Strategic Research Initiatives Governance Framework

version 3.2

1. Executive Summary

"We will provide the platforms and investment to enable the co-creation of new approaches to interdisciplinary problem-solving and support our academics to realise the possibility of their discoveries in society and business" – *ANU by 2025*

ANU is committed to engaging in research that transforms society and creates national capability to address national and international priorities. Many of these priorities – such as energy transition, defence and space industry capabilities, challenges of social equity and the application of AI – require interdisciplinary approaches and benefit from initiatives that give better external visibility of our existing capabilities, are strategically supported to grow critical mass and make new discoveries

This Framework document is designed to bring greater consistency and clarity to the governance and management expectations on major, interdisciplinary strategic initiatives receiving substantial University-level support. Through clear communication, we will better position our research teams to ambitiously address national and international priorities without losing critical time to internal inefficiencies.

The framework will deliver on this ambition and promise through:

- Establishing principles that can guide the University's new investment decisions, and tracking the success of those investments;
- Improving clarity of roles and responsibilities, particularly with respect to governance; and
- Exploring a more agile model for administrative support and reporting as projects ramp up and down over time;

2. Context and Background

2.1   A note on current approaches

Over the past five years, ANU has strategically supported a range of disciplinary and cross-disciplinary high-impact research and development through different investment mechanisms:

- Innovation Institutes[1], and an Innovation Company[2]
- Grand Challenges Scheme[3]
- National Institutes Grant Proposals[4]
- Institutes[5]

By and large, each project under these initiatives has been created with unique objectives, characteristics, governance structures and resourcing. The approach to governance is not consistent, and to an extent we have created a number of new administrative silos, each of which needs to learn how to navigate the University in agile ways.

<u>What has worked well</u>

- Projects have been strategically well aligned with the University's values
- Increasing University focus / critical mass in nationally important areas
- Several initiatives (e.g. InSpace, ICEDS, CEAT) have developed strong external branding and connections, leading to increased external research revenue for ANU.

<u>What can be improved upon</u>

- Clarity of expectations / measures of success, which were not established from the start in several cases.
- Inconsistencies around governance practice, e.g. use of external chairs and advisory boards.

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[1] InSpace, Centre for Entrepreneurial AgriTechnology, 3A Institute [Autonomy, Agency, Assurance], Cyber Institute
[2] WearOptimo
[3] Our Health in Our Hands, Zero-Carbon Energy for the Asia-Pacific, Indigenous Health and Wellbeing Grand Challenge, Humanising Machine Intelligence, Australian Social Cohesion: Exploring New Directions
[4] Centre for Gravitational Astrophysics, Institute for Water Futures, Evolution of Cultural Diversity
[5] Institute for Climate, Energy and Disaster Solutions; Global Institute for Women's Leadership; Gender Institute

- Some initiatives have failed to adequately resource communication of impact, outcomes and reporting, leading to a gap in internal and external understanding of their achievements.
- Lack of clarity and consistency about roles and responsibilities with respect to supervision of Directors, reporting lines, and provision of support across Portfolio and College-based professional services.

3. The Framework

3.1 Justification and Strategic Alignment

As the National University, ANU has a distinctive identity and the responsibility to address the most pressing problems facing Australia. We think this requires research that takes greater intellectual risks for greater potential benefit. We also see the need for more emphasis on research integration and inter-disciplinary perspectives than is currently supported by the Australian research funding systems.

The Framework is aligned to *ANU by 2025*.

a) *Nurturing talent* and providing leadership opportunities is one of the most important things ANU can do to attract and retain the best researchers - those who are most likely to drive programs of research with lasting impact; collaborative leaders and emerging leaders who can explore, synergise and translate research through teaching, entrepreneurship and commercialisation.

b) *Long-term societal transformation* often requires inter-disciplinary lenses. So-called "inter-generational" challenges are core to Australia's national identity, and we have a responsibility to address these.

c) *Being ambitious* requires stable backing and room to try new ideas with the acknowledgement that not all research works out. We want to encourage ambition and innovation - high-risk, high-reward.

d) *Building capacity to navigate change* – identifying and investing in major strategic initiatives in a deliberate way allows ANU to better position itself as a major contributor to solving the biggest challenges now and into the future.

