

This is Strathclyde's response to the request for a narrative on proposed use of UIF allocation in 2017/18.

### **UIF Platform Grant**

We can confirm that Strathclyde will match the platform grant of £250k for 17/18 to continue providing the core capacity through which we support eligible activities on an ongoing basis.

### **UIF Outcomes Grant**

Strathclyde will use Outcomes Grant to develop/ implement the following activities that address the agreed Outcomes, as well as the Priority Actions initially outlined for 2016/17 (now incorporated in the Outcomes) and with a commitment to take these actions forward. Where relevant, we have noted the Priority Action (PA) number throughout. Most of our activities are collaborative with other parts of the HEI Sector (via the Universities Scotland RCDG Collaboration), the public sector, and industry in line with our institutional mission.

**Outcome 1 (Demand stimulation) "working with enterprise agencies, SG, Business networks, Interface and others...help increase the demand and quality of engagement from businesses and the public sector for university services"** (This is in line with Priority Action 5 (PA5) – Enhance skills for effective collaboration within the academic and SME business base.)

Strathclyde is partnering with Glasgow City Council and Scottish Enterprise (SE) in the creation of Scotland's first Innovation District (as part of the Glasgow Economic Strategy 2016-2023). Close working with these strategic partners will stimulate yet more innovation and economic activity around the Merchant City in Glasgow City Centre which already includes Strathclyde's £100M Technology & Innovation Centre, GCC's Tontine House Entrepreneurial Accelerator and SE's Inovo Building. The next stage will focus on a c. £70M investment in a substantial new facility focused on business collaborations in enabling technologies and industrial informatics, attracting R&D investments of relevant high growth SMEs (from inside and outside Scotland), entrepreneurial "spin-ins" (international and regional SMEs such as PPS UK Ltd, Orthosensor Inc, M<sup>2</sup> Lasers Ltd, etc) together with inward investments of bigger companies' R&D teams.

Strathclyde is also collaborating as part of a consortium led by Glasgow Economic Leadership (GEL) that also includes Glasgow & Heriot-Watt Universities, Glasgow City Council, Scottish Enterprise, Fraunhofer Centre for Applied Photonics, NPL Scotland and the CENSIS Innovation Centre in carrying out a BEIS Wave 2 Science & Innovation Audit in "Enabling Technologies for Advanced Manufacturing & Resilient Infrastructure". The Audit will cover the entire Central Belt which encompasses 80% of the relevant company activity in Scotland. GEL plans to use the Audit to achieve better engagement of industry (in key areas such as Advanced Manufacturing in line with the Scottish Government's "Manufacturing Future for Scotland" strategy) and academic partners from across Scotland (e.g. it complements Edinburgh's Wave 1 Audit "Enabling a World-Leading Regional Digital Economy through Data Driven Innovation"). We will use the Audit results to support business cases for further investments in the Central Belt e.g. NMIS (below), a node of the UK Sensor Systems Catapult, a UK investment in Quantum Technology applications, etc.

**Outcome 2 (simplification/ commercialisation) "with enterprise agencies and Interface ...demonstrably simplified business access to knowledge and expertise in Scottish universities"**

Strathclyde is committed to promoting best practice in Scotland in relation to relevant areas of simplification and harmonisation of process in order to ease business access to the knowledge and expertise in Scottish universities. RCDG's plan at Appendix 1 notwithstanding, our Director of Research & Knowledge Exchange Services continues to lead the Universities Scotland RCDG Contracts Sub-Group which is developing simplified standard contracts to be made available on a central website in partnership with Interface by Dec 2017. The Group is refreshing the existing Scotland-wide templates (Confidentiality, Innovation Voucher and Collaboration Agreement); preparing 3 new templates (Consultancy, Material Transfer Agreement and Knowledge Transfer Partnership); and ensuring that the agreements are endorsed by representative business groups. This will deliver a much better perception of the sector in the eyes of SMEs and more importantly will help minimise the barrier for SMEs in first dealings with the HEI base.

This action is in line with Priority Action 7 (PA7) 'Implement enhanced template contract arrangements for SME's in all Scottish universities.'

