

University of Strathclyde's proposed use of UIF allocation in 2018/19.

UIF Outcome Grant

Strathclyde will use the UIF Outcome Grant (including the additional allocation per SFC/AN/12/2018) to develop and/or implement the following activities that address the agreed Outcomes. Most of our activities are collaborative with other parts of the HEI Sector (including 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"

Strathclyde is partnering with Glasgow City Council and Scottish Enterprise (SE) in the development of Scotland's first Innovation District, the Glasgow City Innovation District ("GCID", as part of the Glasgow Economic Strategy 2016-2023). We will stimulate yet more innovation and economic activity around Glasgow's Merchant City area which already includes our £100M Technology & Innovation Centre, GCC's Tontine House Entrepreneurial Accelerator and SE's Inovo Building (which we acquired in 2018).

The next stage will focus on an investment of at least £70M in (a) substantial new facility/ies focused on business collaborations in Clusters including Health Technology, Quantum, Industrial Informatics, 5G Communications, Financial Technology and Space Technology. We will in due course attract 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, M² Lasers Ltd, etc) together with inward investments of larger companies' R&D teams.

As part of Strathclyde's commitment to Outcome 1, we have also, since our January submission decided to create an Industry Engagement Directorate under our Chief Commercial Officer. The new Directorate will be focused on developing new ways to support and enable colleagues across the University to develop even stronger relationships with industrial partners. An initial focus will be supporting colleagues to engage in the Clusters we are prioritising for growth through the expansion of the TIC Zone, as well as working with our partners to develop the TIC Zone and GCID. *The new Industry Engagement Directorate will use the additional UIF allocation for 18/19 to accelerate its development and recruitment.*

The plans in relation to Quantum and Industrial Informatics build directly on the BEIS Wave 2 Science & Innovation Audit in Enabling Technologies for Advanced Manufacturing and Resilient Infrastructure which was a consortium led by Glasgow Economic Leadership (GEL) that also included Glasgow & Heriot-Watt Universities, Glasgow City Council, Scottish Enterprise, Fraunhofer Centre for Applied Photonics ("F-CAP"), NPL Scotland and the CENSIS Innovation Centre. As part of this, Strathclyde led a £25M "Strength in Places" first round submission entitled "Enabling Technologies in Scotland's Central Belt" involving F-CAP and Heriot-Watt amongst others. *We plan to deploy a proportion of the additional UIF allocation to support future development of this proposition – if the Strength in Places bid is invited forward to full submission then we will use UIF to augment our bid team, but even if it is not, we intend to use UIF to support development of future successful bids to ISCF streams related to the Strength in Places submission.* We are also involved in advanced discussions on ISCF Wave 2 propositions in the areas of Energy Systems, Quantum Technology and Medicines Manufacturing (see next section).

To this end our Research Leaders and Industry-facing staff are directly involved in 6 of the Consortia that are developing full business cases based on original ISCF Wave 3 Expressions of Interest, having explicitly contributed to at least 9 of the original Wave 3 Eols. They will contribute to the 6 areas as follows "National Aerospace Research Consortium: The Amy Johnson Challenge:

Advancing Mobility Through Flight”; “UK Manufacturing Made Smarter”; “Stephenson Challenge: UK Manufacture of £5B More Motor Drives by 2025”; “Autonomous Vehicles Challenge”; “Space Data” and “Quantum”. In 2018/19 these research leaders will work to convert their involvement into participation in ISCF-funded UK-wide Consortia using UIF funding to support them and leverage the maximum effect from UKRI and relevant industry partners.

The preceding examples include several where we are already working closely with HEI Partners from across Scotland – either via Research Pools, formal consortia, or case-by-case – in order to optimise the impact of our collective research on the Industrial Strategy agenda. We will also work in partnership with the Sector (via Universities Scotland RCDG), Interface and the Innovation Centres in helping deliver a rolling programme of Innovation Challenge events aimed at understanding and addressing key industrial challenges which can be developed into expressions of interest and used to influence future Waves of the ISCF. A key aspect of these demand-led workshops will be a focus on SME participation, supply chain development and leveraging the UK and international industry networks of all partners. *As a contribution to this we have agreed in principle to part-fund (with the other HEIs) from the additional UIF allocation a dedicated secondee to work nationally helping build a community of practice focused on ISCF, deliver the Innovation Challenge events, broker new relationships in response to ISCF opportunities and industry led-challenges and act as a liaison mechanism with Innovate UK/UKRI and provide support to consortia in emerging challenge areas with potential to influence subsequent waves of ISCF funding.*

In addition 'Enhancing researcher skills for business engagement' will be another key focus in AY 2018-19: working collaboratively through the UIF collaborative framework we will seek to promote some of our successful approaches to people development e.g. programmes trialled successfully in our EPSRC Impact Acceleration Account. By participating in this collaborative activity we will share good practice with other institutions and explore new mechanisms for opening up training opportunities to partner Universities on a reciprocal basis.

