

RE-P-2020-03-Annex B

Cranfield University

HEIF accountability statement

**Narrative return template for HEIF funding period
2021-22 to 2024-25**

Return date: 21 May 2021

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Question 1 – Strategic objectives

Summarise the institutional strategic objectives that relate to knowledge exchange and guide your plans for HEIF.

We expect institutions' plans for HEIF to be guided by strategic objectives for knowledge exchange. However, there is no requirement for institutions to submit or maintain a standalone knowledge exchange strategy document.

We appreciate that KE objectives may be found in a specific KE strategy document or they may be contained as part of other strategic documents such as teaching, research or overarching institutional strategies.

Whatever form your knowledge exchange objectives are in, please provide a precis of the main objectives here so that we can see the strategic context that guides your plans for HEIF and forms the basis for your monitoring and delivery of intended benefits.

We welcome the inclusion of hyperlinks to published strategies and plans that may be referenced in the summary.

In answer to this question, you are free to use text or tabular format but please ensure that the question response is contained in no more than two pages of A4.

This accountability statement is presented in the context of change in Cranfield's senior leadership in 2021/22. The PVC (Research and Innovation) elect has reviewed the statement and expects to build on its enduring principles as he works with the new Vice Chancellor to develop a new Corporate Plan and Knowledge Exchange Strategy. Key Performance Indicators and measures of success will be aligned with these refreshed strategies.

The revised priority objectives of Cranfield's HEIF strategy are guided by: our Knowledge Exploitation Strategy (<https://www.cranfield.ac.uk/research/rio/knowledge-exploitation-strategy>) and our current commended KE Strategy for HEIF

(<https://webarchive.nationalarchives.gov.uk/20180405135332/http://www.hefce.ac.uk/ke/kestrategie/cranfield/>), the strategic research priorities for our eight sector-focused themes

(<https://www.cranfield.ac.uk/research/why-cranfield/theme-research-strategies>); our four grand challenges addressing UN SDGs (<https://www.cranfield.ac.uk/research/why-cranfield/grand-challenges>); and our plans for addressing the Concordat for Engaging the Public with Research.

We will pay particular attention to promoting KE as a vehicle for driving change in equality, diversity and inclusion and have placed greater emphasis on provision for supporting student entrepreneurs.

Cranfield is a specialist institution, which combines a deep understanding of STEM with world-class entrepreneurship and leadership training. Our unique status among UK HE Institutions is illustrated by our classification as the sole Engineering university in the specialist STEM peer group - one of eight 'clusters' - for the Knowledge Exchange Framework (KEF). Within this cluster, Cranfield was named as within the top 10% for Working with Business, top 10% for Skills, Enterprise and Entrepreneurship, top 30% for Intellectual Property and Commercialisation.

Building on these leading capabilities Cranfield has an important role to play by engaging the public in inclusive conversations on STEM and Entrepreneurship research, innovation and teaching.

We will continue to focus on KE programmes to:

1. Support the foundation pillars originally set out in the Industrial Strategy and reflected in Build Back Better – Ideas, People, Infrastructure, Place, plus Innovation Environment and Global Britain.
2. Build on the Cranfield ethos of working closely with business by ensuring that academic staff continue to be business-focussed with KE embedded in their day-to-day role.
3. Provide direct support for academic staff, students and researchers through the Research & Innovation Office, embedded Business Development manager and Knowledge Exchange Champion networks and the Bettany Centre for Entrepreneurship.
4. Focus on developing strategic partnerships with key industrial clients through senior level academic leadership, and corporate entrepreneurship as well as delivering research, professional development and consultancy outcomes. Place-based agenda will be a priority focus for developing new relationships whilst recognising our key industrial clients are located world-wide.
5. Progress our client-centric approach to the provision of professional development programmes, supporting learners in applying new knowledge to their organisational challenges.
6. Increase the impact of existing and new research and development projects through active promotion of KE by our academic staff, supported by targeted advice and coaching from KE professionals and Knowledge Exchange Champions.

