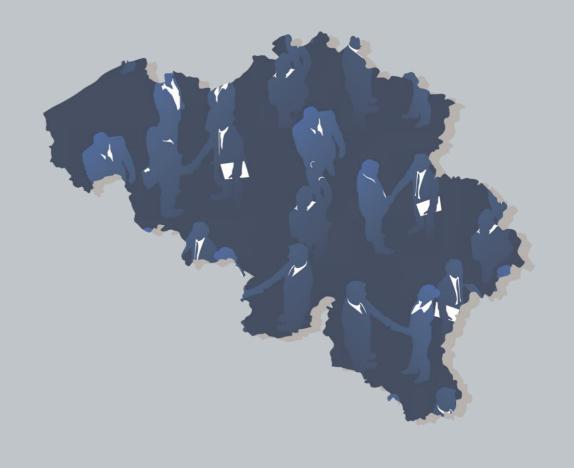


# State of University-Business Cooperation BELGIUM

**Business Perspective** 

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













UNIVERSITY OF APPLIED SCIENCES AND ARTS











### The State of Belgium 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 Belgium. 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 Belgium 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 129 responses. The study measured the perceptions of respondents with respect to their businesses and cooperation efforts.

#### Research at the Forefront of UBC

The nature of cooperation activities between the Belgian businesses involved in this survey and universities generally follows the European pattern. Belgian businesses engage mainly in research activities such as collaboration in R&D (63.6%) and consulting (49.1%). As for UBC in education, Belgian

businesses undertake joint activities with universities in mobility of students and life-long learning, even though the development of activities connected with curriculum co-design and co-delivery is particularly low.

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

Notably, Belgian 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

Belgian businesses see the variation in their cultural peculiarities with universities, such as different motivations and time horizons, as the major obstacles to collaboration. Belgian business representatives also note, that the lack of business funding and people with business knowledge within universities hinders the intensity or quality of joint activities.

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.

## **Executive summary**

#### People are key in UBC

While funding to undertake cooperation emerges as an important factor that enables the UBC in the eyes of Belgian business representatives, the factors that are related to the relationships are more prominent (existence of mutual trust in particular). Belgian businesses further highlight the importance of a mutual commitment, shared goal, and prior relationship with the university partner.

#### **Innovation Aspirations Main Driver**

Belgian 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 the society and the government as receiving the fewest benefits. Then, what is the major motivation for businesses to undertake UBC?

Belgian businesses are primarily driven to collaborate with universities to improve their own innovation capacities, namely obtaining new technologies, knowledge and new discoveries on an early stage.

#### Top-level management committed to UBC

In general, the Belgian business representatives report a low to middle level of the development of all UBC supporting mechanisms within their companies, not exceeding 40%. Mainly, Belgian businesses support their UBC through top-level management and investing their resources, as well as through engaging in presentations and mentoring programmes and student projects with the universities. The least developed are co-working spaces, academic- and student-idea competitions, as

well as funding of adjunct positions within university. Lesser involvement and support of UBC in education and life-long learning is co-related with Belgian business representatives' perception on their already strong human resources profile.

#### **Sufficient capabilities for UBC**

Belgian businesses follow an overall European trend in seeing themselves as rather supportive of collaboration with universities. In particular, Belgian 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. Belgian business representatives report they have sufficient university contacts to undertake UBC.

Notably, Belgian 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 Belgium.

### 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 consider 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.