3.2 Principles for Investment and Measuring Success

The principles set out below have been developed to lead an open discussion about what each initiative is intended to accomplish. These principles can inform decision-making about investment *and* performance.

Performance of each project is monitored based on clear indicators of success, developed in consultation with the project leadership, that translate these principles into measurable goals and targets based on the unique emphasis and activity mix of the initiative (see 3.3). Not all proposed projects can, or should, work towards achieving all

seven, and they will necessarily make trade-offs between different aspects according to their mission

1. Create societal transformation in the long-term through traceable research impact;

2. Recognise ANU as the 'natural home' of high-quality activities that address pressing challenges and national priorities;

3. Promote research excellence and support the highest quality research that may be otherwise difficult to initially find external funding for;

4. Enhance novel cross-disciplinary and integrative work through collaboration and engagement;

5. Establish innovation ecosystems and shift the dial on academic entrepreneurial culture;

6. Build critical mass and position ANU to lead major national research initiatives, attracting funding to further grow and support the work;

7. Create an outstanding environment for research training that can position our early-career researchers for success in a complex world.

3.3 Focus Areas

Research and development is a continuum. Some initiatives are working more at the fundamental end, some are targeted to particular industries, and many have parallel streams of work at different stages of maturity that overlap and feed into one another.

Identifying these focus areas is important, since the expectations we place on initiatives about their outcomes and achievements in relation to the Principles depends on where the work is situated along this continuum. The University might use a major strategic initiative as a vehicle to promote and achieve excellence in some or all of these areas:

1. *Fundamental Discovery* - exceptionally creative and highly innovative research to pursue new knowledge, facilitate learning, develop ideas or concepts and deepen understanding of a particular area.

2. *Research Integration* - to investigate real-world problems and increase public awareness by bringing together relevant knowledge and expertise from diverse disciplines and fields in the research process.
3. *Outreach and Knowledge Transfer* - to bridge the gap between knowledge and application by interpreting and delivering tangible outcomes that will lead to significant benefits to society.
4. *Industry and Entrepreneurship* - strategic engagement and collaboration among industry, government and University cross-disciplinary expertise and capability to enable long-term success of the overall initiative.

In *Appendix 2*, we have mapped the Principles against the Focus Areas to give a more concrete example of how discussions about performance might be guided – i.e., what are the types of things we might think about as being targets or deliverables for a strategic research initiative. The exact, measurable targets are also informed by the scale of investment and discipline mix.

Enablers for success

Strategic initiatives are more likely to succeed when there is a clear vision and strong institutional backing. Breaking this down further, we think that any implementation plan for an initiatives framework must incorporate the following "enablers":

- University-wide support for all initiatives - integrating research and researchers into the fabric of the University
- Strong, collaborative leadership of the project team
- Supported multi-dimensional collaboration across teams
- Common framework for governance and evaluation
- Operational excellence - adequate and specialised support for shared services
- Transparent selection processes for new initiatives

The implementation plan set out at section 4 is designed to embed these ideas in a structured way, in support of each initiative.

Accepting a risk of failure

As a counter-point to the 'Enablers for success' above, given the strategic initiatives framework encourages intellectual risk-taking we must also contemplate that some initiatives may not meet their objectives or the University's expectations.

Under the framework, we believe that input from the Governance Board should be sought and considered, but that the decision is ultimately that of the University management including members of the Senior Management Group.

Where ANU looks to wind down particular strategic initiatives, it is worth considering practical "off ramps" that can mitigate reputational damage or lost opportunity cost. An example may be converting an Institute into a virtual network with a lower level of support.