7. Develop regional–focussed funds for staff and student entrepreneurship building on the Cranfield Pre-Seed Fund to provide additional support for spin-out and start-up companies. Extend this to a planned Midlands Innovation Universities ‘patient capital’ fund and a Cranfield Seed Fund to enhance the reach and impact of entrepreneurial activity at Cranfield.
8. Promote technology-led graduate start-ups through development of student entrepreneur training, mentoring, and specialist education, alongside business acceleration programmes for start-ups.
9. Expand the Cranfield University Business Incubation ecosystem offer to provide sector specific incubation and acceleration including the University Enterprise Zone/Avtech aerospace cluster and Green Technology.
10. Address local growth productivity challenge and reinforce regional KE through supporting regional academic-led programmes, and partnership with bodies promoting the regional agenda, currently South East Midlands Local Enterprise Partnership (SEMLEP), Milton Keynes, Central Bedfordshire Council, Bedford Borough Council and Oxford-Cambridge Arc. As a member of the Arc Universities Group, we are committed to working with government, business and other partners, to maximise the potential in this region of economic significance for sustainable and green growth.
11. Achieve sustainable growth across KE activities by leveraging unique industrial and near-industrial-scale infrastructure and facilities through long-term partnerships and simple, co-operative business engagement mechanisms.

Success of these priorities will be measured using the following measures:

- Academics delivering KE in day-to-day role (including public engagement): developing solutions, improved innovation, IP commercialisation for business.
- Research and Innovation Office support for academics, technicians and students: IP commercialisation, improved business performance, benefits for SMEs.
- Student entrepreneurial ideas supported through mentoring, coaching events and learning experiences.
- Equality, Diversity and Inclusion related impact and improvement.
- Key client strategic partnerships: improved innovation, sector support, inward investment.
- Professional development programmes supporting lifelong learning: improved business performance, stronger supplier linkages, labour market benefits, benefits for SMEs.
- KE coaching for academics, technical staff and students: developing solutions, improved innovation, benefits for SMEs.
- Funds for start-ups and spin-outs: improved innovation, sector support, benefits for SMEs.
- Technology-led graduate start-ups: improved innovation, sector support, local resident services, SME enterprise support.
- Aerospace and Sustainable- Green Technology business incubation and acceleration support: improved innovation, sector support, benefits for SMEs.
- Knowledge Exchange for Regional growth.
- Facility and infrastructure and University technician capability use for KE: benefits for SMEs, strengthening innovation.

Question 2 – Use of HEIF

How do you intend to use your 2021-22 to 24-25 HEIF allocations?

As detailed in [RE-CL-2020-04](#) and RE-P-2020-03., in order to enable institutions to effectively respond to the Covid-19 pandemic, we will use the 2019-20 HEIF Annual Monitoring Statement submitted in February 2021 to gather information about the use of HEIF during 2020-21,

In this accountability statement return we would like to know about your plans for HEIF for the remainder of the funding period 2021-22 to 2024-25. Please include indication of the planned timescale of the activity e.g. 2021-22 only; ongoing or 2022-23 onwards.

Please use the response layout grid provided overleaf, to provide the following information:

- a) Describe the key activities supported by your HEIF allocation.
- b) Include specific reference to how you expect HEIF to support these activities – i.e. specific expenditures: funded posts, academic staff buy out, internal competitive projects; and the proportion of the activity that is supported by HEIF (e.g. x1 business development post 50% HEIF funded).
- c) How these activities relate to the government priorities and RE-OfS strategic objectives outlined in paragraphs 9 and 10 of RE-P-2020-03. Where student benefits are achieved, please include an indication of the number of students benefiting.
- d) Which strategic KE objective, as outlined in question 1, does each activity relate to.
- e) Indication of the timescale for each activity (e.g. 2021-22 only, ongoing or to be confirmed)

In answer to this question, please use the response grid provided and ensure that the entire question response is contained in no more than six pages of A4 or A3.

