

University-Business relationships as a driver of

# Knowledge-Society Europe

Cooperation between business and HEIs is essential for building a knowledge based-society:

- For HEIs – greater sources of revenue
- For academics – more relevant research, greater access to finance, more publishing
- For students – more relevant skills and knowledge

University-Business cooperation in Europe is at an early stage of development.

# STATE OF EUROPEAN UBC

**DG Education and Culture  
Study on the Cooperation  
Between HEIs and Public and  
Private Organisations in Europe**

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***1st April, 2012***

# HIPPO STUDY

**Largest study into  
European  
university-business  
cooperation (UBC)...**

**6,280 responses from  
rectors and academics.**

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Case study: MUAS

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# ABOUT US

## The S2B Marketing Research Centre

- Established in 2002 in Münster, Germany
- 20-person team
- Development of more than 70 instruments of Science Marketing
- Organiser of 10 international conferences
- Over 200 presentations and workshops in 27 countries
- Assisted in creation of the Responsible Partnering Handbook and the TechAdvance Technology Assessment Handbook



# ABOUT THE STUDY: Hippo

## Study on the cooperation between HEIs and public and private organisations in Europe (HIPPO)

DG Education and Culture,  
European Commission

May 2010 to August 2011 (15.5 months)

### 4 project partners



Coventry University



Red OTRI Universidades



Cracow University of Economics



Free University Amsterdam

It aims to give a clear picture of the extent of UBC in Europe and to get a better understanding of how greater UBC can be fostered

### Sub-objectives

1. To chart the current situation regarding UBC in Europe,
2. To describe the factors that facilitate or inhibit UBC,
3. To identify and describe 30 examples of good practice in European UBC.

# METHOD: Countries involved



## PARTICIPATING COUNTRIES

Countries that are existing, or candidate members, of the European Union or are partly committed to the EU economy and regulations as member of the European Economic Area (EEA) were targets of the study.



Involved in study



# METHOD: Multi-Method

<b>1. Secondary information search</b>	<ul style="list-style-type: none"><li>– Literature,</li><li>– Published reports (national and EU level),</li><li>– Books,</li><li>– Journals.</li></ul>	
<b>2. Qualitative research</b>	<u>11 expert interviews</u>	
<b>3. Quantitative research</b>	<ul style="list-style-type: none"><li>– Survey translated into <u>22 languages</u>,</li><li>– Sent to all European HEIs (3551 HEIs),</li><li>– <u>33 countries</u>,</li><li>– Survey sample = <u>6,280</u>,</li><li>– Representative sample achieved.</li></ul>	<b>Perceptions of UBC development of Academics &amp; HEI reps</b>
<b>4. Qualitative workshop</b>	<u>12 experts</u> in UBC met in Brussels	
<b>5. Case studies</b>	<u>30 good practice</u> European UBC case studies	

# Method: Sample

**Largest study ever into European university-business cooperation (UBC)**

## ACADEMICS

4,123 academics responded to the major study

## HEI REPRESENTATIVES

2,157 from HEI Mngt. responded to the major study

**6,280** total responses



# RESULTS

## 10 Key Findings

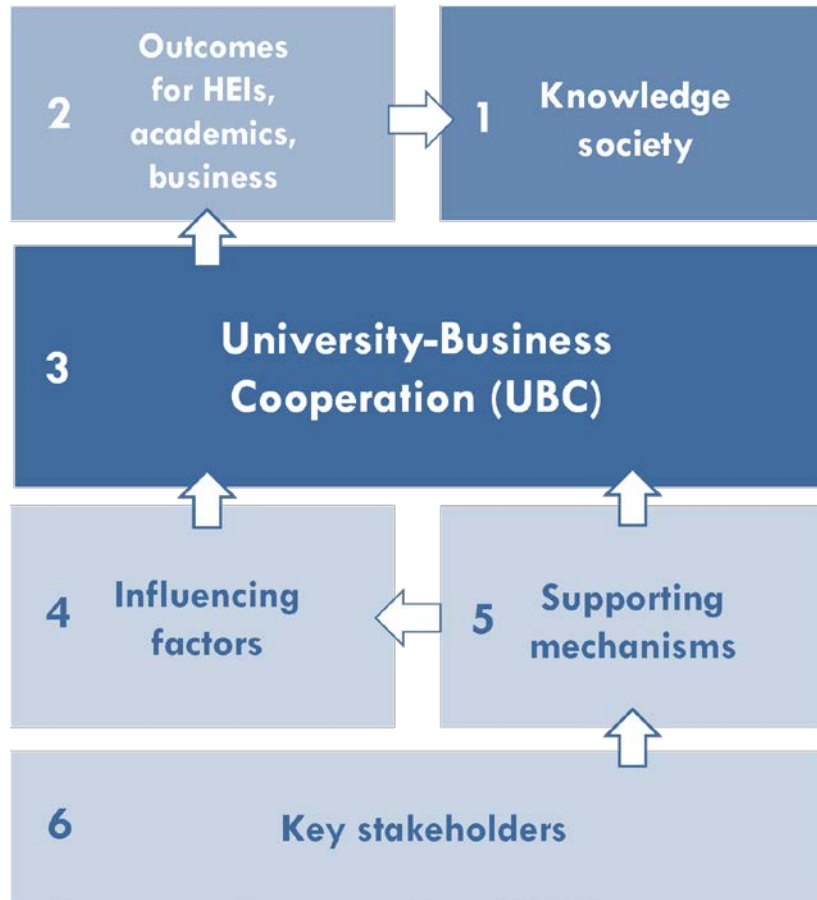




**What is the  
contribution  
(outcomes and impacts)  
of UBC?**

**1**

# FINDING 1: Knowledge society



## UBC is crucial for creating a knowledge society

### 1. Creating the knowledge society

**DEF** Refers to the indirect outcomes experienced by society generally from University-Business Cooperation

The indirect social contribution of UBC includes:

- creates jobs and stimulates economic growth,
- increases living standards, productivity and social cohesion.

### 2. Outcomes for HEIs, academics & business

**DEF** Refers to the direct outcomes experienced at an HEI / business from University-Business Cooperation specifically in regard to:

- I. teaching,
- II. research and
- III. knowledge transfer

# FINDING 1: Knowledge society

DIRECT outcomes			INDIRECT outcomes
HEIs	Academics	Business	Benefits for society
<ul style="list-style-type: none"> <li>• <b>improving <u>future job prospects of students</u>,</b></li> <li>• improving the <u>research conducted</u> within the HEI,</li> <li>• improving <u>transfer of knowledge and technology</u> to society</li> <li>• <b>increasing <u>third-party money</u></b></li> </ul>	<ul style="list-style-type: none"> <li>• <b><u>more relevant research and teaching content</u></b></li> <li>• better / greater <u>opportunities to fund projects</u></li> <li>• <b><u>more publishing opportunities</u></b></li> </ul>	<ul style="list-style-type: none"> <li>• drives local business <u>through product and service development</u>,</li> <li>• <b>drives necessary <u>skills and knowledge</u></b></li> <li>• <u>drives future income</u></li> </ul>	<ul style="list-style-type: none"> <li>• <b>creates jobs and <u>stimulates economic growth</u>,</b></li> <li>• increases <u>living standards, productivity and social cohesion</u>.</li> </ul>

# Finding

# 1

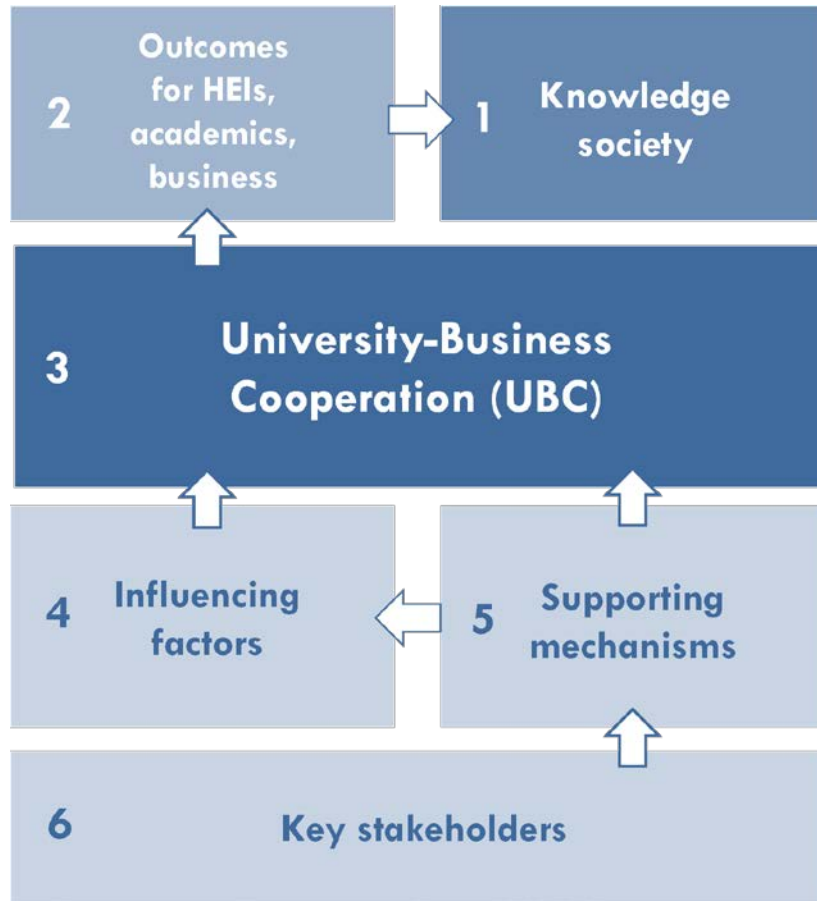
**UBC is seen as a crucial activity in the development of knowledge societies**



**What is the nature  
of the UBC  
environment?**

**2**

# FINDING 2: The UBC ecosystem



**The UBC ecosystem is complex and integrated.**

European UBC is influenced by a large number of factors including:

1. Influencing factors
  - I. Situational factors
  - II. Barriers and drivers
  - III. Perceived benefits
2. Mechanisms that support UBC  
(The '4 Pillars')
3. Key stakeholders

# Finding

# 2

**The UBC  
ecosystem is  
complex and  
integrated...**

All variables and their interrelations must be considered and developed simultaneously with a long term focus.





