

**RE-P-2020-03-Annex B**

# **The Royal Veterinary College**

## **HEIF accountability statement**

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

**Return date: 21 May 2021**

Return as Microsoft Word file to: [KEPolicy@re.ukri.org](mailto:KEPolicy@re.ukri.org)

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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.*

The Royal Veterinary College (RVC) aspires to be the leading organisation of its kind worldwide in the discovery and dissemination of knowledge relevant to food sustainability, zoonotic disease control, translational medicine, and genomic testing. To achieve these aims, we will pursue the following objectives in support of knowledge exchange that builds on our world-leading research:

### **OBJECTIVES**

1. Increase capacity and support for 'big data' use in translational research, through machine learning (a type of artificial intelligence), capitalising on the expertise and environment within London's Knowledge Quarter to ensure AI / machine learning is applied effectively to clinical diagnostics.
2. Develop our clinical research programmes making use of the new Advanced Imaging Centre (with a 3-Tesla MRI scanner as its centrepiece) that will open on our Hertfordshire campus early in 2022; and fostering links to the Cell and Gene Therapy Catapult Manufacturing Centre at Stevenage, which sits at the heart of a Life Science Opportunity Zone on the GSK campus. This will include cultivating our

links with the Stevenage Bioscience Catalyst, and SMEs based at SBC and Sycamore House.

3. Undertake a review of the RVC-owned London BioScience Innovation Centre (LBIC), located on the College's Camden campus. We will consider expansion of LBIC in the context of its value proposition, its economic contribution, research collaborations, and industry links for staff and students, and as a key contributor to the Life Sciences cluster within London's Knowledge Quarter. In addition, we will create laboratory and write-up space for SMEs at our Hawkshead campus.
4. Establish the College's new £27-million Vaccinology and Cell Therapy Hub, due to open in summer 2021, as the leading industry-facing, university-based unit focused on animal targeted vaccination and stem cell therapies.
5. Continue to invest in early career researchers in each of our main research areas, including support innovation and entrepreneurship, e.g. through The Bloomsbury SET Follow-On programme funded by Research England (2021-22).
6. Establish closer working relationships with our strategic partners in a One Health context. This will include other UK HEIs (e.g. LSHTM, LSTM), research institutes (e.g. Francis Crick, Quadram), UK Government bodies (e.g. APHA, DEFRA, FSA, NIBSC) and global organisations such as the FAO, OIE and WHO.
7. Reinvigorate our clinical research agenda with embedded research capacity in new clinical facilities in Hertfordshire, to include replacement of the Queen Mother Hospital for Animals – Europe's largest veterinary hospital. Alongside this we will undertake a tactical expansion of RVC Practices Ltd. (a wholly owned subsidiary of first opinion veterinary practices, providing opportunity for student placements and ensuring referrals to our specialist hospitals). We will also develop further VetCompass™ (for details see answer to Q3) to facilitate development of machine learning-based AI and focused telemedicine initiatives.
8. Develop a focused, transparent and proactive approach within our work and those of others on the replacement, reduction and refinement of animals in translational research (3Rs).
9. Encourage an entrepreneurial culture in our undergraduate and postgraduate students, postdoctoral researchers and staff, through support for enterprise training offered in conjunction with the College's Entrepreneur-in-Residence.

To deliver these objectives we will strengthen support for knowledge exchange within the Research Office and RVC Business, including the LBIC management team.

We expect that in meeting these objectives, there will be a range of positive outcomes, including those listed below.

## **OUTCOMES**

- Recognition of RVC as a One Health centre of excellence in approaches to the global challenges to food safety, food security and human health from (re-) emerging infectious diseases of animals.
- A reputation for authoritative evidence-based opinion on individualised comparative biomedicine, disease diagnostics and performance resulting from genomic testing.
- Identity as a partner of choice in clinical trials.
- New clinical and diagnostic facilities to support the best clinical, research and educational outcomes – a ‘veterinary Mayo clinic’.
- Diversified general and specialist services across species, focused on patient outcomes and the client experience. This will deliver the breadth of educational experience required for our students, as well as our specialists in training, to provide an effective ‘clinical research laboratory’.
- A cadre of graduates and postgraduates able to work with and in industry, government and academia and equipped to address global One Health challenges.
- Increased income from diversified bodies including Government-sponsored innovation initiatives and place-based funding (e.g. Institutes of Technology, Strength in Places, Shared Prosperity Fund).