Question 2: Use of HEIF

(Max 6 pages of A4 or A3)

Planned areas of HEIF supported KE activity Please provide an overview of planned KE activities or projects that will be supported by your 2021-22 and onwards HEIF allocations.	HEIF support How HEIF will be used to support the project?	HEIF priorities How does this relate to govt priorities and RE-OfS strategic objectives? (Including note of scale where student benefits are achieved.)	Strategic objectives Which institutional strategic KE objective does this relate to?	Indication of timescales
a. Research and Innovation Office (RIO) providing support for academics in Technology transfer, business development, commercialisation and market opportunity scoping; also managing the internal HEIF funding call, incubation and acceleration capabilities and commercial collaboration processes. Support for business focussed postgraduate students. (4,825 currently studying with Cranfield (2019/20)).	Support for 14.2 staff in the Research and Innovation Office (9 FTE plus 2 x 0.5 posts in Business Innovation and Partnerships, Knowledge Exchange and RIO Leadership team); 5.2 FTE posts ranging from 0.2 - 0.5 in Research Commercial team) 16.7% of budget – aim to grow this proportion	See detailed programme I - XVII	Primarily 3, secondary all	Ongoing annual programme for the whole duration
b. Internal funding competition programme to support Knowledge Exchange and Innovation arising from the research generated by Cranfield University. It will include special allocation to 'Agility Fund' to support rapid responses to new, innovative "moonshot" activities, especially to support local economic growth and Covid-19 recovery response	Annual budget of ca. £1.2m call-off programme of projects typically up to £50k, plus more substantial support of ca. £150k for the Bettany Centre for Entrepreneurship (https://www.cranfield.ac.uk/som/research-centres/bettany-centre-for-entrepreneurship) and an allocation of ca. £130k per annum for a public engagement programme. An additional £150k to support patent protection. 30% of allocation – aim to grow this proportion and size of project that can be bid for.	See detailed programme I - XVII	1, 2, 3, 4, 7, 8, 10, 11	Ongoing annual programme with competition announcement September, November and December every year.
c. Programme of business and commercial activities undertaken by academic staff, researchers, technical staff and students to meet the university's strategic KE priorities including building relationships with key strategic industry partners, building networks for collaborative bids, providing peer support and development through the Knowledge Exchange Champions, co-developing continuous professional and leadership development	Direct allocation of 53.3% of our HEIF funding to the four Schools hypothecated for KE activities. Aim to reduce this proportion to support a larger 'Agility Fund' for rapid responses to new, innovative KE ideas, activities, especially to support local economic growth.	See detailed programme I - XVII	1, 2, 4, 5, 6, 10, 11	Ongoing annual programme for the whole duration of programme

