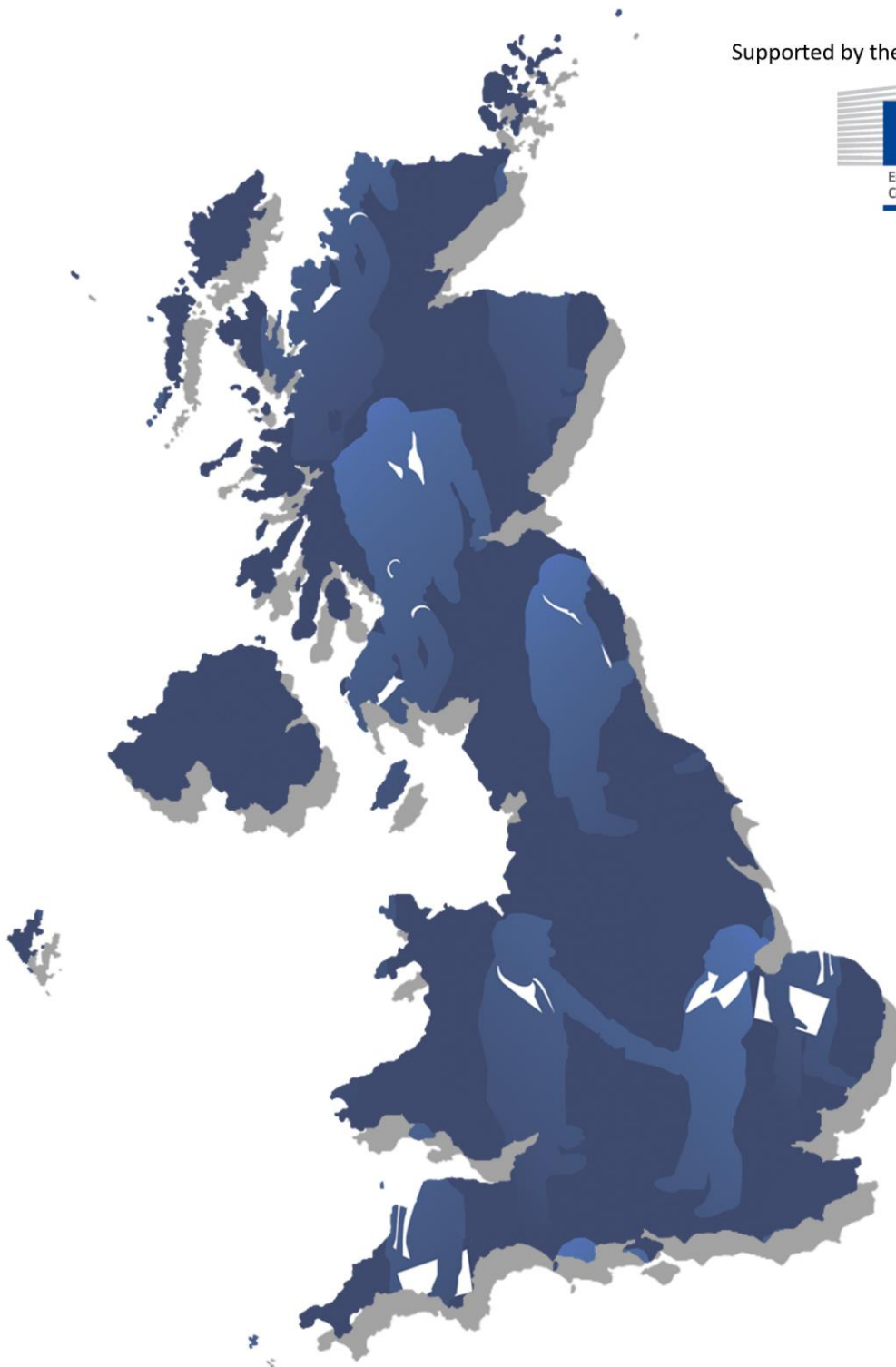


# The State of University-Business Cooperation in United Kingdom

Part of the DG Education and Culture  
Study on the Cooperation Between  
Higher Education Institutions and  
Public and Private Organisations in Europe

*December 5th, 2013*

Supported by the



## Abbreviations

EC	European Commission
HEI	Higher Education Institution
LLL	Lifelong Learning
R&D	Research and development
SME	Small- and medium-sized company
S2BMRC	Science-to-Business Marketing Research Centre
TTO	Technology Transfer Office
UB	University-Business
UBC	University-Business Cooperation
UPB	University professional working with business

### **UBC Country Reports: logic and characteristics**

The UBC country reports compare the continental results of the major *State of European UBC* study (Davey et al., 2011), with the results obtained in a specific country. The reports are designed to be complementary to the major study and highlight the diversity amongst European countries. Additionally, by offering more concrete results at national level, it is believed, provides more appropriate decision-making material for most stakeholders, whose jurisdiction is restricted to the regional or country level.

The reports present mostly descriptive data and are not intended to be a comprehensive or detailed study of each of the countries or a ranking among EU countries. Instead, the reports are provided to all stakeholders simultaneously (academics, HEI managers, policy makers at different levels, business, etc.) and unlike the European report, are expected to provide some opportunity for individual stakeholder interpretation and resulting actions, according to their local understanding and different roles within the UBC ecosystem.

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Partners:

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**technopolis**<sub>[group]</sub>

Authors: Todd Davey, Arno Meerman, Rebecca Allinson, Victoria Galan Muros & Thomas Baaken

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For more information about the University-Business Cooperation reports please contact Todd Davey (davey@apprimo.com)

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# Executive summary

## A tale of two worlds

The results of this study reflect a deep divide in the perceptions of higher education institution (HEI) managers and academics in United Kingdom (UK) with respect to cooperation between HEIs and business (from here termed University-Business Cooperation or UBC). UK HEI managers perceive themselves to be European leaders in UBC, with many mechanisms in place to support UBC. Whilst agreeing that there are well developed UBC *Supporting mechanisms*, UK academics, however, perceive there to be a substantially lower level of UBC development, that there is only a few academic *Benefits* and that UBC has only a moderate contribution to the HEIs three missions. The difference between the two about the extent of UBC is the largest difference recorded between HEI managers and academics Europe-wide. So who is right? Three options exist: (i) the academics know how much cooperation is being undertaken and the HEI managers are miss-informed and over-optimistic, (ii) the HEI managers have a good overview of all UBC activities in the HEI and the academics are miss-informed and pessimistic or (iii) a combination of the above. Either way, it is vitally important that the UK HEIs get the managers and academics are on same page, with similar understanding of UBC. To bridge this divide, it will require real effort from all parties.

## About the study

The results presented in this report were from a study commissioned by the European Commission (EC). Surveys were sent out to all registered European HEIs in 33 countries in 2011. In total, 6,280 responses were received from European academics and HEI management (HEI managers and HEI professionals working with industry). From the UK (forming the basis for this report) 255 responses from academics (102) and HEI management (153) were received. The study measured the perceptions of these two groups in respect to their own cooperation efforts and those of their HEI respectively.

## Collaboration and Commercialisation of R&D are the most developed forms of UBC

The most developed *types of UBC* in the UK are: (1) *Collaboration in research and development (R&D)*, (2) *Commercialisation of R&D results* and (3) *Entrepreneurship* with the least developed type being: *Mobility of academics*. Whilst all types of cooperation are more developed in UK HEIs compared to the average European HEI, the high development and

emphasis on R&D cooperation and *Entrepreneurship* (enterprise in the UK) reflect many of the government initiatives in the UK to increase cooperation between universities and business. These 'transactional' (financially quantifiable) types of cooperation are substantially more developed in the UK (highly developed) than in Europe (moderately developed) for a number of interrelated reasons. This includes the more commercial approach of UK HEIs in an environment of diminishing resources as well as supportive government policy mechanisms and instruments (HEIF fund for example, see recent report <http://www.hefce.ac.uk/media/hefce/content/whatwedo/knowledgeexchangeandskills/heif/paccc-report.pdf>). Whilst still above the EU average, *Mobility of students and academics* are less developed by comparison with *collaboration in R&D*.

In contrast, academics in the UK perceive that they are undertaking a much lower development of UBC with most undertaking a low amount of cooperation, and most types below the EU average.

## Funding barriers still need to be reduced in the UK

The primary *Barriers* to UBC in the UK are: (1) 'the current financial crises', (2) 'lack of financial resources of the business' and (3) 'the lack of external funding for UBC'. It seems palpable then that reducing actual and/or perceived *financial barriers* to UBC is a crucial step to the UK's continued development of UBC.

## Relationships drive cooperation in the UK

As in Europe generally, *relationship Drivers* such as (1) 'existence of mutual trust', (2) 'existence of mutual commitment' and (3) 'having a shared goal' were nominated as the biggest *Drivers* of UBC. The importance of relationships was agreed upon by both HEI managers and academics. This suggests that greater effort to bring academics together with business could be a focus for further improvement of cooperation.

In considering *Barriers and Drivers together*, HEI managers perceive a slightly higher amount of *Drivers* than *Barriers*, whereas British academics perceive the opposite, with slightly higher *Barriers* and *Drivers*.

## Academics perceive lesser personal benefits from UBC

*UK academics* perceive the primary winners from UBC to be: (1) businesses, (2) students followed by (though considerably less) (3) personal *Benefits*, and (4)

*Benefits* to the HEI. These results imply that academics need to receive (or perceive) greater personal *Benefits* from their HEI in terms of chances of promotion in order to increase UBC activity. In fact academics from the UK perceive the least amount of personal *Benefits* from UBC of all European academics. HEI managers state that (3) HEIs *Benefit* the least from UBC after (1) students, (2) business and society, which implies they see UBC as important for employability and for local business competitiveness but not necessarily the HEI itself. With a moderate contribution from UBC to the HEI's mission, there is some room for greater alignment of UBC with HEI missions in the UK.

### Perceived leaders in supporting mechanisms for UBC

Both HEI managers and academics perceive those UBC Supporting mechanisms in the UK to be the most developed in Europe.

UBC Strategies, including resources dedicated to the support UBC, are highly developed in the UK. That said, and despite being above the EU average, there is still some room for improvement for providing incentives to academics for UBC and particularly including UBC in the assessment of academics work performance. This has been taken into account in the Research Excellence Framework (REF) in the UK, which is replacing the Research Assessment Exercise. A clear aim of the new REF is to 'reward and encourage the effective sharing, dissemination and application of research findings and the productive interchange of research staff and ideas between HEIs, business, public and third sector organisations'<sup>1</sup>

Longer-term commitment to UBC is evident in the UK with the development of UBC Structures and approaches, which require a high financial commitment and long-term perspective, being substantially more developed than the European average. The comparatively lower rating of 'agencies external to the HEI dedicated to UBC' implies that support for the HEIs efforts from government (or business) might also be necessary.

Although UBC Activities in the UK are well-developed, the lowest four developed UBC activities are those focussed on academics. A focus on supporting or creating activities to encourage academic UBC efforts seems necessary for further UBC development in the UK.

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<sup>1</sup> <http://www.ref.ac.uk>

# Introduction

## Background

With the creation of the Europe 2020, the European Union's (EU) growth strategy for the coming decade, and the higher education modernisation agenda, Europe is embracing the need to create a more connected and functional relationship between government, business and HEIs in order to increase employment, productivity and social cohesion<sup>2</sup>. If fostering UBC is understood as interactions between higher education institutions and business for mutual benefit, then fostering UBC and extracting its value can help society face a number of issues. These issues include universities with the problem of decreasing public funds<sup>3</sup> help businesses to gain and maintain their competitive advantage in today's dynamic international markets, contribute to the economic development on regional and national level<sup>4</sup> as well as meet the demands of the labour market to provide more relevant knowledge and skills and greater job prospects of students<sup>5</sup>. Additionally, there are substantial indirect outcomes of UBC including support in the creation of a knowledge economy<sup>6</sup>, support for local business<sup>7</sup>, creation of jobs<sup>8</sup>, stimulation of economic growth and increased living standards whilst reducing hindrances to good living<sup>9</sup>. In this context, UBC creates mutual benefit for all parties involved, and wider, to society.

