Consultation on changes to our funding policies for knowledge exchange and innovation (KE&I)

Organisation	Edinburgh Napier University
Question 1: how should the outcomes framework currently in place for UIF evolve to ensure University KEIF is structured to deliver on its renewed purpose and has the right strategic drivers and incentives in place?	**Strategic Drivers and Incentives for the KEIF Outcomes Framework** The new KEIF outcomes framework should coherently link with other parts of the KE&I ecosystem: a systematic approach to mapping the support and aligning the activities of various delivery partners within the innovation support ecosystem (including Innovation Centres and Interface) will help ensure we achieve our shared goals in relation to economic and social impact, avoid duplication and limit unnecessary complexity. These goals should align directly with the National Performance Framework, Programme for Government and contribute to the delivery of the 5 Programmes within Scottish Government's National Strategy for Economic Transformation (NSET), Scottish Government Innovation Strategy and the Net Zero and Environmental Strategies. Within this policy framework and strategic drivers, the KEIF outcomes should be flexible and enable HEIs to develop their strategies and plans in relation to their institutional, regional, and national agendas. With the changing landscape: repositioning of Innovation Centres, Interface and Research Pools; parallel activity in development of an Entrepreneurial Campus Strategy; and potential for a Mission-based approach, clarity around roles and responsibility across the KE&I support infrastructure will be important. **Evolving UIF Outcomes** We expect the KEIF outcomes framework to evolve from the existing UIF Framework and the 7 outcomes and in relation to other developments in the sector including the KE Concordat and Government Strategy and Policy developments: The UIF Outcomes 1, 2 and 3 [Demand Stimulation, Simplification of Access] and the universities' role in ensuring university expertise and IP is exploited for economic and social impact form key components of the existing UIF framework and we expect this to continue to be a core feature in the KE agenda going forward.

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UIF Outcome 4 [Entrepreneurialism] is also an integral part of UIF infrastructure within most Scottish universities and will continue to be an important part of KE&I at Scottish universities - the proposed Entrepreneurial Campus Strategy is addressed in Questions 7-9 of this consultation.

UIF Outcome 5 [International] could be more closely aligned with the Scottish Government Inward Investment Plan facilitating a more coherent relationship with SDI and other stakeholders.

UIF Outcome 6 [Inclusive Growth and Social Impact] is core to universities' mission and purpose and civic responsibility. The KE&I framework should celebrate and promote diversity and recognise the contributions being made by universities of varying sizes, in various regions and in different areas of specialism. Through enabling universities to define their own outcomes and objectives within the KE&I framework, each university in Scotland can deliver a unique set of impacts and benefits in relation to its place and areas of specialism, aligned to institutional, regional, and national agendas.

UIF Outcome 7 [Equality and Diversity] should be embedded throughout all KE&I activity and reflect universities own missions around EDI.

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Question 2: what are your views on the current UIF collaborative framework, how could this evolve and be sustained to support further good practice and purposeful collaboration? Is there a role for the Knowledge Exchange Concordat in this context or more generally?

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Collaborative Framework
The current UIF collaborative framework has encouraged sharing of good practice and collaborative working amongst KE practitioners and some joint funding of activities have been successfully delivered e.g. the SHIFT programme supporting creative entrepreneurs, freelancers, artists, musicians, producers and performers; sharing of resources for training academics in commercial skills and engaging with businesses with the aim of increasing capacity for KE across multiple universities; and development of a community of practice around entrepreneurship which is creating synergies and added value from the UIF-funded enterprise support activities across Scottish Universities. The UIF Enterprise Support Group has objectives and outcomes aligned to the Tech Scaler programme, it is anticipated that this collaborative approach and value generated through our existing ecosystem could produce a multiplier effect in relation Scottish Government's provision of Tech Scalers, working together to significantly raise the performance of Scotland's technology ecosystem to a world-class level.

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	The pandemic affected the momentum being built up in other areas of collaboration including the UK Industrial Strategy Challenge Fund (ISCF) Mangers Network but resource was always a limiting factor in this area. Taking a more strategic and purposeful approach to collaboration and self-organising to mobilise partners across the KE ecosystem to influence and respond quickly to opportunities will be important. This is likely to require resource to enable and accelerate collaboration for the UIF (see Research England's Connecting Capability Fund which was launched the year before the first ISCF calls were launched.
	Knowledge Exchange Concordat There is also a role for the Knowledge Exchange Concordat in this context as the Concordat also advocates a collaborative approach, sharing good practice and continuous improvement in KE. The KE Concordat also provides a useful framework showing "what good looks like in KE" while recognising and celebrating the diversity and heterogeneity of each individual HEI. Using the KE Concordat as a tool/framework to inform and enhance KE culture, practice and process, institutions can use this framework to develop action plans to improve provision against the eight principles of the KE concordat and learn from each other through opportunities for peer review and feedback embedded in the process.
Question 3: what are your views on how the impact and outcomes of University KEIF should be measured, including the role of metrics or other indicators in any future funding and allocation model? We would welcome views on current or potential good practice regarding measuring net-zero KE&I activities and outcomes.	**Evaluating the impact and outcomes of University KEIF** UIF / KEIF is relatively modest compared to HEIF funding in England and therefore it is important to scale expectations and try to reduce the reporting burden and complexity reporting. It might be wise to adopt more of a benchmarked approach to evaluation in Scotland. This would mean that institutions are competing primarily against themselves, which is more likely to create an environment of collaboration with other regional partners, including what might be seen traditionally as direct "competitors" such as neighbouring universities and colleges. **Role of Metrics** An overemphasis on ranking the whole of the sector or projecting hierarchy by other means is a barrier to sharing good practice and purposeful collaboration. Rather than comparing institutions

using metrics (absolute measurements compared across the sector), metrics should be used in context with an emphasis on continuous improvement and providing an opportunity to demonstrate their performance in a way that is not unduly affected by historic and structural disparities in the sector. In the use of metrics, there should be a focus on the impact of KE activity. This should be the main determinant of an evaluation of performance. Impact is more complex and cannot be reduced to the use of proxies for activity such as the amount of funding generated. Evaluation methods may need to operate more broadly to account for this and may require a mixture of quantitative and qualitative evidence. The impact statements in the REF offer one example of how impact is considered in a qualitative sense and the research environment statement also use a combination of qualitative and quantitative data to provide a more holistic and contextualized view. This approach to evaluation which focuses more on impacts will also provide greater evidence of return on investment of KEIF.