**How extensive is UBC  
in European HEIs?**

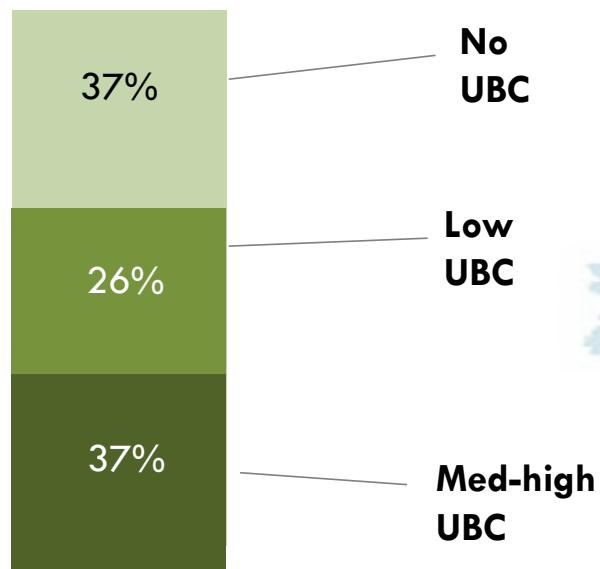
**3**

# FINDING 3: UBC

Approximately 2 of every 5 academics are responsible for most of the UBC activity

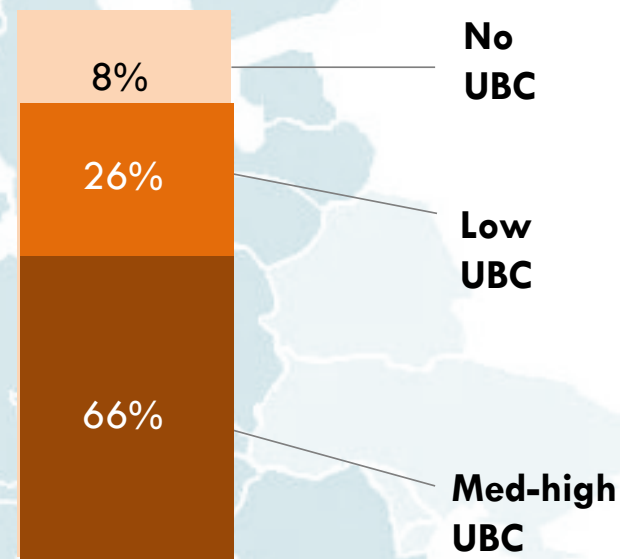
1 of every 3 HEIs undertake no or a low amount of UBC activity

Academic UBC in Europe



n=6280

HEI UBC in Europe



n=2136

# Finding

# 3

**UBC in Europe is still in the early stages of development**

As such, there is a lot of potential development for UBC...

Especially in earning income from UBC (only 4.5% of HEIs' budgets)

**How extensive is UBC  
in European HEIs?**

**4**

# FINDING 4: 8 Types of UBC

**UBC is more than the creation of patents, licences and contract research.**

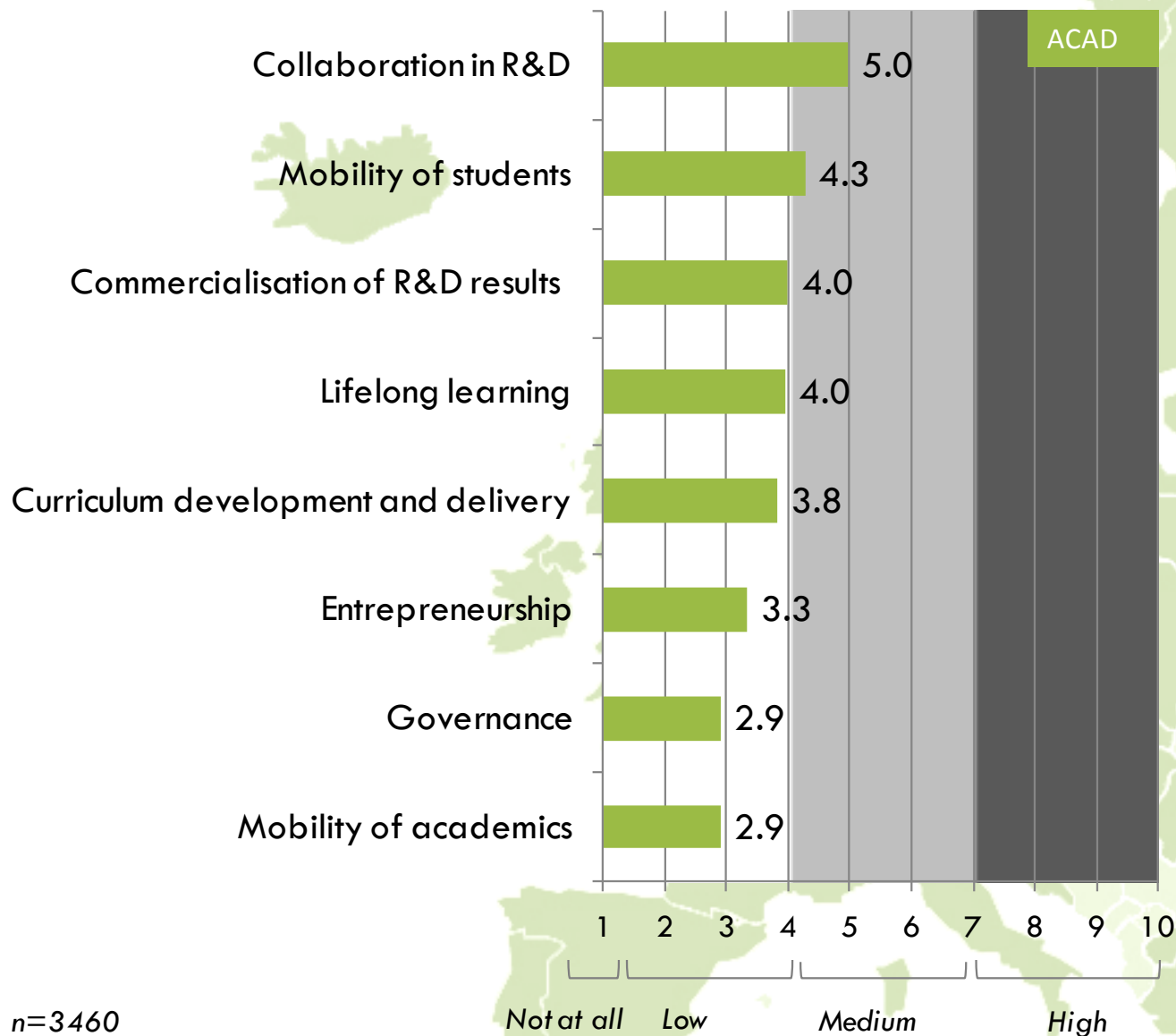
**There are eight different ways in which HEIs and business cooperate**

1. Collaboration in research and development (R&D),
2. Mobility of academics,
3. Mobility of students,
4. Commercialisation of R&D Findings,
5. Curriculum development and delivery,
6. Lifelong learning (LLL),
7. Entrepreneurship,
8. Governance.



# FINDING 4: 8 Types of UBC

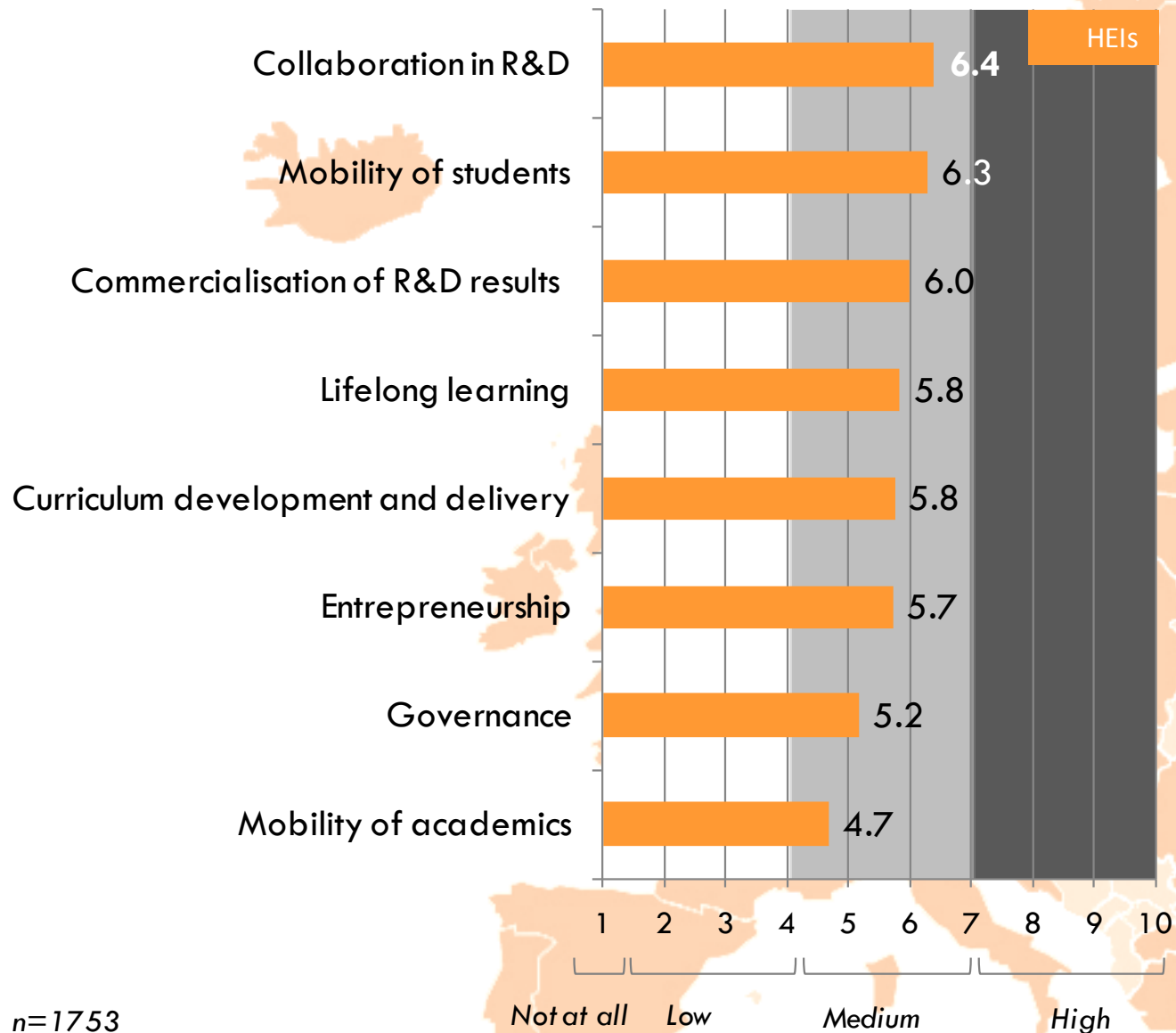
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n=3460

# FINDING 4: 8 Types of UBC

HEIs



n=1753

# Finding

# 4

## There are eight types of UBC

And those types of UBC offering:

1. more direct,
  2. measurable, and
  3. promotable benefits...
- are the most developed ones.