The overarching programmes, a), b), c) above will support the following specific activities:				
I. Business and Knowledge Exchange strategic partnership support and development programme to support academic leadership, corporate entrepreneurship as well as delivering research, professional development and consultancy outcomes. This is a substantial programme which represents a significant proportion of business as usual for most Cranfield academics within a university that is postgraduate only, focusing on technology and leadership and business facing. A recent, significant example involving multiple industry partnerships was Cranfield's success in the Future Flight Challenge where we are involved in nine: https://www.cranfield.ac.uk/press/news-2021/cranfield-rises-to-the-future-flight-challenge . Our managed partnerships are enduring and strong, for example: https://www.cranfield.ac.uk/press/news-2018/cranfield-and-severn-trent-one-of-top-100-global-partnerships	Substantial buy-out of staff time (c) primarily supported by 3 Business Development Managers (BDM) and a Business Development Officer (BDO), 2 KE staff and members of Research Commercial Team (a) and support for targeted new CPD courses (b). Specific opportunities may be supported through the call-off programme (b)	This programme will attract, retain and develop talented, diverse people and teams and will directly contribute to the R&D People and Culture Strategy.	1, 2, 3, 4, 7, 8, 10, 11	Ongoing throughout the period
II. Continuous Professional development programme for businesses and third sector to support creation of new professional development courses. We expect demand to increase over the next 5 years as we emerge from Covid-19 into the green economic recovery.	Developed primarily by academic staff working closely with industry to co-create content (a) and (b).	This programme will attract, retain and develop talented, diverse people and teams and will directly attribute R&D People and Culture Strategy.	5	Ongoing throughout the period
III. Spin-out and start-up growth programme via the University's technology transfer and commercialisation support. Activities include identifying and securing IP, supporting business model development, contractual arrangements, investor identification, supporting negotiations and market identification. (https://www.cranfield.ac.uk/business/develop-your-technology-and-products/spin-out-and-start-up-companies).	Primarily supported by Technology Transfer Manager and Research Commercial Team plus RIO Leadership (a) and supplemented by external commercialisation contract (Oxentia Ltd (b)). Academic staff time to participate is also included in programme (c) and specific opportunities may be supported through the call-off programme (b)	This programme will support the Ideas pillar by assisting commercialisation of "moonshot" projects and will align with the grand challenges of artificial intelligence and data, clean growth and future of mobility plus transition to net zero.	9, 11	Ongoing annual programme for the whole duration of programme
IV. Promotion of technology-led graduate start-ups via entrepreneurship training and mentoring for students, as well as business acceleration programmes for start-up companies, for example the Unilever ice cream and tea challenge (https://www.cranfield.ac.uk/press/news-	Primarily delivered by Bettany Centre for Entrepreneurship (BCE), (b)) with the Head of Business Innovation and Partnerships and BDMs (a). Leveraged by our partnership with Barclays Eagle Lab.	This programme will attract, retain and develop talented, diverse people and teams and will directly contribute	9,	Ongoing annual programme for the whole duration of programme

2021/unilever-innovation-competition-awards-students-7000		R&D People and Culture Strategy. Ca. 300 students pa		
V. Bespoke regional programmes of innovation and business support, drawing in local growth funding, currently from LEPs, primarily SEMLEP local authorities and upcoming Oxford Cambridge Arc investment. Recent examples: £3.6m SEMLEP investment in a new Forensics Institute on the Cranfield campus which will create over 20 new jobs in the region (https://www.cranfield.ac.uk/press/news-2020/0608-game-changing-uk-forensic-science-centre-of-excellence); £2.4m in Cranfield's leadership of MK:U Smart City Living Lab (SCLL) (https://www.milton-keynes.gov.uk/pressreleases/2020/aug/2-4m-awarded-to-support-new-mk-university) Peer Networks programme supported by SEMLEP: https://www.cranfield.ac.uk/som/research-centres/bettany-centre-for-entrepreneurship/peer-network-programme-for-business-leaders-in-the-south-east-midlands	Delivered by academics; time bought out by HEIF(c) supported by Head Business Innovation and Partnerships, 3 BDMs, BDO and Research Commercial team (a) and the business support from BCE (b). Cranfield's R & I leadership team also hosts the Ox-Cam Arc Director, leveraged by funding from Research England's Strategic priorities fund.	This programme will attract, retain and develop talented, diverse people and teams and will directly contribute to R&D People and Culture Strategy. It will also have substantial contribution to the Place pillar via increase of creation and retention of local high-productivity jobs and business environment.	1, 2, 3, 4, 8, 10, 11	Ongoing annual programme for the whole duration of programme
VI. Cranfield seed fund support to capitalise on charitable (philanthropic) donations from alumni and invest in early-stage businesses originating from Cranfield faculty, students, alumni and network members. We will look to grow this over the next five years, extending it to a planned Midlands Innovation Universities 'patient capital' fund and a Cranfield Seed Fund to enhance the reach and impact of entrepreneurial activity at Cranfield by offering funding as well as advice and education	Managed and delivered by BCE (b) in collaboration with HEIF supported staff in RIO (primarily Head of Business Innovation and Partnerships and Tech Transfer Manager) (a). Academic staff time to participate is also included in programme (c)	This programme will attract, retain and develop the talented, diverse people and teams and will directly attribute R&D People and Culture Strategy. This programme will also support the Ideas pillar by assisting commercialisation of projects and aligning with the grand challenges of artificial intelligence and data, clean growth and future of mobility plus transition to net zero.	1, 2, 3, 4, 7, 8, 10	Ongoing programme for the whole duration of programme
VII. Regional and international technology transfer collaboration programme. An example of this is the technology commercialisation support for the nano	Primarily supported by Technology Transfer Manager and Research Commercial Team plus RIO Leadership (a) and supplemented	This programme will support the Ideas pillar by assisting commercialisation of	1, 2, 3, 4, 6, 7, 8, 10	Ongoing programme for the whole

