Volterra

# CAMERA Motion Capture Innovation Studio Programme

## Summative Assessment Report

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University of Bath

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# CAMERA Innovation Programme

## Successfully supporting SMEs and start-ups in the West of England to innovate and grow

### 95 beneficiaries

95 beneficiaries supported by the Innovation Programme, the majority of which are from the digital health and creative sectors

### 20 beneficiaries

20 beneficiaries successfully developed new to market products and new to firm products

### 22 beneficiaries

22 beneficiaries collaborated with research entities

### 30 - 237 FTEs

Up to 237 FTEs supported by the Innovation Programme, made up of direct FTEs today, safeguarded FTEs and future FTEs

## The Innovation Programme has provided support in line with regional policy ambitions.

*"The West of England's ambition is to be recognised globally as a place of innovation, where leading designers, engineers, scientists and entrepreneurs combine with industry to create an innovation ecosystem that drives research, development and commercialisation – both within and across sectors."*

- **All beneficiaries would recommend the Innovation Programme to other businesses**
- **No beneficiaries were aware of another location in the South West where they could get this support**

**72% of beneficiaries** expect the Innovation Programme to lead to future growth in their business

**91% of beneficiaries** introduced to new innovation tools and techniques

**62%** of beneficiaries engaged in research or industry collaborations

**100%** of beneficiaries rated the level of expertise on the Innovation Programme as good or very good

**36%** of beneficiaries think there would be demand for the Innovation Programme even if it weren't free

Sources:


- Department for Business, Energy, & Industrial Strategy, 2019. West of England Local Industrial Strategy

# CAMERA Innovation Programme

## Meeting its four overarching objectives

### Increased numbers of digital creative and digital healthcare enterprises in the West of England region

Supported 13 new enterprises, and helped 10% of enterprises to safeguard employees during the coronavirus pandemic

### Increased investment in new product development in the West of England region

As well as supporting 20 beneficiaries to bring new to market products, 37% of beneficiaries have experienced increases in innovation investment since their time on the programme

### Increased level of project-based research and innovation collaborations between West of England SMEs and regional HEIs

All beneficiaries worked with experts from CAMERA at the University of Bath, with 94% rating the quality and relevance of support provided as good or very good

### Maturation of West of England motion capture network and community of professional practitioners

The Innovation Programme was successful in reducing beneficiaries' barriers to growth, in particular 66% of respondents found it very helpful in addressing a lack of access to facilities

## The following recommendations should be considered for future similar interventions

To achieve permanent employment impacts, a more **permanent solution providing SMEs** with access to innovative motion picture technology is required in the WoE region.

Future support should consider how beneficiaries can be **supported following their time on the Innovation Programme**. The delivery team could provide advice and assist with promotion of the project.

An **extension of the Innovation Programme** should be considered in order allow the continuation of innovation for SMEs in the digital creative and digital health sectors.

Similar interventions should **consider targeting businesses with larger scale projects**. This might help to generate greater impacts in terms of employment creation.

Similar **support should be provided for a reduced fee** at the facility for beneficiaries on completion of their free support in order for those supporting larger projects to get the time they need on site.

Exceptions should be made to **allow access to new firms that lay in neighbouring LEPs/regions to WoE** but require support.

# 1. Introduction

## ERDF Summative Assessment Guidance

This section should provide an overview of the project including timescales, overarching objective(s) and who the main project partner(s) is(are).

## Purpose of the report

1.1 In December 2022, the University of Bath (UoB) appointed Volterra Partners LLP (Volterra) to undertake a **final summative assessment of the Centre for the Analysis of Motion, Entertainment and Applications (CAMERA) Motion Capture Innovation Studio Programme** (hereafter 'the Innovation Programme') operated by the University of Bath (UoB).

1.2 There is a European Regional Development Fund (ERDF) programme requirement to undertake an independent evaluation of the Innovation Programme against its stated aims and objectives, to identify the impact of the funding and to provide recommendations that inform future policy interventions.

1.3 This evaluation is aligned with ERDF Summative Assessment Guidance and provides an **insight into the performance of the Innovation Programme**, determining whether the objectives laid out at the project outset have been met. The assessment also **provides a learning legacy** for the project board, ERDF, DLUHC, and West of England (WoE) LEP (registered as the lead LEP) to carry forward lessons learnt in future interventions.

## What is the ERDF?

1.4 The ERDF provides funding to public and private bodies in EU regions to **reduce economic, social and territorial disparities**. The ERDF supports investments through dedicated national or regional programmes.[1] The ERDF has two main goals, namely:[2]

- **Investment for growths and jobs** – aiming to strengthen the labour market and regional economies; and
- **European Territorial Cooperation** – aiming to strengthen cross-border, transnational and interregional cooperation within the EU.

1.5 Following the UK's exit from the EU on 31st January 2020, the ERDF programme continued to invest in projects after the transition period ended on 31st December 2020, with all funding finishing by the end of 2023.[3]

[1] European Commission, 2022. Available at: https://commission.europa.eu/. Accessed January 2023

[2] Retrieved from: https://www.europarl.europa.eu/ Accessed January 2023

[3] Retrieved from: https://www.gov.uk/government/publications. Accessed January 2023

# Methodology

1.6 The following key research tasks have been undertaken to inform the evaluation report:

- **Initial discussion with UoB –** undertaken in December 2022, Volterra discussed the Innovation Programme with the sole delivery partner, UoB. This provided key information with regards to programme delivery, key aims of the programme, and what the challenges had been in meeting them.
- **Analysis of UoB's monitoring information records** – UoB provided figures on key outputs as reported by 27th March 2023, and final totals that are expected to have been achieved by project closure (31st March 2023). Despite only being a difference of four days, not all beneficiaries have reported their final outcomes to the delivery team to date. The projections provided by the delivery team allow for the full impact of the Innovation Programme to be evaluated. To provide quantitative evidence for the impact and value for money of the Innovation Programme, this report presents findings from models that have been developed using industry-standard methodologies for delivered/retained jobs, cost per job delivered and the GVA generated per pound invested.
- **A beneficiary/business survey and one-to-one interviews** – an online survey was issued to beneficiaries of the Innovation Programme. Responses were collected from 20th December 2022 to 12th February 2023. This provided supplemental information on both qualitative impact and quantitative outputs of the Innovation Programme's. Four one-to-one interviews were carried out by UoB with beneficiaries to further supplement these findings. The one-to-one interviews were carried out by UoB due to budget and resource constraints, albeit UoB were briefed prior to the interviews with instructions provided on how to carry out the interviews (helping to reduce risks of potential bias).

# Overview of project

## Project summary

1.7 UoB is an international leader in Digital and Creative Economy research. CAMERA conducts first class multi-disciplinary research that fuses visual computing, AI and human-computer interaction (HCI) with healthcare, rehabilitation and biomechanics. CAMERA specialises in applying this research to creative and healthcare tech innovation and democratising access to state-of-the-art technologies. More information is available on the CAMERA website: https://www.camera.ac.uk/. Led by CAMERA, the Innovation Programme **provides sole traders, start-ups, micro businesses and SMEs with access to state-of-the-art digital innovation facilities**, including a **high-end motion capture** array and an instrumented walkway for high-end gait analysis.

Motion capture is the process of recording the movement of objects or people. It is used in military, entertainment, sports, medical applications, and for validation of computer vision and robots. In filmmaking and video game development, it refers to recording actions of human actors, and using that information to animate digital character models in 2-D or 3-D computer animation. When it includes face and fingers or captures subtle expressions, it is often referred to as performance capture.

1.8 The Innovation Programme provides access to **world-leading research expertise** covering visual computing (machine vision), machine learning and artificial intelligence, sports, rehabilitation, biomechanics,

creative production and technical skills and spatial audio rendering. **These facilities and equipment are typically expensive to access for the region's SME community**. Through providing firms with access to such facilities and expertise the Innovation Programme aims **to boost innovation to drive growth** in the regions SME and start-up community.

## Project change requests (PCRs)

1.9 UoB submitted PCRs in November 2022 centring around changes timescales, delivery partners and project funding. No changes were made to agreed targeted final project outputs.

### Timescales

1.10 The Innovation Programme was designed in 2017/18 with a planned start and end date of 2nd December 2019 1st November 2022 respectively. The lockdowns that resulted from the coronavirus pandemic in 2020 and 2021 meant that in-person technical assistance, a key part of planned delivery, was not possible. Delays in starting the Innovation Programme's business support activities and recruiting staff initiated the PCR to extend the Innovation Programme by 3 months, with an **agreed end date of 31st March 2023**.

### Delivery partners

1.11 As leaders in their respective fields, the following delivery partners were initially chosen to provide support:

- **Bath Spa University –** With expertise in academic and production in creative film, television (TV), virtual reality (VR), and audio, Bath Spa University was selected to provide support through workshops and one to one academic consultancy targeted at creative sector SMEs. It was intended that production experts at Bath Spa would deliver motion capture demonstrations and testing, whilst the academic team would provide support on creative direction on VR content through presentations on creating narrative content for virtual platforms.
- **Radium Audio Ltd –** Selected due to their technical and production expertise on 2D and 3D audio production for TV, Film and VR. It was anticipated that they would deliver workshops and one to one technical consultancy and motion capture to VR demonstrations.
- **Bristol Old Vic Theatre School (BOVTS) –** The performance and production team at BOVTS were expected to deliver workshops targeted at creative sector SMEs and provide one to one production-based consultancy.

1.12 However, all withdrew as delivery partners for the following reasons:

- **Bath Spa University** did not have the resources required to input due to staffing changes; and
- **Radium Auto Ltd** and the **BOVTS** could not commit sufficient staffing for delivery due to difficulties resulting from the coronavirus pandemic and the long-term furloughing of staff.

1.13 Following these revisions **UoB became the sole delivery partner for the Innovation Programme**.

### Funding

1.14 The total project value was initially £1.80m, split 50:50 between ERDF funding and match funding from delivery partners. However, the amount of funding was reduced through the Project Change Request (PCR) submitted in November 2022. The **final funding total for the Innovation Programme is £1.54m, split equally between ERDF funding and UoB match funding**.

# Report structure

1.15 In line with ERDF Summative Assessment Guidance, this evaluation is reported in the following structure:

- **Project context** – Based around the project logic model, this section assesses the appropriateness of the Innovation Programme delivery design given the economic and policy context in which the project was designed. This section also outlines the nature of the market failure the project seeks to address, project objectives and the rationale behind the delivery approach.
- **Project progress –** This section considers the progress of the delivery of the Innovation Programme with the performance against expenditure, activity, and output targets being assessed, whilst any variation from the initial targets are explained.
- **Project delivery and management –** This section provides qualitative analysis on the delivery of the Innovation Programme by considering the procurement, selection procedures, delivery performance, governance and management, this section considers if these elements of project delivery have gone well and where it may have not been successful.
- **Project outcomes and impact –** This section evaluates the gross and net economic impacts of the Innovation Programme and the contribution it has made towards the targets set out in the logic model.
- **Project value for money –** This section concludes whether the Innovation Programme represents good value for money. Supplemented by a benefit cost ratio, this section provides cost per output analysis.
- **Conclusions and lessons learnt –** This section identifies the strengths and weaknesses of the project. It highlights any specific lessons for the delivery team, those designing and implementing similar interventions, and policy makers.

# 2. Project context

## ERDF Summative Assessment Guidance

This section needs to consider the economic and policy context in which the project was designed, including the nature of the market failure that the project seeks to address, the project objectives and the rationale for the delivery approach. This section should be based around the project logic model and include critical analysis about the appropriateness of the project delivery design given project objectives.

## Project details and background

### Context, market failures and rationale

#### Overarching project aim

2.1 The aim of the Innovation Programme is to **translate UoB's research strength into tangible benefits** for the WoE LEP's digital creative and healthcare businesses. In doing so, the Innovation Programme aims to **increase the ability of SMEs and sole traders to innovate**, resulting in productivity gains or new product development to help drive growth within these small businesses.

#### Market failure

2.2 Market failure refers to a situation in which markets fail to deliver and there is a need for the public sector to intervene.[4] The Innovation Programme set out to provide SMEs and sole traders in the digital creative and health sectors with access to **state-of-the-art digital innovation facilities and world-leading research expertise**. These facilities, equipment and expertise are typically **prohibitively expensive** for the region's SME community to access, creating **high barriers to entry for firms** in the digital creative and digital healthcare sectors. This forms the basis of the market failures that the Innovation Programme aims to address, as summarised below:

**Imperfect competition**

2.3 Imperfect competition is experienced in a market that is **dominated by a small number of competitors which leads to higher prices as demand outstrips supply**. The motion capture market possesses imperfect competition within the WoE LEP and South West region, with a shortage of providers for motion capture services despite significant demand. This has resulted in few companies being able to use this equipment in the digital creative and digital health industries.

2.4 Prior to the creation of the CAMERA facility at UoB in 2015, existing facilities on campus lacked the capability, capacity or staff resources to deliver SME engagement and innovative collaborative R&D

[4] DCLG, 2012. The National ERDF Handbook

projects. At the time, **the WoE had no other providers of this technology**. This meant that there was a lack of industry facing knowledge, expertise, nor bespoke testing facilities for motion capture and analysis available to the region's thriving digital creative and digital health technology clusters.

