Australian Government
Department of Education, Skills and Employment

Higher Education Research Commercialisation IP Framework

Consultation paper

We are seeking views on developing a framework for intellectual property (IP) management and negotiation in higher education research commercialisation (HERC) to incentivise and increase partnerships between businesses and universities. The issues, rationale and key design elements of a HERC IP Framework including standardised agreements are set out in this consultation paper, with some discussion questions intended to guide the submission of your views. A summary of questions is in Attachment A.

The consultation paper was prepared by the Department of Education, Skills and Employment (DESE) with guidance from a working group including people with knowledge and expertise in research commercialisation from the perspectives of IP law, IP managers, university researchers, university technology transfer offices, large and small business, startups, investors and government.

Please email your submission (of up to 1,500 words) to DESE at urcs@dese.gov.au

Please advise in your email whether you consent to your submission being made publicly available. Submissions that do not state that they can be made publicly available will not be published to the department's website.

Submissions on the HERC IP Framework consultation paper will close at 10 am AEST 18 October 2021

Submissions and input from stakeholders will be used to refine a HERC IP Framework that outlines terms, agreements, and clauses. The HERC IP Framework will be presented to The Hon Alan Tudge MP, Minister for Education and Youth later in the year for consideration and decision on the next implementation steps.

"We want to provide a platform and a pathway for our talented researchers to partner with you, with businesses all around the country and to apply their intellectual firepower as research entrepreneurs."

- The Hon Scott Morrison MP, Prime Minister, virtual address to the Business Council of Australia AGM, 19 November 2020

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Introduction

Prosperous businesses, whether large corporations or small startups, create value through innovation. Harnessing our world-leading university research through commercialisation and collaboration will give our businesses a competitive edge, attract investors and ensure all Australians benefit from our great ideas.

Definition

Research commercialisation is 'a collaborative, creative endeavour that translates knowledge and research into impact in society and the economy' (Association of European Science & Technology Transfer Professionals 2020).

Improving research commercialisation to secure Australia's economic and industrial future is a top Australian Government priority. Commercialisation yields profit, attracts international investment, inspires new businesses, creates jobs, and produces social and economic benefits.

> "We want and need our universities to play a bigger role [in setting a higher trajectory for this country's economic growth]. To not just produce brilliant pure research, but to work more with businesses and governments to translate this research into breakthrough products, new businesses, and ideas to grow our economy and strengthen our society."
>
> - The Hon Alan Tudge MP, Minister for Education and Youth, speech at the University of Melbourne, 26 February 2021

In the 2020-21 Budget the Australian Government provided $5.8 million to scope a University Research Commercialisation Scheme to better translate and commercialise university research outputs. Over 80 per cent of University Research Commercialisation Scheme public consultation submissions raised IP-related issues such as difficulties in negotiating IP terms and agreements.

While current, this problem is not new. Barriers to negotiation on IP include lack of money, time and expertise on both sides and lack of understanding of each other's needs and objectives (Innovation and Science Australia 2016). This translates into difficulties in research commercialisation and lost opportunity for all Australians.

> "Industry faces a time burden in having to deal with each university differently and forming agreements across universities in alliances and collaborative efforts is very difficult. Australia needs to move to a common model for university focused commercialisation for all universities to adopt. These efficiencies in policy are needed to give industry and private investors confidence to access Australian university research capabilities."
>
> - The University of Queensland, submission to the University Research Commercialisation Scheme public consultation, April 2021

This consultation paper sets out a vision for a HERC IP Framework to build trusted relationships between universities and industry that will deliver economic and social benefits for Australia. IP includes IP rights such as patents, designs, trade marks, plant breeder's rights and copyright, as well as trade secrets.

The HERC IP Framework will provide standardised IP licensing and contractual agreements to establish a strong foundation for negotiating and managing successful university-industry collaboration and partnerships. The HERC IP Framework will facilitate the initiation, development, and sustainability of commercialisation connections between universities and businesses.

Australian research commercialisation and collaboration

Australian universities produce a substantial volume of outstanding research. Almost 90 per cent of Australian research is rated by Excellence in Research Australia at, or above, world standard, with research strength across many fields including medicine and health sciences, biological sciences, engineering, agriculture and archaeology (DESE 2020).

The problem

While Australia performs well in knowledge creation and some universities have a demonstrated focus on improving commercialisation, there is still much to be done in translating more knowledge into new products and services, new businesses and other innovations. Successful commercialisation is underpinned by successful university-industry collaboration.

The 2020 Global Innovation Index (Cornell University, Institut Européen d'Administration des Affaires & World Intellectual Property Organization (WIPO) 2020) highlights a serious disconnect between Australia's research and development sector (15th) and university-industry research collaboration (39th). Currently, only two per cent of innovating businesses (large or small) collaborate by co-filing patents with publicly funded research agencies (PFRAs), primarily the Commonwealth Scientific and Industrial Research Organisation (CSIRO) (Department of Industry, Science, Energy and Resources (DISER) 2021a), and businesses are more likely to collaborate with other businesses than with universities (George and Tarr 2021).

Collaboration varies greatly across technology fields. Most collaboration in patent co-filings occurs in macromolecular chemistry, polymers, biotechnology and optics, but in technology areas such as mechanical elements there is little to no reported collaboration at all (DISER 2021a). In sectors such as medical sciences, the level of investment to take a product to market means commercialisation is often the only way to ensure breakthrough discoveries are developed for human benefit.

The potential

While some universities have delivered great commercialisation outcomes over the last 20 years, there is considerable scope for improvement across the whole sector. Understanding and addressing the underlying causes of the discrepancy between research excellence and unsatisfactory performance in commercialisation and collaboration offers great potential for a solution to build a stronger bridge between universities and business and deliver major benefits for Australia.

There are several Australian Government programs supporting joint innovation, such as the Cooperative Research Centre (CRC) – Projects (CRC-P) Grants program and the Australian Research

Council (ARC) Linkage Program, which can work more efficiently and effectively to improve commercial outcomes from university-led collaboration with industry.

Almost all university strategic plans commit to business innovation and collaboration. Similarly, many businesses say they would like to work more closely with universities. But it is challenging for universities and business to work together without a starting point for connection and negotiation.

Commercialisation also needs private investment. International investors and the growing Australian technology investment sector are interested in Australian research. The certainty of consistent agreements will reduce costs and risks and make investing in Australian research more attractive.

The constraints

Consultations and commentary have identified IP-related barriers to effective commercialisation. The HERC IP Framework will be designed to help overcome these barriers, where possible.