<p>membrane toilet. https://www.cranfield.ac.uk/case-studies/research-case-studies/nano-membrane-toilet</p> <p>The toilet was named by the Financial Times as one of the '50 ideas to change the world'. The prototype of the toilet has been showcased in a permanent display at the Bill & Melinda Gates Foundation Discovery Centre in Seattle. The interactive display is open to the public, engaging the minds of manufacturing partners and the next generation of researchers in this area.</p>	<p>by external commercialisation contract (Oxentia Ltd (b) where appropriate.</p>	<p>University's IP projects and will align with the grand challenges of artificial intelligence and data, clean growth and future of mobility plus transition to net zero.</p>		<p>duration of programme</p>
<p>VIII.Ideas to innovation (i2i) programme support: https://www.cranfield.ac.uk/som/events/i2i i2i has been designed for ambitious doctoral researchers and postdocs from the technical disciplines looking to unlock their entrepreneurial and creative potential. During the next HEIF period our aim is to grow the number of Cranfield students attending the course from around 40 per annum to the majority of each annual cohort (ca 80)</p>	<p>Delivered by the BCE (b) with some administrative support from RIO; the programme forms part of the 10 days of development we have committed to deliver as part of the Researcher Development Concordat action plan.</p>	<p>This programme will attract, retain and develop talented, diverse people and teams and will directly attribute R&D People and Culture Strategy.</p> <p>Aim to support 150 students pa.</p>	<p>1, 2, 3, 4, 6, 7, 8, 11</p>	<p>Ongoing programme for the whole duration of programme</p>
<p>IX.Cranfield Entrepreneurship Mentoring programme. Three-stage mentoring system within the Bettany Centre of Entrepreneurship. Programme will consist of Bettany Centre staff, Cranfield 50 members, and externals to support students, staff, and alumni along their entrepreneurial journey. This will include an entrepreneur in residence within the Cranfield Eagle Lab – approximately 20 students and staff will benefit from this annually.</p>	<p>Delivered primarily by BCE (b) with leveraged support from Barclays Eagle Lab.</p>	<p>This programme will attract, retain and develop talented, diverse people and teams and will directly attribute R&D People and Culture Strategy.</p> <p>Ca 10 students pa</p>	<p>1, 2, 3, 4, 6, 7, 8</p>	<p>Ongoing programme for the whole duration of programme</p>
<p>X.Start-up weekends and investor days to support staff, student and alumni to develop their entrepreneurial ideas through a series of high-energy sessions and mentoring activities. https://www.cranfield.ac.uk/som/research-centres/bettany-centre-for-entrepreneurship. Other bespoke events include business challenges, for example:</p>	<p>Delivered primarily by BCE (b) supported by Technology Transfer Manager and Head of Business Innovation and Partnerships (a)</p>	<p>This programme will support the Ideas pillar by assisting commercialisation of “moonshot” projects and align with the grand challenges of artificial intelligence and data, clean growth and future of mobility</p>	<p>1, 2, 3, 4, 6, 7, 8</p>	<p>Ongoing programme for the whole duration of programme with annual regular events</p>