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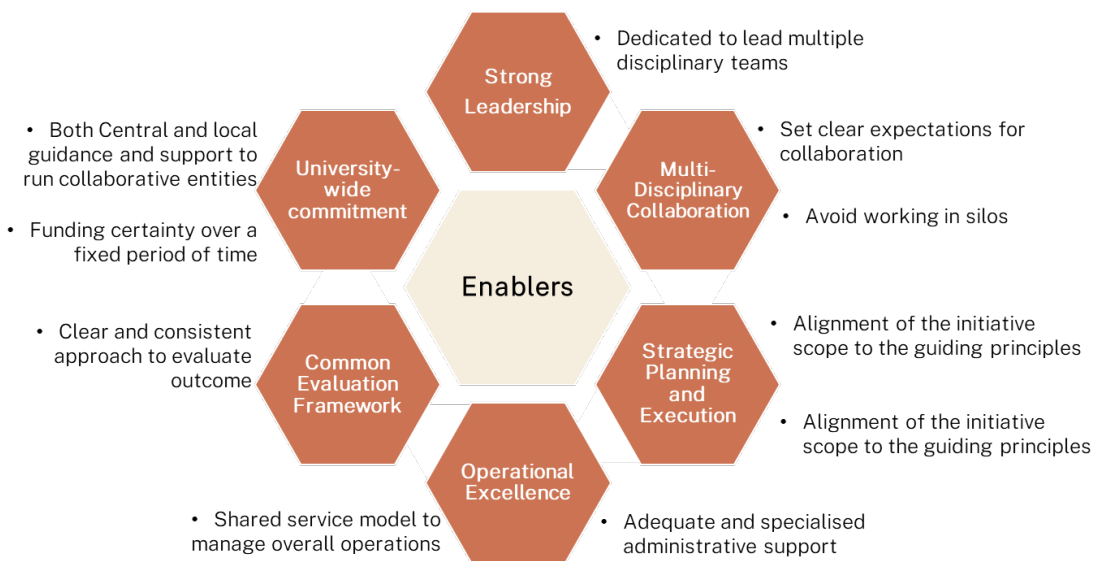Figure 1. Enablers of Success

3.4 The framework in summary

4. Implementation

The Framework as set out above is intended to guide university decision-making, and is deliberately not prescriptive about how initiatives are selected and approved. There is flexibility for the University's leadership to consider business cases for new initiatives through targeted or open calls.

The University is also currently undertaking a review of Centres and Institutes Policy and Procedure, and there is an opportunity to reflect and align the feedback on the policy received from Colleges, Institutes and Innovation Institutes with the implementation of this framework. Should the Framework receive endorsement, these issues will be explored further with College and Portfolio leadership.

For a defined portfolio of initiatives, we are seeking to make the governance and management structures of new initiatives consistent (as far as it is appropriate to do so) on the assumption that greater consistency will lead to better institutional maturity and understanding within the University of 'how these things work'.

Key ideas:

- Each initiative has a Governance Board and Research Advisory Board (or equivalent) with independent external Chairs. (Some initiatives may require additional advisory bodies).
- Research initiatives receiving substantial strategic funding from the DVCRI or VC portfolio will have a dotted line (in limited cases, solid line) reporting relationship to the Director, Research Initiatives and Infrastructure.
- The framework is built on an assumption that there are opportunities to create administrative and operational efficiencies through pooling administrative, governance and communications/event support for new initiatives. Some initiatives are already of a scale to have 'in-house' capability, but the operational model for most does not allow for dedicated support across all such areas.

4.1 Roles and Responsibilities

Responsible Area	Description
Governance Board	• The roles and responsibilities of a Governance Board include maintaining oversight of the vision, purpose and performance of the strategic initiatives; risk and audit; • Governance Board members bring a wealth of different types of expertise and knowledge; generally no more than one or two members would be research experts in the relevant field. • A Governance Board may establish sub-committees to fulfil some of their functions and duties or to receive expert advice in particular areas; • A Governance Board will typically include representation of internal and external stakeholders, led by an independent external Chair. • Meet semi-annually to review strategic plan and high level progress, provide recommendations and directions as per the meeting agenda.
Research Advisory Committee	• Drawn from the academia, industry, government and civil society to offer insights and expertise on the research direction and performance. • Meet at least annually
Research Team / Director	• Consists of a single Director leading a multi-disciplinary research team • Director is supported by an Executive Team (see below) • The research team may be supported by specialised professional positions (e.g. domain-specific knowledge translation) • Reporting line of the Director is subject to discussion prior to the establishment of the strategic initiative, but typically they will have an academic home in a School. The Director of a cross-University multidisciplinary strategic initiative will be in regular contact with the Academic Director, Research Initiatives and Infrastructure (either as a direct or indirect report). • The Director keeps open lines of commuincation with their School/College about workloads, new initiatives (particularly education) and strategic alignment.
Executive Team	• The Executive Team is typically a small group led by the Director, supported by Deputy Directors / research stream leads as well as the Program Manager.