Funding Allocation
The current funding allocation model has a relatively low platform grant of £250K per institution (matched funding from the institution) and the remainder of the UIF funding is distributed using an allocation formula based on income metrics (HEBCI) which favours larger organisations. Over the decades since this allocation model was developed (originally for the KT Grant) a number of other very significant KE funding streams have become available to larger institutions including Research Council Impact Acceleration Accounts (IAAs), usually awarded to institutions with relatively large research portfolio with a particular research council's portfolio. For most institutions which do not have a portfolio of sufficient size with research councils and do not receive IAA funding, the UIF funding represents the critical KE infrastructure funding however this current baseline funding of UIF is insufficient. To ensure that funding about directing public funding resources where they are the most needed or will have the greatest impact is spread more evenly across the country, making efficient use of public funding to generate impact, and to mitigate against the significant concentration of funding resources, we advocate for an increase in the platform grant to ensure a minimum KE infrastructure across all Scottish Universities.

An uplift in the platform grant could open up capacity across the sector giving institutions the space and capacity to contribute towards driving innovation in a way that is truly transformational for their

locality. This additional resource will also support institutions to think more strategically and plan effectively with respect to their Knowledge Exchange activities and provide the capacity required to engage in more collaborative activities (which can be challenging due to resource constraints in some institutions). It is also important to consider the ability to pay matched funding and we propose the co-funding requirement should be scaled the with the size of institution.

Possible options could include:

-Double platform to £500k; smaller institutions required to co-fund £250k and larger institutions co-fund the full £500k; remainder distributed via updated algorithm (taking into account appropriate regional and sector variations).
- Increase platform to £750k; smaller institutions required to co-fund £250k and larger institutions co-fund the full £750k. This approach would also keep the administrative burden low.

Measuring net-zero KE&I activities and outcomes
We welcome the development of metrics that encourage net-zero initiatives although these must be robust. As mentioned in other sections of this consultation response, metrics should be used in contexts and there may be a risk that institutions respond to such measures that allow for a certain degree of gaming within the system to organise activity around these priorities. If the net result of such an approach were to be in tension with other priorities, this would be counterproductive. For example, if, despite best intentions, new funding incentives around net-zero KE&I activities and outcomes simply result in a further concentration of funding by geographical region or by institution type, then this would be contrary to some of the stated aims of government in terms of regional development, and of the SFC in relation to the sustainability of the Scottish HE system.

Question 4: how could the University KEIF, with Interface, help support collaboration with colleges, collectively supporting Scotland's SME base to be more innovative?

By identifying modalities of Knowledge Exchange and Innovation support which leverage the capabilities and expertise within Colleges and exploring these key areas and opportunities for collaboration and sharing of good practice. Please see response to Q7 for views on creating greater collaboration in areas of upskilling/reskilling. Exploring the effectiveness of Innovation Vouchers and

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	other funding mechanisms within the context of Colleges to understand the impact existing funding schemes could deliver in terms of benefits for SMEs.
Question 5: how could core capacity funding (College KEIF) best support colleges to be effective agents of KE&I? We would particularly like to learn from colleges directly on what KE&I means to them and where capacity is needed to deliver this effectively, which could include building on current practice.	The new core capacity funding (College KEIF) could potentially be useful to leverage capacity in colleges to be effective agents of KE&I, utilising funding to deliver impact at later stages of development. Whereas universities are active at lower technology readiness levels (e.g. TRL 1-5), colleges are less research-intensive and may be able to play a role at higher TRL levels (later stage of development towards commercialisation). However, there is currently a gap in capacity for KE within colleges and in order to pivot towards a greater focus on KE, colleges would require investment infrastructure and specialist spaces/labs etc. and it is unclear how colleges will be able to develop the funds to do this. Given that the current workload allocation model in colleges is mostly focused on teaching, this change would also require additional people with specific skills and capacity to effectively contribute and deliver knowledge exchange activities. It may be useful to evaluate the success of the College Innovation Voucher scheme as an initial step in understanding the capacity for KE activity within Colleges.
Question 6: we would welcome views on what would be an appropriate period for SFC to run the first cycle of College KEIF before formally reviewing it and establishing a mature model for future years.	We suggest three years is an appropriate period of time for SFC to run the first cycle of College KEIF and following the first cycle, conduct a formal review to evaluate the outputs, outcomes and impacts being delivered through College KEIF fund.
Question 7: we would welcome views on the potential value of using College KEIF to create frameworks for collaboration and sharing of good practice across the colleges, and with universities.	In terms of the potential to use College KEIF to create frameworks for collaboration and sharing of good practice across colleges and universities, there could be lessons learned from the consortium model used by Knowledge Transfer Ireland formed regionally to facilitate closer working relationships across universities and colleges in various parts of Ireland. There are also opportunities to build on current good practice in terms of collaboration, in particular modern universities which have built up very effective partnerships with colleges in respect to their teaching activity and articulation pathways have proved an extremely successful way of supporting learners widening participation to university. Following from the publication of the SFC Review of Coherent Provision and Sustainability, and given the expected creation of a National Impact Framework and for the further and higher education sector to work in closer collaboration on a regional basis: some of the principles of this collaborative