Table 1. IP-related constraints to successful commercialisation and collaboration

Constraint	Description
IP rights and access	IP rights and access were raised extensively in the University Research Commercialisation Scheme consultation process and are discussed in detail below.
IP valuation and royalties	Businesses think universities overvalue their technology, research and IP, and universities think businesses undervalue the technology and the university's pre-existing IP. This means committing to an upfront royalty payment may be difficult.
Confidentiality before publication	If not appropriately managed, publication requirements of a university can conflict with confidentiality requirements of businesses in securing IP rights. There are specific challenges for PhD students working on projects under deeds of confidentiality.
Contractual confidentiality obligations	Conversations about confidentiality must be at an early stage of project design to establish if the project will fit with university and business policies on publication of research results. This is critical if research outputs need to be held as trade secrets or by government for security considerations.
Warranties and liabilities	There can be differences between what each party considers reasonable in terms of warranties about performance of IP that they should provide, and what warranties they expect in return. There can be concerns about who carries liability, scope of indemnity, and capping liability, as well as whether a party is able to cover the agreed indemnity.
Cost	Significant costs to both universities and businesses can be incurred for lawyers and patent attorneys. This can be a deal breaker for SMEs. There are also opportunity costs of diverting staff, loss of timeliness, principal researcher funding drying up, and strategic costs (one party 'swearing off' the other for future collaboration).
Timeliness	Significant problems arise when negotiations are drawn out and cycle times are not specified or adhered to. There are also long lead times in complex research projects, particularly in basic or discovery research projects.
Materiality	Efforts to arrive at a comprehensive contract can be seen as time-wasting and harm trust between parties. Parties can differ in their basis for making decisions on materiality, from a risk management-based approach with contingency planning, to a worst-case-scenario approach.

Table 1 (continued). Constraints to successful commercialisation and collaboration

Constraint	Description
Research performance incentives	Measuring research success by academic journal publication, which is required for researcher and university rankings and grant funding, is widely perceived as a constraint on commercialisation activity. Despite this, many businesses welcome academic publication as a measure of leading-edge research.
Communication	There are difficulties due to a lack of effective communication channels and procedures (nominated personnel, timeliness, frequency of contact and establishing relationships for potential licensing or collaboration). This compounds the other constraints.
Asymmetry between parties	A common perception is that some universities are in a poor bargaining position. Businesses can also feel out of their depth in navigating the system and finding people with relevant knowledge.

Key issues to address

While the HERC IP Framework will attempt where possible to address the constraints above, the University Research Commercialisation Scheme consultation process additionally highlighted a number of key issues that are critical to improving the negotiation process. These key issues listed below will be addressed in the HERC IP Framework standardised agreements.

Background (pre-existing) IP

Failure to address background IP in research collaboration will affect the IP in later research results of a collaborative venture. Problems arise from background IP that:

- has not been clearly defined and secured
- does not have appropriate terms of use
- is weak or has technical or legal defects.

Freedom to operate issues from background IP are a particular problem with 'fluid' multiparty ventures in which new parties enter and others exit quickly. The risk of infringement is increased because there is little time to do comprehensive freedom to operate checks.

Negotiation around background IP tends to centre on issues of description and identification, confidential information, due diligence, scope of access and warranties. Identifying potential background IP of the collaborators or third parties is critical at an early stage.

Agreements should recognise that companies can also contribute significant background IP and must be confident that collaboration will not undermine their commercial position.

Foreground (arising) IP

Many issues concern access to IP created from a research collaboration, such as:

- Ownership allocation, where several parties want ownership
- A tendency of parties to want ownership and reluctance to agree otherwise
- Flow-on requirements of IP access in ongoing research or commercial projects or programs

- Access to ongoing improvements in IP
- A party ceding ownership and intending to later negotiate an equivalently broad licence, leading to premature discussion of commercialisation issues
- Differences in business IP strategies.

Establishing proper access to foreground IP can be more important than who owns the IP. Clear access rights to foreground IP through ownership or licensed rights are critical for startup companies looking to raise investment to further develop the IP.

Access rights to future improvements of foreground IP needs careful consideration by all parties and is intended to be covered in standard agreements. It is important that flexibility is built in to allow ownership by the party that is best placed to protect and defend the IP when agreed by both parties.

Commercialisation

The HERC IP Framework will capture different commercialisation pathways. There are several issues concerning how IP should be commercialised. Common commercialisation strategies consider:

- Licences, options or assignment (LOA) to a startup or existing business
- How broad the licensed field of use should be
- Whether a licence to commercialise should be included in the original research agreement, including if it will be dependent on performance
- What the consequences of non-performance might be
- Markers for performance, calculation, and benchmarking.

Parties may become trapped in discussing commercialisation arrangements before value of research outcomes is established, so it can be difficult to agree on the value each will add to the project.

A new vision for IP commercialisation and collaboration

The proposed new HERC IP Framework envisions transferring publicly funded research results into breakthrough products and new businesses to grow our economy and strengthen our society. It will ensure our researchers and universities are appropriately rewarded for their discoveries and their engagement with business, and our businesses have certainty to back their investment.

To achieve this vision we must capture our commercialisation and collaboration potential and work through the constraints that stand in the way of achieving it. The HERC IP Framework, implemented through standard agreements, will provide a clearer pathway through the complexity of IP licensing and assignment processes. It will introduce certainty, clarity and confidence in the system and build engagement and trust between collaborating parties.

Around the world, governments and university groups have prepared standard processes and agreements to assist negotiations that involve IP. International standardised agreements for university knowledge transfer include the UK's Lambert IP Toolkit and Knowledge Transfer Ireland’s Model Agreements.

This vision for IP commercialisation and collaboration is reflected in the HERC IP Framework design elements detailed below.

1 Key design elements

1.1 What the HERC IP Framework will do

The HERC IP Framework will be a new model to enable Australian university-led research commercialisation and collaboration. It will be developed based on several critical elements and seek to achieve harmonisation with accepted international best practice.

Standardisation to facilitate commercialisation process quality, efficiency and effectiveness

The HERC IP Framework will guide the efficient and effective management of the IP commercialisation process from invention and discovery, through filing IP rights (IPRs), engagement with businesses, securing legally binding IPR licence and use agreements, to research collaboration (e.g., for scale-up or prototyping), and finally to adoption and use in business. Specifically, standardisation will:

- Cut complexity and transaction times/costs
- Provide an easier entry point for negotiations - particularly important for SMEs, individual researchers and startups
- Promote best practice.