Research Initiatives and Infrastructure	• The Research Initiatives and Infrastructure unit supports major strategic initiatives in the following ways:
	    o The Academic Director, RII provides strategic support to the Director. Where agreed by RII and the Director's home area, the Director may report to the Academic Director, RII
	    o The Academic Director, RII sits as an *ex officio* member on the Governance Boards.

	○ Where appropriate and agreed, RII coordinates the Operational & Administrative team (see below) to deliver services for a strategic initiative, with the intention to develop and apply consistent practices. ○ Provides advice on matters including how to set up appropriate governance, how to build a successful case for strategic or external funding, and navigating ANU services. - For clarity, RII does not see its role as making academic governance decisions or setting directions – this is a matter for the experts. RII provides support, both strategically and operationally.
College/School Leadership	- In most cases Initiative Director and other key academic staff will have an academic home within a School, and will be supervised by a School Director or Dean. - The School Director keeps an open line of communication with the Director / other key acadmic staff about workload and expectations, alignment between the initiative and the School, and how School/College resources (such as space, administration) can be used.
Operational & Administrative Team	- Avoid administrative silos through a combined administration/secretariat for initiatives and the impacts of key professional staff vacancies by developing a shared team. - Provide tailored support to project governance and management, plus other areas such as communications or finance where it is appropriate to do so. - Resourcing coordinated through Research Initiatives and Infrastructure
Integrated Support Team	- Executive Teams have strong connections to key service points (including business engagement, finance, research services and Advancement) to ensure that the Executive and research team can access timely, strategically oriented resources and support as required. - There is no best 'one-size-fits-all' solution on how to best provide the underpinning support that is required by all areas of the University. - This requires discussion with College General Managers / Service Division Directors ahead of time to determine the likely impact on service teams. It is essential that service teams in Colleges and Portfolios understand what is required, particularly in a financially constrained environment. - The intention of this model is for the Operational & Administrative Team to function as a go-between to service delivery areas that can support the strategic nature and objectives of these initiatives.

Figure 3. Governance and Management Model

4.2 Operational Support Structure

We know that cross-University activities face interesting challenges when it comes to navigating the administration of the University. Hurdles are often encountered in respect of governance and reporting, access to systems and support, and having team members in areas that have different policies or processes with respect to, for instance, HR, travel, grants and finance.

Creating administrative support within each initiative delivers 'at-hand' support, but also tends to create isolated professional positions with very broad roles and no back-up. Without a sufficient network or knowledge sharing, our people are learning 'the hard way' about the administrative barriers rather than from those that have already implemented cross-College units.

We propose exploring an agile shared support team that can deliver general administrative, governance and reporting work across multiple initiatives, creating administrative efficiencies. This model is already in place across three Grand Challenges (OHIOH, ASCEND and IHWGC) and allows for more specialist positions to be created where there is a critical mass of need – for example, communications and engagement may not warrant a full-time position in a single initiative, but does when shared across several groups.