Our Director (RKES) also champions the proposed “spin-out company statement of principles” on behalf of RCDG. It is hoped that this will be endorsed by all HEI Principals in Spring 2017 and issued soon after, to provide clarity and predictability for investors and other organisations (such as Enterprise Agencies) whose inputs are needed for spin-outs to maximise positive economic impact. For now, our Director of RKES also chairs the Innovation Centres Administrative Hubs Group. ICAHG is important in harmonising / sharing good practice in relation to the successful operation of the Innovation Centres programme.

**Outcome 3 (simplification/ greater innovation) “in partnership with Enterprise Agencies and Interface...at a national level made use of their sectoral knowledge to promote greater innovation in the economy (including beyond non-STEM)”**

Strathclyde is committed to engaging, in partnership with other universities, enterprise agencies and others using sectoral knowledge to promote greater innovation in the economy. This is in line with Priority Action 6 (PA6), and is one example of how Strathclyde is engaging with key partners to enhance innovation: ‘Shifting from the transactional to more strategic relationships’.

Throughout 2017/18 we will continue to take a leading role in the Sector in areas such as:

**Manufacturing** – Working Scottish Government, its Agencies, Industry and involving the Scottish Research Partnership in Engineering, we will develop the business case for a new manufacturing centre of excellence and skills academy, the National Manufacturing Institute for Scotland. This is a major, transformative project creating a centre that will equip manufacturers of all sizes to compete in future international markets and support the transformation of Scotland's manufacturing industry in terms of innovation and digital opportunities, creating sustainable, high-value and highly skilled jobs.

**Pharmaceutical Manufacturing** – we are partnering with the Universities of Sheffield, Bath, Cambridge, Imperial, Leeds and Loughborough to develop the next phase of the UK Continuous Manufacturing & Crystallisation Centre (CMAC) following the 2016 award of £60M (EPSRC Future Manufacturing Hub). CMAC also collaborates with Scottish partners e.g. Heriot-Watt, Glasgow across its programmes. CMAC provides one rationale for the proposed Medicines Manufacturing Innovation Centre (MMIC). Strathclyde is acting as key promoter in partnership with Scottish Enterprise & the UK High Value Manufacturing Catapult (Centre for Process Innovation) to make the case for MMIC to be located in Scotland and >£20M commitment from pharmaceutical and specialty chemical companies is already secured;

**Digital Health & Care** – we will in 2017/18 implement the new Business Plan for the Digital Health & Care Innovation centre (DHIC, which we now host) in conjunction with SFC, the Enterprise Agencies and NHS Scotland. We have already made progress in linking DHIC more comprehensively with the HE Sector and significantly improved the DHIC's interaction with key research groups across Scotland.

We will continue in 2017/18 to demonstrate our commitment to the Innovation Centres Programme. As well as DHIC we also host IBioIC. CENSIS is based nearby in the Glasgow Innovation District and we are serial collaborators in its work, as well as with OGIC and DataLab.

We recently refreshed our Strategic Themes by which we organise our research in order to make it as easily accessible as possible for outside organisations such as industry to engage with. We now have 7 Strategic Themes: Health and Wellbeing; Energy; Advanced Manufacturing and Materials; Ocean, Air and Space; Society and Policy (cross-cutting theme); Innovation and Entrepreneurship (cross-cutting); Measurement Science and Enabling Technologies (cross-cutting). The themes reflect the sectors of industry and society that we feel are key for Strathclyde to engage with in order to generate the best possible impacts locally, nationally within Scotland, and globally. Most Themes encompass some non-STEM content - this is particularly true of “Society & Policy” and “Innovation & Entrepreneurship”.

**Outcome 4 (entrepreneurialism) ...sector will have made significant positive change in the way entrepreneurial opportunities are promoted and delivered to students, HEI staff and businesses**

Strathclyde has volunteered to lead, nationally or regionally (as it currently does in Enterprise Campus), the co-ordinated response to Outcome 4 as part of the Universities Scotland collaborative response (see end). This approach to Enterprise at Strathclyde is outlined below and is in line with Priority Actions 1 and 2 (PAs 1 & 2).

