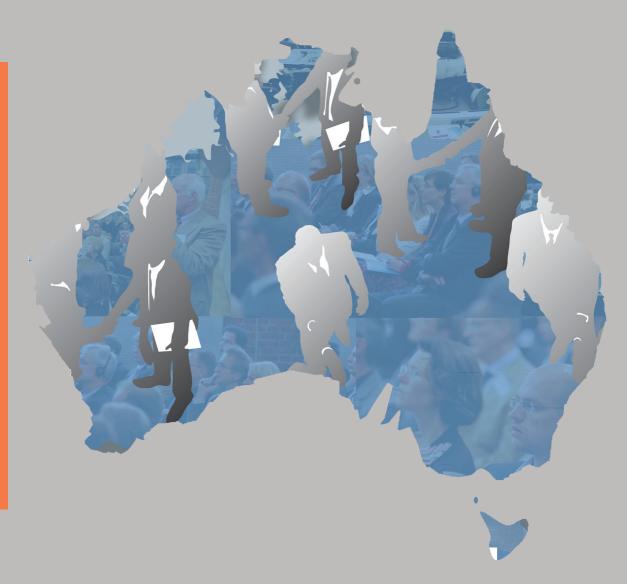


State of University Business Cooperation Australia Business Perspective

Study on the cooperation between Higher Education Institutions and Public and Private Organisations







Science Marketing______



The State of Australian University-Business Cooperation (The Business Perspective)

Partners:









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This document has been prepared by the authors using data that had been collected in the framework of a study prepared by the project partners. It reflects the views only of the authors.

Executive summary

Summary

This report seeks to contribute to our understanding of the business perspective on university-business cooperation (UBC). Examining the perceptions of a wide range of businesses provides positive signs for the future, with 99% of businesses that cooperate with universities planning to maintain or increase their cooperation in the future. Yet, more can be done, for example in supporting businesses with the development of initiatives and activities that can support their cooperation efforts, as well as in developing (actual and perceived) capabilities, particularly of those businesses not currently engaged in cooperation.

About the study

The results presented in this report reflect the perceptions of business people in Australia with respect to cooperation between universities and business. Data was collected by means of an online survey sent out via email to a business database that was developed from publicly available information, leading to a total of 122 responses. The study measured the perceptions of respondents with respect to their businesses and cooperation efforts.

University-Business Cooperation

Education-related cooperation between the businesses involved in this survey and universities is highly diverse. While 85% of respondents cooperate with universities in relation to student mobility and 73% in regards to lifelong learning, much fewer businesses are involved in the design and delivery of the curriculum (40% and 45% respectively). While research-related cooperation activities, such as R&D consulting and joint R&D, are practiced by a large number of businesses in the sample (82% and 78% respectively), the respondents' cooperation in relation to valorisation (e.g. academic and student entrepreneurship) is limited.

The research indicates that businesses cooperating with universities also engage in broader cooperation efforts. Indeed, more than 70% of businesses that cooperate with universities in relation to research and development (R&D) or education and training (E&T) also cooperate with other businesses in the same activity.

It is them, not us

Primary barriers identified by respondents relate to well recognised differences between businesses and universities, such as differing motivations and differing time horizons. Moreover, business respondents point towards the universities, including the universities' limited awareness of opportunities arising from collaborating with their business, their high level of bureaucracy and a lack of people with business knowledge.



Executive summary



Relationships matter

While funding to undertake cooperation emerges as one of the top five facilitators, relational factors are much more prominent. It is the existence of a shared goal, the mutual commitment and mutual trust alongside prior relations with a partner that facilitate cooperation. These results indicate that any effort towards enabling cooperation between businesses and universities should focus on relationship development as a central ingredient.

It is not just for us

What motivates businesses to cooperate with universities? In addition to expected outcomes such as access to knowledge, customised solutions, as well as an enhanced innovation capacity and reputation, results indicate a positive impact on society as the most highly rated benefit motivating Australian businesses to cooperate with universities.

Strategy first

Strong emphasis has been placed on the development of UBC supporting mechanisms by universities; yet little is known about such mechanisms in the business realm. This study indicates that strategic mechanisms are the most highly developed, with close to 40% of respondents indicating the existence of a strategy for, and top-level management commitment to, cooperation with universities. Dedicated structures or activities, however, are less commonly adopted by the businesses represented in the sample.

More to learn

Businesses cooperating with universities have higher perceptions regarding their UBC capabilities, compared to businesses who do not cooperate. Skills and knowledge in relation to UBC procedures and processes, in particular, emerge as in need of development. Results also indicate the opportunity to provide more clarity for businesses on what motivates universities to collaborate.

Introduction

Background

The importance of UBC for innovation and education is widely recognised, with Australia embracing cooperation as critical to economic and social development. Australia's National Innovation and Science Agenda (NISA) places universities at a central position of the economy, embracing the need to create a more connected and effective relationship between government, business and universities to increase employment, productivity and social cohesion.

While Australia retains its poor rating in relation to UBC to date (OECD 2015 Science, Technology and Industry Scoreboard Volume 2015.12), the positive direction of current changes both in relation to policy and institutional advances have been noted (OECD Economic Survey Australia March 2017). Drawing on the clear movement towards advanced university-business relations and improved commercial impact from research in Australia, the timing is right for developing a thorough understanding of the perspectives of various stakeholders in the UBC ecosystem.

When significant change is sought, it is vital to assess the state of play of UBC, its development, barriers and drivers, self-efficacy, institutional culture and mechanisms supporting UBC. To most effectively develop UBC, an in-depth understanding of the UBC ecosystem becomes crucial as it helps to avoid wastage of investment and resources, unrealistic expectations, disappointment and disillusionment.