Align practices and procedures across institutions

The HERC IP Framework will provide consistency and coherence in commercialisation practice for university researchers, businesses, and Australian Government agencies involved in commercialising publicly funded research. In time, the HERC IP Framework will be available for use by other organisations that commercialise research in collaboration with university researchers but are not within scope of the HERC IP Framework.

Provide process maps as reference points

The HERC IP Framework will include process maps setting out commercialisation activities and decision points and providing a basis for assurance that the necessary steps for successful commercialisation have been properly done.

Deliver strategic, economic and social benefits

Standardisation of documents is taking place across the industrial landscape as technology advances and the complexity of operations increases. Businesses standardise processes to reduce transaction costs and risks, increase transparency and accountability, and improve organisational performance in terms of quality, service and customer satisfaction.

Improved commercialisation performance will deliver economic and social benefits through the more effective commercialisation of publicly funded research.

Discussion questions

1. What would ensure the HERC IP Framework is applied consistently across universities (research institutes/centres, colleges, faculties, departments and researchers) and industry?
2. What parts of standard agreements must allow changes to accommodate variation? Why? How?

1.2 Proposed framework scope

The scope of content

The content of the HERC IP Framework will include processes for securing IP and IPRs and contractual obligations in commercialisation agreements. It will set out standard terms across all agreements.

A distinction will be made between processes and agreements. Processes reflect a suite of activities, with a beginning and an end, to deliver a desired outcome or result. An agreement is a document that represents a contract, or set of promises, between two or more entities creating mutual obligations that can be enforced by law.

Processes

The HERC IP Framework will cover key processes including, but not limited to:

Invention identification and disclosure
IP commercialisation options – such as exclusive and non-exclusive licensing or assignment
Copyrighted software licences
Materials licences, including biological research materials

The HERC IP Framework will provide process maps for key processes to act as guidance. Use of these process maps will not be mandatory.

Agreements and contracts

The HERC IP Framework will include critical agreements and documents, including:

Research agreements between universities and collaboration partners
Collaboration agreements for projects with multiple collaboration partners
Option and/or licence agreements
Associated agreements such as variations and confidentiality or nondisclosure agreements
Material transfer agreements
Contract research and fee for service agreements
Short-form licence and assignment agreements
Copyright licences
New company formation agreements

The proposed list of HERC IP Framework agreements is set out at Attachment B.

Dispute resolution

Identifying areas where disputes may arise can help plan to avoid disputes later on and establish effective mechanisms to resolve such disputes. Alternative dispute resolution methods include mediation and arbitration, which are cheaper and quicker than legal action.

The recent *Patent Accessibility Review* (DISER 2021b) recommended DISER and IP Australia include agreement to a dispute resolution method in the Australian IP Toolkit model contracts. The HERC IP Framework agreements will include terms on dispute resolution.

Terms and terminology

The HERC IP Framework agreements will use consistent and clearly defined terms and terminology. The intent is to base all templates on a common set of terms and terminology, with modifications as appropriate for the nature of the document. A key aspect of difference will be a set of 'fast track' shorter form documents to streamline low risk or low value transactions. Terminology will be standardised to help avert potential ambiguity or misunderstanding.

Consistent terminology will not only make documents more accurate and efficient but will also save time and money in the process of completing transactions. Words and terminology will be explained and defined in the agreements. A broad range of terminology is defined in the following glossary.

Guidance and educational material

The HERC IP Framework will provide guidance and educational material to assist users to understand IP issues in a common glossary. Each word or phrase will have only one meaning in a research commercialisation and collaboration setting. This material will address how to start the negotiation process and navigate through the HERC IP Framework.

The material will target the needs of different audiences, including researchers, technology transfer and research office professionals, startups, SMEs, large businesses, investors and innovation intermediaries.

The material will reference a wide range of trusted publicly available resources from IP Australia, Knowledge Commercialisation Australasia, the Department of Industry, Science, Energy and Resources, and WIPO. Development of new material will be guided by the UK's Lambert IP Toolkit and Knowledge Transfer Ireland's guidance material.

Scope of HERC IP Framework coverage

It is intended that the HERC IP Framework will be rolled out progressively to cover:

- All projects that directly receive research funding from an ARC or DESE research programs (e.g., ARC Linkage and DESE administered programs) when engaging in research commercialisation activities. Existing contracts will continue, including extension provisions, under a sunset arrangement.

In the next phase of implementation, we will explore whether the HERC IP Framework could be adopted by other relevant departments and agencies with university-led research projects that directly receive public research funding. This would include:

- Funding provided by other Australian Government departments to higher education providers listed in Table A and B of the *Higher Education Support Act 2003* (HESA) for research and development and innovation purposes that involve engaging in commercialisation activities for university-led research activities. These other departments would include, for example, the Department of Agriculture, Water and the Environment; the Department of Health; the Department of Industry, Science, Energy and Resources; and the Department of Infrastructure, Transport, Regional Development and Communications.
- PFRAs and the 15 Rural Research and Development Corporations.
- Grants administered by the National Health and Medical Research Council (NHMRC).

In instances where funding involves underlying university participation, but where universities are not actively named as primary participants but is not university-led (e.g. Cooperative Research Centres) the HERC IP Framework would not be a mandatory condition of funding.

It is intended that, over time, the HERC IP Framework will also be available for research grants and contracted research being conducted by businesses, particularly SMEs who may lack access to suitable agreements.

It is also the intention that existing partnerships between industry and higher education providers will not have to be subject to the HERC IP Framework provided there is a written agreement by both parties to continue making agreements with the same IP provisions as existing deals.

Organisations and businesses outside this scope may access the HERC IP Framework agreements and guidance material to facilitate negotiation. The existing Australian IP Toolkit provided by DISER and IP Australia also provides template agreements that may be varied to suit a range of purposes.

Scope of users

The HERC IP Framework will require engagement by all participants – researchers, research offices, technology transfer offices, Vice-Chancellors, Deputy Vice-Chancellors Research (Research and Innovation), chief finance officers, directors of research institutes and centres, technology transfer companies established as related entities, patent attorneys and IP lawyers, and innovation intermediaries.

Scope of the fields of research

The HERC IP Framework is intended to accommodate specific issues across different fields of research.

