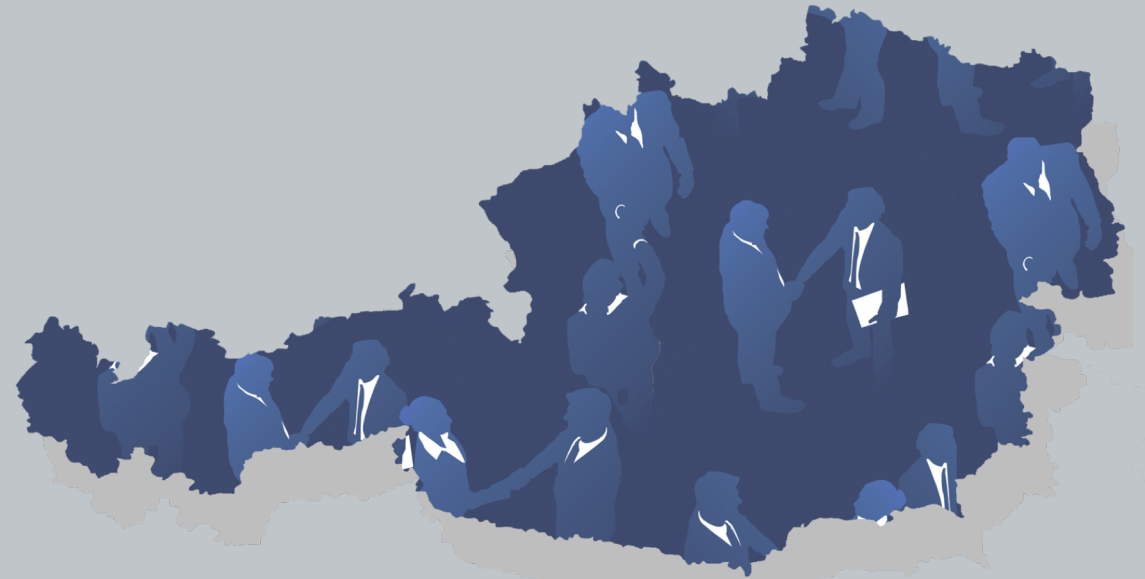


State of University- Business Cooperation

AUSTRIA

Business Perspective

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



The State of Austrian 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 Austria. Examining the perceptions of a wide range of businesses provides positive signs for the future, with 99% of Austrian 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 initiatives and activities that can support their cooperation efforts. Furthermore, there is still room for improvement with respect to perceived and actual capabilities, particularly of those businesses not currently engaged in cooperation.

About the study

The results presented in this report reflect the perceptions of business representatives in Austria with respect to cooperation between universities and business. Data was collected through 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 96 Austrian business responses. The study measured the perceptions of respondents with respect to their businesses and cooperation efforts.

University-Business Cooperation

Austrian businesses engage mostly in research related cooperation, with collaboration in R&D (6.7)

and consulting (4.8) being the most developed UBC activities. As for UBC in education, mobility of students (4.7) has the highest extent, due to the fact that in the Austrian universities of applied sciences students have to go on a compulsory company internship. On the other hand, the cooperation in valorisation (e. g. academic and student entrepreneurship) is limited with nearly 50% of business respondents on average not undertaking any of these activities.

Just like Austrian businesses perceive themselves as the main actors reaching out for collaboration, they also see university alumni, individual academics and current students as proactive initiators of UBC. This demonstrates the willingness of Austrian businesses' to cooperate with universities, but also highlights the opportunity to do more. On the contrary, Austrian representatives identify internal and external intermediaries as well as government as those stakeholders that less often initiate UBC.

It is them, not us

The strongest barriers identified by respondents relate to well recognised cultural differences between businesses and universities, such as differing time horizons and differing motivations between universities and businesses. Moreover, Austrian business respondents point towards the HEIs, reporting their high level of bureaucracy and their focus on producing scientific outcomes as further hindering factors negatively affecting their collaboration efforts. Lastly, lack of governmental funding also seems to hinder UBC in Austria.

NOTE: This report provides a business perspective 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.

Relationships matter

While funding to undertake cooperation emerges as one of the top five facilitators, personal relationship factors are much more prominent. These drivers include the existence of a shared goal, the mutual commitment and mutual trust, together with a certain degree of flexibility of the university partner, that facilitate Austrian UBC. These results indicate that any effort towards enabling cooperation between businesses and universities should focus on relationship development and building trust as key success ingredients.

UBC is beneficial

Austrian businesses see for themselves less benefits from UBC than for universities and students. However, some business are motivated to cooperate with universities businesses expect as a result from collaboration with universities following outcomes such as customised solutions, access to new technologies and knowledge as well as new discoveries at an early stage. Thus it shows that they are primarily driven by the willingness to improve their own innovation capacity.

Strategy first

Strong emphasis has been placed on the development of UBC supporting mechanisms by universities; yet little is known about such mechanisms in the business realm. Compared to the European average, Austrian supporting mechanism are slightly better developed. This study indicates that strategic mechanisms are the most highly developed ones, as 53% and 40% of respondents indicate a top-level management commitment to and a strategy implemented for cooperation with universities respectively. The most underdeveloped supporting UBC mechanisms in Austria include funding of adjunct positions or chairs within a university, academic-idea competitions and co-working spaces.

More to learn

Austrian businesses perceive themselves as supportive towards cooperation with universities. In particular, they identified their strengths in the ability to absorb the knowledge and technology coming from HEIs. They also believe that universities can play a crucial role in innovation efforts. Yet, compared to European average, Austrian businesses are less supportive towards UBC in education and training.

Introduction

About the study

The study focuses 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

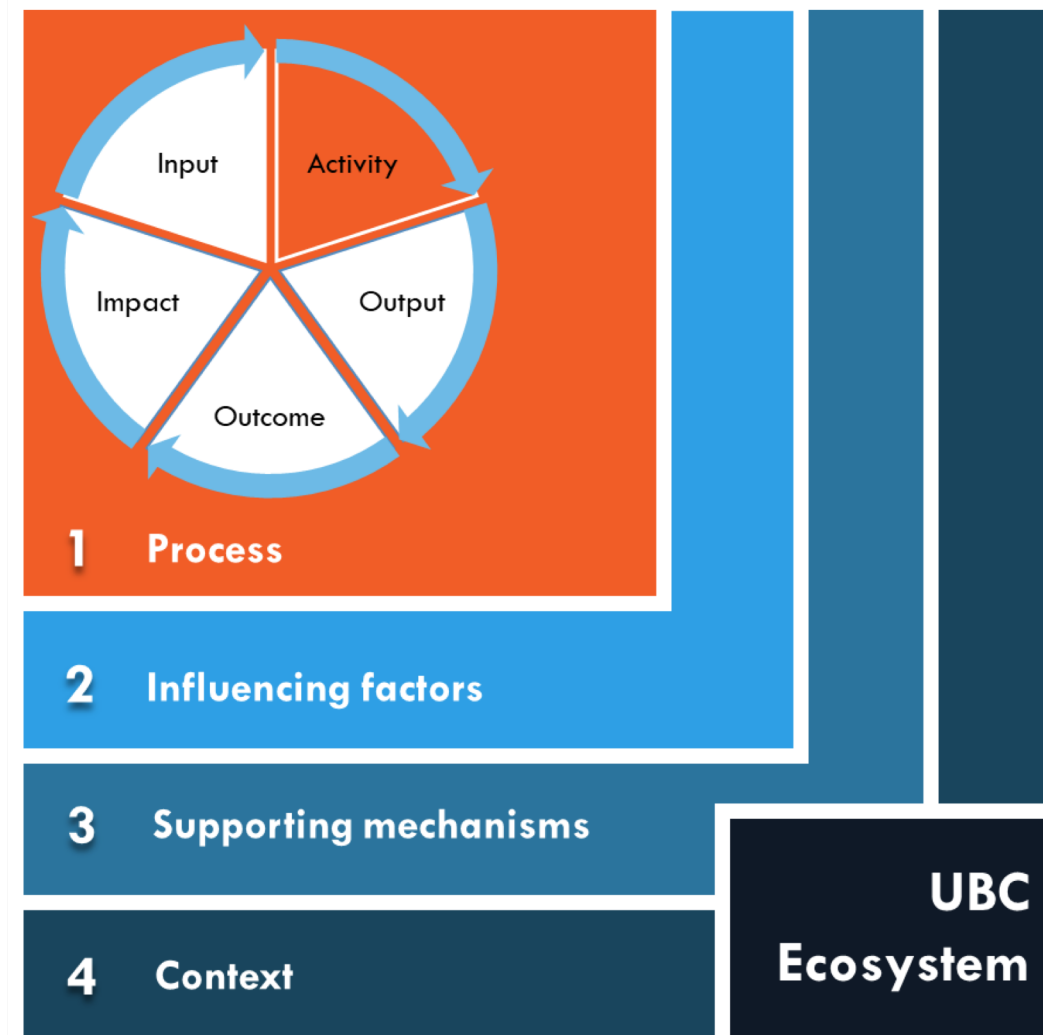
UBC activities

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
Education	<ol style="list-style-type: none">1. curriculum co-design2. curriculum co-delivery (<i>e.g. guest lectures</i>)3. mobility of students (<i>i.e. student internships/placements</i>)4. dual education programmes (<i>i.e. part theory, part practical</i>)5. lifelong learning for people from business (<i>e.g. executive education, industry training and professional courses</i>)
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>i.e. temporary mobility of academics to business and vice versa</i>)
Valorisation	<ol style="list-style-type: none">9. commercialisation of R&D results (<i>e.g. licencing/patenting</i>)10. academic entrepreneurship (<i>e.g. spin offs</i>)11. student entrepreneurship (<i>e.g. start-ups</i>)
Management	<ol style="list-style-type: none">12. governance (<i>e.g. participation of academics on business boards and business people participation in university board</i>)13. shared resources (<i>e.g. infrastructure, personnel, equipment</i>)14. industry support (<i>e.g. endowments, sponsorship and scholarships</i>)

Development of UBC activities

Austrian businesses engage mostly in research UBC activities, like joint R&D (6.7) and consulting (4.8). As for education related UBC, mobility of students (4.7) is the most developed UBC activity. The latter can be explained by the fact that in the universities of applied sciences students have to go on a compulsory company internship, which contributes to the student mobility above.