The study was timed so that it happened concurrently with the *State of European UBC study*, a study undertaken for the European Commission (a €500,000 investment), led by the Science-to-Business Marketing Research Centre (S2BMRC) in Germany and backed by a European Consortium. The European study is a follow-up study to that executed by S2BMRC in 2010-11. Please also refer to the recent Performance Review of the Australian Innovation, Science and Research System for an extensive analysis of the innovation ecosystem in Australia (https://industry.gov.au/Innovation-and-Science-Australia/Documents/ISA-system-review/ index.html).

This study mirrors the European one, using the same methodology and framework. Drawing on the data collected, this report presents mostly descriptive data and is not intended to be a comprehensive or detailed study of the country. The report is provided to all stakeholders simultaneously (academics, university managers, policy-makers at different levels, business, etc.) and is expected to provide some opportunity for individual stakeholder interpretation and resulting actions, according to their local understanding and different roles within the UBC ecosystem.

Method

Data was collected by means of an online survey instrument, originally developed as a central component of the State of European UBC study (https://www.ub-cooperation.eu/). The survey was distributed to a database of Australian businesses, which was developed by drawing on publicly available information, such as information about ARC Linkage Grants, businesses involved in CRCs and prominent businesses in the community, as well as networks developed through UBC activities and project partners networks.

Study Objectives

This report details insight gained from the business perspective during a 10-month study conducted between October 2016 and July 2017. HEI-related insights are reported in an alternate report.

Objectives

The objectives are to:

- determine business perception of the status quo of UBC in Australia, including the extent of collaboration in a wide range of activities,
- describe the factors that facilitate or inhibit UBC in Australia from the business perspective,
- describe the development of business mechanisms supporting UBC in Australia,
- provide information for stakeholders seeking to increase UBC,
- establish a deep understanding of the ecosystem in place for UBC in Australia,
- provide learning opportunities through linkages with the European UBC landscape.

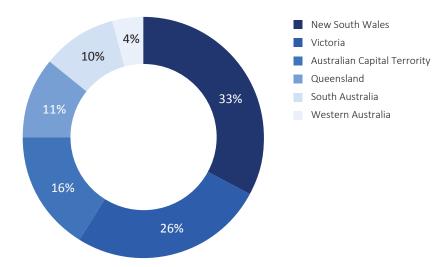
Overall, 122 Australian business people responded to the survey.

Respondent profile

Position of respondent

Business location

- 9% 12% Consultant 13% 16% Other 18% innovation or R&D 31%
 - Director/Manager responsible for HR, recruitment and/or training
 - Director/Manager generally responsible for university collaboration
 - Director/Manager responsible for
 - Business Director (e.g. CEO, Managing Director)



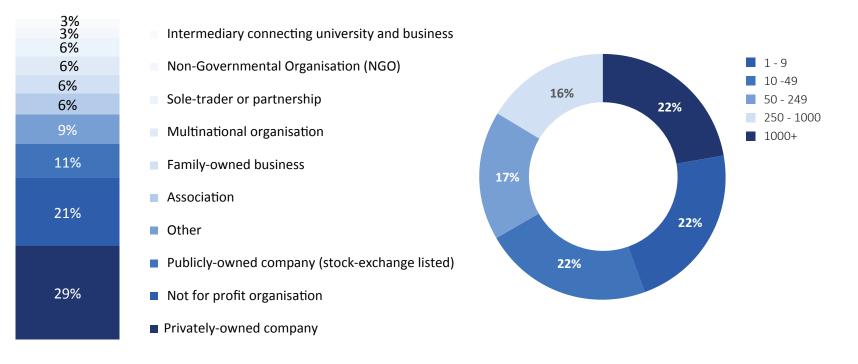
Business directors reflect the largest group of respondents (31%), followed by directors responsible for innovation or R&D (18%). The remaining respondents identified themselves as directors responsible for university collaboration (13%), consultants (12%), and directors of HR, recruitment and training (9%). Sixteen percent of respondents indicated that they hold 'other' positions.

New South Wales emerged as the predominant business location of the respondents (33%), closely followed by Victoria (26%), and the Australian Capital Territory (16%). Regions with smaller representation in the sample include Queensland (11%), South Australia (10%), and Western Australia (4%).

Respondent profile

Type of business





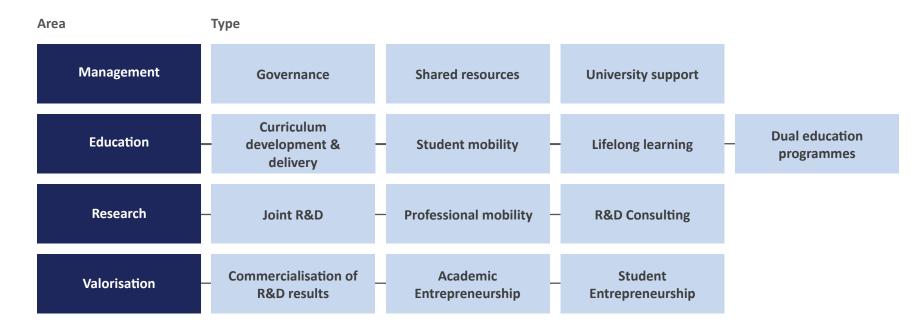
A wide variety of businesses are represented in the sample, with 'privately-owned companies' forming the largest type (29%), followed by 'not for profit organisations' (21%) and 'publicly owned companies' (11%). The type of businesses with less than 10% representation included 'associations', 'family-owned businesses', 'multinational organisations', 'sole-trader or partnerships', 'NGOs' and 'intermediaries connecting university and businesses'.