2.5 The CAMERA **facility was found to be too high-end for smaller developers**. Start-ups and SMEs were not able to justify investing in testing and data capture in order to validate whether or not motion capture is an opportunity for their business. The imperfectly competitive market had resulted in a **lack of production availability for firms in the digital creative and digital health sector**.

**Market power**

2.6 Market power describes markets which are dominated by a few suppliers, with a **high financial barrier to entry which is beyond the reach of SMEs**, resulting in a few, high value incumbents. This can arise from too few buyers or sellers. Barriers to market entry and exit can cause a concentration of market power.

2.7 The **expensive nature of the equipment and expertise needed for motion capture** and the associated costs with innovating limits the ability of SMEs, startups and sole traders to commit to innovation activity. As such, the market for motion capture is dominated by a few digital health and creative firms who can afford to buy and maintain the equipment.

2.8 This Innovation Programme aims to give SMEs, startups and sole traders the opportunity to use these facilities. This minimises the market power of larger firms.

# Context

## National

*"Innovation is crucial to the UK building back better. It is at the heart of 'Build Back Better: our plan for growth' and so much else we want to achieve, from fighting coronavirus to achieving net zero and building Global Britain. Boosting innovation in the private sector is an essential part of the UK's future prosperity and key to achieving UK objectives to be a force for good on global challenges around climate, biodiversity, prosperity and security. We are calling on businesses to invest in innovation, getting British firms to the front of the pack."*[5]

2.9 Innovation is vital for economic and productivity growth, typically creating more and better-paid jobs. There is a **positive relationship between product innovation and revenue productivity**. This relationship is widely accepted, and national policy has referenced a number of reports that demonstrated it.[6,7,8] The **UK has seen stagnant economic and productivity growth** in recent years. A **slowing rate of innovation** is a major cause of this.[9] Providing a means to enhance UK innovation in the private sector directly meets the

[5] Department for Business, Energy & Industrial Strategy, 2021. UK Innovation Strategy

[6] Browyn, 2011. Innovation and Productivity

[7] Hodges, 2010. Investigating the links between innovation and productivity: an analysis of UK firms

[8] Crisculo, 2009. Innovation and Productivity: Estimating core models across 18 Countries in OECD

[9] Fernald, 2015. Productivity and Potential Output before, during, and after the Great Recession

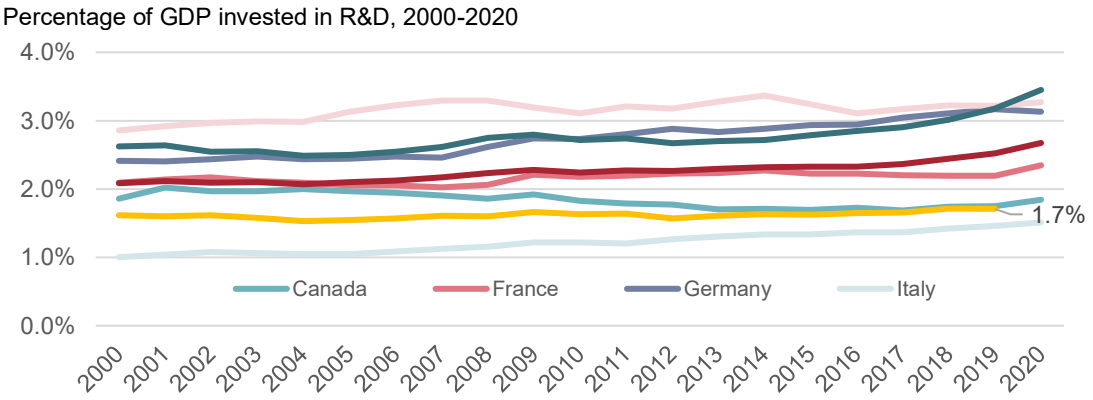
aim of national policy as set out in the UK Innovation Strategy.[10] This strategy sets out the government's vision to make the UK a global hub for innovation by 2023 through four pillars identified below:[11]

- **Unleashing business** – we will fuel businesses who want to innovate.
- **People** – we will make the UK the most exciting place for innovation talent.
- **Institutions & places** – we will ensure our research, development and innovation institutions serve the needs of businesses and places across the UK.
- **Missions & technologies** – we will stimulate innovation to tackle major challenges faced by the UK and the world and drive capability in key technologies.

2.10 The UK Innovation Strategy acknowledges that being able to innovate is **"increasingly expensive and technology dependent, requiring substantial equipment and support"**.[12] It is clear that in order for the UK to achieve its missions, **solutions that can provide the equipment and support required for innovation**, must be encouraged. The Innovation Programme is an example of this.

2.11 The UK's stagnant rate of R&D spend has contributed to poor innovation in recent years with businesses investing less in R&D compared to similar nations since the turn of the millennium (**see Figure 2.1**).

**Figure 2.1 – The UK invests the second lowest proportion of its GDP in R&D (1.7%) against comparators in the G7**




*Source: OECD, 2022. Gross domestic spending on R&D (2000-2020). Data is not yet available for the UK in 2020*

2.12 The **UK Research and Development Roadmap (the Roadmap)** outlines the Government's commitment to increasing investment in R&D to 2.4% of GDP by 2027, with public funding increasing to £22bn per year by 2024. There is a need for domestic business investment into UK R&D to **improve economic productivity** and the **introduction of new products, services and jobs**.[13]

2.13 One of the methods in which the Roadmap aims to address the lack of research and innovation in the UK is through harnessing the economic and social benefits from research and **supporting entrepreneurs and start-ups** to improve the flow of capital into the firms that are carrying out R&D, enabling them to scale up.[14]

[10] Department for Business, Energy & Industrial Strategy, 2021. UK Innovation Strategy

[11] Department for Business, Energy & Industrial Strategy, 2021. UK Innovation Strategy

[12] Department for Business, Energy & Industrial Strategy, 2021. UK Innovation Strategy

[13] Department for Business, Energy, & Industrial Strategy, 2021. UK Research and Development Roadmap

[14] Department for Business, Energy, & Industrial Strategy, 2021. UK Research and Development Roadmap

2.14 Support is particularly targeted in the creative industries. The creative industries rank among the world's fastest-growing sectors, generating more value to the UK economy than the life sciences, aerospace and automotive industries combined. **Much of the growth potential lies in areas that combine technology with creativity**.[15]

2.15 Further policy notes **importance of digital innovation in both the creative and health sectors**:

- The **UK Digital Strategy** specifies that ideas and innovation are central to the future of the UK's creative industries;[16]
- A **Creative Industries Sector Vision** is set to be published to help unlock the innovation potential of the sector;[17]
- Whilst the creative industries are highly innovative there is an abundance of SMEs across various sectors, that lack the ability for strategic, cross-sectoral R&D;[18] and
- The **UK Digital Health and Social Care Plan** states that the digital transformation of health and social care is a top priority for the **Department of Health and Social Care (DHSC)** and **NHS England (NHSE)**.[19]

2.16 Through providing access to facilities to encourage innovation in the digital and creative sector, the Innovation Programme directly fuels businesses who want to innovate in the WoE.

## Regional

2.17 Improving collaborative innovation between the **WoE's four world class universities** (including UoB) and the growing number of innovative SMEs is stated as one of the priorities in the WoE Combined Authority Local Industrial Strategy. A particular focus is placed on building on the region's strengths in three sectors, including the **creative, cultural and digital industries**.[20]

> *"The WoE's ambition is to be recognised globally as a place of innovation, where leading designers, engineers, scientists and entrepreneurs combine with industry to create an innovation ecosystem that drives research, development and commercialisation – both within and across sectors."*[21]

2.18 With UK R&D intensity and funding being concentrated in the Golden Triangle, East and South East England regions, other areas suffer from weaker innovation systems which has resulted in less productive economies that are lagging behind competitors across Northern Europe.[22]

[15] Communications and Digital Committee, 2023. At risk: our creative future

[16] Department for Digital, Culture, Media & Sport, 2022. UK Digital Strategy

[17] Department for Digital, Culture, Media & Sport, 2022. UK Digital Strategy

[18] Department for Digital, Culture, Media & Sport, 2018. Creative Industries: Sector Deal

[19] Department of Health & Social Care, 2022. A plan for digital health and social care

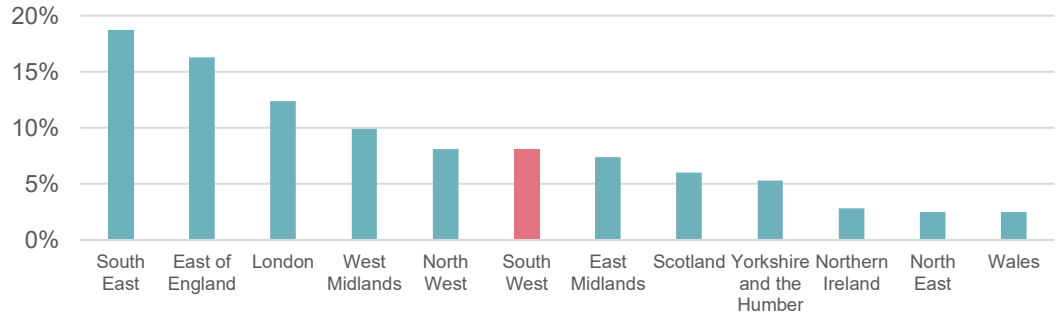
[20] Department for Business, Energy, & Industrial Strategy, 2019. WoE Local Industrial Strategy

[21] Department for Business, Energy, & Industrial Strategy, 2019. WoE Local Industrial Strategy

[22] Department for Business, Energy, & Industrial Strategy, 2021. UK Research and Development Roadmap

**Figure 2.2 – At 8.1% of the UK's total R&D employment, the South West ranks below the UK's leading regions for R&D employment**

Percentage of the UK's total R&D employment, 2020




*Source: ONS, 2021. Business enterprise research and development 2020.*

2.19 There is a clear need to raise levels of innovation activity across the WoE. Indeed, **the WoE LEP area ranked seventh lowest out of 39 LEPs** for the proportion of firms undertaking product or service innovation in 2019 (22.6%). Buckinghamshire ranked first with 38.1%.[23] The WoE LEP further ranked in the bottom half of LEPs for the following indicators:

- New to the market production and service innovation (25th out of 35)
- Introduction of new methods of work organisation (35th out of 39)
- Marketing innovation (32nd out of 36)
- Percentage of firms undertaking design investment for innovation (28th out of 36)
- Collaboration for innovation (27th out of 39)

2.20 Increasing innovation activity is of great strategic importance to the WoE LEP and will **contribute to the key objectives within the 2015-2030 WoE ELP Strategic Economic Plan (SEP)**. The Innovation Programme directly supports this in the digital and creative sector, one of the identified key sectors in the SEP.[24]

2.21 Encouraging innovation remains a key objective in the WoE. The WoE Combined Authority (WECA) have set the following targets surrounding innovation for 2023:[25]

- Deliver 90 innovative new products or services;
- Support 110 new research & development projects
- Engage 1,000 all businesses in innovation

2.22 The **Department for International Trade (DIT)** set out a core aim to support SMEs in growth. This is crucial as SMEs account for over 99% of all UK businesses whilst also accounting for 50% of all private sector employment and turnover.[26] With 85% of WoE businesses employing fewer than ten employees, the WoE Strategic Economic Plan stated a plan to support SMEs with the introduction of a SME Growth Hub to help ensure that the national support provision is used in an optimal manner for the benefit of local SMEs.[27]

[23] Enterprise Research Centre, 2019. Benchmarking local innovation – the innovation geography of England: 2019

[24] WoE LEP, 2015. WoE Strategy Economic Plan 2015-2030

[25] Retrieved from: https://www.westofengland-ca.gov.uk/what-we-do/innovation/. Accessed March 2023

[26] Department for International Trade, 2020. Small and medium-sized enterprises action plan, 2020-2022

[27] WoE Local Enterprise Partnership, 2015. Strategic Economic Plan 2015-2030

# Project rationale and objectives

## Project objectives

2.23 The Innovation Programme aims to use the existing industry scale motion capture studio with VR capability at the UoB to provide free of charge support for the region's digital health and creative community.

2.24 The following four specific outcomes were set for the Innovation Programme from its outset:

1. **Support the growth of digital creative and digital healthcare enterprises** in the WoE region by providing access and expertise to enabling technologies.
2. Enable **increased investment in new product development** in WoE SMEs.
3. **Increase the level of project-based research and innovation collaborations** between WoE SMEs and regional Higher Education Institutions (HEIs).
4. **Help mature the WoE motion capture network** and community of professional practitioners.

## Project rationale

2.25 The Innovation Programme **presents a more affordable solution that allows for SMEs to rapidly capture accurate motion data** from human and animal performers. This translates to service providers and content producers creating content more efficiently and cost effectively in comparison to traditional animation methods. In doing so, the Innovation Programme **directly tackles market failures in the industry of imperfect competition and market power (through high barriers to entry)**. Improvements in levels of innovation contribute to reducing production times and subsequently the cost of projects for digital creative and digital health firms. This directly meets helps the region in their aims to building on existing strengths in the creative, cultural and digital industries.[28]

2.26 The more readily accessible these motion capture facilities and expertise are, the more competitive the market becomes, **shifting from one with a few sellers to a more perfectly competitive market**. This accessibility presents opportunities for the healthcare technology providers to take part in the pre-commercial experimentation, testing and refining of internal pipelines to capture human motion that is necessary for sophisticated digital medical assessment and analysis tools, as well as assisted living / rehabilitation applications.

