Basis of UBC and UBC Ecosystem
Spanning Boundaries Program
Victoria Galan Muros
The State of University-Business cooperation in Europe - The largest international study completed on the topic of University-Business Cooperation includes: 51 good practice case studies, Major survey (over 17,400 responses), 25 national reports, 35 national partners.

The State of University-Business cooperation in Europe - the largest international study completed on the topic of University-Business Cooperation includes: 30 good practice case studies, Major survey (over 6,800 responses), 13 national reports, 13 national partners.

Global Univeristy-Engagement Monitor – 41 national partners, major policy review.
To which of these groups do you belong?

www.menti.com
Code: 6288 6931
UBC relationships don’t (naturally) work

Misalignment of:
- expectations
- risk profile
- time orientation
- mindset
- goals
- attitude to rules

So how can we support them (sustainably)?
... through a better understanding of the university-business cooperation ecosystem
Managing University-Business Cooperation

The UBC Ecosystem Framework

A framework for understanding and managing the elements affecting University-Business Cooperation (UBC)

Framework created by
A/Prof. Todd Davey, Arno Meerman, Dr. Victoria Galan Muros, Prof. Thomas Baaken

Co-created by
Over 400 practitioners validating the framework in their work.

WHY THIS FRAMEWORK?

Currently UBC:
- Is a complex topic
- Is an abstract topic
- Lacks common definitions/concepts
- Lacks evidence

The UBC Ecosystem Framework provides:
- Simplification of reality
- Concrete elements and their relationships
- Common definitions/concepts
- Structure to analyse your own environment

To support strategic decision making process and undertake evidence-based management and policy
There is an entire UBC ecosystem to consider. All types of direct and indirect, personal and non-personal interactions between HEIs and business for reciprocal and mutual benefit.
In which ways can university and business cooperate?

UBC activities
How are university and industry cooperating?
What are the 3 most developed types of University-Business Cooperation?

www.menti.com
Code: 6288 6931
Most common ways for universities to collaborate with business

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobility of students</td>
<td>17.1%</td>
<td>20.7%</td>
<td>27.2%</td>
<td>5.6%</td>
<td>35.6%</td>
</tr>
<tr>
<td>Dual education programmes</td>
<td>43.9%</td>
<td></td>
<td>21.0%</td>
<td>18.2%</td>
<td>16.9%</td>
</tr>
<tr>
<td>Curriculum co-design</td>
<td>38.2%</td>
<td>3.6%</td>
<td>27.6%</td>
<td>19.7%</td>
<td>14.4%</td>
</tr>
<tr>
<td>Curriculum co-delivery</td>
<td>29.7%</td>
<td>25.0%</td>
<td>4.3%</td>
<td>24.4%</td>
<td>20.1%</td>
</tr>
<tr>
<td>Lifelong learning</td>
<td>30.5%</td>
<td>3.6%</td>
<td>26.5%</td>
<td>20.4%</td>
<td>14.6%</td>
</tr>
<tr>
<td><strong>Research</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joint R&amp;D</td>
<td>20.0%</td>
<td>21.4%</td>
<td>23.7%</td>
<td>5.4%</td>
<td>34.9%</td>
</tr>
<tr>
<td>Consulting</td>
<td>22.9%</td>
<td>24.8%</td>
<td>4.8%</td>
<td>27.7%</td>
<td>24.6%</td>
</tr>
<tr>
<td>Mobility of staff</td>
<td>49.0%</td>
<td>2.6%</td>
<td>28.1%</td>
<td>15.7%</td>
<td>7.5%</td>
</tr>
<tr>
<td><strong>Valorisation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercialisation of R&amp;D results</td>
<td>45.9%</td>
<td>3.0%</td>
<td>27.0%</td>
<td>18.6%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Academic entrepreneurship</td>
<td>46.8%</td>
<td>3.0%</td>
<td>26.6%</td>
<td>17.1%</td>
<td>9.5%</td>
</tr>
<tr>
<td>Student entrepreneurship</td>
<td>44.9%</td>
<td>3.1%</td>
<td>28.5%</td>
<td>16.0%</td>
<td>10.2%</td>
</tr>
<tr>
<td>Governance</td>
<td>47.9%</td>
<td>3.1%</td>
<td>24.0%</td>
<td>17.9%</td>
<td>10.2%</td>
</tr>
<tr>
<td>Shared resources</td>
<td>44.5%</td>
<td>3.0%</td>
<td>30.5%</td>
<td>17.0%</td>
<td>7.3%</td>
</tr>
<tr>
<td>Industry support</td>
<td>35.7%</td>
<td>3.6%</td>
<td>28.9%</td>
<td>21.4%</td>
<td>13.0%</td>
</tr>
</tbody>
</table>

