

Programme Management Group

15 November 2018

Regional Cyber Security and Big Data Innovation Centre – Item 7c

Programme Management Group members are asked to:

AGREE: to recommend to the Enterprise M3 Board that expenditure from the Local Growth Fund (LGF) of £5m is approved for the Regional Cyber Security and Big Data Innovation Centre project.

1 Background

- 1.1 Royal Holloway, University of London (RHUL) submitted an Expression of Interest (EOI) as part of the Local Growth Fund round 3 in May 2016. The submission is for the part purchase the £12.93m costs of purchasing a Regional Cyber Security and Big Data Innovation Centre located at the RHUL. RHUL have been reviewing options for the location of the Regional Cyber Security and Big Data Innovation Centre and developing the business case.
- 1.2 During development of the business case, RHUL considered a number of options:
 - The initial choice of a building on the P&G site had to be eliminated as the site had become earmarked for accommodation development. It was also subject to site use restrictions and could not have been made available in time.
 - The RHUL Chestnuts building proved unworkable as the building was in a relatively dilapidated state, configured in an unhelpful way internally and presented problems with critical IT connections.
 - The RHUL Huntersdale building was too remote from the College to ensure a sensible level of interaction with key academic staff, coupled with the fact that it is currently occupied by administrative staff who could not be re-located.
 - No other academic buildings are available for use as space remains a major problem for the College. The only practical solution was therefore to create a new build on a site that is earmarked for development as part of the College's Estates masterplan.
 - The masterplan for the whole College estate was approved by Runnymede Borough Council in April 2015 as an outline application. The site on which the Regional Centre will be located was identified as a development opportunity in the masterplan. As such, the planning risk is considered very low since the proposed development is a smaller development than permission has been granted for.
- 1.3 The Government has identified Cyber Security as a key national priority. The National Industrial Strategy identifies cyber security as one of the six priority sectors identified to support the growth of the Artificial Intelligence (AI) and Data-Driven Economy.
- 1.4 Reports, including the Innovation South Science and Innovation Audit of 2017 have highlighted the importance of the digital economy to the Enterprise M3 region and stressed that one of the region's strengths lies in digital enabling technologies such as cyber security and 5G.
- 1.5 Digital and Data technologies are identified as one of two stimulants for growth in the Enterprise M3 Strategic Economic Plan 2018-2030 with the area being home to the UK

and European headquarters of some of the world's most important and innovative companies in a range of technology-focussed sectors. In digital, Enterprise M3 hosts the bases of major multinational firms including Siemens, Ericsson, IBM, Electronic Arts, Sony and Ubisoft.

- 1.6 The Enterprise M3 region also has a strong base of digital SMEs. There are 8,500 digital businesses, employing 50,000 people across the Enterprise M3 area, many of them will be SMEs.
- 1.7 RHUL has a long history as a specialist in cyber security. The Royal Holloway Information Security Group (ISG), founded in 1990, is an Academic Centre of Excellence for Cyber Security Research recognised by Government Communications Headquarters (GCHQ) and the Engineering and Physical Sciences Research Council (EPSRC). RHUL hosts one of only two UK National Cyber Security Centres (NCSC) supported Centres for Doctoral Training in Cyber Security and its MSc in Information Security is recognised by GCHQ/NCSC.

2 Details of the Project

- 2.1 RHUL has requested an LGF grant of £5m to part fund the £12.93m costs of providing a Regional Cyber Security and Big Data Innovation Centre located at the RHUL. The full business case for the project, along with the AECOM due diligence report are available to PMG on request. Please email helen.caney@enterprisEnterprise M3.org.uk.
- 2.2 RHUL will contribute the remaining £7.93m capital build costs from their reserves.
- 2.3 RHUL have also committed to the revenue costs (£4.9m) for the Cyber Security Innovation Centre through to 2026
- 2.4 The project consists of a new build facility to house a Regional Cyber Security and Big Data Innovation Centre (1,987m² gross internal area (GIA)) as part of a larger Enterprise Centre complex at RHUL. The Enterprise Centre will consist of specialist facilities including a large 200m² Cyber-Physical Engineering Collaboration Space (CPECS) to directly engage and support industrial innovation. Additionally, there will be meeting rooms, training areas and incubation space for start-up companies spin-outs as well as space to house technical staff from collaborating companies who wish to be embedded within the colleges' cyber security activities.
- 2.5 The Regional Cyber Security Centre will be located on the site of the current Orchard Building and Noh Theatre. LGF funding of £1.08m from the requested £5m (for detailed financial information see table at section 5.1 below) will be used to fund enabling works in the 2018/19 financial year. These enabling works will include demolition of the Orchard building, removal and safe storage of the Noh Theatre and provision of water, power and data services for the new building.
- 2.6 The new building will house the Regional Cyber Security and Big Data Innovation Centre alongside the Smart Card and Internet of Things (IoT) Centre, part of the ISG that specialises in physical security and the IoT. The Cyber Security Centre will have its own distinct footprint and dedicated secure entrance.
- 2.7 The building will also house the Research and Enterprise Department of the College which will provide support services to the Cyber Security Centre.
- 2.8 The Cyber Security Centre will include a Student Enterprise Hub to encourage a culture of enterprise among students studying cyber security. The Hub will develop the Student Enterprise Strategy through the introduction of schemes for undergraduates to provide experience, skills and knowledge on how to set up businesses, how to market themselves as freelance workers, how to act as entrepreneurs and how to spot opportunities and assess risks.
- 2.9 The Regional Centre will provide access to two specialist environments:
 - The **“War Room”**: an interactive space for the simulation and testing of cyber security systems subject to attack-defence gaming attacks through provision of dedicated red