<p>https://www.cranfield.ac.uk/som/events/natwest-climate-focus-business-challenge Approximately 150 students will benefit from this.</p>		<p>plus transition to net zero. Ca. 150 students pa</p>		
<p>XI. Cranfield 50 network programme is a network of high-profile Cranfield alumni entrepreneurs and investors. Building a strong network of Cranfield 50 will be a real game-changer for Cranfield going forward to create an even stronger entrepreneurial ecosystem. https://www.cranfield.ac.uk/som/research-centres/bettany-centre-for-entrepreneurship/the-cranfield-50-a-network-of-leading-entrepreneurs</p>	<p>Delivered primarily by BCE (b) supported by Technology Transfer Manager and Head of Business Innovation and Partnerships (a)</p>	<p>This programme will attract, retain and develop the talented, diverse people and teams and will directly attribute R&D People and Culture Strategy.</p>	<p>1, 2, 3, 4, 6, 7, 8</p>	<p>Ongoing programme for the whole duration of programme</p>
<p>XII. Ready for Scale programme support. The aim of the programme is to support SMEs and start-ups including those established by students including those who have successfully been endorsed by the University entrepreneurship visa programme and any successor programme (up to 25 a year). The 12-week programme will be delivered with individual Growth Plans developed that helps them critically review their business, ask challenging questions, and thoroughly interrogate what is and what isn't working. https://www.cranfield.ac.uk/som/research-centres/bettany-centre-for-entrepreneurship/ready-for-scale</p>	<p>Delivered primarily by BCE (b) supported by Head of Business Innovation and Partnerships (a)</p>	<p>This programme will support the Ideas pillar by assisting commercialisation of "moonshot" projects and will align with the grand challenges of artificial intelligence and data, clean growth and future of mobility plus transition to net zero. Ca. 25 Students pa</p>	<p>1, 2, 3, 4, 6, 7, 8, 11</p>	<p>Ongoing programme for the whole duration of programme</p>
<p>XIII. Business Development Manager and Knowledge Exchange Champion network support primarily for staff including training, networking and experience exchange activities</p>	<p>Delivered and supported by RIO BD and Tech Transfer staff (a) and academic staff (KECs) supported through the HEIF allocations to their School (c).</p>	<p>This programme will attract, retain and develop talented, diverse people and teams and will directly attribute R&D People and Culture Strategy.</p>	<p>1, 2, 3, 4, 6, 7, 8</p>	<p>Continuous programme for the whole duration of programme</p>
<p>XIV. Technical Support programme for SMEs to develop new processes and systems to improve efficiency and introduce new products and services. This will include technical support programmes co-funded by LEPs. Our aim is to increase our work with SMEs, including through an expanded KTP programme, and to eventually join the SME Charter.</p>	<p>Primarily delivered Head of Business Innovation and Partnerships and BDMs (a) in collaboration with Bettany Centre for Entrepreneurship (BCE)</p>	<p>This programme will support ideas pillar by assisting commercialisation of projects and align with countries grand challenges of artificial intelligence and data, clean growth and future of mobility plus transition to net zero.</p>	<p>1, 2, 3, 4, 6, 8, 10, 11</p>	<p>Ongoing programme for the whole duration of programme</p>

