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THE STATE OF UNIVERSITY-BUSINESS COOPERATION IN EUROPE

EXECUTIVE SUMMARY

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ABOUT THE REPORT

This report presents the findings of the project 'The State of University-Business Cooperation in Europe'. The project has been conducted during 2016 and 2017 by a consortium led by the Science-to-Business Marketing Research Centre, Germany for the DG Education and Culture, European Commission.

The aim of the project was to get a more profound, comprehensive and up to date understanding of the state of University-Business Cooperation (UBC) in Europe, from the perspective of both the higher education institutions (HEIs) and the business sector. The project explored the state of play of UBC in different countries, examining the form and extent of main drivers and barriers for the different stakeholders, regulatory frameworks and the type and extent of existing measures supporting UBC at a national level.

The main components of the project were a series of expert interviews with 23 recognised UBC experts, 52 good practise case studies, a major policy and indicator 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), and over 22,000 contacts (CEOs, managers responsible for UBC, innovation, recruitment and HR) in over 16,000 businesses in 33 countries during October-November 2016. Through this, a final sample population of 17,410 representatives from within HEIs (14,318 responses including 2,285 HEI Managers, 10,836 Academics and 1,197 Knowledge Transfer Professionals) and business (3,113 responses) was achieved making it the largest international study into cooperation between HEIs and business yet completed.

THE STATE OF UBC IN EUROPE

The results showed that, given the right circumstances, UBC can be a highly positive activity for all parties involved. Particularly, businesses are starting to realise the benefits of partnering or working with higher education institutions (HEIs) as a source of future-oriented innovation as well as talent development that can build a competitive advantage. Moreover, since the last study in 2010-11, there is evidence that HEIs are being increasingly seen as a source of talent, entrepreneurship and a lead player in regional development.

The majority of academics and business still do not engage in UBC, although the vast majority of HEIs do, to a certain extent. This limited engagement is reducing the labour market relevance of the study programmes, the employability of graduates and the impact of research.

Despite significant efforts by European national governments and the European Commission to broaden the engagement in UBC, there is a lack of awareness of how HEIs and business can cooperate and how these activities (inter)relate.

A total of 14 UBC activities were identified in the fields of research, education, valorisation¹ and management but the level of cooperation is low for most of these, providing many opportunities for improvement. Cooperation in research (particularly cooperation in R&D) is the most developed activity followed by education (particularly student mobility); whilst valorisation and management activities are far less common.

UBC activities are correlated, meaning that once either an academic (as an individual) or business (as an organisation) cooperates in one activity, they are more likely to cooperate in others. As an example, an academic who cooperates with a business in research, is more likely to invite one of their business colleagues to give a guest lecture or supervise a thesis. Additionally, even a lack of cooperation with business does not mean that academics do not cooperate externally at all, because nearly 75% of the academics not cooperating with business, do cooperate with the government or other societal actors.

As such, the study suggests that rather than perceiving UBC as a set of transactions and managing them in siloes, UBC should be viewed as mutually beneficial relationships with a broad set of potential cooperation activities, that may also include government and other societal actors.

In order to broaden the understanding of UBC and widen its development, governments (EU and National / regional), HEIs (HEI) and business (BUS) can:

	EC	Nat/Reg Gov.	HEI Mngt.	Business
Finance project consortiums that extend their cooperation activities beyond research into education, valorisation and management cooperation.	█	█		
Provide funding for longer term cooperation initiatives, which allows the stability for expertise to develop and relationships to mature.			█	█
Promote the benefits of UBC through guides, videos, roadmaps, e-courses, forums and workshops as well as media articles.	█	█	█	█
Create more opportunities for cooperation with employers in education including more practical programmes, both within and cross-faculty.		█	█	█
Create small 'packaged' opportunities to collaborate e.g. master-thesis supervision, student 'consulting' project with business, a joint paper around a common area of expertise, etc.			█	█
Provide support to the creation of new curricula, to redesign existing curricula or undertake ongoing modernisation of curricula at HEIs.		█	█	
Develop improved employment and recruitment pathways from higher education to employers.		█	█	█
Embrace the HEIs role in providing entrepreneurship education, creating entrepreneurial ventures and facilitating a regional entrepreneurship ecosystem.		█	█	

¹ Valorisation activities relate to the commercialisation of knowledge emerging from a HEI such as 'commercialisation of R&D', 'academic entrepreneurship' and 'student entrepreneurship'. Management activities relate to illustrate a more strategic nature to cooperation between HEIs and business with the activities grouped into three categories: 'governance', 'shared resources' and 'industry support'.

