

University Innovation Fund – 2017/18

Abertay is well placed to contribute to Scotland's priority economic sectors and the national programme (innovation improvement agenda) of structural change, process improvement and or university cultural change which have been framed for the period 2017-20.

Our 2017/18 plan is a proactive engagement with the UIF agenda and should be read with our comprehensive 2016/17 plan (attached with status update) as a logical development of our services in the spirit of continuous improvement and enhancement, and collaboration. We have avoided repetition of the 16/17 plan and focused on new activities or development of existing.

It should be noted that Abertay punches above its weight in terms of the innovation improvement agenda and flow of resources from the SFC. We receive a baseline platform grant of £250k per annum which we match fund in order to provide a stable, predictable core of funding for innovation support and knowledge exchange. In addition to this we receive in 2016/17 a £45k per annum UIF outcome grant. This compares to an average sector UIF outcome grant of £0.4m and an average top quartile grant of £1.0m.

We have built upon our strengths and given the funding framework, have focused our engagement with some, rather than all of the outcomes.

In discussion with Scottish Funding Council we have agreed that the best mechanism to work at a sector level to deliver the national outcomes is to work together to:

- Analyse current activity and identify best practice.
- On the basis of this, where appropriate, devise and execute a pilot programme.
- If successful, develop/initiate a sector-wide programme.

Through the Research and Commercialisation Directors' Group (RCDG) each institution has agreed to contribute to various outcomes. Each institution notes and acknowledges the importance of each of the outcomes but for the best use of resource each institution will be involved with a different combination of work. As an institution we have signed up to participate in the groups for outcomes 1 and 4.

1. Demand Stimulation

To help increase the demand and quality of engagement from business and the public sector for university services.

Following the recruitment of a Director of External Relations in early 2016, a new Business Engagement team is currently in establishment and will focus on:

- Supporting our engagement with key stakeholders in the business/public sector/third sector communities through events, speaker opportunities and company engagement through internships and placements.
- Supporting academic colleagues with new course development through identification of sector trends/skills gaps/synergies with industry bodies.
- Supporting financial and business development bids (eg Tay City Deals, SDS Graduate Apprenticeships).
- Driving enterprise initiatives to support student employability.

By the end of 2017, we will have made measurable progress towards:

- Abertay becoming the first port of call for private, public and third sector partners in key industry areas.
- Our students and graduates being known to possess the right mix of skills, confidence and attributes for their employers, now and in the future.

2. Simplification / Commercialisation

To simplify business access to the knowledge and expertise in Scottish universities.

We have recently launched a new Consultancy framework to encourage our staff to use their knowledge and expertise to solve real-world problems and to make a positive impact on the world around us. This will support the attraction and development of the best staff, recognising and rewarding them for the contribution they make to our success, to enrich the lives of staff by offering opportunities for new experiences and to encourage and support entrepreneurial activity by our staff.

We will re-write our business engagement website pages to demonstrate the range and focus of business engagement work at Abertay (clear remit, areas of responsibility, single point of contact for new enquiries and relationships, case-studies).

3. Simplification / Greater Innovation

To make strategic use of sectoral knowledge to promote greater innovation in the economy.

The Business Engagement team will provide a valuable additional layer of expertise which can be applied to filter ad hoc opportunities or ideas, and support those which progress to the next stage. Early examples of these include the Tay Cities Deal and the development of Graduate Apprenticeships.

Proposed City Deal: The cyberQuarter (Abertay lead) with the objective to:

- Establish the region as the location of the cybersecurity sector in Scotland and support the creation of new companies through integration of industrial experience and start-up support with cybersecurity education.
- Create a physical Cybersecurity Centre with the infrastructure support necessary to attract existing companies and nurture start-ups. The centre will have direct links to university RKE expertise.
- Develop a concerted response to the digital threat to Scotland's citizens, businesses and global partners. Focussing expertise, enterprise and innovation will inform the development of new cybersecurity products and services for the global market.

To attract expertise, enterprise and investment to the region, the Cybersecurity Quarter will build on widely recognised capability, networks and resources that currently exist around the Ethical Hacking and Cybersecurity programmes at Abertay. The resulting new industry cluster will generate growth in high-value knowledge-intensive jobs to the city, retaining graduates and creating new opportunities for the regional population. Investment into growing a cluster of such companies in the region will complement rather than compete with the existing digital economy in Tay Cities Region.

