

University Innovation Fund – 2018/19

Supplementary information provided in response to the announcement of UIF 18-19 uplift is provided at Annex A

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 2018/19 plan is a proactive engagement with the UIF agenda and should be read with our comprehensive 2016/17 and 2017/18 plans (attached with status update) as a logical development of our services in the spirit of continuous improvement and enhancement, and collaboration.

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 received 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 and will engage with the learning and outputs of the other three groups (outcomes 5-7) going forward.

1. Demand Stimulation

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

Our Business Engagement team is now established, and has been operational since December 2016. The team is developing a one-stop shop approach to business engagement, to ensure that commercial, public and not for profit organisations can access and navigate University support, facilities and services.

We will continue to focus on:

- Working with key stakeholders in the business/public sector/third sector communities through events, speaker opportunities and company engagement in key sectors.
- 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.

Our drivers are:

- Abertay becoming the first port of call for private, public and third sector partners in key industry areas including sectors identified in the new UK Industrial Strategy, Scotland's Economic Strategy and the Tay Cities Regional Economic Strategy 2017-2037.
- 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 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 launched a new website in February 2018 with a dedicated Business section, to support businesses to better understand the innovation opportunities which can be realised in collaboration with Abertay. We have clear information about our services and facilities, single points of contact and examples/case studies in different categories to illustrate what is possible. Increased communications and PR activity linked to innovation and business collaboration has also been facilitated by the inclusion of the Business Engagement function within the wider External & Corporate Communications team, for example we were able to generate significant coverage from the knowledge exchange project which won Innovation of the Year at the Scottish Knowledge Exchange awards in 2017 (Abertay University/Ivan Wood & Sons).

The One Stop Shop approach has allowed commercial businesses to engage efficiently and quickly with the University, particularly within restricted timeframes. For example, companies wishing to bid for public sector contracts through the formal procurement process have a simple route to request input and/or expertise, with a single point of contact responsible for routing the request, following internal procedures and responding within an agreed and appropriate period.

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.

The Tay Cities Deal is still in the final decision making stages, although we anticipate an outcome during Spring 2018.

Proposed City Deal: The cyberQuarter (Abertay lead)

Our mission is to realise new economic opportunities for cyber security through innovation, cutting edge research in ethical hacking and adoption of products, services and practices in SMEs. Our ambition is to create the conditions in the Tay Cities Region for companies and academics to innovate, exchange knowledge, exploit intellectual assets and grow businesses here in Scotland that can serve the world.

This project will catalyse the formation of a geographic cluster of cybersecurity companies in the Tay Cities Region by harnessing the supply of highly skilled labour, offensive cybersecurity talent and realising the commercialisation potential emerging from education and research at Abertay University. The cyberQuarter will be a cluster of academic-commercial activity - a co-location space for academia and industry, expertise in applied research and access to a range of public sector support located within the Tay Cities region to exploit the existing expertise of Abertay University in ethical hacking and the digital industries ecosystem of Dundee city.

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 University. 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 (TCR).

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 that 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.

One of the most important contributions that universities can make to Scottish businesses is to refresh the pool of talent by developing business-literate and enterprising graduates and postgraduates with a strong educational grounding. We are proud of our industry focus and links to business. We will encourage the development of enterprise skills and entrepreneurial behaviour among our students through a range of activities across 4 priority themes.

Many of our students will not have a 'job' as we currently know but will be self-employed, freelance, contractors or take a portfolio approach to work and career. As a city, and as part of the Tay Cities region, Dundee faces major challenges in terms of employment, business start-up and economic growth. With some 75% of our students coming from the local area and so many choosing to stay here after graduation, Abertay can play a major role in developing the right skills to support employability and the creation of high value jobs locally, nationally and globally.

Our enterprise activities for 2018-19 will span:

- Entrepreneurial mindset, skills and behaviours.
- Commercial awareness.
- Company creation and business start-up.
- Self-employment options and new ways of working.

Priority 1 - A place for enterprise – we will:

- Create a space for student enterprise on campus.
- Launch a student consultancy service.
- Explore innovative community based funding approaches for student start-ups, including an Abertay Community Bond, allowing staff, students, alumni and supporters to invest into a Fund which provides micro loans to start up student enterprises.

Priority 2 - Skills and learning for enterprise – we will:

- Support our teaching staff with enterprise in education learning opportunities.
- Curate a year round programme of workshops and drop in sessions for students.
- Host relevant and useful resources for student enterprise.
- Offer enterprise activity as viable student placement opportunities.