UBC BARRIERS AND DRIVERS

All stakeholders are still facing **barriers** to UBC. **Academics, HEI managers and businesses** agree that lack of funding and resources is a barrier to cooperation. However, **academics** specifically name bureaucracy and the lack of work time as inhibitors, and **business** identify cultural differences with respect to time management and differing motivations as specific obstacles.

Whilst it is important to remove barriers preventing UBC, policy should focus on developing the **drivers** of UBC. Study results show that the removal of barriers does not necessarily trigger UBC. Instead, if there are sufficient drivers for cooperation, collaborators will find a way to cooperate. These UBC drivers consist of (i) motivators and (ii) facilitators.

Each stakeholder group has its own **motivation** for UBC: **academics** cooperate primarily to benefit their research, **HEI managers** have diverse reasons for wanting the university to engage including funding, graduate employability and the use of research in practice, and **businesses** are motivated by the outcomes for their innovation process (especially, to access future perspectives), potential access to talent, and the competitive advantage they could develop in collaboration with HEIs.

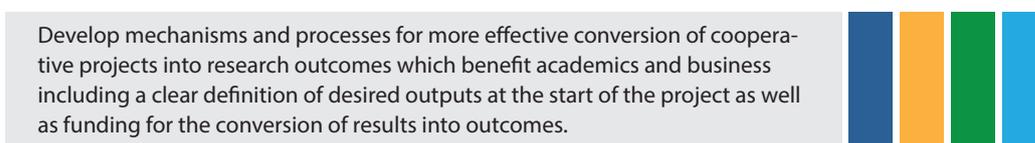
At the same time, mutual trust and commitment, common interest and goals **facilitate** cooperation for **all stakeholder groups**. People and relationships drive UBC in Europe.

Overall, a shift in thinking about UBC policy is required from a focus on barriers to drivers, and from facilitating transactions to establishing and nurturing relationships.

In order to improve personal relationships, governments, HEIs and businesses can:



In order to improve research outcomes from UBC, governments, HEIs and businesses can:



MECHANISMS SUPPORTING UBC

For both HEIs and businesses, UBC is a discretionary activity that is not necessarily natural for the protagonists. As such, appropriate mechanisms need to be put in place to encourage and support cooperation.

These supporting mechanisms should aim to help reduce or eliminate the largest barriers (e.g. bureaucracy), offer facilitators (e.g. common aims) and provide incentives (e.g. recognition) that reward HEIs and business to undertake the activity. This can include creating new, or building on old, [policies, strategies, structures and activities](#).

A number of misalignments are found between those involved in UBC and the rewards they receive.

Both cooperating [academics](#) and [businesses](#) perceived they receive some of the lowest [personal benefits](#) from UBC compared to other stakeholders. Despite [HEI managers](#) naming ‘funding’ as both a major barrier and driver for cooperation, national funding for HEIs is still mostly based on student numbers and research outcomes.

A brief UBC [policy review](#) across Europe showed the large variety of policies that national [governments](#) use to support each of the UBC activities, highlighting many gaps and overlapping areas. Additionally, it shows the involvement of different ministries (research, innovation, education, employment, etc.) and agencies in different aspects of UBC policymaking, which could potentially create misaligned or even conflicting policies.

Whilst most [HEIs](#) include UBC in their [mission and vision](#), this strategic commitment is often not reinforced by dedicated resources (e.g. a responsible high-level person, budget, personnel or facilities). HEIs need to make a greater and longer term commitment to UBC. Incentives for academics are the least developed UBC mechanisms, so this provides an immediate area of focus for policymakers.

Over a third of [businesses](#) commit to UBC as part of their [strategy](#) and they generally support this commitment with [resources, a responsible executive and allocation](#) of work time. Therefore, the major challenge is to get more business to recognise and understand the importance of UBC and how it can support their competitive advantage.

A greater commitment to UBC from government, HEIs and businesses in Europe is required to develop it, firstly ensuring that there are no barriers actually preventing UBC and put in place the fitting incentives for each stakeholder to engage in the activity.