Over the last few decades there has been a dramatic shift in the focus of HEIs and policy makers towards the HEI's so-called 'third mission'. Through this, HEIs have had their roles focussed to a greater extent on the need to contribute to society in a more meaningful way through knowledge and technology creation, transfer and exchange<sup>10</sup>. In recent years, the focus has been extended to recognise all the ways in which HEIs can contribute to society including *Lifelong learning* (LLL), *Entrepreneurship* or exchanges of workers with business as means to reach the third mission. Owing to this, the holistic extraction of value via UBC has become more important for the viability and relevance of HEIs as the benefits of closer and better cooperation between HEIs and business and the benefits for the students have been increasingly recognised.

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<sup>2</sup> European Commission 2011

<sup>3</sup> Carayol, 2003

<sup>4</sup> OECD, 2002

<sup>5</sup> Bozeman and Boardman 2013

<sup>6</sup> Etzkowitz & Leydesdorff 2000

<sup>7</sup> Davey et al. 2011

<sup>8</sup> *ibid*

<sup>9</sup> Etzkowitz & Leydesdorff, 2000

<sup>10</sup> *ibid*

## Support for UBC in the UK

In the UK, there is political interest in UBC, as well as a practical budgetary support through a number of programmes and instruments to encourage further cooperation. The focus is firmly on the support of *Commercialisation of R&D*, particularly in potential growth sectors of the economy.

The publishing of the Wilson Review on HEI business cooperation in 2012 put the subject firmly on the political agenda of the current government in the UK. One of the major outcomes was the setting up of the NCUB, the National Council for Universities and Business), financed by a combination of some of the UK's biggest companies, universities and other public bodies. The NCUB runs a number of programmes to strengthen collaboration.

In terms of direct funding, some universities receive a single funding stream of Higher Education Innovation Funding (HEIF) which supports a wide range of activities and rewards success in generating income. The universities have the right to decide on their own priorities to fit their own needs.

The Technology Strategy Board (TSB), the UK's innovation agency funds KTPs, knowledge transfer partnerships one of the oldest national programmes supporting knowledge transfer from universities into businesses. The TSB also supports the Catapults network in the UK, physical centres which bring together science, research and business.

Recognising the regional nature of economies, the government recently introduced Local Enterprise Partnerships (LEPs) in England. LEPs are business led locally developed voluntary partnerships, responsible for setting strategies and driving economic growth across England. In the spring of 2013, the government commissioned an independent review exploring how universities can support growth by working with LEPs (The Witty Review<sup>11</sup>). This review is ongoing but the preliminary findings highlight the potential for collaboration and its impact on the economy. There are already examples of universities playing formal roles in the LEPs (board members and part of strategic planning processes) as well as universities organising their contacts with the Local Enterprise Partnerships.

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<sup>11</sup> <https://www.gov.uk/government/consultations/universities-and-growth-the-witty-review-call-for-evidence>

## Objective

The objective of this report is to evaluate the current status of UBC in the United Kingdom (UK) and benchmark these outcomes against European HEIs. As a result of this analysis, the reader will have a clearer understanding of the extent of cooperation with business. Furthermore, the report aims to highlight the *Barriers* and *Drivers* preventing or motivating cooperation as well as the extent of development of mechanisms supporting UBC, in comparison with the European average.

## Methodology

### The survey

The survey was created a project completed with the EC in a fifteen and a half month study on the cooperation between HEIs and public and private organisations in Europe. The main components of the project were in-depth qualitative interviews with 10 recognised industry experts as well as a major quantitative survey. The survey was translated into 22 languages and sent to all registered European HEIs (numbering over 3,000) in 33 countries during March 2011. Through this, a final sample of 6,280 academics and HEI management was achieved making the study the largest study into cooperation between HEIs and business yet completed in Europe.

Questions were posed to two groups within HEIs. These groups were asked about their perception of UBC:

1. **Individual academics** were asked to respond on behalf of themselves
2. **HEI management** (HEI managers and HEI professionals working with industry) were asked to respond on behalf of their HEI.

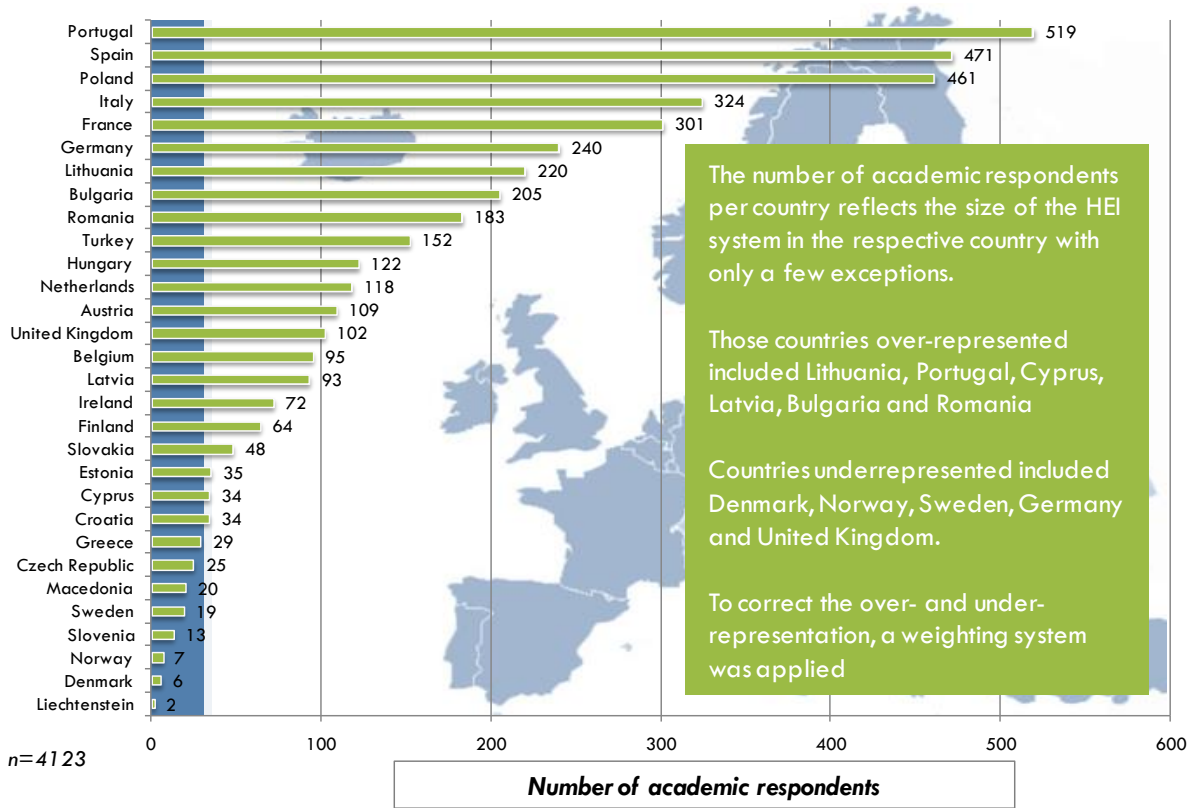
	Focus	Responded on behalf of	Colour code for results
1	Academics	Indv. academics	Green
2	HEIs	HEI management and university professionals working with industry	Orange

Colour codes have been used throughout the report to identify those results received from the academic (green) and those results received from the HEI (orange).

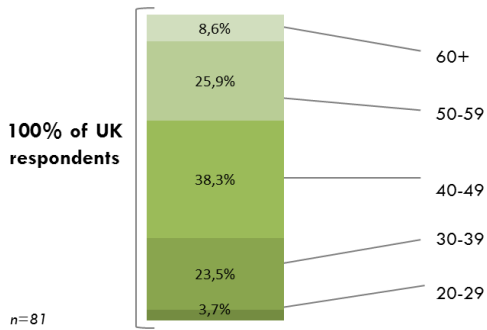


## Respondents (academic)

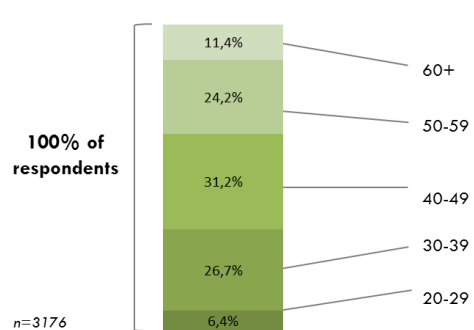
### Country



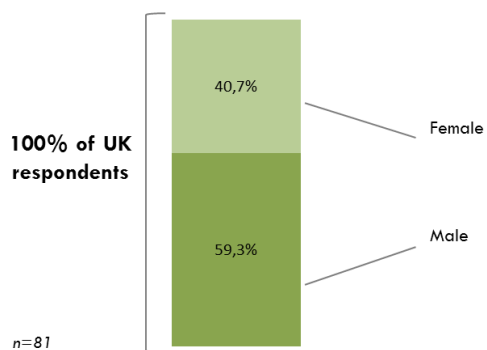
### Age of academic respondents in the UK



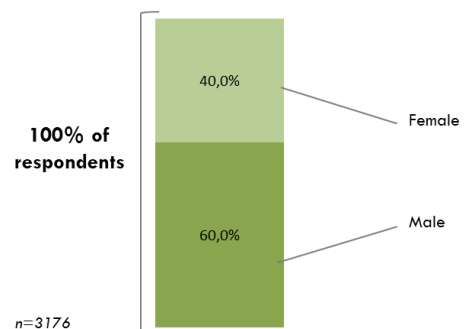
### Age of academic respondents in Europe



### Gender of academic respondents in the UK



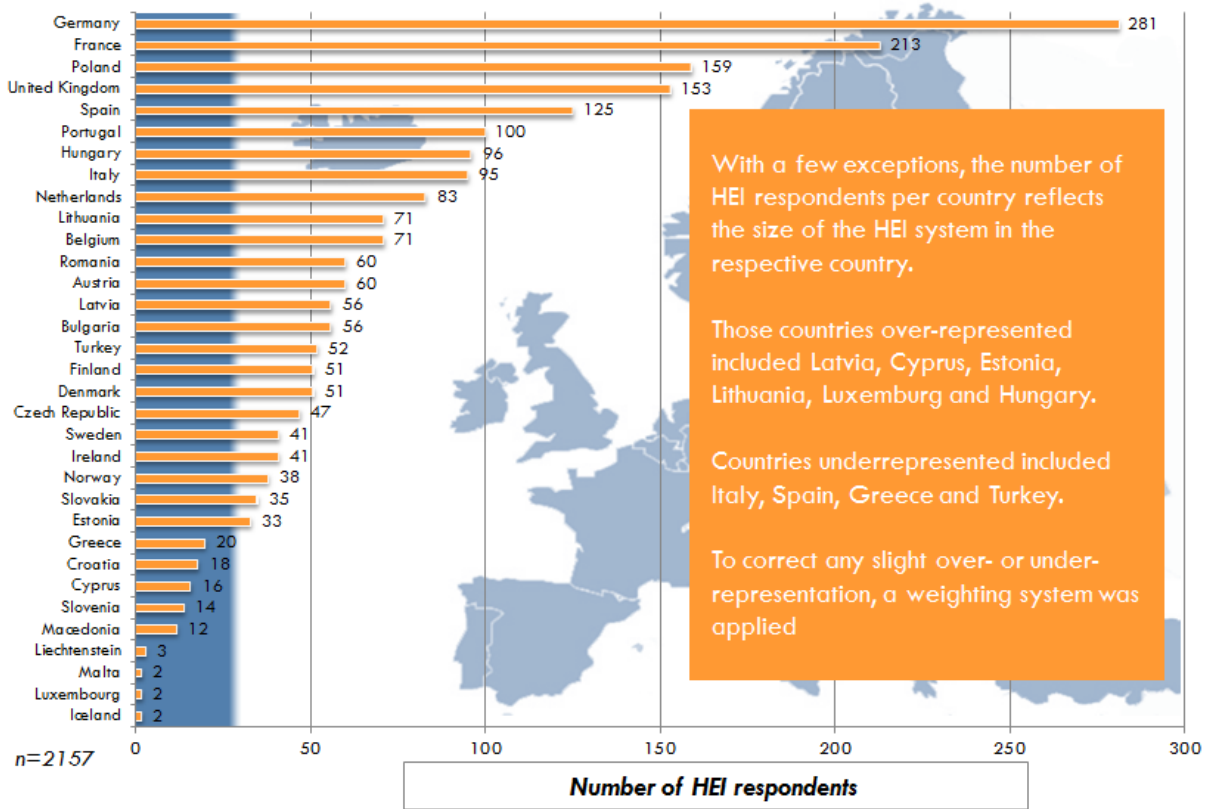
### Gender of academic respondents in Europe