Businesses are clustered into five groups according to the number of staff they employ. The sample comprises a high percentage of large and medium-sized firms, with 22% of respondents indicating that they worked for three groups of firms: those with over 1000 employees, 250-1000 employees and 50-249 employees. Smaller businesses with 10-49 and 1-9 employees are represented in 17% and 16% of cases, respectively.

Extent of UBC

Fourteen UBC activities are recognised, commonly categorised into the areas of education, research, valorisation and management.

Forms of university-business cooperation



Graphic: University – business cooperation activities

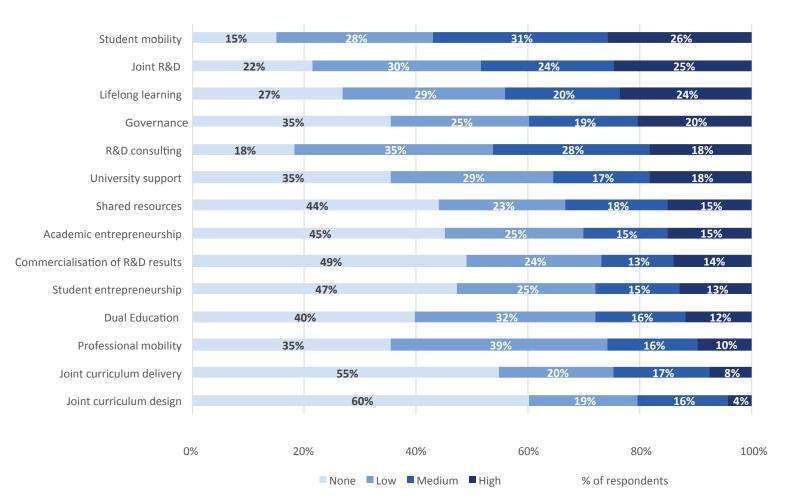
Extent of UBC

| UBC areas | UBC activities |
|--------------------------|--|
| Cooperation in education | 1. curriculum co-design |
| | 2. curriculum co-delivery (e.g. guest lectures) |
| | 3. mobility of students (i.e. students internships/placements) |
| | 4. dual education on programmes (i.e. part theory, part practical) |
| | 5. lifelong learning for businesspeople (e.g. executive education, industry training and professional courses) |
| Research cooperation | 6. joint R&D (incl. joint funded research) |
| | 7. consulting to business (incl. contract research) |
| | 8. mobility of professionals (i.e. temporary mobility of academics to business and vice versa) |
| Valorisation | 9. commercialisation of R&D results (e.g. licencing/patenting) |
| | 10. academic entrepreneurship (e.g. spin offs) |
| | 11. student entrepreneurship (e.g. start-ups) |
| Management cooperation | 12. governance (e.g. participation of academics on business boards and businesspeople participation in university board) |
| | 13. shared resources (e.g. infrastructure, personnel, equipment) |
| | 14. industry support (e.g. endowments, sponsorship and scholarships) |

Table: Definitions of the university-business cooperation activities

Extent of UBC by activity

Respondents were asked to comment on the extent to which their business cooperates with universities in respect to a range of UBC activities.

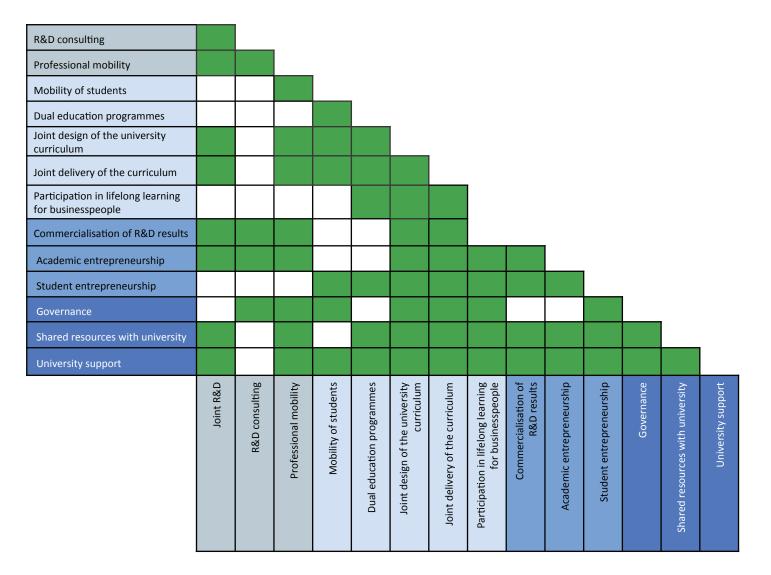


Australian businesses classified their cooperation with universities in different activities as none (no cooperation), low, medium, and high.

Overall, the responses indicate that the extent of cooperation between businesses in the sample and universities is highest in the areas of 'student mobility' (57% of respondents report a medium to high extent of cooperation) and 'joint R&D' (49% of respondents report a medium to high extent of cooperation).

In comparison, collaboration is perceived lower for 'joint curriculum design' and 'joint curriculum delivery' with 55%-60% of the respondents reporting no cooperation with universities in these activities.

Relationship between UBC activities



N.B. Significant correlations at 5% indicated in green

Cooperation is commonly not limited to a singular activity, so when businesses engage (or increase its engagement) in one activity, they are likely to engage (or increase their engagement) in others as well. The following table shows a strong positive correlation (marked in green) between the extent to which various UBC activities occur.

The UBC activities that are more connected to others are 'joint design of the university curriculum', 'joint delivery of the curriculum' and 'university support'. In contrast, 'R&D consulting' has the least number of associations with other UBC activities meaning that it is more likely conducted in isolation.