In order to increase the [strategic commitment to UBC](#), governments, HEIs and business should:

	EC	Nat/Reg Gov.	HEI Mngt.	Business
Ensure that both academics and business get greater benefits from their cooperation that contribute to both their short-term and long-term objectives, with focus on research / innovation outcomes.				
Reward HEIs for undertaking UBC by linking part of their funding to their UBC activities and outcomes.				
Expand the benefits from cooperation beyond research to deliver more employable graduates, support better employment pathways, more streamlined valorisation of research results and management level cooperation.				
Prior to implementing UBC mechanisms, audit the environment to have clarity about which supporting mechanisms are already in place and what is needed.				
Provide a clear UBC strategy and development policy which is aligned and included in the mission of the organisation.				
Establish an executive-level position that is responsible for UBC and a person responsible for its execution.				
Seek opportunities to remove barriers for UBC, which primarily relate to lack of funding and resources.				
Seek ways to develop improved cross-cultural understanding between the academic and business environment.				
Create external engagement offices, overseeing all external engagement activities, incl. alumni, graduate and technology transfer offices.				

CONTEXT IN WHICH UBC OCCURS

UBC is still a fragmented and indistinct field, and the understanding of UBC remains inadequate because most policy focus on specific parts of the system. UBC needs to be understood as an encompassing, overarching and interconnected ecosystem instead, which comprises **individuals, organisations and regions**. Each of these levels affect UBC and are therefore important to understand.

At the individual level, **academics** who cooperate perceive their own cooperation, their HEIs' and the region's UBC capabilities as superior to those who do not cooperate. The implication is that UBC needs people with the right skills, experience and environment to engage successfully. However, all of these aspects can be improved with the right interventions and policy mechanisms.

The recognition of **HEIs** as central player of a knowledge-driven regional or national innovation system is increasing. This role includes supporting regional industry and creating growth and employment, which suggests a holistic set of regional interactions. However, **HEI managers** state that their UBC and business knowledge can be improved as can their amount of external contacts.

Business are increasingly looking to a more open innovation process, which includes other business and HEI co-operators. Cooperating **businesses** perceive that they have higher organisational UBC capabilities than non-cooperating business, but both cohorts perceive the UBC capabilities of their region similarly. Most **businesses cooperating** with HEIs in R&D also cooperate with other business and /or have their own R&D capability.

Building UBC experience drives cooperation. Once **academics and business** cooperate, they tend to cooperate in multiple ways and at increasing levels. Those academics and businesses that cooperate are mostly willing to recommend research cooperation to their colleagues and 98% predict that they will collaborate at similar or higher level in the future.

FACTORS AFFECTING UBC

At an individual and institutional level, a number of additional factors affect UBC positively or negatively, including:

- I. **The 'university influence'** – The greater the number of years that an academic works at an HEI the less they tend to cooperate with business.
- II. **The 'understanding effect'** – The greater the number of years that an academic works in business the more they tend to cooperate with business.
- III. **The 'experience multiplier'** – The greater the number of years that an academic cooperates with business the more cooperation they undertake.
- IV. **The 'faculty / industry' focus** – Whilst most faculties at HEIs and industries in the business world collaborate mostly in research, each has their own mix of UBC activities specific to them.
- V. **The 'size effect'** – Larger HEIs and businesses tend to cooperate more, especially in UBC areas with a longer term payoff e.g. education and management.
- VI. **The 'proximity effect'** – Most collaborating partners are in the same region (or at least country).

Considering the influence of these factors, the combined individual, institutional and regional strengths and weaknesses need to be considered to advance UBC and develop a UBC ecosystem. Policy should therefore focus on developing the UBC capabilities at an individual, organisational and regional level to develop a regional ecosystem that supports UBC.

In order to increase the UBC skills and experience of academics and business people, governments, HEIs and business can:

	EC	Gov.	HEI Mngt.	Business
Provide programmes that develop specific UBC knowledge and skills for both academics and business people. This can be done through buddy-programmes, workshops, e-courses, forums and promoting positive examples of successful UBC.				
Employ 'boundary-spanners' or 'connectors' who have a deep understanding of business and academia, to support transfer and exchange of knowledge.				

In order to increase the recognition of UBC, governments, HEIs and business can:

	EC	Gov.	HEI Mngt.	Business
Seek to increase the profile and reputation of UBC including national / regional prizes for excellence in UBC, empowering UBC champions or ambassadors, publishing stories on the university website and in newsletters.				
Recognise, promote and regulate for a differentiated HEIs sector with different models of external engagement e.g. collaboration in high quality research, in education, entrepreneurship, lifelong learning, society etc.				

In order to increase the collaboration between HEIs and SMEs, governments can:

	EC	Gov.	HEI Mngt.
Reduce and simplify regulations for SMEs in their cooperation with HEIs to allow SMEs more flexible access to project consortiums and research and development results.			
Offer SMEs and academic institutions incentives for initiating collaboration through devices such as research vouchers and support in their expectation management on both sides.			

