

Describing University-Business Cooperation (UBC)

The UBC Ecosystem

A model for understanding
the important elements
affecting University-Business
Cooperation (UBC)

1 Indirect outcome (society)

2 Direct outcome (actors)

3 University-Business
Cooperation (UBC) types

4 Influencing factors

5 Supporting mechanisms

6 Key stakeholders

ECOSYSTEM ORIGIN > Hippo study

The UBC Ecosystem was created during the “Study on the cooperation between HEIs and public and private organisations in Europe (HIPPO)”

Client: DG Education and Culture,
European Commission

Duration: May 2010 to August 2011 (15.5 months)

4 project partners:



Coventry University



Red OTRI Universidades



Cracow University of Economics



Free University Amsterdam

Project 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.

About the study

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

6,280 full responses (4,123 academics, 2,157 from HEI Mngt.)

METHODOLOGY > 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



Largest study ever into European Cooperation between Education and Business

ACADEMICS

4,123 academics
responded to the
major study

MANAGERS

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

6,280 total responses

THE UBC ECOSYSTEM MODEL

DEF_ University-Business Cooperation (UBC)

All types of direct and indirect, personal and non-personal interactions between HEIs and business for reciprocal and mutual benefit.

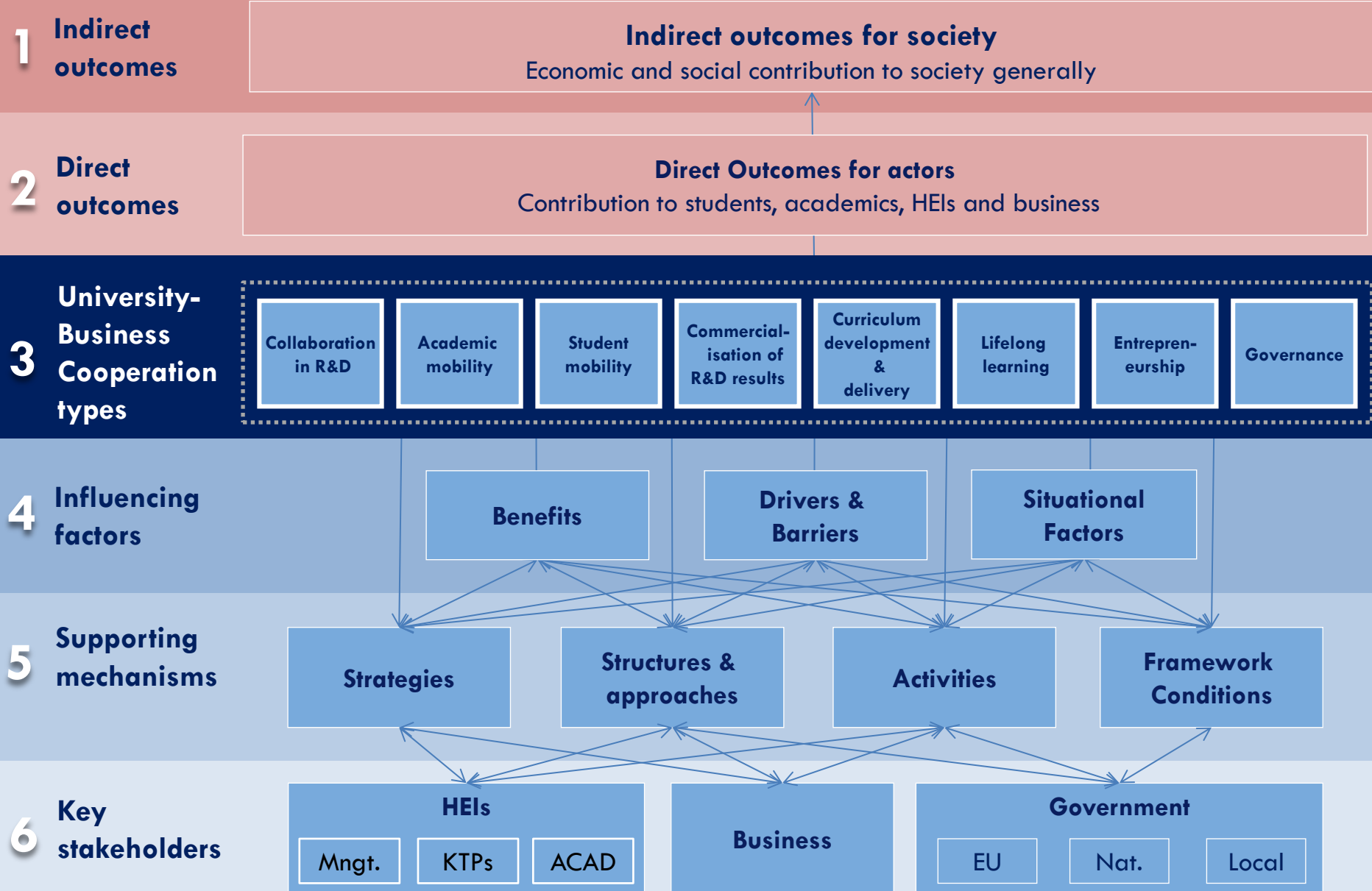
DEF_ The UBC Ecosystem

A model that describes how UBC is affected, influenced or supported by other aspects including drivers, barriers, perceived benefits, supporting mechanisms and key UBC stakeholders. The model also shows the outcomes of UBC for HEIs, academics and business, as well as the society as a whole.

The model reflects the complex interrelationship and co-reliance among these elements within a 'UBC ecosystem'.

- 1 Indirect outcome** (society)
- 2 Direct outcome** (stakeholder)
- 3 University-Business Cooperation (UBC) types**
- 4 Influencing factors**
- 5 Supporting mechanisms**
- 6 Key stakeholders**

UBC ECOSYSTEM MODEL > Detailed



1. INDIRECT OUTCOMES

DEF Refers to the indirect outcomes experienced by society generally from UBC

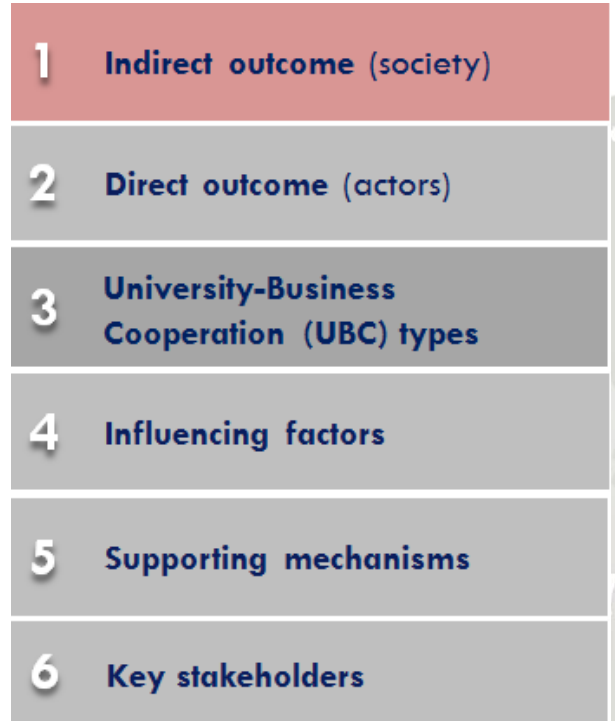
The indirect social contribution of UBC includes:

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

UBC is vital in building the knowledge society

A knowledge society consists of: (i) innovation, (ii) education, (iii) ICT and (iv) science & technology, to which UBC is vital.