## 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)

<p><b>Planned areas of HEIF supported KE activity</b></p> <p>Please provide an overview of planned KE activities or projects that will be supported by your 2021-22 and onwards HEIF allocations.</p>	<p><b>HEIF support</b></p> <p>How HEIF will be used to support the project?</p>	<p><b>HEIF priorities</b></p> <p>How does this relate to govt priorities and RE-OfS strategic objectives? (Including note of scale where student benefits are achieved.)</p>	<p><b>Strategic objectives</b></p> <p>Which institutional strategic KE objective does this relate to?</p>	<p><b>Indication of timescales</b></p>
<p>Proof-of-concept (PoC) studies involving analysis of large data sets (e.g. genomic sequencing data) by machine learning algorithms, leading to new analytical models.</p> <p><i>Applications: e.g. improved mathematical models to prevent the transmission and spread of emerging and endemic infectious diseases of humans and animals.</i></p>	<p>PoC project funding through Concept Development Partnership scheme, attracting matched funding from industry, in total up to £100,000 per project (50% funding from HEIF).</p>	<p>Supports ‘<i>Innovation</i>’ and ‘<i>Skills</i>’ elements of Plan for Growth (PfG), by creating new analytical models and equipping researchers with new skills and knowledge.</p> <p>Supports ‘<i>International collaboration</i>’, ‘<i>Talented people and teams</i>’ and ‘<i>Innovation and productivity</i>’ elements of R&amp;D Roadmap, by funding collaborative projects with industry.</p>	<p><b>Objective 1:</b> Build capacity and support for big data use in research through AI / machine-learning.</p>	<p>2021-22 onwards</p>
<p>Research business development around the new £5-million Advanced Imaging Centre (3 Tesla MRI) at RVC’s Hawkshead campus in Herts.</p> <p><i>Applications: cardiovascular imaging to inform clinical research and surgical treatments, bioelectronic medicine; training of scientists and technicians in collaboration with industry, NHS hospitals and veterinary referral practices.</i></p> <p>Research business development to build stronger links between the RVC’s Stem Cell Centre (focus: therapies and treatments for companion animals</p>	<p>Research Office support through 3 FTE senior staff posts: (1) Head of Research Development; (2) Head of KE and Commercialisation; (3) Head of Research Contracts and Due Diligence – all 100% funded from HEIF.</p> <p>Research Office support via 2 FTE contracts officers, dealing with CDAs, MTAs, consultancy agreements, contract research</p>	<p>Supports ‘<i>Infrastructures</i>’, ‘<i>Innovation</i>’ and ‘<i>Skills</i>’ elements of PfG, by facilitating new contracts with industry and other partners.</p> <p>Supports ‘<i>Talented people and teams</i>’ and ‘<i>Innovation and Productivity</i>’ elements of R&amp;D Roadmap by encouraging new industrial collaborations in the area of</p>	<p><b>Objective 2:</b> Develop our clinical research programmes making use of: (a) new Advanced Imaging Centre; and (b) fostering links to the Cell and Gene Therapy Catapult Manufacturing Centre, Stevenage Bioscience Catalyst and associated Cell and Gene SME cluster.</p>	<p>2021-22 onwards</p>

<p>and horses) and the emerging Cell and Gene Therapy cluster at Stevenage (focus: therapies and treatments for humans).</p> <p><i>Applications: novel treatments using cell and gene therapies for animals or humans, e.g. using veterinary patients as large animal models for human disease.</i></p> <p><i>Support for ecosystem development around the Life Sciences Opportunity Zone centred on Stevenage, helping to promote the Zone to companies in the Cell and Gene Therapy field, with a view to attracting companies interested in working with RVC's Stem Cell Centre..</i></p>	<p>services and access to scientific equipment for measurement / testing – both 100% funded from HEIF.</p> <p>Part-funding of one staff post within the Stem Cell Centre – 1 FTE senior lecturer, 50% from HEIF.</p> <p>RVC Business support through 1.5 FTE administrative staff posts – 100% from HEIF.</p> <p>RVC Business support through contribution to staff time (study managers) in Biological Services Unit at Hawkshead – £125k in 2019-20.</p>	<p>cell and gene therapy, including foreign direct investment.</p>		
<p>Refurbishment and upgrading of existing space in London BioScience Innovation Centre, Camden (McFadyean Building, c. 28,000 square feet); and decommissioning of Amoroso Building (c. 5000 square feet). Current estimate is that this work will be undertaken in a phased manner over the next 2-5 years.</p> <p>Possible expansion into new site close to RVC's Camden campus, c. 30,000 square feet, by Q3 2022-23. Option to manage a further 70,000 square feet at same site from Q3 2022-23. Possibility to provide specialist services to other occupants, e.g. animal facilities, pathology services.</p> <p><i>Application: new or refurbished laboratory and write-up spaces for SMEs and corporates in the heart of London, with range of business support functions.</i></p>	<p>Research Office support through 1 FTE senior staff post – Head of KE and Commercialisation – 100% funded from HEIF.</p>	<p>Supports '<i>Infrastructures</i>' and '<i>Innovation</i>' elements of PfG, by creating new managed laboratory space for Life Science SMEs and corporates.</p> <p>Supports '<i>Talented people and teams</i>' and '<i>Innovation and productivity</i>' elements of R&amp;D Roadmap, through provision of laboratory space and business services.</p>	<p><b>Objective 3:</b> Undertake a review and possible expansion of the RVC-owned London BioScience Innovation Centre (LBIC).</p>	<p>2021-22 onwards</p>