Table 2. Examples of IP issues specific to certain fields of research

Examples of field of research	Examples of issues
Agriculture – plant and animal sciences, plant breeding and gene technologies, AgTech	Long timeframes, complex background IP, regulatory approval processes
Medical and clinical sciences – particularly where an end-user is likely to be a pharmaceutical company or medical device company, including a startup	Long timeframes, pharmaceutical patent extension of term, regulatory approval processes
Engineering and technological sciences – artificial intelligence, robotics, analytics, computer vision	Patentability issues, copyright issues
Economics and finance – economic methods, econometrics, analytics, FinTech, software products	Patentability issues, copyright issues, trade secrets
Arts and creative practice – artistic, musical, film and literary works	Copyright issues

Scope of pathways to market

The HERC IP Framework will refer to alternative pathways to market. Pathway selection should be based on best overall impact and what will guide the best choice of commercial parameters. The pathways covered in the HERC IP Framework, their associated types of agreements and scope for standardised templates or clause banks are outlined below.

Table 3. Pathways to market

Commercial pathway	Agreements	Format
Government grant funded research (self-commercialised)	Grant agreement	Template
	Inter-institutional agreement with multiple universities or institutions	Template
Assign IP	Deed of assignment	Template/clause banks
Licence IP – exclusive (may have an assignment trigger)	Licence agreement	Clause banks/standard definitions
Licence IP – non-exclusive	Licence agreement	Clause banks/standard definitions
Contract research	Research agreement	Template
Collaborative research	Collaborative research agreement including multiparty agreements	Template
Research with option to licence	Research agreement with an option to licence	Template/clause banks
	Licence agreement	Clause banks/standard definitions

Commercial pathway	Agreements	Format
Joint venture	Unincorporated joint venture agreement	Template/clause banks
Spin-out or startup	Shareholder agreement	Clause banks/standard definitions
	Subscription agreement	Clause banks/standard definitions
	Constitution	Clause banks/standard definitions
	Licence agreement	Clause banks/standard definitions

Attachment C sets out a matrix covering nine pathways to market used in universities, with specific characteristics, features and considerations about choosing a particular route.

All pathways should address contributions made in kind, cash, royalties and equity. Pathway design should incorporate an objective assessment of the value of contributions.

Indigenous Knowledge

The scope will include consideration of Indigenous Knowledge. Indigenous Knowledge is an important asset belonging to Aboriginal and Torres Strait Islander people, their communities and their organisations or businesses. Indigenous Knowledge can reflect and identify a community's history, cultural and social identity and its values.

Indigenous Knowledge covers a range of knowledge and culture held and developed by Aboriginal and Torres Strait Islander peoples, including Traditional Knowledge (know-how, practices, techniques and skills), and Traditional Cultural Expressions (visual imagery, performance, design, words and names).

The misuse of Indigenous Knowledge can be disrespectful and offensive to Indigenous people. It can undermine cultural practices and may also affect the economic opportunities available to Indigenous communities (IP Australia 2021).

Some Indigenous Knowledge is regarded as secret and sacred and should not be used commercially at all. Some other knowledge could be used commercially, but consent from the Traditional Owners must be sought, and protocols attaching to its use should be observed.

Many issues concerning the use of Indigenous Knowledge can be addressed by obtaining consent from the Traditional Owners. 'Free, prior and informed consent', or FPIC, is a principle established under international human rights law. It refers to conditions where people can negotiate the terms of an action or policy which will directly affect their interests, and they have the option to give or withhold their consent (IP Australia 2021).

Obtaining consent before proceeding to use Indigenous Knowledge is good practice that helps avoid causing cultural harm or offence.

Discussion questions

3. What should be in and out of scope for the HERC IP Framework to be useful, reasonable and practical?
4. What are the strengths and limitations in the current Australian IP Toolkit that could be addressed in HERC IP Framework?
5. How could the demarcation between the HERC IP Framework and the Australian IP Toolkit be best set out to avoid confusion about applicability for different transactions?
6. What information should be in the process maps, guidance and educational material? What formats are best?
7. What other processes and agreements should be included in the HERC IP Framework?
8. Should the HERC IP Framework apply to (a) only ARC or DESE research programs; or (b) also extend to publicly funded research at federal level through departments, Rural Research and Development Corporations, the NHMRC and PFRAs?
9. What specific issues in different fields of research should the HERC IP Framework include?

1.3 Target audiences

In developing the HERC IP Framework, DESE will engage with universities, businesses and peak associations to help create awareness and understanding of the HERC IP Framework and build acceptance and commitment. The target audience is segmented broadly as follows.

Universities

Larger universities that already have substantial research commercialisation capability and generate significant revenues from IP commercialisation
Smaller universities that would benefit from simple procedures and documentation
University peak bodies/associations, e.g. Go8, Australian Technology Network, Innovative Research Universities, Regional Universities Network, Knowledge Commercialisation Australasia

Business

Large Australian and multi-national businesses with established R&D divisions and in-house lawyers and patent attorneys; some already have strong relationships with universities – particularly pharmaceutical companies
Small businesses, particularly new technology-based businesses, who would like access to IP that they need or know about but have no in-house support and weak relationships with universities
Representative business associations and chambers of commerce, including, for example, the Business Council of Australia, the Australian Chamber of Commerce and Industry, Australia Business Ltd, and the Australian Information Industry Association

Other research organisations
PFRAs – CSIRO, Australian Nuclear Science and Technology Organisation (ANSTO), Australian Institute of Marine Science (AIMS), Geoscience Australia
Medical Research Institutes
Rural Research and Development Corporations
Australian Government departments and agencies administering research programs

Technology investors
Australian and international venture capital / private equity firms that invest in university startups
Australian seed and startup investment firms
Corporate venture capital investors, including large technology firms and banks
Large super funds that invest directly in technology firms
Business 'angels'
Business associations involved in this segment, including the Australian Investment Council (previously the Australian Venture Capital and Private Equity Association)

Discussion questions

10. What unique aspects of specific sectors and commercial situations should be accommodated in the HERC IP Framework? Why? How?
11. What would make the HERC IP Framework attractive to collaborating and investment partners?

2 Key parameters guiding development and implementation

2.1 Foundation principles

The HERC IP Framework, while separate from the National Principles of Intellectual Property Management for Publicly Funded Research, is intended to align, where feasible, with the intent of its key provisions. Similarly, the Australian IP Toolkit provided by DISER and IP Australia will also be considered in the construction of the HERC IP Framework.

2.2 IP policy protocols

The HERC IP Framework will incorporate best practice from other countries, as well as aspects of the National Principles and the Australian IP Toolkit within the following proposed IP policy protocols:

- Licence and agreement forms and documents will be standardised, consistent, and mandatory (as set out in the section 'Scope of HERC IP Framework Coverage')
- Terminology will be consistent and written in plain English
- Completed forms and documents will be capable of electronic completion and lodgement
- Formats will meet commercialisation characteristics across research fields
- Formats will avoid divergence through 'special cases' of standardised forms for the same research commercialisation pathway
- Provision will be made for the inclusion of standardised clauses and addenda
- There will be flexibility for more complex, higher-value arrangements.