At the same time, SMEs could:

	Business
Join a collaborative regional and/or supply chain consortiums, allowing them to exchange knowledge, skills and technology with both large companies who can support knowledge translation and HEIs.	
Include larger partners designated as 'anchor' partners committed to the life of the research and/or development project and combine this with other smaller players that have more feedback to come and go from the initiative.	

PROFILE OF THE 'ACADEMIC COLLABORATOR'

more than
half
initiate their
own cooperation
with business

62%
cooperate with
more than
2 businesses

Cooperating academics
Non-cooperating academics

Most cooperate with business in their
region or nation

59%
cooperate in more
than 1 activity

mutual commitment

mutual trust

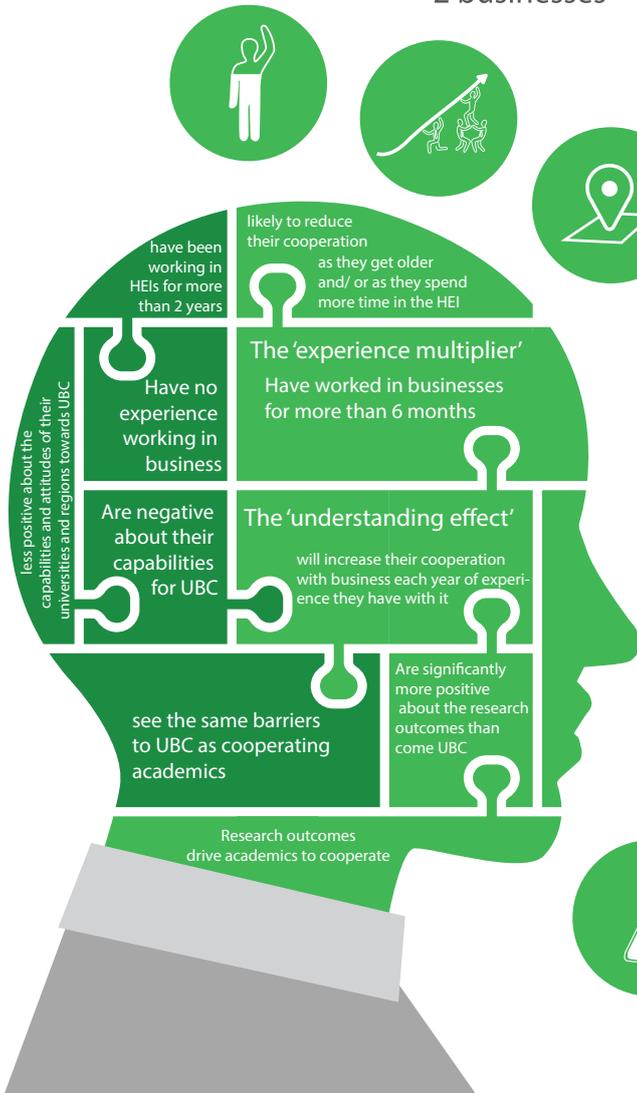
Relationships
facilitate academic cooperation