Priority 3 - Access to enterprise support

There is no shortage of courses, prototype funds, contests, dragons dens, incubators, accelerators and small pots of start-up funding available – many organisations and services are already working in this space. Our challenge is that Abertay students don't appear to be applying for or successfully accessing this support or money and that there is no single point of contact for external agencies to liaise with. We will prioritise engagement with high profile national and specialist sector programmes to facilitate the increased visibility of enterprise activity among our students and within the business community.

Access to finance and business development support can be a complex and crowded landscape for a student to navigate. We will improve signposting for students and help them to understand the options available to them.

Priority 4 - "Social first" enterprise

We will support Scottish Government's Social Enterprise Strategy by:

- Building careers in social enterprise – increasing work placements and internships in the social enterprise sector.
- Providing inspiration on campus - to stimulate social entrepreneurship through teaching, knowledge transfer and business incubation.
- Delivering world-leading research - participating in the new social enterprise academic forum to be established by Scottish Government, independently chaired and led by the university sector.

We have recently gained acceptance on to the Santander University programme, and will focus on student enterprise as part of this work. We will explore the creation of a student consultancy service through the Santander Enterprise Fund, and promote the creation of student-led tech and non-tech businesses through the Santander Entrepreneurship Awards – the first time we have been able to participate in the competition.

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 has submitted three bids (total value £19m) drawing upon Abertay's extensive experience of delivering

solutions to communities and businesses in ODA countries. We will continue to work with international partners when future opportunities arise.

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.

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.) Our professional Events Team has been in place for one year, offering a high quality programme of events with an enhanced focus on business and community focused partnership events. To support this increased focus on our events strategy, alignment with brand enhancement and a focus on enlarging our business and community audiences, we host as many as possible being held on Abertay premises to encourage people through our doors to see what we do and the difference we make. In 2017, the events team delivered 67 business and/or public facing events which reached more than 8000 people. In combination with our academic excellence in key areas for the UK Industrial Strategy such as data and creative industries, external bodies are now approaching our business engagement and events team to run events for different audiences – for example, James Heydari, the Head of Smart and Open Programmes at Innovate UK is coming to Abertay to deliver a session for staff, students and alumni as part of a pilot programme to inspire a new generation of innovators across the country.

Our City Deal proposals specifically address the inclusive growth agenda. For example, the cyber Quarter project has a specific focus on upskilling people in the local area, ‘unblocking’ the pipeline for the low and middle level jobs within the digital economy by offering opportunities (directly and in conjunction with FE colleges) to gain a ‘cyber premium’ in terms of skills, salary and employability prospects, and facilitating new entrants into the industry from disadvantaged and under-represented groups.

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.

Annex A

Additional UIF Funding 2018/19

The increase in the UIF platform and outcomes grants (from £295k in 2017-18 to £450k in 2018-19) will allow us to accelerate our engagement with the UIF agenda, through the existing work underway and in development, both at institutional and at collaborative level.

We will focus on two case studies (not listed in the 2018/19 UIF plan) to show what we expect to achieve with increased UIF in terms of industrial collaboration, public sector collaboration and third sector collaboration; and our expectation of the leverage we will achieve, individually and in collaborations from ISCF and other UK sources, supported by the increased UIF.

Industrial Strategy: Creative Cluster Programme

Earlier this month we were awarded an Innovation for Games and Media Enterprise (InGAME) project, one of nine Arts and Humanities Research Council's (AHRC) Creative Clusters announced across the UK as part of the Industrial Strategy, to establish a dedicated research and development centre for the Dundee video games cluster with a view to driving product, service and experience innovation across the industry. AHRC cash contribution £5.1m.

The UIF platform grant contributes towards the cost of preparing complex submissions and our broader engagement with the UK Industrial Strategy; not just academic time but third party specialist advice, travel and partnership building. The increased UIF grant has facilitated the exploration of additional opportunities such as InGAME, without having an adverse prioritisation on our other plans such as "a place for enterprise" (the creation of a space for student enterprise on campus and launch of a student consultancy service, both on track for autumn 2018), intended to make a significant and positive change in the way that entrepreneurial opportunities are promoted and delivered to students, staff and business.

Given the strength of the bids presented to the Creative Clusters interview panel, AHRC were able to negotiate an increase in HM Treasury funding available to the programme, to allow them to fund a total of nine creative R&D Partnerships. This was on the condition that all funded Creative R&D Partnerships made efficiencies and savings within their budgets. In order to maintain the quality and integrity of the original bid, £414k of cost was taken by Abertay (£92k per annum – starting October 2018). This was only possible because of the UIF uplift.

Led by Abertay University, in partnership with the University of Dundee and the University of St Andrews, the project will offer a high level resource to local, Scottish and UK games companies, benefiting from significant funding from the AHRC Creative Industries Clusters programme and the Scottish Funding Council.