<p>Research business development and early-stage commercialisation of vaccines and adjuvants, and new diagnostic tools / technologies created using the new laboratories and allied infrastructure at RVC's Hawkshead campus.</p> <p><i>Applications: new or more efficacious vaccines and adjuvants, and diagnostics for combatting emerging and endemic infectious diseases of livestock and/or humans.</i></p> <p><i>New stem cell treatments for horses and companion animals, e.g. treatment of laminitis in horses.</i></p>	<p>Research Office support for research business development through 2 FTE senior staff posts: (1) Head of Research Development and (2) Head of KE and Commercialisation – both 100% funded from HEIF.</p> <p>Part-funding of one academic staff post within the Stem Cell Centre – 1 FTE senior lecturer, 50% from HEIF.</p> <p>RVC Business support through 1.5 FTE administrative staff posts – 100% from HEIF.</p> <p>RVC Business support through contribution to staff time (study managers) in Biological Services Unit at Hawkshead – £125k in 2019-20.</p> <p>Marketing and Communications support to promote outcomes from translational research (all areas, not simply the Hub) – 100% from HEIF.</p>	<p>Supports '<i>Infrastructures</i>', '<i>Innovation</i>' and '<i>Skills</i>' elements of PfG, by creating new research laboratories and assisting the training of researchers.</p> <p>Supports '<i>International collaboration</i>', '<i>Talented people and teams</i>' and '<i>Innovation and productivity</i>' elements of R&amp;D Roadmap, by providing the scientific infrastructure required to attract substantial project-based R&amp;D funding from government and industry.</p>	<p><b>Objective 4:</b> Establish the College's new £27 million Veterinary Vaccinology and Cell Therapy Hub.</p>	<p>2021-22 onwards (NB. new and refurbished buildings due to open in July 2021)</p>
<p>Equipping of early career researchers with the skills necessary to be competitive at national and international level, either to work in industry or academia (or move freely back and forwards between the two).</p>	<p>Research Office support for mentoring and career development; guidance on protecting intellectual property, provided by 2 FTE senior staff posts: (1) Head of Research</p>	<p>Supports '<i>Innovation</i>' and '<i>Skills</i>' elements of PfG, through the training of researchers at postdoctoral level.</p>	<p><b>Objective 5:</b> Continue to invest in early career researchers in each of our main research areas,</p>	<p>2021-22 onwards</p>