shared goal

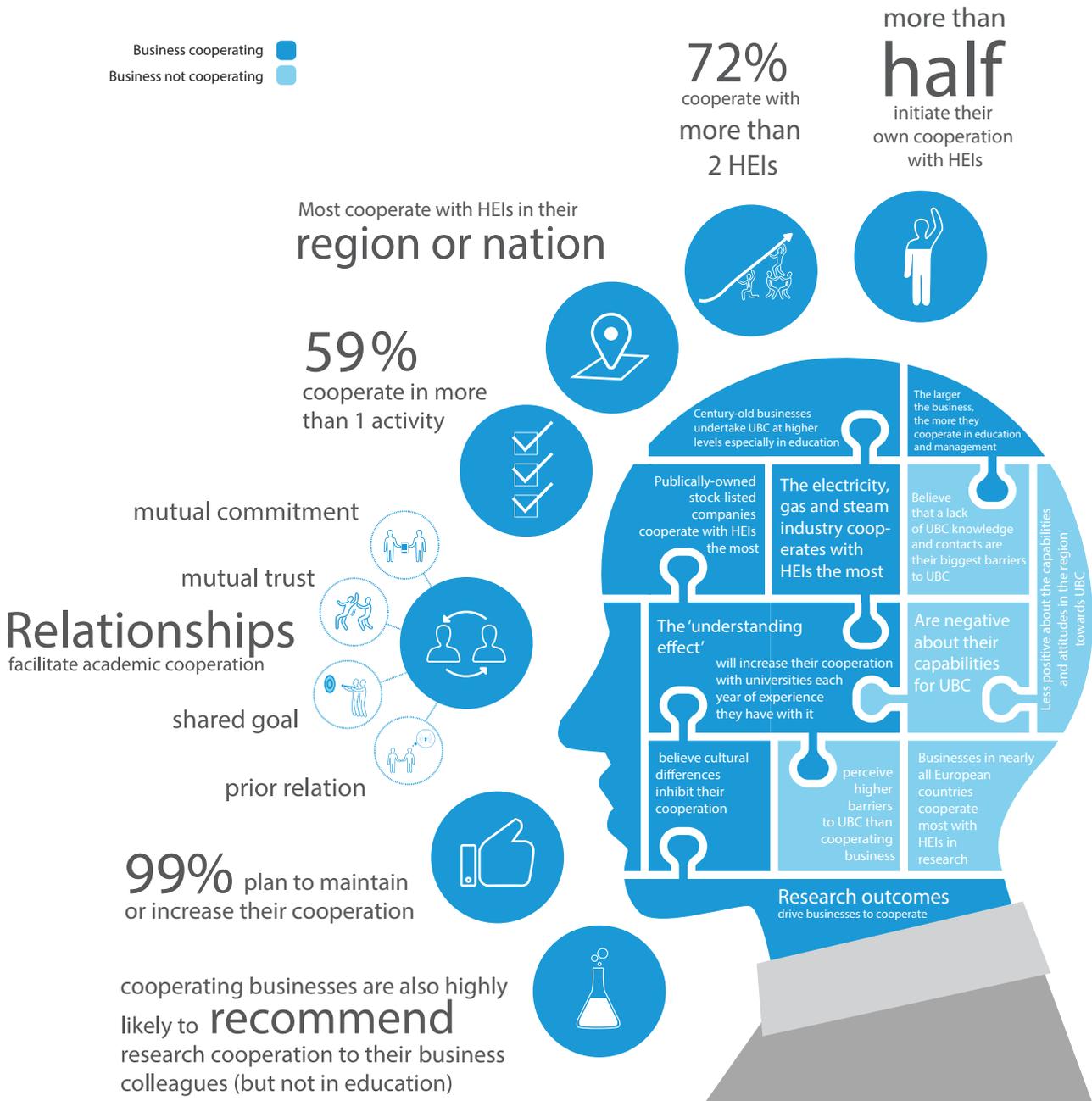
prior relation

98% plan to maintain
or increase their cooperation

cooperating academics are also highly
likely to **recommend**
research cooperation to their academic
colleagues (but not in education)



PROFILE OF THE 'BUSINESS COLLABORATOR'



A VISION FOR UBC IN EUROPE

The State of UBC in Europe study presents a mixed picture. In order to increase the low levels of cooperation, UBC needs to focus on drivers rather than barriers, the mechanisms of UBC need to be developed and aligned and relationships need to be placed at the core of UBC. In short, UBC needs to be seen as an ecosystem that requires careful management. For UBC to institutionalise and increase its impact, there should be a concerted effort between governments at national and regional level, HEI and faculty boards, and business managers.

The study underlines the potential for UBC in Europe.

- UBC in **education** offers potential for better aligning curricula and the skills of graduates with the labour market, improving employment pathways for students, and recruitment for employers as well as lifelong learning programmes for business,
- For **research**, HEIs offer the greatest benefit to business as a partner for innovation with a longer-term horizon as well as shorter term problem solving. Conversely, business offers HEIs insights, opportunities, data for high quality research and the ability to bring research into practice and create impact,
- Through **valorisation**, HEIs become part of a regional innovation system acting as a source of next generation innovations, high tech new companies and entrepreneurial talent for the value chains of industry,
- Cooperation in **management**, provides possibilities for improved regional and institutional governance, the sharing of facilities, equipment and other resources to better leverage strategic assets.

The potential exists for HEIs to act as an 'anchor tenant' on which their cities and regions can build competitiveness upon. In this scenario, the campus acts as a platform or hub, a modern collaborative precinct, which brings together excellence in HEIs and business. UBC has the potential to increase the ability of the higher education system to keep pace with the rate of change in our societies in the areas of education and research, to create and develop talent and well as rise Europe's competitiveness in a globalised and rapidly changing world.

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