Validation: Literature, expert interviews and 30 case studies show that UBC is crucial for creating a knowledge society



ACTION: Promote ways of measuring and recognising this contribution

Indirect Outcome

1

UBC is a crucial activity in the development of a knowledge society

.. which indirectly contributes to the social and economic development of the whole society

2. DIRECT OUTCOMES

DEF Refers to the direct outcomes experienced by an HEI/business/academic/student from UBC specifically in regard to:

1. teaching,
2. research and
3. knowledge transfer

The following stakeholder outcomes have been document:

HEIs	Academics	Business
<ul style="list-style-type: none"> • Improving/increasing future job prospects of students, • the research conducted within the HEI, • transfer of knowledge and technology to society • increasing third-party money 	<ul style="list-style-type: none"> • more relevant research and teaching content • better / greater opportunities to fund projects • more publishing opportunities 	<ul style="list-style-type: none"> • drives local business through product and service development, • drives necessary skills and knowledge • drives future income

Validation: Literature, expert interviews and 30 case studies show that UBC is crucial for creating a knowledge society



Direct Outcome

2

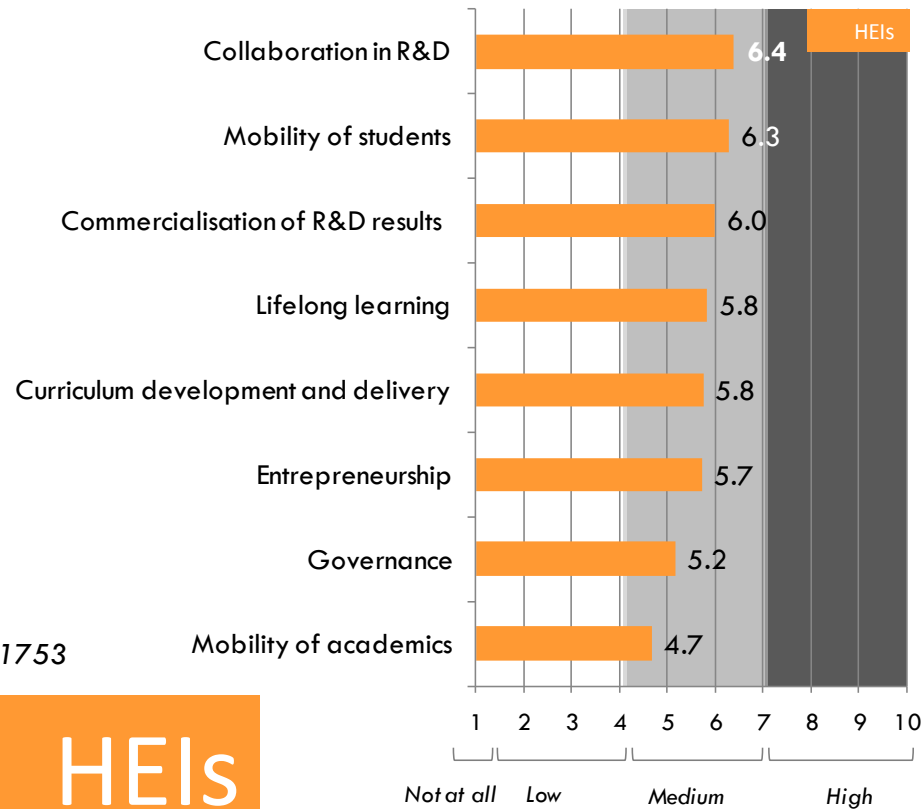
UBC is a crucial activity for each of the stakeholders groups involved

... which directly benefits HEIs, business, academics and students in respect to research, teaching, knowledge transfer and innovation

3. EXTENT OF UBC

DEF Refers to the extent of UBC being undertaken by a HEI or an academic.

There are eight types of UBC... with different levels of development (results below from European HEIs)