<p><i>Application: RVC typically has between 60 and 70 postdoctoral researchers at any given time. Skills training will include mentoring support for career development, and equipping with knowledge around the early-stage commercialisation of research (e.g. technology disclosures, filing of patents, licensing of novel technologies to industry, spin-out company formation).</i></p>	<p>Development; (2) Head of KE and Commercialisation – both 100% funded from HEIF.</p>	<p>Supports ‘<i>International collaboration</i>’, ‘<i>Talented people and teams</i>’ and ‘<i>Innovation and productivity</i>’ elements of R&amp;D Roadmap, through mentoring and support for the development of highly skilled researchers.</p>	<p>including support for translational research.</p>	
<p>Identification and development of strategic partnerships with industry (including human pharma and animal pharma, MedTech), through relationship-building and signing of appropriate framework agreements for collaboration. Such agreements may cover a range of different activities (research, training, potential for student placements etc.).</p> <p><i>Application: industry partnerships for collaborative R&amp;D, access to animal facilities for research, access to a pipeline of intellectual property, access to skilled people.</i></p>	<p>Research Office support for strategic partnership development, IP development and contracts negotiation through 3 FTE senior staff posts: (1) Head of Research Development; (2) Head of KE and Commercialisation; (3) Head of Research Contracts and Due Diligence – all 100% funded from HEIF.</p>	<p>Supports ‘<i>Innovation</i>’ and ‘<i>Skills</i>’ elements of PfG, through strategic partnering (best with best).</p> <p>Supports ‘<i>International collaboration</i>’, ‘<i>Talented people and teams</i>’ and ‘<i>Innovation and productivity</i>’ elements of R&amp;D Roadmap, by connecting world-class researchers at RVC with their peers in industry, governments, NGOs and industry, in order to collaborate on translational research projects.</p> <p>Potential for student placements with strategic partners (NB. KPI is to be developed with regards to number of placements).</p>	<p><b>Objective 6:</b> Establish closer working relationships with our strategic partners in a One Health context.</p>	<p>2021-22 onwards</p>

<p>Scoping studies for replacement of Queen Mother Hospital for Animals, leading to decision on new facilities. In the meantime, to progress knowledge exchange activities and impact arising from excellent clinical research using existing hospital, e.g., studies of diabetes, epilepsy and heart conditions in companion animals with application to human patients.</p> <p>Scoping work on possible expansion of RVC Practices Ltd., a wholly owned subsidiary of RVC that operates first opinion veterinary practices.</p> <p>Further development of VetCompass™ database in support of work with industry (vet practices and vet pharma).</p> <p><i>Applications: new facilities in place to support clinical research and training of veterinarians, veterinary nurses and technicians, thereby maintaining RVC's existing professional accreditations and its position as the top-ranked institution in the world for veterinary science (QS University Rankings 2021).</i></p> <p><i>Development of machine learning-based AI and telemedicine initiatives, making use of data from VetCompass™.</i></p>	<p>Research Office support for contracts negotiation through 1 FTE senior staff post: (1) Head of Research Contracts and Due Diligence – 100% funded from HEIF.</p> <p>Support from veterinary nurses in the Clinical Investigation Centre (CIC, Department of Clinical Science and Services) who manage collaborative R&amp;D and clinical trials funded by industry. Work includes patient recruitment from veterinary practices; preparation of study protocols for ethics clearance; writing of reports that will benefit a wider audience, beyond the funder of a particular study, and potentially lead to funding for a follow-on study. Support from experts in machine learning to interrogate large clinical data sets (VetCompass™ data) in conjunction with industry. Allocation: £100k from HEIF in 2019-20.</p>	<p>Supports 'Infrastructures' and 'Innovation' elements of PfG, by creating new clinical facilities for the treatment of animals and for cutting-edge research.</p> <p>Supports 'Talented people and teams' element of R&amp;D Roadmap, through skills development and training of veterinarians, veterinary nurses, and laboratory technicians.</p>	<p><b>Objective 7:</b> Reinvigorate our clinical research agenda with embedded research capacity in new clinical facilities in Herts and elsewhere. Develop further applications of the VetCompass™ database.</p>	<p>2023-24 onwards</p>
<p>Ongoing support for RVC's work in furtherance of the 3Rs agenda (replacement, reduction and refinement of the use of animals in research), which includes part-funding with two other London Colleges of a dedicated 3Rs post – 1 FTE, centrally funded (not HEIF).</p> <p><i>Application: RVC seen as a leading institution worldwide in terms of the 3Rs, and the</i></p>	<p>Research Office support for research business development involving use of animals in research, and assistance with contract negotiations. This is achieved through 2 FTE senior staff posts: (1) Head of Research</p>	<p>Supports 'Innovation' and 'Skills' elements of PfG, through awareness-raising and encouraging the 3Rs.</p> <p>Supports 'International collaboration', 'Talented people and teams' and 'Innovation and productivity'</p>	<p><b>Objective 8:</b> Develop a focused, transparent, and proactive approach within our work and those of others on the replacement, reduction, and refinement of animals in research (3Rs).</p>	<p>2021-22 onwards</p>