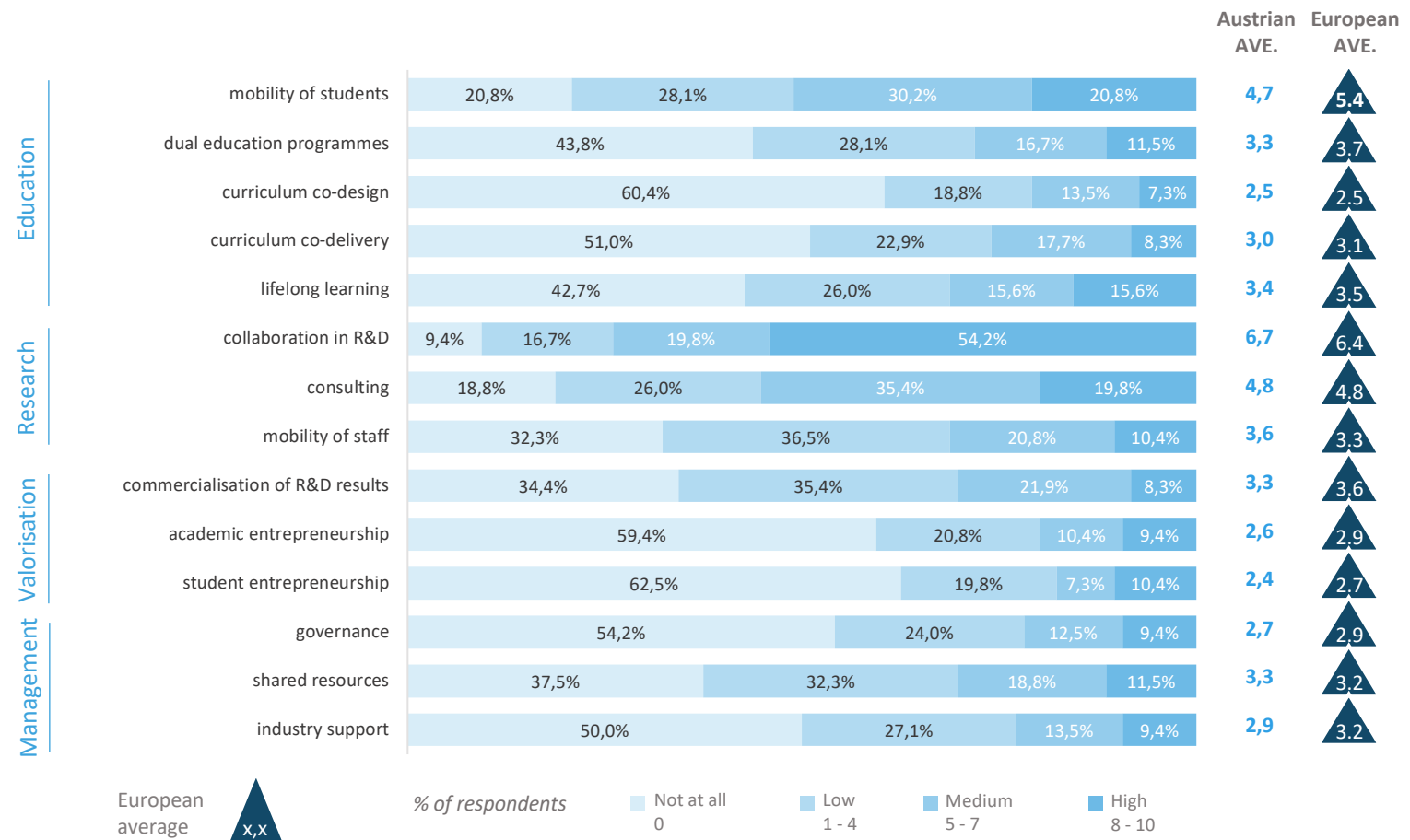
Over 50% of businesses do not undertake any management or valorisation related collaboration (with the exception of commercialisation of R&D results and shared resources).

Particularly low are the activities of curriculum co-design, academic entrepreneurship and student entrepreneurship.

In comparison with the development of the UBC activities for European business, the Austrian one is very similar.

UBC activities development

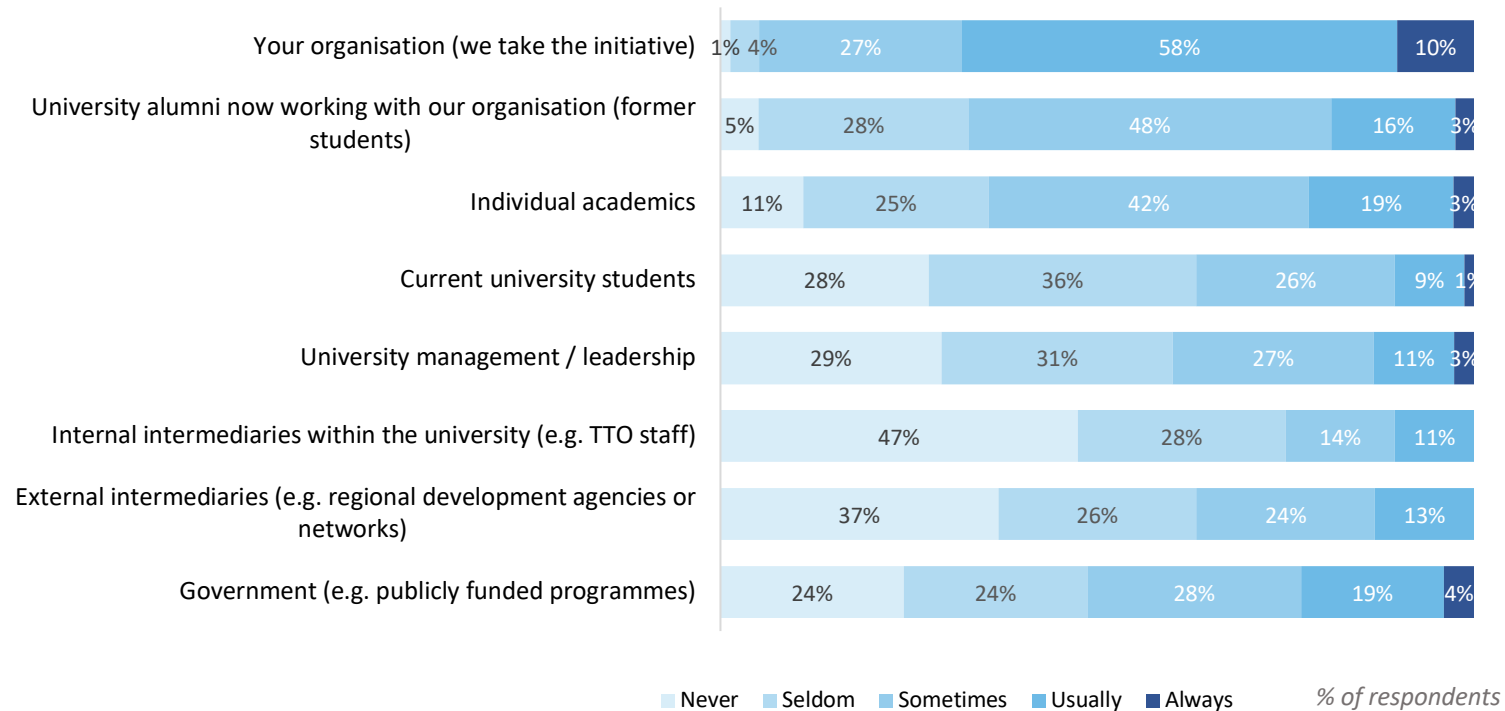
'Which UBC activities do you collaborate with universities in?'



Initiation of UBC

How UBC is initiated

'How often various stakeholders initiate UBC activities?'



Austrian businesses clearly see themselves as the main initiators of cooperation with universities. 68% of business state that their organisation always or usually initiate UBC. Both business and university (see the report on university perspective) show overconfidence about their role in initiating UBC activities.

Austrian businesses see the individual academics and university alumni now working with their organisation also active in initiating cooperation.

Internal intermediaries within the universities or external ones are perceived as passive in UBC initiation. 75% and 63% of the businesses report that they never or seldom undertake any first actions towards UBC initiation respectively.

Similarly, 64% and 60% of business state that current university students and university managers do never or seldom initiate UBC.