1 Indirect outcome (society)

2 Direct outcome (actors)

3 University-Business Cooperation (UBC) types

8 types of cooperation

4 Influencing factors

5 Supporting mechanisms

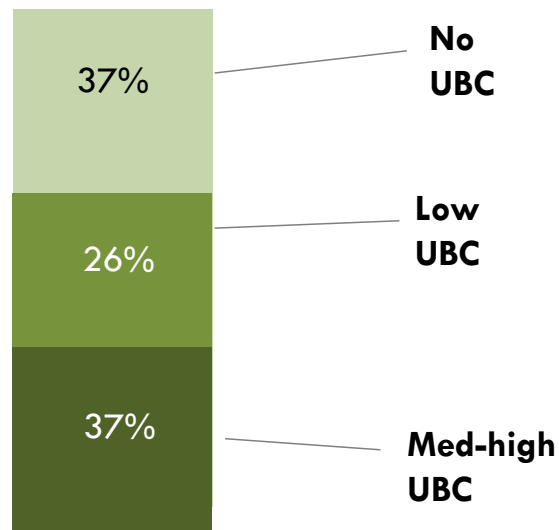
6 Key stakeholders

ACTION: Promote all the 8 types of UBC

3. EXTENT OF UBC

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

Academic UBC in Europe

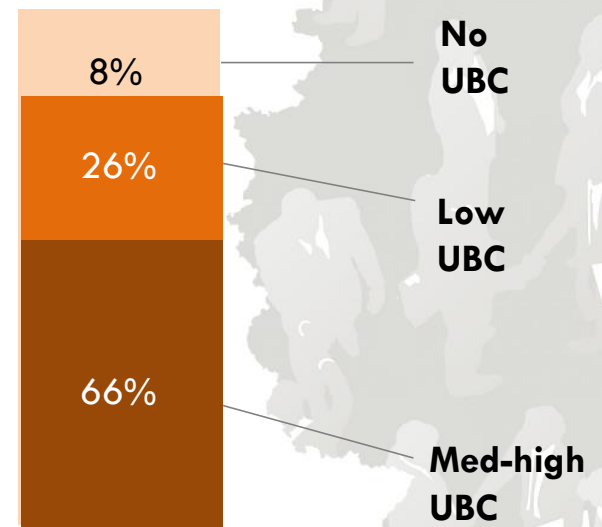


n=6280

ACAD

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

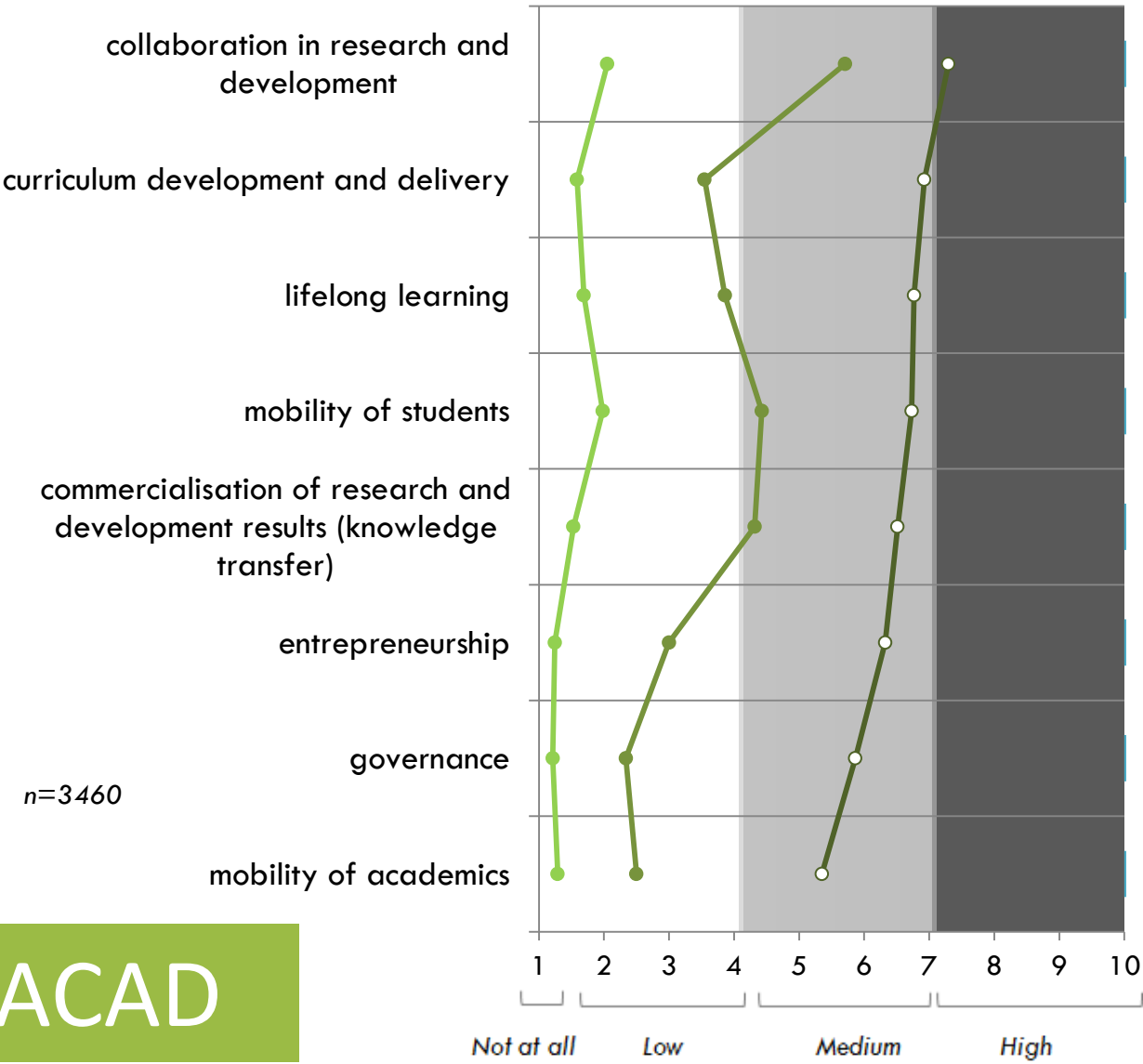
HEI UBC in Europe



n=2136

HEIs

3. EXTENT OF UBC > Interrelation