Where appropriate the HERC IP Framework will draw on the *Intellectual property principles for Commonwealth entities* (Department of Infrastructure, Transport, Regional Development and Communications (DITRDC) 2019), which provide guidance on how Australian Government agencies should manage their IP and how different types of IP should be used.

2.3 Matters concerning cost and risk

The HERC IP Framework must enable universities, businesses and investors to manage the IP commercialisation and collaboration process with:

- Minimal cost – economic use of university and business resources and efficiency in resource use
- Acceptable risk – requiring risk awareness and strategies to minimise and mitigate risk.

2.4 Dual Streams of Agreements

The HERC IP Framework will recognise and incorporate a choice of two separate streams of agreements. These streams would relate to either:

- Simple agreements with few anticipated complications. The HERC IP Framework will require the use of standardised agreements with relatively little room for negotiation beyond clarifying commercial details. This would be mandated for lower value contracts under $100,000.
- More complex agreements, or agreements with higher commercial value of over $100,000 would allow greater flexibility in the use of the standardised agreements. The use of a more flexible approach would be a matter to be addressed in the negotiation process.

Flexibility could be introduced where standardised agreements would be considered as 'deal breakers' in the negotiation process by both parties, and they are valued at above $100,000. The only allowable exception to this rule would be for multi-party agreements which would also be able to use the more flexible, complex agreements for any value.

Flexibility in the structure of agreements will also allow for bespoke provisions to include unique parameters about how the outcome will be delivered. This reflects the complexity of IP commercialisation. The more complex agreements will be a starting point for negotiation and will only be intended to cover some agreed terms on key issues to reduce transactional barriers.

2.5 Significant Background IP

A party's background IP used in a project will constitute 'Significant Background IP' where it is the subject of a granted patent and/or the project substantially relies on this party's background IP and without it the project would be difficult or impossible to carry out.

The definition of what constitutes Significant Background IP will be agreed by the parties during negotiation and recorded in the collaboration agreement.

2.6 Ownership and assignment of foreground IP

The default position for standardised agreements within the HERC IP Framework is that universities will have ownership of foreground IP, with the degree of commercial rights of a business, investor, or venture capital partner being contingent on the proportion of the funding, in-kind support and Significant Background IP that is brought to the project.

Standardised agreements will contain triggers recognising that the right of assignment or exclusive access (or non-exclusive licence if more appropriate) may be provided to the non-university participant subject to the extent of in-kind support and Significant Background IP provided.

In arrangements where industry provides all or the major proportion of research funds for commercialisation and/or collaboration agreements, or in contract services agreements, the right of assignment/ownership for foreground IP from the project will lie with the industry/investment partner. Flexibility will be incorporated to recognise that in some circumstances it is in the interests of both parties that the university retains ownership where it is best placed to manage the foreground IP.

Non-severable improvements to Significant Background IP should be owned by the party that contributes the background to the project.

2.7 Warranties and liabilities

Universities are not, by their nature, in a position to offer warranties or take on liabilities to the same extent that they are taken on or offered by commercial entities. Therefore, and by their open nature, universities are not in a position to give the same assurances in respect of IP management as a commercial entity can give.

As a licencee has control over the development and ultimate use of the IP, the licencee must take over any liability arising in respect of these activities. It is, however, important that a university give industry an acceptable level of confidence around the management and integrity of publicly funded technology, and that this level of confidence is consistent across the higher education sector.

In particular:

- A university should be expected to warrant that it has entitlement to enter the research contract and will undertake the project with reasonable care
- The results and background IP should be expected to be licensed 'as is' without any warranties as to fitness for purpose
- Universities should not be expected to warrant non-infringement of third-party IP.

Each party should complete a risk assessment to assist in assessing the risks of a project. This will help determine if risk treatment strategies (such as additional insurance) would be appropriate.

2.8 Right to publish

Publication is one of the primary activities of a university, and industry collaborators are well aware that this is an important issue. Moreover, the ARC and other publicly funded granting agencies have requirements in relation to Open Access publication of research output. It is also important for all to recognise commercial pressures. To the greatest extent possible timeframes for publication should align with the timeframe needed to secure IP protection for commercially oriented research.

In line with best practice arrangements from other national IP toolkits, a university provider will have the right to publish their research in all standardised and flexible complex agreements. Notice would have to be provided to the non-university partner before publication. This arrangement does not apply in the case of contract research. Depending on the extent of industry/investment partner funding, and the sector in which the agreement takes place, there will be provisions in which the non-university partner can request delay of publication or removal of specific confidential material if publication will cause acute commercial harm (e.g., when there is a patent application in process).

2.9 Confidentiality

The following guidelines should apply concerning confidentiality:

- Each party would keep confidential information designated as such
- Confidential information would only be disclosed to those authorised to receive it, and only to the extent needed to perform their obligations
- Exclusions would cover reporting to funding bodies and return of information on termination.

A time limit may be imposed on the duration of confidentiality after the project terminates.

Discussion questions

12. What specific activities in your organisation would not be amenable to a standardised agreement?
13. What design aspects – such as a $100,000 investment, or significant background IP – should define the threshold for more complex agreements?
14. What elements must be flexible to prevent barriers in complex, high value agreements? How would these work in practice?

3 Trust and Culture

3.1 The basis of trust

Trust underpins the way people and organisations transact business. Without trust between parties, effective research commercialisation will be difficult to achieve. This requires trust both between

people and in the HERC IP Framework. Trust demands credible, clear and consistent messaging, clarity, accountability and transparency, openness and honesty, and alignment with objectives.

3.2 Building trust between people – creating social capital

Social capital refers to 'features of social organisation, such as networks, norms, and trust, that facilitate coordination and co-operation for mutual benefit' (Fountain 1998). Social capital is the 'glue' that allows physical capital and human capital to work together effectively (ARC 2001), and is essential for building strength in university business collaboration.

Social capital is built at the personal level through people's shared experiences and shared values. Informal linkages and networks can be very effective in developing social capital. There can be tension between informal activities and the need to enter formal contract arrangements, particularly where accountability is required for the use of government funds. In addition, where the contract process is positive, it can assist in generating the social capital required for repeat exchanges and further development of social capital.

Without adequate investment in social capital, existing physical capital and human capital can be under-exploited because there is insufficient trust and shared expectations to overcome the inherent risks in knowledge-based interactions (ARC 2001).