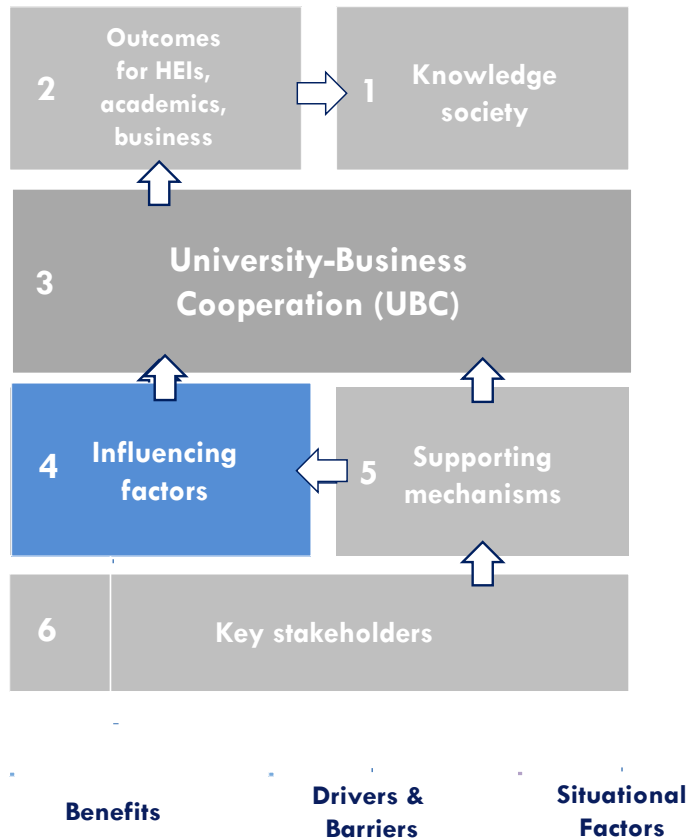
## Why do some academics and HEIs engage in UBC and not others?

Influencing factors help to explain this:

- a) **Situational factors**  
(e.g. age, faculty, years in business, etc.)
- b) Barriers
- c) Drivers
- d) Perceived benefits

5

# FINDING 5: Situational factors



All 'situational factors' ..  
play a role in influencing the extent of UBC

Years working  
in the HEI

Gender

Age

Country

Years working in  
**business**

The type of HEI  
they work for

**Faculty**

Years in business	Total UBC
None	3.4
> 0 - 2	3.9
> 2 - 5	4.2
> 5 - 9	4.4
> 9 - 19	4.5
> 19 years	4.5

Significantly lower for those with no experience in business and also less for those with less than 2 years of experience in business,

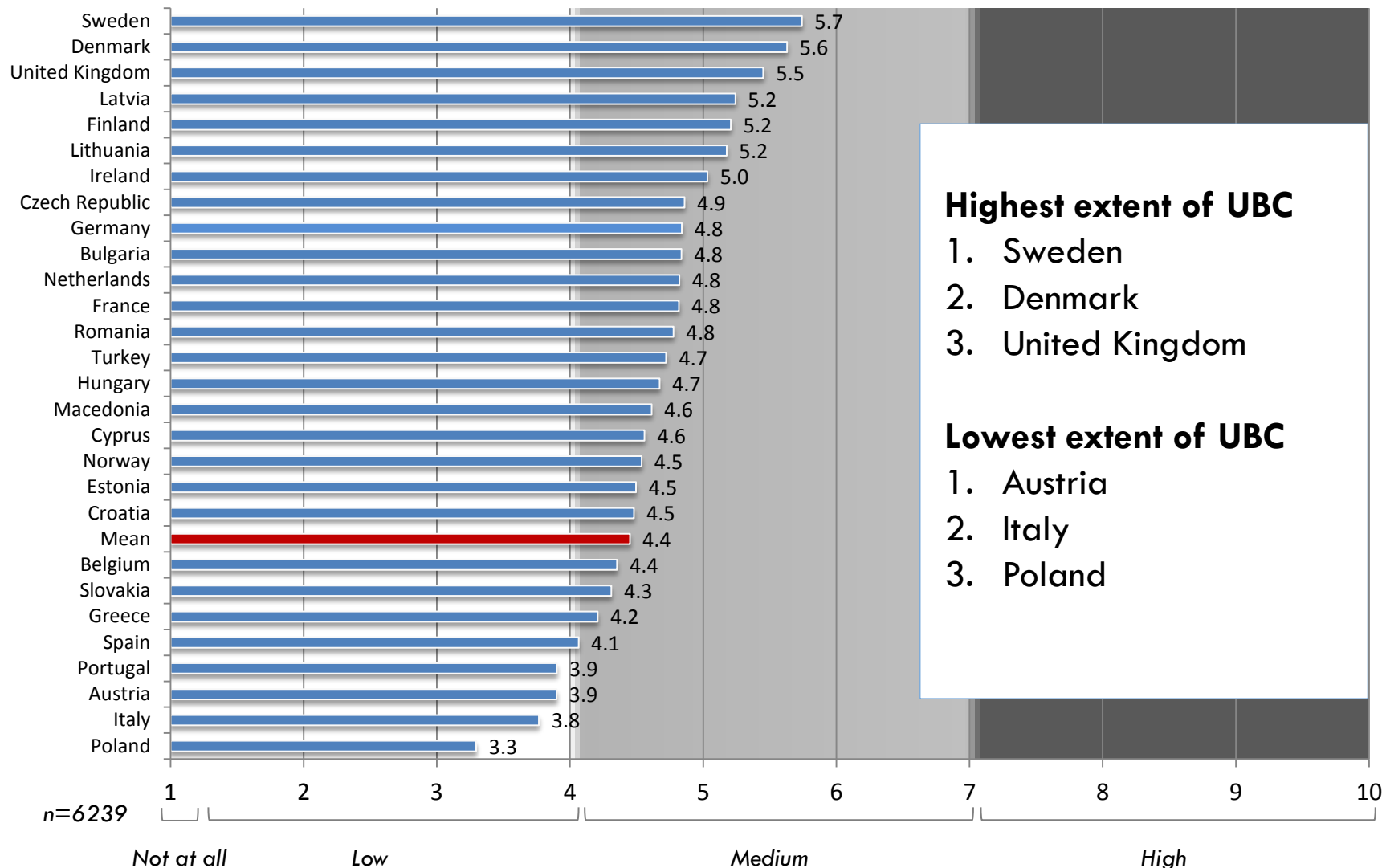
'Diminishing returns' = 5 years working in business,

Technology and Engineering have the highest level of UBC.

**Scale:** 1 = none, >1 - 4 = low ; >4 - 7 = medium ; >7 - 10 = high

## Extent of cooperation per country (combined) (min 30 respondents)

Please indicate to what extent you / your HEI cooperates with business (mean of all)



# FINDING 5: Country

Country	Collaboration in R&D	Mobility of academics	Mobility of students	Commercialisation of R&D Findings	Curriculum development and delivery	Lifelong learning	Entrepreneurship	Governance	Total UBC
Austria	6.7	3.8	5.1	5.5	5.0	5.4	4.5	4.4	5.0
Belgium	6.3	4.5	5.9	5.6	5.5	5.4	5.6	4.5	5.4
Bulgaria	5.4	5.4	6.0	4.8	5.7	6.4	5.6	5.5	5.8
Czech Republic	6.1	5.0	5.8	5.0	6.3	6.3	4.0	3.9	5.3
Denmark	6.3	4.8	6.7	5.4	5.8	6.3	6.0	4.7	5.8
Estonia	5.1	4.1	5.2	4.7	6.9	6.4	4.9	4.0	5.1
Finland	7.4	5.3	7.0	5.4	5.9	6.6	6.0	5.0	6.2
France	6.8	4.0	6.8	5.2	6.3	6.2	6.0	5.9	5.9
Germany	7.2	4.6	6.7	5.9	4.9	5.3	5.6	4.7	5.6
Hungary	6.4	4.6	5.4	4.7	6.1	6.2	4.8	5.1	5.6
Ireland	7.9	5.1	7.2	7.7	7.3	7.1	7.6	6.8	6.9
Italy	5.8	4.8	6.0	5.0	5.9	5.5	5.1	4.7	5.3
Latvia	6.4	5.9	7.2	4.4	6.7				
Lithuania	4.9	5.9	7.2	4.4	6.7				
Netherlands	6.4	4.6	6.1	5.4	5.2				
Norway	6.5	4.0	5.3	4.7	4.5				
Poland	4.9	4.4	5.5	4.0	5.1				
Portugal	6.0	4.8	6.8	4.8	6.0				
Romania	6.8	6.3	7.2	5.5	6.9				
Slovakia	5.1	4.8	5.4	4.4	4.9				
Spain	6.9	4.9	6.6	6.1	5.7				
Sweden	7.0	4.4	5.4	6.2	5.5				
Turkey	5.6	5.0	5.4	4.5	4.6				
United Kingdom	7.6	5.4	6.5	7.4	6.9				

## GERMANY

### European leaders in UBC

1. Collaboration in R&D
2. Mobility of students
3. Commercialisation of R&D

### Below average extent of UBC

1. Curriculum development & Delivery
2. Lifelong learning
3. Governance

**Scale:** 1 = No UBC, >1 - 4 = low ; >4 - 7 = medium ; >7 - 10 = high



# Finding

# 5

**Situational  
factors  
help to explain  
UBC**

...but only a few of them have  
practical implications



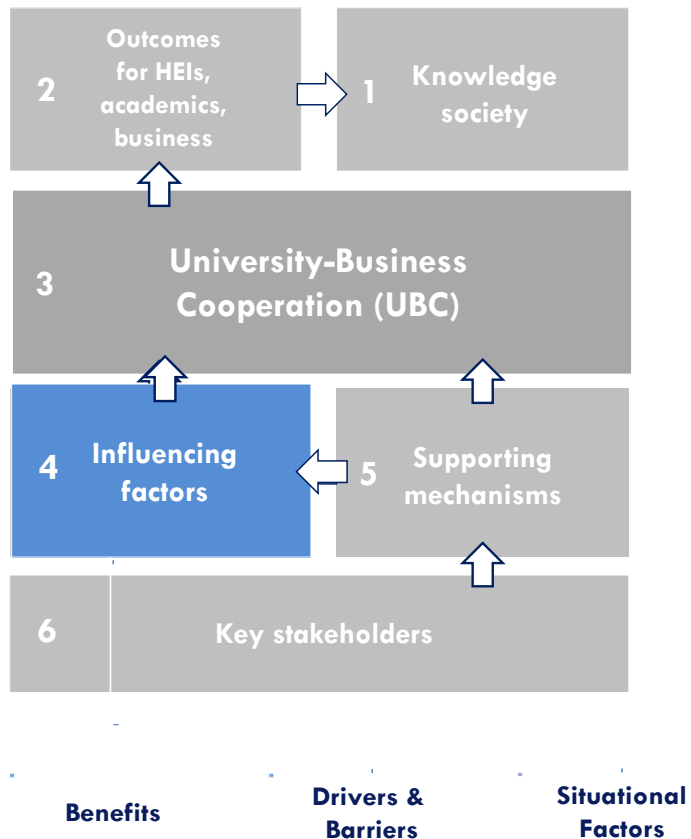
## Why do some academics and HEIs engage in UBC and not others?