team/blue team command posts, overall monitoring booths, observation spaces and a video data wall of screens to visualise the attacks. The War Room will be used by companies for training, product development, product validation and threat evaluation.

- One of the simulation environments being proposed will be a common platform developed in collaboration with researchers in the two key facilities in the USA and Japan (University of Baltimore and Keio University Japan). This will mean that any commercial systems that pass accreditation in the Regional Centre can be accredited/recognised in both the Japanese and US markets, opening up opportunities for internationalisation and inward investment for the Enterprise M3 region.
- The War Room will be used as the main teaching base for dedicated general cyber security training run by the Centre when it is not being operated by businesses.
- **CPECS:** a unique engineering facility comprising four engineering bays that will enable companies to test the cyber resilience and safety of physical products. The facility is effectively an engineers' playground for testing, evaluating and improving the security of physical systems.
- The CPECS facility will enable businesses to evaluate or demonstrate physical systems using simulated environments. The space will be provided with direct external access and will be configured to allow a scale of activity that could accommodate at least a full SUV plus instrumentation in each bay according to industry needs. It is anticipated that companies will make use of this facility in development projects funded in many cases by Innovate UK grants or joint industry project consortia.
- The four engineering bays will be self-contained and initially the environment will be open plan, but it is intended that when companies wish to work on sensitive (commercially secret) projects each bay can be provided with a solid wall to realise a security barrier.

2.10 The Regional Centre will deliver 3 specific activities:

- **Training:** standard and bespoke training programmes on cyber security tailored to industrial needs and delivered on site using industry practitioners, academics and legal and business experts assembled as needed.
- **Access to collaborative research:** a central meeting point for industry and academia to develop and implement research programmes, brokered by the Institute of Cyber Security Innovation at the University to solve industry problems. Industry will be able to second staff to the Centre to work directly on projects and to interact with the university experts.
- **Incubation of start-ups and spin-outs:** students on Masters (250/year) and PhD programmes (circa 90 in total) will have exposure to industry through seminars, project work and day-to-day interactions that will stimulate ideas for spin-out businesses. These, along with new start-ups forming organically within the region can be incubated at the Regional Centre in dedicated facilities with open access to equipment, academic experts and business advisors.

2.11 Funding the project will support the priorities outlined in the Enterprise M3 Strategic Economic Plan 2018 – 2030 by:

- Stimulating research and innovation in enabling digital technologies.
- Facilitating the commercialisation of AI and technology opportunities by providing access to specialist facilities for businesses and developing connections between large businesses and SMEs, enhancing the ability for them to collaborate and bring new ideas to market more quickly, driving local and UK competitiveness.
- Developing international connections which will open up opportunities for local SMEs to internationalise and encourage inward investment.

- Encouraging investment in the area as start-ups and digital businesses will be attracted to stay or locate in the Enterprise M3 region if they can access the specialist facilities, expertise and incubation space at the Regional Centre to help grow their business.
- Supporting the development of key skills digital businesses need to grow by providing access to practical training on security platforms
- Encouraging knowledge exchange between industry and research by providing all students with the opportunity to take an additional year as part of their degree programme, as a Year of Enterprise.
- Supporting high value sectors that intersect with digital technologies, in particular the space and satellite technology, life sciences, especially Medical Technology and professional services sectors.
- Supporting high productivity SMEs to scale up through the provision of space to test and develop products alongside access to specialists and support services.
- Linking with the Growth Hub and SetSquared to bring together universities and business in key sectors to enhance the culture of innovation and enterprise across the Enterprise M3 area.