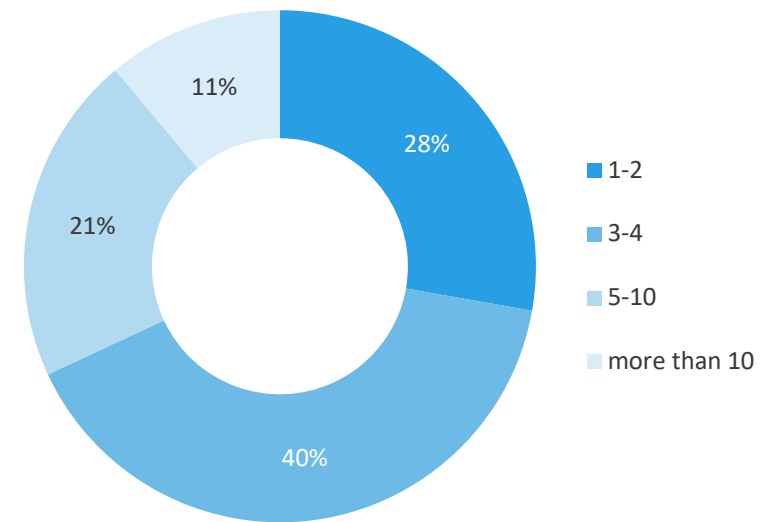
Business partners

Location of university partners

Percentage of businesses cooperating with...	
HEIs in their region	85.5%
HEIs in their country	98.5%
HEIs outside their country	84.8%

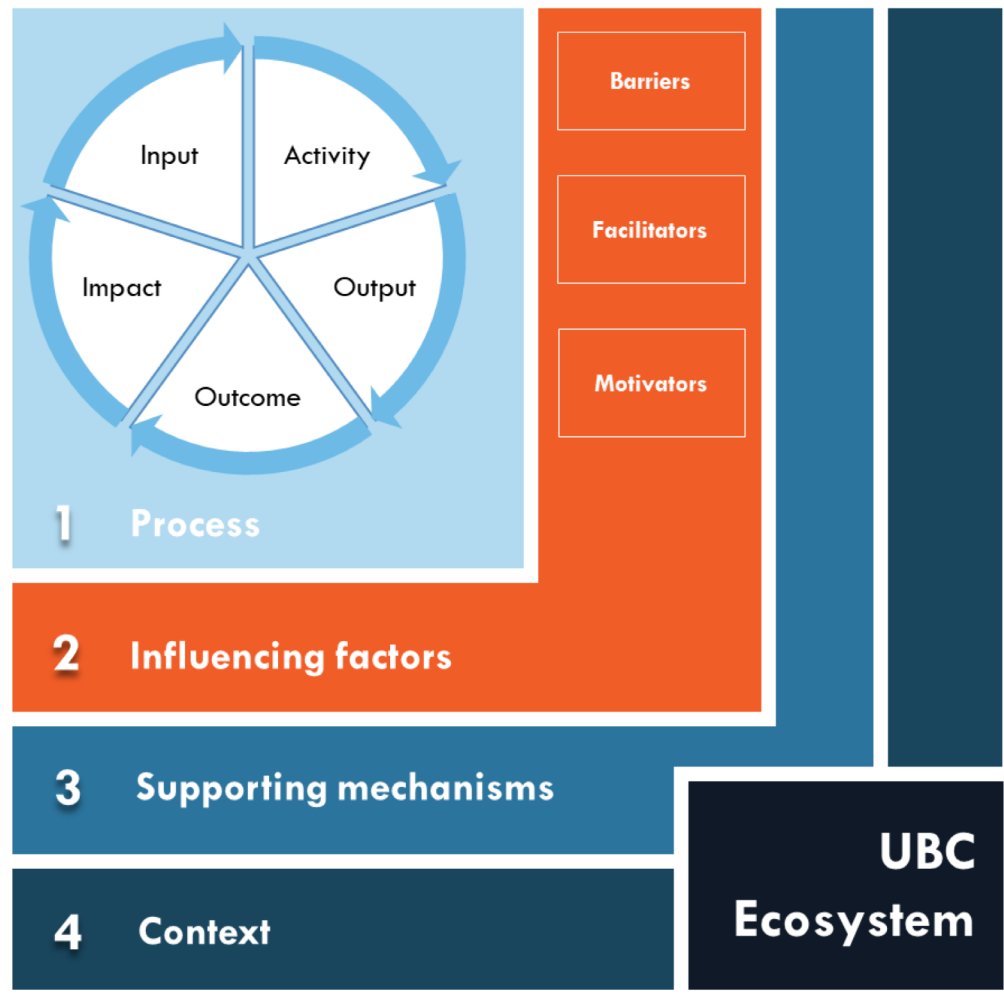
While most Austrian businesses cooperate with Austrian universities (98.5%), they also cooperate with university partners from the region and outside Austria (85.5% and 84.8% respectively). The geographical location and size of the Austrian economy and of the Austrian higher education system might explain this.

Number of university partners



Over two third (68%) of the Austrian businesses cooperate with less than 4 university partners. While 21% have established relations with 5-10 partners, only 11% cooperate with over 10 universities.

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 Austrian businesses to cooperate with universities are diverse.

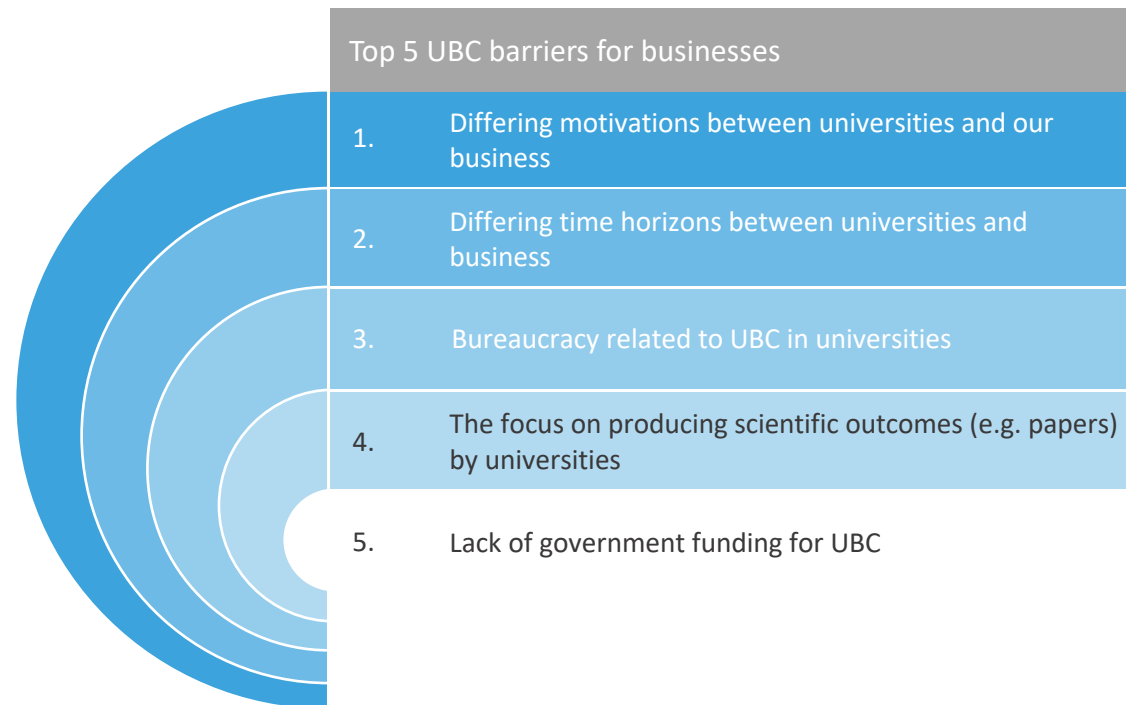
The main ones are related to cultural differences, such as the differing motivation and the differing time horizons between universities and business indeed highlighting the different cultures in universities and businesses. Businesses also highlight that universities are too focused on producing scientific outcomes.

The bureaucracy related to UBC in universities is also an important barrier for businesses. The university law that changed in the early 2000s allowed universities to have more autonomy and updated their management and administration processes¹. However, business still see a large room for improvement in universities.

The lack of government funding for UBC is the only relevant financial barrier.

Barriers

‘What is inhibiting your cooperation with universities?’