Influencing factors help to explain this:

- a) Situational factors (e.g. age, faculty, years in business, etc.)
- b) **Barriers**
- c) Drivers
- d) Perceived benefits

6

# FINDING 6: UBC Barriers



**Finding:** All academics and all HEI representatives see the same barriers to UBC regardless of their extent of cooperation

## Most important barriers for **academics**

1. Bureaucracy within or external to the HEI (7.3)
2. Lack of HEI funding for UBC (6.9)
3. Lack of external funding for UBC (6.9)

## Most important barriers for **HEIs**

1. Lack of external funding for UBC (7.0)
2. Lack of financial resources of the business (6.9)
3. Business lack awareness of HEI activities (6.9)

**Scale:** 1 = No importance, - 10 = high importance



# Finding

# 6

**Lack of funding and excess of bureaucracy at all levels (HEI, national, European) are the highest barriers to UBC**

... but removal of barriers does not create UBC



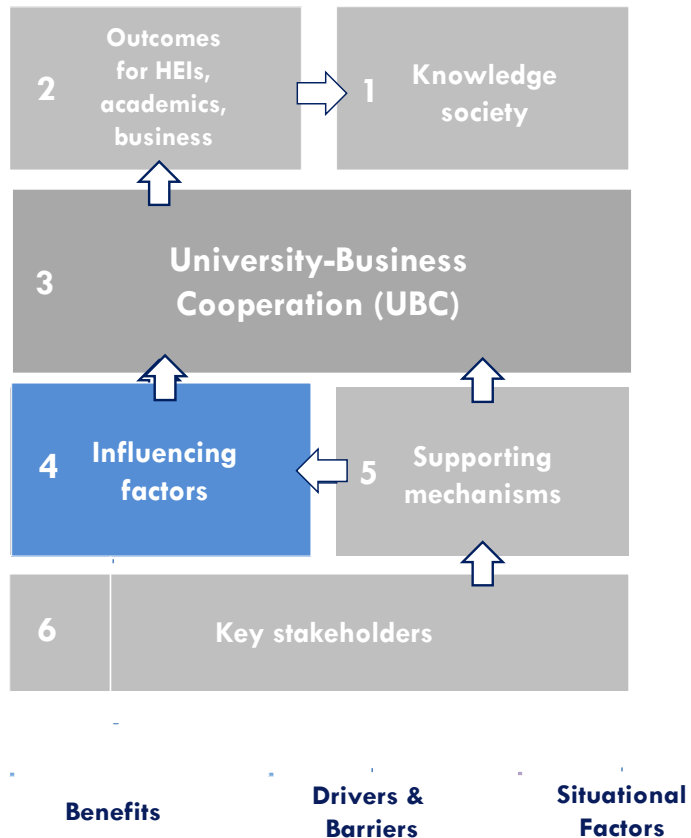
## Why do some academics and HEIs engage in UBC and not others?

Influencing factors help to explain this:

- a) Situational factors (e.g. age, faculty, years in business, etc.)
- b) Barriers
- c) **Drivers**
- d) Perceived benefits

7

# FINDING 7: UBC Drivers



## Most important drivers for **academics**

1. Existence of mutual trust (7.4)
2. Existence of mutual commitment (7.0)
3. Having a shared goal (7.0)

## Most important drivers for **HEIs**

1. Existence of mutual trust (7.5)
2. Existence of mutual commitment (7.1)
3. Having a shared goal (7.1)

**Scale:** 1 = No importance, - 10 = high importance

# Finding

# 7

**Personal relationships drive UBC. It's a people game!**

Existence of mutual trust and commitment are the most important drivers of UBC for both academics and HEIs.

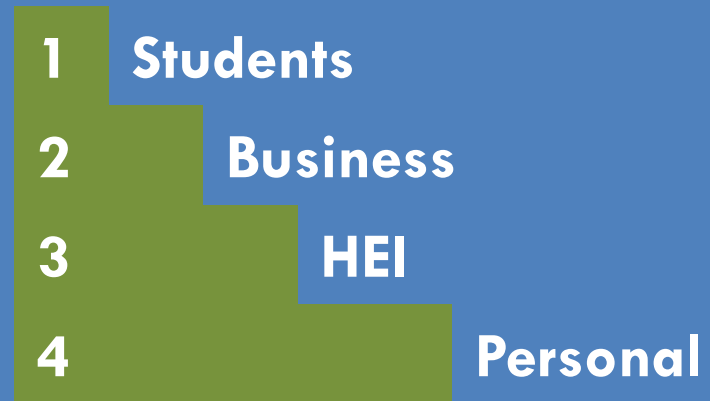
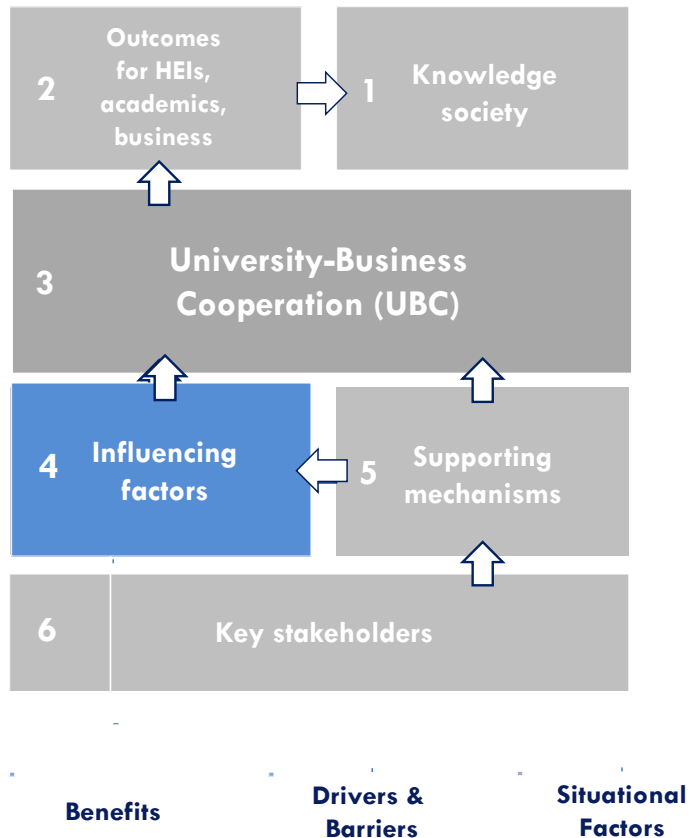
Those academics or HEIs perceiving higher drivers for UBC are more engaged in UBC than those perceiving low drivers for UBC

# Why do some academics and HEIs engage in UBC and not others?

Influencing factors help to explain this:

- a) Situational factors (e.g. age, faculty, years in business, etc.)
- b) Barriers
- c) Drivers
- d) **Perceived benefits**

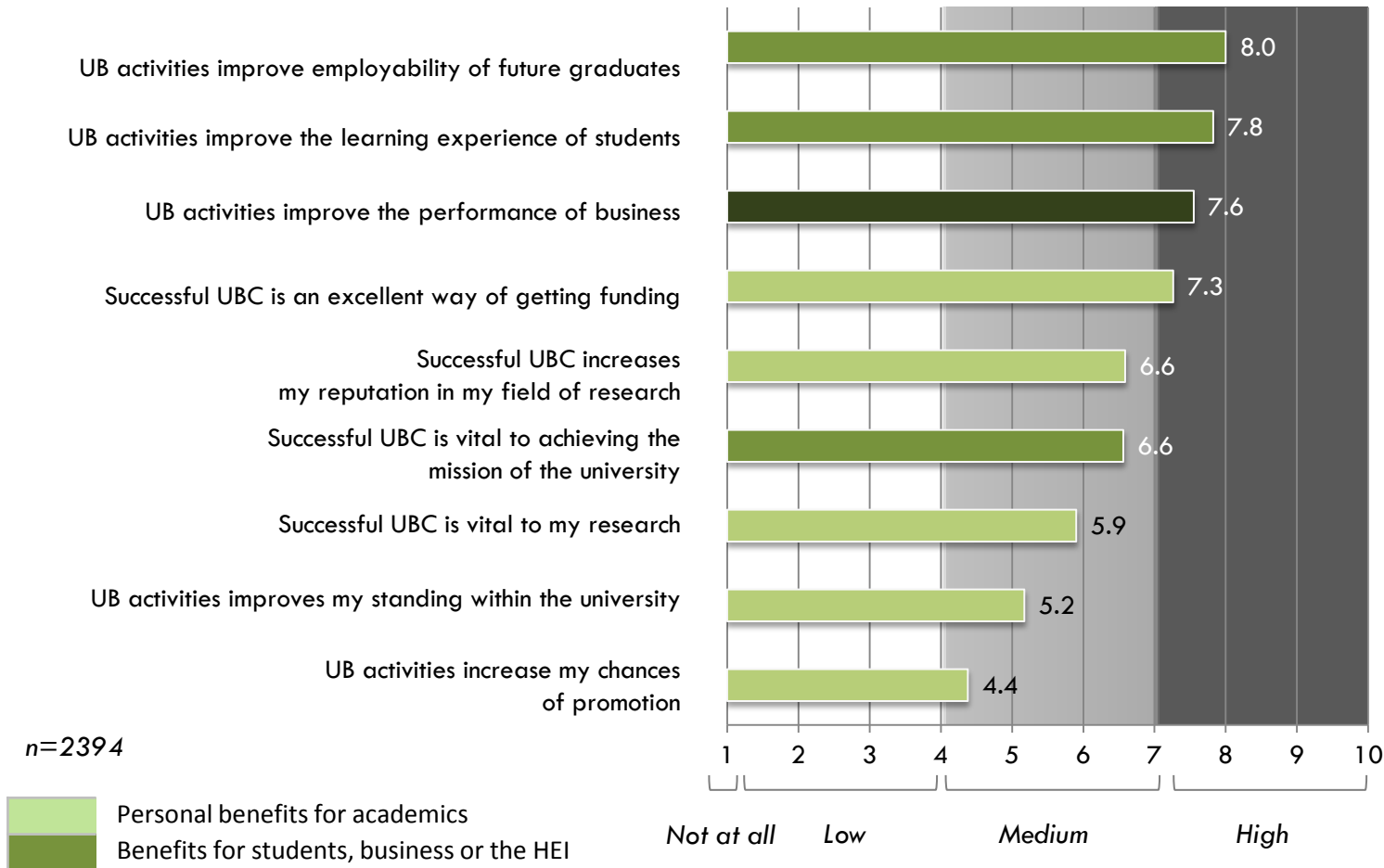
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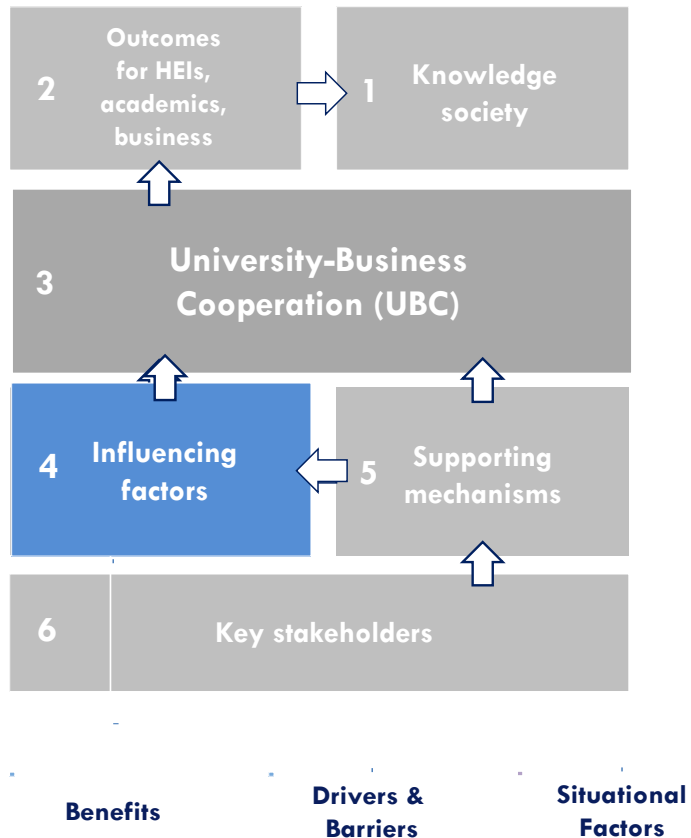


Academics recognise the high degree of benefits from successful UBC for different stakeholders...

however to a lower extent the personal benefits they receive from UBC.