A 2-step cluster analysis shows that *'trailblazers'* academics (high UBC) are likely to cooperate with business in all the 8 Types to a similar extent, which range from medium to high. This finding is reflected through all 3 clusters which allows us to conclude the following:

The eight types of UBC are all interrelated (they do not work in isolation)

- High UBC
- Medium UBC
- Low UBC



Types of UBC

3

There are eight types of UBC which are all interrelated (they do not work in isolation)

Those types of UBC offering:

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

4. INFLUENCING FACTORS > Situational factors

All Situational factors help to explain UBC



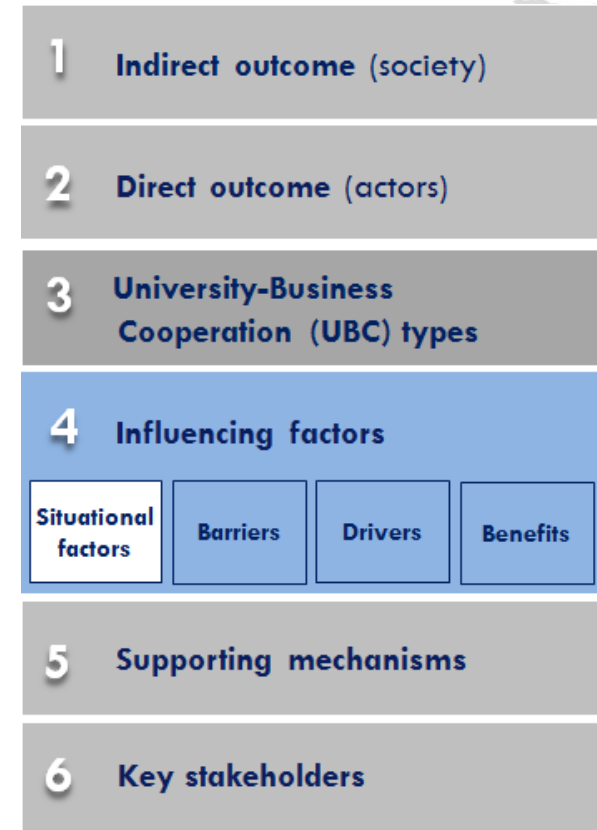
...but only a few of them have practical implications