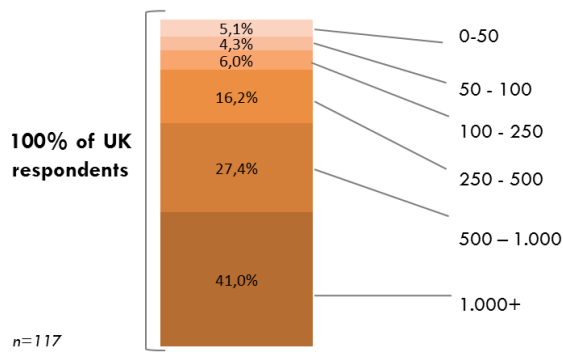


## Respondents (HEIs)

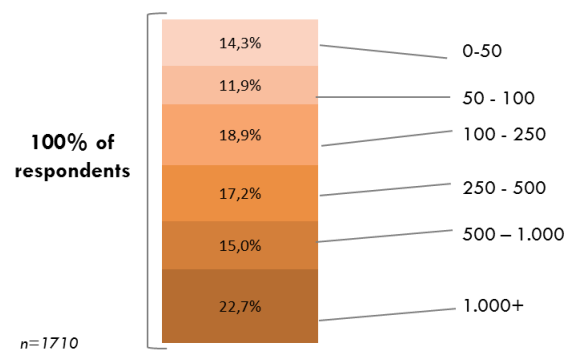
### Country



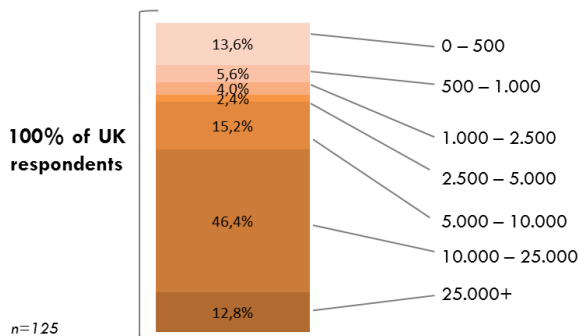
### Size of HEI (no. of academics) in the UK



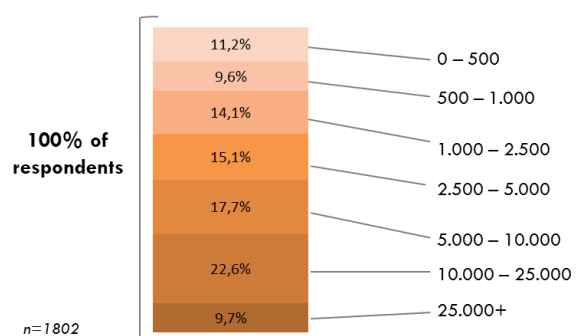
### Size of HEI (no. of academics) in Europe



### Size of HEI (no. of students) in the UK



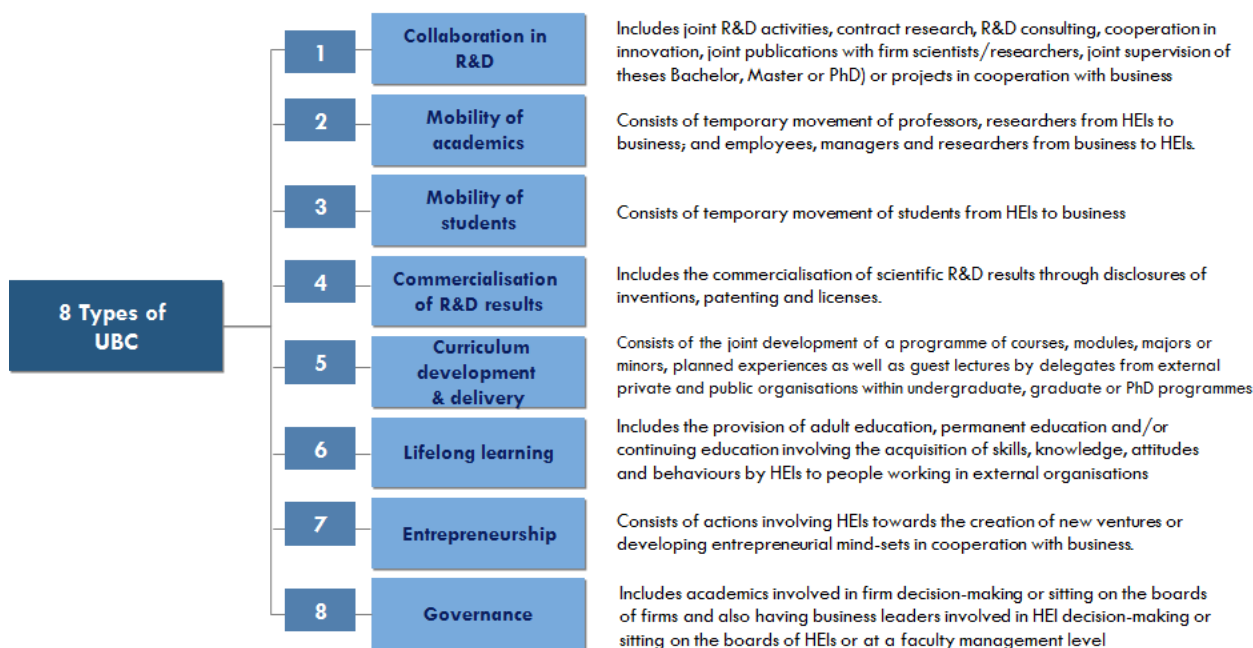
### Size of HEI (no. of students) in Europe



# Results

## Extent of UBC

There have been eight types of cooperation recognised between university and business as found in the *State of European UBC Report* with the following descriptions:



### 3 clusters of HEI cooperation

In respect to cooperation with business it was found that HEIs could also be categorised into 3 clusters:

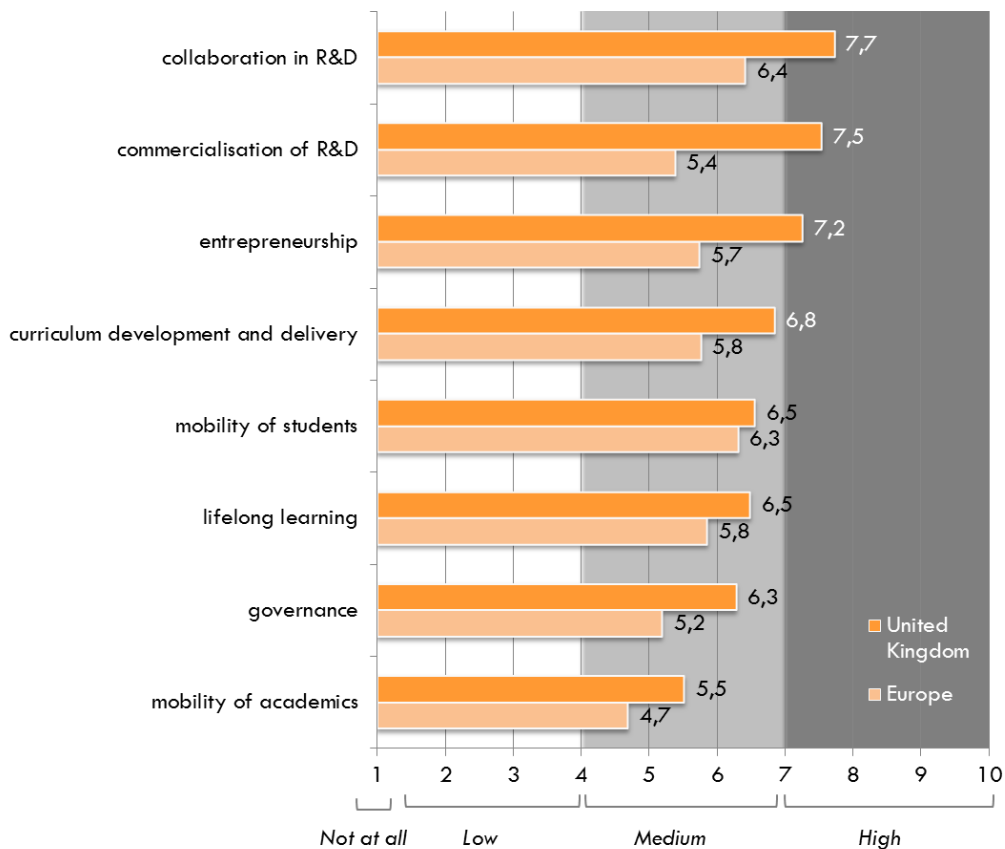
1. the 'innovators' undertaking a higher level for all types of UBC,
2. the 'majority' undertaking a medium level for all types of UBC,
3. the 'laggards' executing generally a low level (or not at all) for all types of UBC.

### Relationship among cooperation types

The study identified that HEIs tend to cooperate at a similar level in all UBC types e.g. if they cooperate to a high extent with business in 'Collaboration in R&D', they cooperated to a similar extent for all the types of UBC.

## Extent of UBC in the UK

As answered by HEI management



### UK academics

Responses from UK academics about their own level of UBC show that they perceive a much lower extent of

UBC in comparison to UK HEI managers and an extent slightly below the EU average (in brackets).

UK Academics	Collaboration in R&D	Academic Mobility	Student Mobility	Commercialisation of R&D results	Curriculum development & delivery	Lifelong learning	Entrepreneurship	Governance
	4,8 (5,0)	3,0 (3,2)	3,6 (4,3)	4,0 (4,1)	3,9 (4,3)	3,6 (4,3)	3,4 (3,4)	2,6 (3,1)

### Extent of cooperation in the UK

There is a differing degree of development of the 8 types of UBC in the UK, with Collaboration in R&D (7.7), Commercialisation of R&D results (7.5) and Entrepreneurship (7.2) being the most developed types and Mobility of academics the least developed (5.5).