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	approach should be taken forward into the KEIF where possible. Although there are aspects which are distinctive parts of universities' activity, it is important that KE activity components can be joined up effectively as this will help to promote collaboration in the KE space including good potential to collaborate more across colleges and universities to deliver the upskilling/re-skilling agenda.
Question 8: our review recommended that we co-design the Entrepreneurial Campus strategy with colleges and universities. We would welcome views on what is proposed in this consultation, including potential opportunities, weaknesses and gaps.	Edinburgh Napier is supportive of the ambition and intention of the Entrepreneurial Campus strategy. We believe that we have a strong track record in producing employable graduates with entrepreneurial skills development built into their curriculum development framework and design and in our Learning & Teaching strategy. We are also drafting our Employability Strategy which will provide a coherent framework for students employability; with entrepreneurial skills development and enhancement within and outside the curriculum being a core theme. While we would not like to see a national approach that was pre-determined, we are willing to participate in the co-design of a united and focused strategy with other partners and stakeholders across the sector in order to facilitate continuous improvement and greater coherence. The strategy should reflect diversity in our HEIs in terms of both place and sectors, recognising that not all universities will produce high concept, high growth enterprises; not all enterprises will move into tech scaler. The strategy should also reflect on the need to recognise regional priorities in rural communities; supporting micro-businesses and our freelance networks; working with family businesses to ensure succession; inspiring more female founders and providing a roadmap to finance for entrepreneurial women; enabling international students to stay in Scotland to start businesses; and encouraging lifelong learning to enable entrepreneurs to start-up at any stage of life. In this respect, it will be difficult to define a 'baseline level of provision' as each institution has different starting points and different priorities. Edinburgh Napier has signed up to the KE Concordat and this is a mechanism that can be used as the basis for self-assessment and continuous improvement and to help HEIs embed an entrepreneurial culture. The HE Innovate tool provides another option- https://www.heinnovate.eu/en. We would suggest that the Scottish Funding Council seeks to develop shared definitions, and associated responsibilities and expectations when developing its strategy. There are a number of

elements here; embedding an entrepreneurial mindset and culture across the curriculum and in staff development; the delivery of extra-curricular initiatives; and support for start-ups and spin-outs; and there are implications for the people involved and resources required.

Entrepreneurial Mindset & Culture
At Edinburgh Napier, the development of entrepreneurial mindset and culture within the curriculum is led by the Department of Learning & Teaching Enhancement (DLTE) as a core theme of our employability strategy. This work is informed by input from the careers and skills development service, Student Futures, and the enterprise support service, Bright Red Triangle (BRT.)

Developing a base level of provision across the sector will be challenging as each HEI has different priorities, ambitions, methods and means to resource their current offering.

An Entrepreneurial Campus Strategy will require HEIs to share best practice and examples of successful initiatives in the curriculum. Edinburgh Napier are keen to participate in this collaboration which could include shared knowledge and curriculum content as well as Train the Trainer initiatives etc. It will be important that this work extends beyond the curriculum and that we work with colleagues in Professional Development to enable staff to access entrepreneurial education through induction and training. This will, however, require long-term resourcing to ensure a coherent and sustainable cross-sector approach.

It will also be important to ensure that students and members of staff are consulted on the way in which entrepreneurial training is embedded and delivered (e.g., through the means of online learning, short courses or sprints) to alleviate any concerns. Specifically, this includes addressing potential concerns regarding the capacity to be able to successfully integrate entrepreneurial learning in programmes which have very busy curricula and where including further content could present additional challenges.

Edinburgh Napier has a number of successful initiatives which could be scaled and shared with the sector. These include:

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- The Employability Skills Programme (ESP) in the Business School. This is an accredited and compulsory programme for all students in the School which contains a strong focus on entrepreneurial skills development through SDG inspired challenge-led activities.

- BRT deliver the Freelance Academy which offers training for students who are moving into sectors where self-employment is the norm. This programme has been successfully delivered to College students as well.

- Final-year undergraduate Product Designers undertake a Professional Practice module which includes personal and professional development input from Student Futures along with a commercialisation programme delivered by BRT. The students are prepared to pitch their ideas to investors and future employers at the Degree Show.

- Start For Future is an EIT-funded initiative where Edinburgh Napier works in collaboration with 15 European University partners on a start-up programme which shares entrepreneurial training, coaching, access to industry and investor networks, incubator resources and best practice. The programme begins by developing and supporting entrepreneurial teams within the curriculum, phase 2 invites university start-ups and motivated individuals to join a pre-incubation programme to develop their ideas and teams before pitching for access to any of the incubator programmes across the international network. This 10-month programme is about to enter its 4th iteration and offers a way to share access to resources, networks and best practice.

If we assume the successful delivery of initiatives in the curriculum then we can expect an increase in interest and participation in extra-curricular initiatives. These must also be properly resourced to meet the new demands.

Extra-Curricular Enterprise Initiatives

At Edinburgh Napier the extra-curricular enterprise initiatives are led by Bright Red Triangle with input from Research, Innovation & Enterprise (RIE,) L&T colleagues and in alignment with wider stakeholders both internally and externally.

Extra-curricular initiatives are challenging to establish and deliver. They can be resource intensive and may only be delivered to limited numbers. However, they can have substantial impact on participants. BRT have a long track record in supporting Edinburgh Napier students, alumni and staff in developing enterprise skills and starting up businesses. Uniquely among Scottish HEIs, the BRT service is offered to all graduates without time limit. Most institutions offer services to alumni within two or three years of graduation. The BRT model brings together a rich mix of the wisdom of experience and the energy of youth and is worth sharing across the sector.

As with enterprise in the curriculum it will be difficult to define a base level of provision as each HEI different priorities, ambitions, methods and means to resource their current offering. Edinburgh Napier are keen to participate in this collaboration. This will also require long-term resourcing to ensure a coherent and sustainable cross-sector approach.

Support for Start-ups and Spin-outs
At Edinburgh Napier the support for student, alumni and staff start-ups as well as the commercialisation of University IP through spin-outs is led by RIE of which BRT is a core component. We work closely with key stakeholders and partners across the entrepreneurial ecosystem and have had significant success in this area in recent years as per the HE-BCI statistics.

Edinburgh Napier already share knowledge and best practice through participation in the RCDG and the Enterprise Support Group (ESG.)