<p>XV. Comprehensive business incubation programme available to local entrepreneurs and businesses willing to develop their activities in SEMLEP area (https://www.cranfield.ac.uk/business/access-our-world-class-facilities/business-incubation) consisting of:</p> <ul style="list-style-type: none"> • Cranfield entrepreneurship visa endorsement programme for Cranfield students and upcoming graduates (25 a year) • Pre-start up advice and mentoring in conjunction with our world-leading School of Management, and the Bettany Centre for Entrepreneurship • AVIATE+, University Enterprise Zone UK Aviation Innovation and Technology Entrepreneurship cluster • Cranfield University's Business Incubation Centre (CUBIC) providing targeted facilities and support for very early-stage start-ups. • Cranfield Eagle Lab - collaboration between Barclays and Cranfield University is an early-stage development innovation Lab specialising in aerospace technology. 	<p>Primarily delivered Head of Business Innovation and Partnerships and BDMs (a) in collaboration with Bettany Centre for Entrepreneurship (BCE), (b)) Leveraged by our partnership with Barclays Eagle Lab (2 FTE) and the UEZ staff (2FTE) funded by Research England.</p>	<p>This programme will attract, retain and develop talented, diverse people and teams and will directly attribute R&D People and Culture Strategy.</p> <p>It will also have substantial contribution to Place pillar via increase of creation and retainment of local high-productivity jobs and business environment.</p> <p>Ca. 25 students pa</p>	<p>1, 2, 3, 4, 6, 8, 10, 11</p>	<p>Ongoing programme for the whole duration of programme</p>
<p>XVI. Public and community engagement programme and support to integrate across the University staff member's roles and responsibilities. Support for research active staff members and students engaging with the public.</p>	<p>Delivered by a programme manager and support programme paid for through the call-off programme (b); staff contribution to these community and public engagement programmes is paid for through the allocations to their Schools (c)</p>	<p>This programme will attract, retain and develop talented, diverse people and teams and will directly attribute R&D People and Culture Strategy. Ca. 20 students pa</p>	<p>1, 2, 3, 6</p>	<p>Ongoing programme for the whole duration of programme</p>
<p>XVII. Equality, Diversity and Inclusion programme. We will support a programme to increase the level of participation in innovation at Cranfield building expertise in the School of Management and on work undertaken by our incubation partners, Barclays.</p>	<p>Call off project (b) and support from academics (c) supported by senior leadership team in RIO.</p>	<p>This programme will attract, retain and develop talented, diverse people and teams and will directly attribute R&D People and Culture Strategy.</p>	<p>1, 2, 3, 4, 6, 7, 8, 11</p>	<p>Ongoing programme for the whole duration of programme</p>

Question 3 – Monitoring success

How do you manage your HEIF funding and monitor the success of your activities against the strategic objectives set out in question 1, and in line with delivering Government priorities?

Describe the policies, procedures and approach you have in place in the context of your strategic objectives to:

- i. manage your HEIF spending
- ii. measure progress
- iii. evaluate outcomes and
- iv. identify lessons learned.

In answer to this question, you are free to use text or tabular format but please ensure that the entire question response is contained in no more than four pages of A4.

(Max 4 pages of A4)

i. Managing HEIF Spending

All funding is managed in accordance with our responsible evaluation policy and our research and integrity policies and data is managed in accordance with research data management and GDPR policies (<https://www.cranfield.ac.uk/about/governance-and-policies/policies-and-regulations>) and consideration of Equality, Diversity and Inclusion.

Categories a) and b) are directly overseen by the Pro Vice Chancellor for Research and Innovation (PVC R & I) reporting directly to the Universities' Executive Group. Outputs from dedicated staff are measured through formal Performance and Development Review which sets smart objectives for all staff, including meeting the HEIF KPIs and progress is reviewed at a formal review meeting annually with regular informal review. The call-off funding competition provides opportunity for academics to bid for up to £50k to support new projects that meet at least one of the 11 priorities of our KE strategy. It is intended to be flexible and agile to meet urgent demand so the peer review is light touch but robust. Applicants are supported in preparing their proposals by members of the RIO team and they are required to provide: details of their project, details of external organisations involved, a summary of expected outcomes and impacts, a commercialisation plan and a detailed funding breakdown. The programme is managed by the Head of Business and Innovation Partnerships, supported by a BDO with a panel comprising the PVC R & I (Chair), Director of Research and Innovation and Head of Business and Innovation Partnerships with appropriate experts, e.g. public engagement panel members, Knowledge Exchange Champions and consideration of adding appropriate external experts from partner organisations. A condition of award is that applicants provide a final report to the PVC R & I. The

patent budget is managed by the Technology Transfer manager with a regular report on outcomes being provided for the University Executive.