2.27 The implementation of the Innovation Programme and the procurement of a new studio space in a location that enhances collaborative working across the West England region enables businesses to access support from UoB's academic team. This team offers demonstrations and tests that optimised their production processes, shortening the production time and reducing its associated costs. By optimising the production processes, the **Innovation Programme induces investment by new and small firms as the financial barriers to entry are lowered reducing the overall risk and increasing the number of companies taking part in filmmaking moving the market towards a competitive equilibrium**.

# Project design and delivery model

## Advertising strategy

2.28 Promotion for the Innovation Programme was broad and strategic. CAMERA's already well-established **social media networks and a mailing lists** were utilised throughout the duration of the programme alongside promotion via **featured articles** on websites and newsletters. Online promotion was vital as the

[28] Department for Business, Energy, & Industrial Strategy, 2019. WoE Local Industrial Strategy

coronavirus pandemic restricted the ability to hire venues and host in person marketing and networking events as intended.

2.29 A specialist marketing consultant was employed to create a **database of 180 SMEs and sole traders**, who were contacted on an individual basis. Working with the **Creative England's Elevate Membership Programme Manager** and **Women in Film and TV** (the Leading Membership Organisation for Women Working in Media) served to further promote the Innovation Programme.

2.30 A **series of networking events** and invited talks were given following the lifting of pandemic restrictions. The delivery team promoted the Innovation Programme to a specialised audience of creative companies attending the **Bristol and Bath Creative R&D cluster showcase** and engaged in wider networks such as **TechSpark Bath Third Thursday** events, Watershed, Bristol VR Lab, 'MyWorld meets', and B+B Creative R&D Cluster events.

2.31 To attract businesses in the healthcare sector, the delivery team designed **full day targeted workshops** for SMEs and sole traders to attend. Physiotherapists, rehabilitation specialists and personal trainers were targeted, given the importance of them gaining access to the latest technology and research in biomechanics and motion capture through the Innovation Programme.

2.32 The detrimental impact that the coronavirus pandemic had on the creative industries meant that the delivery team undertook **additional rounds of recruitment and targeted marketing into the third year of delivery**. The recruitment strategies included attending networking events to specifically promote the Innovation Programme to start-up businesses whilst working closely with **Bath SETsquared**, a business incubator and accelerator that helps start-ups and innovative business in the region, on cross-referrals, promotional activities, and networking.

## Selection process

2.33 Beneficiaries of the Innovation Programme were accepted if they met the following eligibility requirements to ensure they were the right fit to benefit from the support offered:

- The business needs to be **registered with Companies House** or a registered Sole Trader.
- The business needs to **have fewer than 250 employees**.
- The business must have an operations address in the WoE Local Enterprise Partnership area (Bath and North East Somerset, Bristol, North Somerset or South Gloucestershire).
- The business needs to meet the De Minimis state aid criteria and have **received no more than €200,000 in De Minimis aid over the last three fiscal years**.
- The **applicant should be the founder** or the CEO of the business and be the person who is responsible for driving the growth of the business.

2.34 Beneficiaries were positive about the application process, with 88% of survey respondents reporting that the application process was either straight forward or very straight forward, with the remaining 12% stating it was neither straight forward nor complicated.[29]

## Project design

2.35 The Innovation Programme was designed to ensure that beneficiaries received **access to studio facilities and expertise** that allows them to identify the areas in which they need support. Beneficiaries were then able to collaborate with the delivery team to prototype, test scale up and commercialise innovative products and services.

[29] Volterra, 2023. Beneficiary Survey

2.36 Support was initially expected to be delivered through six methods, with each beneficiary given a package consisting of one or more of these methods **suited to their specific needs**. The six mechanisms are detailed below.

## Network brokerage

2.37 The Innovation Programme would utilise the creative network of CAMERA and Centre for Digital Entertainment at UoB. This network would enable a company seeking to motion capture virtual environments to be referred to the CAMERA Motion Capture Innovation Studio. Through using the knowledge of the academic staff and their network connections to market leaders, the Innovation Programme would help build new supply chain relationships between regional content developers and service providers, as well as national sector leaders. **This network has been utilised and support has been provided throughout the Innovation Programme**.

## Motion data testing / experimentation / data collection sessions

2.38 Beneficiaries would be provided access to support at studio facilities, each run by the Studio Engineers and attended by a Studio Manager, with up to 6 hours of post-production support also available to businesses depending on their data requirements. This was aimed at businesses that are developing motion capture-based content, products or services; optimising, or innovating in, their production pipelines; or just experimenting with new technology.

## Motion capture workshop series

2.39 The Innovation Programme would provide beneficiaries access to a selection of thematic workshops with additional preparation time delivered in one day. The workshops would cover:

- Motion capture production.
- Spatial audio for virtual environments.
- Motion capture for live performances.
- Gait analysis for healthcare technologies virtual training and rehabilitation environment.

## Expert consultancy

2.40 The Innovation Programme would provide expertise in visual computing, machine learning and artificial intelligence, sports, rehabilitation, biomechanics, creative production and technical skills, and spatial audio rendering. This was intended help these businesses to scope and undertake pre-take commercial rapid prototyping projects, proof of concept, scale up, and pipeline optimisation of technologies for commercialisation.

## Expert speaker series

2.41 Presentations would be held quarterly to cover topics ranging from practitioner focussed production to research focussed exploration of new concepts that relate to motion capture and analysis. This would aim to disseminate the Innovation Programme's benefits to a wider audience, with all attendees including individuals and non-qualifying businesses being captured as an additional non-project related output.

## Innovation diagnostic and signposting

2.42 The SetSquared Innovation Manager would provide businesses with monthly access to one hour of innovation diagnostics, whilst offering signposting to relevant innovation finance and business scale up

support programmes that are available regionally and nationally. This support would be designed to help businesses identify the follow up support that they need from other programmes that is complimentary to the support they receive from the Innovation Programme in order to help them progress their innovation activities.

## Appropriateness of the project delivery design given project objectives

2.43 Through providing the different elements of support outlined above, the Innovation Programme aimed to provide the following:

- Access to state-of-the-art facilities.
- Access to world leading research and technical expertise.
- Access to production expertise.
- Access to structured sector specific workshops.
- Access to business growth and access to finance signposting.
- Access to expert speaker sessions.

2.44 However, it became clear from the outset of the Innovation Programme that **beneficiaries were not requesting the type of assistance inputs that were originally expected**. It was clear that businesses were less interested in workshops and more interested in the bespoke offer that CAMERA provided. The delivery team responses and **increased the amount of one-to-one expert advice offered** and time spent using the facilities of the Innovation Studio.

2.45 These methods of support **allow for knowledge transfer from UoB's academic and studio engineer team to the SMEs**, providing them with the support necessary to innovate. In doing so, the Innovation Programme has made progress towards their four objectives (refer to **paragraph 2.24**) and has positively contributed to the innovation of sole traders and SMEs in the digital and creative sectors.

# Changes in context

2.46 The effects of the **coronavirus pandemic meant that start-ups and SMEs faced further constraints on their ability to innovate and grow their businesses**. The International Chamber of Commerce launched a "Call to Action to Save Our SMEs" in 2021 through:[30]

- Shining a spotlight on the devastating impact of the coronavirus pandemic on SMEs and their employees.
- Ensuring effective policy and fiscal responses at both the international and national level.
- Providing resources and tools to help SMEs navigate the economic shock.

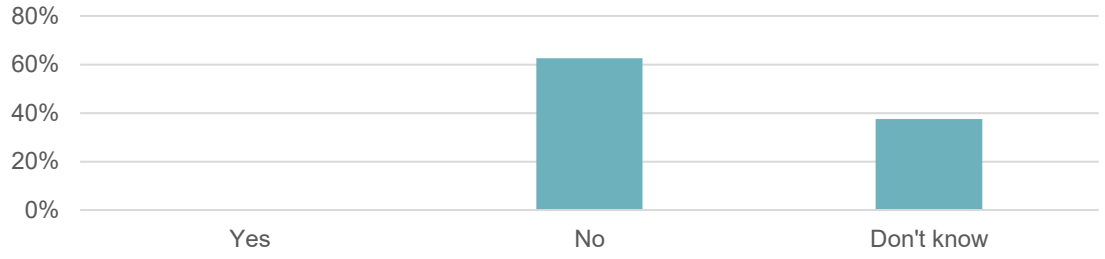
2.47 Though providing SMEs with advice and equipment to help foster innovation and business growth, the programme directly helped to provide SMEs with **resources and tools to navigate the economic shock**.

2.48 Without the Innovation Programme, it would still be difficult for SMEs to access these sorts of facilities in the WoE today. This was confirmed in the business survey, with **62.5% of respondents stating that at the time of receiving the support on the Innovation Programme there were no alternative providers of similar support**. This highlights that it remains difficult to obtain access to these types of facilities in this region, meaning that it is difficult for businesses to adopt innovative methods.

[30] Retrieved from: https://unglobalcompact.org/academy. Accessed March 2023

**Figure 2.3 – All beneficiaries either did not know or had no other providers of support that they could access in the South West area**

Beneficiaries responses to "At the time of your support on the Innovation Programme, were there any other providers of similar support in the South West area that you could reasonably access?"




*Sources: Volterra, 2023. Beneficiary Survey. 32 responses*

2.49 Encouraging innovation remains a key objective in the WoE. The WoE Combined Authority (WECA) have set the following targets surrounding innovation for 2023:[31]

- Deliver 90 innovative new products or services.
- Support 110 new research & development projects.
- Engage 1,000 all businesses in innovation.

# Conclusions

2.50 There was a **clear need to support innovation in SMEs in the WoE** at the outset of the Innovation Programme. This need remains today, and if anything has become more urgent given recent national policy priorities established. This need is particularly pertinent for businesses in **digital creative and digital health sectors**, given the targets of local policy and the potential for future sectoral growth.

2.51 Whilst the wider context has changed due to the coronavirus pandemic, it is **clear that digital health and digital creative are growing sectors that need investment to enable innovation.** A clear market failure remains in these sectors surrounding high barriers to entry for firms. The Innovation Programme was designed appropriately, and adapted well to the types of support by moving more towards one-to-one support rather than workshops, reflecting emerging business needs.

2.52 The **programme objectives seem appropriate given the economic landscape and policy aspirations at both the local and national level.** However, the nature of the coronavirus pandemic meant that it would be more challenging to achieve the respective objectives. The project extension to the 31st March 2023 was important in allowing the Innovation Programme the best opportunity to its objectives and specific target outputs (discussed in the following section).

2.53 **Targets surrounding supporting the growth of digital creative and digital healthcare are deemed particularly ambitious** given the limited length of support offered to each individual business – with this support clearly being a temporary, rather than permanent solution for businesses – but also the questions surrounding business aims during the coronavirus pandemic of survival rather than growth. Despite this, it is clear that the support offered by the Innovation Programme would be valuable during this unprecedented time.

[31] Retrieved from: https://www.westofengland-ca.gov.uk/what-we-do/innovation/. Accessed March 2023

# 3. Project progress

## ERDF Summative Assessment Guidance

This section should consider the progress with the implementation of the project, drawing in particular on annual and lifetime performance against the expenditure, activity and output targets. Variations from the targets should be carefully explained and supported by the available evidence. Progress against any horizontal principals and any explicit targets which were set should also be considered.

## Project expenditure

3.1 It is anticipated that the Innovation Programme will have spent 100% of its final agreed ERDF budget by the end of the programme. It is further expected that public match funding provided by the UoB will reach £772,189.55 matching total expenditure funding through the ERDF. This brings total expenditure on the Innovation Programme up to £1,544,379.10

**Table 3.1 – The Innovation Programme has claimed £567,094.53 of ERDF funding to date, with a final projected total of £772,189.55 by the project closure. This final amount is in line with the agreed amount in the most recent funding agreement variation**

Innovation Programme ERDF expenditure

| Expenditure | Original funding agreement | Agreed amount following project change requests | Total claimed by time of evaluation | Percentage of agreed final total | Projected to be claimed at project closure | Percentage of agreed final total |
|---|---|---|---|---|---|---|
| ERDF capital expenditure (£m) | £191,641.00 | £187,768.60 | £153,768.60 | 82% | £187,768.60 | 100% |
| ERDF revenue expenditure (£m) | £709,041.00 | £584,420.95 | £422,325.93 | 72% | £584,420.95 | 100% |
| Total ERDF expenditure | £900,682.00 | £772,189.55 | £576,094.53 | 75% | £772,189.55 | 100% |

*Source: UoB*

# Project outputs

3.2 The performance of the Innovation Programme with respect to the target outputs varied across the seven different indicators is summarised in Table 3.2 – **Table 3.2**. Outputs achieved as of 27th March 2023 are shown, alongside outputs achieved at project closure.