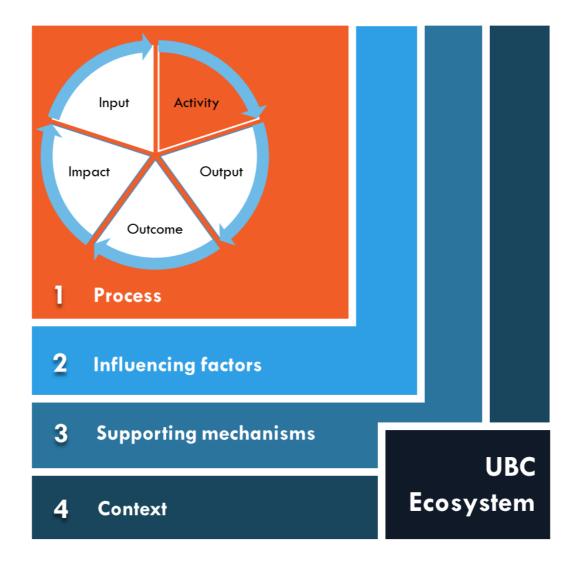
### **UBC** activities

#### **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	1. curriculum co-design		
Education	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)		
	<ol> <li>lifelong learning for people from business (e.g. executive education, industry training and professional courses)</li> </ol>		
Dagagush	6. joint R&D (incl. joint funded research)		
Research	7. consulting to business (incl. contract research)		
	8. mobility of professionals (i.e. temporary mobility of academics to business and vice versa)		
Malautantian	9. commercialisation of R&D results (e.g. licencing/patenting)		
Valorisation	10. academic entrepreneurship (e.g. spin offs)		
	11. student entrepreneurship (e.g. start-ups)		
Management	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)		

Belgian businesses engage mostly in research UBC activities, such as joint R&D (5.4) and consulting (4.2). As for education related UBC, mobility of students (4.5) is developed the most. R&D-related UBC is especially well-developed in life sciences. In Flanders as well as in Wallonia, the biotechnology and life sciences industries are represented by a number of regional governments and private sector network organisations that actively participate in the biotechnology clustering activities.

Over 50% of businesses do not undertake any management or valorisation related collaboration activities.

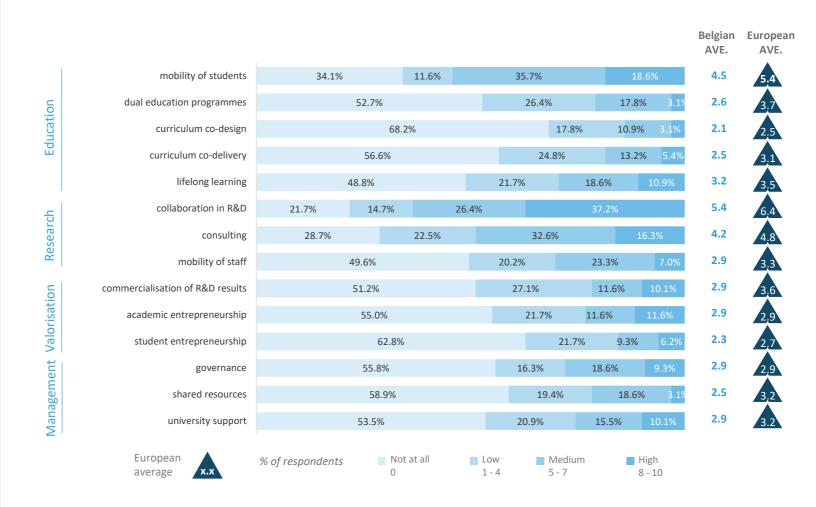
Collaboration in curriculum co-design and student entrepreneurship activities is of particular low intensity. Though there are good examples of UBC valorisation driven by some institutions in Ghent and Limburg, there is more work to be done on a more systemic level.

In comparison with European average the development of the UBC activities for Belgian businesses is at a lower level

### **Development of UBC activities**

#### **UBC** activities development

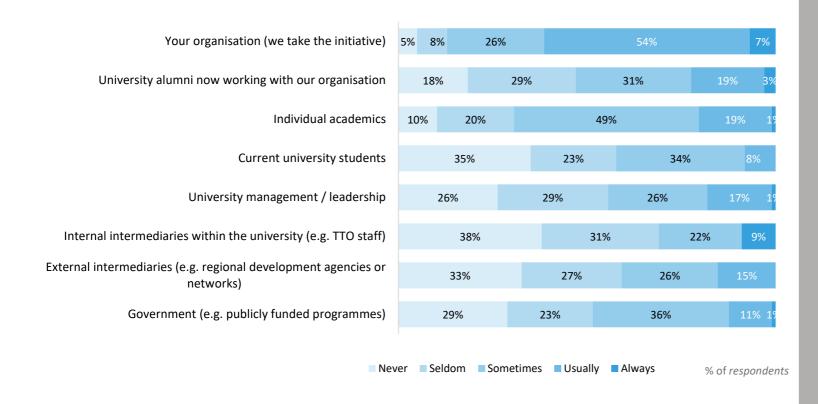
'Which UBC activities do you collaborate with universities in?'



