

Research and Knowledge Exchange Strategy 2020-25:

R-LINCS 2

Background

As defined by our new 2020-25 strategic plan, the University's purpose is three fold:

1. To offer transformational opportunities to everyone who has the ability to benefit from Abertay's approach to university education.
2. To inspire and enable our students, staff and graduates to achieve their full potential and to have a positive impact on the world around us.
3. To prepare students for the world of work and a life of learning.

This paper sets out a new Research and Knowledge Exchange (RKE) Strategy that aligns with the University's overall strategic plan aims for RKE, which states that:

1. We are committed to producing quality research and knowledge exchange that is aligned with international, national and local priorities and delivers real impact for society.
2. We will invest in research and increase our reputation for research and knowledge exchange in areas which enhance our academic programmes, thereby ensuring a sustainable, vibrant and collaborative researcher community.
3. We will support staff to deliver quality research output, knowledge exchange and impact; we will clearly articulate our expectations and standards to staff.

This new RKE Strategy is deliberately action and outcome-focused and supersedes the current RKE Strategy, R-LINCS (Research-Led Innovation Nodes for Contemporary Society).

Consultation process

The writing of the strategy has been a team effort led by the Dean of Research and the Graduate School supported by the Research Executive, the Academic Leadership Group and the Theme Leaders Group. The strategy has been consulted on through a series of engagements:

- Academic Leadership Group 11th June, 27th November 2019
- Theme Leaders Group, 18th July, 31st July, 6th November 2019
- Theme Leaders and Head of Divisions group meeting 9th September 2019
- Research Executive 20th August, 26th November 2019, 21st January 2020
- Senior Management Group, 8th January 2020
- Professoriate, 8th January 2020
- Open session with all staff 13th January 2020
- Graduate School Forum, 13th January 2020
- University Research and Knowledge Exchange Committee, 4th December 2019
- Senate, 22nd January 2020
- University Executive, 27th January 2020
- University Court, 5th February 2020

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Preamble

Abertay is a compact, focused University with an established reputation for working well across traditional research boundaries, as well as within new and emerging disciplines and sectors. We are committed to high quality research that delivers real impact for society. From environmental research into sustainable businesses and food production, to using computer games as creative and critical tools to understand the behaviours and structures that drive and influence individuals in the societies in which they exist, our researchers are solving complex real-world problems to fuel innovation-led growth and sustainable development.

Externally, the research and innovation landscape and its interfacing with Higher Education is evolving quickly. The most notable developments to date are the formation of UKRI, the growing emphasis on research-led innovation, the shift in RKE investment through the introduction of the £4.7Bn Industrial Strategy Challenge Fund, and the intensification of funding into Doctoral Training Partnerships and Centres of Doctoral Training. Moreover, the UK and Scottish Governments at all levels expects universities to maximise the opportunities afforded to society and the economy through the translation of research and the acceleration of its impacts as well as the upskilling of the workforce at all levels.

We are beginning to respond to this shifting landscape. Our research excellence is driving our innovation and partnerships with private, public and the third sector and in key industry areas including sectors identified in the new UK Industrial Strategy¹, Scotland's Economic Strategy (2015)² and the Tay Cities Regional Economic Strategy (2017-2037)³. In particular, our reputation for working in partnership with, and delivering for, industry has facilitated our engagement with UKRI ambitions and funding opportunities. We have built upon our strengths and have focused our engagement on some, rather than all, opportunities and initiatives to leverage additional competitive funding for research and innovation nationally and internationally. We are creating a dynamic academic ecosystem which stimulates a virtuous circle where maximising the use of research excellence helps drive innovation, economic and social impact through partnership working with key stakeholders, which in turn feeds back to expand and enrich our own research and teaching excellence, relevance, capacity and capability.

The RKE Strategy 2020-25 (R-LINCS 2)⁴ is a considered response to the external landscape, contextualised by the successes achieved and challenges faced during the period of our previous RKE Strategy (2014-19). Through investment in and delivery of our new RKE Strategy, Abertay will support areas of existing and emerging research excellence across the University and grow the value of our research to make a major contribution to economic prosperity, social and cultural impact and inclusive growth. This RKE Strategy is central to our long-term plan to embed a research-led culture right across Abertay that underpins everything we do in research, knowledge exchange and teaching, and will deliver an integrated strategy across the Institution, driving and coordinating actions at individual, Division, School and University levels.