<p><i>transparency of its research operations. This transparency also supports the reproducibility agenda.</i></p>	<p>Development; (2) Head of Research Contracts and Due Diligence – both 100% funded from HEIF.</p>	<p>elements of R&amp;D Roadmap through promotion of best practice in the use of experimental animals, thereby ensuring the highest standards of animal welfare.</p>		
<p>Ongoing work to build a strong culture of enterprise and entrepreneurship at all levels within RVC, from undergraduate to senior staff.</p> <p><i>Application: skills training and business mentoring to equip RVC researchers and students with the know-how and skills to develop their ideas into a viable business, or support others to do so.</i></p>	<p>Research Office support for an Entrepreneur-in-Residence (0.4 FTE, consultancy) – 100% funded from HEIF.</p>	<p>Supports <i>'Innovation'</i> and <i>'Skills'</i> elements of PfG, through encouragement of entrepreneurship and the development of bio-business skills.</p> <p>Supports <i>'Talented people and teams'</i> and <i>'Innovation and productivity'</i> elements of R&amp;D Roadmap through training of staff, researchers and undergraduate students. (NB. KPI is to be developed with regards to number of people trained.)</p>	<p><b>Objective 9:</b> Encourage and support the development of an entrepreneurial culture in our undergraduate and postgraduate students, postdoctoral researchers and staff.</p>	<p>2021-22 onwards</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.*

The RVC takes the following approaches in relation to delivering its strategic objectives:

- i. Managing HEIF expenditure – Expenditure under HEIF is tracked and monitored on a monthly basis by the Research Management Accountant in the College's Finance Office, discussed at the monthly Research Office / Finance Office meeting, and reported to Research England through the HEIF Annual Monitoring Exercise. The bulk of expenditure is on **staff costs** (comprising a mixture of dedicated KE posts in RVC Business and the Research Office, and research assistant time on project grants – see HEIF AMS). There are also non-pay costs, for example in relation to **consultancy** (e.g. Entrepreneur-in-Residence scheme; payment for one-off technology evaluations) and **proof-of-concept project funding** awarded under the College's Concept Development Partnership (CDP) scheme. The CDP projects, which usually are match-funded by industry, are typically 12 months in duration but can run for up to 36 months. This requires the College to monitor carefully its commitments on expenditure, given that in recent years HEIF has been allocated on an annual basis with no certainty beyond that time. At the end of each CDP project, a final report is requested from the Principal Investigator. This will cover both the scientific outcomes and a final expenditure statement.
- ii. Measuring progress – Progress on CDP projects is monitored by the Head of Knowledge Exchange and Commercialisation through liaison with Principal Investigators (PI). This includes consideration of any technology disclosures arising from the funded project, which may lead to the filing of a patent. As noted above, the PI is required to produce an end of project report, which is received and reviewed by the College's Innovation Management Group (consisting of the Vice-

Principal for Research and Innovation, Director of Research Administration, Head of Knowledge Exchange and Commercialisation, and Head of Research Development). Industry income received in the form of matched funding for CDP projects is reported internally against a College-level KPI (target in 2019-20 is for industry funding to exceed 20% of all income received from external grants and contracts).

In relation to the **Entrepreneur-in-Residence** scheme, this has been running since January 2020. Given the unusual circumstances of 2020, with a global pandemic in full swing, many of the planned face-to-face activities have been delayed or moved online, resulting in a re-scheduling of timelines for delivering the outputs from the scheme (18 months instead of 12 months). Progress during this period has been monitored by the Director of Research Administration through monthly meetings with Caroline Broad, the incumbent.

Funds from HEIF are used to support staff in the **Clinical Investigation Centre (CIC)**, the role of which is to improve our understanding of disease conditions affecting animals and thereby reduce suffering and improve quality of life. To that end, the CIC team works closely with clinicians across all disciplines to investigate companion animal health with the aim of improving diagnosis and treatment. The CIC is home to the **Veterinary Companion Animal Surveillance System (VetCompass™)**: <https://www.rvc.ac.uk/vetcompass>, which collects clinical data in de-identified format from >1800 veterinary clinical practices (15% of all UK practices) and combines these to create 'big data'. Such data are amenable to analysis by AI / machine-learning algorithms to reveal patterns and explore linkages, thereby helping in the study of conditions as diverse as epilepsy, cancer, skin disease, endocrinopathies and heart disease, as well as describing general longevity and mortality in dogs and cats. There is also an Equine VetCompass, which provides a facility for supporting the health and welfare of the national horse population (see: <https://www.rvc.ac.uk/vetcompass/research-projects-and-opportunities/projects/vetcompass-equine>). Progress in these areas is monitored at CIC meetings, and at departmental level. The Deputy Principal and the Head of Clinical Science and Services are both members of the CIC team.