Put simply, if the parties do not have a sufficient foundation of relationship and a shared understanding of each other's values, goals, needs and drivers, this can inhibit both the contract process and the prospects for collaborative success.

Discussion questions

15. Would pre-negotiation tools (such as term sheets or non-binding agreements) help your organisation build trust and confidence in a partnership? What tools would help?

4 Implementation

4.1 Communication engagement and education

Communication and engagement will be delivered through existing DESE capability. This will involve communication with university technology transfer offices and business and will be designed with all users (described above) to create deep understanding of the purpose of the HERC IP Framework, how it is used, and its benefits in increasing Australia's performance in research commercialisation.

Discussion questions

16. What communication and educational subject material would help your organisation in implementing the Framework?

4.2 Implementation timeline

To ensure there is sufficient time for this HERC IP Framework to be implemented for 2022 projects, implementation of the HERC IP Framework will be expedited. However, since this cannot be quickly adopted across the board, a staggered implementation for adoption is proposed.

Dec 2021	HERC IP Framework including standardised agreements is made available for adoption
Jan – June 2022	HERC IP Framework including standardised agreements becomes required for universities as part of legislation for DESE administered funding for research commercialisation
Jan – June 2022	All new programs and program funding rounds arising from this point onwards that directly receive research funding administered through DESE and ARC, including programs arising from the University Research Commercialisation package, when their projects are engaging in research commercialisation activities must be subject to the HERC IP Framework
Dec 2022	All Australian Government programs and PFRAs (excluding DESE and ARC) that adopt the HERC IP Framework will be able to progressively amend funding rules to incorporate the HERC IP Framework for future funding rounds of programs where the HERC IP Framework is applicable (existing contracts will be able to continue, including extension provisions, under a sunset arrangement)
Jan 2023	From this point onwards, all ARC and DESE projects that have university-led research and are within scope of the HERC IP Framework must be subject to the HERC IP Framework For example, the HERC IP Framework would be mandatory for ARC projects awarded from 2023 onwards, subject to caveats relating to extended timeframes of some grant application processes
Jan 2023	Table A and B Higher Education Providers as set out in the *Higher Education Support Act 2003* must ensure IP Policies are consistent with the HERC IP Framework.
Oct 2026	DESE will review and update the HERC IP Framework, where necessary, to ensure currency of the HERC IP Framework and to ensure that the HERC IP Framework is meeting its intended policy intent and positively contributing to the research commercialisation ecosystem

4.3 Governance

The Minister for Education and Youth will be responsible for the HERC IP Framework. DESE will provide policy and administrative support. Other Australian Government departments and agencies will be progressively involved as the rollout of the HERC IP Framework proceeds.

DESE will report on the adoption of the HERC IP Framework for ARC and DESE-funded projects. DESE will also monitor and report on the adoption of the HERC IP Framework as part of internal university policies where applicable (e.g., in university IP policies), and arrange performance monitoring.

Discussion question

17. How can performance of the HERC IP Framework be monitored without an undue administrative burden on users?

Attachment A: Summary of discussion questions

What will the HERC IP Framework do?

1. What would ensure the HERC IP Framework is applied consistently across universities (research institutes/centres, colleges, faculties, departments and researchers) and industry?
2. What parts of standard agreements must allow changes to accommodate variation? Why? How?

Framework scope

3. What should be in and out of scope for the HERC IP Framework to be useful, reasonable and practical?
4. What are the strengths and limitations in the current Australian IP Toolkit that could be addressed in HERC IP Framework?
5. How could the demarcation between the HERC IP Framework and the Australian IP Toolkit be best set out to avoid confusion about applicability for different transactions?
6. What information should be in the process maps, guidance and educational material? What formats are best?
7. What other processes and agreements should be included in the HERC IP Framework?
8. Should the HERC IP Framework apply to (a) only ARC or DESE research programs; or (b) also extend to publicly funded research at federal level through departments, Rural Research and Development Corporations, the NHMRC and PFRAs?
9. What specific issues in different fields of research should the HERC IP Framework include?

Target audiences

10. What unique aspects of specific sectors and commercial situations should be accommodated in the HERC IP Framework? Why? How?
11. What would make the HERC IP Framework attractive to collaborating and investment partners?

Key parameters guiding development and implementation

12. What specific activities in your organisation would not be amenable to a standardised agreement?
13. What design aspects – such as a $100,000 investment, or significant background IP - should define the threshold for more complex agreements?
14. What elements must be flexible to prevent barriers in complex, high value agreements? How would these work in practice?

Trust and culture

15. Would pre-negotiation tools (such as term sheets or non-binding agreements) help your organisation build trust and confidence in a partnership? What tools would help?

Implementation

16. What communication and educational subject material would help your organisation in implementing the Framework?
17. How can performance of the HERC IP Framework be monitored without an undue administrative burden on users?

Attachment B: HERC IP Framework agreements

The proposed HERC IP Framework agreements are listed in Table 4 under a number of categories for the purpose of consultation. The listing is not intended to be exhaustive and DESE welcomes feedback on other critical agreements that should form part of the HERC IP Framework.

Table 4 - List of HERC IP Framework agreement categories

Item	Category	Comment
1.	Research agreements between universities and collaborators	There will be multiple research agreement templates with consistent 'baseline' terms and conditions, and each will address different treatments of IP rights and licensing arrangements.
2.	Collaboration agreements for projects with multiple collaborators including universities	There will be multiple collaboration agreement templates for multi-party agreements that will set out different treatments of IP rights and licensing arrangements.
3.	Associated agreements, including: Confidentiality agreements/non-disclosure agreements Variation agreements	These templates will be developed to align with the HERC IP framework and to reflect standard commercial terms reflected in agreements of this nature.
4.	Commercialisation agreements including: Term sheets Option and/or licence agreements, including to a spin-out company Short form IP licence or assignment agreements under a certain value New company agreements	Commercialisation agreements are intended to provide a framework for parties to negotiate the terms to commercialise the results of a project. Flexibility may be required as investors normally stipulate using their shareholder agreement in return for investment. Universities may sometimes licence to startups with a trigger to assign.
5.	Royalty agreements	The templates will include standard royalty agreements suitable for simple transactions
6.	Material transfer agreements	Material transfer agreements are intended to allow quick and easy access
7.	Contract research/fee for service agreements	Contract research agreements will be available
8.	Copyright licences	Copyright access through licencing may be required

Attachment C: Pathways to market (impact-led)