### **Initiation of UBC**

#### How UBC is initiated

'How often various stakeholders initiate UBC activities'



Belgian businesses clearly see themselves as the main instigators of cooperation with universities. 61% of business representatives state that their organisations always or usually initiate UBC.

Belgian businesses see the individual academics and university alumni now working with their organisations also as rather active in initiating cooperation.

Internal intermediaries within the universities and external intermediaries are perceived as passive in UBC initiation. Over 60% of the business representatives report that the above mentioned stakeholders never or seldom undertake any first actions towards UBC initiation.

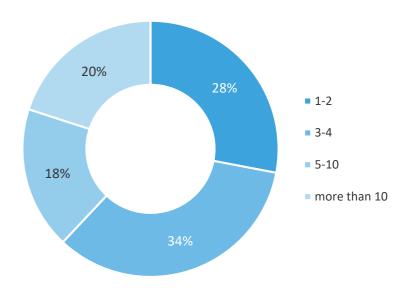
# Geographical location still matters

#### **Location of university partners**

Percentage of cooperating businesses with		
universities in their region	91%	
universities in their country	94%	
universities outside their country	82%	

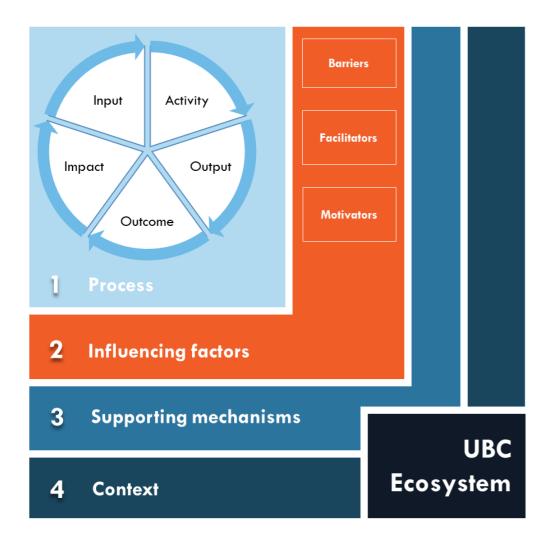
Most Belgian businesses cooperate with universities on a regional level (91%) and country-wide (94%). The results also indicate that as much as 82% of Belgian businesses engage in UBC with international university partners. International collaborations are quite prominent in life sciences (e.g. in biotech).

#### **Number of university partners**



Almost two thirds of the Belgian businesses (62%) in the sample cooperate with less than 4 university partners. While 18% have established relations with 5-10 partners, 20% of businesses engage in UBC with more than 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.

The major barriers for Belgian businesses relate to cultural aspects and funding.

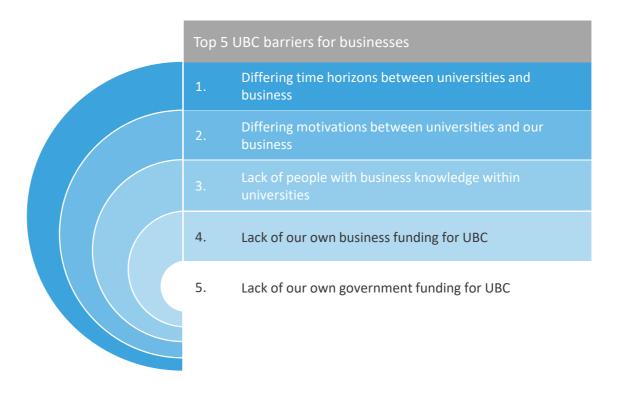
Differing time horizons and motivations between universities and business are the highest barriers for Belgian businesses.