Initiation of UBC

Respondents were asked how often various stakeholders initiate UBC activities

48% 1% 3% 28% 19% 8% 35% 23% 1% 33% 13% 25% 18% 5% 40% 41% 18% 13% 23% 6% 19% 31% 10% 5% 35% 21% 27% 32% 15% 4% 14% 4% 24% 26% 32% 25% 33% 16% 1% 25% 0% 20% 40% 60% 80% 100%

■ Never ■ Seldom ■ Sometimes ■ Usually ■ Always

% of respondents

Your organisation (we take the initiative) Individual academics University management / leadership Government (e.g. publicly funded programmes)

Current university students

University alumni now working with our organisation (former students)

Internal intermediaries within the university (e.g. TTO staff)

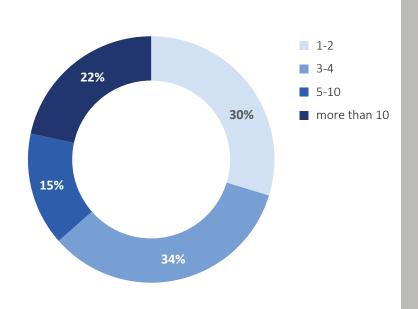
External intermediaries (e.g. regional development agencies or networks)

Geographical location still matters

| Percentage of cooperating businesses working with | | | | | |
|---|-------|--|--|--|--|
| Universities in the region | 98.6% | | | | |
| Universities in the country | 93.4% | | | | |
| Universities outside the country | 67.6% | | | | |

Most Australian businesses (98.6%) cooperate with the universities in their region, and in their country (93.4%). Cooperation with international universities is reported by 67.6% of respondents. Diversity is evident in the number of partners.

Number of university partners



While 30% of cooperating Australian businesses in the sample report that they are working with 1-2 university partners, 22% report that they cooperate with more than 10 partners. Over half of the businesses surveyed (57%) collaborate with universities in R&D. Of these, 71% that cooperate with universities in R&D also cooperate with other businesses for this purpose. However, only 32% of businesses that do not cooperate with universities in R&D do so with other businesses.

Additionally, businesses that cooperate with both universities and other businesses in R&D are more willing to recommend R&D cooperation with universities to others (8.2%) as compared to those who cooperate only with universities (7.4%).

Extent of R&D cooperation amongst Australian businesses

To gain a better understanding of how R&D is undertaken in the sample, businesses are categorised regarding whether they cooperate with universities and/or other businesses in their R&D efforts and/or whether they undertake R&D internally.

| | | other bu | ites with isinesses &D | Underta inter | | Group name | Willingness to recommend R&D with universities (1-10) | | | | | | | | | |
|------------------------|-----|----------|------------------------------|------------------|------|--------------------------------|--|-----|-----|-----|-----|---|--|-----|----|-----------------------------------|
| | |) (a a | 710/ | Yes | 39% | Comprehensive R&D focus | 8.0 | | | | | | | | | |
| Cooperates with | 57% | Yes | 71% | No | 32% | External R&D focus | 8.4 | | | | | | | | | |
| universities in R&D | | 57% | 57% | 57% | 57% | 57% | 57% | 57% | 57% | 57% | 57% | N | | Yes | 9% | University and internal R&D focus |
| | | No | 29% | No | 20% | R&D outsourced to universities | 7.5 | | | | | | | | | |
| | | | 100% | | 100% | | | | | | | | | | | |

| Doesn't | | Yes | 32% | Yes | 28% | Internal and external business R&D focus (not university) |
|------------------------|-----|-----|-----|-----|-----|--|
| cooperate | 43% | | | No | 9% | External business R&D focus |
| universities in R&D | | No | 68% | Yes | 28% | Internal R&D focus |
| | | | | No | 34% | No R&D |

100%

100%

Extent of collaboration in education and training for Australian businesses

To gain a better understanding of business cooperation in relation to education and training (E&T), businesses in the sample are categorised regarding whether they cooperate with universities or other businesses in their E&T efforts and/or whether they undertake E&T internally.

| | | Cooperates with other Undertakes E&T businesses in E&T internally | | Group name | Willingness to recommend E&T cooperation with universities (1-10) | | |
|------------------------|-------------|--|-----|------------|--|-----------------------------------|-----|
| | | Vec | 78% | Yes | 42% | Comprehensive E&T focus | 7.6 |
| Cooperates with | CO 2 | Yes | 10% | No | 36% | External E&T focus | 8.3 |
| universities in E&T | 60% | No | 22% | Yes | 5% | University and internal E&T focus | 8.3 |
| | | | | No | 16% | E&T outsourced to universities | 6.7 |

100%

100%

| | n't | Yes | 41% | Yes | 27% | Internal and external business E&T focus (not university) |
|---|----------|-----|------|-----|-----|--|
| with 40% | erate | | | No | 14% | External business E&T focus |
| universities Yes 29% Internal E&T focus | ersities | | F.0% | Yes | 29% | Internal E&T focus |
| No 59% No 31% No E&T | | INO | 59% | No | 31% | No E&T |

100%

100%

100%

A large number of businesses in Australia have a comprehensive E&T focus, as they cooperate with universities and other business in regards to E&T while also offering internal training. Of the businesses surveyed, 60% cooperate with universities in E&T and most of those cooperating businesses also include other businesses in their E&T (78%). In comparison, only 41% of businesses that do not cooperate with universities in E&T cooperate with other businesses.

Those businesses with an external E&T focus (business and universities) or those conducting E&T internally and with universities are the most likely to recommend cooperating with universities in regards to E&T.