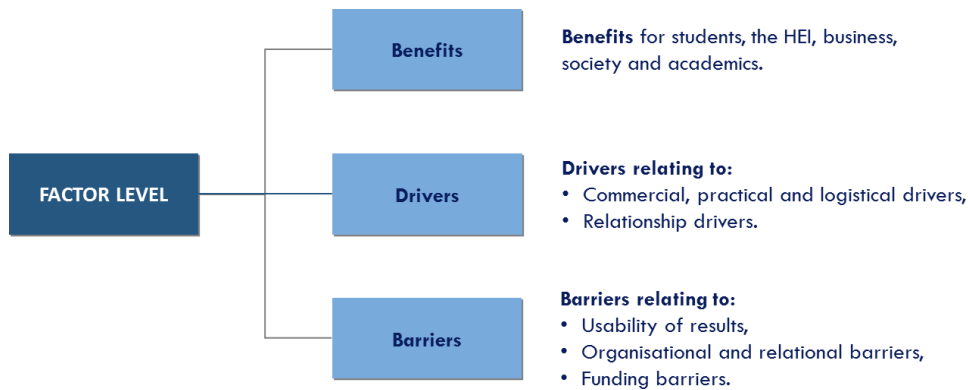
### Benchmarking the UK against the EU

According to the results, the UK HEI management show a higher extent of development in comparison to the European average, with all types of cooperation being developed above the European average. Resultantly, they can certainly be seen as the 'early adaptors' of Europe. In comparison with the European average, the extent of development of the UBC types are as follows:

	United Kingdom	Europe
Highly developed	<ol style="list-style-type: none"> <li>1. Collaboration in R&amp;D</li> <li>2. Commercialisation of R&amp;D results</li> <li>3. Entrepreneurship</li> </ol>	
Moderately developed	<ol style="list-style-type: none"> <li>4. Curriculum development and delivery</li> <li>5. Mobility of Students</li> <li>6. Lifelong Learning</li> <li>7. Governance</li> <li>8. Mobility of Academics</li> </ol>	<ol style="list-style-type: none"> <li>1. Collaboration in R&amp;D</li> <li>2. Mobility of Students</li> <li>3. Lifelong Learning</li> <li>4. Curriculum development and delivery</li> <li>5. Entrepreneurship</li> <li>6. Commercialisation of R&amp;D results</li> <li>7. Governance</li> <li>8. Mobility of Academics</li> </ol>

## Factors influencing the extent of UBC

The coming section will outline the extent to which a number of factors affect cooperation within business. These factors have been found to significantly influence cooperation within the European context.



### Relationship between barriers and drivers

A *Barrier* provides a hindrance or obstacle to do something, while a *Driver* provides the motivation to do that thing. More specifically, removing a *Barrier* does not create UBC, rather it makes UBC possible. It is the *Driver* that means that an academic cooperates with business. As an example, even when the lack of funds is nominated as the highest *Barrier* (obstacle), owing to the impossibility of cooperating without funds, the presence of funds may not be enough to cooperate if the *relationship drivers* or perceived *Benefits* (motivators) are not developed.

### Benefits explained

'*Benefits*' are the perceived positive outcome (financial and non-financial) from undertaking UBC for the different stakeholders groups that can potentially participate in UBC. This perception can be a reason to increase or decrease their participation or the involvement of other groups. For example, if academics perceive their own benefits to be low, that might cause a low participation in UBC and if they perceive that benefits for students are high, they might undertake actions that contribute to students' involvement in UBC.

## Barriers hindering UBC

*Barriers* are those obstacles that restrict or inhibit the ability of academics or HEIs to engage in UBC.

The following table explains the extent of relevance of *Barriers* to UBC by academics (green) and HEIs (orange) in Finland compared to the EU average. The barriers have been factored into 'meta-groups' to provide a more strategic understanding.

### Three groups of UBC barriers

Resulting from an analysis of the results, *Barriers* can be categorised in the following groups:

1. *usability of results,*
2. *funding barriers and*
3. *relational barriers.*

### **Barriers (grouped) to cooperation – UK v EU**

*As answered by academics and HEI management*

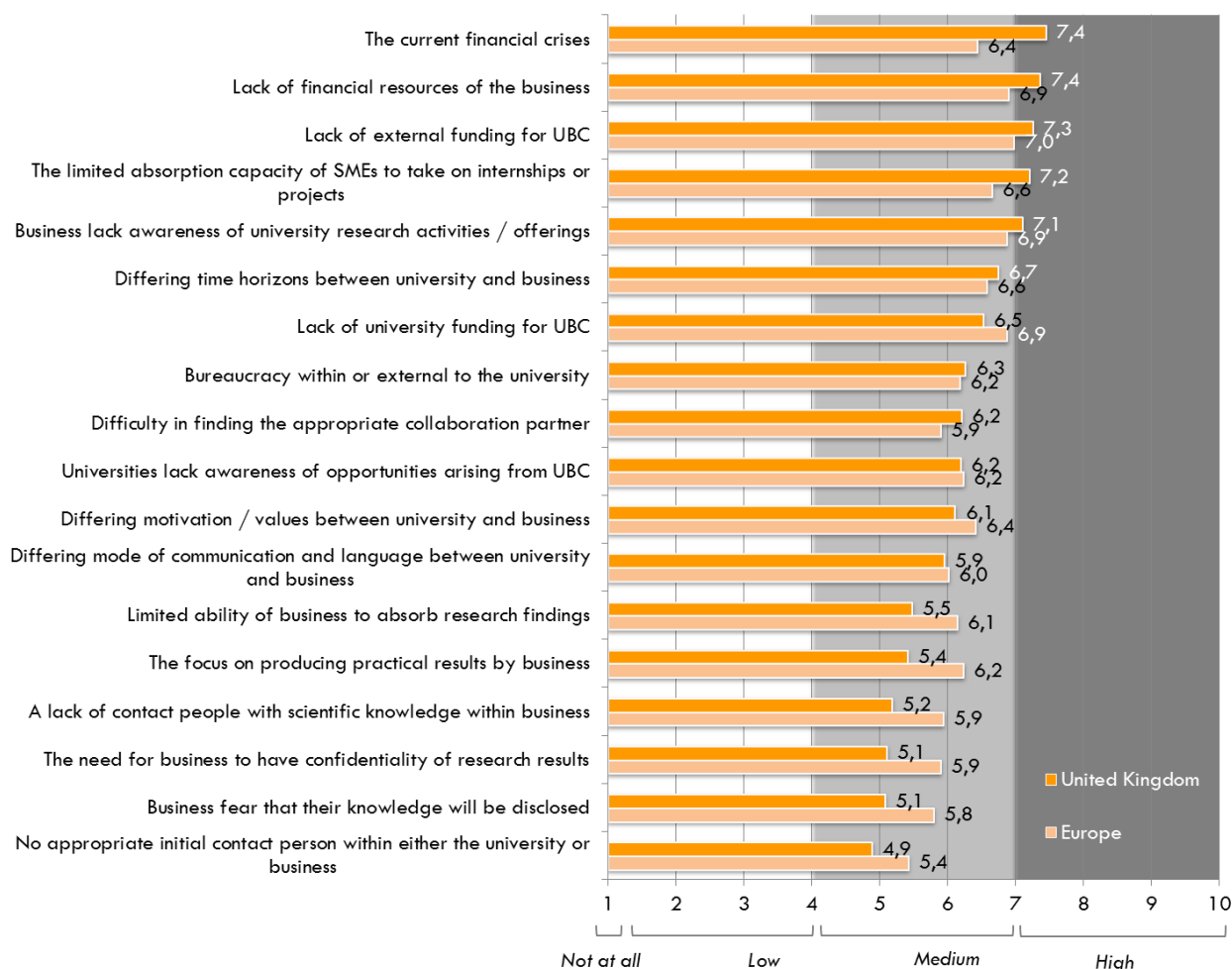
Usability of results	Extent of relevance (1-10)		Extent of relevance (1-10)	
	United Kingdom		Europe	
	ACAD	5.9	ACAD	6.1
HEI	5.2	HEI	6.0	

Funding barriers	Extent of relevance (1-10)		Extent of relevance (1-10)	
	United Kingdom		Europe	
	ACAD	6.8	ACAD	6.5
HEI	7.1	HEI	6.8	

Relational barriers	Extent of relevance (1-10)		Extent of relevance (1-10)	
	United Kingdom		Europe	
	ACAD	6.3	ACAD	6.4
HEI	6.2	HEI	6.2	

## Main barriers to cooperation – UK v EU

As answered by HEI management



The most prominent *Barriers* named by the UK HEI management are those related to the ‘funding barriers’ between the HEI and business including ‘lack of financial resources of the business’ (7.4), ‘the current financial crises’ effecting business (7.4) and ‘lack of external funding for UBC’ (7.3).

In respect to *relationship barriers*, whilst not seen as the main *Barriers*, HEI management in the UK have recognised them as important *Barriers*. In both the UK and Europe ‘the limited absorption capacity of SMEs to take on internships or projects’ and ‘business lack awareness of university research activities / offerings’ are perceived to be of high importance.

Comparing UK HEI representative responses with UK academic responses (see table from previous page)

Generally the UK HEI representative and academics saw the *Barriers* to UBC similarly with HEI management rating *funding barriers* as higher. Whilst that is true, UK HEIs rated the *Barrier usability of the results* as only a moderate barrier (5.2), UK academics rated this factor as a more significant *Barrier* than their HEI management counterparts (5.9).

Comparing UK HEI representative responses with EU HEI representative (see graph above)

UK HEI management perceive the *usability of results Barriers* (such as ‘the need for business to have confidentiality of research results’; and ‘business fear that their knowledge will be disclosed’) of a lower importance than European HEI management. This could indicate a greater level of trust and/or understanding between business and HEIs in the UK compared to Europe. *Funding barriers* were perceived by UK HEI management to be bigger *Barriers* to UBC than EU HEI management (though the difference was not significant) suggesting a need for greater financial support for cooperation efforts in the UK.

### Main barriers to UBC in the UK

1. The current financial crises
2. Lack of financial resources of the business
3. Lack of external funding for UBC
4. The limit absorption capacity of SMEs
5. Business lack awareness of HEI research activities/offerings

## Drivers stimulating UBC

Drivers are those factors that encourage academics or HEIs to engage in UBC.

The following table explains the extent of relevance of Drivers of UBC by academics (green) and HEIs (orange) in the UK compared to the EU average. The Drivers have been factored into 'meta-groups' to provide a more strategic understanding of UBC Drivers.

### Two groups of UBC drivers

Resulting from an analysis of the results, Drivers can be categorised in the following groups:

1. relationship drivers and
2. business drivers.

### Drivers (grouped) of cooperation – UK v EU

As answered by academics and HEI management

Relationship drivers	Extent of facilitation (1-10)		Extent of facilitation (1-10)	
	United Kingdom		Europe	
		ACAD	6.8	ACAD
	HEI	7.6	HEI	7.0

- Existence of mutual trust,
- Existence of mutual commitment,
- Having a shared goal,
- Understanding of common interest by different stakeholders (e.g. universities; business; individuals; students),
- Prior relation with the business partner,
- Cooperation as effective means to address societal challenges and issues.