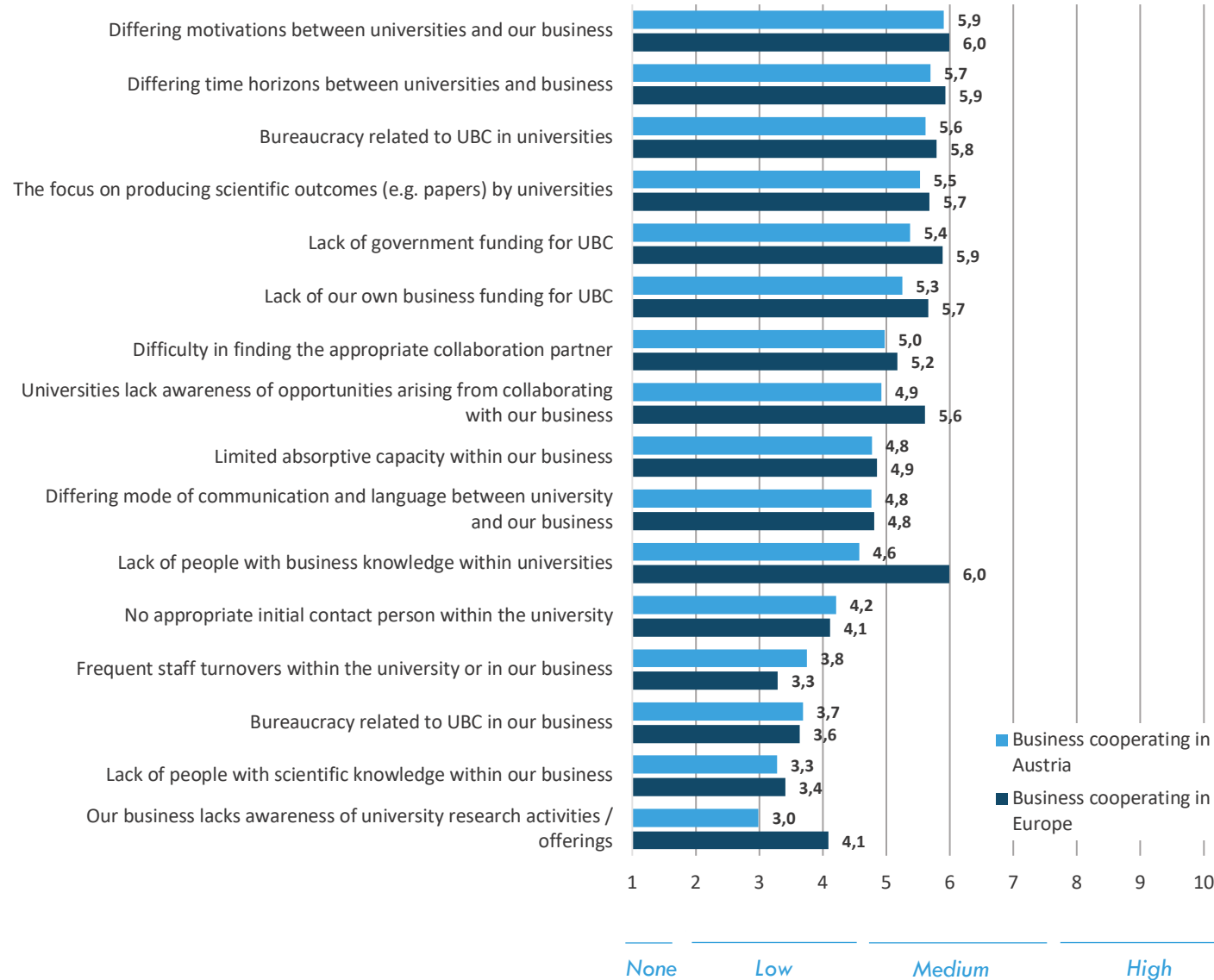


¹ Pechar, H. (2005). Backlash or modernisation? Two reform cycles in Austrian higher education. In A. Amaral, M. Kogan, & A. Gornitzka (Eds.), *Reform and change in higher education. Analysing policy implementations* (pp. 269–285). Dordrecht: Springer.

Barriers hindering UBC

Barriers

'What is inhibiting your cooperation with universities?'



The majority of barriers perceived by cooperating Austrian businesses and their European counterparts are to some extent similar. However, Austrian businesses perceive most barriers slightly lower.

The lack of awareness of both organisations and the lack of people with business knowledge within universities, are significantly higher barrier for European business than they are for Austrian business.

The two strongest barriers emerged for both groups are related to the cultural issues such as differing motivations and differing time horizons.

Lack of awareness of university activities/offerings is the weakest barrier.

Drivers stimulating UBC

The main factors that facilitate Austrian business cooperation with universities are related to their personal relationships.

A relationship based on trust, commitment, flexibility and a shared goal highly facilitate cooperation for Austrian businesses, resulting in smoother and more successful collaboration with universities.

The existence of funding to undertake UBC is also likely to play an important 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:

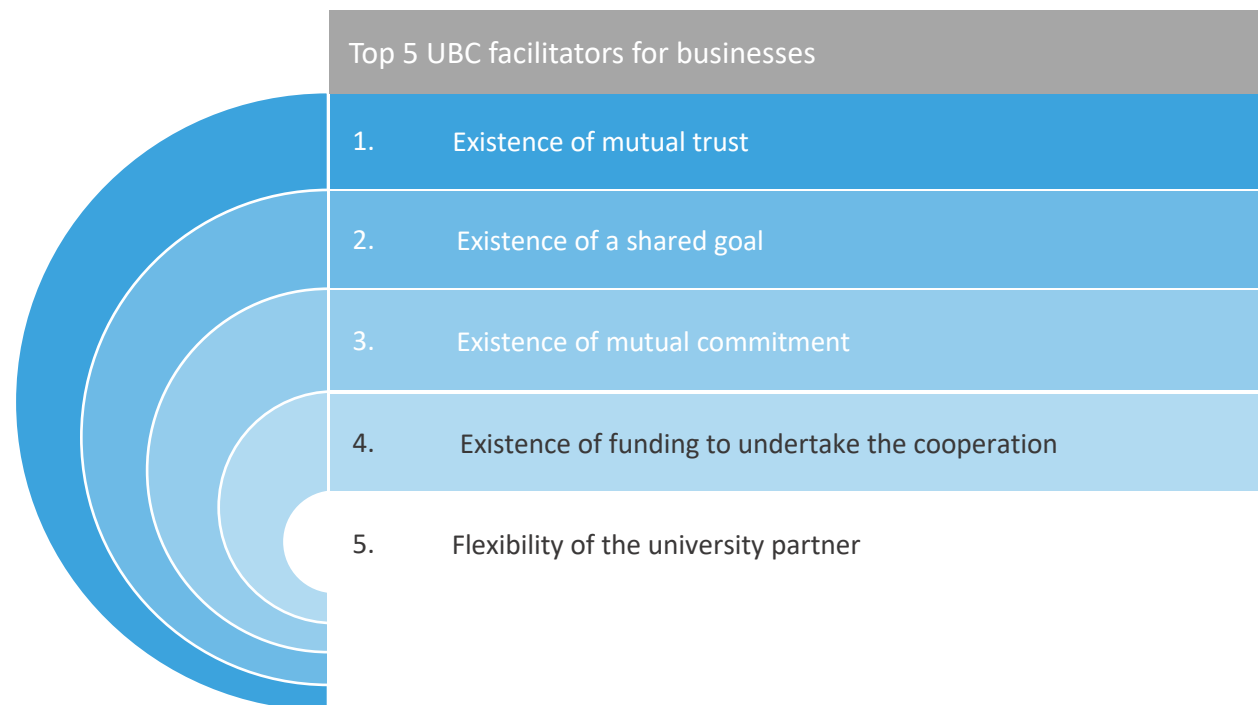
1. **Facilitators** – factors that enable or ease cooperation
2. **Motivators** – incentives or benefits that the respective stakeholders would like from the cooperation

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

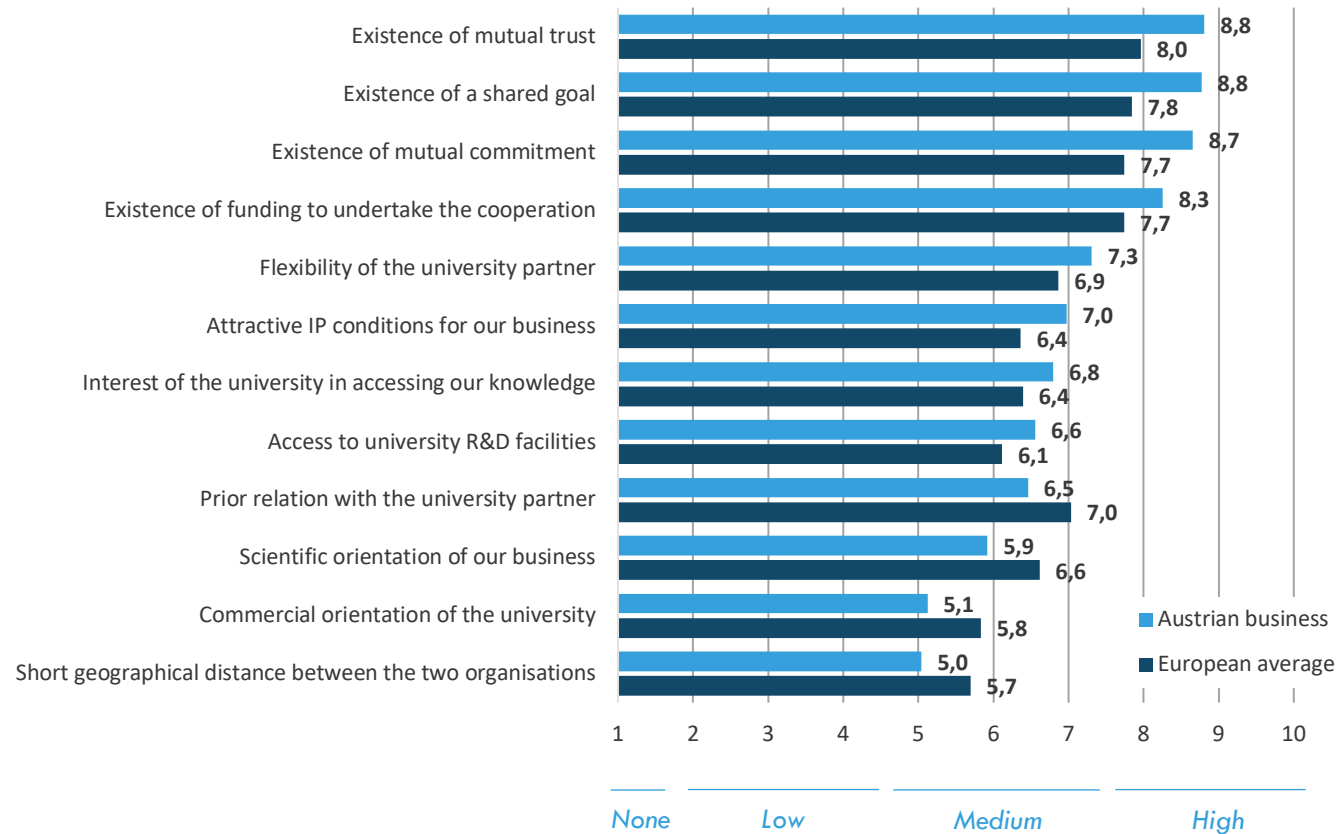
'What is facilitating your cooperation with universities?'



Drivers stimulating UBC

Facilitators

'What is facilitating your cooperation with universities?'



Most facilitators are perceived higher by Austrian than European businesses.