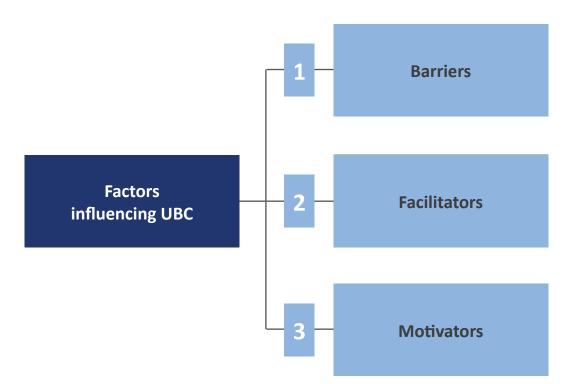
<u>Relationship between barriers and drivers</u>

A *barrier* provides a hindrance or obstacle. Drivers comprise facilitators, which provide the capability to do something, and a motivator the incentives to engage in an activity. Removing a *barrier* does not create UBC; rather, it makes UBC possible. The *facilitators* and *motivators* are the incentives that foster UBC.

As an example, even when a lack of funds is often noted as a major *barrier* to cooperation, the presence of funds may not be enough to ensure cooperation happens if the *facilitators* or *motivators* are *perceived* as insufficient.

Factors influencing the extent of UBC

This section outlines the extent to which businesses perceive a number of factors to affect their cooperation with universities. The factors included in the survey are known from previous research to significantly influence UBC.



Barriers hindering UBC

Barriers to UBC for Australian businesses

Respondents were asked to rate barriers commonly identified as hindering UBC.

| Το | p UBC <u>barriers</u> for | Australian business |
|----|---------------------------|---|
| 1 | Cultural | Differing motivations between universities and our business |
| 2 | Awareness | Universities lack awareness of opportunities arising from collaborating with our business |
| 3 | Administration | Bureaucracy related to UBC in universities |
| 4 | Cultural | Lack of people with business knowledge within universities |
| 5 | Cultural | Differing time horizons between universities and business |

The barriers to UBC presented to the Australian businesses are categorised in three meta-groups: cultural, administration, and awareness obstacles. All three groups are present in the top five.

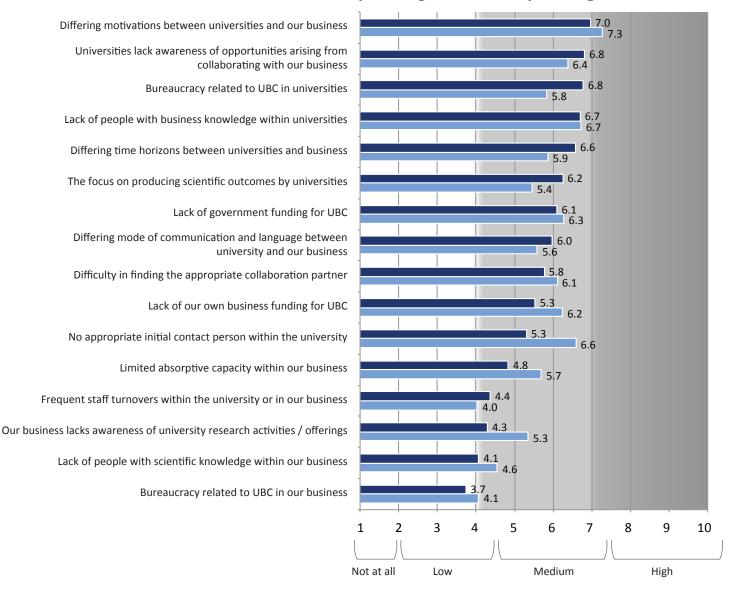
'Different motivations between universities and our business' (*culture*) emerges as the most prominent barrier (mean of 7.0 on a 10-point scale), followed by the perception that 'universities lack awareness of benefits arising from collaborating with businesses' (*awareness*) (6.8), and the barrier 'bureaucracy related to UBC in universities' (*administration*) (6.8).

Two more *culture*-related challenges follow in fourth and fifth place, including 'lack of people with business knowledge at the universities' (6.7), and 'time horizon differences between the cooperating institutions' (6.6). To better understand barriers to UBC, perceptions of businesses currently cooperating with universities are compared to those businesses not currently cooperating.

While perceptions between cooperating and non-cooperating businesses are similar for some barriers, such as the 'lack of people with business knowledge within universities' and the 'lack of government funding for UBC', non-cooperating businesses perceive barriers hindering initial contact higher, such as 'no appropriate initial contact person within the university' and 'our business lacks awareness of university research activities/offerings'.

Barriers hindering UBC

Barriers to UBC – Australian businesses cooperating and not cooperating



Business cooperating

Business not cooperating

Drivers fostering UBC

Facilitators enabling UBC

Drivers of UBC are divided into two factors:

- 1. Facilitators factors that enable cooperation
- <u>Motivators</u> incentives or benefits that the respective stakeholders would like from the cooperation

Together, these two factors provide a comprehensive picture of what compels businesses to cooperate. The 2010-11 State of European UBC study showed that for European universities the existence of strong UBC drivers can overcome the presence of barriers to UBC.