Proposed City Deal: The Scottish Games Centre (Abertay lead) with the objective to increase the growth of the existing computer games cluster in the region and capitalise on relationships with public agencies, games studios and major digital content commissioners at a local and national level. While parts of Dundee's existing games cluster are prospering, other parts are fragile and the positive role it plays in the region is at risk of being diluted by other geographic clusters competing for talent, investment and reputation.

This project has potential to address emerging challenges for the games industry. These challenges include the shift in the underpinning business model of games studios (small and micro enterprises now predominate the sector, and a chronic lack of leadership and management skills which are negatively affecting commercial success and contributing to record levels of studio start up and closure.

The project aims to offer three complimentary strands of activity, coordinated through the Scottish Games Centre. The Centre will provide facilities to promote experimentation and innovation in professional practice; advocacy and representation for the local games business community; and wraparound, bespoke business and enterprise support to maximise commercial success.

Proposed City Deal: Brighter Lives by Design (Abertay and Dundee co-leads) to advance person-centred care, from well-being and prevention to faster patient pathways and home-based management of chronic diseases and mental health. This collaborative model is unique to the Tay Cities Region, harnessing two internationally recognised strengths of the area - Creative Industries and Health & Social Care - to form a new Creative Health & Social Care specialism.

The project will create and apply a range of innovative technological and design-led solutions, underpinned by expertise in gaming, art and design to address and resolve major challenges in the provision of Health & Social Care. It will create design-led products that deliver healthcare solutions to improve patient experience, enhance service delivery and develop the next generation of care workers. These products will be developed locally and, importantly, will involve extensive cross-collaboration among patients, healthcare professionals and experts in technology and design. The project will focus on better patient journeys for individuals with chronic disease and mental health and on integrating currently disparate Health & Social Care systems. We will also develop state of the art educational provision through digital technology; both Dundee universities are world leaders in this provision. The project will generate revenue by selling these innovative technological solutions globally.

Food and Drink - we will continue to lobby for more flexible Scottish interventions for innovation led growth that don't assume one size fits all and encourage traction in high growth sectors such as Food and Drink, where R&D spend has historically been low but sector growth projections are high. In anticipation of the new Scotland Food and Drink Strategy 2017-30 we will continue to work in collaboration with SRUC and QMU to look

at the alignment of resources focused on collaborative academic capacity building. We will further develop this partnership and engagement with the Food and Drink Industry via our joint work with the liaison group.

Abertay will also as part of the proposed Centre for Food & Drink Knowledge and Innovation (with UHI and Perth and Kinross Council), leverage City Deal investment to augment existing academic expertise and capacity by adding new facilities, Hi Tech equipment and additional high quality staff. Taken together, these joint-investments will provide the tools needed to deliver better skills, greater innovation and increased productivity by providing companies with:

- New technology, which will cut existing and future production costs by facilitating affordable and flexible access to more efficient manufacturing processes currently unavailable in Scotland.
- Access to a skilled and motivated workforce aware of the cutting-edge nature and rewards of a career in the sector and trained on the latest technology at all levels.
- Specialist food product development expertise, which will increase and streamline local commercialisation capacity and the new product development journey through closer links to upstream research and early introduction to new technologies.
- Consumer-led product innovation through enhanced access to greater consumer and sensory-based testing at all stages of new product development.

4. Entrepreneurialism

To make a significant and positive change in the way that entrepreneurial opportunities are promoted and delivered to students, HEI staff and business.

We need teaching and experiential learning opportunities inside and outside of the curriculum to be as real and up to date as possible to ensure the Abertay Attributes resonate with employers and industry sectors. We will work to demonstrate that course content reflects industry and sectoral requirements and work experience mirrors current ways of working. We will use research and insights to identify sectors with higher rates of business start-up, self-employment, freelancing and contracting, e.g. creative industries, sports, IT.