This is the case for those personal relationship facilitators, which bear great importance in the advance of UBC in Austria.

The interest in accessing each other knowledge and facilities also facilitates UBC for Austrian businesses to a larger extent.

However, the scientific orientation of the business, the commercial orientation of the university and the short geographical distance between the two organisations do play a lower role than the previous factors in Austria, and also have lower importance than for European businesses.

Drivers stimulating UBC

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

Businesses cooperate with universities primarily to improve their own innovation capacity and obtaining a customised solution for their business.

Austrian businesses are also motivated to access new knowledge, technologies and discoveries at an early stage.

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

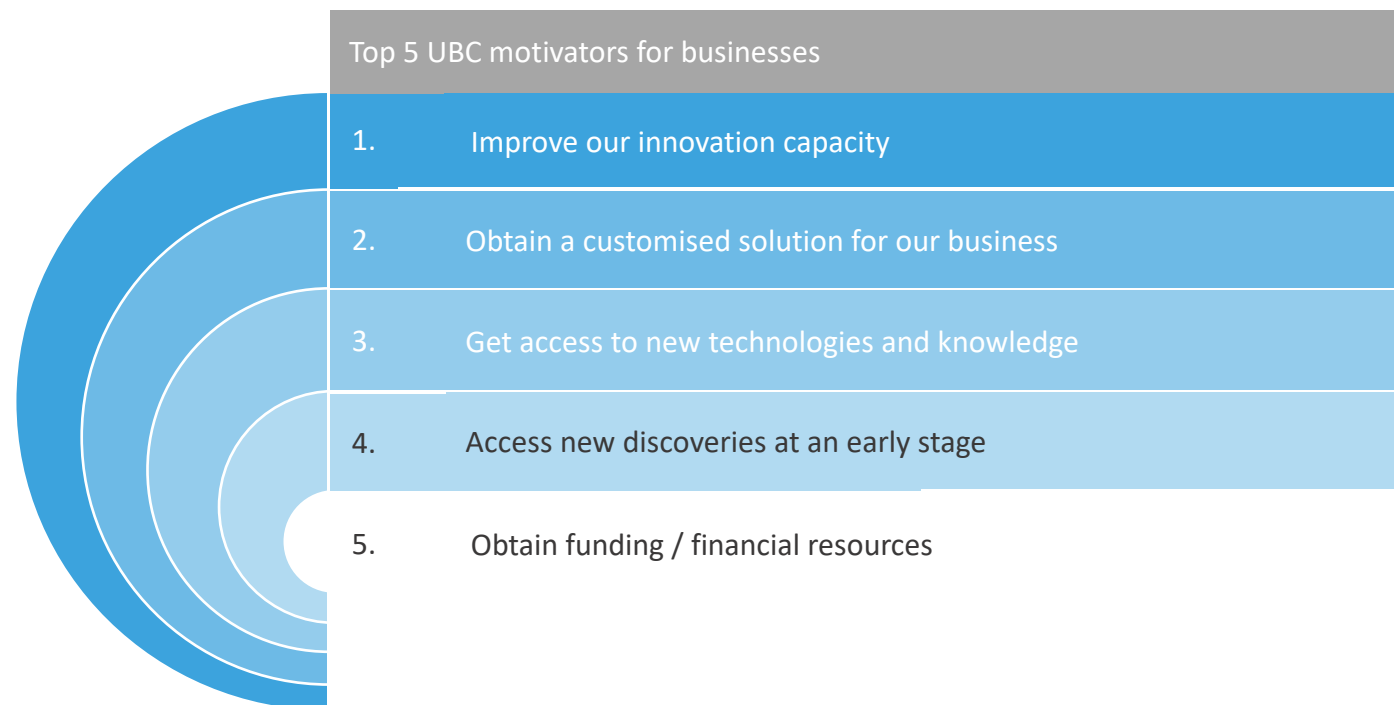
Motivations for UBC are the reasons why businesses collaborate with universities.

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

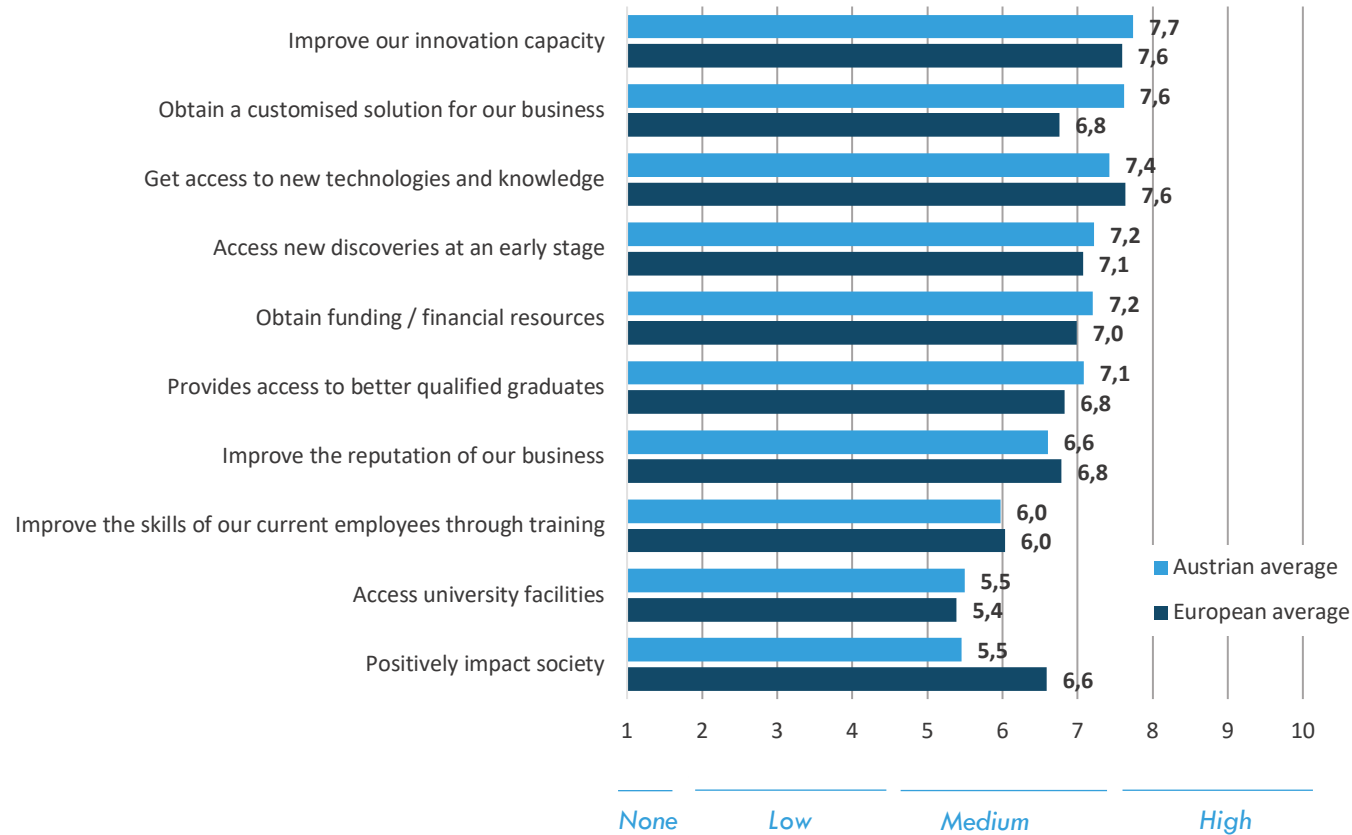
'What motivates you to cooperate with universities?'



Drivers stimulating UBC

Motivators

'What motivates you to cooperate with universities?'



Overall, the importance of the motivations for both Austrian and European businesses are similar.

The motivation of obtaining a customised solution for their business is higher for Austrian businesses than for European ones.

Like their European counterparts, Austrian businesses are not highly motivated to collaborate in training opportunities with universities.

On the other end, Austrian businesses are significantly less motivated than European ones about positively impacting the society, which is the least relevant motivators for them.

Benefits of UBC

Both Austrian and European businesses have exactly the same perceptions in respect to which stakeholder groups benefit more or less from UBC.

Both groups see students as the primary beneficiaries of UBC, followed by universities.

Notably they perceived themselves also as beneficiary but to a slightly lower extent.

The lowest benefits are perceived to be for academics, society and government.


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

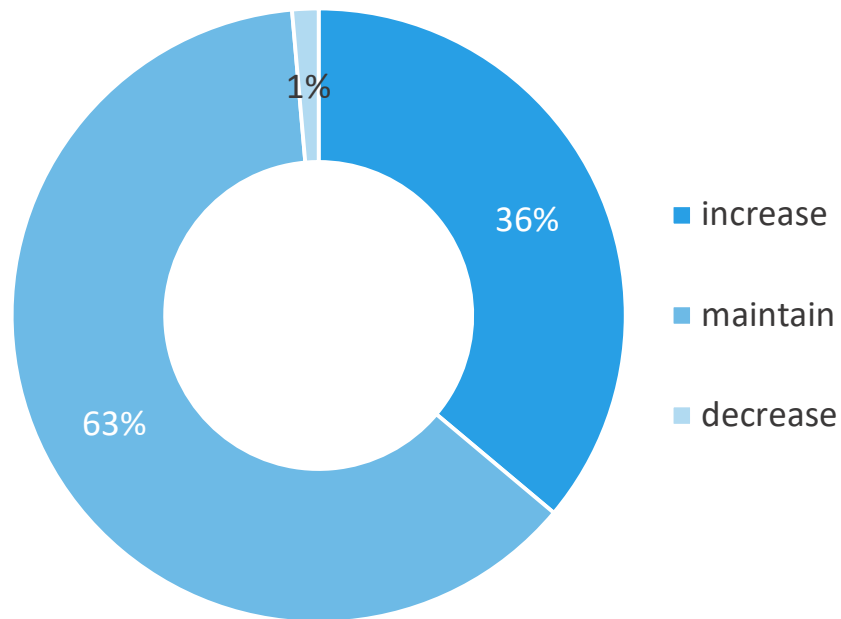
'Who receives the benefits of UBC?'