As the portfolio of active initiatives evolves over time, we will continue to explore the most effective and efficient ways of supporting strategic research initiatives.
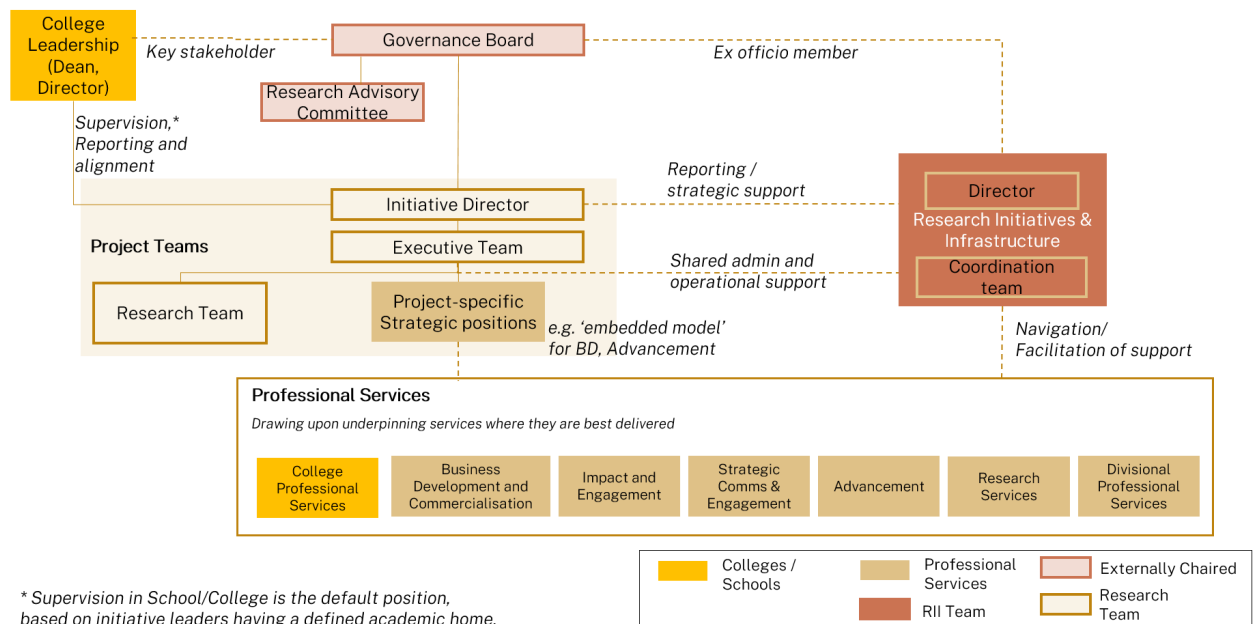
Australian National University

Appendix 1

Grand Challenges

Grand Challenges	Grand Challenge Objective	Duration	Funding Contribution	# of Colleges
Australian Social Cohesion: Exploring New Directions (ASCEND)	improving social cohesion requires connecting disparate pockets of excellence in areas such as psychology, demography, security and business to understand the factors that impact social cohesion	3 years, 2019 - 2022	$4M - approx. 2.75m colleges, $1.25m DVCRI	4
Humanising Machine Intelligence (HMI)	enabling the design and adoption of sociotechnical systems for democratically legitimate Artificial Intelligence requires core disciplinary and cross-disciplinary work across computational methods, cognitive science, philosophy, social psychology, law and political economy	3 years, 2019 - 2022	$5M - approx. 3.5m colleges, $1.5m DVCRI	4
Our Health in Our Hands (OHIOH)	deep personalisation of medicine (diagnosis, monitoring and accurate treatment) requires understanding of future healthcare needs, the healthcare system, translation of medicine, innovation in medical devices and research into biomarkers	5 years, 2018 - 2023	$10M (DVCRI)	3
Zero-Carbon Energy for the Asia-Pacific (ZCEAP)	improving climate resilience through industrial-scale soil regeneration requires earth sciences, forestry, climate modelling, biology and agriculture	5 years, 2019-2024	$10M (DVCRI)	6
Indigenous Health and Wellbeing (IHW)	improving the health and wellbeing of Australia's First Nations peoples requires broad research into disease, cultural mapping, history, music and public health	6 years, 2020-2026	$10M (DVCRI)	6

The Grand Challenges Program (GC) was a competitive scheme established under the 2016-2020 Strategic Plan. A competitive process was run in 2017 and 2018, with winning teams receiving strategic funding of $10m (OHIOH, ZCEAP). Runner-up teams in 2018 (HMI, ASCEND) were supported with funding to further develop and support the projects, which was then matched with substantial College funding. Indigenous Health and Wellbeing was strategically selected as the topic of the 2019 GC. Since then no GC was run due to the financial impacts of COVID.