The lack of business and university funding are identified as another important barrier. However, there are recent trends related to the growth in private equity funding in some dedicated sectors such as life sciences (e.g. biotech)

## **Barriers hindering UBC**

#### **Barriers**

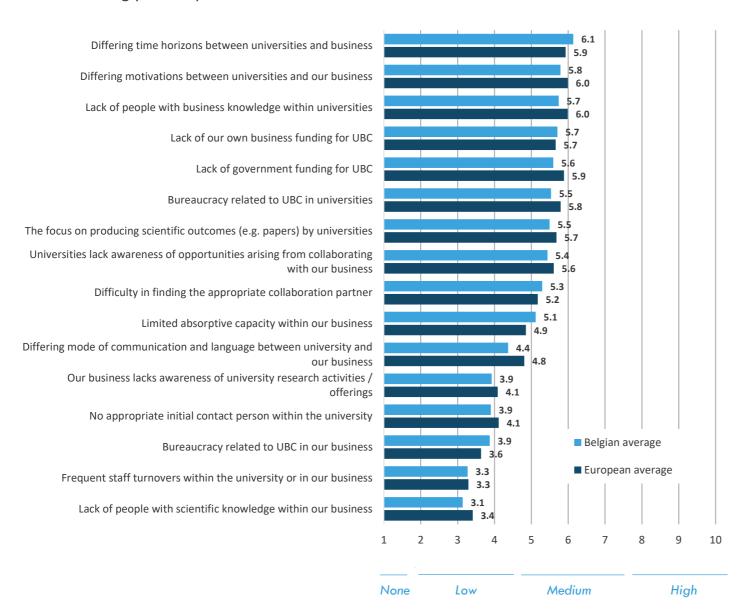
'What is inhibiting your cooperation with universities?'



### **Barriers hindering UBC**

#### **Barriers**

'What is inhibiting your cooperation with universities?'



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

Both groups see cultural differences (differing motivations and time horizons) and funding issues (e.g. lack of government and business funding) as top barriers to UBC.

Lack of scientific knowledge within Belgian businesses and frequent staff turnover at either partner are the weakest barriers for both groups. The major factors that facilitate Belgian business cooperation with universities are related to their personal relationships.

A relationship based on mutual trust, commitment, and a shared goal sets the foundation for smoother and more successful UBC. The existence of funding is also considered as an important facilitator in this process.

The prior relation with the university partner is also important for enabling collaborative activities.

## **Drivers stimulating UBC**

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

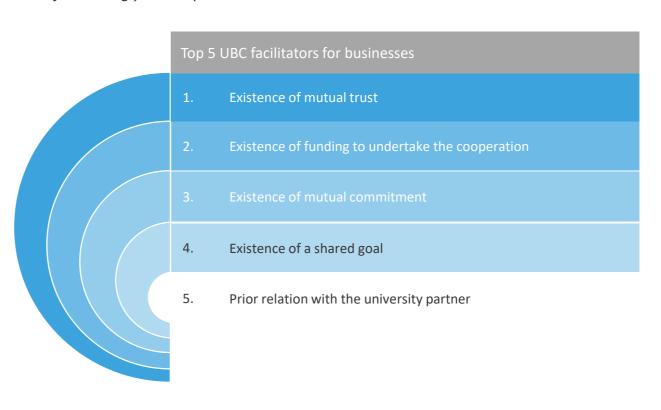
- <u>Facilitators</u> factors that enable or ease cooperation
- **2.** <u>Motivators</u> incentives or benefits that the respective stakeholders would like from the cooperation

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**

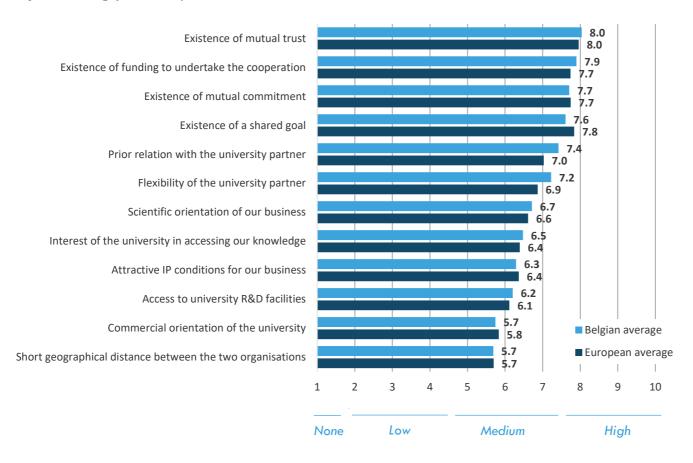
'What is facilitating your cooperation with universities?'



