

ECU Research Commercialisation

The Framework

This framework describes the principles, elements and organisational characteristics that define the commercialisation function and its place and priority within ECU.

Firstly, care has been taken to ensure the framework is consistent with and aligns to ECU's Purpose, Vision, Values and Strategic Priorities.

The ECU research commercialisation framework has also been developed to dovetail into ECU's research and teaching processes and return value to ECU.

Defining Commercialisation within the context of Research and Intellectual Property at ECU

The Research Context

Research is a key area of endeavour at ECU and features strongly in the University's strategic statement of Purpose. One of ECU's key Strategic Goals is to strengthen research capability, capacity, translation and impact. The University's overarching research goal is to contribute to the creation and use of knowledge through relevant research and creative activity. The vast majority of endeavour towards this goal comprises Core Research and there are a number of ways research can be translated in support of this goal.

Research Defined

Projects or activities where ECU is engaged in the original investigation of new knowledge are classified by the University as research projects. ECU defines research as: "the creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies and understandings. This could include synthesis and analysis of previous research to the extent that it leads to new and creative outcomes."

Intellectual Property Defined

The World Intellectual Property Organization (WIPO) defines intellectual property as follows: "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." <http://www.wipo.int/about-ip/en/>

It is important to note that new knowledge generated by research inherently comprises intellectual property which may take various forms (in fact, knowledge or know-how is but one form of intellectual property). ECU has developed principles, policies and processes for dealing in its intellectual property including this document. In accordance with ECU's IP Policy, intellectual property created by ECU employees and affiliates is owned by ECU. Students may be required to assign their rights to IP in certain circumstances. Given the legal meaning and implications of dealing in intellectual property care must be taken in its management from the creation of research projects through to their conclusion.

Research Translation – Developing a Definition within ECU

Arguably, research translation can be used almost interchangeably with the term knowledge translation, which is supported by ECU's reference to the creation of new knowledge research. As a working definition, the meaning of research (or knowledge) translation could be stated as, "the application of new intellectual property created through research to improve the direction, principles and practice within a given endeavour." In the context of ECU's Purpose and Strategic Goals, this definition could be extended to ensure that application of new knowledge results in benefits to students, staff and graduates, ECU, the community of Western Australia and beyond.

ECU Research Commercialisation

Consistent with the definition of intellectual property above, decisions in relation to research translation should consider the nature of the underlying intellectual property. This is particularly true in relation to research commercialisation given the need to trade in legal rights accruing to the intellectual property.

Forms of Research Translation

Dissemination:

Typically, the main form of research translation is the public dissemination of new knowledge through publication and presentation. Dissemination is a relatively passive approach to research translation and relies on impact to stimulate the application of the new knowledge to current practice.

Collaboration:

New knowledge disclosed to peers can often stimulate peers to propose extensions to the research or to create new research threads. This may also lead to new funding mechanisms. Collaborative research results in further new knowledge and the creation of intellectual property. ECU is expected to share in the intellectual property in these cases.

Consultancy:

Projects or activities that involve the application of existing knowledge or expertise to achieve a particular targeted outcome are classified as consultancy projects. A consultancy draws on and applies existing knowledge with no academic output, such as publications in refereed journals. Generally the prime purpose of consultancy is not the generation of new knowledge.

Contract Research:

The dissemination of new knowledge and the resulting profile and awareness of the underpinning research capability and capacity can attract industry to utilise ECU's resources to solve specific research problems. In attempting to solve these problems ECU's researchers are applying the knowledge they have gained from previous research. The process of solving the problems results in the creation of new intellectual property. Depending on the nature of the commercial arrangement ECU may share in the rights to and/or proceeds from new intellectual property.

Research Commercialisation:

This is defined as the monetisation of intellectual property, typically through developing and trading in products, services, processes or technology ("products"). Generally, value is created during the process of translating research into a commercialisation outcome and this value can be monetised in some circumstances during the commercialisation process (e.g. licensing of the underlying IP), rather than exclusively at its conclusion (e.g. product revenue). Proceeds from research commercialisation can come from licensing fees, product/service revenues, royalties, sale of shares, etc. Much more so than the other forms of research translation, research commercialisation involves considerable risk uncertainty and requires the investment of resources into overcoming and mitigating that risk in order to secure a return on the investment.