It should be noted that each individual HEI has their own approach as well as policies and procedures for spin-outs. This is usually dependent on the type of research and partnerships being developed at each University and so it will make it difficult to establish a baseline approach.

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As with the other elements of the Entrepreneurial Campus Strategy there are resourcing implications for each HEI to adopt and deliver new initiatives. This will also require long-term resourcing to ensure a coherent and sustainable cross-sector approach.

There are several initiatives which we have found to be impactful and believe could be scaled and shared with the sector if appropriate resource could be found. We also believe there are some gaps in provision that would have an impact. These include:

- Entrepreneurs in Residence (EiR); Innovators in Residence; typically funded by Royal Society and have had a strong impact on the academics they have worked with. The sector needs high quality network of potential EiR/mentors/commercial champions. Could we create a pan-Scotland collective where successful entrepreneurs feedback into the system, to become mentors or commercial champions, and all HEIs can access? One option would be for Converge or Entrepreneurial Scotland to support this. Perhaps by adapting the Saltire Fellowship programme to support commercial champions?

- Academics in Residence (AiR): Academics embedded either in university incubators working with student and academic start-ups or embedded in businesses outside of the University ecosystem. Academics should be doing more to evaluate our entrepreneurial performance.
- Student Enterprise Internships/Ambassadors; previously funded by SIE. This has been a great way to connect with students and encourage participation in enterprise activities.
- Reciprocal offer of access to University incubators and innovation spaces (where possible and appropriate.)
- Microfinancing/Stipends/Grants: financial support for early career entrepreneurs to pursue business ideas without concerns about lack of income; particularly important for certain sectors such as creative industries.
- Intervention for spinouts before investor-ready: currently provided by SE HGSP and ICURe, but these are limited in number/limited in value.
- Commercialisation routes which involve working with companies need to have more focus and could involve supporting mechanisms to join up our offering.

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	- Student placements in Start-Ups. This would increase the capacity of early-stage companies. - More support for Start-Up Visa and a pathway to the Innovator Visa for international students. Visa endorsement is very resource intensive. - An annual report from the University sector reporting on entrepreneurial activity and impact and celebrating success. Entrepreneurial success and learning in all its forms should be celebrated alongside raising awareness of entrepreneurship as a realistic career choice is incredibly important. - Lecturers in further colleges who have expertise, ideas for a start-up business or IP to commercialise currently may have more reduced access to support perhaps further alignment can be considered with higher education institutions either appropriate geographical or sectoral alignment. - Finally, it is important the Entrepreneurial Campus strategy also positively supports key missions such as the transition to a green economy and net zero.
Question 9: we would welcome evidence of current practice in Scotland (or elsewhere) to ensure we have an up-to-date picture of what is working well and upon which the Entrepreneurial Campus strategy could build on.	At Edinburgh Napier we are building an entrepreneurial ecosystem that offers a simultaneous range of triggers (accredited curriculum; incubation; extra-curricular events, workshops and commercialisation training; researcher development; and international student exchanges) which leads to the building of confidence amongst our students, staff and alumni community. The Entrepreneurship teaching team within the Business School at Edinburgh Napier offers all students at the university the opportunity to study entrepreneurship to gain academic credit and / or engage with a range of activities which enable them to develop their own entrepreneurial mindset and ambitions and enrich their learning experience. We currently offer a range of modules at every level across the whole university where students can engage with business start-up and growth. The Business School also provides an Employability Skills Programme which is compulsory for every student in the School. This was co-designed with relevant support services including Student Futures and Bright Red Triangle. Every student must work in a team on an enterprise challenge aligned to the UN Sustainable Development Goads (SDGs).

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	The Research, Innovation and Enterprise Service at Edinburgh Napier provides support for Research and Knowledge Exchange. On the Knowledge Exchange side this is focused both on Business Engagement and IP Commercialisation. We have been very successful in recent years with Spin-Outs such as ZoneFox. Celtic Renewables, Symphonic and Cyacomb. We have a clear stage-gated process for commercialisation; this is important and welcomed by academics to map out the journey. It needs to be transparent and as easy as possible. Spinouts are one aspect but another important route to commercialisation is working with companies and companies using our intellectual assets including licensing our IP. The University has had many successful examples of Knowledge Transfer Partnerships (KTPs). Connecting more companies to opportunities to license. KTP can lead to commercialisation opportunities. We have an increased focus on industry collaborations, access to challenges set by industry and the development of more strategic partnerships, supported by a team of Business Development Relationship Managers in RIE. Bright Red Triangle is the enterprise support service at Edinburgh Napier University and offers: -Incubator space for student, staff and alumni businesses: offers free hot-desk space & registered business address - Regular seminars, workshops and events - BYOBIZ a start-up bootcamp x 2 per annum - Freelance Academy (training for aspiring freelancers) x 2 - Summer Accelerator x1 - Start For Future (International Start-Up programme in collaboration with 20 international partner universities) x 2 - Access to a Business Advisors for one-to-one and ad hoc advice - ACE Network provides advice, coaching and encouragement - Access to digital resources - Access to networks & community - Access to funding and competition support - Legal, financial and IP support from expert partners - Start Up Visa endorsement

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- Access to academic support through student projects and upskilling programmes

Bright Red Triangle is there to help surface more ideas from across the University and provide a supportive environment where they can be developed.

Here are some case studies from our School of Health & Social Care

Health
The concept of the "Entrepreneurial Campus" could be enormously timely in terms of pre-registration Allied Health Profession provision (AHP).

Context:
Entrepreneurship has not been traditionally delivered through the pre-registration Allied Health Professional curriculum. These curriculum are prescribed by the professional and regulatory bodies to ensure that key competencies are developed in readiness for clinical practice deployments. The focus has remained on the acquisition of key critical clinical skills necessary to "do the job". The curriculum also includes a specification that a threshold of placement hours are achieved across the training period. These placements have been traditionally been in NHS settings.