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

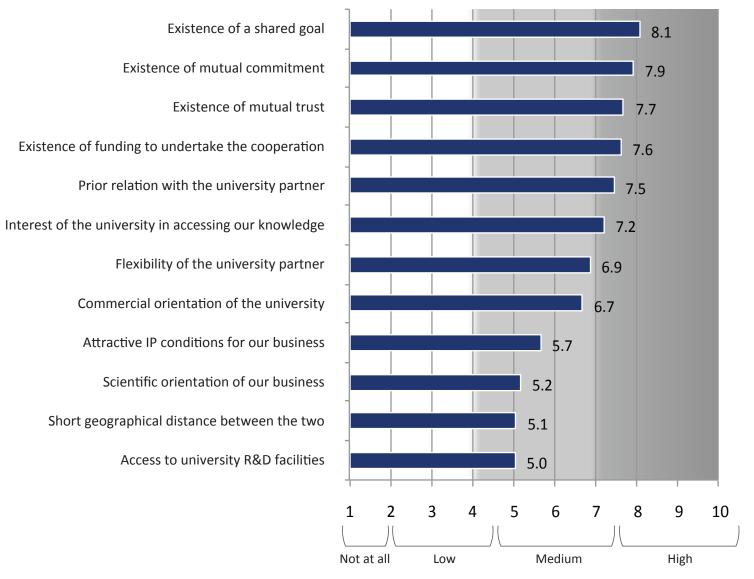
Top UBC facilitators for Australian business

| 1 | Relationship | Existence of a shared goal |
|---|--------------|---|
| 2 | Relationship | Existence of mutual commitment |
| 3 | Relationship | Existence of mutual trust |
| 4 | Funding | Existence of funding to undertake the cooperation |
| 5 | Relationship | Prior relation with the university partner |

The top five UBC facilitators perceived by Australian businesses emerge within the two meta-groups, 'relationship' (four facilitators) and 'funding' (one facilitator). The 'existence of a shared goal' is mentioned as the most prominent facilitator (mean of 8.1 on 10-point scale), followed by the 'existence of mutual commitment' (7.9), and 'existence of mutual trust' (7.7). The 'existence of funding to undertake the cooperation' came fourth (7.6), followed by 'prior relation with the university partner' (7.5), another *relationship* facilitator.

Drivers fostering UBC

Facilitators of UBC



While personal relationship facilitators bear considerable importance in the development of UBC in Australia, a number of other attributes also emerge as enablers. Specifically, 'interest of the university in accessing our knowledge' and 'flexibility of the university partner' also emerged as relevant. Conversely, the factors 'access to university R&D facilities' (5.0), 'short geographical distance between the two organisations' (5.1) and the 'scientific orientation of our business' (5.2) scored lowest as facilitators of cooperation, although still of medium importance.

Motivations for UBC

Motivations for UBC highlight the reasons why Australian businesses collaborate with university.

They provide key information about the outcomes that the businesses seek from their collaborative activities relating to education, research, valorisation and management. The ability of the collaboration to achieve these outcomes will have a substantial influence on the businesses' assessment of the success of their collaboration.

Top UBC motivators for Australian business

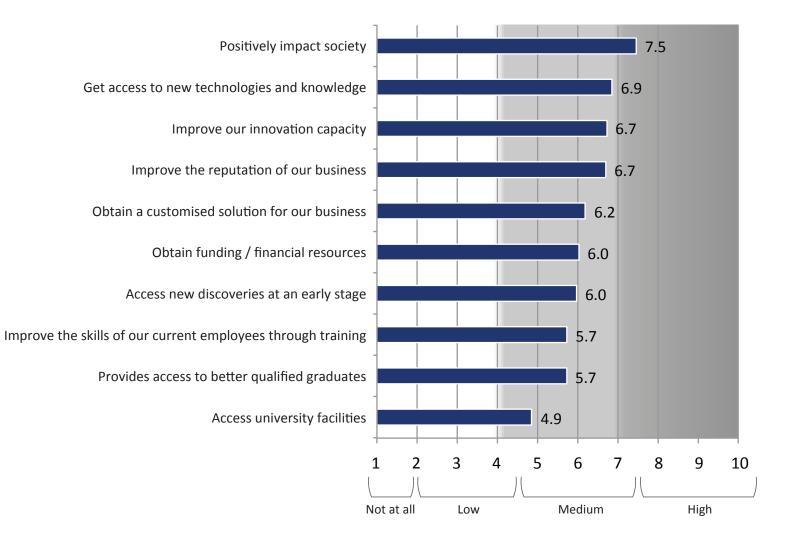
| 1 Society | Positively impact society |
|-------------------|---|
| 2 Innovation | Get access to new technology and knowledge |
| 3 Innovation | Improve the reputation capacity |
| 4 Competitiveness | Improve the reputation of our business |
| 5 Competitiveness | Obtain a customised solution for our business |

The motivators rated most highly by businesses are classified into three metagroups, namely society, innovation, and competitiveness. In particular, businesses are motivated to cooperate with universities to impact society (mean of 7.5 on 10-point scale), get access to new technologies and knowledge (6.9), and improve their innovation capacity (6.7).

Furthermore, they are motivated by the possibility of improving their reputation (6.7) and obtain a customised solution (6.2). On the other hand, access to university facilities emerges as the least relevant motivator for engaging with universities.

Motivations for UBC

Motivations for university – business cooperation



Benefits of cooperation

Benefits are the perceived positive outcomes (financial and non-financial) from undertaking UBC for the different stakeholder groups that may participate in UBC. These perceptions are important to understand, as they can influence business decisions, such as whether or not to cooperate with a university and/or which UBC activity to undertake.