Finding: The extent of UBC is significantly higher with those academics with some experience in business

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

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

ACAD



ACTION: Employ academics with business experience or provide opportunities for academic mobility

Situational factors

4a

**Situational
factors help to
explain UBC**

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

4. INFLUENCING FACTORS > Barriers to UBC

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: All European academics and HEI representatives see the same barriers to UBC no matter their extent of cooperation

1 **Indirect outcome** (society)

2 **Direct outcome** (actors)

3 **University-Business Cooperation (UBC) types**

4 **Influencing factors**

Situational factors

Barriers

Drivers

Benefits

5 **Supporting mechanisms**

6 **Key stakeholders**

ACTION: Remove barriers to UBC for academics and HEIs especially funding and bureaucracy

UBC Barriers 4b

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 necessarily create UBC

4. INFLUENCING FACTORS > Drivers of UBC

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

1 Indirect outcome (society)

2 Direct outcome (actors)

3 University-Business Cooperation (UBC) types

4 Influencing factors

Situational factors

Barriers

Drivers

Benefits

5 Supporting mechanisms

6 Key stakeholders

ACTION: Support the creation and development of long-term personal relationship (partnerships)

UBC Drivers

4c

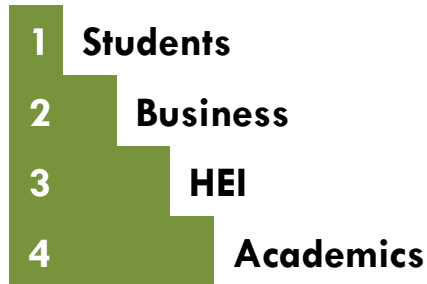
Personal relationships drive UBC. It's a people game!

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

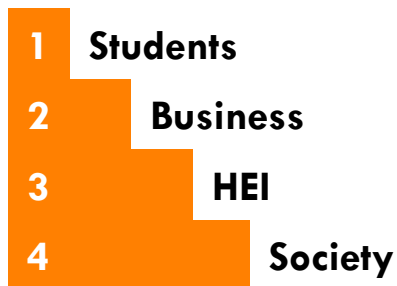
Those academics or HEIs perceiving higher drivers for UBC are more engaged in UBC than those perceiving low drivers for UBC

4. INFLUENCING FACTORS > Perceived benefits

Perceptions of high benefits & incentives drive UBC.

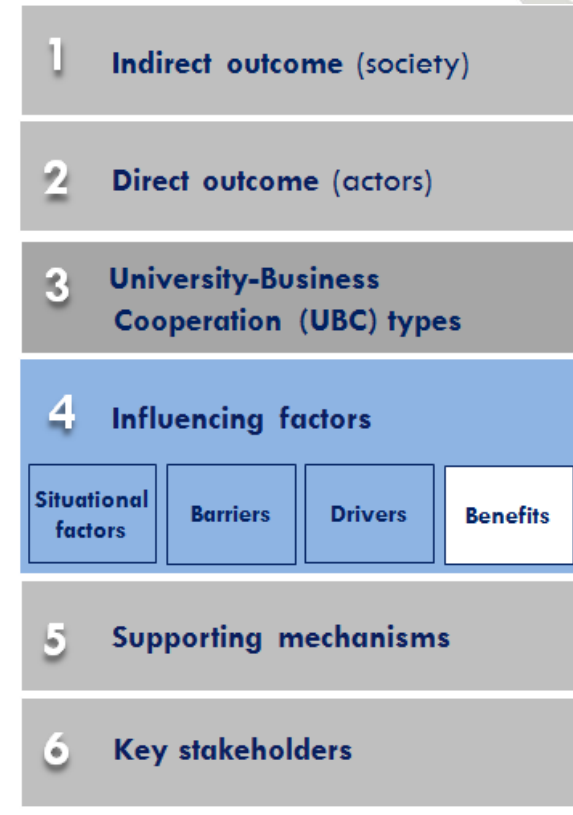


Academics recognise benefits for different stakeholders... however to a lower extent the personal benefits they receive from UBC.