RKE Framework

Strategic RKE activity will be focused within and across Challenge Spaces addressing key local, national and international priorities that our research base best positions us to respond to. To address these Challenge Spaces we will draw on our research expertise that is encapsulated in our Pooled Excellence, which represent cross-institutional ways of working, and our academic units, the Divisions.

Challenge Spaces

Creative Industries & Cultural Vitality, exploring the creative use of interactive and immersive technologies in entertainment and non-entertainment spaces alike, and how they shape our everyday living, leisure and work cultures and practices.

¹ <https://www.gov.uk/government/topical-events/the-uks-industrial-strategy>

² <https://www.gov.scot/publications/scotlands-economic-strategy/>

³ <https://www.taycities.co.uk/publications>

⁴ The RKE Strategy 2020-25 aligns with and supports our new University Strategic Plan, our new Learning Enhancement Strategy and new Digital Strategy.

Health and Care Across the Lifespan, considering human and societal challenges of adversity, mental and physical health, wellbeing, education, performance and social care and the roles that science, sport and physical activity have in addressing those challenges.

Security, Equality & Social Justice, fostering personal, societal and organisational security and resilience in a time of increasing local, national and transnational threats and socio-technical disruption together with growing economic and health inequality.

Sustainable Development & Inclusive Living, managing responsibly the natural resource requirements (and energy-food-water nexus) of inclusive living and business infrastructures and safeguard their transmission to future generations.

Pooled Excellence

Our Pooled Excellence cross-cuts organisational structures and recognises our particular ways of working that can contribute to all of the above Challenge Spaces. We have Pooled Excellence in:

Co-creation & external engagement: working with stakeholders collaboratively from the outset to define and develop solutions to problems.

Digital transformation & emerging technologies: using existing and emerging digital technologies to create new social and economic processes and products.

Effective learning & pedagogy⁵: investigating learning, and sharing expertise with students, staff, and the wider research and education community.

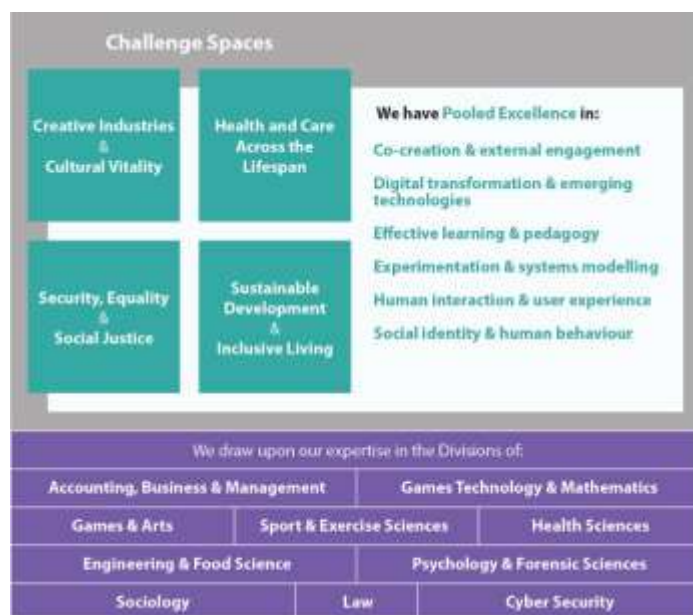
Experimentation & systems modelling: investigating complex systems through systematic experimental design and predictive modelling.

Human interaction & user experience: ensuring efficient and effective interactions with processes, products and technologies.

Social identity & human behaviour: examining the relationship of individuals and groups to socio-economic and technical change.

Divisions

Divisions⁶ are central to all of our academic activities. Divisions provide discipline-based RKE strength and Heads of Division manage the workload of our academic community.



The Figure provides a visual representation of our RKE Framework of Challenge Spaces, Pooled Excellence and Divisions.