Research Impact

Whilst research translation comprises the activities involved in ensuring research brings about positive change, research impact is the extent of that change. In making decisions on how to maximise research translation, consideration should be given to the likely impact accruing from the activities selected.

In the case of dissemination, for example, impact may be measured as a function of the prestige associated with the forum, the attaching credibility/influence it provides and the size of the audience. While it depends on the success of the outcomes, research commercialisation has the potential to

ECU Research Commercialisation

generate high levels of research impact given that the products/services to be commercialised must typically address a real-world need or customer problem for them to be adopted.

Research Commercialisation Guiding Principles

Research translation and impact are key goals of the University and commercialisation is only one possible pathway to achieving them. Research commercialisation is likely to be, and should only be, a small proportion of research translation activities undertaken by a University. “Likely to be” because the majority of research is fundamental research (i.e. purely for the purpose of generating new knowledge and understanding) and is not directed at solving a commercially relevant problem. And “should only be” because research commercialisation is inherently risky, requires significant resources to execute properly and even when well executed there is no certainty of success.

Consultation with key stakeholders within ECU revealed consistent views and expectations that have provided the foundation for the guiding principles for ECU’s investment in research commercialisation:

1. Research commercialisation should be reserved for highly significant and strategically valuable opportunities;
2. Investment of resources should be commensurate with likely returns to ECU; and
3. Where research commercialisation is undertaken, ensure it is adequately supported and resourced and adopt good practice.

Managing Research Commercialisation

Research commercialisation is a complex and lengthy process requiring expertise across a range of disciplines and therefore best lends itself to a team approach. ECU’s research commercialisation efforts will initially be managed at the School level and projects will proceed to the next stage of the process when School approval has been obtained. The Office of Research and Innovation, Finance and Business Services Centre, the Office of Legal Services and the Risk and Assurance Service Centre will then continue the detailed assessment of opportunities, liaising with the School as needed. The research commercialisation process also allows for external experts to be consulted whenever the opportunity may require it. Consultation with key stakeholders and proponents of commercialisation has resulted in a detailed process that should be followed for every opportunity.

Research Commercialisation Process

It is not expected that commercialisation opportunities will be an outcome of basic research. Even applied research will not often generate commercialisation outcomes; and even those that show promise may not successfully achieve a commercialisation outcome or return on investment. For these reasons, rigorous assessment and selection processes and criteria have been established to ensure only those opportunities that are eligible and have sufficient merit should proceed down the research commercialisation path.

It is also important to note that given the level of uncertainty, considerable information must be gathered on which to base decisions. For this reason, the research commercialisation process will use a staged approach to gather the most pertinent information first in order to build confidence and will then proceed with investing further resources to gather additional information, develop strategies and plans, and execute them.

The ECU research commercialisation process is summarised within the ECU research commercialisation framework schematic (see over).