The future of work for Abertay graduates may not be 'jobs' as we know them today – micro enterprise, portfolio careers and the threat of automation to certain roles will inform our work around enterprise. Key skills and behaviours around enterprise, business start-up and self-employment will be reflected in a new enterprise strategy with the associated delivery embedded across all Schools, embraced by the University community and offering practical support to student entrepreneurs

The Innovation for Global Growth (IGG) event consists of students and companies working together to find solutions to current business challenges. The motivation behind this project was three-fold: to enable students in their later years to synthesise their learning to solve complex problems; to build student confidence in their knowledge and the value senior managers would place on it; and to change company perceptions about the capabilities of Abertay students. Organisations involved have ranged from the Scottish Blood Transfusion Service, BT, Royal Bank of Scotland; Michelin; Scottish Enterprise; Perth & Kinross Council and bodies representing small businesses such as Scottish Seafood.

The event itself is preceded by workshops on areas such as creativity, the consultancy process and systems thinking. The event is an intensive week of activities where clients present their problem to the students who work in groups to come up with quick fire solutions which they present to the client within a 3 hour period. Students are then assigned a single topic to work on for 6 weeks and then produce a consultancy report which is assessed by the Abertay tutor and is passed to the client for comment.

Feedback from students shows that the event has a huge effect of their confidence and their aspirations post study. Companies have been delighted and surprised by the quality of the ideas they have received with many taking the student ideas to implementation. A prime example of this was the work with BT, who came back after the event to work with a subset of students and invited 5 students down to London to meet with the Chief Executive (Business) to present their ideas.

5. International

To pool knowledge, networks & shared good practice to promote and engage Scotland internationally.

Abertay and Perfect World Education (a subsidiary of China's leading entertainment and creative enterprise Perfect World Investment & Holding Group) have agreed a strategic partnership to develop and nurture new talent to meet the demands of the international computer games industry and to provide a platform for collaboration and cultural exchange in computer game education. China has a rapidly expanding games

development sector, and is now the second largest market for UK game exports. As Europe's leading university for computer games education, we are ideally placed to foster university-business links in this area, and we are confident it will prove to be a great success for both the UK and Chinese creative industries.

The Global Challenges Research Fund (GCRF) is a new £1.5 billion fund announced by the UK Government to support cutting-edge research that addresses the challenges faced by developing countries through challenge-led disciplinary and interdisciplinary research, strengthening capacity for research and innovation within both the UK and developing countries or providing an agile response to emergencies where there is an urgent research need. Abertay recently submitted two bids (total value £7m) drawing upon Abertay's extensive experience of delivering solutions to communities and businesses in ODA countries:

- 'Promoting access to appropriate sanitation and waste management and resource recovery practices through research and enhancement sharing partnership'. This project will provide capacity building for Togo's waste and water management and enhanced skills and know how to 5,000 to 10,000 employees of city councils, state authorities and other organizations and increase access to clean water.
- 'Enhancing sustainability of the Vietnamese seafood industry'. A collaboration with Vietnamese researchers and business to extract bioactive compounds from waste generated by the fishing industry. This will reduce pollution, Vietnam has the world's third largest seafood industry, and promote economic development through these compounds being used to develop new products.

Abertay is undertaking a Centre of Expertise for Waters (CREW) funded independent evaluation of the Integrated Water Resource Management – Southern Malawi project on behalf of the Scottish Government. Abertay secured this project on the basis of their experience over 15 years of undertaking audits and experience in knowledge exchange and capacity building in Africa in the context of water resources and environmental protection.

6. Inclusive Growth and Social Impact

Contribute to society through public engagement with a research base with impact beyond pure economic terms.

The Dundee Cultural Strategy (2015-2025) has made a commitment to ensuring that Dundee is known as an International City of Design and Creativity through a process of cultural-driven regeneration. Through an internal and external programme of activities Abertay can make a valuable contribution to this ambition and in turn can reap the benefits in recruitment of students by positioning Dundee as a creative and vibrant city which is a good place for students to live.

Whilst it would be easy for the University to save a small amount of resource by withdrawing from these activities which are more removed from our day to day work as a University, it is the recommendation that we spend a much greater effort in these areas in order to position the University as an engaged city-partner and a key influencer in the creative industries and do more to promote the role played by Abertay students, staff or alumni.