Benefits from university – business cooperation

| Βι | isinesses who cooperate said: | Businesses who do not cooperate said: |
|----|---------------------------------|---------------------------------------|
| 1 | Universities | Universities |
| 2 | Society (generally) | Students |
| 3 | Students | Academics |
| 4 | Businesses | Government / public authorities |
| 5 | Academics | Society (generally) |
| 6 | Government / public authorities | Businesses |

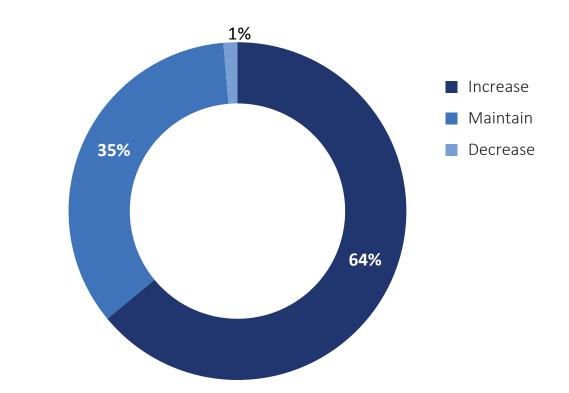
Perceptions regarding benefits of UBC differ depending on whether or not the business currently cooperates with universities.

While both groups of businesses nominate universities as the major beneficiaries of UBC, perceptions regarding benefits for business and society differ.

Businesses that do not cooperate with universities perceive their businesses to benefit least from UBC. Such perceptions are likely to provide one reason for why they refrain from cooperating with universities.

In addition, businesses that cooperate perceive their cooperation with universities to have wider benefits to the society in general, in contrast to businesses that do not cooperate. With impact on society shown as the strongest motivator for businesses to engage in UBC, this perception also deserves attention.

Future intentions



In a vote of confidence in UBC, 99% of businesses in the sample that cooperate with universities indicate that they plan to maintain or increase their cooperation with universities, with only 1% planning to reduce it.

Willingness to recommend UBC

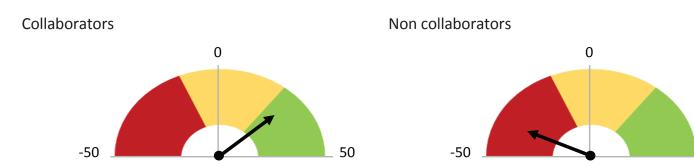
Respondents were asked how likely it would be that they would recommend to a business colleague to engage in R&D / E&T related UBC, using the *Net Promoter Score* metric, a proxy for customer satisfaction.

50

Willingness to recommend R&D cooperation with universities

| | Detractors | Passives | Promoters |
|--|------------|----------|-----------|
| Business cooperating with universities in R&D | 17% | 40% | 43% |
| Business <u>not</u> currently cooperating with universities in R&D | 57% | 28% | 14% |

Satisfaction with R&D cooperation with universities (net promoter score)



Cooperation experience matters, as businesses with experience in cooperation are more likely to promote R&D cooperation with universities. The results indicate a clear difference between cooperating and noncooperating businesses towards the promotion of R&D activities. A higher percentage of those that do not cooperate act as detractors (57%), compared to those who cooperate (17%).

Similarly, 43% of the cooperating businesses recommend R&D cooperation with universities to others, a higher percentage than those that do not cooperate (14%). Overall, collaborators scored considerably higher (26.4) on the Net Promoter Score metric on the scale of -50 to +50 compared to their non-collaborator counterparts (-42.9). Similar to the business attitude towards R&D cooperation, businesses with experience are more likely to promote E&T cooperation with universities. While 38% of cooperators emerged as promoters of E&T collaboration with universities, only 27% of noncooperators are promoters.

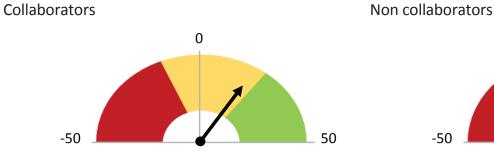
Similarly, fewer co-operators take on the role of detractors (28%) compared to non-cooperators (46%). Yet, perceptions are more closely aligned in relation to E&T as compared to R&D cooperation: Cooperators have a net promoter score of 10, while noncooperators have a score of -18.2.

Willingness to recommend UBC

Willingness to recommend education, recruitment and training cooperation with universities

| _ | | Detractors | Passives | Promoters |
|---|--|------------|----------|-----------|
| | Business cooperating with universities in R&D | 28% | 34% | 38% |
| | Business <u>not</u> currently cooperating with universities in R&D | 46% | 27% | 27% |

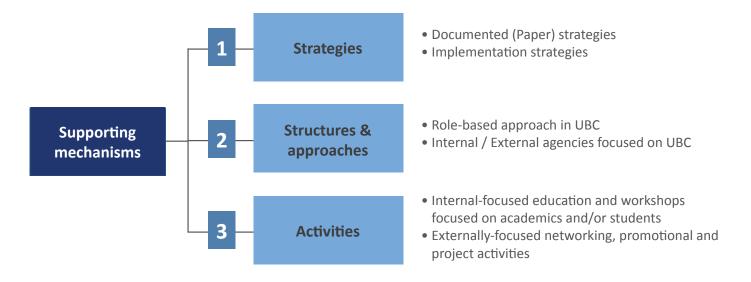
Satisfaction with R&D cooperation with universities (net promoter score)