ECU Research Commercialisation

ECU Research Commercialisation Framework Schematic

POLICY									
Intellectual Property Policy									
PROCESS									
1. Research Output /IP Creation	2. Pre-disclosure (Self-Assessment)	3. Invention Disclosure (Screening)	4. Commercial Potential and IP Protection Assessment	5. External Assessment and Co-Funding Support	6. IP Protection, Strategy Development and Planning	7. (Optional) Further Co-Funding Support & Development	8. Strategy Implementation and Secure Returns	9. Monitor, Measure and Manage Returns	10. Exit or Close Project
RESOURCING									
Researcher(s)									
School					FBSC				
ORI					OLS				
RASC					Commercialisation Committee				
External Validation, Expert Advice and Assistance									
FUNDING									
School Funding			ORI Funding; Industry Collaboration Grants				Strategic Research Fund		
Industry, Private Investment, Government Grants sought ahead of, or co-invested with, ECU investment									
IP MANAGEMENT									
<ul style="list-style-type: none"> Maintain confidentiality via secrecy and agreements Agree Invention and share of returns 						<ul style="list-style-type: none"> Commence appropriate IP protection Licensing of IP rights 		<ul style="list-style-type: none"> Assignment of IP rights 	
DECISION CRITERIA									
Eligibility (Objective Assessment)									
<ul style="list-style-type: none"> Researcher is confident that: <ul style="list-style-type: none"> Invention/IP ownership has been agreed and there are no IP rights granted that preclude control. Reliable and repeatable results have been achieved demonstrating functionality. Asso. Dean (Research) / Institute Director / Dean is convinced: <ul style="list-style-type: none"> All inventors have been recorded and inventorship agreed. IP ownership and third party rights agreed and ECU has beneficial rights and control. No prior activity that would prevent protection of IP. Research is in an area of research strength (objective) or there are other benefits to ECU (subjective). 	<ul style="list-style-type: none"> School approval received Invention established and externally validated. The form of IP and appropriate means of protection identified. Identifiable product, service or process to be commercialised Evidence of technical veracity for the innovation, i.e. reliable, repeatable functional results can be demonstrated that support the value proposition. ORI approval for matching funding up to \$50k (note: this amount is current as at time of publication and is subject to change at ECU's discretion). FBSC and ORI approval to proceed with securing external funding. OLS review of IP protection. 	<ul style="list-style-type: none"> FFM input and approval of project budget. External funders have their own eligibility criteria. Satisfactory due diligence on funding body or investor(s). Funding secured from external party or independent professional adviser endorses ECU 	<ul style="list-style-type: none"> IP protection strategy commenced. Commercialisation Committee approval of the final strategy and plan developed (see below). Commercialisation Committee approval of funds to support licensing or other activities required to implement the 	<ul style="list-style-type: none"> If licensing not successful, Commercialisation Committee approval for matching funds up to \$250k to support a grant, or independent professional adviser endorses ECU investment of funds up to \$250k preferably matched by external investor(s). 	<ul style="list-style-type: none"> Satisfactory completion of a grant, or equivalent, project. Licensing efforts undertaken ahead of other means to commercialise the IP. 	<ul style="list-style-type: none"> Cash proceeds generated from licensing, product or service revenue, dividends or sale of shares. 	<ul style="list-style-type: none"> Commercialisation Committee approval to exit or close project. 		

ECU Research Commercialisation

	<ul style="list-style-type: none"> ○ Reliable and repeatable results have been achieved demonstrating functionality. 		investment of funds up to \$50k.	plan.				
Merit (Subjective Assessment)								
	<ul style="list-style-type: none"> ● Researcher is convinced that: <ul style="list-style-type: none"> ○ There has been a significant research discovery, innovation or invention addressing a commercially relevant problem and solution represents value to a paying customer. ○ Research in an area of research strength and has benefits accrue to ECU and the Nation ○ Potential exists to license or commercialise the IP. ○ There is a realistic path to a significant market opportunity ● Asso. Dean (Research) / Institute Director / Dean is convinced: <ul style="list-style-type: none"> ○ Significant research breakthrough. 	<ul style="list-style-type: none"> ● Prima facie evidence of a superior value proposition to a paying customer or licensee, relative to competing alternatives. ● Identifiable means to create sustainable competitive advantage underpinning the value proposition. ● Indications of an addressable market opportunity in excess of \$100M pa globally. ● Credible and achievable development path to produce a commercially valuable product, process or service. ● Realistic and achievable path to monetising the IP, focused on achieving early revenue through licensing. ● Sufficient management capability or a plan to secure appropriate individuals to support the next 12 months of activity. 	<ul style="list-style-type: none"> ● Substantial evidence and independent validation the opportunity satisfies the criteria for the previous stage. ● In addition, suitable development and/or commercialisation partners have been identified, e.g. lead customer, distribution partner or licensee. 	<ul style="list-style-type: none"> ● Satisfactory completion of a CA Skills & Knowledge grant project or equivalent, including: <ul style="list-style-type: none"> - A robust strategy and plan to commercialise the IP. - Quality supporting collateral and documentation 	<ul style="list-style-type: none"> ● If CA grant or external investment is sought it should be supported by evidence of a potential customer(s) representative of the target market who is willing to trial product/ service/ technology at arm's length as a means to validate the value proposition. 	<ul style="list-style-type: none"> ● Commercialisation Committee approval to implement the strategy/plan. 	<ul style="list-style-type: none"> ● Suitable acquirer and/or ● Enhanced ability to realise benefits to ECU and/or the community 	
DATA COLLECTION & METRICS								
Monitor, Measure and Improve Process								
	School							
		FBSC						
	Webmaster (form downloads)							