Most common ways for business to collaborate with universities

There are a broad range of activities through which business can collaborate with universities.
Dairy Crest (DC), a leading British dairy company

Looked to develop capability in foodtech and food security

Started cooperating in joint research and development R&D projects with a local university, Harper Adams University in Shropshire (England)

DC also provided additional education input to the design and delivery of curricula

- Set up a £4m (€4.8m) innovation centre on the campus of Harper Adams University
- Aims to deliver 10% of year-on-year growth through new product development; with scientific research, technology and product development at the core of this objective
- The partnership was awarded the ‘Most Innovative Contribution to Business-University Collaboration’ category in the Times Higher Education (THE) Awards 2016
An emerging hybrid form of higher education, which offers the participant the opportunity to complete a:

1. A degree programme at a higher education institution
2. A certification of practical vocational training and/or work experience in a company.

In Germany:

- **70%** of these courses are related to the engineering field and to economics and business studies.
- The remaining **30%** is made up by computing, social sciences and others.

BADEN-WÜRTTEMBERG COOPERATIVE STATE UNIVERSITY (DHBW)

First university in Germany to combine on-the-job training at numerous partner enterprises and classical academic studies.

With around **34,000 enrolled students**, over **9,000 partner companies** and more than **145,000 graduates**, DHBW is one of the largest higher education institutions in Baden-Wuerttemberg.

About their dual study programmes:

- lasts **8 semesters** on average.
- students to earn whilst they learn through a monthly payment
- ultimately leads to a job at VW.
- can be undertaken in a range of topics including: information technology, mechanical engineering, electrical engineering etc.
Tiimiakatemia (Team Academy)
University of Applied Sciences Jyväskylä (JAMK), Finland
University recruited an entrepreneur to develop the academic spin-out within the university incubator.

University provides the patent license and incubation and takes a share in the enterprise.

**EXAMPLE:** RE-TIMER
- Partnered with an industry partner: SMR Automotive, a medium-sized Australian contract manufacturer who wanted to grow and diversify.
- Competencies in lighting and injection moulding
- The incubator supplied the entrepreneur and technology
- International (expert) focus
Student-Business IP Program
Tampere, Finland

**DEMO LA**

**BUSINESS** - Bring business challenges, technologies, ideas to students. Businesses buy the idea back at the end of the project based on three models.

**STUDENTS** - (cross-disciplinary) Develop solutions, new technologies and new business concepts over 4 months, including 3 pitches and creation of a prototype. Get to own the idea if the business doesn’t want it, gets paid if they do.

**UNI** - manage the programme and IP, provide mentorship and assign marks and credit points to students.

**RESULT**

- 96% of completed Demola projects are licensed by the project partners.
- Over 10% of students are headhunted by the companies they worked with; and all students get a taste of entrepreneurship.
Shared laboratory
Shared building
Shared investment and costs
Incubator with startups
Supply chain partners invited
In the time of COVID19?

- It is difficult to start new activities
- Some activities are easier to start than others
- Focus on ‘easy’-start and smaller activities to test the relationship
  e.g. Smaller research projects, student-business projects, guest presentations, hackathons
Which factors inhibit and facilitate engagement in UBC activities?

UBC Barriers, Motivators and Facilitators
Barriers are those obstacles that restrict or inhibit the ability of the academic or HEI to engage in UBC.

Three groups of UBC barriers
Resulting from an analysis of the results, barriers can be categorised in the following groups:
I. usability of results,
II. funding barriers and
III. relationship barriers.
What are the 3 biggest barriers to University-Business Cooperation?

www.menti.com
Code: 6288 6931
<table>
<thead>
<tr>
<th>University Management</th>
<th>Academics</th>
<th>Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited resources of SMEs</td>
<td>7.4</td>
<td>Limited resources of SMEs</td>
</tr>
<tr>
<td>Lack of business funding for UBC</td>
<td>6.7</td>
<td>Bureaucracy related to UBC</td>
</tr>
<tr>
<td>Lack of government funding for UBC</td>
<td>6.6</td>
<td>Insufficient work time allocated by the university for academics’ UBC activities</td>
</tr>
</tbody>
</table>

**Barriers to external engagement**

Scale: 1 = “Not at all relevant” to 10 = “Extremely relevant”
Regional innovation cooperation transitions a traditional industry to a sustainable development. Wanted to be a leading region for a forest-based bio economy.