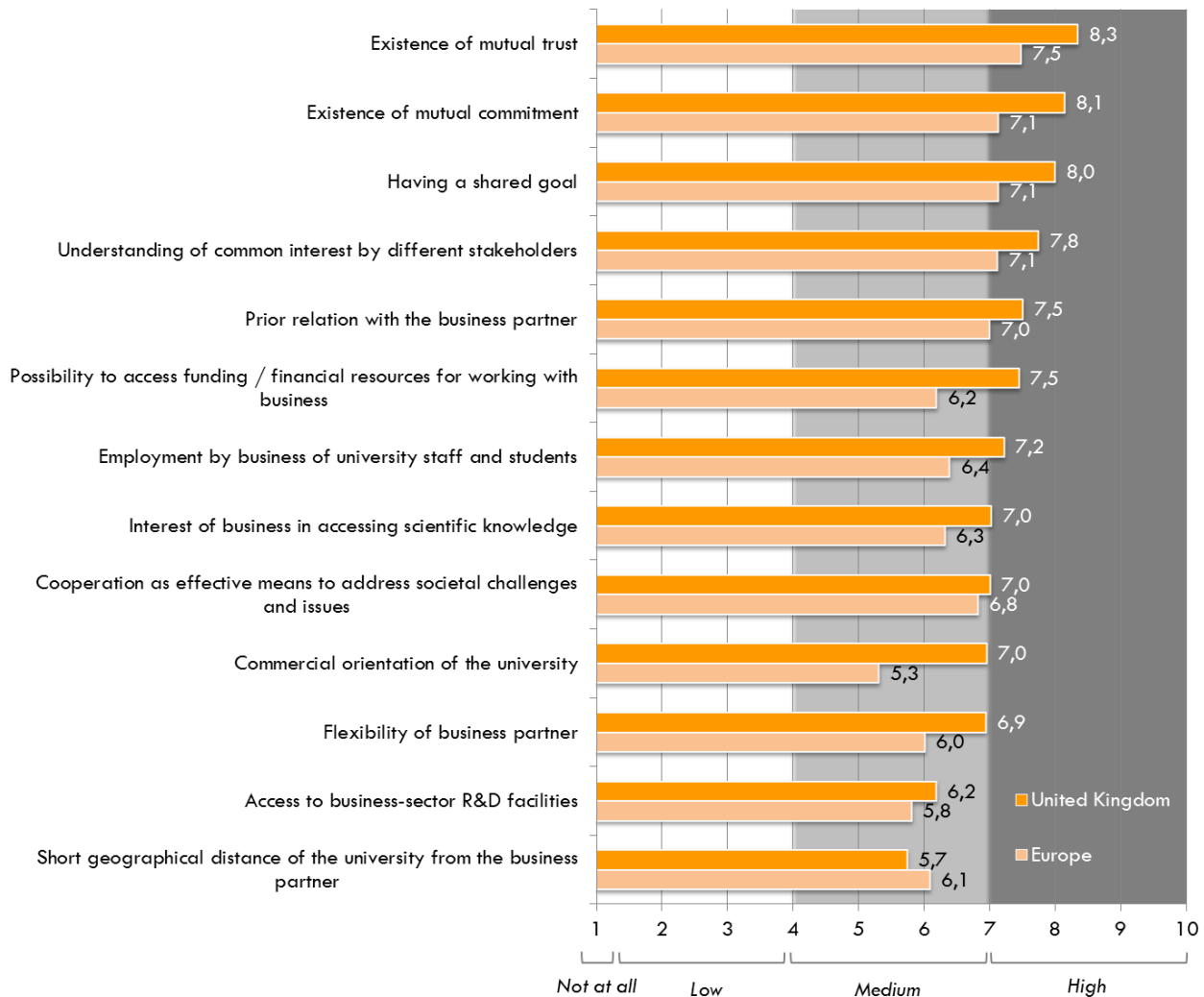
Business drivers	Extent of facilitation (1-10)		Extent of facilitation (1-10)	
	United Kingdom		Europe	
		ACAD	5.3	ACAD
	HEI	6.7	HEI	6.7

- Employment by business of HEI staff and students,
- Interest of business in accessing scientific knowledge,
- Possibility to access funding / financial resources for working with business,
- Short geographical distance of the HEI from the business partner
- Flexibility of business partner,
- Access to business-sector research and development facilities
- Commercial orientation of the HEI.



## Main drivers of cooperation – UK v EU

As answered by HEI management



The HEI management in the UK perceive the highest Drivers of UBC to be *relationship drivers* such as ‘existence of mutual trust’ (8.3), ‘existence of mutual commitment’ (8.1), ‘having a shared goal’ (8.0), and ‘understanding of common interest by different stakeholders’ (7.8). UK academics generally agree that *relationship drivers* are critical for UBC, although they rate these drivers slightly lower than the HEI management (6.8).

Comparing UK HEI representative responses with UK academic responses (see table from previous page)

Whilst *business drivers* were rated as important by both UK representative and academics, they were rated lower than *relationship drivers*. This means that in the UK UBC is a people’s game.

Comparing UK with EU responses (see graph above)

Aside from a higher rating by UK HEI management for *relationship drivers* (UK: 7.6 compared to 7.0 in the EU), academics and HEI representative see UBC drivers quite similarly to their European counterparts.

### Main drivers of UBC in the UK

1. Existence of mutual trust
2. Existence of mutual commitment
3. Having a shared goal
4. Understanding of common interest by different stakeholders
5. Prior relation with the business partner

## Benefits of cooperation (academic perspective)

*Benefits* are the positive results that stakeholders perceive that they obtain from undertaking UBC.

The following table explains the extent of relevance of *Benefits* of UBC by academics (green) in the UK compared to the EU average. The *Benefits* have been factored into 'meta-groups' to provide a more strategic understanding of UBC *Barriers*.

## Four groups of UBC *Benefits* (academics perspective)

Resulting from an analysis of the results, *Benefits* for academics can be categorised in the following groups:

1. *benefits for students,*
2. *benefits for business,*
3. *benefits for HEIs and*
4. *personal benefits for academics.*

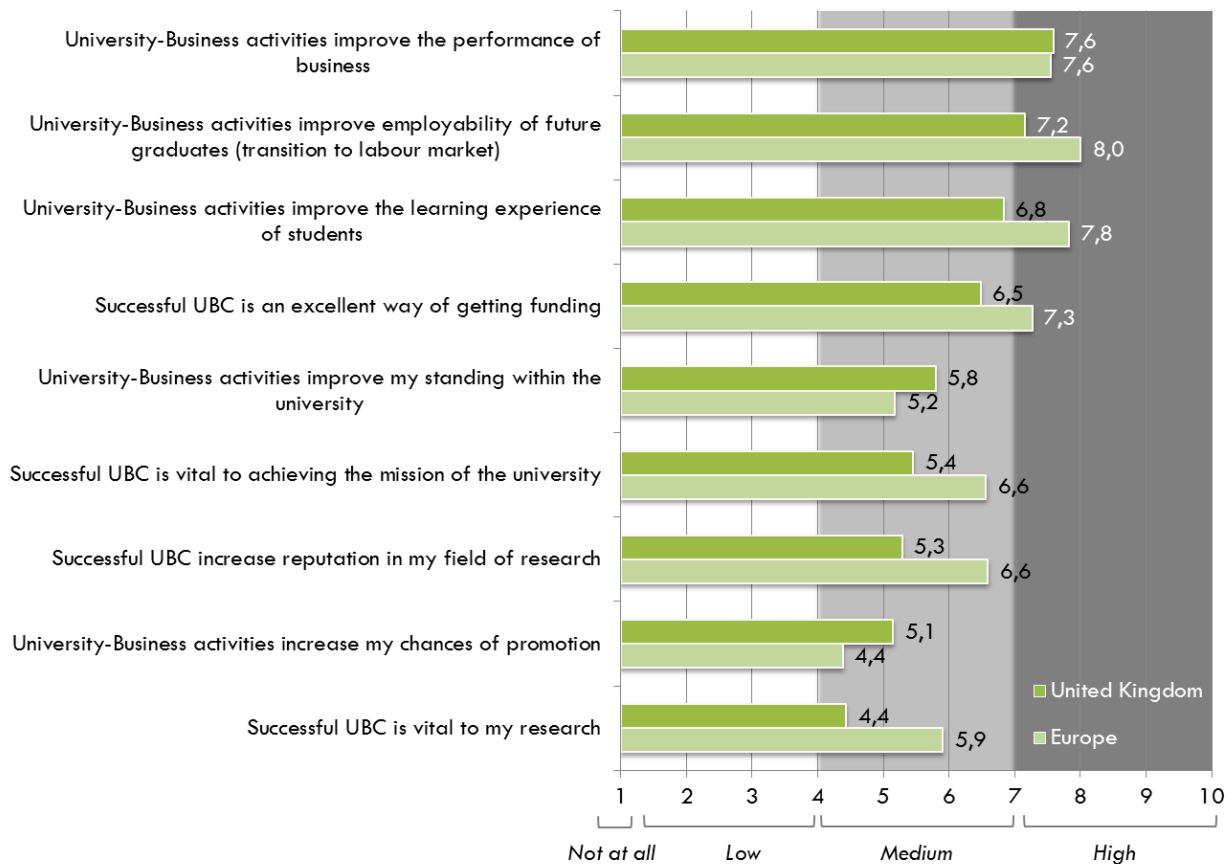
## Benefits (grouped) from cooperation – UK v EU

As answered by academics

<b>Benefits for students</b> <ul style="list-style-type: none"> <li>• UB activities improve employability of future graduates</li> <li>• UB activities improve the learning experience of students</li> </ul>	Extent of importance (1-10)		Extent of importance (1-10)	
	United Kingdom		Europe	
	ACAD	7.0	ACAD	7.9
<b>Benefits for business</b> <ul style="list-style-type: none"> <li>• UB activities improve the performance of business</li> </ul>	Extent of importance (1-10)		Extent of importance (1-10)	
	United Kingdom		Europe	
	ACAD	7.6	ACAD	7.6
<b>Benefits for HEIs</b> <ul style="list-style-type: none"> <li>• Successful UBC is vital to achieving the mission of the HEI</li> </ul>	Extent of importance (1-10)		Extent of importance (1-10)	
	United Kingdom		Europe	
	ACAD	5.4	ACAD	6.6
<b>Benefits for academics</b> <ul style="list-style-type: none"> <li>• Successful UBC is an excellent way of getting funding</li> <li>• Successful UBC increases my reputation in my field of research</li> <li>• Successful UBC is vital to my research</li> <li>• UB activities improve my standing within the university</li> <li>• UBC activities increase my chances of promotion</li> </ul>	Extent of importance (1-10)		Extent of importance (1-10)	
	United Kingdom		Europe	
	ACAD	5.3	ACAD	5.9

## Benefits from cooperation – UK v EU

As answered by academics



Academics nominate that the greatest *Benefits* from UBC go to businesses ('UBC activities improve the performance of business'), then to students ('UBC activities improve employability of future graduates', 'UBC activities improve the learning experience of students') followed by some personal Benefits as well as Benefits to the HEI.

Interestingly whilst UK academics recognise that 'UBC increases their standing in their university' and is 'an excellent source of funding', they rate other personal *Benefits* from UBC ('UBC activities increase my chances of promotion') and also the contribution of UBC to their research ('Successful UBC increase reputation in my field of research', 'Successful UBC is vital to my research') much lower. This indicates that UK academics get recognition for their UBC efforts within their HEI, however these efforts are not still not recognised in the scientific field or in being connected with promotion at the HEI.

### Comparing UK academic responses with EU academic responses (see graph above)

In comparison with the EU average, UK academics see a similar amount of *Benefits* to business, and fewer *Benefits* to students and contribution to the mission of HEIs than European academics. However, UK academics are much more positive in respect to perceived *Benefits* to (i) the standing in the HEI and (ii) to their chances of promotion although they see a lesser role of UBC in their research reputation, compared to their European counterparts.

Overall, the UK academics perceive the *Benefits* from UBC to be of a lower extent in comparison to the EU average.

#### Main benefits of UBC identified by UK academics

1. UBC activities improve the performance of business
2. UBC activities improve employability of future graduates,
3. UBC activities improve the learning experience of students.

## Benefits of cooperation (HEI perspective)

*Benefits* are the positive results that stakeholders perceive that they obtain from undertaking UBC.

The following table explains the extent of relevance of perceived benefits of UBC by HEI management (orange) in the UK compared to the EU average. The *Benefits* have been factored into 'meta-groups' to provide a more strategic understanding of UBC *Barriers*.