## **Drivers stimulating UBC**

#### **Facilitators**

'What is facilitating your cooperation with universities?'



Belgian business representatives perceive most facilitators of UBC to be very similar to those of European ones.

For both groups the existence of mutual trust plays a vital role in facilitating UBC. Other relationship indicators rate similarly for both groups.

Existence of funding for UBC rates slightly higher for Belgian businesses.

Both groups agree that short geographical distance between the organisations and commercial orientation of the

The main motivator for Belgian businesses to undertake UBC is related to research dimension.

Thus, access to new technologies and improve the innovation capacity prove to be the top motivators for Belgian businesses.

In the same vein the access to new discoveries at an early stage and obtain a customised solution for the business.

Among other motivators rating relatively high for Belgian context is the access to better qualified graduates.

### **Drivers stimulating UBC**

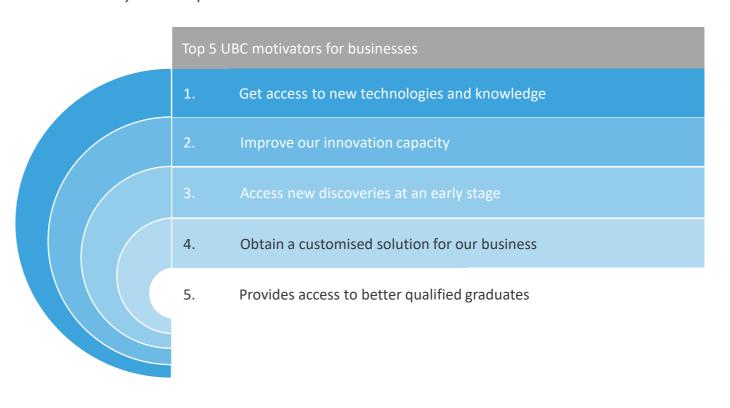
Motivations for UBC are the reasons why businesses collaborate with university.

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**

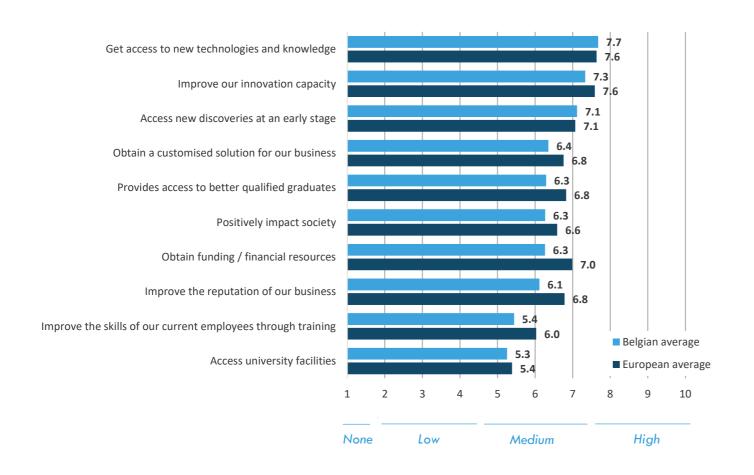
'What motivates you to cooperate with universities?'



# **Drivers stimulating UBC**

#### **Motivators**

'What motivates you to cooperate with universities?'



Overall, Belgian businesses' motivation to engage in UBC are lower than it is the case with EU businesses.

Both groups see the access to new technologies and knowledge as the top motivator to undertake UBC.

Similarly to European counterpart, only to a slightly lower extent, the Belgian businesses are motivated to improve their innovation capacity.

On the other hand, Belgian businesses are less interested in obtaining funding and access to better qualified graduates than it is the case with European businesses.

Access to university facilities proves to be the lowest motivator for Belgian businesses, as it is the case for their European counterparts. Both Belgian and European businesses have rather similar perceptions in respect to which stakeholder groups benefit more or less from UBC.

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

Yet, while Belgian businesses see academics to be profiting from UBC more than themselves, European businesses hold an opposite view.

Both Belgian and European businesses deem government and society to be benefitting from UBC the least.

