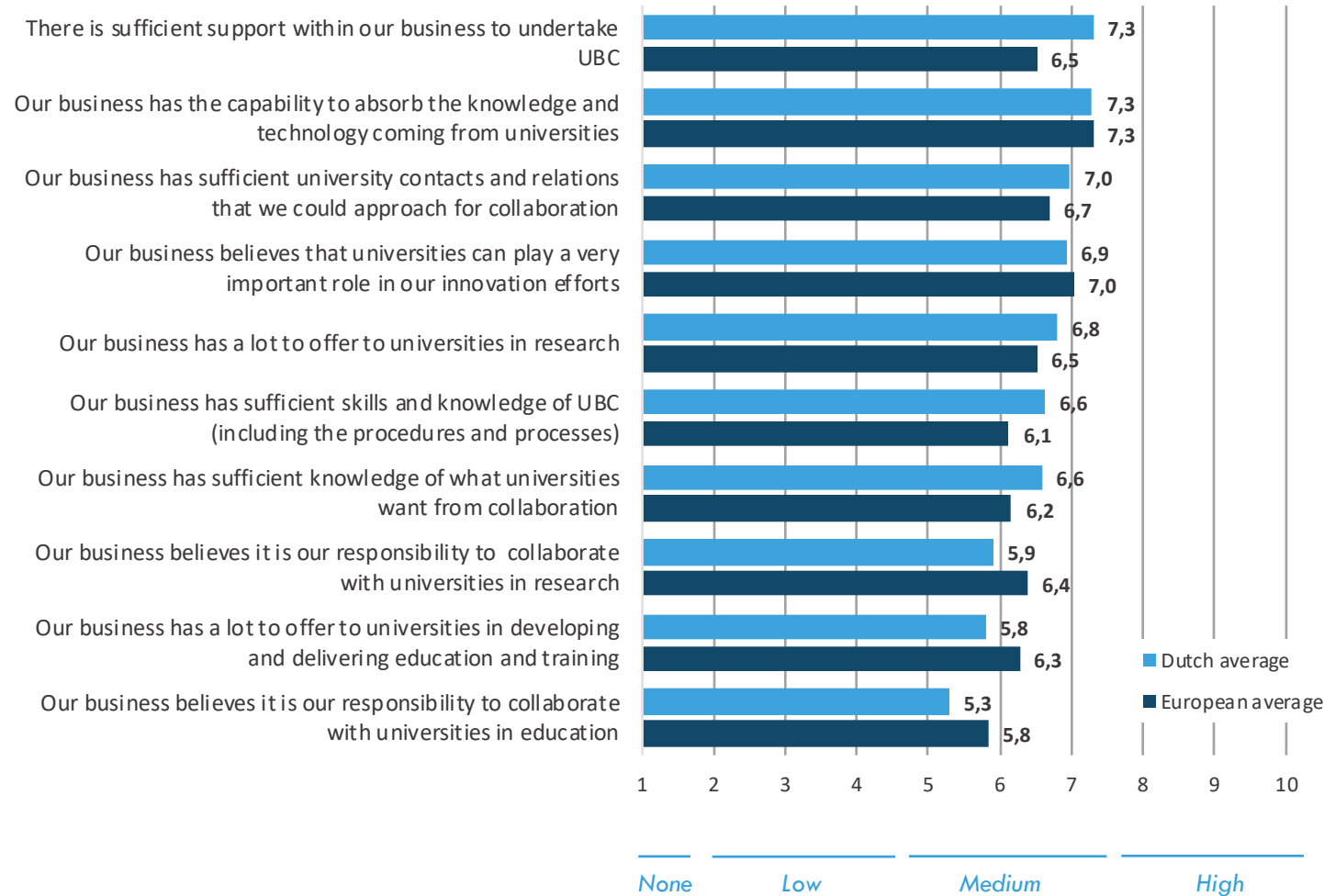
'To what extent do you agree with the following statements?'



UBC capabilities and beliefs

Supportive UBC environment

How supportive are your organisation and environment for UBC?'



Dutch businesses perceive themselves as supportive towards cooperation with universities.

In particular, they report that they get sufficient support within their businesses to undertake UBC. WHY?