### Benefits (grouped) from cooperation – UK v EU

As answered by HEI management

### Three groups of UBC Benefits (HEI perspective)

Resulting from an analysis of the results, *Benefits* for academics can be categorised in the following groups:

1. *benefits for students,*
2. *benefits for business and society, and*
3. *benefits for HEIs.*

Benefits for the HEI	Extent of importance (1-10)		Extent of importance (1-10)	
	United Kingdom		Europe	
<ul style="list-style-type: none"> <li>• UBC is vital to achieving the mission of the HEI.</li> </ul>	HEI	6.8	HEI	7.7

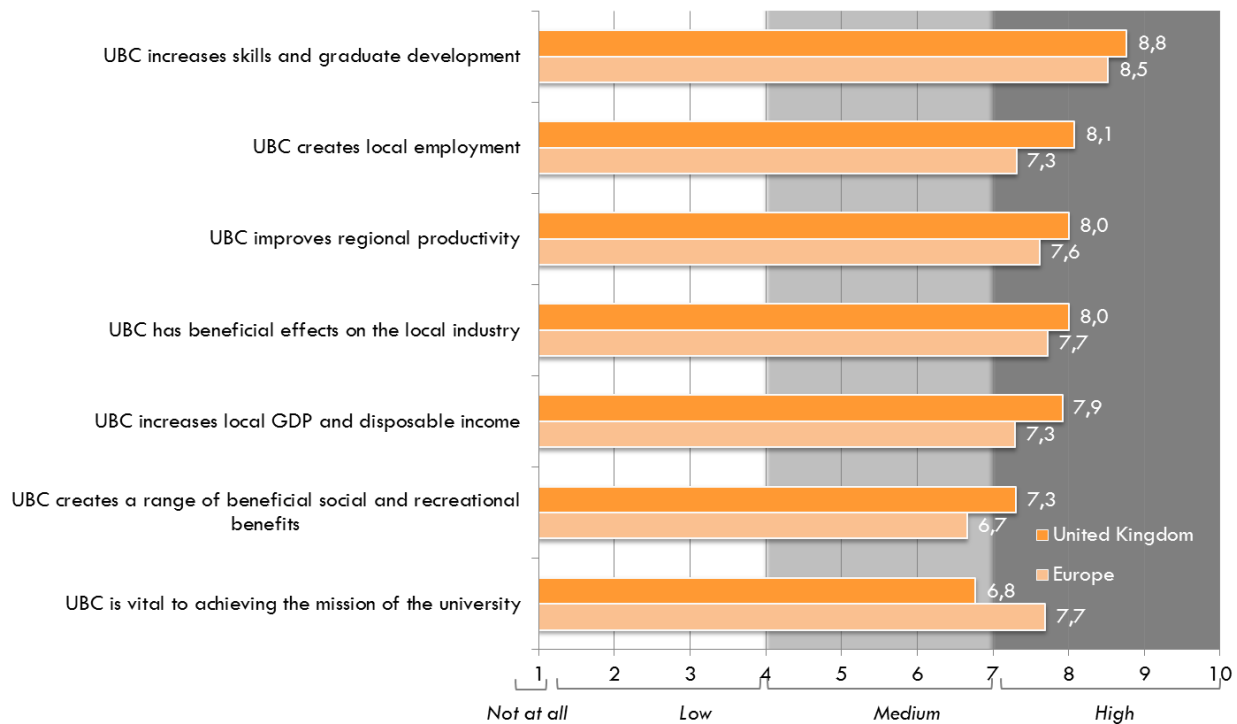
Benefits for students	Extent of importance (1-10)		Extent of importance (1-10)	
	United Kingdom		Europe	
<ul style="list-style-type: none"> <li>• UBC increases skills and graduate development</li> </ul>	HEI	8.8	HEI	8.5

Benefits for business and society	Extent of importance (1-10)		Extent of importance (1-10)	
	United Kingdom		Europe	
<ul style="list-style-type: none"> <li>• UBC has beneficial effects on the local industry</li> <li>• UBC improves regional productivity</li> <li>• UBC creates local employment</li> <li>• UBC increases local GDP and disposable income</li> <li>• UBC creates a range of beneficial social and recreational benefits</li> </ul>	HEI	7.9	HEI	7.3

## Benefits from cooperation – UK v EU

As answered by HEI management



HEI management in the UK perceive the *Benefits* from UBC for society ('UBC creates local employment', 'UBC improves regional productivity', 'UBC has beneficial effects on the local industry', 'UBC increases local GDP and disposable income' and 'UBC creates a range of beneficial social and recreational benefits') and students ('UBC increases skills and graduate development') to be of a high extent.

Interestingly for the development of UBC in the UK, UK HEI management assessed the contribution of UBC to the HEI mission ('UBC is vital to achieving the mission of the university') as the lowest *Barrier* suggesting further work is needed by government to align working with business to the missions of UK HEIs.

Comparing UK HEI management' responses with EU HEI management' responses (see graph above)

In comparison with the EU average, the UK HEI management have a similar perception on the *Benefits* for students, however they are far more positive towards the *Benefits* related to the local and national society. They however see the vitality of UBC in achieving the mission of the HEI to be of a lower importance, indicating a higher integration of UBC in the mission of HEIs in other EU countries.

Overall, the UK HEI management perceive the *Benefits* from UBC to be of a higher extent than the EU average.

### Main benefits of UBC identified by UK HEI management

1. UBC increases skills and graduate development
2. UBC creates local employment
3. UBC improves regional productivity

# Benchmark

...universities in your region

## Assisting governments and universities improve University-Business Cooperation (UBC)

Using the State of European UBC study results, decision makers, managers and practitioners involved in UBC can benefit from receiving:

1. a benchmark in terms of UBC of your organisation, institution, sector, region or country against others.
2. a clear picture of progress in efforts to increase UBC,
3. proactive areas of focus for increasing UBC,
4. the required information to advance UBC within their region or institution

Provided to your organisation in the form of a report and/or presentation, a state of the UBC report dedicated to your organisation can assist with developing greater financial and other benefits from UBC



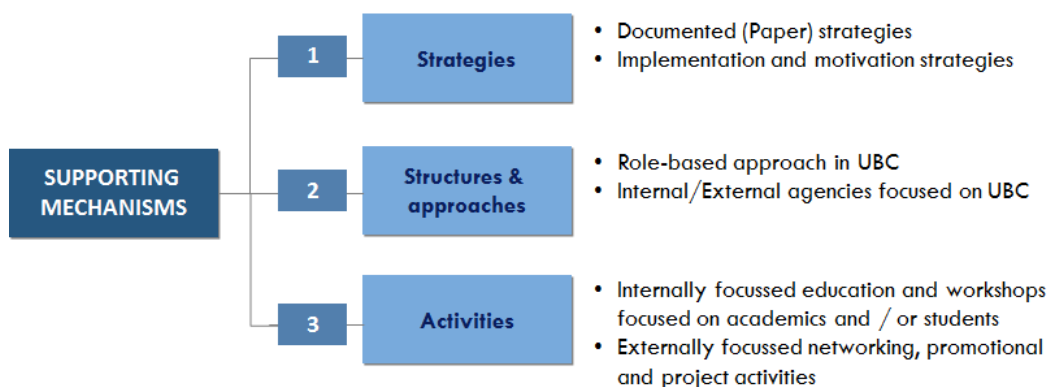
...your university

Please contact [davey@apprimo.com](mailto:davey@apprimo.com) for more information.

## Supporting mechanisms for UBC

Supporting mechanisms are interventions designed to support the development of cooperation between HEIs and business.

The coming section will outline the extent to which UBC *Supporting mechanisms* are developed in the UK. The development of these mechanisms has been found to significantly influence cooperation within the European context.



### Supporting mechanisms explained

The UBC *Supporting mechanisms* constitute the ‘action-level’, where all stakeholders need to focus their efforts when they want to influence the extent of UBC.

The specific role and importance of *Supporting mechanisms* at HEIs has long been recognised in both practice and literature. They are often recognised in multiple ways including (i) in a variety of different names (e.g. interventions, enablers), (ii) captured in a model (e.g. ecosystem, regional innovation system) or (iii) known as individual elements (e.g. activities, infrastructure).

A key finding of the *State of European UBC report* was that the extent of development of the *Supporting mechanisms* was found to significantly affect the extent of general activity between HEIs and business. The nature of the *Supporting mechanisms* in terms of (i) responsibility, (ii) expense and (iii) time to impact are summarised in the table below.

	Primary responsibility for the mechanism	Secondary responsibility	Expense	Time to impact
Strategies	HEI management	All UBC stakeholders	Low	Long term
Structures and approaches	HEI / regional Govt. and agencies	Regional UBC stakeholders	Agencies: High Personnel: Med-high	Agencies: Long Personnel: Medium
Operational activities	Knowledge transfer Professionals	Regional UBC stakeholders	Medium	Short-medium term



## Strategies for UBC

Strategies are the drafting and implementation of cross-functional decisions by a HEI that will enable it to achieve its long-term objectives with respect to UBC.

The primary responsibility for the creation of UBC Strategies is with HEI management as a strategic instrument is usually created by decisions made at a HEI board level.

### Two groups of UBC strategies

Resulting from an analysis of the results, Strategies can be categorised in the following groups:

1. Documented strategies
2. Implementation and motivation strategies

### Development of UBC Strategies (grouped) – UK v EU

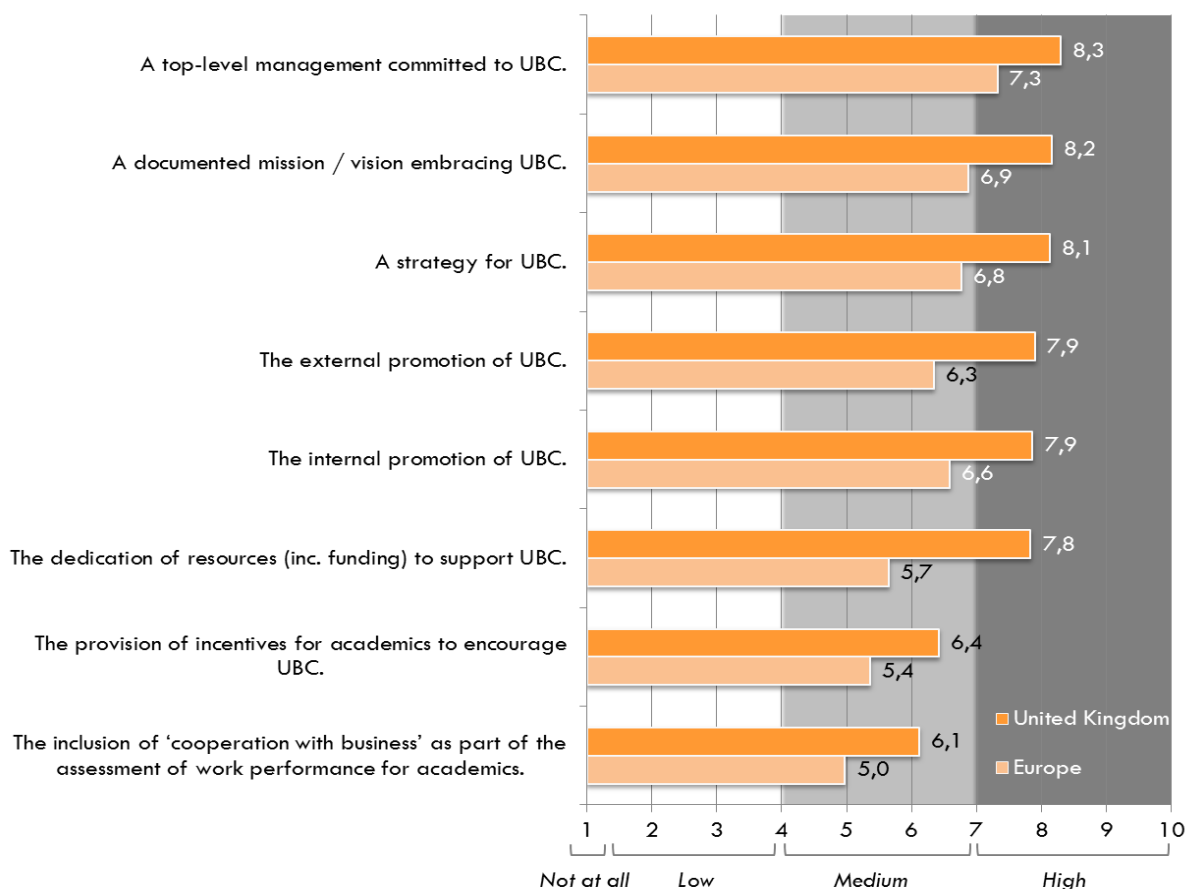
As answered by HEI management

Documented (Paper) strategies	Extent of development (1-10)		Extent of development (1-10)	
	United Kingdom		Europe	
	HEI	8.0	HEI	6.8
<ul style="list-style-type: none"> <li>• A top-level management committed to University-Business cooperation,</li> <li>• A documented mission / vision embracing University-Business cooperation,</li> <li>• A strategy for University-Business cooperation,</li> <li>• The internal promotion of University-Business cooperation,</li> <li>• The external promotion of University-Business cooperation.</li> </ul>				