⁵ and in line with Abertay’s Learning Enhancement Strategy 2020-25, priority 5

⁶ including the pan-University AbLE Academy

Vision and aims

Our underlying vision is *focused collaborative research and interdisciplinary innovation for impact*. The three central pillars of our vision are:

- To achieve research of the highest quality;
- To have an impact beyond academia which yields economic, social and cultural benefits;
- To support and develop excellent researchers.

To realise this vision we will:

Foster ambition and success, build critical mass and new research and knowledge exchange strengths across the University, by leveraging existing excellence within priority challenge spaces

Stimulate excellence in collaborative and interdisciplinary research and knowledge exchange with societal and economic impact through development of existing staff and the new appointment of talented and leading academics and practitioners

Develop researchers to be adaptable and flexible in an increasingly diverse and global research environment, through provision of researcher training, mentoring, facilitated interaction with enterprise and public engagement channels, investment and support

Enhance the value of our researcher output and impact through research leadership and a streamlined and effective research support infrastructure

Develop further strategic collaborations aligned with our core academic provision through national and international academic and industrial research and knowledge exchange alliances

We will achieve our aims by focusing purposeful activity, strategic investment and innovative policies into five key Priorities over the next five years:

- Research leadership, recruitment and management
- Sustainable research environment
- Researcher development
- Quality output and impact
- Informed decision making

We set out each of these Priorities in turn together with risks and KPIs. Through these Priorities we will invigorate the University research culture and rebalance the profile of RKE with teaching within the academic ecosystem, by communicating our successes, appropriate resourcing, prioritisation and support.

Priority 1: Research leadership, recruitment and management

Leadership: We will develop a coherent, transparent network of RKE leadership, management and support that will allow us to build capacity and focus effort via Challenges, and develop core competencies and depth via Pooled Excellence. We will form research teams drawing across from Divisions to ensure alignment of strategy at all levels of the University. Our research leaders will identify funding opportunities and priorities, and plan coordinated activity and support via a Research Leadership Group. Output, impact and income achieved will be assessed against agreed research leader and manager targets. We will introduce effective research leadership into subject areas where this does not yet exist.

Recruitment: We will also identify those RKE areas where through key recruitment and investment we can develop a broad front of excellence, impact and RKE leadership. To effect this, interview panels for all academic posts will have appropriate research representation from the Research Executive or Professoriate.

Management: We will develop and clearly articulate our expectations and standards to research leaders, managers and staff. Workload will be allocated and managed to support RKE goals of output, impact and income generation. We will identify potential research leaders in key areas and support them to secure major awards and come to the forefront of their fields. We will support the development and management of large grants.

Summary: Research leadership and line management is critical to improved RKE performance; purposeful quality research leadership and management will improve the number of large coordinated grant proposals being submitted and the quality and quantity of output generated by staff.

Priority 2: Sustainable Research Environment

Investment: We will focus internal investment through our Challenge Spaces and enabling Pools of Excellence, to build on our existing successes and capitalise on our critical mass and interdisciplinary capabilities, with a view to develop and diversify application, industry networks and partnerships, in areas which enhance our academic provision. To help focus this investment we will develop a revised funding model for Schools based on success and opportunity.

PGR Students: We will provide targeted internal support for postgraduate research students (funded and co-funded studentships; Abertay Futures Scholarships) and provide quality research degree supervision, to support the growth and impact of our postgraduate research community and stimulate new intra- and inter-disciplinary developments appropriate for a contemporary research landscape. We will provide excellent Research Degree Student supervision to support student success, employability and career progression.

Impact: We will provide an ecosystem of support for individuals and organisations in order to help realise the economic, social and cultural impact of new innovation arising from our research. We will increase the number of academic staff recognised internationally for their excellent research and impact and we will target our effort to diversify funding from business, and esteemed UKRI, UK charity and international sources.

Infrastructure: We will ensure that appropriate technical support is in place in key areas and provide state-of-the-art facilities and equipment.

Summary: Developing an ambitious, resourced, supportive and collaborative research culture is critical to the vitality and sustainability of the academic community; targeted support and prioritised effort will develop our reputation for delivering quality research with impact, and will support the appointment and retention of excellent academics.