Recent developments:
Given the growing numbers of students in these professions and the pressure on NHS providers to deliver services, it has become increasingly difficult to find and secure these student placements due to the staffing issues and student supervisory requirements. This has been compounded by the Covid-19 pandemic with requirements for social distancing etc. It has also been accepted that therapists are working across many varied settings and as such, the professional bodies and NHS are exploring opportunities to support "non-traditional" placements. Academic providers who arrange these placements are seeking alternative options to the NHS settings such as academic or clinical research placements or a role emerging placements. The 'entrepreneurial campus' is thus a timely opportunity to address these issues within the provision, and showcase gains achieved to date in embracing this shift in thinking.

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	Secondly, there has been a recognition that the NHS requires transformational change to enhance service delivery and patient care and that students and clinicians need to seek out opportunities to embrace the change agenda. To do this requires a skilling up of students and clinicians to adopt an entrepreneurial mindset. Health Case Study- Embedding Entrepreneurship in the Curriculum and Placement Provision In the School of Health and Social Care at Edinburgh Napier University, the AHPs have responded to this challenge by developing and delivering a 'Leadership and Entrepreneurial' module for the pre-registration occupational therapy and social work students in their second year. It is anticipated that the pre-registration physiotherapy students will also undertake this module following programme revisions. The module, led by *anonymised* (Occupational Therapist) and co-delivered with Entrepreneur-in-residence *anonymised*, requires that the students work in groups to identify a need in the community and devise a business plan to deliver a workable solution to the problem. The team have also embraced the opportunity to offer a "traditional" (NHS) and a "non-traditional" (non-NHS) placements for the students during the 2 year pre-registration MSc Occupational therapy Programme . Health Case Study - Upskilling professionally qualified clinical staff with Entrepreneurial Skills At Ulster University, a credit bearing MSc (level 11) module on 'Entrepreneurial Leadership' was developed by *anonymised* (Occupational Therapist) to upskill qualified Allied Health Professionals in entrepreneurial leadership. *Anonymised* (ENU) is currently leading the delivery of an externally funded project to address upskilling of therapists in specialist areas including this module. The experiences from some of the students registered on this module (2021/2022) illustrate the gains to be had from this approach and the potential for transformational change in healthcare delivery as a result: "The completion of the learning materials in this module and involvement in the group project has been empowering. It has enabled me to develop my personal, entrepreneurial potential and understanding of the importance of applying leadership skills to promote the delivery of high quality care in our services". (Occupational Therapist)

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"Throughout this module, I was continuously pushed out of my comfort zone; it has given me the confidence to speak about problems that may arise in the workplace and has encouraged me to not only identify problems but to search for a solution". (Physiotherapist)

"Overall, I have a learned a lot about myself and what I need to do to become a better leader". (Occupational Therapist)

"I now find myself thinking of small ways to improve the service on a daily basis".
"Prior to starting this module, I would not have considered myself as an entrepreneurial thinker. Overall, I think this module has helped me learn a lot about myself and grow as a therapist". (Physiotherapist)

"I previously thought improving the health care service was the sole responsibility of the management team. I now think a lot differently. I am not afraid to question services and challenge the status quo in order to maximise patient recovery. I find myself thinking more and more outside the box in terms of treatment ideas and multi-disciplinary working". (Physiotherapist)

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Question 10: the Review recommended that the university and college sectors join SFC in repositioning Innovation Centres (ICs) as stable long-term infrastructure investments. We would welcome views on the details of the proposed 'repositioning' as described in this consultation, including any opportunities, weaknesses and gaps.

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The repositioning of Innovation Centres (ICs) as stable long-term infrastructure investments is welcomed with some key recommendations for moving forward.

Broader engagement leveraging more of the Expertise in Scottish Universities
There is an opportunity for ICs to broaden their reach within the Scottish HEI ecosystem. The current relationships between ICs and Universities can be limited to only a few key academics and there is a perception that some links are over-used whilst other potential links are underutilised. This may be due to a lack of understanding of the broader capabilities across the sector. It is challenging for ICs to understand the full range of expertise relevant to their areas across the HEI Sector. Universities have a role in showcasing their expertise and simplifying access but ICs should be encouraged to take a proactive role to broaden their links with Universities and avoid repeatedly going back to the same

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academics, inevitably limiting potential for innovation and impact. Support could be provided through the UIF model and could build upon investment in this area.

Accessing funding for University / Business Collaborative R&D
During the first phase, the ICs had programme funding and had funding competitions to disburse funding for Scottish Universities to work on projects which benefited business partners. However this funding has reduced during Phase 2 and the ICs which were refunded in Phase 2 no longer have the same level of funding to support university-industry projects. Without these regular calls and expertise searches, ICs proactive engagement with Universities has further reduced.

ICs are now competing for UKRI funding to directly benefit Scottish companies, the ICs are a very visible part of the KE & Innovation support ecosystem in Scotland (included in the business-university research collaborations in 2015) and have been invited to join a number of consortia. ICs should ensure these efforts work in concert with the efforts of the Universities to work in collaboration with large UK consortia targeting UKRI funding.

Programme Funding to Stimulate and Seed-fund University / Business Collaboration in New Areas. The Innovation Centres do not cover all areas or key sectors important to the Scottish Economy: other flexible mechanisms of support to encourage University-Industry collaboration could address this gap. For example, before ICs were formed the SFC had a number of KE funding competitions addressing the needs of industry (e.g. SPIRIT in 2009). These specific funding programme which nurtured new collaborations between university, industry, sector support groups and enterprise agencies no longer exist. However, over a decade later, we can see significant success from some of the 20 projects seed funded through these competitions, some have resulted in a number of successful University-Industry partnerships involving multiple Universities (within Scotland and the across the UK) and consortia of industry partners (end users and supply chain companies, including SMEs), delivering key outcomes including attracting investment inward from UKRI (e.g. ISCF) to Scotland. For this reason, it is important to understand how Scottish strength and funding programmes designed to leverage our capabilities align with Scottish and UK challenges and business opportunities.