Implementation and motivation strategies	Extent of development (1-10)		Extent of development (1-10)	
	United Kingdom		Europe	
	HEI	6.7	HEI	5.4
<ul style="list-style-type: none"> <li>• The dedication of resources (inc. funding) to support University-Business cooperation,</li> <li>• The provision of incentives for academics to encourage University-Business cooperation,</li> <li>• The inclusion of 'cooperation with business' as part of the assessment of work performance for academics.</li> </ul>				

## Development of UBC Strategies – UK v EU

As answered by HEI management



Development of strategies at UK HEIs (see table from previous page in combination with graph on this page)

The documented strategies supporting UBC have a high extent of development (8.0) with 'a top-level management committed to UBC' (8.3), 'a documented mission / vision embracing UBC' (8.2) and 'a strategy for UBC' (8.1) being rated the highest. Overall the documented strategies in the UK are of a significantly higher extent of development compared to the European average. As can be seen in the evaluation of the implementation strategies, specifically 'the provision of incentives for academics to encourage UBC' (6.4) and 'the inclusion of cooperation with business as part of the assessment of work performance for academics' (6.1), the UK HEIs and government could achieve a further increase in cooperation with business, by creating incentives for academics to cooperate with business or include it in work performance measurement.

Comparing UK HEI representative responses with EU HEI representative (see graph above)

When compared with the European average, the UK shows generally a greater implementation of UBC Strategies, with 'the dedication of resources (incl. funding) to support UBC' to be developed far higher (7.8) in the UK than in Europe (5.7). Also the Strategies

'the provision of incentives for academics to encourage UBC' and 'the inclusion of 'cooperation with business' as part of the assessment of work performance for academics' are of a higher extent of development in the UK compared with the EU average which helps to explain the greater amount of UBC in the UK.

United Kingdom	
Highly developed	1. A top-level management committed to UBC
	2. A documented mission / vision embracing UBC
	3. A strategy for UBC
	4. The external promotion of UBC
	5. The internal promotion of UBC
	6. The dedication of resources (incl. funding) to support UBC
Moderately developed	7. The provision of incentives for academics to encourage UBC
	8. The inclusion of 'cooperation with business' as part of the assessment of work performance for academics

## Structures and approaches for UBC

UBC *Structures and approaches* are constructions created as a result of top-level strategic decisions within (or related to) a HEI that are an ‘enabler’ of UBC and include the creation or development of institutions, positions, methods and policies and programmes. They are put in place in order to promote, develop or implement UBC with a mid to long term focus and can be created within the HEI or as a bridge between the HEI and business. Structures and approaches usually involve significant investment and can be funded by the HEI, the government, business or a combination of these sources.

### Two groups of UBC Structures and approaches

Resulting from an analysis of the results, *Structures and approaches* can be categorised in the following groups:

1. *the creation and /or expansion of positions (personnel) and*
2. *agencies (units of focus).*

### Development of UBC Structures and approaches (grouped) – UK v EU

As answered by HEI management

Roles-based approaches in UBC	Extent of development (1-10)		Extent of development (1-10)	
	United Kingdom		Europe	
	HEI	6.9	HEI	5.4

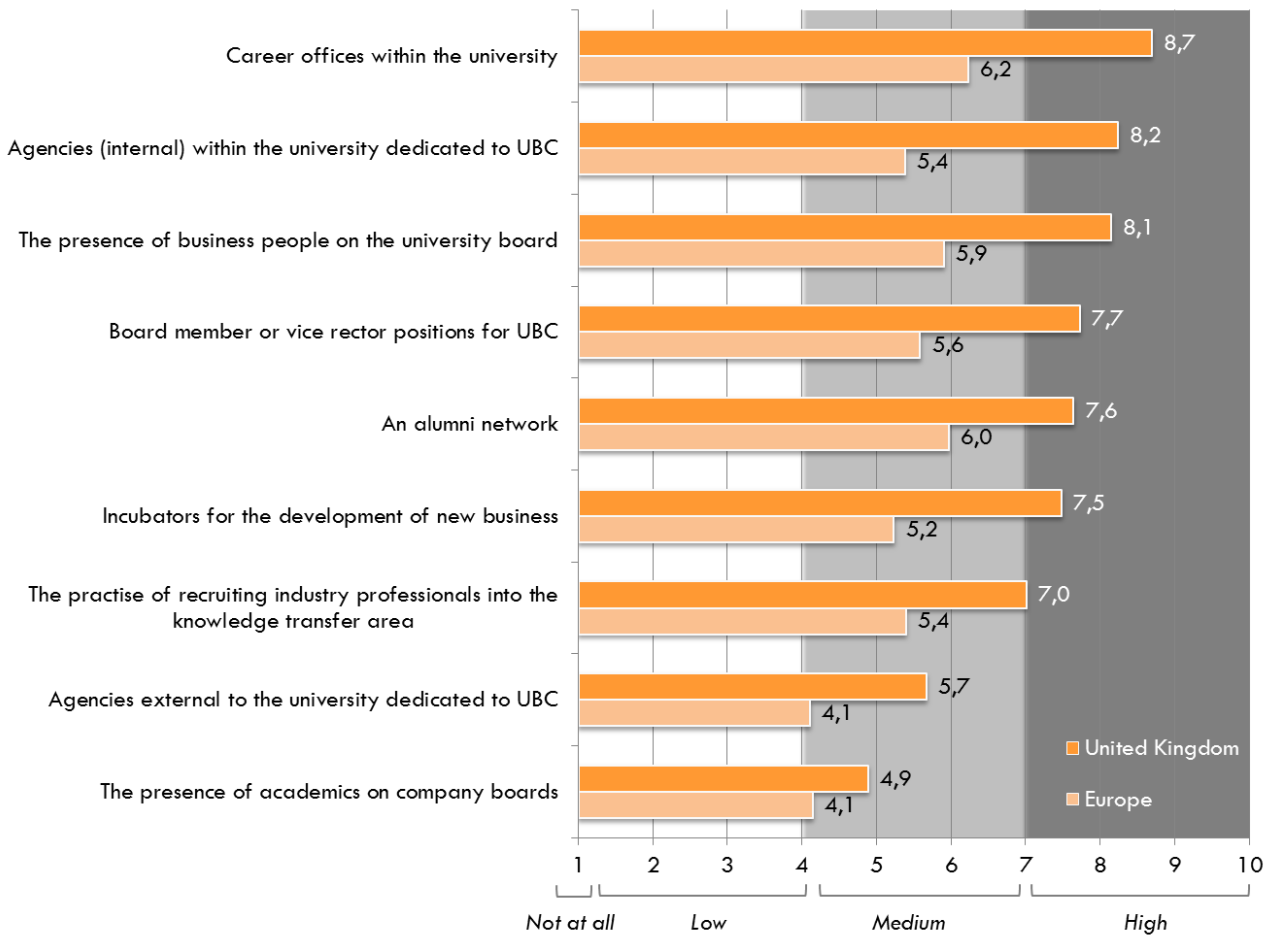
- The presence of academics on company boards,
- The presence of business people on the HEI board,
- Board member or vice rector positions for UBC.
- The practise of recruiting industry professionals into the knowledge transfer area.,
- An alumni network.

Internal/External agencies focused on UBC	Extent of development (1-10)		Extent of development (1-10)	
	United Kingdom		Europe	
	HEI	7.5	HEI	5.3

- Career offices within the HEI,
- Agencies external to the HEI dedicated to UBC
- Agencies (internal) within the HEI dedicated to UBC,
- Incubators for the development of new business.

## Development of UBC Structures and approaches– UK v EU

As answered by HEI management



### Development of structures and approaches at UK HEIs (see graph above)

The high extent of development of the *Structures and approaches* for UBC in the UK shows the perceived devotion of the UK HEIs to the support and development of UBC. The integration of business in UK HEIs is evident through the development of ‘the presence of business people on the university board’ (8.1), ‘board member or vice rector for positions for UBC’ (7.7) and ‘the practice of recruiting industry professionals into the knowledge transfer area’ (7.0). By contrast, whilst ‘career offices within the university’ (8.7) and ‘agencies (internal) within the university dedicated to UBC’ (8.2) are the most developed Structures, the ‘external agencies’ are significantly less developed.

### Comparing UK HEI representative responses with EU HEI representative (see table from previous page in combination with graph on this page)

The *role-based approaches in UBC and internal/external agencies focussed on UBC* are significantly higher developed in UK HEIs than the EU average.

In comparison to the European average, the development of *agencies within the HEI dedicated to UBC* is significantly more developed in the UK likely as a result of the long term financial commitment the UK has made towards UBC.

<b>Highly developed</b>	<ol style="list-style-type: none"> <li>1. Career offices within the HEI</li> <li>2. Agencies (internal) within the HEI dedicated to UBC</li> <li>3. The presence of business people on the HEI board</li> <li>4. Board member or vice rector positions for UBC</li> <li>5. An alumni network</li> <li>6. Incubators for the development of new business</li> <li>7. The practise of recruiting industry professionals into the knowledge transfer area</li> </ol>
<b>Moderately developed</b>	<ol style="list-style-type: none"> <li>8. Agencies external to the HEI dedicated to UBC</li> <li>9. The presence of academics on company boards</li> </ol>

## Operational activities for UBC

*Operational activities* are actions of a practical and immediate nature undertaken by HEIs, governments, regional agencies, HEIs and business to create and support UBC. *Operational activities* are usually the least cost to implement of all the *Supporting mechanisms*, require less commitment from HEI management and whose scope and volume can be described/measured.