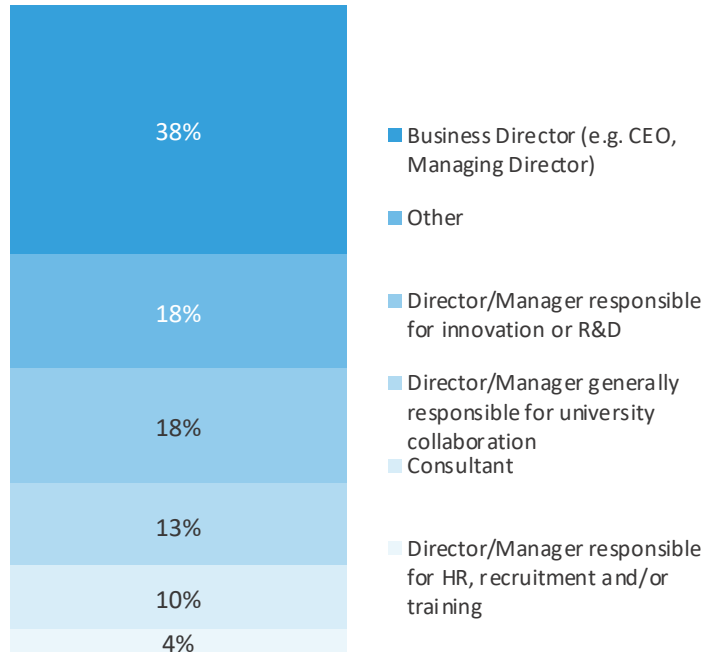
They identify their strengths in the capability to absorb knowledge and technology from universities. WHY?

Dutch businesses also state that they have the sufficient university contacts and believe that universities play an important role in their innovation efforts. WHY?

Yet, Dutch businesses are less supportive towards UBC in education. WHY?

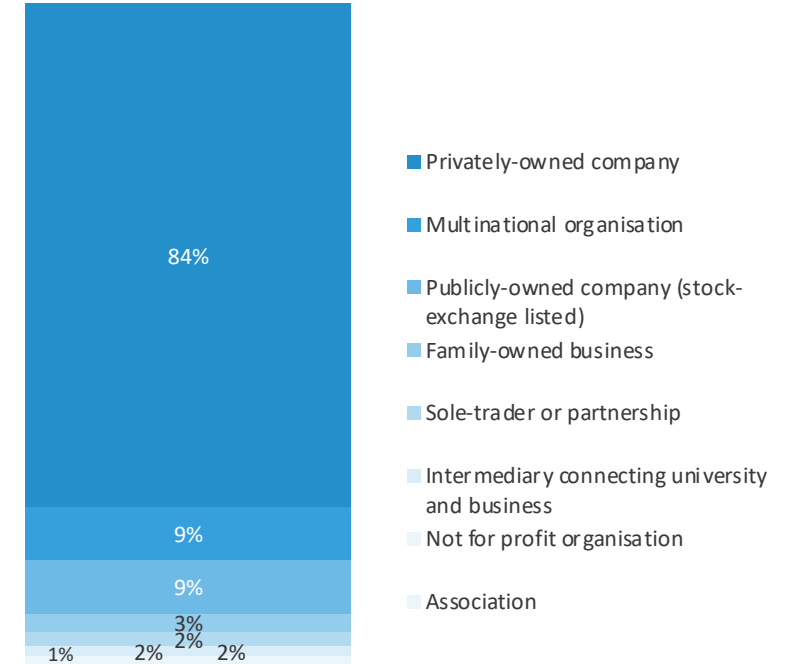
Respondents profile

Position of respondent



Business directors represent the largest group of Dutch respondents (38%), followed by directors responsible for innovation or R&D (18%). The remaining respondents identified themselves as directors responsible for university collaboration (13%), consultants (10%), and directors of HR, recruitment and training (4%). 18% of Dutch business respondents hold 'other' positions.

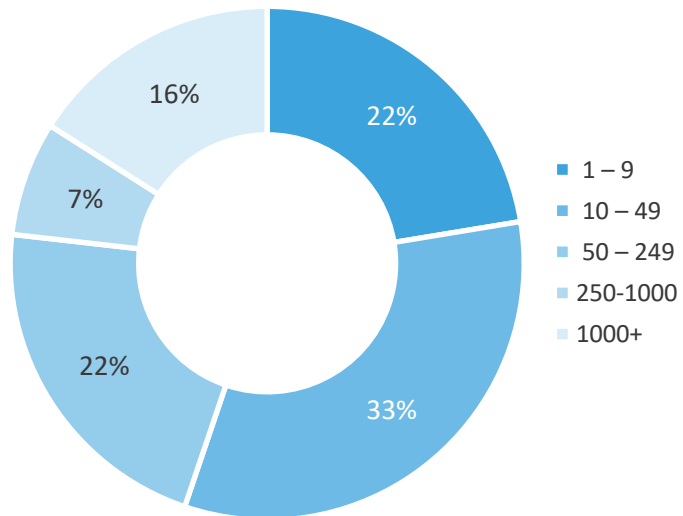
Type of business



The majority of businesses represented in the Dutch sample are the privately-owned companies (84%). The type of businesses with less than 10% representation included multinational organisations, publicly-owned companies, family-owned businesses, 'sole-traders', intermediaries connecting university and businesses, not for profit organisations and associations.

Respondents profile

Business size



Sample Size	
Dutch business representatives	n = 125
European business representatives	n = 3.113

Over half (55%) of the Dutch business sample is comprised by small firms (under 49 employees). 22% work for medium-sized companies, while large companies (250 to 1000+ employees) are represented by 23% 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

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