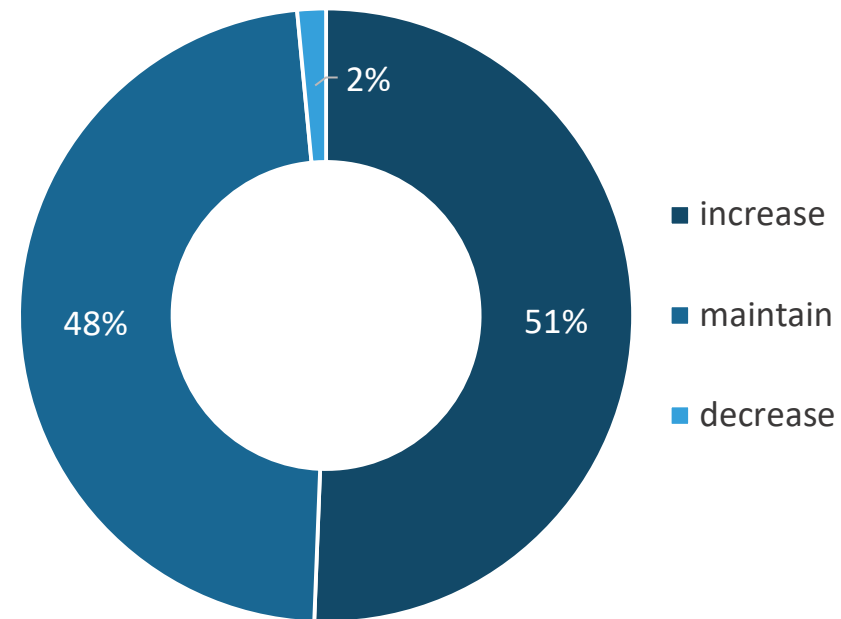
	Austrian businesses	European businesses
1.	Students	Students
2.	Universities	Universities
3.	Businesses	Businesses
4.	Academics	Academics
5.	Society	Society
6.	Government/ public authorities	Government/ public authorities

Future intentions

Future UBC intentions – Austrian businesses



Future UBC intentions – European businesses



99% of Austrian businesses that currently cooperate with universities plan to maintain or increase their cooperation, and only 1% intend to reduce it. This shows an important momentum for UBC in Austrian businesses.

European businesses seem to be even more confident in their future intentions towards UBC, as over half (51%) of them plan to increase their cooperation activities and only 2% to reduce them.

Willingness to recommend UBC

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

Austrian businesses are equally satisfied with UBC in research as their European counterparts (NPS=31). While 43% of them will promote it positively, 12% would do it negatively.

Contrary, Austrian businesses are less satisfied with their cooperation in education (NPS= -22). Only 20% would highly recommend it and as much as 42% will not recommended it. This is also more negative than their European counterparts (NPS = -2).

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

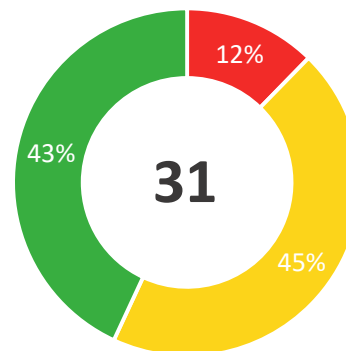
'How likely is it that you would recommend to a business colleague to engage in UBC?'

	Detractors	Passives	Promoters	Net promoter score
Business cooperating with universities in R&D	12%	45%	43%	31
Business cooperating with universities in E&T	42%	38%	20%	-22

The *Net Promoter Score* metric offers a proxy for customer satisfaction, it ranges between -100 and 100 and a score above 0 is considered positive.

Satisfaction with cooperation with universities (net promoter score)

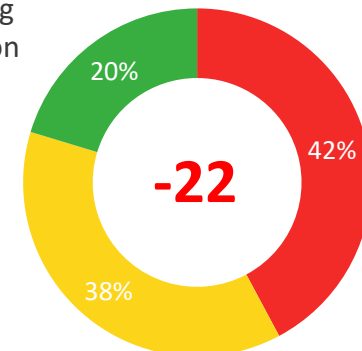
Business cooperating in research



■ Detractors ■ Passives ■ Promoters

European business NPS result: 28

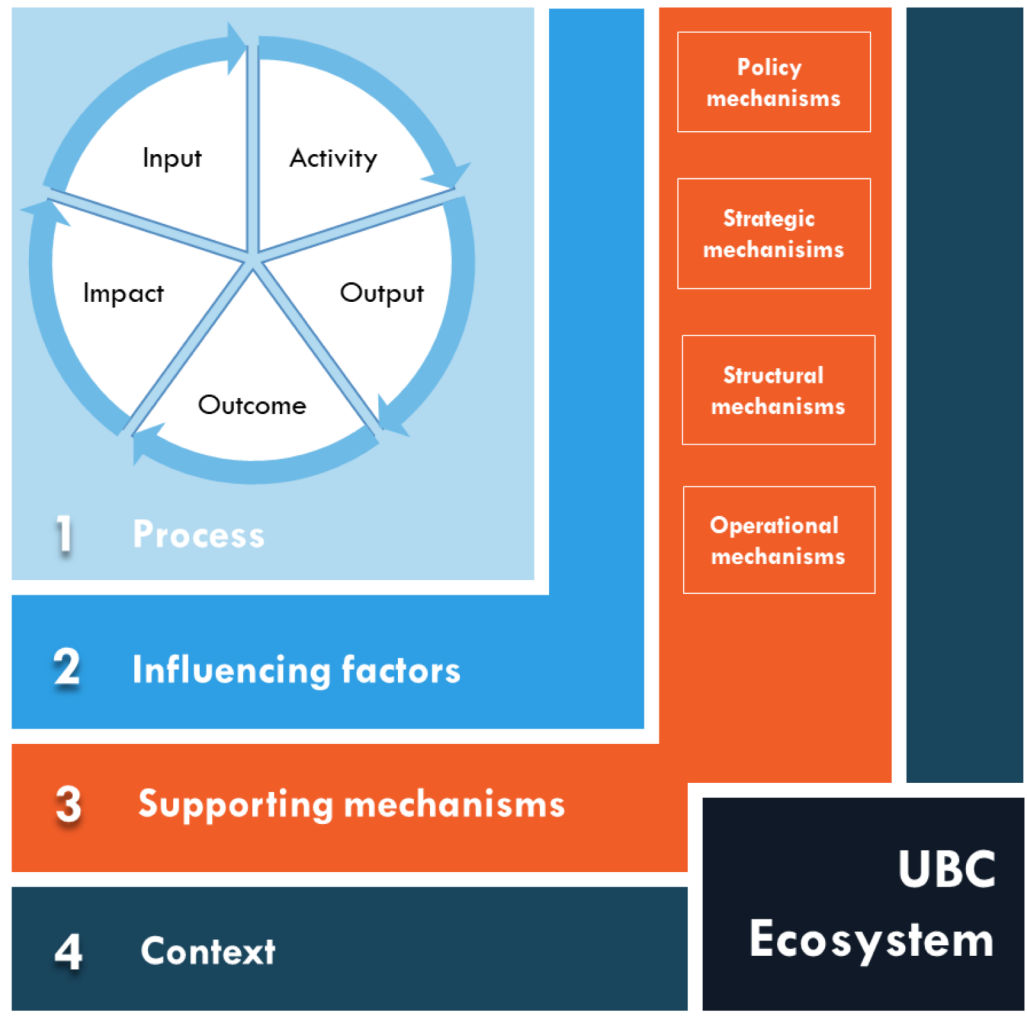
Business cooperating in education



■ Detractors ■ Passives ■ Promoters

European business NPS result: -2

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

Austrian businesses can adopt a range of supporting mechanisms in their interaction with universities, but most of them are present in under a third the businesses.