### Three groups of UBC Operational activities

Resulting from an analysis of the results, Operational activities can be categorised in the following groups:

1. *Internally focused education and workshops focused on academics*
2. *Internally focused education and workshops focused on students*
3. *Externally focused networking, promotional and project activities*

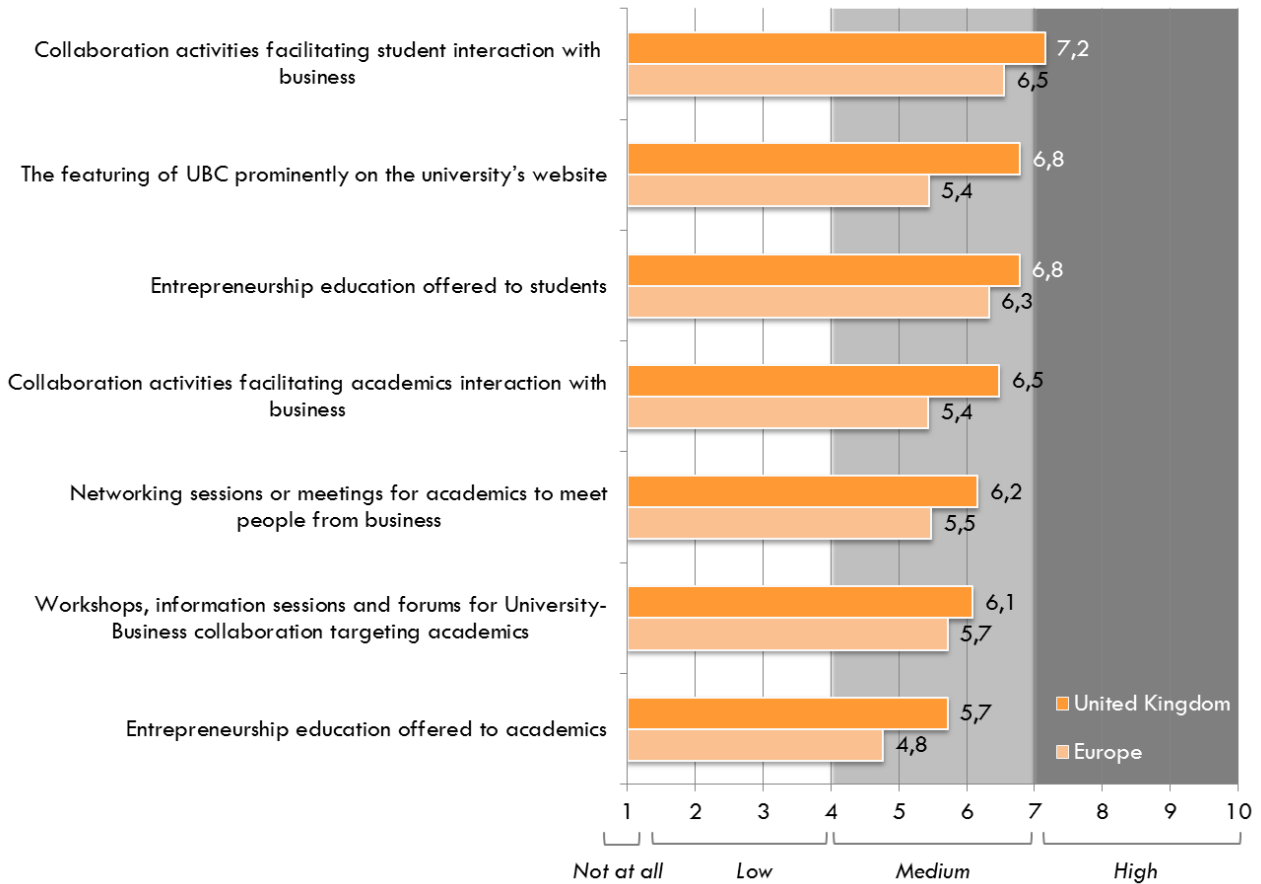
### Development of UBC Operational activities (grouped) – UK v EU

As answered by HEI management

<b>Internally focused education and workshops focused on <u>academics</u></b> <ul style="list-style-type: none"> <li>• Workshops, information sessions and forums for University-Business collaboration targeting academics,</li> <li>• Entrepreneurship education offered to academics.</li> </ul>	Extent of development (1-10)		Extent of development (1-10)	
	United Kingdom		Europe	
	HEI	5.9	HEI	5.3
<b>Internally focused education and workshops focused on <u>students</u></b> <ul style="list-style-type: none"> <li>• Entrepreneurship education offered to students.</li> </ul>	Extent of development (1-10)		Extent of development (1-10)	
	United Kingdom		Europe	
	HEI	6.8	HEI	6.3
<b>Externally focused networking, promotional and project activities</b> <ul style="list-style-type: none"> <li>• Networking sessions or meetings for academics to meet people from business,</li> <li>• The featuring of University-Business cooperation prominently on the HEI's website,</li> <li>• Collaboration activities facilitating student interaction with business,</li> <li>• Collaboration activities facilitating academics interaction with business.</li> </ul>	Extent of development (1-10)		Extent of development (1-10)	
	United Kingdom		Europe	
	HEI	6.6	HEI	5.7

## Development of UBC operational activities – UK v EU

As answered by HEI management



Development of UB activities at UK HEIs (see table from previous page in combination with graph from this page)

Regarding activities for student interaction with business, the UK HEIs is very well advanced with both 'collaboration activities facilitating student interaction with business' (7.2) and 'entrepreneurship education offered to students' (6.8) being well developed. However the activities targeted at academics ('workshops, information sessions and forums for UBC targeting academics' and 'Entrepreneurship education offered to academics') are of a far lower development than those activities targeted at students

Comparing UK HEI representative responses with EU HEI representative (see table from previous page in combination with graph from this page)

In comparison with the EU average, UBC activities at UK HEIs are more advanced especially the *externally focused networking, promotional and project activities*. This suggests that UK HEIs are more 'market-facing' than EU HEIs.

Highly developed	1. Collaboration activities facilitating student interaction with business
Moderately developed	2. The featuring of UBC prominently on the HEI's website
Moderately developed	3. Entrepreneurship education offered to students
Moderately developed	4. Collaboration activities facilitating academic interaction with business
Moderately developed	5. Networking sessions or meetings for academics to meet people from business
Moderately developed	6. Workshops, information sessions and forums for UBC targeting academics
Moderately developed	7. Entrepreneurship education offered to academics

# The UBC Ecosystem

The UBC ecosystem is a model for understanding the important elements affecting University-Business Cooperation (UBC)

## Model created by

Todd Davey, Victoria Galan Muros, Arno Meerman.

## Model validation partners

Science-to-Business Marketing Research Centre, UIIN, aprimo UG

## Co-created by

105 practitioners validating the model in their work.

The model relationships have been scientifically validated by the Science-to-Business Marketing Research Centre

1 Indirect outcome (society)

2 Direct outcome (actors)

3 University-Business Cooperation (UBC) types

4 Influencing factors

5 Supporting mechanisms

6 Key stakeholders

## Are you?

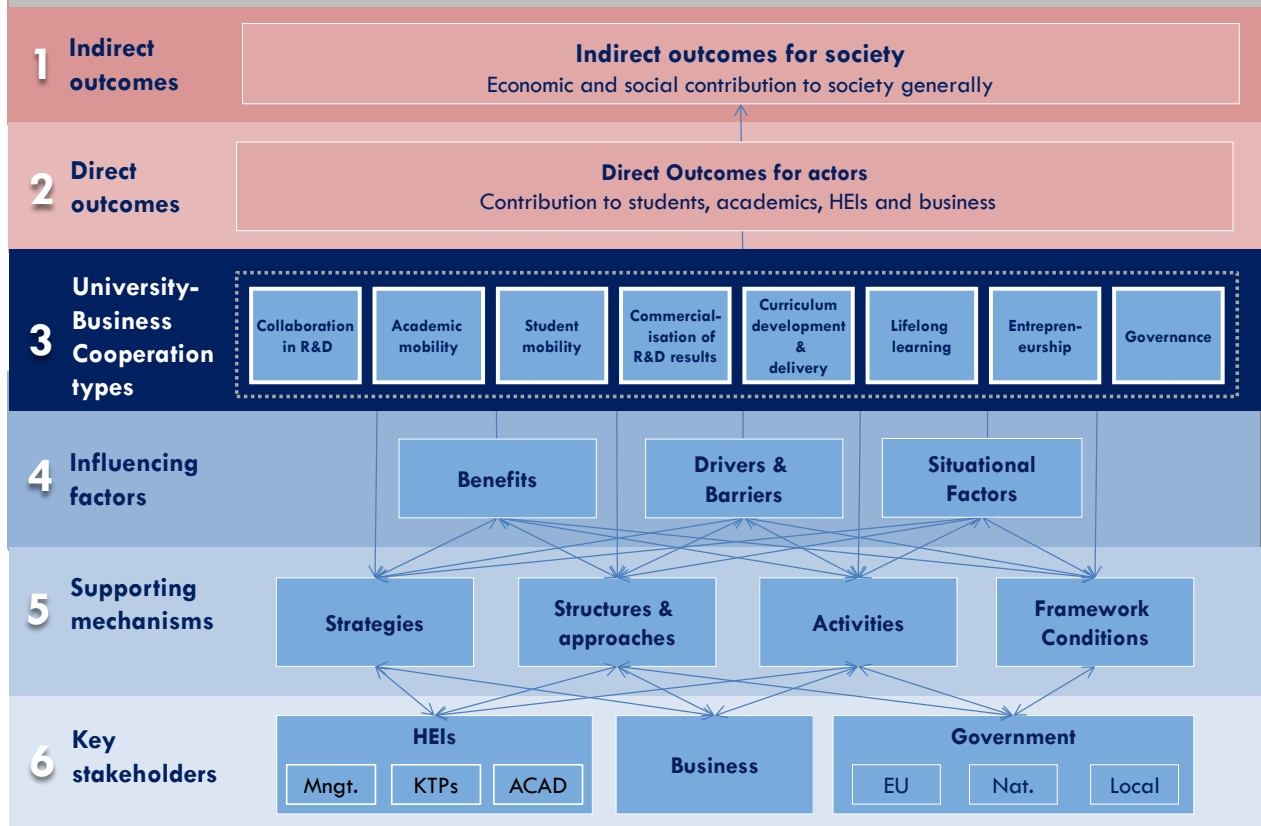
- attempting to develop UBC within your organisation?
- repetitively thinking about the factors affecting cooperation between HEI and business as well as their how they relate to each other?
- trying to foster open innovation involving universities?
- continually confronted with the challenge of creating better relationships between HEIs and business?
- a revolutionary trying to match researchers with business partners?

**... if you answered 'yes' to any of these questions, you are not alone: this model was developed by people like you for these reasons**





# UBC ECOSYSTEM MODEL > Detailed



## 6 Ecosystem Elements (and their key findings)

1. UBC is vital in creating a knowledge society
2. UBC provides direct outcomes for students, HEIs, academics and businesses
3. Those UBC types with more direct, measurable, and promotable benefits are the most developed (e.g. collaboration in R&D, mobility of students)
- 4a. Situational factors (e.g. age, faculty) help to explain UBC but there is little that can be implemented from these results
- 4b. Lack of funding and excess of bureaucracy at all levels (HEI, national, European) are the highest barriers to UBC
- 4c. Personal relationships drive UBC. It's a people game!
- 4d. Perceptions of high personal benefits & incentives are motivators of UBC
5. The creation and development of supporting mechanisms (especially those with the highest impact) are critical for UBC
6. In the UBC ecosystem, the multiple actors need to work cooperatively and in a coordinated manner

UBC ECOSYSTEM		All aspects are measurable (benchmarking)
1	Indirect Impact	Impact level How it impacts society
2	Direct outcomes	Outcome level How it affects stakeholders
3	University-Business Cooperation types	Result level What occurs
4	Influencing factors	Factor level What you have to consider
5	Supporting mechanisms	Action level What you can do
6	Key stakeholders	Stakeholder level

Please go to <http://ub-cooperation.eu/pdf/UBCECO.pdf> for more information or contact [davey@apprimo.com](mailto:davey@apprimo.com).

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# Contact us

**Science-to-Business Marketing Research Centre -**

**apprimo UG - UIIN**

Todd Davey

[davey@apprimo.com](mailto:davey@apprimo.com)

Tel.: +49 (0) 251 2024 512