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	Long-term management of key innovation projects aligned with priority sectoral areas Funder priorities change over time, leading to good innovation projects being stalled. We recommend a long-term view on key innovation funding linked to sectoral priorities and believe the ICs could play a role in supporting this model. For example, once key projects are selected, with the appropriate periodic reviews, they could be supported over an extended period based on an innovation stage-gate model (demonstrating successful delivery of objectives at successive gates), rather than depending on competitive bidding at every stage. In some cased key Innovation projects could be integrated and managed together to allow for the timeous exploitation by the partners. This would achieve a more joined up innovation funding landscape but would require a robust management and governance structure.
Question 11: we would welcome views on how we could best strengthen the Innovation Centres' relationship with universities and colleges, ensuring added value, sense of partnership and collaboration, avoiding duplication of effort etc. This would include opportunities for alignment and partnership with Interface, Scottish Enterprise, Highlands and Islands Enterprise, South of Scotland Enterprise and other relevant agencies and organisations.	**Deepening engagement and the creating stronger links across all organisations** There is an opportunity during Phase two of the Innovation Centres to achieve greater integration with universities and colleges through directing more time and resources in creating stronger links across the ecosystem partners (including Universities, Colleges, Interface and the Enterprise Agencies) and building upon current UIF investment and the Industry Leadership Groups (ILGs). The focus should be on understanding of our shared goals and taking a more systematic approach to addressing Scottish Government's top priorities (green recovery, a well-being economy and transition to a net zero carbon society) and translating these to action plans. This will require an element of co-creation of plans, working together to leverage our collective capabilities to address shared goals and agreeing priorities. This more systematic approach will provide greater transparency and a more targeted approach through joint action plans. Through increased communication, transparency and understanding of shared priorities amongst the KE practitioner across Universities, Colleges, Innovation Centre, Interface and companies working with Companies, Industry Leadership Groups, Enterprise Agencies, Local Government, and Funders, we could deliver a more joined-up approach to generating business investment in R&D and attracting UK Government and International investment to Scotland. It is important to have appropriate Governance in place to provide strategic oversight, drive collaboration, and ensure plans and resources are in place to achieve enhanced connectivity between

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parts of the ecosystem in order to deliver the outcomes (discussed further in response to Q19). The opportunity to embed the ICs more closely with Universities and colleges will ensure a broader view of alignment and synergistic expertise across Scotland can be accessed and understood by all. Aligning enterprise agencies and interface to this initiative will further strengthen relationships and support greater understanding and links across all organisations. The Industry Leadership Groups (ILGs) are a key player in this landscape and mention should be given to the recent report Industry Leadership Groups Review which summarises that the ILGs have been tasked with strengthening their relationship with HEIs and colleges. Being an integral part of innovation ecosystem.

There is a further opportunity to build upon the UIF model, bridging gaps in knowledge across HEIs and leveraging collective expertise within a sector for a stronger collaborative Team Scotland approach to large strategic, multi-partner bids for UK funding opportunities through UKRI. Whereas the provision of localised R&KE offices within HEIs are essential in surfacing nascent knowledge and expertise within the academic base sharing this knowledge across the Scottish HEI can be challenging when there are resource constraints and delivering on key institutional goals are paramount. Expanding the UIF model (currently 1.0 FTE UIF Collaboration Manager) to support Team Scotland large interdisciplinary bids and the mission-based approach by coalescing expertise across the Scottish HEI base would be a welcome addition to the current model.

A number of practical approaches to strengthen the connectivity across the entire ecosystem to ensure understanding of different parts of the ecosystem and increase collaboration:
- Rotational co-location for IC staff at all Scottish HEIs and/or IC space for HEI staff.
- Staff secondments (academic and professional services).
- Alignment of all Innovation Centres and Interface within one hub as per UKRI model to facilitate the discovery of relevant funding opportunities.
- The creation of an HEI and colleges specific 'Experts on offer' webpage on the new hub which should provide an outline overview of all HEIs and sectoral expertise -this will help facilitate new relationships and identify expertise not hitherto used by ICs, interface industry.
- The creation of key sectoral governance and leadership groups with representation from all organisations (HEIs, ICs, colleges, Interface, EAs and ILGs) aligned with priority areas and the development of joint action plans to support collective priorities.

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Consultation on changes to our funding policies for knowledge exchange and innovation (KE&I)

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- The creation of sub-groups within priority sectors focussing on the management of long-term innovation across multiple projects and partners. An example of this approach at Edinburgh Napier is the Mountain Bike Centre of Scotland and the closeness of the relationship with the HEI, SE, industry and other sectoral alignment.
- The expansion of the UIF model to support a more robust "Team Scotland" approach when bidding into larger, interdisciplinary UKRI or other bids. Resource will be required to facilitate improved communication around current industry priorities, themes/activities and opportunities to encourage proactively engagement with the University and Innovation Centre-led activities to create larger multi-partner collaborative programmes. The partners in the innovation support ecosystem should work together to make it as easy as possible for individual companies and academics to see where their own interests and expertise might fit with national priorities. There may be some learning from the Knowledge Transfer Network which responds to the BEIS Innovation Strategy.
- Using the convening power of the ICs to bring industry and academic communities together to address key industry led themes/areas of focus (identified in collaboration), relevant to major funding opportunities. Co-creation of innovation programmes and engaging regional and national stakeholders to co-development consortium bids. Ensuring benefits are clear to all partners and stakeholders, this improved connectivity would also enable a more agile response to opportunities and with this focus, provide increase opportunity to influence the scope of major national and international opportunities being developed.
- Potential to create a Governance structure with a Hub and Innovation Centre spokes enhancing the joined up approach across Innovation Centres to collectively respond to the anticipated new Innovation Strategy for Scotland: by pooling their knowledge of industry needs and challenges and their various networks which extend into various parts of the research base: orchestrating partnerships between key lead industry and university partners taking an inclusive approach with efforts to broaden the partnerships (both industry and academics) from within Scotland and beyond to create internationally competitive partnerships across the public and private sector.