3 Economic Benefits and Outputs

3.1 An LGF grant of £5m unlocks £7.93m in university match funding

3.2 The development of the Regional Cyber Security and Big Data Innovation Centre will deliver:

- Incubation of a minimum of 25 businesses over 5 years
- 250 new FTEs over a five-year period
- 250 safeguarded FTEs over a five-year period
- An increase in GVA of £300m to £500m over a ten-year period

4 Independent Scrutiny and Assurance

4.1 AECOM have carried out due diligence of the robustness of the project and have made the following recommendations:

- That the Cost Plan should be further reviewed following design development and prior to tender to ensure costs are consistent to those shown within this report.
- That the programme should be proactively reviewed as the design and delivery progresses to ensure the pre-construction activities have suitable durations allocated and are inclusive of the construction activities provided by the appointed contractor.
- That all novation agreements are fully agreed by all parties (including the appointed contractor) and are in place prior to the Contract execution phase, to ensure there are no delays which can be attributed as a Client risk.
- Whilst AECOM do not highlight any visible issues with the issued Cost Plan, it is recommended that this is reviewed on a regular basis to ensure the design aligns with the budget.
- That RHUL obtain written confirmation that delegated powers will be the method of approving the planning application by Runnymede Borough Council (RBC). Should an alternative process be used by RBC this may have a delaying effect on the programme.
- That the Estates Department of RHUL are fully involved in any negotiations of the Contract terms and conditions when a draft contract becomes available and that these are acceptable to Enterprise M3 prior to release of the Grant

- That the type and suite of Contract has been appropriately selected for the project prior to the tender phase as the difference in administering the Contract may affect the costs returned by the bidding contractors. It is also important for the consultants to have allowed enough time within their fees for the administration of the Contract as different suites demand a different management style.
- That Enterprise M3 request confirmation of the appointment of an appropriate consultant to ensure the Project has been reviewed and achieves subsequent sign-off with regards to Building Regulation Approved Documents.
- That despite Stride Treglown having been appointed as the Principal Designer, RHUL are to ensure they are fully aware of their obligations under the CDM Regulations 2015.
- That Enterprise M3 review the assumed success factors of the project and request RHUL confirm how these figures have been calculated against benchmarked indices. These are assumed outcomes and AECOM are unable to comment on the likelihood that they are achieved.
- That Enterprise M3 review the assumed employment outcomes of the project and request RHU confirm how these figures have been calculated against benchmarked indices. These are assumed outcomes and AECOM are unable to comment on the likelihood that they are achieved.
- That Enterprise M3 obtain written confirmation from RHUL that they will directly fund the balance of £7.93M and any overspend on the Project.

5 Finance

5.1 The table below details the spend profile of the project

Table 1

| £m | 2018-19 | 2019-20 | Total |
|-------------------------------|---------------|---------------|----------------|
| Capital funding – RHUL | | £7.93m | £7.93m |
| Capital Match – EM3 | £1.08m | £3.92m | £5.0m |
| Total | £1.08m | £11.85 | £12.93m |

6 Key criteria

6.1 The table below summarises how the project performs against key criteria

Table 2

| Criteria | Assessment | Comments |
|-------------------------------------|------------|--|
| Strategic Fit | Excellent | Aligns with Strategic Economic Plan 2018-30 and supports a key stimulant to grow the Digital and Data Technologies sector across Enterprise M3 |
| Impact of the Scheme | Good | Significant regional and national impact to stimulate internationalisation and inward investment |
| Percentage of Match Funding | Good | Match funding represents 61% of funding |
| Past Performance of Scheme Promoter | Unknown | Enterprise M3 have not funded any projects with the scheme promoter |

7 Project Milestones & Key Dates

Table 3

| | |
|-----------------------|---|
| January 2018 | Establishment of a project board to oversee the work in the University with representation from relevant stakeholders- COMPLETED |
| January 2018 | Preparation for a project brief for architects Completion of stakeholder review to define project brief specifying space locations within new centre - COMPLETED |
| February 2018 | Stage One approval to develop new build project - COMPLETED |
| March 2018 | Development of an initial plan and costing regime for the new build project Return of architect's concepts and valuation process complete |
| September 2018 | Formal stage two project plan approved by University, leading to any planning permissions required |
| February 2019 | Stage three project plan to be approved by University |
| February 2019 | Commencement of advanced work on site (Theatre removal and fees) |
| March 2019 | Planning permission obtained Tender out for build contract |
| May 2019 | Contractor appointed |
| June 2019 | New Build commences |
| September 2020 | Occupation of first areas of space Initial occupation of space, staff begin to operate from building |
| January 2021 | Formal opening of Centre |

8 Conclusions & Next Steps

- 8.1 RHUL has requested a LGF grant of £5m to part fund the £12.93m costs of providing a Regional Cyber Security and Big Data Innovation Centre located at the RHUL.
- 8.2 The Regional Cyber Security and Big Data Innovation project offers an opportunity to stimulate a key sector for the Enterprise M3 area by creating a specialist research and innovation hub. The project has been through a thorough due diligence process, which has led to the recommendations above. These recommendations are manageable and will be addressed through the contract negotiation and project delivery phases.

9 Recommendations

- 9.1 **Programme Management Group members are asked to AGREE** to recommend to the Enterprise M3 Board that expenditure from the Local Growth Fund (LGF) of £5m is approved for the Regional Cyber Security and Big Data Innovation Centre project.

Helen Caney
6 November 2018