The University's onsite cultural centre delivers a programme of exhibition and events. This provides an invaluable platform to share the creative work produced by students and staff, and also a place to showcase relevant cultural activity that can stimulate our research and teaching. A stakeholder research engagement exercise (internal and external stakeholders) is planned for completion by February 2017 with recommendations on the way forward for the gallery's role, brand and location, to maximise the return for Abertay.

An enhanced events strategy which will support our brand enhancement and reach with potential stakeholders (the business community, potential students and their parents, local stakeholders like the Chamber of Commerce, Rotary clubs, City Council and cultural partners.) An Events Lead has been recruited who has been tasked with professionalising the events programme.

To support this increased focus on our events strategy, alignment with brand enhancement and a focus on enlarging our business and community audiences, we will host as many events as possible on Abertay premises (eg Business Breakfasts in collaboration with the Chamber of Commerce, conferences, speakers series). An example is the recent brief to the business community by our ethical hacking students on the increasing importance of cyber security during a special Business Breakfast.

7. Equality and Diversity

Positive promotion in staff and all who are affected by the use of the UIF.

Our strategic plan confirms our intention to mainstream equality and diversity across all of our activities. Our Equality Action Plan, which contains detailed actions related to student applications, admissions and student achievement, is routinely monitored and updated.

Reminder: University Innovation Fund – 2017/18

Institutions are invited to submit their individual responses by 1 February 2015. Submissions should detail the contribution each HEI will make towards delivering the national priorities, individually and in collaboration, and should not exceed four sides of A4 in length. ~~Institutions should also identify their ability to utilise and match fund the Platforms Grant.~~

Abertay is well placed to contribute to Scotland's priority economic sectors and the national programme (innovation improvement agenda) of structural change, process improvement and or university cultural change both individually and in collaboration.

As a modern, business facing University we deliver local, national and international research and knowledge exchange which focusses on the needs of businesses and other end users. We build upon our expertise in food technology, environmental management and computer games and apply it to a broad range of industries (e.g. through visualisation technology).

Establishing the Graduate School

To support long-term vitality of the University research culture, in 2014 Abertay introduced ambitious plans and investment into a pan-University Graduate School (GS) as part of our R-LINCS (Research-Led Innovation Nodes for Contemporary Society) strategy to grow our RKE capacity and excellence. All PG (taught and research) students and research/ academic staff, have access to the GS which provides a comprehensive researcher development programme within a central location of flexible working spaces, open to the entire research community to promote integration and an inter-disciplinary ethos. Research students and early-career researchers are supported through a range of opportunities to enhance their research and professional skills. The GS provides training and professional development opportunities to both staff and students through seminars, workshops (e.g. statistics, programming, supervisor training, grant writing), intensive courses (e.g. preparing to teach in HEI), retreats, and an on-line Research Skills Master Programme (18 modules on research, planning, management and entrepreneurship skills). PG students develop communication skills through presenting at our PG Conference and internal seminar series, and have access to discipline-specific seminars and training via our on-line GS Events Calendar. Personal development planning is supported through the VITAE Researcher Development Framework tool and app.

PGR students and academics can apply to dedicated University funds for: researcher training support (conference/ meeting attendance and specific training needs); support for Open Access Publication; Pump-Priming to drive enterprise and innovation through small-scale RKE projects (up to £5K vouchers); R-LINCS studentships (RCUK level stipend, fees plus support fund); and have secured facilities and equipment support via R-LINCS Theme Leaders and the GS. RKE support is provided to research/academic staff and students alike, thereby promoting integration, mentoring and a vibrant research culture. Given our small size, we make best use of regional and national development opportunities (e.g. courses provided by Dundee and St Andrews Universities, VITAE and the Leadership Foundation). Our membership of the inter-University Scottish Research Pools (SAGES, SICSA and SIPR) and Scottish Graduate Schools (SGSAH and SGSSS) also supports researcher development and provides opportunities to share research expertise, new discoveries across traditional discipline boundaries, and access to development programmes, networking and facilities. Staff may apply for sabbatical leave to pursue various development opportunities.

The GS is still relatively new, and will continue to establish and develop in 2016.