Priority 3: Researcher Development

Development: We will attract, develop and nurture the careers of excellent and early career researchers by resourcing their initial period at Abertay so that they are embedded within the academic community and their research and impact reaches an internationally excellent level. This embedding will be effected through mentoring and support, reduced administrative and teaching workloads and access to collaborative studentships.

We will develop and clearly articulate our expectations and standards to staff and we will support staff and students to deliver quality research output, knowledge exchange and impact. Individual researchers will be supported to build integrated bodies of work that evidence sustained and deep research inquiry. This support will include research planning to deliver on a relatively small number of high quality outputs with clear pathways to impact supported by effective networking.

The Graduate School will act as an integrated centre to support development of academics and raise the quality of output and impact. The Graduate School will support researchers in developing bodies of work and support managers in the use of Professional Development Discussions to ensure staff engagement with research development. Development activities will include UKRI bids, working with industry with input from BEIS, SG etc., and community and public engagement.

Integrity: We will meet the highest standards of research integrity and promote equality of opportunity in the career progression of all researchers, whatever their background or community.

Networking: We will introduce a regular University RKE Seminar Series within a dedicated timeslot with an expectation that research active staff and PGRS attend, open to UGs and the public. We will also deepen our network of leaders and mentors (e.g. alumni, industrialists and entrepreneurs) to assist staff and students develop ideas and funding proposals.

Summary: Developing our staff and students is critical to the vitality and sustainability of the academic community; engagement with researcher development opportunities will develop the quality of research and its impact, our RKE income, PGRS outcomes and ELIR results, and will support our ambition for DTP or CDT engagement.

Priority 4: Quality output and Impact

Outputs: We will produce excellent research in terms of originality, significance and rigour and deliver impact with considerable reach and significance beyond academia to yield economic, social and cultural benefits. To improve our research quality, REF UoA teams will continually review the quality of research output by academic staff and support continued improvement, through the use of appropriate esteemed academics (either internal or external as appropriate), paying particular attention to experimental design, the writing process and output forum (e.g. journal) selection.

Where academics undertake KE we will support academics to plan development of underpinning research into the running of the KE project.

Impact: Abertay already has very good industry engagement in some areas. We will deepen our existing collaborations, and develop new strategic relationships with industry, the public and third sector, locally, nationally and internationally, growing our position as an open innovation ecosystem for accelerated research translation. We will strategically manage our key external relationships for the long-term benefit of our research agenda, especially with a view to continued UKRI funding with industry.

Where research with impact is undertaken, the REF UoA teams will monitor the quality of impact generated by academic staff and support continued improvement of impact and impact case studies through early planning of impact pathways and recording of evidence over the long term.

More broadly, we will extend the influence of our research and innovation on policy and practice development and promote a culture of inclusive public engagement with our research. We will fully engage with the Open Access agenda and we will support our staff and partners to develop added value from open access data.

Enterprise: To stimulate enterprise and innovation we will provide proof of concept funding for small-scale research and knowledge exchange projects, and work with Bell Street Ventures to translate research into start-ups and spin-outs; provide opportunities for entrepreneurship and corporate co-location to facilitate collaborations between staff, students and companies.

Summary: Improving the quality of our research output and impact is critical to the sustainability of the academic community; targeted support and prioritised effort will develop our reputation for delivering quality research with impact, will attract external funding and quality partnerships, and will help to attract excellent academics and students.

Priority 5: Informed decision making

Our administrative support for RKE will be an integrated provision, using fit-for-purpose information systems⁷ that provide accurate and timely data sets so that the needs of our researchers and sponsors

⁷ In line with the Abertay Digital Strategy 2020-25: the University will ensure that technology is used in innovative, intelligent and flexible ways to support and enhance all of our activities including the management and application of research (goal 4; supporting Research with Impact).

are met comprehensively and that our research leadership and management can carry out data-informed planning.

We will refine our RKE IT management system functioning, with a particular focus on reporting to Schools, Divisions and the Research Executive, and improve automatic recording of research data/metrics. Our RKE IT management system will be linked to other University information systems and will support Data Management and Open Access requirements.

RISKS: Reliable information systems (in line with the Digital Strategy) and regular reporting, review and feedback is critical to improved RKE performance; reporting, assessment, and informed research leadership and management can only occur if information systems are made efficient and fit for purpose.