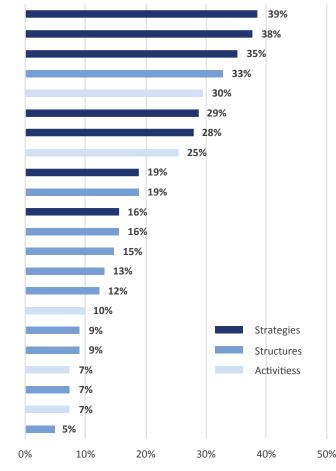
Supporting mechanisms for UBC

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



Supporting mechanisms for UBC

Mechanism development for university-business cooperation



A strategy for collaborating with universities A top-level management committed to UBC The dedication of resources (incl. funding) to support UBC Executive within our business responsible for UBC (e.g. university relations) Networking sessions/meetings for our employees to interact with academics The allocation of sufficient work time for staff to undertake UBC Presentations, lectures or mentoring within the university Student projects with business Featuring university relations prominently in our marketing material The practise of recruiting PhD students/scientists into our business Student-idea competitions Co-working spaces A structured/systematic R&D programme (Cooperative) Research institutes Lifelong-learning programmes **Employment fairs** Science/Technology Park precincts Joint laboratories Academic-idea competitions

Funding of adjunct positions or Chairs within a university

Recognition for UBC activities e.g. awards

Filling of Professor in practice positions within a university

% of respondents

Respondents were asked to what extent various supporting mechanisms exist in their organisation. These mechanisms comprise strategies, structures and activities.

Businesses seem to adopt a range of supporting mechanisms in their interaction with universities. A strategy for collaborating with universities emerges as the most prominent mechanism, employed by 39% of businesses in the sample. A similar percentage of businesses confirm the existence of top level management commitment to UBC (38%) and the dedication of resources (35%).

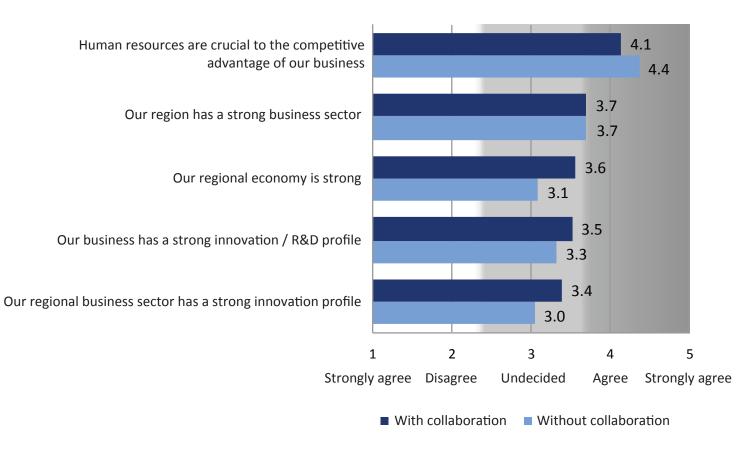
The types of mechanisms most commonly employed are *strategic* mechanisms, representing six out of the first ten mechanisms. Despite their potential short-term impact, *activities are* reported to be the least common group of mechanisms.

Supporting environment

Respondents were asked to indicate their perception of the environment in which they operate.

This is measured by their agreement/disagreements with the following statements.

How supportive is your organisations and environment for UBC?



Perceptions regarding the environment are relatively similar between those businesses cooperating and those not cooperating with universities.

They both see human resources as crucial to the competitiveness of their business and qualify their business sector as strong, although a lower perception emerges regarding the sector as innovative. Overall, businesses perceive most of their UBC capabilities in the medium range, although cooperating businesses have higher perceptions of their UBC capabilities than non-cooperating ones.

In particular, cooperating businesses see a clear role for UBC, with the three highest statements relating to their 'belief in our innovation efforts' (mean of 7.5 on 10point scale), 'our business has a lot to offer to universities in developing and delivering education' (7.3), and 'our business has the capability to absorb the knowledge and technology coming from university' (7.3).

Yet, the results indicate that more needs to be done in developing (perceived) skills and knowledge of businesses in relation to UBC procedures and processes and in creating a greater understanding of what universities want from collaboration.

UBC capabilities

Respondents were asked questions relating to their perceived capabilities regarding UBC

Our business believes that universities can play a very important role in our innovation efforts

Our business has a lot to offer to universities in developing and delivering education and training

Our business has the capability to absorb the knowledge and technology coming from universities

Our business has a lot to offer to universities in research

Our business has sufficient university contacts and relations that we could approach for collaboration

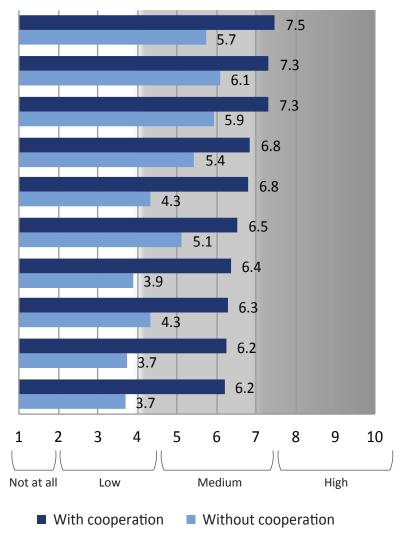
Our business believes it is our responsibility to collaborate with universities in education

There is sufficient support within our business to undertake UBC

Our business believes it is our responsibility to collaborate with universities in research

Our business has sufficient knowledge of what universities want from collaboration

Our business has sufficient skills and knowledge of UBC (including the procedures and processes)





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Final Note

This report provides a HEI perspective on universitybusiness cooperation (UBC), drawing on a survey of Australian businesses conducted late 2016 to early 2017. While acknowledging limitations relating to the generalisability of the results due to the non-random nature of the sample, the results provide positive signs both of the present and for the future, while also providing an indication as to areas requiring future development.





Science Marketing______



Background

This report is part of the Global University-Business Monitor initiative, a global study into university engagement and cooperation between university and business. The study is already the largest study into university engagement worldwide running in more that 50 countries world since 2011. Further information can be found at <u>www.uni-engagement.com</u>