Please indicate the extent to which you agree or disagree with the following statements.



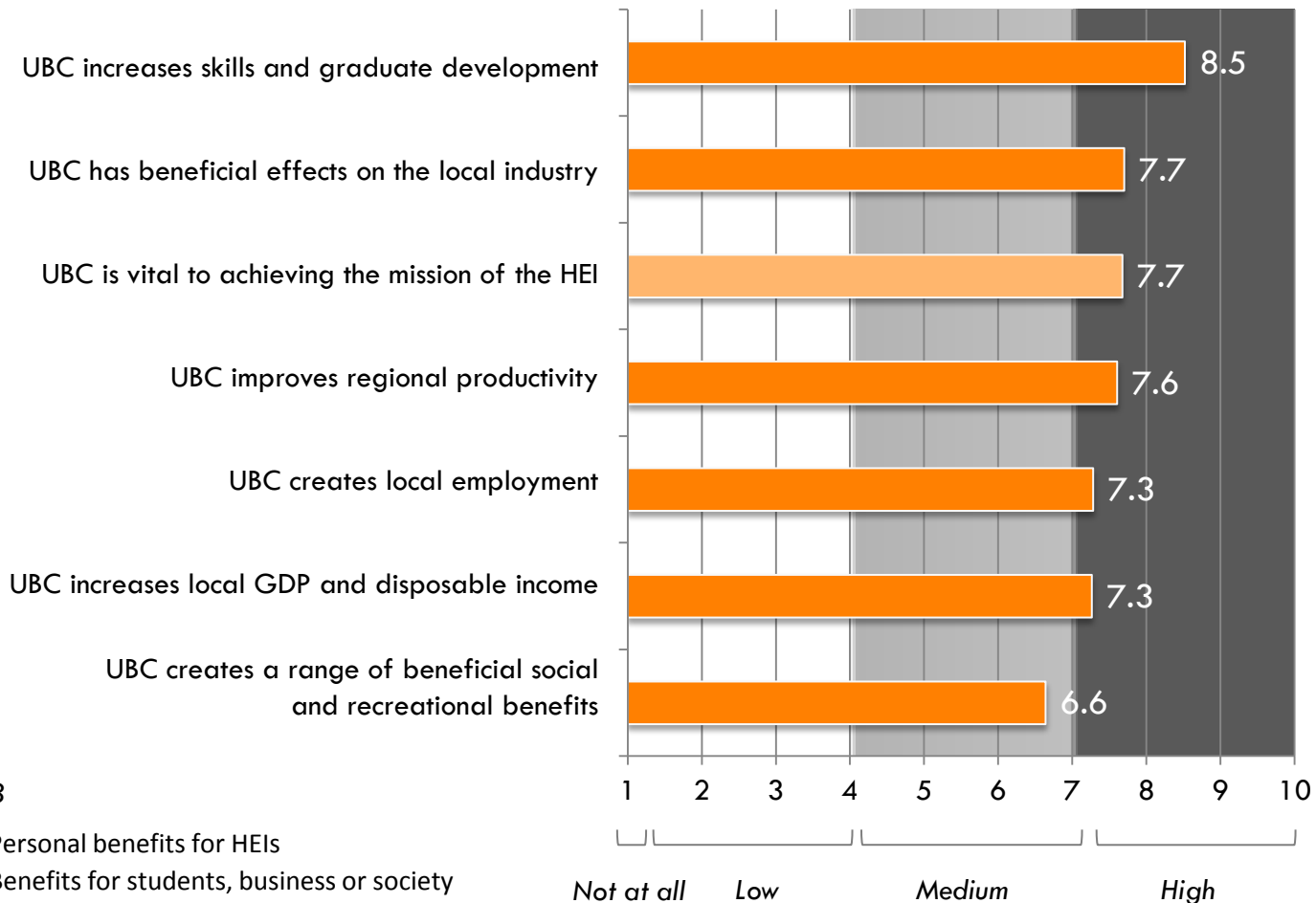


HEIs rated the highest benefits for students, followed by business...

then the ability of UBC to contribute to the mission of the HEI with the lowest benefits perceived for society.



Please indicate the extent to which you agree or disagree with the following statements.



# Finding

# 8

## Perceptions of high benefits & incentives drive UBC

The perception of self-benefit is a major factor in UBC.

The higher the perceived benefits, the higher the extent of UBC carried out.



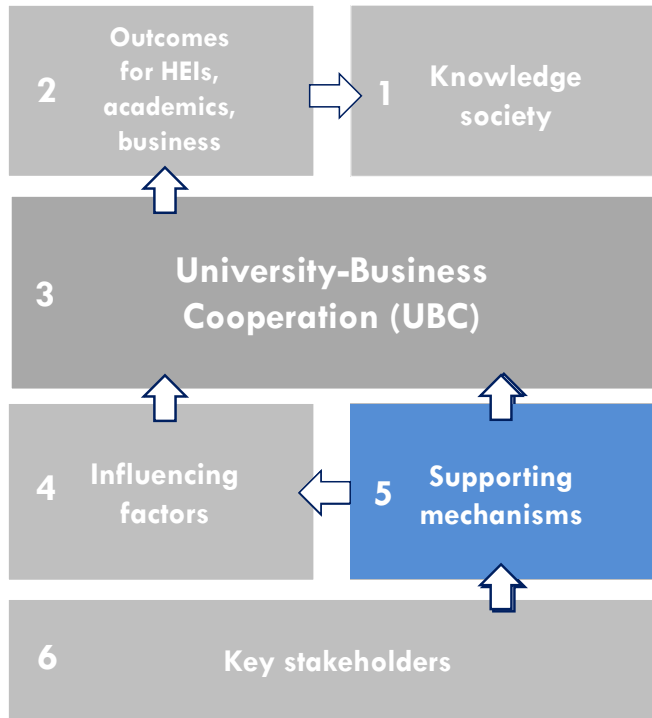
If influencing factors are only part of the explanation for UBC activity, what else can help to explain European UBC?

**The existence of supporting mechanisms (*4 Pillars*) for UBC**

1. Strategies
2. Structures and approaches
3. Operational activities, and
4. Framework conditions

9

# FINDING 9: Supporting mechanisms



**Finding:** The UBC supporting mechanisms that are easier to implement, are much more developed than those that are more difficult to implement

## The creation and development of supporting mechanisms are critical for UBC

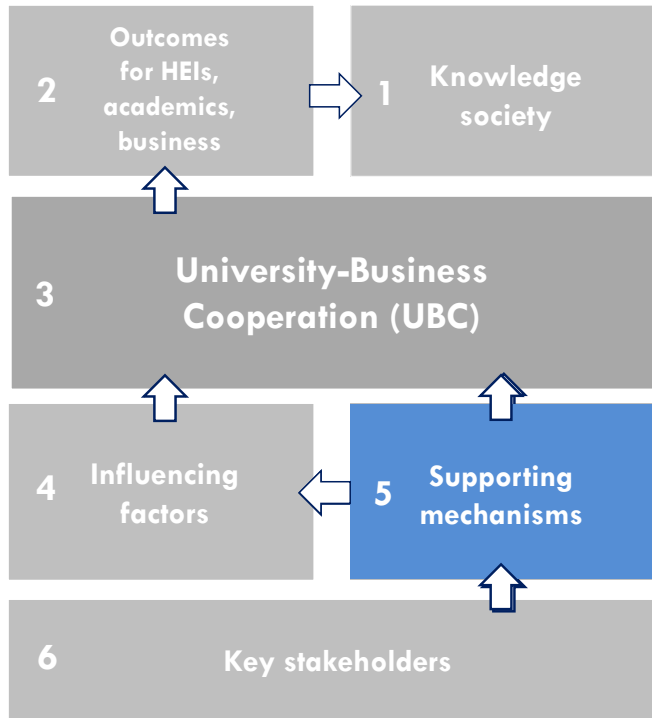
1. Strategic instruments
  - a. Documented e.g. vision / mission,
  - b. Implementation e.g. incentives
2. Structural instruments or approaches
  - a. Positions i.e. personnel
  - b. Agencies i.e. units of focus
3. Operational activities
  - a. Academic focussed
  - b. Student focussed
4. Framework conditions

Having a dedicated:

1. strategy,
2. programme / agency / responsible person, activity,

Has a substantial effect on stimulating the different types of UBC

# FINDING 9: Supporting mechanisms



**ACTION** A greater focus on strategies (especially implementation strategies) is required

## DEVELOPMENT

The development of the 4 *Pillars* (supporting mechanisms) from the most developed to least is:

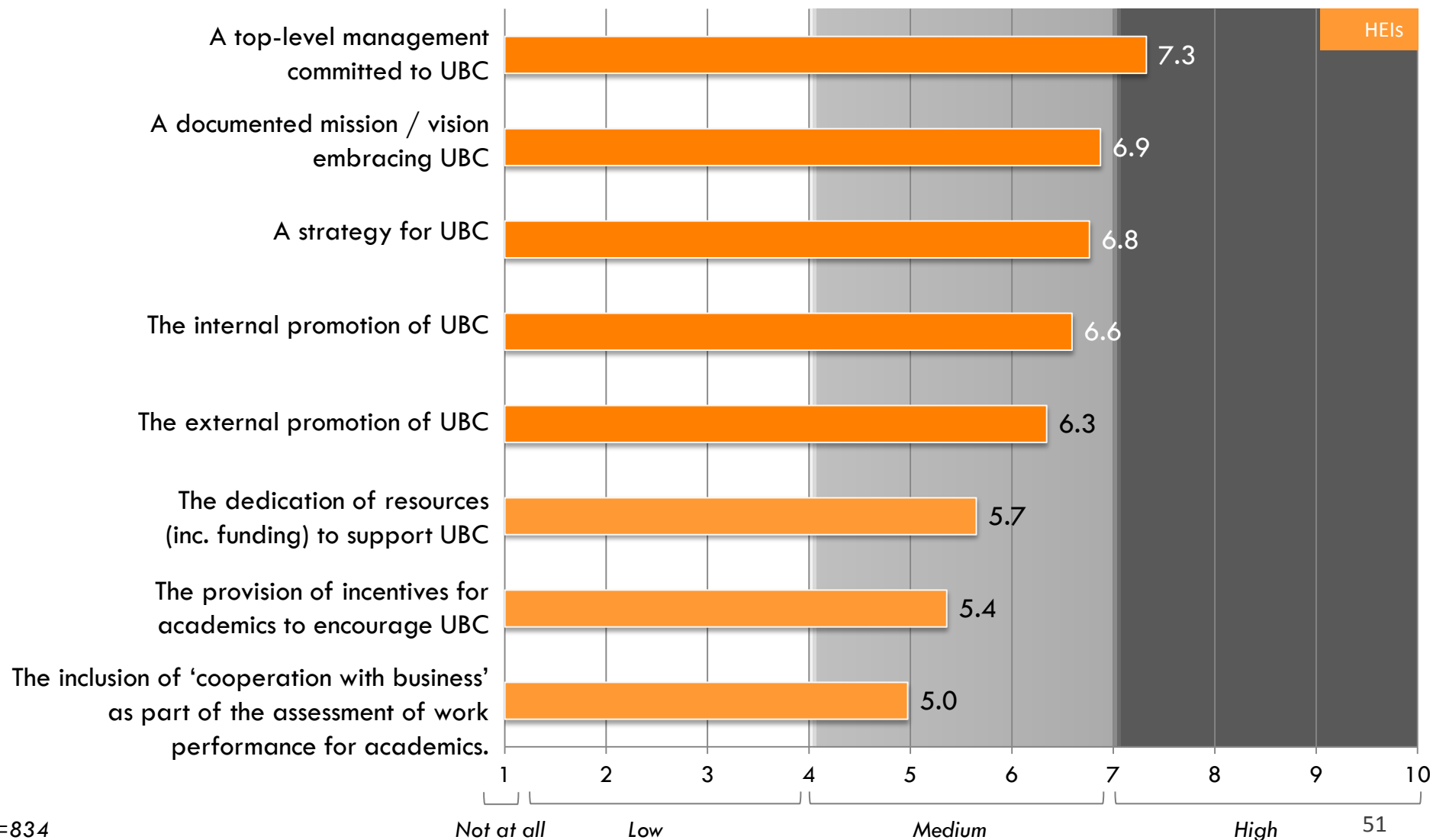
1. Operational activities (5.4),
2. Structures and approaches (5.1),
3. Strategies (4.9), and
4. Framework conditions (4.5).

## IMPACT

The impact on UBC from the 4 *Pillars* from the highest to lowest is:

1. Strategies (58%)  
(especially implementation strategies)
2. Operational activities (53%),
3. Structures and approaches (52%), and
4. Framework conditions (40%).

Thinking about strategies used within your HEI, how developed are the following points?

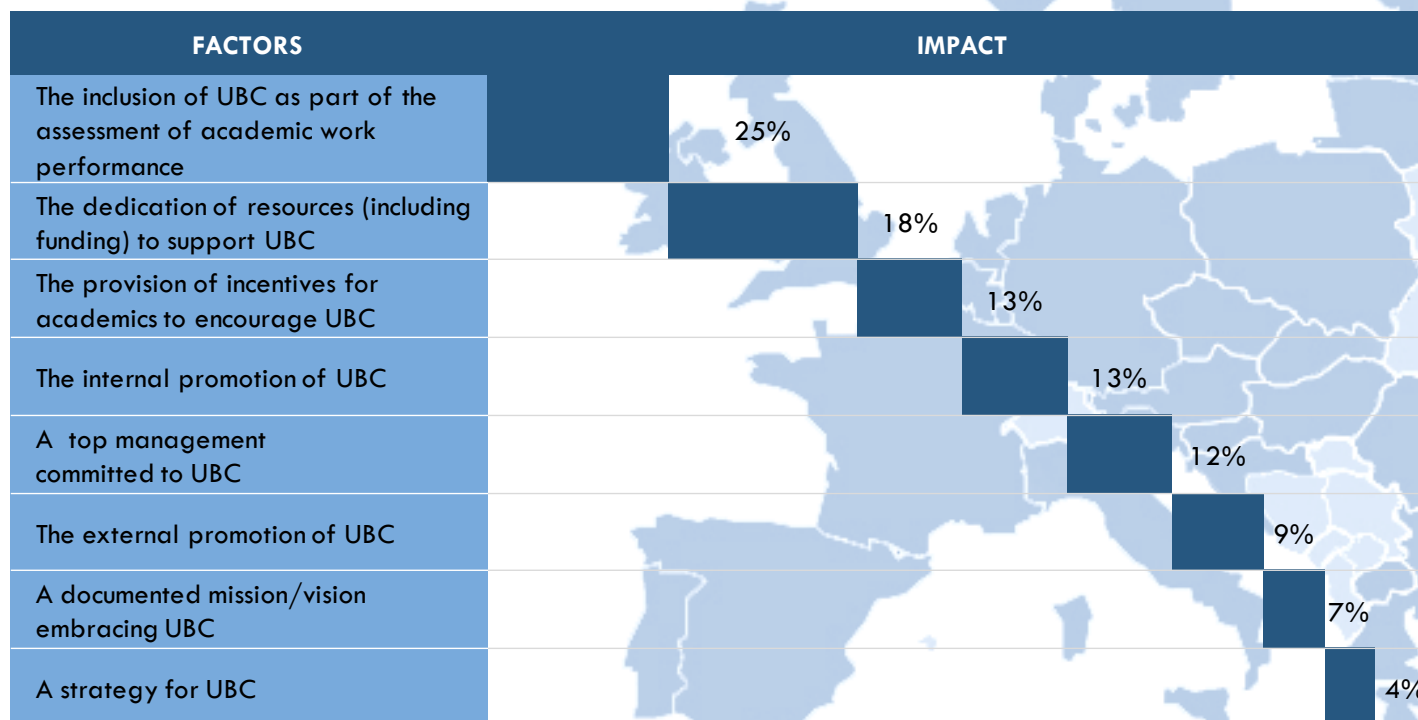


# FINDING 9: Strategies impact

## Strategies development

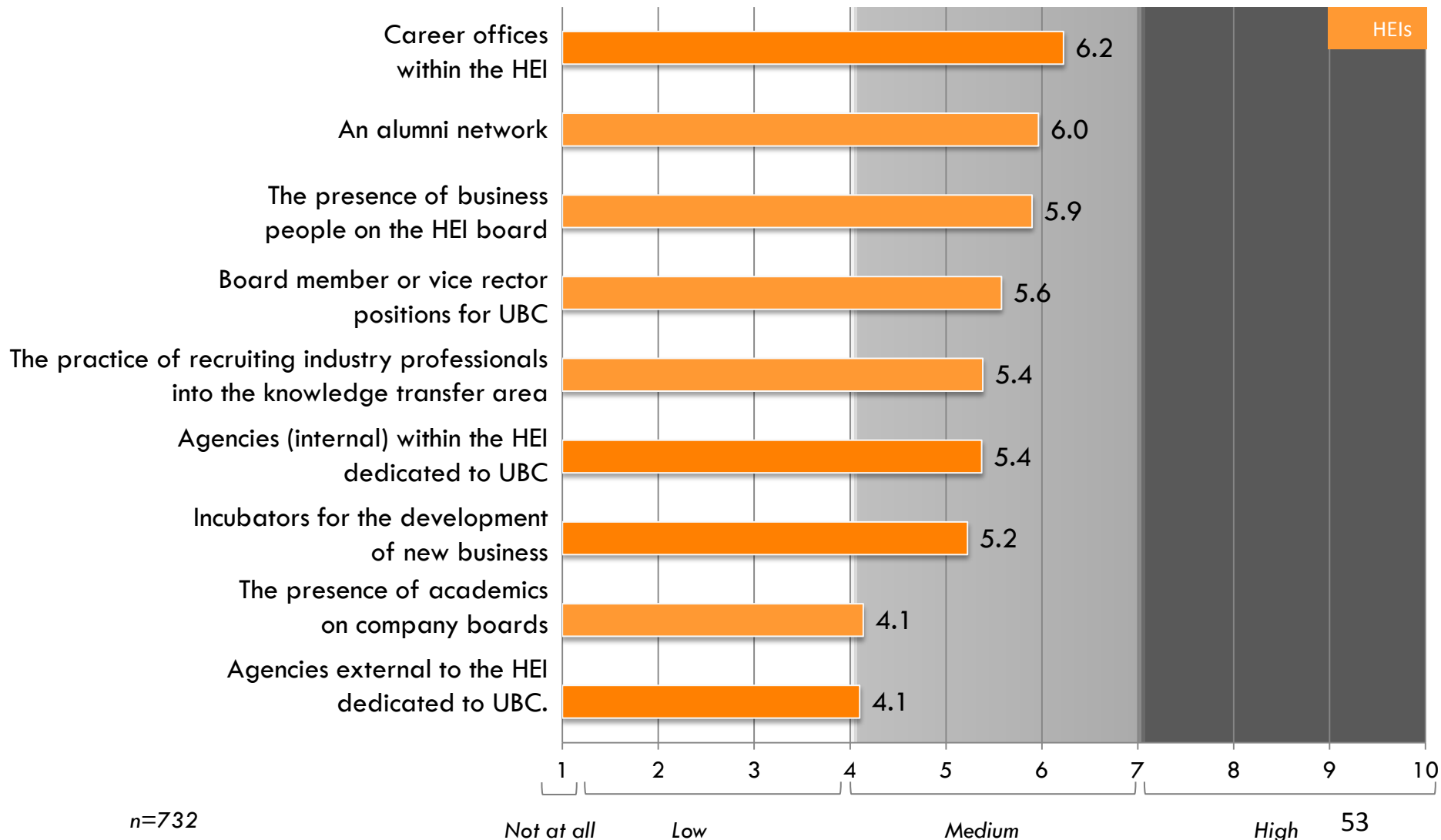
'Documented strategies' (management committed to UBC or mission / vision embracing UBC) ... is more developed than the 'implementation strategies' (The inclusion of UBC as part of the assessment of academic work performance and dedication of resources

## IMPACT



# FINDING 9: Structures dev.

Thinking about structures and approaches used within your HEI, how developed are the following points?