**Table 3.2 – The Innovation Programme is expected to meet four of the seven objectives identified at its outset.**

Programme output performance.

| Indicator | Original funding agreement | Amount in most recent funding agreement variation | Total claimed by end of 27th March 2023 | % of final target | Projected to be achieved at project closure | % of target |
|---|---|---|---|---|---|---|
| (C1) Number of enterprises receiving support | 100 | 100 | 89 | 89% | 95 | 95% |
| (C4) Number of enterprises receiving non-financial support | 100 | 100 | 89 | 89% | 95 | 95% |
| (C5) Number of new enterprises supported | 30 | 30 | 13 | 43% | 13 | 43% |
| (C8) Employment increase in supported enterprises | 30 | 30 | 30 | 100% | 30 | 100% |
| (C26) Number of enterprises cooperating with research entities | 20 | 20 | 20 | 100% | 22 | 110% |
| (C28) Number of enterprises supported to introduce new to the market products | 20 | 20 | 16 | 80% | 20 | 100% |
| (C29) Number of enterprises supported to introduce new to the firm products | 20 | 20 | 17 | 85% | 20 | 100% |

*Source: UoB, 2023. Monitoring data*

## (C1) Number of enterprises receiving support

**The Innovation Programme has supported 89 beneficiaries as of 27th March, and is expected to have completed support to 95 beneficiaries by the end of the programme. This is a slight underperformance against the final target of 100.**

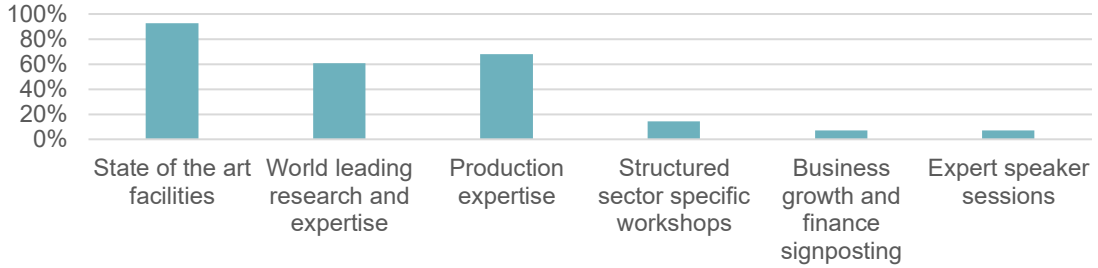
3.3 Given the nature of support being mainly one-to-one, and the inability to provide support virtually, the coronavirus pandemic hindered the ability of the Innovation Programme to successfully provide support for its targeted 100 beneficiaries. The extension of the Innovation Programme, agreed in the PCRs, was vital to allow the delivery team to get near this target and reach 95 beneficiaries.

3.4 It is clear that a number of avenues explored to promote the scheme to prospective businesses. The marketing methods of the delivery team are summarised in **Advertising strategy**. An initial target of reaching 730 potential beneficiaries was set at the outset of the Innovation Programme. Although this number has not been tracked and therefore cannot be confirmed, the delivery partners believe it has been surpassed.

3.5 The delivery team worked responsively with beneficiaries, **tailoring the offer to the very particular needs and requirements of companies engaging with them**. It was found early on that beneficiaries had greater interest in one-to-one bespoke support, rather than workshop sessions. This focus on one-to-one support made the target of supporting 100 enterprises more difficult, given the intensive nature of support provided. The beneficiaries survey confirmed this was the case, with the majority of respondents citing access to state-of-the-art facilities, world leading research and expertise, and production expertise as the primary aspect that the programme opened up, rather than workshop sessions.

**Figure 3.1 – 26 out of 28 respondents received access to state-of-the-art facilities during their time on the Innovation Programme**

Responses to "Did the Innovation Programme provide access to any of the following?"




*Source: Volterra, 2023. Beneficiary Survey, 2022.*

## Response to "in what way was the support provided by the Innovation Programme tailored to your business needs?"

Example 1: *"One of the things that I thought was great was to be put in direct touch with just a small number of key people assigned to the project, rather than have to battle through layers of institutional hierarchy."*

Example 2: *"They (the delivery team) just found out what we needed and provided it. We're not a normal company, so there was no standard pattern that could have helped. It was a whole new ask; no one had ever done this before."*

3.6 It is clear **that the delivery partners made substantial efforts to meet the target** despite difficulties surrounding the coronavirus pandemic. It is also clear that the nature of the support provided was of high standard with beneficiaries being generally positive about their experience. It is judged that **providing support to 95 beneficiaries is a positive result, given the challenges faced and available resource**.

## (C4) Number of enterprises receiving non-financial support

**All beneficiaries of the Innovation Programme received non-financial support. The final outputs are therefore the same as C1 of 89 as of 27th March with the expectation this will reach 95 by project closure. This is an underperformance against the final target of 100.**

3.7 Many survey respondents were positive about the support they received. A selection of quotes below evidence this:

- *"CAMERA provided the opportunity for the first ever proof of handsfree control of augmented reality (Microsoft HoloLens) headset with the EarSwitch. Also providing an amazing marketing video demonstrating this."*
- *"The attention given to our needs and ideas was fantastic. Our times at CAMERA always felt welcoming, inspiring and informative!"*
- *"The team were enthusiastic, productive and helpful at all times. We're able to try new techniques and tools for creating complex and realistic 3D video game characters as a result. Something we didn't have access to in the South West."*

3.8 The survey responses make clear that beneficiaries were able to trial new techniques and tools, allowing them to create complex and realistic products. Similarly to C1, despite falling slightly short of the initial target, it is judged that the number of enterprises receiving non-financial support is reasonable given the challenges faced and available resource, and the quality of support is deemed to have been of a high level.

## (C5) Number of new enterprises supported

**This output indicator is a subset of C1. The Innovation Programme has supported 13 new enterprises. This is an underperformance of over half relative to the target of 30.**

3.9 ERDF guidance defines a new enterprise as one that has either:[32]

- Been registered at Companies House or HMRC for less than 12 months prior to assistance; or
- Is a business locating in the England programme area for the first time, to start trading (i.e. registers for VAT, or registers for National Insurance (Class 2) contributions, or the start date of a company's first accounting period, or the date a business receives risk finance investment prior to its first commercial sale).

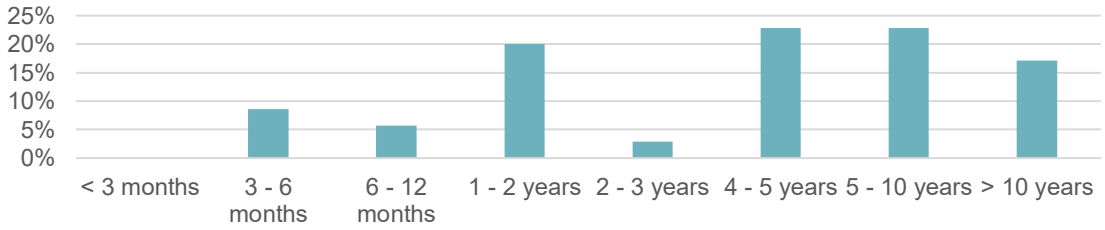
3.10 The beneficiary survey reaffirmed conclusions of the UoB monitoring data. Of the 35 businesses who provided details with the company size at the time of the support on the Innovation Programme, the majority have existed for a number of years. **Over half (63%) of businesses being established over 4 years ago**. There was a large number of **younger businesses (34%) that were established within two years** of their support on the Innovation Programme. This proportion of young businesses being supported by the Innovation Programme falls in line with the national growth priority of supporting businesses to start and grow as set out in the Industrial Strategy Green Paper.[33]

[32] ERDF, 2018. Output Indicator Definitions Guidance

[33] HM Government, 2017. Building our Industrial Strategy – Green Paper

**Figure 3.2 – The majority of beneficiaries on the Innovation Programme had been active businesses for over four years (63%)**

Business age at time of support on Innovation Programme




*Source: Volterra, 2023. Beneficiary Survey. 35 responses.*

3.11 Whilst the number of new enterprises supported was below the targeted amount, the Innovation Programme still supported micro-businesses with few employees. The beneficiary survey found that the **majority of the businesses supported had less five or less employees (84%)**.

3.12 Beneficiaries were required to provide financial turnover information based on the last complete financial year. The beneficiary survey further found that **67% of businesses had made a turnover less than £100,000 in 2021-2022, with almost half reporting turnover of less than £50,000.**

3.13 **Whilst this objective has not been met, it is not necessarily to the detriment of the Innovation Programmes impact on supporting innovation in SMEs and start-ups**. Survey respondents showed that beneficiaries remained small, with few employees and low financial turnover, and require support to help innovate and grow. The Innovation Programme was therefore supporting the kinds of businesses that had struggled to grow due to the market failures identified surrounding imperfect competition and market power.

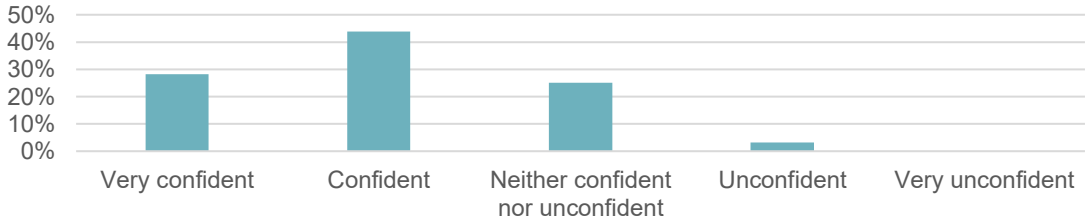
## (C8) Employment increase in supported enterprises

**The Innovation Programme has supported an employment increase in beneficiaries of 30 FTEs, meeting the final target of 30.**

3.14 Further to employment supported to date, the majority of beneficiaries expect to grow in the future as a result of their time on the Innovation Programme (see **Figure 3.3**). This is likely to bring **future employment growth over the coming years**.

**Figure 3.3 – 72% of respondents were either confident or very confident that the Innovation Programme will lead to future business growth**

Responses to "how confident are you that the support provided by the Innovation Programme will help your business to grow in the future?"




*Sources: Volterra, 2023. Beneficiary Survey*

3.15 This potential of the Innovation Programme to support future employment in beneficiaries is assessed in detail in the **Project outcomes and impact** section, alongside the role the Innovation Programme had in safeguarding jobs during the coronavirus pandemic.

## (C26) Number of enterprises cooperating with research entities

**The Innovation Programme has supported 20 enterprises in cooperating with research entities as of 27th March 2023. The final total by the end of the Innovation Programme is expected to be 22, above the target of 20.**

3.16 With the initial target met, it is clear that the Innovation Programme has had a positive impact on improving the level of collaboration between SMEs and research entities. This positive impact falls in line with one of the priorities in the WoE Local Industrial Strategy of improving collaborative innovation between the WoE's four world class universities (including UoB) and the growing number of innovative SMEs in the creative, cultural and digital industries.[34]

## (C28) Number of enterprises supported to introduce new to the market products

**The Innovation Programme has supported 16 enterprises in bringing new to the market products as of 27th March 2023. The final total by the end of the Innovation Programme is expected to be 20, meeting the target.**

**3.17** The survey of beneficiaries found that 46% were able to develop new to market products as a result of their time on the Innovation Programme. With the target met, it is clear that the Innovation Programme has had a positive impact on improving number of new to market products being developed.

**3.18** The WoE Combined Authority outlined a target to achieve 90 innovative new products or services by the end of 2023.[35] The level of new to the market products supported through the Innovation Programme is viewed as a great step towards the LEP policy goal.

## (C29) Number of enterprises supported to introduce new to the firm products

**The Innovation Programme has supported 17 enterprises in bringing new to firm products as of 27th March 2023. The final total by the end of the Innovation Programme is expected to be 20, meeting the target.**

3.19 Half of the respondents to the beneficiary survey stated that their time receiving support from the Innovation Programme resulted in them being able to develop new to firm products, indicating that the final number could in reality by larger than 20.

[34] Department for Business, Energy, & Industrial Strategy, 2019. WoE Local Industrial Strategy

[35] Retrieved from: https://www.westofengland-ca.gov.uk/what-we-do/innovation/. Accessed March 2023

# 4. Project delivery and management

## ERDF Summative Assessment Guidance

This section of the summative assessment will need to provide a more qualitative analysis of the implementation of the project. This should include procurement, selection procedures, delivery performance, governance and management. It needs to consider the elements of project delivery which have gone well and, if necessary, the elements which have gone less well.

## Project delivery

### Procurement of partners

4.1 **UoB were listed as the lead delivery partner** (following the withdrawal of other delivery partners as discussed in **paragraph 1.11**) as their staff were already involved with the CAMERA research centre. Whilst inconvenient that all original intended delivery partners could not participate, **the delivery of the Innovation Programme was not fundamentally affected** as the core delivery team were able to provide the expertise that would've been offered by the initial partners. An example of this was the in-house studio team successfully delivering the workshops for theatre makers without the need for additional input from partners.

4.2 To enable the delivery of the Innovation Programme, new roles were created to join the delivery team, with the new staff being recruited in line with the University of Bath's Recruitment and Selection Code of Practice. The new roles were:

- **Creative Studio Producer (1.0 FTE)** – responsible for day-to-day control of the Innovation Programme; ensuring the programme is delivered and outcomes achieved; ensuring that records are kept to ERDF standards and that claims made are checked and validated before submission; providing managerial oversight of the facility; and providing operational management of activities in the studio, including scheduling, resourcing, and management of business support delivery.
- **Studio technicians (1.0 FTE initially, increasing to 2.0 FTE from August 2022)** – responsible for day-to-day technical operation and maintenance of the studio facility, delivery of workshops and studio-based assistance.