Games industry partners include 4J Studios, All4Games, BBC, Beano Studios, Biome Collective, DeltaDNA, Microsoft, Outplay Entertainment and Sony Interactive Entertainment Europe, while business and cluster development will be supported by Creative Dundee, Creative Scotland, Elevator UK, Interface, Dundee City Council, Scottish Enterprise, TIGA, UK Games Fund and UK Interactive Entertainment and V&A Dundee.

InGAME will take a highly collaborative approach, with artists, designers and creative writers co-located with technologists and business specialists.

SME games studios will have access to the partners' expertise, engaging in creative experimentation, utilising new and emerging games technologies, exploring new audiences, and forming interdisciplinary working relationships.

With the ability to rapidly prototype and test ideas, InGAME will also develop experimental processes for the generation of original creative content, while promoting the diversification of new products and markets.

Business modelling, user analytics and service design will all be embedded within the project, which seeks to promote significant growth, increased sustainability and intensification of the Dundee games cluster.

InGAME will also provide industry experience for students from all three universities as they work on business-led briefs.

The project will involve academic researchers, students, industry experts and business leaders, and is expected to further energise the successful Dundee cluster, which is characterised by a high number of micro-SMEs creating content for mobile, tablet and PC gaming platforms, as well as larger SME's with more established product portfolios.

UKRI Strength in Places Fund and the Scottish Government Decommissioning Challenge Fund

With the United Kingdom Continental Shelf (UKCS) moving towards decommissioning its older and economically unproductive oil & gas production installations, the Tay Cities region area is ideally placed to support this change over from 'black to green' and can utilise its academic and knowledge exchange capabilities to support both effective and efficient decommissioning and deployment of offshore renewable energy assets.

Abertay are working with the Oil & Gas Innovation Centre, DundeeCom (a public-private partnership including Dundee City Council and Forth Ports) and University of Dundee to develop proposals for a major support programme for decommissioning sector growth in the city to drive inclusive economic growth in the region maximising the social, environmental and economic benefits that decommissioning can bring to the region.

To support our ambitions we have submitted proposals for early development work to the UKRI Strength in Places Fund and the Scottish Government Decommissioning Challenge Fund.

The project will develop an economic impact assessment and series of business plans to underpin work in four key areas:

1. Increasing technological innovation to reduce decommissioning costs through R&D
2. Establishing a physical hub to focus on re-use and circular economy approaches
3. Creating a Decommissioning Innovation Network of organisations involved in decommissioning
4. Supporting businesses to scale up and grow

For these early stage activities, and funded from the UIF uplift, Abertay will contribute £20k of in kind support to design and scope a decommissioning sector programme for scale-up/growth for businesses in the supply chain and/or circular economy, engaging with local and global companies plus a further £5k to curate the project findings into an investment grade proposal for future public or private sector funding.

Dundee can become the 'go to' location for decommissioning solutions and expertise for the world's Oil & Gas Industry and can develop a unique ecosystem of innovation, academic excellence and business led R&D to ensure that Dundee, and Scotland, thrives in this field.

UKCS decommissioning is an industry worth in excess of £35bn and with a spend of at least £2.5bn per annum over a decade or more. As the taxpayer effectively pays for around 50% of this, there is a strong motivation to achieve meaningful cost reductions and at the same time ensure that the business benefits of such activity accrue to Scotland and its business base. With more than 90% of UKCS decommissioning yet to take place, we believe that we have the perfect opportunity to develop and share technological improvements throughout the supply chain and support the development and implementation of beneficial innovations for cost reduction, environmental management and business growth – fuelled by academic research and expertise across a range of disciplines and institutions.

Annex B

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.

UPDATE: Our Business Engagement team is now established. Examples of activity during 2017 include: hosting a workshop for 50 local third sector organisations to engage with academic staff, students and services which was linked to the Social Innovation Fund operated by the Scottish Government Third Sector and Equalities division; and attending a Scotland CAN DO session with Angus Council to assess innovation potential within public services locally and set challenges.

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).

UPDATE: 2017/18 actions have been delivered.
--

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.

UPDATE: The Tay Cities Deal is still in the final decision making stages, although we anticipate an outcome during Spring 2018.

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.

UPDATE: We have recently gained acceptance on to the Santander University programme, and will focus on student enterprise as part of this work. We will explore the creation of a student consultancy service through the Santander Enterprise Fund, and promote the creation of student-led tech and non-tech businesses through the Santander Entrepreneurship Awards – the first time we have been able to participate in the competition.

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.

UPDATE: We continue to apply for GCRF, British Council and Newton funds.

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.

UPDATE: 2017/18 actions have been delivered.
--

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.

Annex C

University Innovation Fund – 2016/17

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.

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.

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.

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.

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).

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.

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).

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.

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.

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).

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.

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.

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.