The funding provided to Schools to help them meet strategic KE priorities is intended to be flexible in recognition of rapidly changing demands, for example, this methodology enabled us to rapidly mobilise teams to bid into the Future Flight Challenge with unprecedented success, and also enabled us to work with industry on a number of Covid-related programmes, for example researchers at Cranfield University are working on a new test to detect SARS-CoV-2 in the wastewater of communities infected with the virus. (<https://www.cranfield.ac.uk/press/news-2020/wastewater-test-could-provide-early-warning-of-covid-19>)

Schools receive the funding hypothecated for use on KE activities that meet our strategic priorities and are required to report on outcomes annually.

ii) measure progress

HEIF activities will vary between programmes, but essentially, our programmes will be designed to impact on productivity and employment in our target geographies via various outputs based on the knowledge exchange and commercialisation opportunities, e.g. business assists, new products and processes developed, and business spin-outs, successful projects, start-ups, etc.

There are also more qualitative, wider local growth and placemaking impacts from our investments which are harder to quantify. For example, AVIATE+ University Enterprise Zone will generate immense catalytic impact for highly skilled job retention in South East Midlands region, driving increased economic activity for via direct, indirect, induced and student spending effects, helping to retain more graduates in the local area and to attract inward investment.

We monitor the outputs and impacts of our local growth activities via periodic project evaluations and regular monitoring reports (as well as through HE-BCIS). Going forward, we are committed to enhancing and broadening this monitoring and have commissioned ongoing advice using a logic chain-based approach to identify enhancements that can be made to our existing KPI monitoring.

Current Key Performance Indicators for all HEIF supported programmes are highlighted below (reference table in Q2):

- I. Innovate UK contracts; KE and innovation contracts with business clients; KE contracts with government and third sector; Patents; Licenses and joint collaborations
- II. KE and innovation grant submission rates; success ratios; academic and student spin-outs
- III. Number of strategic partnerships; number of SME interventions; growth achieved by SMEs
- IV. Attendees of professional development programmes on improved business performance;

- V. Courses on KE and Innovation subject held; number of attendees
- VI. Seed Fund set-up, number and scope of investments;
- VII. Attendees at Start-up weekends and investor events, IP workshops; new businesses established, investment raised
- VIII. Aerospace and Sustainable Technology incubation ecosystem, jobs created, regional productivity impact
- IX. SME interventions; engagement with SEMLEP, Local authorities and Oxford Cambridge Arc
- X. University research and innovation facilities used for KE resulting in income from industry; companies supported through facilities;
- XI. Knowledge Exchange multiplier effect through engagement with networks like Midlands Innovation.
- XII. Knowledge spill over effect through expert groups leading to growth, productivity and new knowledge exploitation

The University plans to use the Knowledge Exchange Concordat principles audit to evaluate how individual KPIs are contributing towards the wider Knowledge Exchange and Innovation goals and principles. In particular a Knowledge Exchange working group will be set up to take into account and act on indicators from existing Knowledge Exchange activities and funded projects, e.g. HEIF investment contributions to the required areas. By bringing together representative from all of the Schools this group will be ideally positioned to examine how joined-up and coherent is the messaging about Cranfield's Knowledge Exchange mission and how efficient has been the leadership and Knowledge Exchange Champion and Business Development Manager involvement. The working group will monitor and identify any investment steer, process improvements and training needs of Cranfield staff and students in aspects of Knowledge Exchange and will be steering interaction with other University service units like Human Resource services and Facilities on the issues relating to facility utilisation, new developments, staff professional development, motivation and performance.

Externally Cranfield University will provide evidence of the scope and scale of Knowledge Exchange metrics as part of the Knowledge Exchange Framework. Cranfield will also design a third-party evidence gathering process to judge the value of Knowledge Exchange activities by external stakeholders.