### Targeted businesses

4.3 The Innovation Programme aimed to provide support for SMEs and sole traders in the digital creative and health sectors. The size of beneficiaries is covered in

4.4 **Project** progress. **This confirmed that only SMEs and sole traders benefited from the Innovation Programme.**

## Geographic location

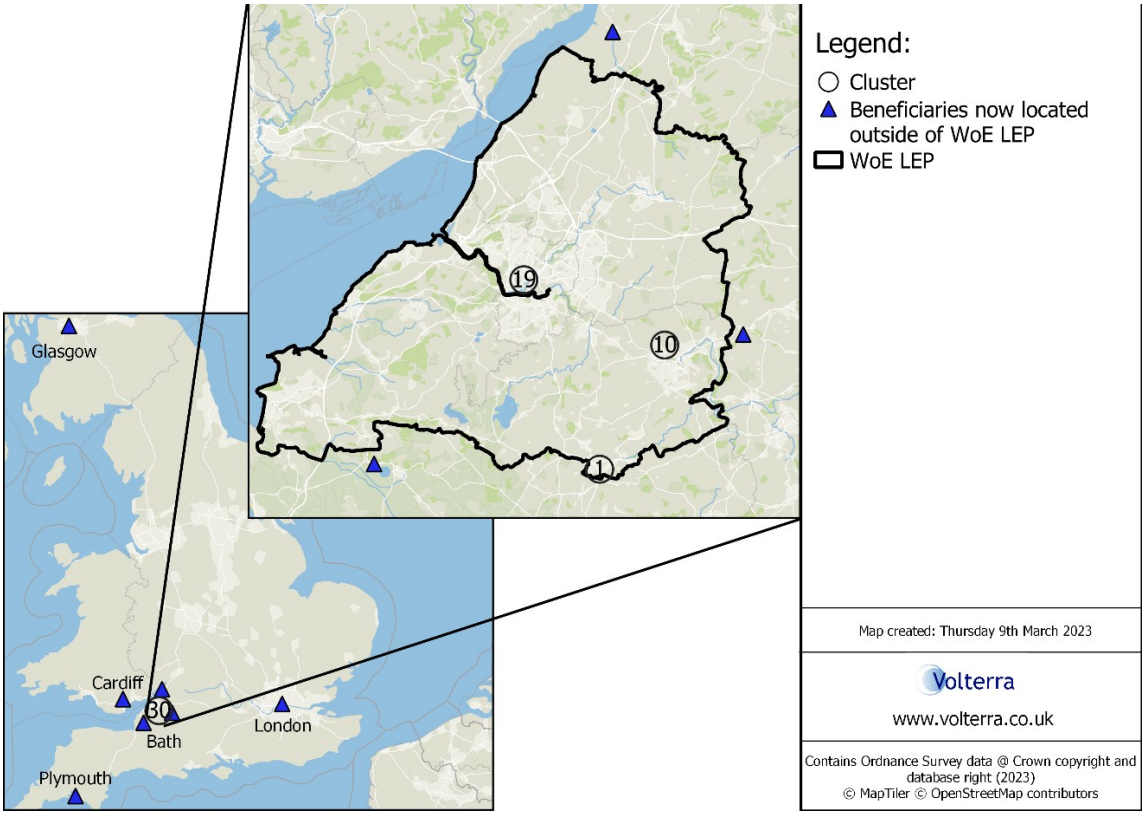
4.5 The Innovation Programme required beneficiaries to have an operations address in the WoE LEP area with there being no intention to support businesses outside of the WoE LEP area.

4.6 At the time of responding, 29 of the 36 (81%) surveyed beneficiaries were located in the WoE LEP as shown in **Figure 4.1**. The remaining beneficiaries were spread over England and Wales with some primarily located in Cardiff, Plymouth, London and Glasgow – but with business activity in the WoE. **Delivery partners ensured that all beneficiaries had operations in the WoE LEP ahead of being accepted onto the programme**.

4.7 Of the 29 beneficiaries located in the WoE LEP area, the majority are clustered around the cities of Bath and Bristol, with 13 being located in the City of Bristol and eight in the Bath and North East Somerset local authority area.

**Figure 4.1 – 81% of survey respondents were primarily located in the WoE LEP. It is expected that all beneficiaries have some operations in the WoE.**

Geographical spread of beneficiaries

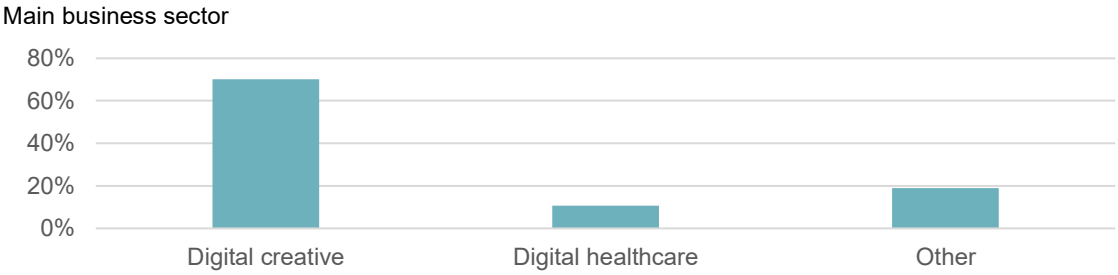



*Source: Volterra, 2023. Beneficiary Survey. 36 responses.*

## Sectors

4.8 It was initially anticipated that the Innovation Programme would support 100 businesses with approximately 75% being from the digital creative sector and 25% from digital healthcare. The sectoral split of businesses indicated in the survey responses is broadly in line with the targeted amount with 70% of beneficiaries reporting that they were digital creative businesses, and 11% reporting that they were in the digital healthcare sector (below the target proportion). The remaining businesses that replied to the survey were split between VR, health and fitness, immersive design agency, arts and design, physiotherapy, podiatry, and children's martial arts and digital learning & education. It is likely that these businesses have some overlap with the digital health and digital creative sectors.

**Figure 4.2 – The Innovation Programme successfully provided supported for businesses in the targeted sectors, with the majority coming from the digital creative sector (69%)**




*Source: Volterra, 2023. Beneficiaries Survey. 37 respondents.*

# Quality and effectiveness of delivery

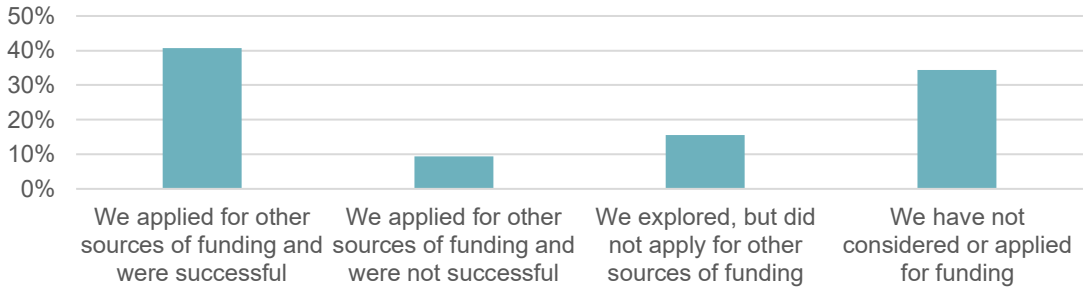
4.9 This section of the report explores the effectiveness of the Innovation Programme delivery model, and the quality of the support it provided. Judgement is based on feedback received from business beneficiaries, staff, and stakeholders. It largely relies on responses to the survey and the one-to-one interviews.

## Innovation experience of beneficiaries

4.10 Beneficiaries were asked if they had considered or applied for any additional funding elsewhere to help fund innovation activities. **Half of survey respondents had applied for other sources of funding of the past three years** to help towards innovation, the majority of which were successful (81%). Just over one-third of businesses (34%) had not considered applying for additional funding support due to a lack of awareness of other funding programmes that would support innovation, or that the business was able to fulfil its own needs without the need for funding, or that they simply weren't ready for support.

**Figure 4.3 – There was a mixture of beneficiaries who had access to additional funding elsewhere and those who did not**

Responses to "has your business considered or applied for any other source of funding to help innovate over the past three years?"

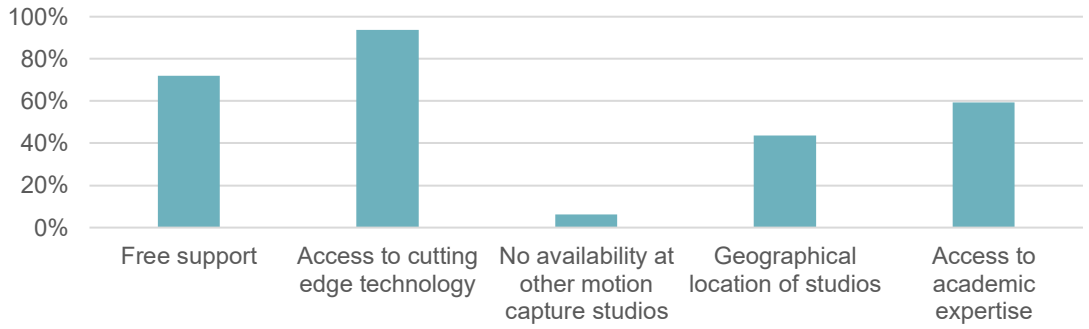



*Source: Volterra, Beneficiary Survey, 32 responses*

4.11 When queried on what about the Innovation Programme appealed to them, **72% of respondents stated it was the free support**. Having access to cutting-edge technology at the CAMERA was a big draw of the programme, with 94% of respondents stating that was part of the appeal. Other beneficiaries noted that access to academic expertise (59%), geographical location of CAMERA (44%) and the lack of alternative motion capture studios (6%) appealed to them.

**Figure 4.4 – Access to cutting edge technology was the biggest draw for the Innovation Programme**

What appealed to you about the Innovation Programme? (Respondents can select multiple)




*Source: Volterra, 2023. Beneficiary Survey, 32 responses*

None of the beneficiaries surveyed were aware of any other providers of similar support in the South West that they could reasonably access, with 63% stating that there wasn't any, whilst the remaining businesses did not know.

## Governance and management arrangements

### Experience of management and delivery team

4.12 In addition to the newly created roles as described in **paragraph 4.2**, the Innovation Programme made use of academic, technical and professional services staff members from UoB.

4.13 The delivery team was selected due to their expertise in motion capture technology, motion capture production, computer vision, machine learning, biomechanics, or healthcare technologies, or are experts in the research, development and commercialisation of immersive and creative content production technologies. UoB's existing research staff was selected for their expertise in the following departments:

- Department of Computer Science
- Department for Health
- Centre for Digital Entertainment
- CDT in Accountable, Responsible and Transparent AI
- Centre for the Analysis of Motion, Entertainment Research and Applications, (CAMERA)
- Reality and Virtual Environments Augmentation Labs, (REVEAL)

## Horizontal principles

### How did the principle of sustainable development shape delivery?

4.14 Sustainability is one of UoB's core values. The UoB's Sustainability and Low Carbon Management Steering Group oversaw the coordination of environmental and sustainability issues surrounding the Innovation Programme.

4.15 The Innovation Programme itself is **not expected to have had a negative environmental impact** due to being based in the one location and remote connection via video call being available wherever possible in order to prevent the environmental impact of traveling. Proximity to public transport networks was part of the criteria of the procurement process for the new studio location.

4.16 Carbon reduction behaviours were encouraged in all those who participated in the Innovation Programme. Whilst the Innovation Programme supported digital businesses that have low negative impact in terms of sustainability by their very nature, it was **ensured that digitally enabled products consider sustainability** aspects such as materials choice, reusability and recyclability.

### How did the principle of equal opportunities shape delivery?

4.17 UoB's statement of Equality Objectives sets out four equality principles to ensure equality and diversity is fully incorporated into the university's core business. These principles were adopted into the Innovation Programme. **All project staff, including the delivery partners had been trained in equality and diversity,** whilst all promotional events and public literature ensured equality of access between the sexes, race/ ethnic origin, religion or belief, disability, age or sexual orientation.

4.18 To ensure that the Innovation Programme was accessible to all, potential beneficiaries were surveyed on business ownership, sex, race and disabilities, with all data being collated anonymously. Each of the businesses were checked to see if there were any potential additional individual requirements in order to maximise their involvement on the Innovation Programme and if they had equality and diversity considerations such as if English was a second language.

4.19 The beneficiary survey found that the proportion of BAME employees at beneficiaries was significantly higher than the proportion of BAME residents in the WoE LEP (34% vs 12%).[36] This indicates that reasonable efforts were undertaken to reach protected groups. The survey also found that proportion of employees that were female at supported businesses was 49.4%, slightly lower than the proportion of women in the WoE LEP (50.7%).[37]

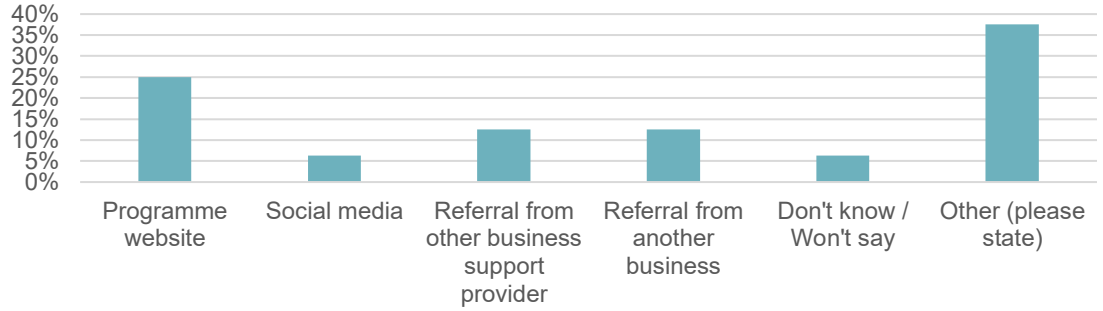
# Beneficiary engagement, customer journey & quality of support

## Beneficiary engagement

4.20 Testament to the methods used by the delivery team to promote the Innovation Programme (refer to **paragraph** Error! Reference source not found.), **38% of survey respondents stated that they had heard o f the Innovation Programme at an event in which the programme was advertised**, whilst only 6% of respondents had found it through social media. A significant proportion of respondents (25%) stated that they had been referred by either another business support provider or an actual other business, whilst another 25% stated that they had found it directly on the CAMERA website. Some beneficiaries stated that they thought the Innovation Programme could have been advertised more widely, with one business noting they had happened to find the programme by chance.