# FINDING 9: Structures impact

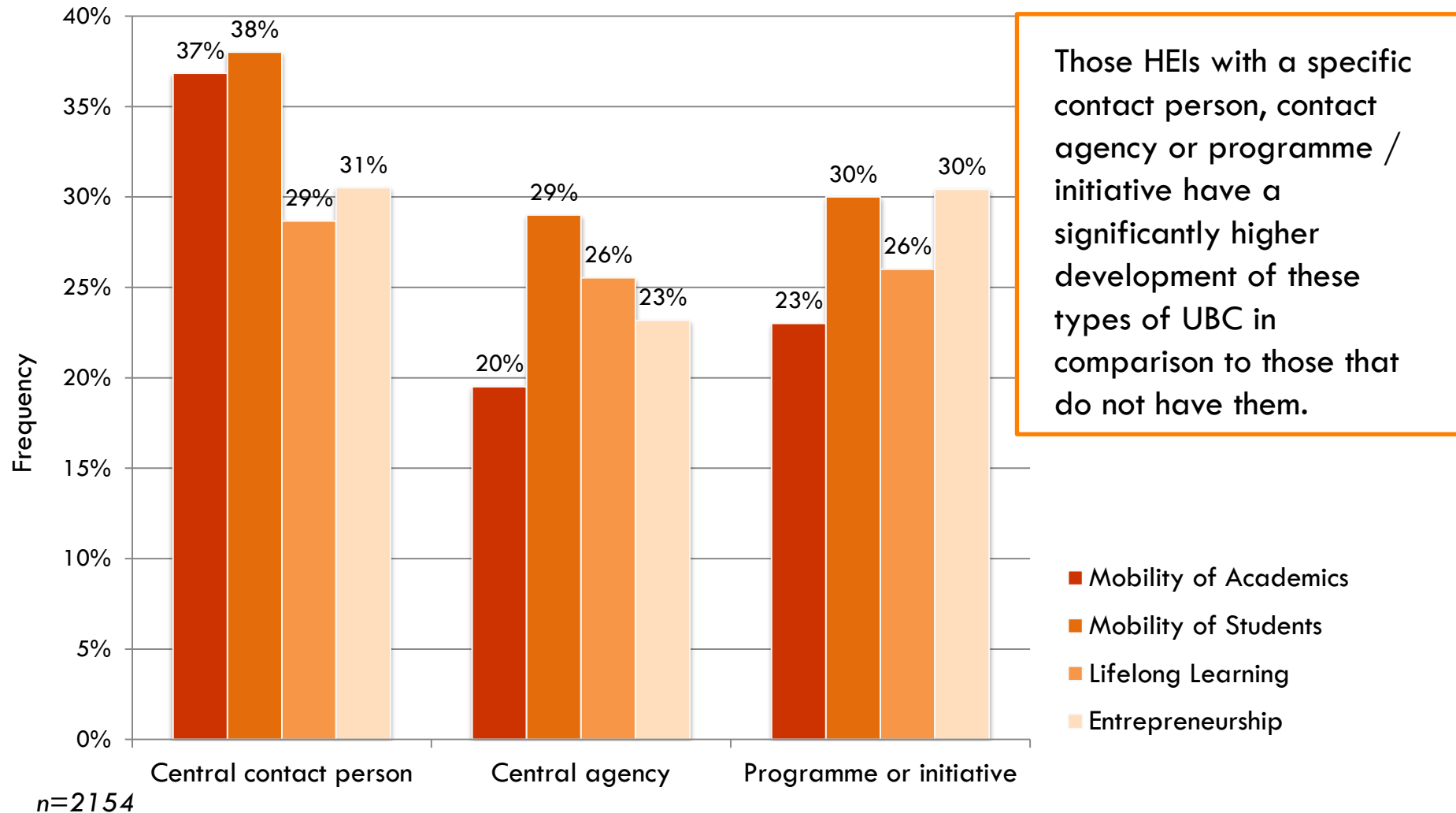
## Structures and approaches development

Development of 'agencies' and 'people-based' structures and approaches perceived to be similarly developed

### IMPACT

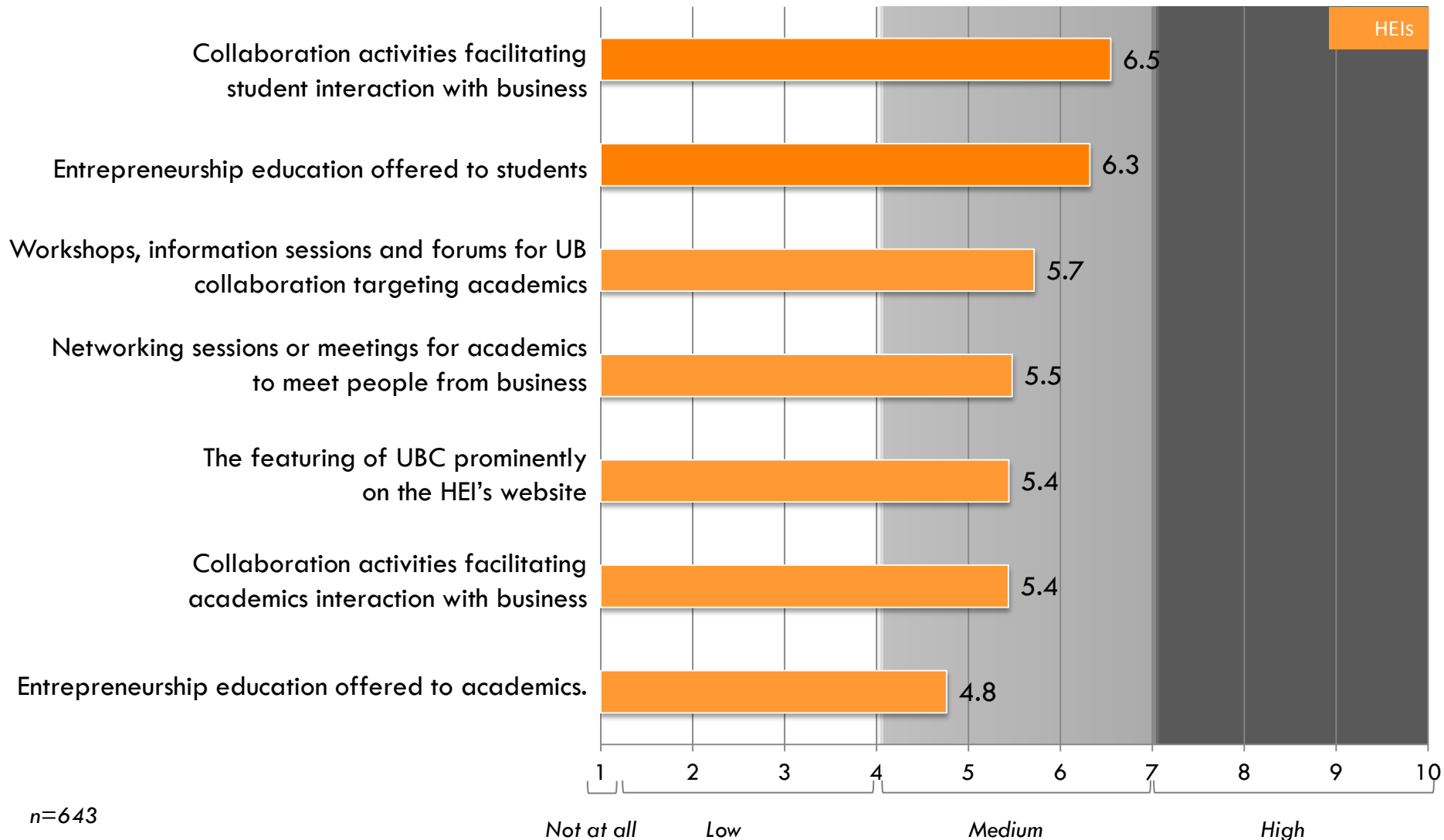
FACTORS	IMPACT
Industry professional employed in knowledge transfer area	18%
Incubators for the development of new business	17%
Board Member for UBC	13%
Alumni network	13%
Existence of career office	12%
Academic on business board	11%
Business people on university board	8%
External agencies dedicated to UBC	4%
Internal agencies dedicated to UBC	4%

## Possession of the facilitators supporting different types of cooperation



# FINDING 9: Activities dev.

Thinking about operational activities used within your HEI, how developed are the following points?



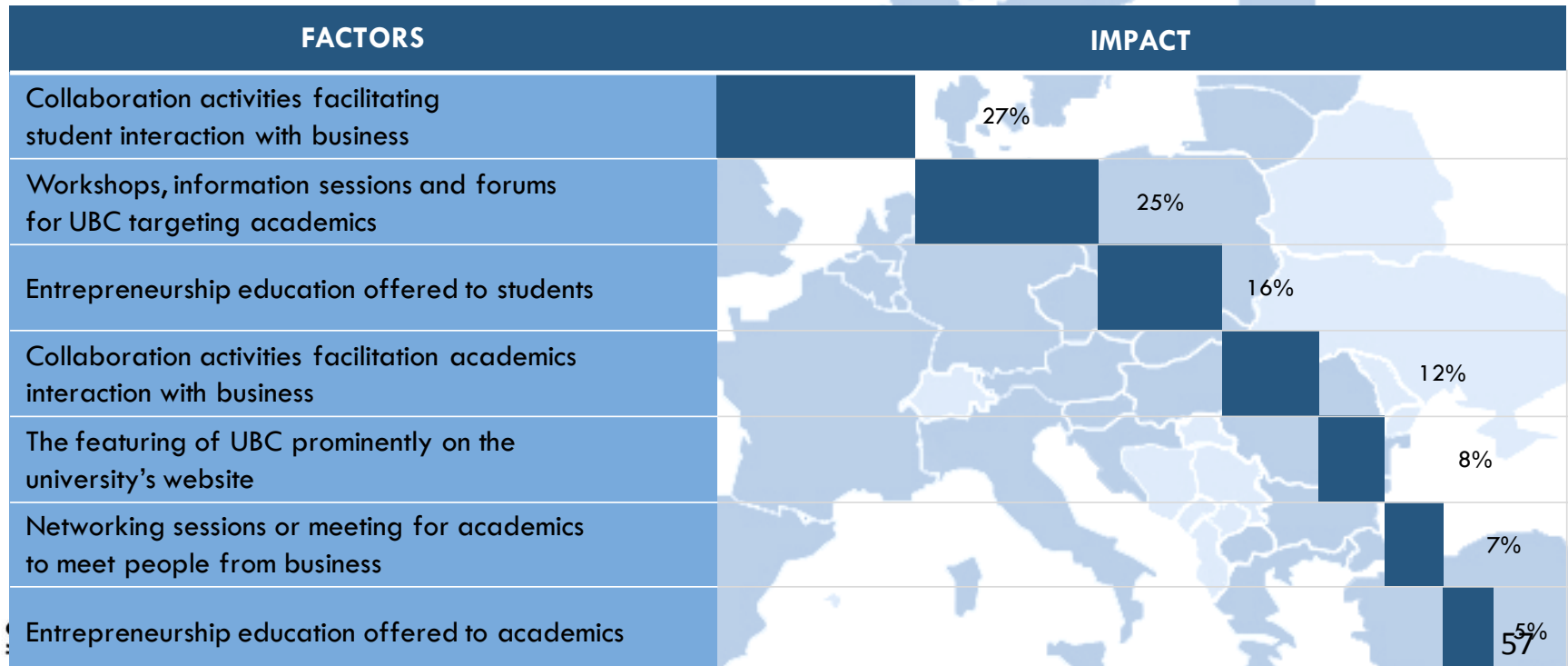
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# FINDING 9: Activities impact