### **Benefits of UBC**

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**

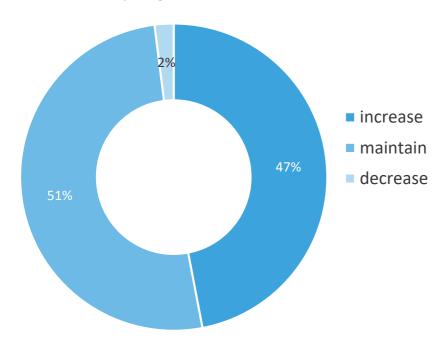
'Who receives the benefits of UBC?'

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

### **Future intentions**

#### **Future UBC intentions – Belgium**

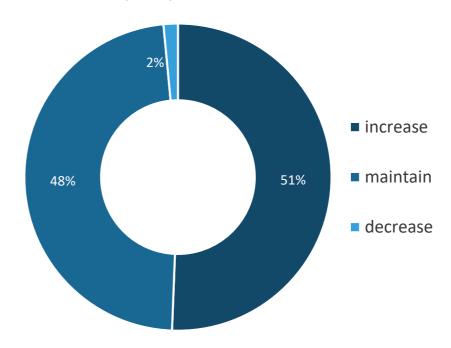
As answered by Belgian businesses



47% of Belgian businesses engaging in UBC plan to increase their cooperation, while 51% will maintain it. Only 2% of the respondents intend to reduce it.

#### **Future UBC intentions – EUROPE**

As answered by European businesses



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.

The willingness of Belgian cooperating businesses to recommend engaging in UBC varies depending on whether this cooperation is in research or in education.

Belgian businesses are less satisfied with UBC in research as their European counterparts (NPS=21). While 39% of respondents will promote it positively, 18% will do it negatively.

Furthermore, Belgian businesses are also less satisfied with their cooperation in education (NPS=-24).

### Willingness to recommend UBC

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

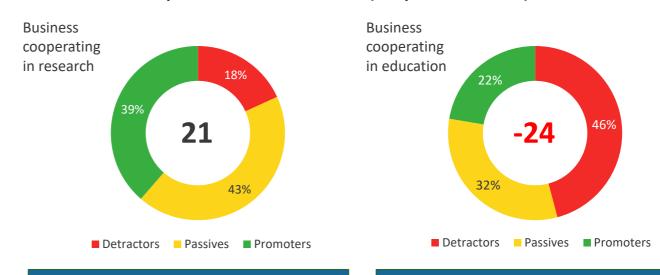
education and training (E&T,). The *Net Promoter Score* metric offers a proxy for customer satisfaction.

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

	Detractors	Passives	Promoters
Business cooperating with universities in R&D	18%	43%	39%
Business cooperating with universities in E&T	46%	32%	22%

Net promotor score	
21	
-24	

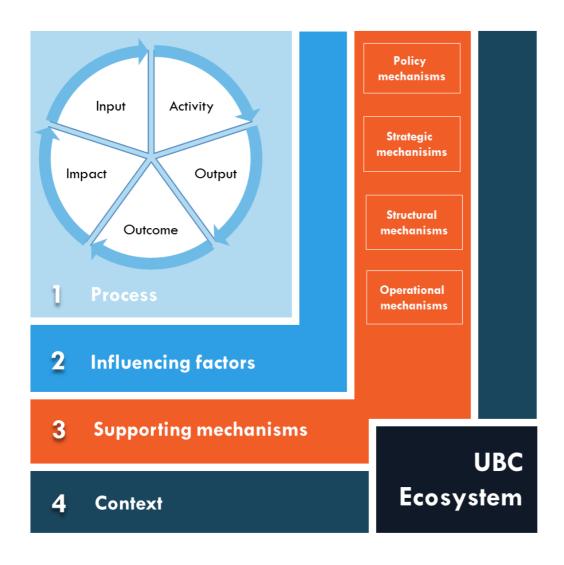
#### Satisfaction with cooperation with universities (net promoter score)



**European business NPS result: 28.2** 

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.

Overall, Belgian businesses report a low level of development of most mechanisms supporting UBC.

The most common ones are the toplevel management committed to UBC (35%) and dedication of resources to support collaboration with universities (33%).