**Figure 4.5 – The programme website was the most reported way beneficiaries discovered the Innovation Programme**

Responses to “how did you hear about the Innovation Programme?”




*Source: Volterra, 2023. Beneficiary Survey. 37 responses*

## Enquiry and eligibility check

4.21 The project management team performed eligibility checks for all potential beneficiaries to ensure consistency of approach and compliance to ERDF eligibility. Checks looked at whether the applicant was an SME, if they were compliant from a geographical basis, and if they were from relevant sectors.

[36] ONS, 2023. Census 2021, TS021 - Ethnic group

[37] ONS 2023. Census 2021, TS008 - Sex

## Application and approval

4.22 As discussed in **paragraph 2.34**, the majority of beneficiaries were happy with the application process. The majority had no suggestions for improvements, with a few simply commenting that the process was lengthy. This is understandable as the delivery team had put the necessary checks in place to ensure the appropriate beneficiaries were being targeted.

## The customer journey

4.23 The Innovation Programme catered support to each specific beneficiary. To do this, each beneficiary had an **initial face-to-face meeting with the delivery team** to discuss how they could best benefit from the Innovation Programme.

4.24 The uniqueness of the offering from the Innovation Programme was a key theme in the beneficiary survey, with many noting the support that they had received was tailored to their needs:

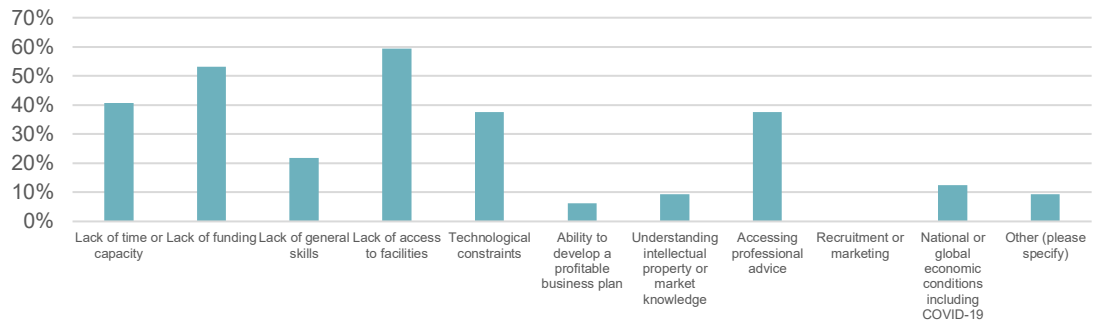
- One business reported that after meeting the Creative Studio Producer at CAMERA, they were able to work out a brief with defined objectives and timeframes. This business also stated that the support that they received was much more helpful than other support programmes, particularly given they were able to work in direct contact with key people rather than layers of institutional hierarchy.
- Another business stated that the support that they received had significantly benefited them as they were expanding into a new area of action motion capture. The support provided had set a foundation for them to specialise and grow in this sector over the coming years.
- One business owner stated that whilst their time on the Innovation Programme was useful and tailored to their needs, it could have been made a lot clearer in the analysis phase where there was scientific language belonging to a specific discipline such as biomechanics.

## Quality of support

4.25 Beneficiaries identified a wide range of barriers to growth prior to their support on the Innovation Programme. Almost **60% of businesses stated that lack of facilities was a factor that was limiting their growth**. Financial issues also were a factor with 53% of survey respondents listing that as one of their barriers.

**Figure 4.6 – Aside from recruitment or marketing, all listed barriers were preventing some businesses from innovating and growing**

Responses to "what barriers to growth or innovation did you face before joining the CAMERA programme? (can select multiple)"



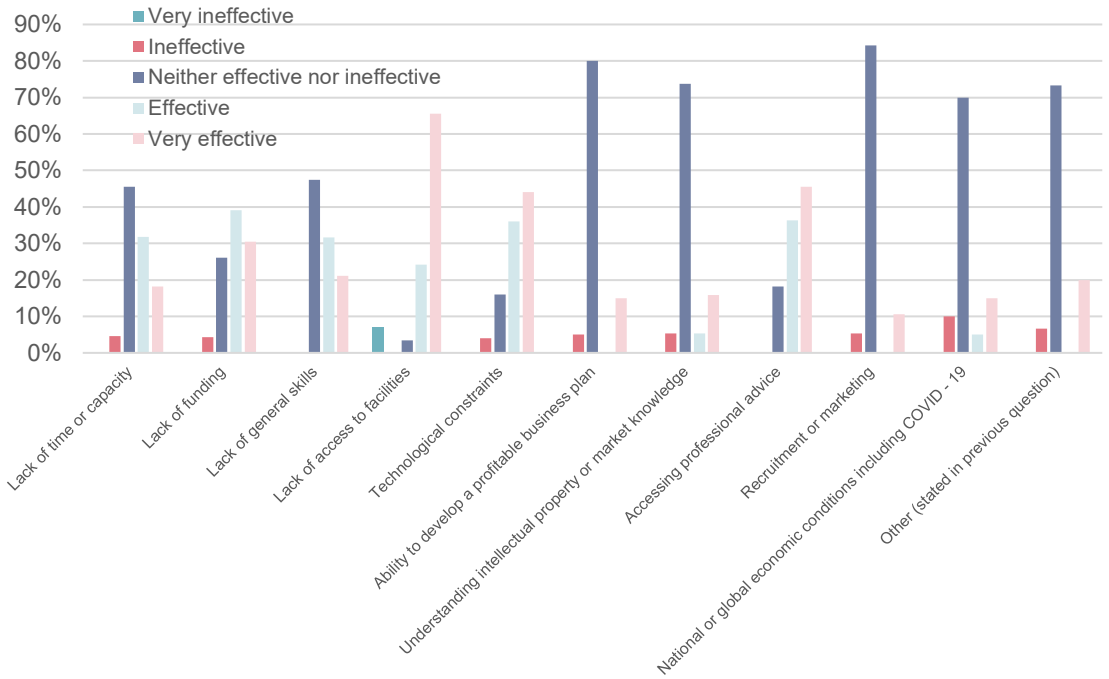

*Source: Volterra, 2023. Beneficiary Survey, 32 responses*

4.26 Beneficiaries largely found the Innovation Programme helpful in addressing their stated barriers to growth and innovation. Over **80% of beneficiaries found that the support was either effective or very effective at addressing their technological constraints and provided access to professional advice**. Whilst **90% of beneficiaries had expressed that the support provided them with a greater access to high end facilities**. However, 7% of the beneficiaries found the support to be very ineffective to improving the lack of access to facilities. This may be due to the temporary nature of the free assistance provided by the Innovation Programme with some beneficiaries not able to pay for this support once their 12 hours was over.

4.27 **Figure 4.7** shows the link between the initial type of support that the programme provided and the effectiveness of its support, as few businesses opted for the support in expert speaker sessions and business growth and finance signposting and as a result found the programme neither effective nor ineffective in helping them improve their understanding of intellectual property or market knowledge, developing a profitable business plan, and recruitment or marketing. As only 8% of respondents had required support from the programme to help retain staff during the coronavirus pandemic, few businesses found the programme effective at supporting them through national or global economic conditions.

**Figure 4.7 – The Innovation Programme was effective in helping remove barriers to growth for beneficiaries**

Responses to "how effective has the support given by the Innovation Programme been in addressing the following?"

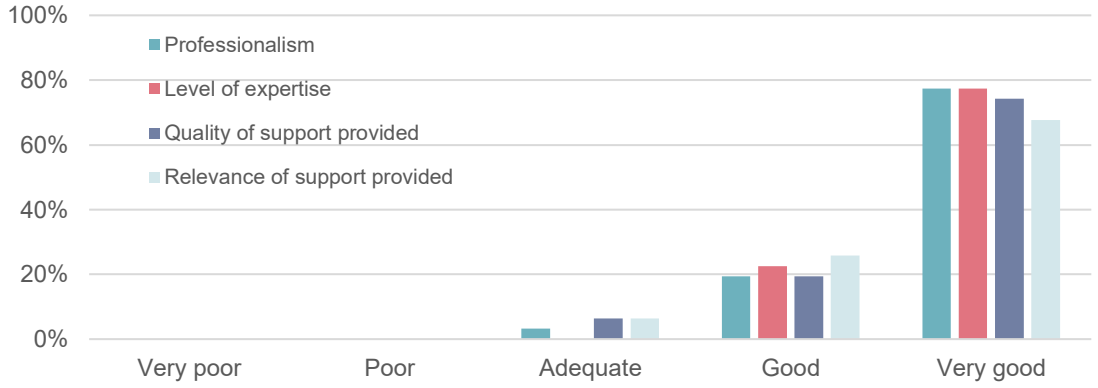



*Source: Volterra, 2023. Beneficiary Survey, 32 responses*

4.28 Given the success in addressing barriers to growth, it is not surprising that **94% of beneficiaries thought that the delivery team had provided either good or very good support,** with no business describing the support as poor or very poor.

**Figure 4.8 – No businesses described the professionalism, level of expertise, and relevance of support provided by the delivery team as either poor or very poor**

Responses to "how would you rate the following aspects of the support provided by the ERDF programme?"




*Source: Volterra, 2023. Beneficiary Survey. 31 responses*

4.29 This high-level quality of support is reflected in one interview where the business stated that though the Innovation Programme has not directly led to employment to date, but has safeguarded existing jobs and will be a direct catalyst for further employment in the future. Due to the support provided on the Innovation Programme they were able to move beyond funded organisations towards something that would be a semi commercial proposition. This is something that they would potentially bring back to the CAMERA team. When asked if they would have been able to obtain these results without the help of the Innovation Programme, they said that they would have had to more standard activities that would have been more focussed on sustaining the business rather than growing it. In this example, **the Innovation Programme was integral to helping this business to innovate, providing future growth opportunities**.

## Support through the coronavirus pandemic

4.30 Whilst some businesses were able to retain staff as a result of the Innovation Programme, **19% of survey respondents stated that jobs were lost in their business** due to the coronavirus pandemic, although **52% of respondents said that retaining employees was not an issue for their business**.

4.31 All survey respondents were in some capacity confident about that they may have survived without the support of the Innovation Programme, with 39% being very confident. Of all respondents, **55% of businesses thought that the Innovation Programme had responded well to the coronavirus pandemic.**

# Stakeholder perceptions

## Delivery team

4.32 At the top level, the director of the CAMERA is responsible for the Innovation Programme whilst the UoB programme team provided programme management and were ultimately responsibility for the day-to-day operations, delivery, and monitoring.

4.33 The ability to tap into existing internal expertise and experience, particularly under the leadership of the Director of CAMERA and that of the wider university helped ensure the smooth running of the programme.

4.34 Consultees noted this was facilitated by the office and studio dynamic, transparency and lack of hierarchy at the UoB enabling the members of the delivery team to work closely. The Innovation Programme set out to hold regular meetings at and between all levels; it was through these meeting where issues could be discussed and addressed which was valued by consultees.

### Beneficiaries

4.35 **All of the businesses surveyed expressed that they would recommend the Innovation Programme to other businesses**. When asked if the businesses anticipate a continued demand for the type of support that the ERDF programme delivers, 97% of businesses stated that there would be. Of the 97% of businesses, only 37% indicated that they would be willing to pay to receive level of support that they receive in relation to innovation, growth and developing products and services with the remaining businesses saying that they would only anticipate demand as long as the support was free to access. This reaffirms the issue of SMEs not being able to afford access to facilities such as the CAMERA, and that providing low cost or free support is essential to encouraging innovation amongst the SME community.

## Conclusions and recommendations

4.36 The Innovation Programme has successfully provided SMEs and start-ups in the WoE access to a tailored scheme that best fit their needs. In particular, beneficiaries were provided the support required to help reduce the following barriers to growth:

- Lack of funding
- Lack of general skills
- Lack of access to facilities
- Technological constraints
- Access to professional advice

4.37 Beneficiaries were overwhelmingly positive about the quality of services, with 94% of survey respondents reporting that the delivery team had provided either good or very good support. It was particularly important that the delivery team was able to adapt and focus support on CAMERA studio time rather than workshops and lectures.

4.38 It is clear that this type of support will continue to be in demand across the WoE; particularly evidenced by the investments by UKRI's Strength in Places Fund MyWorld Programme (of which UoB are a key partner) and recent WECA infrastructure investment to CAMERA – goes some way to enable continued open-door access and democratisation of technology to the region's creative industries. However, there is great importance on it being affordable, which is not the case outside of the Innovation Programme. To achieve permanent employment impacts, a more permanent solution providing SMEs with access to innovative motion picture technology is required in the West of England region.