HEIs rated the highest benefits for students, followed by business... then the ability of UBC to contribute to the mission of the HEI in third place with the lowest benefits perceived for society.

Finding: The higher the perceived personal benefits of UBC, the higher the extent of UBC carried out



ACTION: In order to encourage UBC, the right incentives need to be in place

Perceived benefits

4d

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.

5. SUPPORTING MECHANISMS

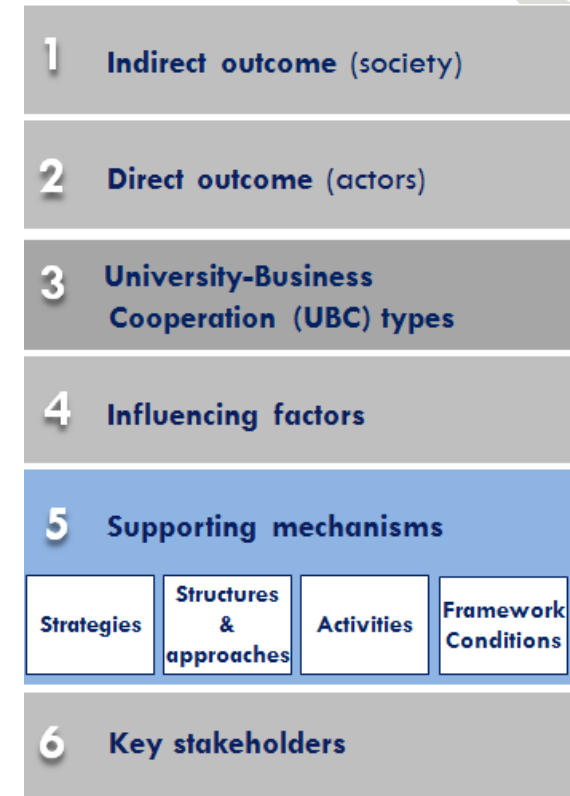
The creation and development of supporting mechanisms are critical for UBC. These include:

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

Finding: It was found that having a dedicated:

1. strategy,
2. program,
3. agency, and/or
4. responsible person

has a substantial effect on stimulating European UBC.



Finding: The UBC supporting mechanisms that are easier to implement (e.g. activities) are more developed than those (e.g. structures) that are more difficult (costly, time-consuming) to implement

5. SUPPORTING MECHANISMS

DEVELOPMENT

The development of the mechanisms supporting UBC in Europe from the most developed to least are:

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

Scale: 1 - 4 = low ; >4 - 7 = medium ; >7 - 10 = high

IMPACT

It was found that the impact of the *Supporting Mechanisms* on European UBC is (from the highest to lowest):

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

1 Indirect outcome (society)

2 Direct outcome (actors)

3 University-Business
Cooperation (UBC) types

4 Influencing factors

5 Supporting mechanisms

Strategies

Structures
&
approaches

Activities

Framework
Conditions

6 Key stakeholders

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

Supporting mechanisms

5

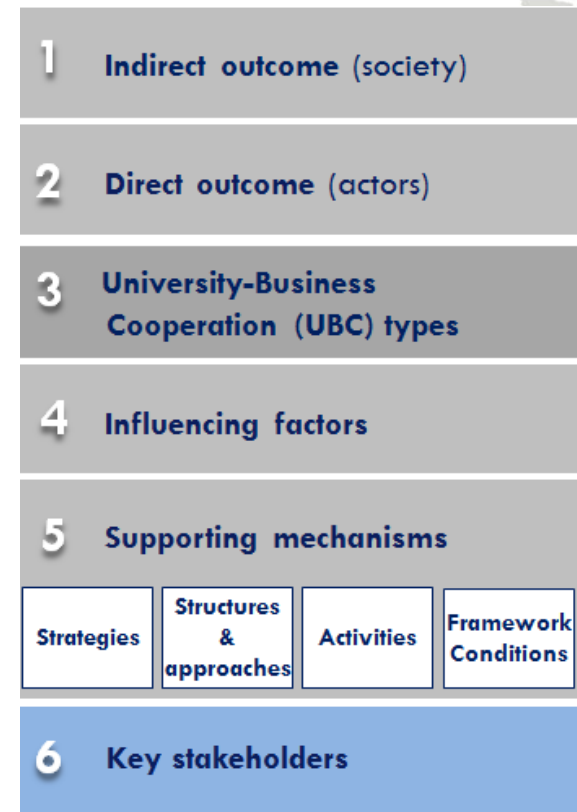
The creation and development of supporting mechanisms are critical for UBC