Scheme Objectives

- Tackle pressing social and/or technological problems too complex for a single disciplinary approach;
- Create unusually creative high-risk / high-reward interdisciplinary opportunities not being advanced elsewhere, and unlikely to be funded through traditional, competitive funding schemes.
- Expose the next generation of researchers and scholars to the benefits of interdisciplinary collaboration and create research leadership opportunities for Early Career Researchers
- Recognise and reward leadership, research excellence, and collaborative and collegial behaviour.
- Create platforms for future research funding.

What has worked well

- Strategic alignment
- College co-contribution model
- Increase in University capacity / critical mass in nationally important research areas
- Singular, collaborative leadership with effective advocates

What can be improved upon

- Communication of impact and outcomes
- Connectivity to other parts of the R&I portfolio, and to Advancement.
- Clear indicators of success
- Conceptualising how GCs transition to BAU operations.
- Lack of clarity on research external funding expectations.
- Effectiveness of operational support (e.g. shared model)

Innovation Institutes

Innovation Institutes	Grand Challenge Objective	Duration	Funding Contribution	# of Colleges
ANU Institute for Space (InSpace)	catalysing the translation and adoption of Space research for commercial benefit and showcase ground-breaking research through events, outreach and training	5 years, 2018 - 2023	Approx. $9.5M (DVCRI)	-
Centre for Entrepreneurial Agri-Technology (CEAT)	supporting a culture of increased industry collaboration and aligning ANU capabilities to national significant priorities in the field of Agri-Technology	5 years, 2018 - 2023	Approx. $3M (DVCRI) and ACT Gov co-funding	-

The Innovation Institutes framework was developed as a deliberately agile framework that could support and inspire the cultural change required at ANU to achieve research diversification and growth targets.

Scheme Objectives

- An Institute could have research, translation and/or engagement programs, and would be set up as new organisational units outside of the Schools and Colleges
- IIs led by a Director, typically appointed as an Entrepreneurial Fellow or Professor, with a University-wide mandate to integrate expertise across campus and deliver outstanding translational research.
- Highly collaborative, entrepreneurial and outwardly-focused on relationships and pathways to impact.
- Capable of maturing into a sustainable business model at scale – IIs would be limited to finite seed funding.
- IIs typically procure services, space and infrastructure through Colleges
- Reviewed at five years – when it would be anticipated that each Institute will become self-sustaining through external income from research or commercialisation activities.

What has worked well

- Strong brand name internally and externally
- Well developed networks and partnerships already giving tangible outcomes
- External income (major grants and contracts won)
- Creating entrepreneurial ecosystems within and tangent to ANU

What can be improved upon

- Internally-facing communications e.g. through R&I channels
- Operational service delivery – Central vs in Colleges

Appendix 2 - Early draft - expectations for projects across different stages of research and development maturity

Each box contains examples of the types of outcome expected at different stages of research maturity. Through discussion with the research teams, Research Initiatives and Infrastructure and the Governance Board, each project would develop measurable goals facilitating agreed success measures that can be readily reported to each Governance Board meeting.

Principle	Fundamental Discovery	Research Integration	Outreach and Knowledge Transfer	Industry and Entrepreneurship
Create societal transformation in the long-term through traceable research impact	Embed research impact evaluation principles into project design. Clear direction or research question the research is to solve. Strong academic impact (citations, invited talks etc.) Engaging potential strategic partners	Embed research impact evaluation principles into project design. Evidence of use in policy, industry or community, or pathways towards use. Pathways may include engagement activities, media, white papers or reports etc. Developing strategic partnerships and keeping evidence of research impact methodology	Evidence of use in policy, industry or community. Formalising strategic partnerships Managing a pipeline or portfolio of translation opportunities Case studies of actual or potential research impact developed and retained for future iteration.	Evidence of increasing use and uptake in policy, industry or community. Clear pathway/narrative to creating societal transformation. Detailed case studies of actualised research impact, with evidence
Recognise ANU as the 'natural home' of high-quality activities that address pressing challenges and national priorities	ANU increasing visibility of capabilities/interests Capacity to attract top-tier academic talent into a research program	ANU hosts key conferences, leads networks or major bids, is building strong connection to Government, industry, community etc.	Build strong and multifaceted connections with Government, industry, communities etc. Front-door for industry, government and others.	Front-door for industry, government, communities and others. Agile expertise and strong research-based offering.