Developing the R-LINCS Strategy

Collaboration is the ethos of our R-LINCS RKE strategy which aims to bridge conventional boundaries between disciplines to devise innovative approaches to address societal challenges. Building on existing areas of expertise and our industry facing heritage, strategic research activity is focused around themes to address key local, national and international priorities. Our four R-LINCS Themes (Creative Industries, Environment, Security and Society) serve as a focus for interaction and development and are led by experienced research academics committed to fostering and supporting RKE activity and excellence. Our Outreach and Public Engagement Network (OPEN) fosters staff and student engagement with the local, national and international community, making Abertay an accessible and open community asset.

R-LINCS will continue to embed. We will conduct an impact assessment in 2016 and make further staff investment to support its development.

UPDATE: R-LINCS impact assessment taking place in March 2017 (external peer review).

Sector-wide ambitions for the new UIF.

Our priorities have been grouped under the 12 actions agreed at RKEC:

To promote entrepreneurial opportunities to students

- Enterprise Business Incubator (Nov-15): £1.6m project in collaboration with Dundee & Angus College to support students in developing their business plan, provide facilities and in-house resources.
- Intellectual Property Policy (Jan-16): transformed to expedite and enable students to turn their ideas into business opportunities. The inventor (staff and / or student) will now own the IP.
- Access to early stage funding: we partnered with Mercia Technologies capital investment fund (Sep-15) to give our student entrepreneurs access to early stage funding. Discussions have started for computer game students and we are looking to expand this to life sciences and cyber security.
- Enterprise Campus: Our students have access to workshops, mentoring and funding to support business start-ups through our membership (Jul-2015).
- EBMC European business challenge – Entrepreneurial Brains Made on Campus: Students will take part for the seventh year running (Feb-16). It involves developing their own business ideas in response to a real problem; taking what they've learnt from their studies and applying it in a safe environment to develop business skills.

UPDATE: 2016/17 actions have been delivered.

To increase development opportunities and uptake of entrepreneurial training and education

- Increase the number of Enterprise Fellowships: Abertay is currently hosting a Royal Society of Edinburgh Enterprise Fellowship. We want to build on this and encourage other students to use this funding opportunity. We will run a series of programmes to raise awareness amongst our graduate students and support the translation from idea to proposal.
- GS to host a programme of workshops delivered by the Scottish Institute for Enterprise and Enterprise Campus to develop researchers understanding of pathways to impact and stimulate innovation and KT.
- Make use of opportunities for enterprise arising from the refocused strategies of SAGES, SICSA, SIPR.

UPDATE: Establishment of an enterprise team (late 2016) to drive enterprise initiatives to support student employability.

Encourage mobility of staff between business and universities.

- Intellectual Property Policy (Jan-16): Goes further than any other Scottish University as the IP will be owned by the inventor rather than the University. A driving factor in the change of policy was to encourage and enable our staff to “spin out” their inventions. It will remove a barrier to working with businesses who have long argued that negotiation of IP rights with the sector slows down and / or prevents collaboration.
- Staff Secondments and Mobility: We are reviewing our policy to promote the hosting of secondments and to support staff that want a secondment into industry. We will explore SIPR funding .

UPDATE: IP policy change made and fully embedded. Staff secondment policy to be reviewed in 2017.

Commitment to the professional development of our Enterprise & Innovation officers

- Professionalise E&I administration: officers to undertake ARMA’s Certificate in Research Administration (2016), the Head of E&I has been appointed as Quality Assessor for ARMA Certificate and Diploma in Leadership of Research Management (Dec-15) and will undertake a LLM in International Business Law as part of his CPD to develop in-house capability of contract management and IP legislation (2016).

UPDATE: 2016/17 actions have been delivered.

Enhanced skills for effective collaboration within the academic and SME business base

- Roll-out E&I strategic partnering to existing collaborations (e.g. KTP Management Committees), tailor promotion of appropriate RKE funding streams and progression (e.g. Innovation Voucher to KTP) and support to academics depending upon their career-stage (early, mid, expert).
- Review of front and back office support to identify barriers to effective collaboration: We have simplified our internal processes for Innovation Vouchers (Nov-15) to streamline the academic application process and to accelerate the start of (funded) projects. We will look to extend this further for consultancy.