As the West Hub for Enterprise Campus (“EntC”), Strathclyde has worked very well for 3 years with Edinburgh and Aberdeen on steering the EntC pilot towards its outcomes for PGR enterprise. In the West

we have excellent engagement with Caledonian, Glasgow, GSA, Stirling and UWS. Results to date are very encouraging, with the West Hub having formed 25 businesses to date (target: 30) out of 56 across Scotland, and 17 of the 19 Scottish HEIs participating actively in EntC. We are keen to lead the dialogue about how the best elements of EntC and Converge Challenge (in which EntC provided 2 of the top 3 in the most recent Awards with the joint winner MindMate Ltd being from EntC West and having gone on to international acclaim) can be capitalised upon going forward, Entrepreneurial Scotland has moved its HQ into Strathclyde's TIC and this has promoted deeper engagement between Strathclyde and Scotland's entrepreneurial community - to the benefit of our staff and students. We see SFC and the Enterprise Agencies as key partners in this. Without pre-judging the overall outcome, we consider that the regional Hubs have been one of the key strengths of EntC and should continue in the new "system" for company creation and early stage support we envisage.

Via the Hunter Centre for Entrepreneurship (HCE) we expose a high proportion of our undergraduate (ug) students to enterprise education both via its BA (Hons) Business Enterprise and via the modules it offers on many of the University's other ug courses. Strathclyde also provides via the Strathclyde Entrepreneurial Network (SEN) a pathway from education to practice, as well as access to mentors and investment networks via Strathclyde 100 (<http://www.strath.ac.uk/s100/>). Via SEN, Strathclyde also runs its Enterprise Pathway ("Pathway") scheme annually. Pathway is a 3-stage intensive entrepreneurial training programme that ends with a pitching competition and involves experience entrepreneurs (typically from Strathclyde's cohort of Enterprise Partners). Pathway is open to (i) ug students and early career research staff from the Strathclyde's 4 Faculties and (ii) Masters & postgraduate research students from Strathclyde, UWS, Glasgow, Stirling, Glasgow Caledonian and Glasgow School of Art as part of EntC. We use our Strategic Theme in "Innovation & Entrepreneurship" to bring together HCE knowledge with practical expertise from SEN/ Ent C to inform our professional services offering in this area. Strathclyde considers promotion of entrepreneurial awareness and practical enterprise training activities as within the scope of UIF, but Enterprise education *per se* as outwith the scope of UIF.

#### **Outcome 5 (international) "in partnership with SDI, Connected Scotland others...pooled knowledge and networks and shared good practice to promote and engaged Scotland internationally" (PA11)**

Strathclyde has reinforced its position as a Leading International Technological University. We collaborate closely with SDI in areas where our strategic interests and/or those of relevant Scottish businesses overlap. We focus on a select number of bilateral strategic partners internationally – including kindred spirit universities (such as MIT, Stanford, HKUST and Nanyang Technological University), foreign government agencies on collaborative technology development, and individual territories e.g. Malawi where we work intensively to create societal and economic impact through our research and KE. We have already used our international strategic partner Universities to create export/ internationalisation opportunities for Scottish companies e.g. with NYU, Scottish company Smarter Grid Solutions Ltd locating in New York University's Incubator, and for economic/ spin-in activity from US companies e.g. Mako Surgical Inc with Strathclyde and Glasgow Royal Infirmary/NHS (Mako was acquired by Stryker Medical for US \$1.65Bn in 2013).

Examples of our collaborative approach include (i) SDI support in our relationship with Korean agency KIAT (which involves Korean and Scottish SMEs) (ii) our collaboration with Aberdeen, Edinburgh and Heriot-Watt on the Marketing Initiative run by SDI's US East Coast office (iii) our relationship with Scottish Government through the 6 programmes funded via its International Development Fund with the University of Malawi (iv) our commitment to use the Glasgow Innovation District and the S&I Audit to create a growth cluster of companies in enabling technologies and industrial informatics around our Audit Consortium (Strathclyde, Glasgow, H-W, Fraunhofer, NPL, CENSIS and Glasgow City Council).

#### **Outcome 6 (inclusive growth and social impact)**

In this arena Strathclyde will support 2 main strands of collaborative activity using UIF, i.e. linking policy research with impact via our International Public Policy Institute (IPPI), and reaching out to external communities (companies, public sector organisations and the public) locally and nationally via our "Engage" industry and public engagement platform. This activity, discussed below, is in line with Priority Action 10:

(Development of the structures and mechanisms to give) more ambitious and effective connection of universities to social and cultural beneficiaries. (PA10).