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. Our Director of Research & Knowledge Exchange Services continues to lead the Universities Scotland RCDG Contracts Sub-Group which is developing and testing simplified standard contracts (with Interface) to be made available on a central website. This was an action from the original Universities Scotland Innovation Action Plan. At present, the Group is ensuring that the suite of template agreements it developed are endorsed by representative business groups but has encountered some delays due to staffing changes. 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.

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.

Throughout 2018/19 we will continue to take a leading role in the sector in areas such as:

- **Manufacturing** – Working with Scottish Government, its agencies, industry and involving the Scottish Research Partnership in Engineering, we will continue to develop, and start to implement, the business plan for a new manufacturing centre of excellence and skills academy, [the National Manufacturing Institute for Scotland](#). This is a major, transformative

investment of around £65M (£48M already committed from Scottish Government, with a significant part of the balance from BEIS via the High Value Manufacturing Catapult) in the Advanced Manufacturing Innovation District near Glasgow Airport. NMIS 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. *Strathclyde will continue to deploy staff backed by our UIF, and will augment this using the additional UIF, in the critical detailed business planning and early implementation stages in 18/19.*

- **Pharmaceutical Manufacturing** –Strathclyde is acting as the key Scottish promoter in partnership with Scottish Enterprise & the UK High Value Manufacturing Catapult (Centre for Process Innovation) in the £56M UK Medicines Manufacturing Innovation Centre, which was announced in June 2018. MMIC will revolutionise the way medicines are manufactured, offering pharma companies, from start-ups through to multinational organisations, a service to develop and adopt novel manufacturing techniques to adapt into their own manufacturing processes. Located in Scotland, again in the Advanced Manufacturing Innovation District, building work will start in 2019. Over £20M in launch commitment from pharmaceutical and specialty chemical companies is expected with £14M already secured from partners such as AstraZeneca and GSK. Glasgow and Heriot-Watt are also engaged as MMIC HEI partners in Scotland.

Our commitment to the Innovation Centres Programme will also continue in 2018-19. We host DHIC and IBioIC (which has just launched its second phase of activity); and are serial collaborators in the work of CENSIS which is based in GCID in our Inovo Building and we are also serial collaborators with OGIC and DataLab.

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 (through its Director RKES) is leading the coordinated response to Outcome 4 as part of the Universities Scotland RCDG collaborative response, and chaired the recent workshop at Stirling (30th August 2018).

Via the RCDG Outcome 4 Working Group we have committed to working with the sector and with SFC to lead the dialogue about how the best elements of Enterprise Campus (EntC) and Converge Challenge can be capitalised upon longer term. As the West Hub for EntC, Strathclyde worked well during the 3 year pilot with Edinburgh and Aberdeen on steering the EntC pilot towards its outcomes for PGR enterprise. In the West, we achieved excellent engagement with Glasgow Caledonian, Glasgow, GSA, Stirling and UWS and delivered 31 new company formations – this exceeded the West target. SFC and the Enterprise Agencies are key partners in this success. Our view ahead of the overall outcome is that regional Hubs were one of the key strengths of EntC, and that these should continue in the new company creation and early stage support system we envisage. *We are prepared to commit resource from the UIF additional allocation and otherwise to ensure that Strathclyde remains a Hub in any new system but we recognise that other potential Hubs may need more incentive and this will be the subject of continued dialogue with the SFC, Scottish Enterprise and others in the 18/19 year.*

Strathclyde is also planning to create a hub for Innovation and Entrepreneurship as part of the Glasgow City Innovation District (“GCID”). Entrepreneurial Scotland has located its HQ within Strathclyde’s TIC Zone in GCID, and this has already promoted deeper engagement between Strathclyde and Scotland’s entrepreneurial community - to the benefit of our staff and students. Concentrating a cluster of innovation and entrepreneurship actors from within our own University (such as Strathclyde Business School’s Hunter Centre for Entrepreneurship (HCE), and Strathclyde Entrepreneurial Network) with organisations supporting entrepreneurship more widely

(such as Entrepreneurial Scotland and Scottish Edge) we will extend the entrepreneurial culture of Strathclyde and foster new company creation and growth – both in the Glasgow City area and into Scotland more broadly.

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

We will continue to partner closely with SDI and others in connecting Scottish HEI Sector research capability with international funders, users and beneficiaries of our research.

Strathclyde is a member of the Conference of European Schools for Advanced Engineering Education and Research ([CESAER](#)), [a network which champions](#) excellence in higher education, training, research and innovation, influence debate, and contributes to the realisation of open knowledge societies and deliver significant scientific, economic, social and societal impact. Our Principal, Professor Sir Jim McDonald has been [elected President of CESAER for the period 2018-2021](#). This leading role in CESAER will enable Strathclyde to increase its influence in the development of academic collaboration across Europe in the post-Brexit era. We will use our unique positioning as the only Scottish member of CESAER to promote the distinct Scottish Research profile in Europe through the CESAER community’s influence with the EC and national governments of EC countries.