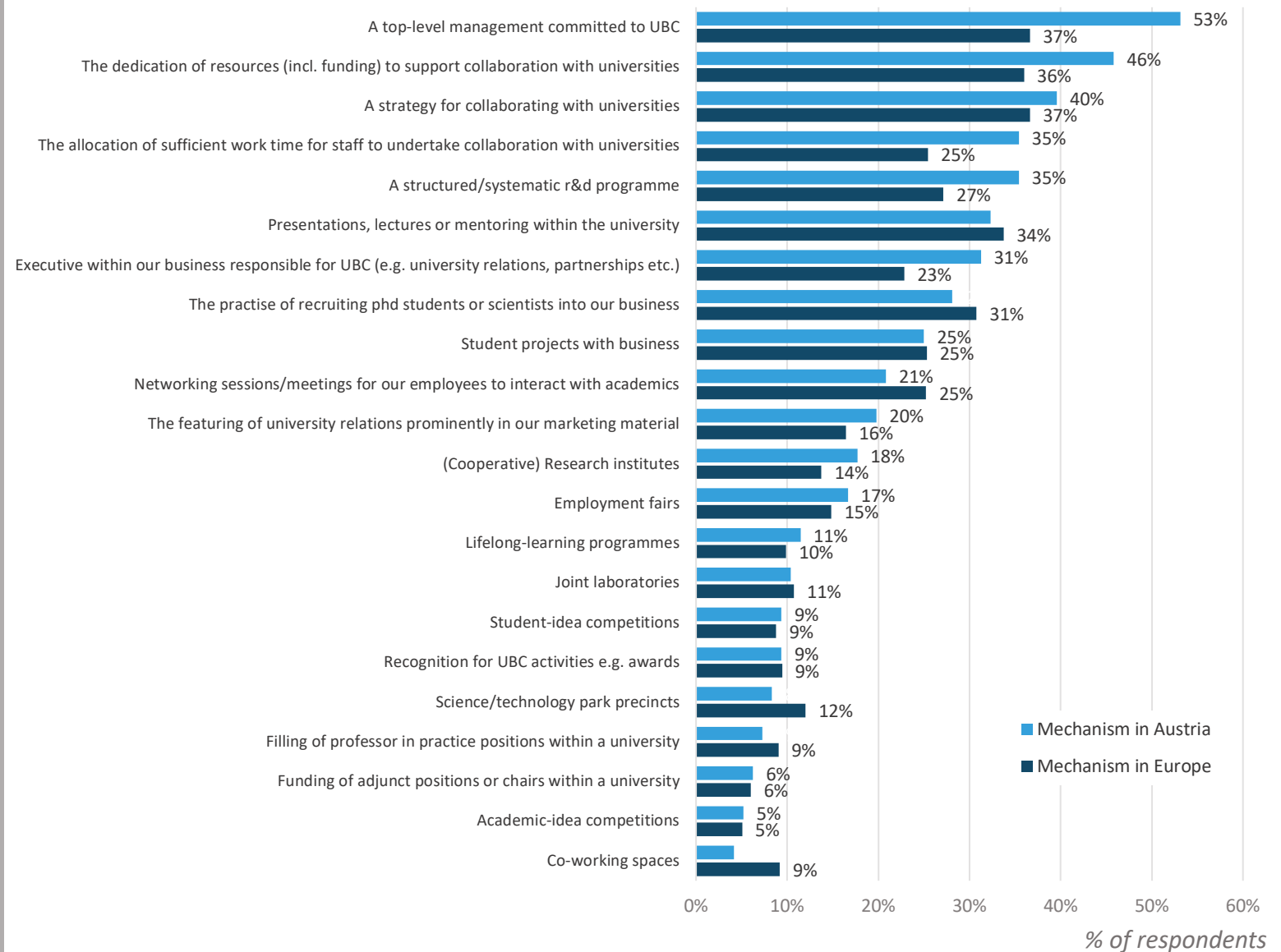
The most developed one, and the only one present in over half of Austrian businesses is a top-level management committed to UBC (53%). The dedication of resources (46%) and a strategy for UBC (40%) are the further mechanisms present. Compared to the European average, UBC supporting mechanisms in Austria are generally more common. Particularly, the Austrian business managers are significantly more devoted to UBC than the European average.

This is clearly a sign of the highly developed innovation system where it is clear that HEI play a key role for innovation and corporate competitiveness.

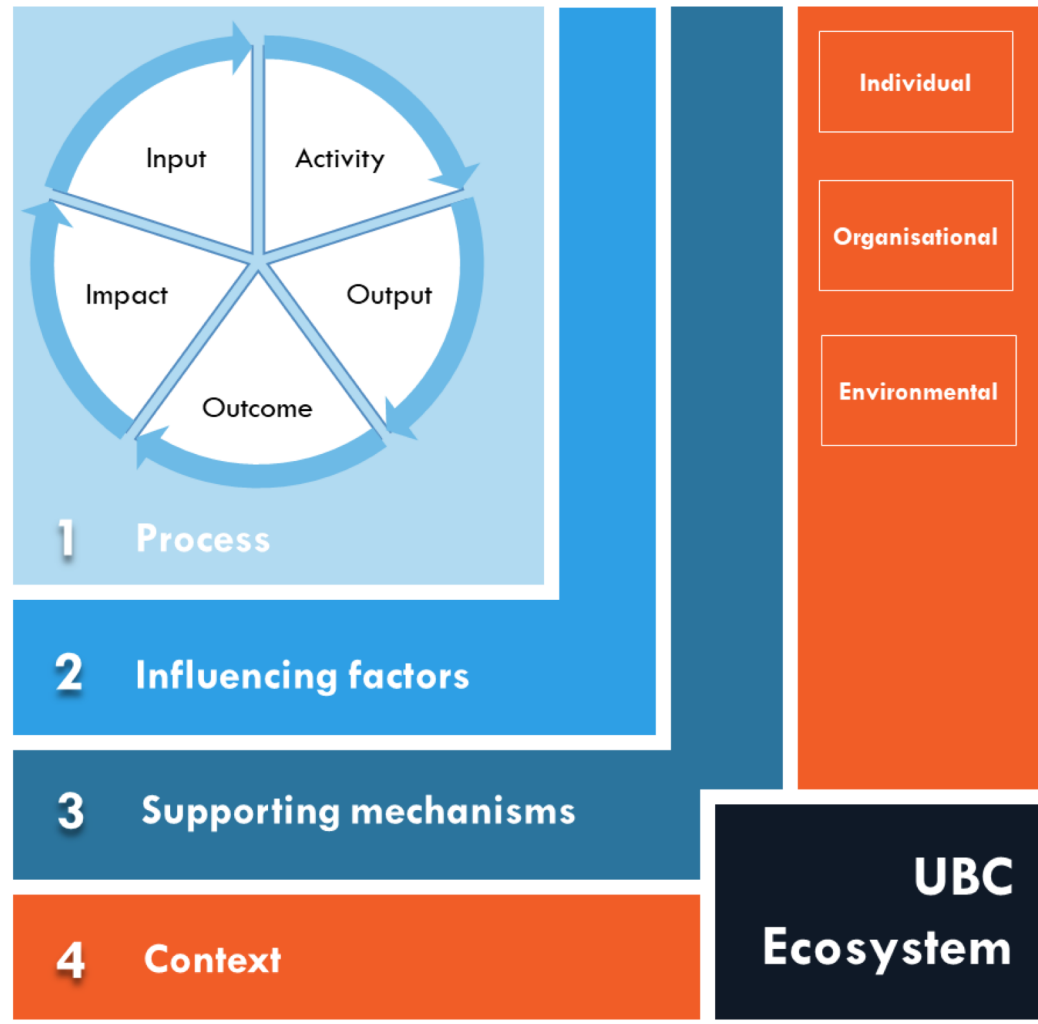
Additionally, resources for UBC are allocated in a greater percentage of Austrian businesses, they also have more often time allocated to staff for UBC and a structured R&D programme.

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 the short or medium 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

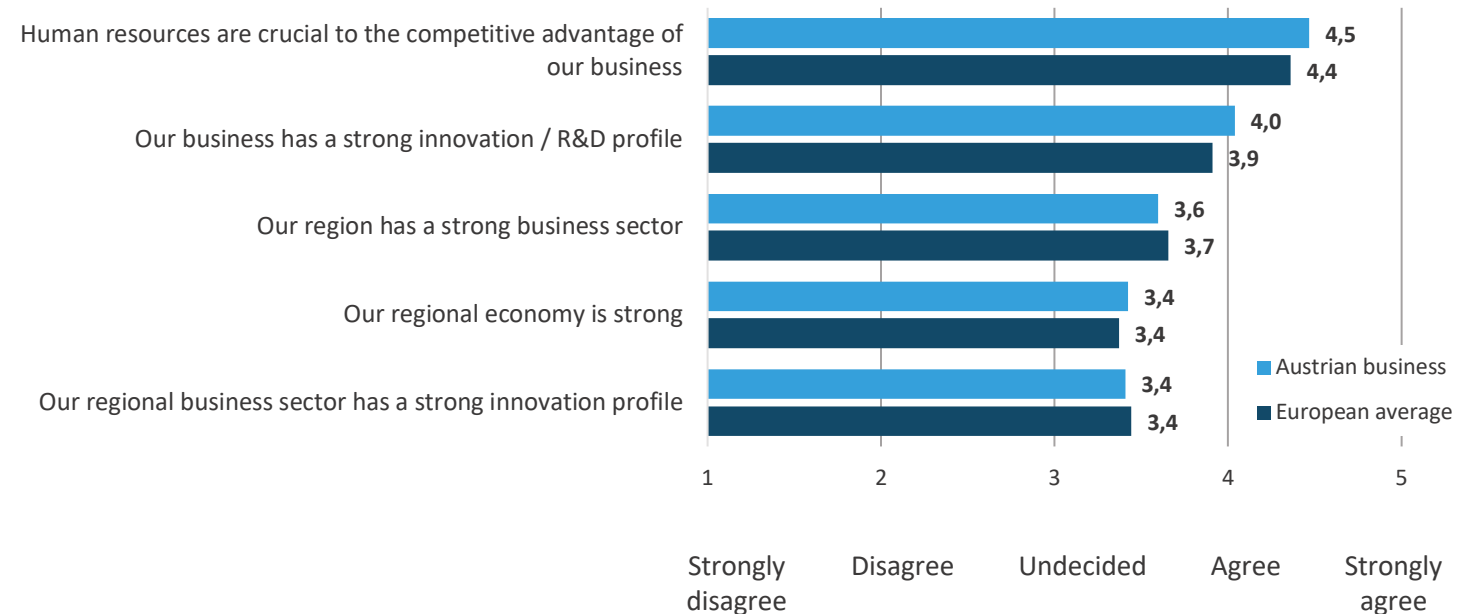
Austrian business cooperating with universities perceive their context similarly to European cooperating businesses.