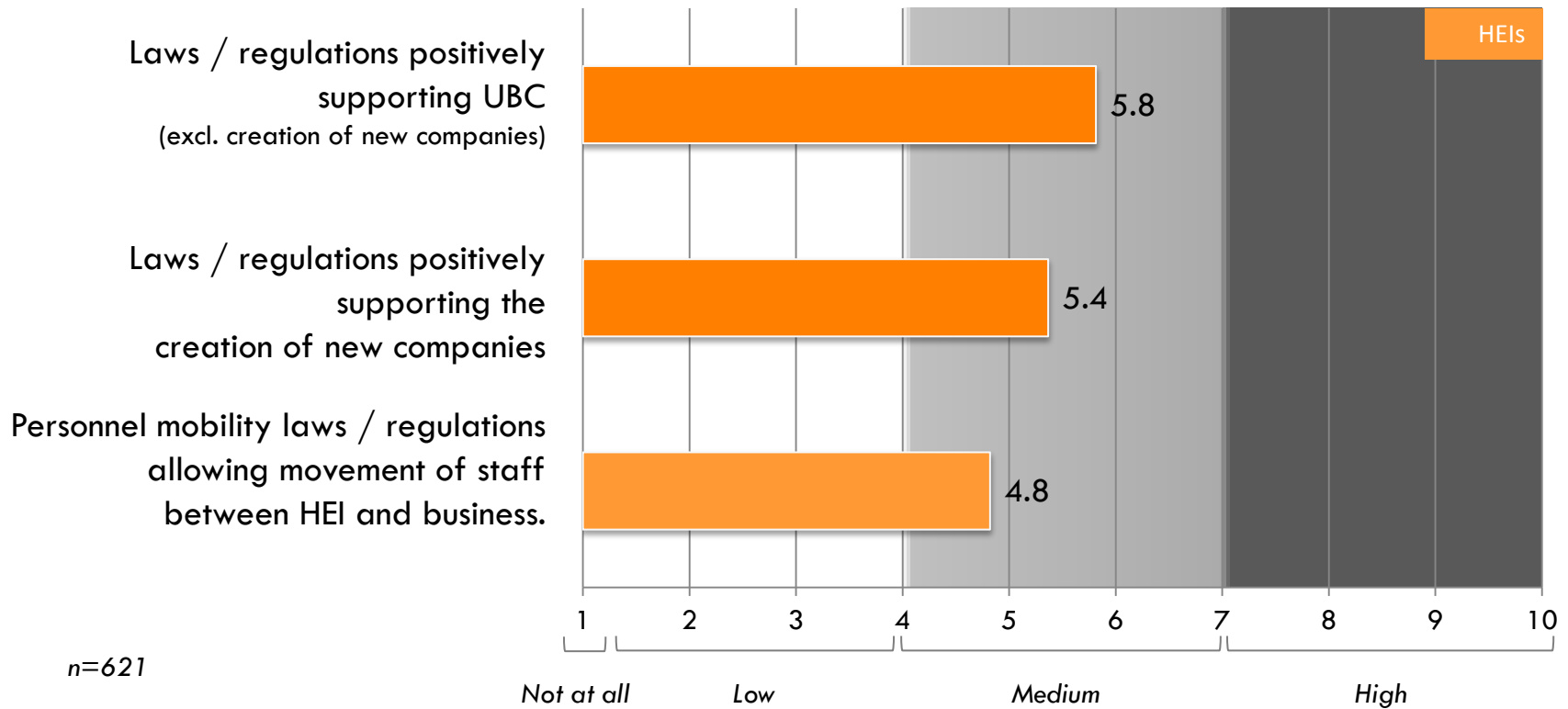
## Activities development

Operational activities are also assessed to be moderately developed, with those 'UBC activities targeting students' more developed than those 'UBC activities targeting academics'

## IMPACT



Thinking about the environment that your HEI operates in, how developed are the following points?



# FINDING 9: Framework impact

## Framework conditions development

Laws positively supporting UBC being more developed than those laws supporting staff mobility

## IMPACT


FACTORS	IMPACT
Laws/regulations positively supporting UBC	54%
Laws/regulations allowing movement of staff between university and business	39%
Laws/regulations positively supporting the creation of new companies	7%

# Finding

# 9

**The creation and development of supporting mechanisms are critical for UBC**

The UBC supporting mechanisms that are easier to implement, are much more developed than those that are more difficult to implement

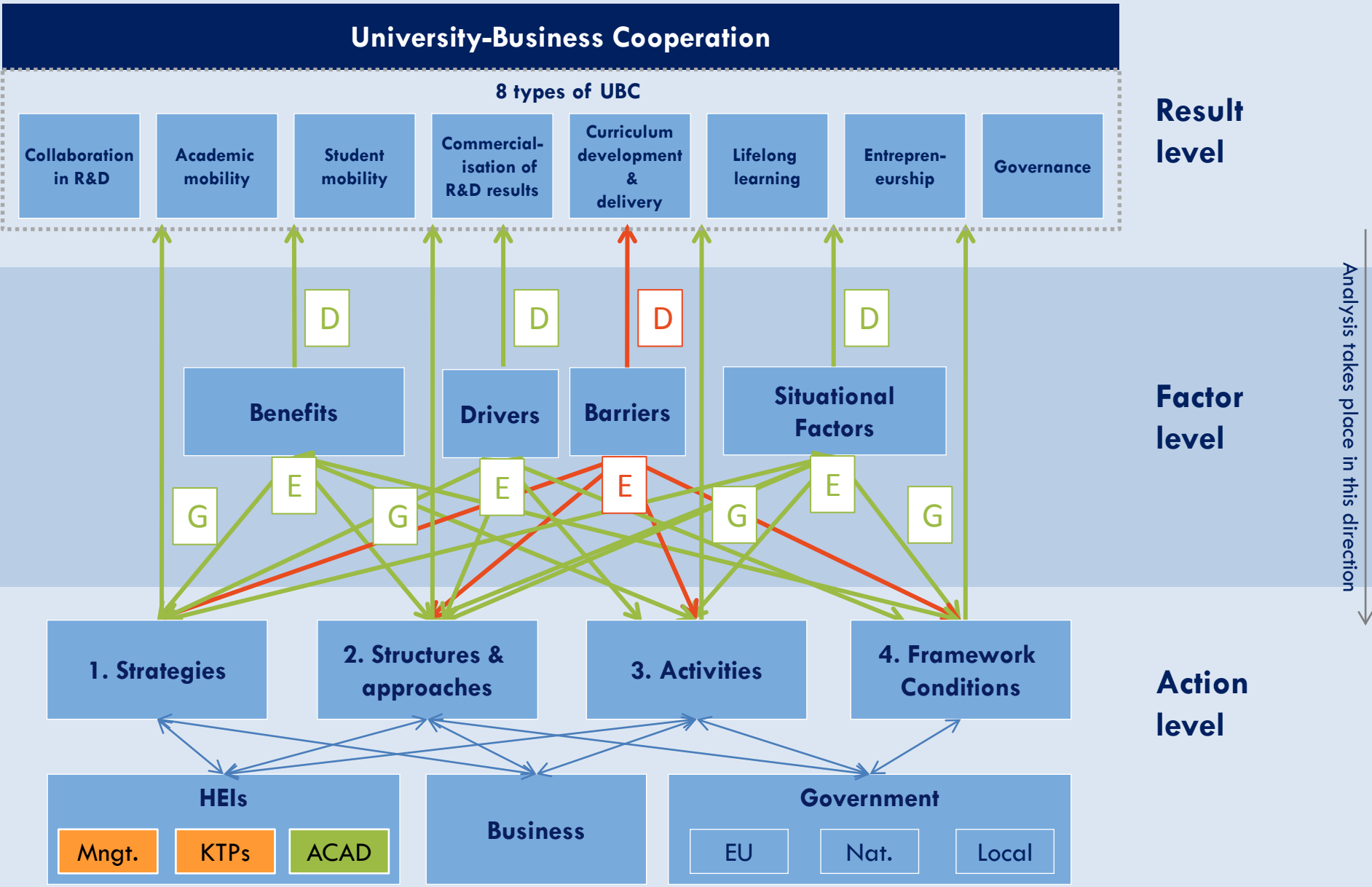


How do the previous findings interrelate  
and how reliable are they in explaining  
European UBC?

10



# FINDING 10: The UBC Model



# Finding

# 10

**In the UBC ecosystem,  
the multiple actors  
need to work  
cooperatively...**

...and in an integrated manner towards effectiveness and developed UBC.

If only one of those actors does not perform actively, the disruptive influence might be considerable enough to inhibit the whole momentum

# A summary of key findings

## 10 key findings

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

**What does this mean  
for HEIs, Govt. and key  
stakeholders?**

**A new paradigm is in play**

**New thinking is required to develop  
our societies through UBC**

**A more holistic approach to UBC is  
required beyond:**

- Patents and licenses, paper strategies (mission / vision), creating a science park, one-off, short-term interactions ...

**Knowledge and support mechanisms  
must be increased based on a  
comprehensive understanding of the  
elements in the UBC ecosystem and their  
interrelations**

# Recommendations for UBC stakeholders

## TOP 3 actions for stakeholders

HEIs (Rectors)	Academics	Business	Society (Policy makers)
<ol style="list-style-type: none"><li>1. <u>Create 'implementation strategies'</u> (e.g. UBC as part of academic assessment)</li><li>2. <u>Reduce bureaucracy</u> within the HEI for UBC</li><li>3. More <u>focus on relationship development</u> (especially trust) between academics and business, as this <i>drives</i> UBC</li></ol> <p><b>Bonus:</b> <u>Promote the benefits of UBC</u> (monetary and non-monetary)</p>	<ol style="list-style-type: none"><li>1. Seek opportunities or invite business to <u>partner in research projects</u></li><li>2. Proactively <u>seek opportunities to meet relevant contacts within business</u> e.g. through the TTO or through student internships</li><li>3. <u>Seek opportunities to engage with business in curriculum development and delivery</u></li></ol>	<ol style="list-style-type: none"><li>1. Proactively <u>seek opportunities to meet relevant contacts within academia</u></li><li>2. Seek to <u>better understand the motivations of academics</u> and HEIs</li><li>3. Seek to <u>partner on projects or provide finance</u> for UBC</li></ol> <p><b>Bonus:</b> <u>Employ those who have worked within academia</u> to liaise with academics</p>	<ol style="list-style-type: none"><li>1. <u>Funding is working</u> in removing <i>barriers</i> to UBC (keep doing it!).</li><li>2. Programmes funded that <u>research and promote the benefits of UBC</u></li><li>3. Programmes funded that support a <u>dedicated programme, contact person or agency</u> for UBC (<i>structure</i>) with HEIs</li></ol>

# TEAM HIPPO



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# What now?

## Top 4 actions for stakeholders

1	2	3	4
<b>Obtain the report</b>	<b>Collaborate with us!</b>	<b>Acquire your own report</b>	<b>Receive a workshop to develop UBC</b>
<p>Go to: <a href="http://www.ub-cooperation.eu">www.ub-cooperation.eu</a> and...</p> <ol style="list-style-type: none"><li>1. Download a <u>digital copy</u> of the report</li><li>2. Order a <u>printed copy</u> of the report</li></ol> <p>You can also download <u>other resources</u> at this site</p>	<p>We invite interest from:</p> <ol style="list-style-type: none"><li>1. practitioners</li><li>2. academics</li><li>3. Governments</li><li>4. Business</li></ol> <p>... to build greater knowledge and understanding of University-Business collaboration.</p>	<p>Acquire a customised University-Business Report for your organisation, institution, sector, region or country by contacting us.</p>	<p>Receive workshops on University-Business Cooperation by the authors of the report by contacting us.</p>

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## Contact

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