UPDATE: 2016/17 actions have been delivered.

Support the transition from transactional to strategic relationships between universities and business/ industry

- Recruitment of a Director of External Relations (Spring 2016) to coordinate our interactions with businesses and to develop long term strategic relationships.
- Appointment of an Academic Enterprise lead to work with the Research Theme Leaders to drive and facilitate opportunities for external liaison with industry and external networks. This will ensure that enterprise / pathways to impact activities are not treated as an addition to research activity but are embedded within the research process itself at every stage.
- Increased participation in Industry Leadership Groups and development of workshops with key sectors. Abertay will host an OGIC workshop (Apr-16) to identify how Universities’ can support companies working on environmental remediation. We are planning a further workshop on how human resources and information technology can to drive innovation in the oil and gas industry (summer 2016).

UPDATE: 2016/17 actions have been delivered.

Implement enhanced template contract arrangements for SME’s in all Scottish universities

- We have started the process of harmonising and simplifying contract negotiations by adopting a standard set of terms and conditions for small value consultancy projects (summer 2015).
- We actively input into and will be an early adopter of the RCDG suite of simple publicly available contracts.

UPDATE: Standard set of consultancy terms and conditions delivered. We are awaiting finalisation of the RCDG suite of publicly available contracts.

Work with others to implement “post-project referral protocol” in all individual HEIs and Innovation Centres.

- We will use Innovation Vouchers as a “spring board” for KTPs. There are 5 KTP projects, either submitted for approval or funded with companies that we initially worked with through Innovation Vouchers .
- We will contribute actively to, and be early adopters of the protocol.

UPDATE: 2016/17 actions have been delivered.

Contribute to the development of a Framework to monitor and evaluate the success of the new approach

- Development of a balanced scorecard for internal monitoring of initiatives.
- Active engagement into sector discussions using expertise in key economic sectors, particularly food and drink and computer games, to evaluate the success of the new approach (to the sectors and their supply chains).

UPDATE: In discussion with Scottish Funding Council we have agreed that the best mechanism to work at a sector level to deliver the national outcomes is to work together to:

- Analyse current activity and identify best practice.
- On the basis of this, where appropriate, devise and execute a pilot programme.
- If successful, develop/initiate a sector-wide programme.

Through the Research and Commercialisation Directors’ Group (RCDG) each institution has agreed to contribute to various outcomes. Each institution notes and acknowledges the importance of each of the outcomes but for the best use of resource each institution will be involved with a different combination of work.

Strengthen our connections with social and cultural beneficiaries;

Build upon our existing links with social and cultural organisations through:

- The Dundee Academy of Sport; a partnership with Dundee & Angus College to engage with students at school, college and university level and supporting the delivery of community sport across Tayside.
- The V&A Museum of Design Dundee, where we are participating in the development of the museum including providing interns.
- Dundee Waterfront where our visualisation technology is used to inform the planning process and consult with stakeholders.
- We are also working on collaborative projects with National Theatre of Scotland, Scottish Dance Theatre, Dundee Rep Theatre and Perth Museum and Art Gallery.

UPDATE: Establishment of an enterprise team (late 2016) to support our engagement with key stakeholders in the business/public sector/third sector communities through events, speaker opportunities, company engagement through internships and placements, and to support financial and business development bids (eg Tay City Deals, SDS Graduate Apprenticeships etc)

We will provide more effective support for Scottish businesses to trade on a European and global stage

- Develop our external business portal to signpost sources of funding (collaborative research and knowledge transfer), our staff expertise, and facilities.
- Capital investment (£3.5m summer 2016) in facilities and the creation of a Consumer Experience laboratory to enhance the range of services that we can offer to the Scottish food and drink industry.
- Develop our internal management information to better understand who we are engaging with and how we can further that offering.

UPDATE: 2016/17 actions have been delivered.

Contribute to the thinking the innovation support ecosystem of Scotland.

- Actively engage in a further stream of sector wide work with the goals of how to stimulate the demand for R&D in Scotland and challenge businesses to think longer term, develop student driven initiatives and build upon successful mechanisms such as KTPs, Enterprise Fellowships and student business challenges.

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