# 5. Project outcomes and impact

### ERDF Summative Assessment Guidance:

The analysis here will need to set out the progress that the project has made towards outcomes and impacts set out in the project logic model. It will need to provide an analysis of the gross and net additional economic impacts (see Appendix C). It will be particularly important here to ensure that the analysis provides forecasts of lifetime outturns. This section should also provide conclusions about the contribution that the project has made to any ERDF programme result indicators which are identified as relevant to the project.

## Methodology

5.1 Having provided an overview of progress and outputs, this section of the report focuses on wider outcomes and impacts arising from UoB's work, with reference to the beneficiary experience. This section also considers the Innovation Programme's additionality, contribution to Programme Result Indicators and Strategic Added Value.

5.2 The two main impact/outcome assessed in this report are:

- FTE jobs created by the support given from the Innovation Programme.
- Annual gross value-added output directly increased from the Innovation Programme.

## Progress towards outcomes and impacts

5.3 This progress towards outcomes and impacts is predominantly based on the feedback received from the beneficiaries survey and one-to-one interviews.

5.4 Progress in relation to the key outputs (C1, C4, C5, C8, C26, C28 and C29) was discussed in depth in **Project Progress**. This section looks at project progress in relation to overarching outcomes as identified in **paragraph 2.24**.

### Outcome 1: Increased numbers of digital creative and digital healthcare enterprises in the WoE region

5.5 The previous section confirmed that the Innovation Programme is expected to have successfully supported 95 beneficiaries, of which 13 are new enterprises as defined by ERDF. By supporting new enterprises and smaller SMEs the Innovation Programme falls in line with the growth priorities set out the in both the

Industrial Strategy Green Paper and WoE Strategic Economic Plan, where the latter notes the goal to build the local business stock by supporting new business start-ups and aiding inward investment.[38]

## Outcome 2: Increased investment in new product development in WoE region

5.6 The Innovation Programme introduced new innovation tools and techniques to 91% of survey respondents. This led to 38% of beneficiaries increasing the amount of investment in innovation after their time on the Innovation Programme. Of the businesses that responded to the survey, 75% of them determined that this innovation would have not been possible without the support provided by the Innovation Programme.

## Outcome 3: Increased level of project-based research and innovation collaborations between WoE SMEs and regional HEIs

5.7 In meeting its targets of bring 20 'new to market' and 20 'new to firm' products and services, the Innovation Programme has been effective at increasing the level of project-based research. The Innovation Programme has also improved the collaborative innovation between the WoE's four world class universities (including UoB) as 62% of survey respondents stated that their time participating in the Innovation Programme resulted in them gaining new research or industry collaborations.

## Outcome 4: Maturation of WoE motion capture network and community of professional practitioners

5.8 When asked how confident they were that the support that the Innovation Programme provided will aid in their business' growth in the future, 72% of survey respondents expressed that they were either confident or very confident. The support provided by the Innovation Programme has already translated into 30 FTE jobs being created, with many businesses expecting the support to result in additional employment (demonstrated in the example response below).

## Beneficiary response to "did the support result in new employment at your business and if so, how many new jobs have you created and what kind?"

*"It has been able to, we employed somebody at the beginning of last year and it secured their job for this year and it's actually really because of this project that we made with CAMERA. Not only has it secured people's jobs, but it's been a direct catalyst for further employment in the future."*

[38] WoE Local Enterprise Partnership, 2015. Strategic Economic Plan 2015-2030

# Economic impacts

## Employment

5.9 The Innovation Programme has supported, and will continue to support, employment through various ways:

- **Staff hired for project delivery –** two FTEs, increasing to three FTEs as of August 2022, consisting of creative studio producer and studio technicians (as discussed in **paragraph 4.1**) required for the delivery of the Innovation Programme. To be conservative, this employment is not considered in the overall project impact, as it is judged to be a temporary impact.
- **Existing employment created to date** – 30 new FTEs jobs, meeting the agreed target. Of the survey respondents, 15% stated that the support received resulted in new job creation.
- **Safeguarded jobs through the coronavirus pandemic** – Approximately 10% of businesses reported that the Innovation Programme helped them to safeguard their employees during the coronavirus pandemic. Extrapolating this up to cover all businesses supported on the Innovation Programme shows that approximately 36 FTEs were safeguarded through the coronavirus pandemic through the support of the Innovation Programme.
- **Future jobs created through the innovation activities** – Whilst it is accepted that product innovation can entail a job-creating effect through the emergence of new products and new markets, it can take some time for this effect to result in employment. It is not possible to be certain how many new jobs might be created through the Innovation Programme. However, survey responses and one-to-one interviews clearly indicate that the Innovation Programme will help to sustain future growth and employment in beneficiaries, with 72% of survey respondents being confident or very confident that it will lead to future growth in their business. Full workings are detailed below, but to be conservative this assessment has ensured to include a scenario where no additional employment is delivered.

5.10 It is clear from some of the beneficiaries supported early on in the Innovation Programme that the effects of support on generating employment can take a few years to kick in. For instance, Condense Reality, an early beneficiary of the Innovation Programme in 2020, have created 17 new FTEs in the three years since their time on the Innovation Programme.

5.11 This economic impact section and following value for money section assess performance based on new employment created to date. Further scenarios are explored that take fully into account the number of jobs that might have been safeguarded due to the support at the Innovation Programme alongside future jobs that will be created over the next two years.

## Case Study: Condense Reality

Condense Reality was the first company to work with CAMERA as part of the Innovation Studio programme, in early 2020. At the time of support they had only one employee.

As part of the assistance, CAMERA scanned boxers via photogrammetry, created realistic avatars, motion captures boxers in action and presented outputs as 2-screen volumetric video – which Condense Reality used to demonstrate their concept for live volumetric video to investors.

Condense Reality were also able to use the data provided by CAMERA to train their system for volumetric capture and live streaming. They have since used this to test live capture sporting events, such as Tyson Fury's recent fight at Wembley Stadium.

CAMERA has since acquired the Condense Reality Live Volumetric Capture and Streaming system and have used it for other ERDF assists. Of note, musician Sarasara – testing of a digital twin performance at Lost Horizon, Bristol venue.

This positive company performance has resulted in the expansion of the team to over twenty employees (having been established in 2019 just before their time on the Innovation Programme).

5.12 The following steps are taken to estimate a range of potential employment that the support from the Innovation Programme might support. Findings are presented in **Table 5.1**:

- Assume the 72% of 95 project beneficiaries will realise some sort of employment growth as a result of the Innovation Programme over the next two years.
- There is no scientific or standard method in guidance for estimating the number they might hire. The one-to-one interviews found that one business was expecting to hire between 3 and 5 FTEs in 2023, whilst Condense Reality have shown that the figure can be much higher than this. To be conservative we estimate that it is most likely that businesses will see a small increase in employment at first, and that further employment in later years is likely not attributable solely to the Innovation Programme. Our scenarios project that these companies that might grow are most likely to hire between 1.5 FTEs and 2.5 FTEs over the next two years. This range reflects the uncertainty and small sample size.

**Table 5.1 – The Innovation Programme is forecast to create, safeguard and potentially create between 30 – 237 FTEs**

Jobs created by business beneficiaries

| | Scenario 1 (no safeguarded FTEs, no future FTEs) | Scenario 2 (36 safeguarded FTEs) | Scenario 3 (36 safeguarded FTEs, 102 future FTEs) | Scenario 4 (36 safeguarded FTEs, 171 future FTEs) |
|---|---|---|---|---|
| Actual FTEs created to date | 30 | 30 | 30 | 30 |
| Safeguarded FTEs to date | 0 | 36 | 36 | 36 |
| Forecast FTEs to be created in the next 12 months | 0 | 0 | 102 | 171 |
| **Total FTEs created, safeguarded and forecast** | **30** | **66** | **169** | **237** |

*Source: Volterra analysis. Figures may not sum due to rounding*

## Impact on GVA

5.13 One of the targets of the Innovation Programme was to improve the competitiveness and productivity of the beneficiaries through collaborative R&D, with the aim of creating approximately £5.2m of GVA per year for the region's economy. The GVA impact of the Innovation Programme is estimated based on the number of jobs created in each scenario given in **Table 5.2**, and the average GVA for businesses in the relevant sectors in the South West (£49,450).[39]

**Table 5.2 – Once future jobs have been accounted for, the total gross annual GVA created by the Innovation Programme is estimated to be between £1.5m – £11.7m.**

Gross annual GVA based on jobs created, safeguarded and potentially created in the future as a result of the Innovation Programme

| | Scenario 1 (no safeguarded FTEs, no future FTEs) | Scenario 2 (36 safeguarded FTEs) | Scenario 3 (36 safeguarded FTEs, 102 future FTEs) | Scenario 4 (36 safeguarded FTEs, 171 future FTEs) |
|---|---|---|---|---|
| Total jobs created, safeguarded and forecast | 30 | 66 | 169 | 237 |
| GVA per job (2020) | £49,450 | £49,450 | £49,450 | £49,450 |
| **Total gross annual GVA** | **£1.5m** | **£3.3m** | **£8.3m** | **£11.7m** |

*Source: Volterra analysis. Figures may not sum due to rounding.*

5.14 Guidance set out by the Department for Business, Innovation & Skills (BIS) states that the manner in which the benefits of public sector investment persist over time should be considered. For larger or more complex projects the timeframe for benefits to be fully realised is likely to be between six month and five years after the completion of the project, with some capital project benefits being realised even later.[40] Due to the size of the Innovation Programme, the benefits are conservatively expected to persist for 3 years (2022/23 – 2024/25). This assumes that in the first year, only the already created FTE jobs and the safeguarded jobs are realised, before the various scenarios of future jobs being created are applied from 2023/24. Benefits are presented in present value terms through the utilisation of a 3.5% discount rate, in line with HM Treasury Green Book guidance.[41] **This results in a total gross GVA impact of the Innovation Programme being between £2.8m - £22.2m.**

# Additionality

5.15 Additionality is the extent to which something happens as a result of an intervention that would not have occurred in the absence of the intervention or would have occurred at a slower rate or to a lower quality or on a smaller scale. To calculate the additionality, deadweight, substitution, displacement and multiplier effects are considered.

[39] SIC codes for beneficiaries were provided by the UoB

[40] Department for Business, Innovation & Skills, 2009. RDA Evaluation: Practical Guidance on Implementing the Impact Evaluation Framework

[41] HMT, 2020. Green Book

## Deadweight

5.16 Deadweight refers to the total output that is generated by the Innovation Programme that would have happened regardless of if the Innovation Programme had occurred. Of the beneficiaries surveyed 91% reported that the Innovation Programme introduced them to new innovation tools and techniques, with 37% reporting that innovation investment had increased at their business since their time on the Innovation Programme. **Of those who experienced innovation, only 25% stated they would've been able to achieve this without the Innovation Programme** - this is judged to be a reasonable estimation for the level of deadweight.

**Figure 5.1 – Beneficiaries believe that their innovation done through the Innovation Programme would not have been possible without the support provided – impacting their ability to attract future innovation investment**

Responses to "would this innovation have been possible without the Innovation Programme"

*Source: Volterra, 2023. Beneficiary Survey. 28 respondents (only 29 out of 32 businesses reported to innovating during their time on the Innovation Programme)*

### Response to "if your business had not received support from the program, what would you have spent the time doing instead?"

*"Well, we would have done commercial projects. There's millions of projects we could do which are less exciting but pay the bills. Because of the kind of networks we have we'd be doing animation projects and doing standard stuff that would bring in the money, but it would be a means to an end rather than growing the business, it would be sustaining rather than growing."*

## Substitution

5.17 Substitution refers to where a firm substitutes one activity for a similar one (such as recruiting a jobless person while another employee loses a job) to take advantage of public sector assistance. It can be thought of as "within firm" displacement.[42] For the Innovation Programme, this effect would occur if a beneficiary had other avenues of innovation it could've explored without the Innovation Programme. If this was the case, any

[42] Department of Homes and Communities, 2014. Additionality Guide

potential FTE creation would've been substituted for the opportunity of creating another FTE if that business had done the other activity.

5.18 It is **not likely that the job creation in the beneficiaries was substituted for other opportunities**. None of the beneficiaries surveyed were aware of any other support available in the South West. To be conservative, **a 10% substitution factor**, to account for the fact that as these businesses might have been able to generate employment through other activities during the time they spent on the Innovation Programme.

## Displacement

5.19 Displacement describes the proportion of outputs that the Innovation Programme generated that took market share or labour, land or capital from other existing local firms or organisations.[43] **A low displacement effect of 25%** is used as the beneficiaries' proximity to the talent pool means that jobs generated as a result of the Innovation Programme are likely to be new jobs rather than displaced from other businesses, whilst the lack of other support providers similar to the Innovation Programme means that other outputs generated will be new rather than displaced.

## Leakage

5.20 Leakage refers to the proportion of the outputs of the Innovation Programme that benefit those outside of the WoE LEP area. **Of the 37 businesses surveyed, seven are now based outside of the WoE LEP (19%)**. This percentage is used to represent the proportion of benefits that would be realised outside of the WoE LEP area. **This is judged to be a conservative assumption, given all beneficiaries have some operations in the WoE LEP area**. It was a requirement for each beneficiary to have operations in the WoE LEP during the selection process. This was maintained as a key criteria for selection throughout the duration of the Innovation Programme.