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

All supporting mechanisms are equal though some supporting mechanisms are more beneficial than others!

6. STAKEHOLDERS

Stakeholder	Explanation
Governments	Includes all levels of governments ranging from regional or national to international involved in supporting and developing UBC
HEIs	HEI representatives include: <ol style="list-style-type: none"> 1. University management 2. University professional working with business 3. Academics (incl. professors, researchers and lecturers)
Business	Business is considered in a broad sense in the study to include: <ol style="list-style-type: none"> 1. Privately and publicly owned organisations, 2. Non-government organisations, 3. Not-for-profit organisations
Intermediaries	Intermediaries in UBC can be understood as those organisations not necessarily owned or managed by either the Government or HEI that facilitate UBC. These include: chambers of commerce, business associations, investor groups and regional development agencies.



ACTION The development of a well-connected, proactive and supporting UBC stakeholder community is crucial for developing UBC

Stakeholders

6

The presence of prosperous, well-connected, proactive and supporting UBC stakeholder community is crucial for developing UBC

UBC stakeholders include: the triple helix of governments, HEIs and business as well as their intermediaries

SUMMARY OF ECOSYSTEM ELEMENTS

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 MODEL > Detailed

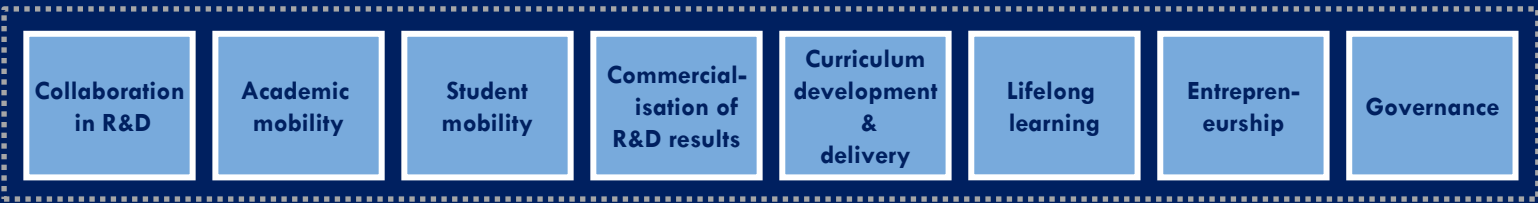
1 Indirect outcomes

Economic development
Contribution to society generally

2 Direct outcomes

Outcomes
Contribution to students, academics, HEIs and business

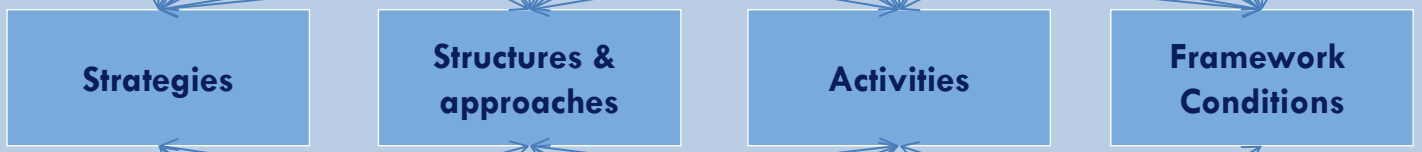
3 University-Business Cooperation types



4 Influencing factors



5 Supporting mechanisms



6 Key stakeholders



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