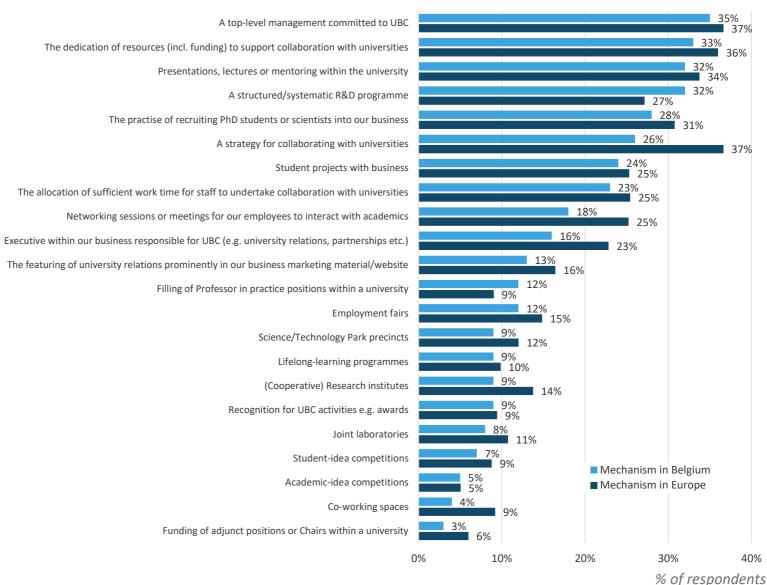
In the other hand, a strategy for collaborating with universities, networking sessions with academics and executive within the businesses responsible for UBC are significantly lower than it is the case in the rest of the European businesses.

Co-working spaces and funding of adjunct positions or chairs are the least frequent supporting mechanisms in Belgian businesses.

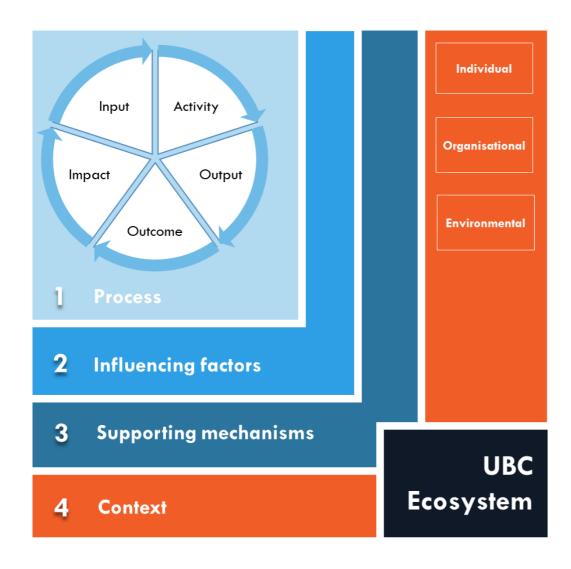
# Supporting mechanisms for UBC

#### **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 element 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.

Belgian businesses perceive the contextual factors affecting UBC rather differently from their European counterparts.

Similarly to European businesses, albeit to a lesser extent, Belgian businesses see human resources as crucial part of the business.

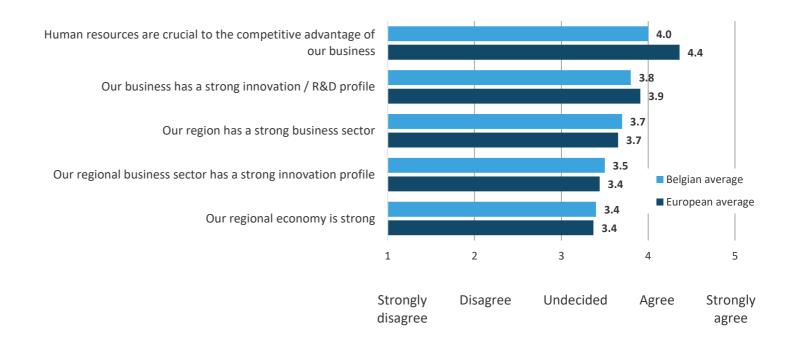
Belgian businesses also agree that their businesses have strong innovation profiles.

Belgian and European business representatives rate the strength of regional economy equally low.