## Multiplier

5.21 A multiplier is applied to consider the effects of supply chain purchases by beneficiaries of the Innovation Programme, as well as the expenditure of workers directly employed the beneficiaries. Given the nature of the types of economic activity that the businesses supported by the Innovation Programme is varied greatly from start-ups to SMEs that have been operating for over five years, we have applied **the standard 1.25 multiplier** suggested by the BIS guidance on additionality estimates at the sub-regional level.[44]

## Total net additional impact

5.22 **Table 5.3** provides an assessment on the gross and net additional impact of the Innovation Programme on employment and shows that the **gross employment impact is between 30 – 237 FTEs**, whilst the **net additional jobs in the WoE LEP area is estimated to be between 15 – 117 FTEs**.

5.23 The **annual gross GVA impact of the Innovation Programme is between £1.5m and £11.7m**, and the **annual net additional GVA impact in the WoE LEP area is between £0.8m and £6.1m**. By achieving employment towards the top end of the range would see the Innovation Programme meet the target of generating £5.2m of GVA each year in the WoE LEP.

[43] Department of Homes and Communities, 2014. Additionality Guide

[44] Department for Business, Innovation & Skills, 2009. RDA Evaluation: Practical Guidance on Implementing the Impact Evaluation Framework

**Table 5.3 – The total GVA impact of the Innovation Programme including is expected to be between an annual £1.0m - £7.6m once additionality is considered, with £0.8m - £6.1m being realised in the WoE LEP area**

Gross and net additional impact for employment and GVA

| | | *Adjustment* | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 |
|---|---|---|---|---|---|---|
| Employment (FTEs) | A. Gross impact | - | 30 | 66 | 169 | 237 |
| | B. Gross additional FTEs (Deadweight) | *= A * (1-0.25)* | 23 | 50 | 127 | 178 |
| | C. Net direct FTEs (Substitution + Displacement) | *= B * (1 – (0.1 + 0.25))* | 15 | 32 | 82 | 116 |
| | D. Net indirect FTEs (Multiplier) | *= C * 0.25* | 4 | 8 | 21 | 29 |
| | **E. Total net additional FTEs** | ***= C + D*** | **18** | **40** | **103** | **144** |
| | **G. Total net additional FTEs, WoE LEP (Leakage)** | ***= E * (1 – 0.19)*** | **15** | **33** | **83** | **117** |
| GVA (£m) | H. Gross impact | *= A * £49,450* | £1.5m | £3.3m | £8.3m | £11.7m |
| | I. Gross additional GVA (Deadweight) | *= B * £49,460* | £1.1m | £2.5m | £6.3m | £8.8m |
| | J. Net direct GVA (Substitution + Displacement) | *= C * £49,450* | £0.7m | £1.6m | £4.1m | £5.7m |
| | K. Net indirect GVA (Multiplier) | *= D * £65,400*[45] | £0.2m | £0.5m | £1.3m | £1.9m |
| | **L. Total net additional GVA** | ***= J + K*** | **£1.0m** | **£2.1m** | **£5.4m** | **£7.6m** |
| | **M. Total net additional GVA, WoE LEP (Leakage)** | ***= L * (1 – 0.19)*** | **£0.8m** | **£1.7m** | **£4.4m** | **£6.1m** |

*Source: Volterra analysis. Figures may not sum due to rounding*

# Strategic Added Value

5.24 The Innovation Programme has helped some beneficiaries to place a greater focus on innovation going forward. When asked to describe their business' approach to innovation prior to joining the Innovation Programme, 13% of survey respondents stated that they had either did not take part in innovation activities or found themselves usually catching up to other businesses. Despite the majority of respondents already being involved in some sort of innovation, the Innovation Programme introduced new innovation tools and

[45] Average GVA per worker for West of England LEP

techniques to 91% of the respondents, including 82% of the businesses that identified themselves as a leader of innovation prior to receiving support from the Innovation Programme.

5.25 As part of the consultations, the CAMERA delivery team were asked whether they had seen any wider benefits which had been delivered through the programme. A broad range of benefits were cited, which are summarised below:

- The building of networks and networking between companies.
- Increasing the UoB's status and reputation in the region.
- Research income extending past the programme end date.
- Career development of early career academics, studio engineers, and experience for postgraduate students.

# 6. Value for money

## ERDF Summative Assessment Guidance

Drawing upon the analysis in the impact assessment section, this section of the summative assessment report will need to provide a clear analysis of the value for money that the project has provided. The summative assessments should also conclude on whether the project presents good value for money or not. This will need to be benchmarked against other similar interventions if reliable comparable data is available.

## Assessment

6.1 Value for Money (VfM) is normally assessed with reference to project outputs and impacts, benchmarked against other similar interventions, as well as calculating a return on investment. **Table 6.1** shows the results for the Innovation Programme. Results are compared against a series of benchmarks for the 2014-2020 ERDF programme based on DLUHC data from the 2007-2014 programme.[46]

**Table 6.1 – Across all outputs, the Innovation Programme was able to deliver a better cost per output than the mean benchmark figure**

Cost per output – the unit cost of performance column is rag rated (green for better performance than mean and median, amber to better performance than the mean, red for worse performance than both mean and median)

| Output | Projected to be achieved at project closure | Target | % of target | Unit cost of performance [47] | Benchmark cost (figures are uplifted to current prices, 2022/23) |
|---|---|---|---|---|---|
| C1 Number of enterprises receiving support | 95 | 100 | 95% | £16,300 | Mean: £43,000<br>Median: £12,900<br>Lower quartile: £5,900 |
| C4 Number of enterprises receiving non-financial support | 95 | 100 | 95% | £16,300 | There were no benchmark costs |
| C5 Number of new | 13 | 30 | 33% | £118,800 | Mean: £253,000 |

[46] DLUHC, 2018. England ERDF Programme 2014-20: Output Unit Costs and Definitions

[47] This considers the total funding of the Innovation Programme, comprised of both ERDF funding and public sector matched funding from the UoB

| Output | Projected to be achieved at project closure | Target | % of target | Unit cost of performance [47] | Benchmark cost (figures are uplifted to current prices, 2022/23) |
|---|---|---|---|---|---|
| enterprises supported | | | | | Median: £30,400<br>Lower quartile: £4,400 |
| C8 Employment increase in supported enterprises | 30 | 30 | 100% | £51,500 | Mean: £90,000<br>Median: £32,500<br>Lower quartile: £14,600 |
| C26 Number of enterprises cooperating with research entities | 22 | 22 | 100% | £70,200 | Mean: £127,000<br>Median: £53,100<br>Lower quartile: £21,500 |
| C28 Number of enterprises supported to introduce new to the market products | 20 | 20 | 100% | £77,200 | Mean: £119,000<br>Median: £35,400<br>Lower quartile: £35,400 |
| C29 Number of enterprises supported to introduce new to the firm products | 20 | 20 | 100% | £77,200 | Mean: £119,000<br>Median: £35,400<br>Lower quartile: £35,400 |

*Source: Volterra analysis. Regeneris Consulting, 2014. England ERDF Programme 2014-20: Output Unit Costs and Definition.*

## Return on investment

6.2 In accordance with government guidance, the return on investment (ROI) delivered by the Innovation Programme is estimated based on the net additional GVA impact, divided by the total public sector expenditure defrayed by the end of the project. The final value for money figure is highly dependent on the level of future employment created and supported. This final figure will be unknown until beneficiaries are able to realise the full benefits of project support. A range is therefore presented based on earlier employment and GVA estimates.

The final return on investment is expected to range (in all scenarios tested) from 1.52:1 (for every £1 of public sector investment, £1.52 of net additional GVA is generated) to 11.97:1 (for every £1 of public sector investment, £11.97 of net additional GVA is generated).

# 7. Conclusions and lessons learnt

## Overall assessment

7.1 The Innovation Programme aimed to help address a clear market failure in the digital creative and digital healthcare sectors in the South West region. The Innovation Programme is judged to have been **appropriately designed to address this market failure**, with the objective of supporting growth and increasing the level of investment and collaboration between beneficiaries and regional HEIs.

7.2 Feedback from survey respondents and interviewees was positive about the support provided. Beneficiaries overwhelmingly found the support **beneficial in addressing their stated barriers to growth and innovation**.

7.3 The Innovation Programme successfully met **four of its seven target outputs**. The coronavirus pandemic and withdrawal of key delivery partners hindered the ability of the Innovation Programme to meet all of its objectives.

7.4 It is expected **that beneficiaries have not yet been able to realise the full benefits** of the Innovation Programme yet. For instance, it is likely that beneficiaries will continue to grow due to the support received on the Innovation Programme. This is likely to result in new job creation in the coming years.

7.5 The implementation of the Innovation Programme has enhanced collaborative working across the WoE region through one-to-one work with UoB's academic team, and has made a significant contribution to its four key objectives:

- **Support the growth of digital creative and digital healthcare enterprises** in the WoE region by providing access and expertise to enabling technologies.
- Enable **increased investment in new product development** in WoE SMEs.
- **Increase the level of project-based research and innovation collaborations** between WoE SMEs and regional HEIs.
- **Help mature the WoE motion capture network** and community of professional practitioners.

## Lessons learnt and recommendations

### Lessons for policy makers

7.6 The ERDF reporting requirements are constrained. Innovation is often intangible and within the human capital of firms workers. The effects of innovation are often realised at a later date, and so reporting of impacts received by the end date of the project, or in some cases before the project has completed delivery, does not always tell the future story of its impact.

**Recommendation 1** - There should be flexibility to allow summative assessments to be undertaken slightly later than project completion dates, to ensure summative assessments rely less on projected outcomes and more on actual outcomes that can be confirmed upon project completion.

7.7 Providing low cost and free support is essential to encouraging innovation amongst the SME community, particularly in digital creative and digital health sectors where there are high barriers to entry. Targeted, one-to-one support is more desirable for SMEs seeking innovation support in technical areas, than workshops. This lesson was learnt by the delivery partners during project delivery and should be taken into consideration by policy makers when deciding the destination of future funding. The flexibility of the delivery team to deliver a variety of support methods was a real positive for the Innovation Programme and contributed greatly to its success.

**Recommendation 2** - Policy makers should consider similar interventions in the future that provide flexible, tailored, one-to-one support to SMEs and start-ups, rather than a one-size-fits-all approaches. Beneficiaries valued the tailored aspect of the Innovation Programme and expect demand for similar programmes to exist in the future providing it is free or low cost. An extension of the Innovation Programme should be considered in order allow the continuation of innovation for SMEs in the digital creative and digital health sectors.

## Lessons for CAMERA and the delivery team

7.8 Options for longer support should be considered. Some beneficiaries felt they weren't able to get the full benefits of the Innovation Programme due to being limited by 12-hour support. This temporary nature of support is likely to have limited the ability for beneficiaries to create employment generating opportunities during their time on the Innovation Programme.

**Recommendation 3** - To achieve permanent employment impacts, a more permanent solution providing SMEs with access to innovative motion picture technology is required in the WoE region.

7.9 A number of beneficiaries noted ways that the Innovation Programme could have supported them after their time on the programme. Some suggested ways include:

- Promotion of their project on the CAMERA website.
- A follow-on grant.
- A reduced studio rate to work with CAMERA after the free period of support.

**Recommendation 4** - Future support should consider how beneficiaries can be supported following their time on the Innovation Programme.

7.10 Indeed, one beneficiary noted that *"there are mocap training courses available in other parts of the country that run for £500 to £1000 per day. It would be exciting if CAMERA could help provide a more affordable service that offers actors mocap training/experience."* A rate, such as that suggested here, should be explored to provide prolonger support to beneficiaries who want it.

**Recommendation 5** - The CAMERA may wish to provide a reduced fee for future support at the facility for beneficiaries on completion of their free support in order for those supporting larger projects to get the time they need on site.

7.11 To have a greater chance of achieving project objectives delivery partners could perhaps have explored promoting the Innovation Programme more widely and to businesses in neighbouring LEPs. Exceptions could have been made to allow access to new firms that lay in neighbouring LEPs to the WoE to help benefit newer firms without access to this type of technology. The delivery team were unable to do so for the Innovation Programme, but if they were able to it would have likely helped to benefit newer firms without access to this type of technology.

**Recommendation 6** - Future similar interventions should be allowed to give access to firms that require support in neighbouring LEPs/regions to WoE.

7.12 It was sensible that the delivery team focused on online methods of engagement following the coronavirus pandemic, making the most of their social media accounts. There was potential to add a more strategic, resilient and comprehensive marketing strategy that is less vulnerable to exogenous shocks to the economy. For future programme's online methods of engagement should form the core of the engagement strategy.

**Recommendation 7** - Future programmes should have a resilient engagement strategy in place that responds to the modern methods of online working and engagement that have arisen as a result of the coronavirus pandemic.

7.13 It is important to **ensure interventions commence on time**. Whilst it was the coronavirus pandemic that prevented the Innovation Programme from operating during its anticipated time period, it is important that future projects put the necessary measures in place to ensure that support can be delivered in some way in the allotted time period. Specifically, this enables:

- Project targets (outputs and expenditure) to be more realistic and achievable.
- More effective development and (consistent) implementation of processes, systems and guidance.
- More effective development of internal project partnership working.

**Recommendation 8** - The CAMERA facility should consider targeting businesses with larger scale projects in the future. These slightly larger scale projects could also have the potential to generate greater impacts in terms of employment creation at a faster rate than the beneficiaries in the Innovation Programme.

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