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Question 12: we would welcome views on potential areas of future opportunity where the Innovation Centre model could help deliver outcomes for Scotland.	Each of the Innovation Centres were formed independently and have very different ways of working, appropriate to the various contexts they operate in. In order to evolve the Innovation Centre model in a way that ensures they deliver outcomes for Scotland it is important for them to play a key role in proactively leveraging capabilities from a broader range of expertise across Scottish Universities. To do this in a way that creates added value, sense of partnership and collaboration, avoiding duplication of effort etc., will require effort from all partners involved in the innovation support ecosystem include Interface, enterprise agencies and the universities & colleges themselves. Some ideas around building closer working relationships across the KE support infrastructure are provided in response to Q11. To achieve this, it will also be crucial to develop the model in a way that incentivises greater collaboration across innovation centres and other parts of the innovation support ecosystem in Scotland. Equally important is to ensure good alignment of objectives and KPIs by clearly articulating the alignment and shared goals and the key contributions made by various organisations we can orchestrate effective collaboration across partners and ensure they are incentivised and can see the benefits of working in partnership. There also gaps in provision of ICs across priority sectors and Universities need to work in partnership with innovation ecosystem partners to self-organise in order to attract/align funding and resources to address these gaps (please refer to the response to Q 10 of this consultation). The UIF model could further be used to support greater exploitation of both the current IC model and the Team Scotland approach to larger interdisciplinary bids funded through UKRI as referred to in Q.11.
Question 13: we would welcome views on strengthening Interface's relationship with universities and colleges, ensuring added value, sense of partnership and collaboration, avoiding duplication of effort etc. This would include opportunities for alignment and partnership with Innovation Centres, Scottish Enterprise, Highlands and Islands Enterprise, South of Scotland Enterprise and other relevant agencies and organisations.	Interface is a small but crucially important part of the knowledge exchange and innovation support ecosystem. It is well recognised role in facilitating engagement with companies who have never worked with a university, helping them to find the academic expertise which can address their challenge, problem or opportunity. It is important to have clarity of the contributions made by Interface and how their activities synergise and complement the University KE & I infrastructure and Innovation Centres contributions (as well as the role played by Enterprise Agencies and the ILGs etc.). By ensuring good clarity and understanding across all relevant agencies and organisations, we can avoid duplication of effort, create a greater sense of partnership and collaboration, all playing a crucial part in working towards common goals. By focusing on impacts and creating a more joined up view of

	the successes delivered as outputs from this inter-connected system of support, recognising inputs from across the ecosystem to create an evidence based of case studies could also provide increased transparency around the important roles played by different components of the Scottish system and by promoting more widely the roles played by various components of the system and the successes achieved may influence and justify increased investment in Scottish KE infrastructure. An example of role definitions is below: - HEI/College R&KE office - localised within HEIs these core staff are essential in both surfacing nascent knowledge and expertise within the academic base but also brokering and developing key business relationships, developing collaborative projects and managing negotiation of various contracts types. - UIF: expand this model to be a key facilitator of inter-HEI expertise aligned with priority sectoral areas linking to larger national funding such as UKRI. - Interface: repositioned as a key alignment with Innovation Centres and early-stage funding. Can act as the broker for early-stage engagement although recognising a lot of activity still occurs within the HEI/college. - Innovation Centres: realign with Interface and the EAs and support later-stage engagement aligned with key sectoral priorities. - Sectoral governance and leadership groups - representation from all organisations (HEIs, ICs, colleges, Interface, EAs and ILGs) aligned with priority areas and the development of joint action plans to support collective priorities and Scottish Government Innovation Strategy. - Sub-sectoral groups - focussing on the management of long-term innovation across multiple projects and partners and to identify the timely emergence of innovation synergies occurring across multiple projects.
Question 14: if you have direct experience of working with Interface, we would welcome suggestions for evolutions to its operating model to help it develop even more effective support for	There is an opportunity for interface to triage the opportunities; some of the enquiries are submitted from companies which are too small and do not yet have the potential to be able to work productively due to lack of internal capacity to engage or financial resources, e.g. sole traders.

productive relationships between businesses and our universities and colleges.	The current system would benefit from digital upgrades and the investment in a portal to manage activity. This would avoid the duplicative effort spend on managing early-stage activity and would help with improved connectivity and signposting across HEIs and colleges, ensuring businesses and other external partners receive the right kind of support and access to funding to progress. The process is very manual at present and time consuming for HEI staff who process and matchmake all requests for expertise. e.g. Universities are required to track all the interface enquiries and report this data back to Interface; it would be more efficient such a portal could provide automatic tracking and reporting across all stakeholders to allow them to see progress and generate reports on activity. Interface give good feedback to applicants (the business partner) on a bid they are keen to drive the project through to an award. When they see a project with good potential, they read draft and give feedback to speed up the process. Interface could also provide more timely feedback to the academic partners; it may be that the company is delaying the project but if they could keep academics informed this would reduce the amount of work for the University KE practitioners (academics often follow-up with internal research office staff for updates and this creates additional work). The suggestion above, to create a portal to manage activity, may also help with this enabling quicker access to progress updates on the system.
Question 15: we would welcome general views, based on direct experience of the Innovation Voucher scheme, on how it could evolve and better support our system for KE&I.	The innovation voucher scheme equally suffers from short-termism and benefits from being a key enabler of early-stage innovation. There is a significant funding gap at these early stages and the type and level of company Interface supports/intend to support do not normally have the funding to progress their innovation further even to the Advanced Voucher stage. Similar to what was described in Q.10, Interface would benefit from offering key priority projects funding based on an innovation stage-gate model rather than defined monetary boundaries. They could support a project up to £50k (as an example) but monitor this on a stage-gate process. This type of project could be on a defined innovation pathway leading to IC funding, for example. The current £5k pots could also still progress but these could be in defined sectoral areas.
Question 16: we would welcome views on widening the scope of Innovation Vouchers to encompass wider KE activity but retaining the key objective of using them as a means to promote first time	The current innovation voucher scheme could expand to cover multi-interdisciplinary projects and partners. This was once in place and was positively received. For example, sometimes the players in a sector are too small to innovate on their own but their collective muscle could be powerful -for