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

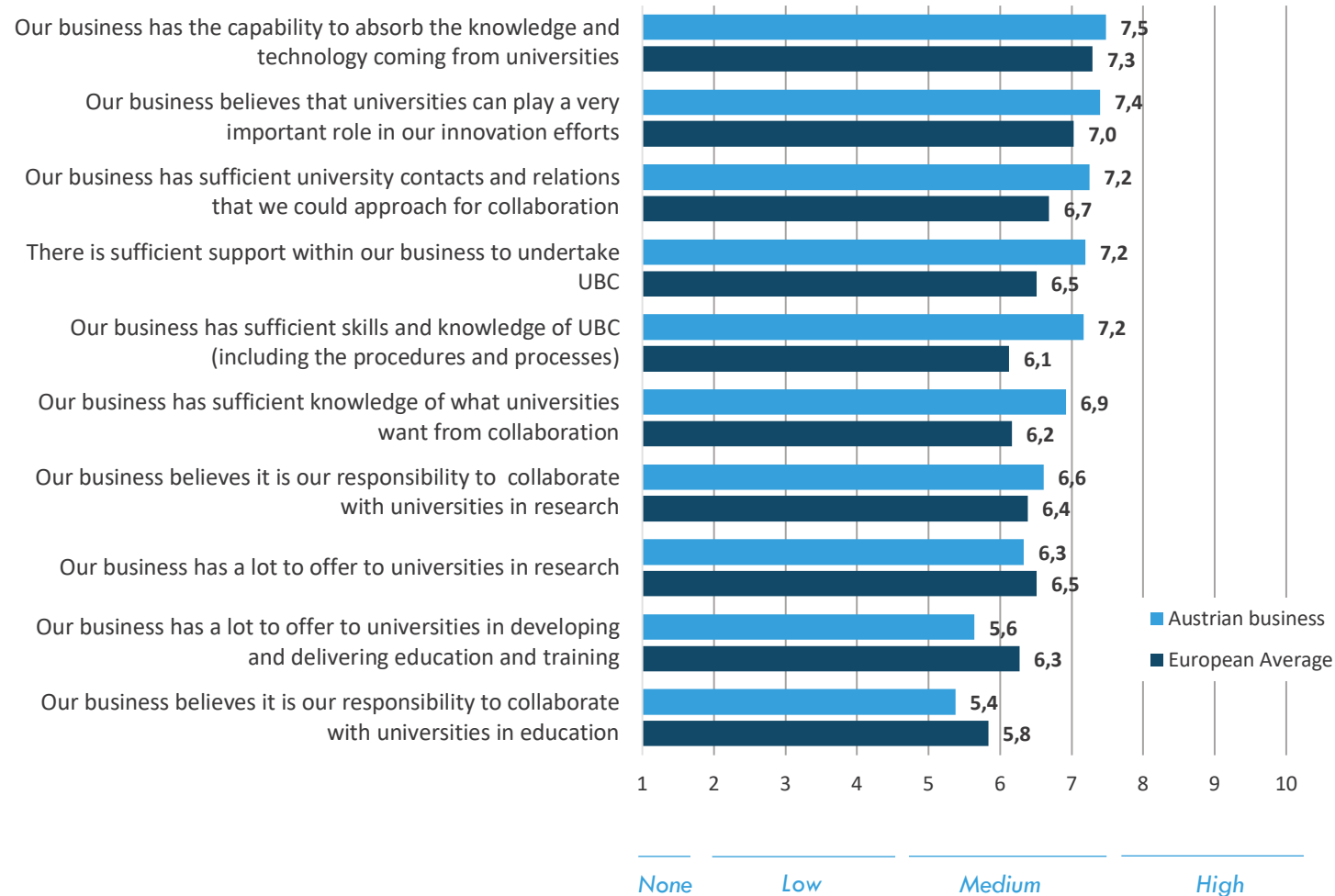
'To what extent do you agree with the following statements?'



UBC capabilities and beliefs

Supportive UBC environment

How supportive are your organisation and environment for UBC?'



Austrian 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.

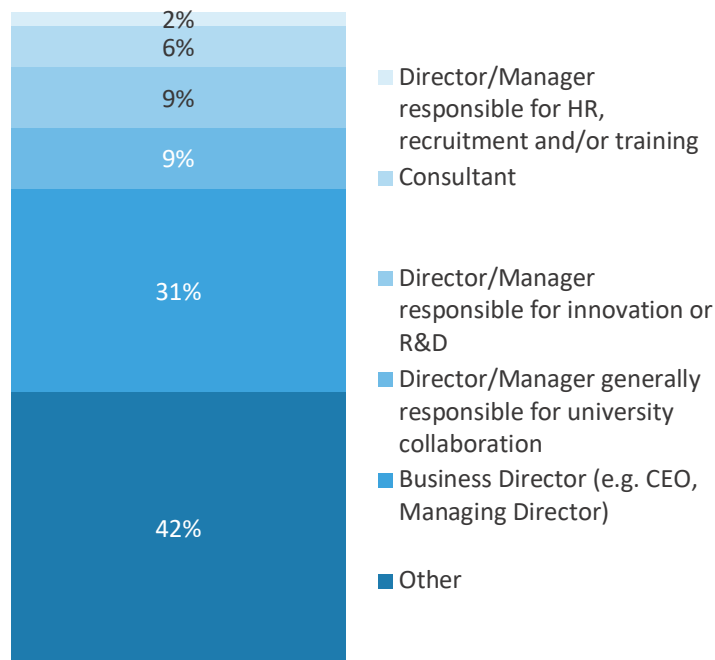
Yet, Austrian businesses are less supportive towards UBC in education and training.

Austrian business state that they have sufficient university contacts, skills and knowledge of UBC, knowledge of what universities want and support within the business to undertake UBC.

Overall, Austrian businesses perceive themselves in a more positive way in comparison to European average, with the exception of the educational activities that are ranked slightly higher in European than in Austrian businesses.

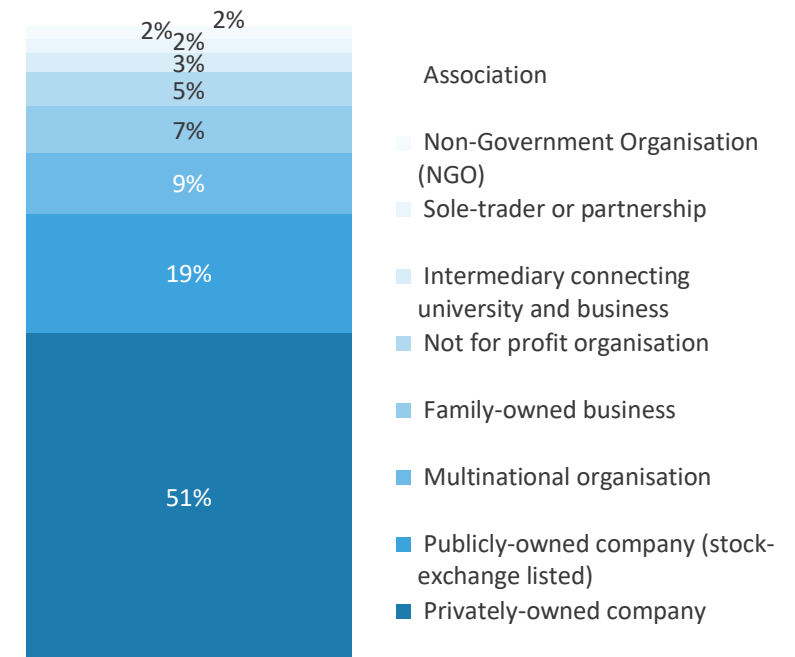
Respondents profile

Position of respondent



Almost a third of the Austrian business sample (31%) are business directors, which represent the largest group. It is followed by directors responsible for innovation or R&D and directors responsible for university collaboration (9% each). The remaining business respondents identified themselves as consultants (6%), and directors of HR, recruitment and training (2%). 42% of Austrian respondents hold 'other' positions.

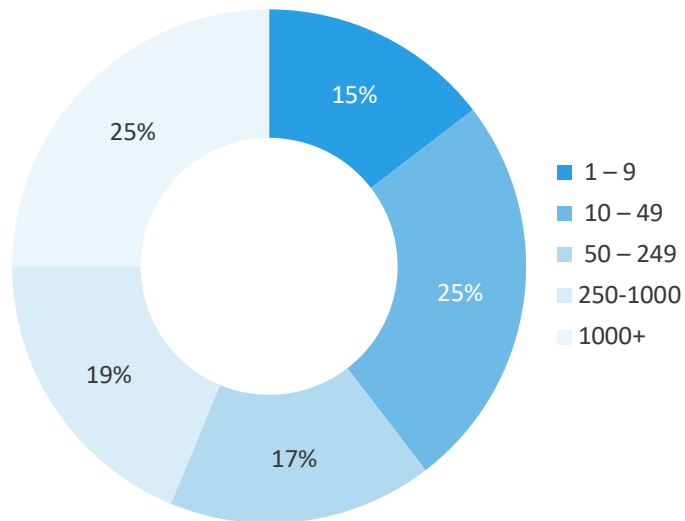
Type of business



A wide variety of businesses were represented in the Austrian sample, but over half of them (51%) are privately-owned companies, followed by publicly owned companies (19%). The type of businesses with less than 10% of representation include: not for profit organisations, associations, family-owned businesses, multinational organisations, sole-trader or partnerships, NGOs and intermediaries connecting universities and businesses.

Respondents profile

Business size



Sample Size	
Austrian business representatives	n = 96
European business representatives	n = 3.113

Half of the Austrian business sample is comprised by either small firms (10 to 49 employees) or larger companies with more than 1,000 people employed (25% each). 15% of business managers work for micro-companies and 17% for medium-sized companies. Large companies (250 to 1000 employees) are represented by 19% of the business managers in the sample.

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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