	Alignment with national and ANU priorities	Alignment with national and ANU priorities	Alignment with national and ANU priorities	Alignment with national and ANU priorities
Create an outstanding environment for research training that can position our early-career researchers for success in a complex world	Attract high-quality HDR students and ECRs Provide outstanding research training experiences and opportunities E.g. travel grants, global research exchanges, 2+2s, research cohorts	Attract high-quality HDR students and ECRs Provide outstanding research training experiences and opportunities E.g. travel grants, global research exchanges, government and community internships, media training	Attract high-quality HDR students and ECRs Provide outstanding research training experiences and opportunities E.g. travel grants, government and community internships, industry placements, industry-sponsored scholarships and positions, media training	Attract high-quality HDR students and ECRs Provide outstanding research training experiences and opportunities E.g. industry internships, industry-sponsored scholarships and positions, IP/commercialisation training, accelerators etc.
Promote research excellence and support the highest quality research that may be otherwise difficult to initially find external funding for	Positioning ANU to attract research grants and income, particularly ARC, NHMRC, philanthropic funding High-quality research outputs Clear goals and targets for future applications/ partnerships	Positioning ANU to attract research grants and income, particularly ARC, NHMRC, philanthropic funding High-quality research outputs Clear goals and targets for future applications/ partnerships	Supporting capacity to secure large research grants and income with particular emphasis on Category 2-3-4. High-quality research outputs Clear goals and targets for future applications/ partnerships	Supporting capacity to secure large research grants and income, with particular emphasis on Category 2-3-4. High-quality research outputs Clear goals and targets for future applications/ partnerships
Enhance novel cross-disciplinary and integrative work through collaboration and engagement	Create collaboration culture and work through discipline-based expectation differences. Create building blocks for cross-disciplinary work, e.g. jointly supervised students or ECRs, defined questions. Cross-disciplinary conferences or workshops	Create collaboration culture and work through discipline-based expectation differences. Cross-disciplinary conferences or workshops. Application of integration and knowledge transfer expertise	Proactively identifying next-user and end-user needs and coordinating research teams to address particular challenges Enhancing engagement through proactively Breaking down barriers between academic and other research cultures	Front-door for industry, government or community that has access to cross-disciplinary expertise and specialised cross-disciplinary teams. Enhancing engagement through proactively Breaking down barriers between academic and other research cultures

Establish innovation ecosystems and shift the dial on academic entrepreneurial culture	Agile approach to researchers coming in and out of the university research system	Developing national and international networks and developing key strategic partnerships Agile approach to researchers coming in and out of the university research system	Explicitly building an innovation ecosystem through entrepreneur-focused networks or opportunities Tailored workshops and fora	High-profile innovation ecosystem supporting industry (small to large). Front-door for problem-solving; facilitiating business-to-business and research-to-business Fluid researcher movement in and out of the university
Build critical mass and position ANU to lead major national research initiatives, attracting funding to further grow and support the work	Key academic conferences National and International networks Centres of Excellence Laureates/Future Fellowships Underpinning LIEF and NCRIS bids and networks	Key academic conferences National and International networks Centres of Excellence Laureates/Future Fellowships CRCs ARC Linkage Projects	National and International networks Government networks CRCs Industry Laureates / MCRs/ECRs Spin-outs and direct industry engagement supporting further R&D	National and International networks CRCs Industry Laureates / MCRs/ECRs Spin-outs and direct industry engagement supporting further R&D