### Context

#### **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?'

Our business has the capability to absorb the knowledge and technology coming from universities

Our business believes that universities can play a very important role in our innovation efforts

There is sufficient support within our business to undertake UBC

Our business has sufficient university contacts and relations that we could approach for collaboration

Our business believes it is our responsibility to collaborate with universities in research

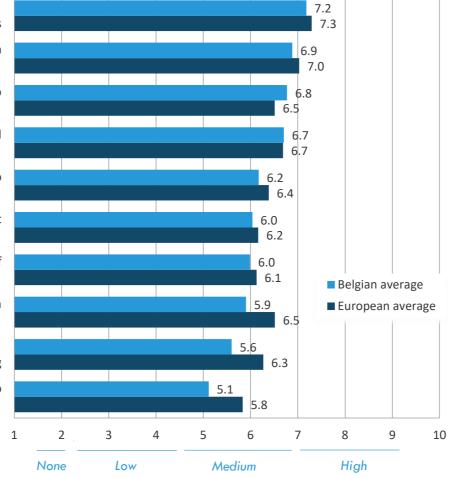
Our business has sufficient knowledge of what universities want from collaboration

Our business has sufficient skills and knowledge of UBC (including the procedures and processes)

Our business has a lot to offer to universities in research

Our business has a lot to offer to universities in developing and delivering education and training

Our business believes it is our responsibility to collaborate with universities in education



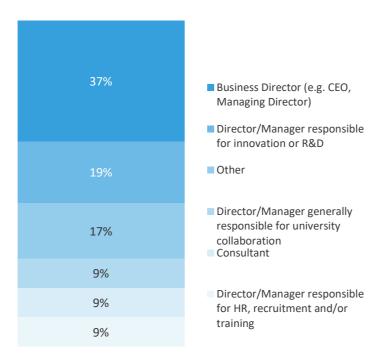
Belgian businesses perceive themselves as supportive towards cooperation with universities, but in most cases to a lower extent than European average.

Belgian business representatives recognise that their businesses can absorb the knowledge and strongly believe in university role in when it comes to their innovation efforts.

Yet, Belgian businesses are much less supportive of cooperation in education and training, where their European counterparts rated noticeably higher.

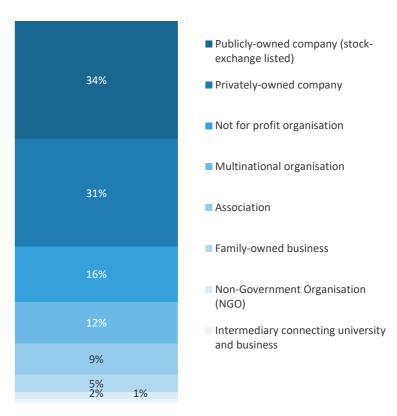
# Respondents profile

#### **Position of respondent**



Over a third of the Belgian business sample (37%) are business directors, who constitute the largest group. It is followed by directors responsible for innovation or R&D (19%). The remaining business representatives identified themselves as directors responsible for university collaboration, consultants and directors of HR, recruitment and training (9% each). 17% of Belgian respondents hold 'other' positions.

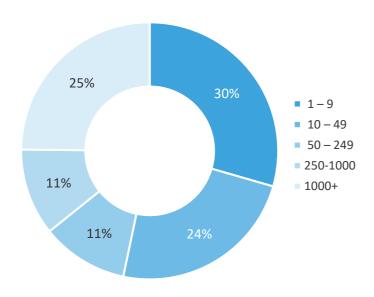
#### Type of business



The majority (34%) of businesses from the Belgian sample are publicly-owned companies. 31% of business representatives work at privately-owned companies. Not for profit organisations comprise 16% of the sample while Multinational organisations take up 12% of the sample. Family-owned businesses constitute 8% and 6% respectively. The types of businesses with 5% or less representation include: NGOs, associations, not-for-profit organisations, intermediary connecting university and business and sole-traders or partnerships.

# Respondents profile

#### **Business size**



Sample Size			
Belgian business representatives	n = 129		
European business representatives	n = 3.113		

Almost a third of Belgian business sample is comprised of micro firms. 30% of them employ 1 to 9 people, while 24% of respondents represent small companies (10 to 49 employees). 25% of business representatives work at very large organisations (over 1000 employees). 11% each work at medium (50-249) and large companies (250-1000).



# 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.ubc-monitor.com





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