- Buy-in and commitment from all quadruple helix actors
- All actors are knowledge producers
- Stamina is required (time, energy and resources)
- Tolerance between actors
- Change terminology e.g. chemistry to bio-design
- Long term commitment allows real development
Drivers are those factors that facilitate the academic or the HEI to engage in UBC.

Two groups of UBC drivers
Resulting from an analysis of the results, drivers can be categorised in the following groups:

I. Motivators
II. Facilitators
What are the 3 biggest motivators to undertake University-Business Cooperation?

www.menti.com
Code: 6288 6931
University Management
To obtain funding / financial resources 8.1
To improve graduate employability 8.1
To use the university’s research in practice 8.0

Academics
Gain new insights for research 7.8
Use my research in practice 7.7
Address societal challenges and issues 7.1

Business
Get access to new technologies and knowledge 7.6
Improve our innovation capacity 7.6
Access new discoveries at an early stage 7.1

Motivators of external engagement
Scale: 1 = “Not at all relevant” to 10 = “Extremely relevant”
Are academics’ and businesses’ motivations fulfilled?

Academics rating who gets the most benefits from UBC

1. Students
2. Business
3. HEI
4. Academics

Businesses rating who gets the most benefits from UBC

1. Students
2. HEI
3. Business
4. Academics
AMIRA P260 Supply Chain Research Partnership

- Consortium of large mining/minerals companies
- SME supply chain partners
- Research institutions

Running for over 29 years
Project iterations (3-4 years each)

RESULTS
- 300 refereed research publications
- 50 PhD students
- 41 working mining and processing sector

Total benefits: $1AU billion (€670 Million)

Recognise motivations & (ideally) ensure desired stakeholder outcomes

Short term (Problem solving)

Long term (basic research)

Site Visits

Applied Research

"Blue-Sky" Research
Drivers are those factors that facilitate the academic or the HEI to engage in UBC.

Two groups of UBC drivers
Resulting from an analysis of the results, drivers can be categorised in the following groups:

I. Motivators
II. Facilitators
What are the 3 biggest facilitators for University-Business Cooperation?

www.menti.com
Code: 6288 6931
### University Management

<table>
<thead>
<tr>
<th>Factor</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existence of mutual trust</td>
<td>8.3</td>
</tr>
<tr>
<td>Existence of a shared goal</td>
<td>8.2</td>
</tr>
<tr>
<td>Existence of funding to undertake the cooperation</td>
<td>8.0</td>
</tr>
</tbody>
</table>

### Academics

<table>
<thead>
<tr>
<th>Factor</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existence of mutual trust</td>
<td>8.0</td>
</tr>
<tr>
<td>Existence of a shared goal</td>
<td>7.9</td>
</tr>
<tr>
<td>Existence of funding to undertake the cooperation</td>
<td>7.8</td>
</tr>
</tbody>
</table>

### Business

<table>
<thead>
<tr>
<th>Factor</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existence of mutual trust</td>
<td>8.0</td>
</tr>
<tr>
<td>Existence of a shared goal</td>
<td>7.9</td>
</tr>
<tr>
<td>Existence of mutual commitment</td>
<td>7.8</td>
</tr>
</tbody>
</table>

#### Facilitators of external engagement

Scale: 1 = “Not at all relevant” to 10 = “Extremely relevant”
SIEMENS CKI PROGRAMME

Why?
1. Access research and talent
2. Long term research
3. Constant dialog: CKI Office, CKI Manager & CKI Director

Complement Model:
(17) Principal Partner Universities
MANAGING UBC BARRIERS AND DRIVERS

FIVE RECOMMENDATIONS

1. Find out which barriers and drivers are affecting UBC at your organization

2. Remove or reduce important barriers... but focus on providing drivers

3. Personal relationships are the greatest facilitators

4. Ensure that everybody receives benefits from collaborating and promote these benefits

5. Reduce bureaucracy and provide time and recognition for academics
UBC is a people’s game

• Support people, not technology (so much)
• Foster relationships, not transactions (so much)
The UBC Ecosystem put into practice:

I. Traffic light system

II. Holistic view

III. Understanding roles, behaviour and mechanisms
... ANTICIPATE RESISTANCE 😊
‘THE TROUBLE IS, IF YOU DON'T RISK ANYTHING, YOU RISK EVEN MORE.’

– Erica Jong
Final thought on leading / driving university-business cooperation
‘THANK YOU!’

– Any comments or questions?