**Linking policy with Impact: IPPI** communicates and internationalises public policy research and connects it to current public policy debate. With its Policy Centres and Visiting Professors, IPPI publishes Policy Briefs, promotes policy discussion via seminars and lectures, develops research-led international policy links and develops/ strengthens cross-disciplinary public policy research and teaching. IPPI is organised in six themes: Health Policy, Energy Policy, Economic Development, Government & Public Sector Policy, Education & Social Policy and Future Cities. Each IPPI theme involves a high level of cross sectoral collaboration within the Scottish HEI Sector and intensive partnering with outside stakeholder organisations, including internationally. See by way of example the Centre for Health Policy's partners at: <http://www.strath.ac.uk/research/internationalpublicpolicyinstitute/centreforhealthpolicy/ourpartners/>

Within IPPI's "Economic Development" theme, the Fraser of Allander Institute (FAI) is Scotland's leading independent economic research institute. FAI has developed an unrivalled knowledge and understanding of the Scottish economy and is Scotland's expert authority on economic policy issues. FAI is also a leading provider of forecasting, appraisal and economic consultancy services with a diverse client base from the public, private and third sectors. FAI's Business Monitor survey for Royal Bank of Scotland is the definitive monitor of business trends, market conditions, financial factors and business conditions in the Scottish economy - based on a postal and electronic survey carried out quarterly.

**Public engagement:** Our "**Engage with Strathclyde**" programme ([www.strath.ac.uk/engage](http://www.strath.ac.uk/engage)) won Times Higher Education KE Initiative of the Year in 2014 and is the main corporate mechanism by which we reach out to all the communities of individuals and organisations that can benefit from connecting with Strathclyde across all of our activities i.e. well beyond public engagement with STEM subjects. It is a centrally-facilitated programme giving our academic staff an easy platform to engage their constituencies and gets the public onto our campus for a week. In 2016 >2,000 delegates attended events, representing >500 external organisations. Outputs are monitored with Impact to social and cultural beneficiaries in mind. Examples of the diverse events include demonstrations of 'Future Technologies for Stroke Rehabilitation'; "Inclusion, Resilience and Wellbeing for Children & Young People"; Future Energy Networks – Enabling Responsive Demand in Buildings; and The Economic and Fiscal Issues Facing Scotland.

With reference to public engagement with science, Strathclyde collaborates intensively with the Universities of Glasgow, Aberdeen, St Andrews & Edinburgh (the Beltane Public Engagement Network) in delivering events under the EC-funded "Explorathon" project. Events are held in several venues across each city on a single Night to demonstrate that not all research takes place in academia (involvement from business, industry partners and Innovation Centres). For 2017 Explorathon: (i) >500,000 people across Scotland will be made aware through targeted advertising, media and social media campaigns (ii) 50,000 will further engage via media features or actively pursuing news and information online (iii) 'Live' engagement with at least 9,000 people (Aberdeen 2,000; Glasgow 4,000; Edinburgh 2,500; St Andrews 500).

### **Outcome 7 (equality and diversity) – we will have “ensured positive promotion of equality and diversity in staff and all who are affected by the use of UIF”.**

We will ensure that all our activities and actions (collaborative where relevant) in support of UIF outcomes reflect a commitment to advancing equality and diversity, where this is appropriate. A number of our female leaders and future leaders in UIF-backed roles are participants on the LFHE Aurora Programme (<https://www.lfhe.ac.uk/en/programmes-events/programmes/women-only/aurora/>) which Strathclyde supports. The Equality and Diversity impact of UIF will be considered in our wider Outcome Agreement Equality Impact Assessment. Further commitments will be identified in future Outcome Agreements.

### **Commitment to Collaboration across the Sector via Universities Scotland RCDG**

In discussion with Scottish Funding Council, Universities Scotland has agreed that the best mechanism to work at a sector level to deliver the national outcomes is to undertake to work together to:

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

Through 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 all the outcomes – leading in outcome 4. The full list is attached as Appendix 1.

**Dr David McBeth**  
**27 January 2017**