Outcome 6 (inclusive growth and social impact)

Strathclyde is committed explicitly to a “socially progressive” agenda as part of our institutional mission and all future investments across teaching, research and knowledge exchange will increasingly reflect this. We will continue to support two main strands of collaborative and impactful activity using UIF in 2018/2019:

- Linking policy research with impact is a critical challenge for us in delivering inclusive growth and social impact. To this end we will in 2018/2019 restructure our cross-disciplinary academic activity (including collaboratively within Scotland) under a new banner – Policy@Strathclyde. This will be led by our Executive Dean of Humanities Arts & Social Sciences, working closely with the Executive Dean of the Strathclyde Business School and others to strengthen the activities of our current centres including the Centre for Health Policy (<https://www.strath.ac.uk/research/internationalpublicpolicyinstitute/centreforhealthpolicy/>), Centre for Energy Policy and the internationally leading Centre for Looked After Children (CELCIS). *We will use some of the additional UIF allocation to accelerate this process.*
- Reaching out to external communities (companies, public sector organisations and the public) locally and nationally via our “Engage” industry and public engagement platform.

Our [Engage with Strathclyde](#) public engagement programme won Times Higher Education KE Initiative of the Year in 2014. It is our primary method of engagement with the communities of businesses and organisations (and individuals in some cases) that may benefit from connecting with Strathclyde across all of our activities, well beyond public engagement with STEM subjects. It is a centrally-facilitated programme and provides Strathclyde’s academic staff with an easy platform to engage with potential collaborators and the public. Our 2018 week featured 70 separate events and was attended by >2,600 delegates, representing in excess of 650 external organisations. Outputs are monitored with Impact to social and cultural beneficiaries in mind.

The diverse events included:

- Future Technologies for Stroke Rehabilitation;
- Inclusion, Resilience and Wellbeing for Children & Young People;
- Future Energy Networks – Enabling Responsive Demand in Buildings;

- The Economic and Fiscal Issues Facing Scotland.

We will continue to expand the scope of the Engage Programme into and beyond 2018/19, and we will use part of our additional UIF allocation for 18/19 to formalise and strengthen the team that delivers the Programme as it becomes a permanent part of our central commitment to inclusive growth.

Another significant public engagement initiative is the EC-funded “Explorathon” project, in collaboration with the Universities of Glasgow, Aberdeen, St Andrews, Edinburgh, Edinburgh Napier and Heriot-Watt to deliver events. Business, industry partners and Innovation Centres also collaborate to hold events across each city on a single night to demonstrate that not all research takes place in academia. Explorathon 2018 events will take place on 28 and 29 September to coincide with European Researchers’ Night; targets for the 2018/19 campaign include:

- Over 600,000 people across Scotland will be made aware of each NIGHT through targeted advertising, media and social media campaigns.
- Circa 75,000 will further engage via media features or actively pursuing news and information online.
- Exceed previous best total of 11,000 attendees (2017) with ‘live’ engagement with over 13,000 people each NIGHT (Aberdeen 2,000; Glasgow 4,000; Edinburgh 3,500; St Andrews 2000; Rest of Scotland 1,500).

In recognition of our approach to public engagement, Strathclyde is in the process of applying for the prestigious UK Public Engagement Watermark, from the National Co-ordinating Centre for Public Engagement (NCCPE). We expect the result of this application in November 2018. *Part of the Watermark recognition compels Strathclyde to implement an institutional level plan for our ongoing activities and some of the additional UIF allocation will be used to start implementing this plan.*

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](#) which Strathclyde supports. The Equality and Diversity impact of UIF will be considered in our wider 2018-19 and 2019-20 Outcome Agreement Annex Equality Impact Assessments.

Strathclyde bid successfully in 2018 to an Engineering & Physical Sciences Research Council (EPSRC) Equality & Diversity Call. The proposed “STEM Equals” project led to an award of c. £550k. In partnership with BAM Nuttall Ltd, and the Scottish Research Partnership in Engineering (SRPE), the STEM Equals project will develop initiatives that will improve equality and diversity for female and LGBT staff across science and engineering. Project activities include the introduction of free flexible crèche facilities for staff to attend key research meetings whilst on-leave, the delivery of workshops with key industry partners to disseminate successful activities and share best practice, and the setting up of public and private social media platforms for women and LGBT staff. STEM Equals also aims to help deliver a fresh approach to University management and reverse the decades-old practice within UK Universities which has led to a severe lack of senior women. Strathclyde is also a partner on the VisNET: (virtual *in situ* networking) project, led by the University of Glasgow, which aims to understand and fundamentally transform the mechanisms of networking and collaboration in academia. Focusing on the dominant leak in the academic pipeline, the post-doctoral researcher to lecturer transition, we seek to remove the disadvantage women experience in building their international reputation, an important measure of academic esteem. Ultimately, our outcomes will help to redress the under-representation of women in STEM academia by establishing equality of opportunity when competing for research funding and academic promotion.

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.

Dr David McBeth
17 September 2018