Pathway	What is it?	Features	Recommended / more likely to be useful	Less likely to be useful
Self-commercialise (grant or self-funded research)	Research organisation (RO) commercialises wholly owned IP on its own	Low documentation burden RO revenue is directly earned from exploitation Ongoing IP maintenance burden/cost lies with RO	When the RO has the capability to commercialise the IP on its own	When the RO does not have the capability to commercialise the IP on its own
Sell IP (assignment)	Assign IP from RO to commercial partner (CP) for a fee	Low documentation burden Generally high up-front price; could include future royalties or milestones due Usually no royalty nor ongoing collaboration nor further R&D Ongoing IP maintenance burden/cost lies with CP RO generally retains no exploitation rights CP has responsibility to commercialise and manage risks; no/low liabilities back to RO	When the IP is wholly owned by the RO When the IP has a high TRL When the IP is not part of a platform or licensing program and not significantly encumbered When CP cash flow is high enough to afford a high up-front price When CP has the resources and strategy to progress the IP to the market/end user	When the IP is part of a platform or significantly encumbered When the IP is not wholly owned by the RO When the IP is low TRL and requires significant further development When the purchaser does not intend to commercialise the IP to the market/end user
Licence IP (exclusive)	RO retains IP ownership and grants exclusive licence to commercialise existing IP from RO to CP Can be in combination with other pathways	Medium documentation burden Medium ongoing administrative burden Upfront payment may be due in return for exclusivity Generally significant ongoing royalties or licence fees Scope of licence generally narrow Ongoing IP maintenance cost generally covered by CP Performance obligations Exclusivity can be ascribed to different fields e.g. commercial and research fields This maximises impact with a platform technology	When the IP is wholly owned by the RO When the IP is high TRL When the IP is not part of a platform or significantly encumbered When the CP business plan demonstrates a high likelihood of success	When the IP is part of a platform or significantly encumbered When the IP is not wholly owned by RO When the IP is low TRL and requires significant further development When the CP does not have the capacity or intention to commercialise the IP
Licence IP (non-exclusive)	RO retains IP ownership and grants non-exclusive licence to commercialise existing IP from RO to CP Can be in combination with other pathways	Medium documentation burden Low ongoing administrative burden Ongoing royalties or licence fees will be lower than for an exclusive licence Scope of licence may be narrow or broad Performance obligations will be lower than for an exclusive licence Multiple CPs may participate Where IP is wholly owned by RO there may also be a trigger to convert the non-exclusive licence to an exclusive licence	When the IP is significantly encumbered Where impact is achieved through wider uptake of the IP by multiple CPs	Where impact would be better achieved by a single CP

Pathway	What is it?	Features	Recommended / more likely to be useful	Less likely to be useful
Provide R&D services (contract research)	RO provides paid research and/or development services to CP Can be in combination with other pathways	Priced at full cost recovery plus margin Payment can be cash and/or equity; royalties less common Low documentation burden Low ongoing administrative burden CP owns project IP or any licence grant usually limited to specific deliverables and often non-exclusive RO owns background IP and may grant an appropriate licence (non-exclusive) if CP requires it to commercialise the project IP	When the CP is essentially a customer procuring R&D services from the RO and those services are based on using existing in-house IP and technical expertise at the RO	When the work involves research to generate new IP that is not based on the CP's existing IP
Increase technology readiness level (TRL)	Pre-cursor to commercial development to enhance 'investment readiness' Research with an option to licence background and foreground IP	Low/medium document burden Research fees and an option fee Option period Licence fees to be negotiated if option triggered	Low TRL CP wishes to further derisk or progress IP before committing to a licence	High TRL/mature technology CP doesn't have the business model/resources to commit to further development
Collaborative R&D	A program of R&D work where both the RO and CP provide material financial and non-financial contributions to the R&D activities (e.g., IP or in-kind)	Medium documentation burden	When the CP contributes existing in-house IP and technical expertise and makes a genuine non-financial or financial contribution to the R&D work	When the CP is essentially the only party making a financial contribution
Unincorporated joint venture (JV)	An arrangement involving two or more parties pursuing a joint undertaking with a view to mutual benefit Where the JV activities are conducted by the participants themselves under arrangements that do not use a separate entity as the JV vehicle	Medium to high documentation burden Constituted under contract (not a separate legal entity from the parties) Participants tend to hold their interests in the joint venture separately rather than jointly JV agreement sets out the ownership interests of the parties in the JV property and terms for operation and management of the JV activities	When the parties prefer to commercialise via a separate corporate vehicle for commercial reasons (e.g., to encourage third party investment)	If the RO and CP simply wish to collaborate or provide service and the RO wishes to provide IP rights to a CP under a licensing arrangements
New entity (spin-out / startup / special purpose vehicle)	A separate corporate entity in which the RO and the CP are typically shareholders (along with investors and others) Note in this case the investor may be the CP	Very high documentation burden High set up cost High ongoing regulatory and administrative burden Creates a separate legal entity with its own interests separate to the shareholders Ultimately the IP will be licensed to the startup subject to licensing terms that may be exclusive or non-exclusive (see above)	When the parties prefer to commercialise via a separate corporate vehicle for commercial reasons (e.g., to encourage third party investment)	When the parties wish to retain more direct control or do not want the ongoing cost, administrative and regulatory burden of a corporate vehicle.

Glossary

The terms defined below draw on terms contained in the Knowledge Transfer Ireland *Glossary of Terms* (KTI 2020), Ireland's *National IP Protocols Made Simple* (KTI 2019) the Lambert IP Toolkit (Intellectual Porperty Office 2018), the *Oslo Manual* (OECD 2018), and where a term could not be located, the *Oxford English Dictionary*.

Agreement: a negotiated and typically legally binding arrangement between parties as to a course of action.

Assignment: a contract transferring ownership of rights in IP to a third party, including startups or other entities.

ANSTO: Australian Nuclear Science and Technology Organisation

AIMS: Australian Institute of Marine Science

ARC: Australian Research Council

Background (pre-existing) IP: any IP, including in any material, that is brought into a project for use during the project.

Collaboration: co-ordinated activity across different parties to address a jointly defined problem, with all partners contributing. Collaboration requires the explicit definition of common objectives, and may include agreement over the distribution of inputs, risks, and potential benefits. Collaboration can create new knowledge, but it does not need to result in innovation.

Collaborative research: a research project undertaken between two or more parties. The project may be fully funded by a company, or funded partly by government, and partly in cash and/or in-kind, including a company participating in the research itself. As a research project, there would be an expectation of academic publication. The work would be covered by a collaborative research agreement.

Collaborative research agreement: the Lambert IP Toolkit identifies seven model research collaboration agreements for universities and companies that wish to undertake collaborative research projects together. Each provides a different approach on who is to own and exploit the IP in the results or outcome of the project.