collaborations and encourage longer-term relationships.	example, arts and creative industries sector. Across disciplines is also vital but without being too regimented on what those sectors are; creating room for serendipitous innovation is critical. Innovation could be viewed more broadly by Interface and not just related to R&D. For example, funding could be used to support innovative CPD and upskilling and time given to the creation of this.
Question 17: how could colleges and universities help SFC understand, or monitor longitudinally, how many Innovation Vouchers have led to ongoing relationships? Are there cross sectoral digital solutions to this which can help us better understand the outcome we hope to achieve?	The solution to this is creation of digital portal. This would support a more automated approach to tracking and reporting whilst simultaneously giving all stakeholders access to real-time data. Tracking specific case-studies would be of real benefit across the spectrum of support on key interventions provided. Pooling of such data across all stakeholders (HEIs, Interface, ICs, EAs) would be key to make the Case-Studies richer. As provided in Q.10, such key projects could be managed by a team of key stakeholders looking at synergistic opportunity across a priority sector.
Question 18: From experience of mission-led approaches elsewhere, how would you advise SFC to use its resources and investments to facilitate such activity in support of Scottish Government objectives for economic transformation?	Edinburgh Napier University would recommend that the SFC uses its resources and investments to closely align with the delivery of the key areas of the recently published National Economic Transformation Strategy, which includes a significant focus on entrepreneurial activity. We also recognise that the Scottish Government is due to publish an innovation strategy in due course which is likely to have a significant bearing on the research, innovation and knowledge exchange agenda and priorities. Considering the available examples from the UK and worldwide, it seems that the most appropriate would be to choose amongst Scotland's most competitive sectors which has good existing grounding - as have been identified as part of the National Economic Transformation Strategy - and has an initial advantage given the current standing of the industry in Scotland and considering the relevant local and international economy and resources landscape. As an example, in our view the space technology is one of the sectors where the investment should focus. This sector is already relatively large and has a global focus and early starter advantage. Given the availability of appropriate skilled and trained workforce in Scotland (particularly in the central belt of Edinburgh - Glasgow) this sector has the potential for fast growth. It is very important to complement this targeted investment with an appropriate investment finance environment. This should scale up considerably the currently available investment finance

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<td>environment centred in Edinburgh. Following on from the example, perhaps a space tech specific investment incentive system (e.g. reduced taxes) and a space tech specialized stock exchange could be set up to provide the supportive investment ecosystem. In addition to this a programme similar to the current TechScaler programme could be set up, perhaps including a fast-paced start-up incubator closely connected to the investment ecosystem, aiming to emulate the Y Incubator from California, but with a space tech focus.</td>
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<td>Question 19: We would welcome views on the breadth of the role a KE&I Advisory Board could play and what stakeholder membership would give us the most effective support for SFC's role in the ecosystem.</td>
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The KE&I Advisory Board could play a role in achieving greater integration and coherence through the knowledge base of colleges and universities but also alignment of goals and greater collaboration with Universities, Colleges, Innovation Centres, Interface and other major facilities and parts of the KE infrastructure.

For example:
- Taking a higher-level view and providing governance across all parts of the ecosystem to ensure the alignment of objectives and KPIs and clarity around the roles and contributions being made by various organisations.
- Where there is overlap, ensuring this is adding value and there is good connectivity to avoid any duplication of effort.
- The Advisory Board could also play a role in ensuring all possible resources available to knowledge exchange can be deployed: working with the sector to develop the KE infrastructure and through implementation of key recommendation of the SFC review where additional funding is crucially important e.g. Missions-based approach and the Enterprise Campus proposition.
- Ensuring there are mechanisms to help stimulate industry demand for university expertise and IP as well as working with wider stakeholders including industry leadership groups to identify opportunities for industry sectors to address shared challenges and exploit research excellence in Scottish Universities.
- By providing underpinning support to encourage partners to work together (perhaps focussed on missions, key sector and/or global challenges, we can nurture more University-Business partnerships and through building trust across the industry-academic consortia we will

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	encourage greater business investment in Research & Development (R&D), and contribute to national and regional economic and social goals. Working in this way will require leveraging of capabilities across all disciplines and all parts of the Scottish system. To raise ambition and generate high value jobs and prosperity for Scotland we need to self-organise and influence upcoming opportunities. This will enable quicker response to opportunities and improve our ability to attract investment. This will require greater engagement and dialogue targeting key funders such as UKRI. We will require specialist advisory groups in specific areas with representation from the knowledge base, industry and stakeholders outside Scotland. These specialist advisory groups could feed into the overarching Knowledge Exchange Advisory Board and Governance structures. In addition to targeting Scottish Government priorities of a green recovery, a well-being economy and transition to a net zero carbon society, our Universities and companies can contribute to UK industrial challenges and Global challenges by enabling "many flowers to bloom" Scotland will leverage more of its capability within the industry and research base and attract increased inward investment to support Scottish R&D with co-funding from Industry and Public sector in the UK, European and International. Collective action could be orchestrated via Advisory Groups which connect with expert advice and the overarching Knowledge Exchange Advisory Board. The stakeholder membership overarching Knowledge Exchange Advisory Board may have similar constitution to the current SFC RKEC whereas defining appropriate stakeholder membership is likely to depend on some future decision regarding the proposed SFC Missions approach and the specific expertise required to support SFC's role in the ecosystem.
We may publish a summary of the consultation responses and, in some cases, the responses themselves. Published responses may be attributed to an organisation where this information has been provided but will not contain personal data. When providing a response in an individual capacity, published responses will be anonymised. Please	Publish information and excerpts from this survey response INCLUDING the organisation name.

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confirm whether or not you agree to your response being included in any potential publication.	