- iii. Evaluation of outcomes – As noted above, outcomes from CDP grants are reviewed by the College's Innovation Management Group, which reports into the Research Strategy Committee. Wider outcomes from KE activity (e.g. grants awarded, commercialisation activities) are reported to the Research Strategy Committee and to the College's Executive Committee. Similarly, the Innovation Management Group oversees the work of the Entrepreneur-in-Residence, via monthly meetings at which progress towards meeting enterprise-linked KPIs is assessed.

Outputs from the work of the CIC, including VetCompass™, are published in the form of peer-reviewed research papers and data-sets, some of which are available as open data (for details see: <https://www.rvc.ac.uk/vetcompass/papers-and-data>).

No additional evaluation is thought necessary, given the role of external peer review in assessing quality of outputs and outcomes.

Thus far, the College has not undertaken any formal evaluation of the entire HEIF-funded portfolio of activities over the period 2016-21. However, experience with The Bloomsbury SET (2018-21) – a £5 million Connecting Capability Fund programme led by RVC’s Research Office, and supported by Research England and industry – suggests that such an evaluation would be valuable in helping the College to reflect on the outcomes and capture key learning points. Therefore, an external evaluation has been costed into our HEIF activities for 2021-22 and will be commissioned by the College in autumn 2021. We envisage that this evaluation will contribute to the aim of continuous improvement in the effectiveness of our KE activity, to be monitored in fulfilment of the RVC’s commitment to meeting the aims of the Knowledge Exchange Concordat (KEC). We will refer to the external evaluation in more detail in connection with our KEC submission due in summer 2021.

- iv. Identifying lessons learned – At present the learning around the use of HEIF is not captured through any formal recording process. Rather the lessons learned have been taken on board by senior staff in the Research Office and then applied to:
  - a) The formulation of ‘flagship’ KE programmes such as **The Bloomsbury SET** (CCF, 2018-21, see: <https://bloomsburyset.org.uk>) and its **Follow-On** programme (CCF, 2021-22), both of which are led by RVC.
  - b) The design of large-scale infrastructure for Life Sciences, notably the RVC’s £27-million **Veterinary Vaccinology and Cell Therapy Hub**, which is part-funded by the Hertfordshire Local Enterprise Partnership (£7 million, 2018-24, see: <https://www.rvc.ac.uk/news-and-events/rvc-news/hertfordshire-local-enterprise-partnership-awards-rvc-7m-grant-to-build-leading-one-health-vaccine-and-stem-cell-research-centre>), and a £5-million **Advanced Imaging Centre**, also part-funded by the Herts LEP (£2.13 million, 2020-24, see: <https://www.rvc.ac.uk/research/news/general/rvc-advanced-medical-imaging-centre-set-to-strengthen-hertfordshire-s-life-sciences-capability>).
  - c) The development of science policy work, such as RVC’s leadership of the BEIS-sponsored **Science and Innovation Audit of London’s Knowledge Quarter** (2017-18, see: <https://www.knowledgequarter.london/sia/>), and its involvement in a successful bid for a **Life Science Opportunity Zone** (LSOZ) at Stevenage, Herts, awarded in 2019. Promotion of the LSOZ, working with the Department for International Trade to develop a High Potential Opportunity marketing plan designed to attract foreign direct investment.

d) The formulation of class-leading strategies around different aspects of KE, such as those articulated in the RVC's submission to the Knowledge Exchange Framework (KEF) in 2020.

As such, since 2016 there has been a continuous effort to *reflect upon* and *apply* the lessons from management of HEIF, through active engagement in other national funding initiatives. This includes CCF, where RVC leads one project and is a partner in another (the Imperial-led **MedTech Super-Connector** and its Follow-On programme, see: <https://medtechsuperconnector.com/>); and the Single Local Growth Fund, where RVC has won two capital grants with a combined value of £9.1 million. This proactive approach has led in the past five years to RVC – a specialist institution with fewer than 200 academic staff – becoming one of the most successful universities in the UK, in terms of grants capture around KE.

As noted above, in autumn 2021 we intend to pause for breath and undertake a formal evaluation of our HEIF programmes and allied activities, such that the learning is not lost should there be senior staff changes at RVC over the next few years.