Consortium: an association of people, countries, companies, or other parties who are working together on a particular project.

Consortium agreement: sets out the internal management guidelines for the consortium and can, for example, provide arrangements regarding the granting of specific access rights in addition to those provided for through standard IPR provisions.

Consultancy services: a contractual arrangement in which a university provides professional-level work to an external client organisation through an academic researcher or other university staff member in exchange for a full commercial or discounted fee. The client specifies the work against deliverables agreed with the university.

Contract: a written or spoken agreement that is intended to be enforceable by law.

Contract research: an arrangement under which an external organisation can formally access the knowledge and expertise of university academics to improve or create strategies, organisational processes, products and services. The work will generally result in a report that will be owned by the contracting organisation. Scholarly publication from the work is usually only permitted if the contracting organisation agrees.

CP: Commercial partner.

CRC: Cooperative Research Centre

CRC-P: Cooperative Research Centre - Partnerships

CSIRO: Commonwealth Scientific and Industrial Research Organisation

DESE: Department of Education, Skills and Employment

DISER: Department of Industry, Science, Energy and Resources

DITRDC: Department of Infrastructure, Transport, Regional Development and Communications

Foreground (arising) IP: defined IP and IPRs obtained or developed in the course of a project.

FPIC: Free, prior and informed consent

HERC IP Framework: Higher Education Research Commercialisation IP Framework

Improvement: improvement is iterative and typically incremental. The focus is on optimising existing products, services and processes and eliminating defects. Innovation, by contrast, involves creating something fundamentally new and different from what has been experienced before.

Indemnity: generally provides that the assignor of IPRs being licensed or assigned will indemnify the assignee if the IP infringes a third party's IPRs.

Innovation: a new or improved product or process (or a combination thereof) that differs significantly from previous products or processes and that has been made available to potential users (a product or service) or brought into use by the unit (process).

Intellectual property (IP): refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce. IP is protected in law by patents, trade marks, designs, plant breeder's rights and copyright (including the copyright in software in any code), which enables people to earn recognition or financial benefit from what they invent or create. Although not protected by formal IP rights, other forms of IP include business ideas, database rights, know-how, trade secrets and other confidential information, and goodwill.

Invention disclosure: the first actual recording by a technology transfer office of an invention or a commercial opportunity that contains basic information, including supporting data, that helps to evaluate, subsequently protect and, potentially, commercialise the IP associated with an invention.

IPRs: IP rights

Joint venture (JV): a commercial agreement between two or more parties that otherwise retain their distinct identities, to achieve specific outcomes from a commercialisation collaboration.

Knowledge transfer: the sharing of expertise, capability, technology and IP between the research base and industry or the public sector with the aim of developing new or improved products, processes and services that deliver societal and economic benefit.

Knowledge (research) translation: the synthesis, exchange, and application of knowledge by stakeholders to accelerate the benefits of innovation.

Knowledge diffusion: the process by which innovations are adopted.

Non-disclosure agreement (NDA): a contract governing the disclosure of confidential information from one party to another – the disclosure may be mutual (i.e. both/all parties disclosing confidential information), or there may be just disclosure by one party to the other(s).

Licence: a contract under which the use of IPRs are transferred from one party to another for the purpose of commercialisation.

LOA: an abbreviation that refers to licences, options, and agreements.

NHMRC: National Health and Medical Research Council

Non-exclusive royalty-free (NERF) licence: a licence to use IP under which the licencee is not required to pay any amounts (whether initial recurring royalties or milestone payments), except that the licencee may be required to pay some or all of any costs for prosecution, maintenance and defence of any patent or similar granted IP rights.

Material transfer agreement (MTA): a contract governing the transfer of materials between researchers. The researchers might be employed by universities, research institutions or commercial companies or be private individuals. The supplier/provider of the materials is usually the organisation owning the materials but may sometimes be an authorised licencee.

Multi-party collaboration: a collaboration in which one or more industry parties and one or more universities are parties in a program. It is funded partly by government and partly in cash and/or in kind, including participation in the research itself, by the industry partners.

Non-severable improvement: IP that, at a minimum, was created using Significant Background IP introduced to the programme. Cannot be used or commercialised without infringing on the Significant Background IP.

Option: an agreement that permits a company to reserve a right to acquire technology later, without committing itself to do so, for a period during which the company can further evaluate its potential, or raise funding for product development, without committing itself or a university to the obligations of a licence agreement. Options are usually six months to one year in duration and typically require both an upfront fee and patent prosecution reimbursement during the option term.

PFRA: publicly funded research agency

RO: research organisation.

Royalties: legally binding payments made by a licencee to a licensor in exchange for the use of the licensor's IP. They are usually a percentage of the net or gross revenue made by the IP, paid on a regular basis (often monthly, quarterly, or annually).

Significant Background IP: background IP introduced to a program where: the background IP is the subject of a granted patent, and/or the programme substantially relies on this background IP and without it the programme would be difficult or impossible to carry out.

SME: a small to medium enterprise.

Spin-out company: a new incorporated business based primarily on knowledge and/or IP originating from the university, in which the university holds equity and/or has a licence to the IP.

Startup company: a company formed by staff or students from a university not based on knowledge or IP generated by the university and where there is no formal IP licence or equity share with the university.

Strategic alliance: a close and collaborative relationship between two or more entities that share assets, strengths, risks, rewards and control. There are important distinctions between alliances in which partners access existing knowledge, resources, and capabilities and those that lead to the development of new knowledge, resources, and competencies.

Technology readiness level (TRL): TRLs measure the maturity level of a technology throughout its research, development and implementation phase progression. TRLs are based on a scale from 1 to 9, with 9 being the most mature technology.

Term sheet: a document where parties in negotiations agree certain key terms of their proposed agreement before they engage in detailed negotiations over the wording of the final contract. These key terms are recorded in a document that is given a variety of names, including: heads of agreement; heads of terms; term sheet; memorandum of understanding; letter of intent.

Technology Transfer Office (TTO): a name often applied to the team at a university responsible for managing knowledge transfer or technology transfer services including IP, licensing, partnering with industry and the creation of new companies generally known as spin-out companies.

University-led research: research where a university employee or student is Chief or Principal Investigator or where the university has control of the research being conducted and the university holds the majority of the relevant background IP.

Warranty: an IP warranty generally provides that the IPRs being licensed or assigned constitute all IPRs owned or controlled by a party prior to the effective date of the transaction. A warranty may also go on to say such IP does not infringe third-party IPRs.

WIPO: World Intellectual Property Organization

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