

Heart of the South West Local Enterprise Partnership

LEP Board Paper

Report title: Commercialising innovation

Date: 15/11/20

Purpose: This paper is for **decision**

Link to LIS: Indicate by **bolding** which area the paper links to.

Inclusive Growth			Clean growth		
Energy		Engineering		Digital	
Ideas/ Innovation	People/Skills	Infrastructure	Bus. Environment	Places	

Non- LIS purpose: N/A

Timing: work to develop implementation plans would commence immediately if agreed, implementation would take place in stages and for some actions would be dependent on the timing of funding coming available.

Financial Impact: none at this point, if agreed costed proposals would be worked up for consideration in the context of future funding rounds.

Decisions requested: agreement of recommendations in order that detailed implementation plans may be drawn up.

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Summary

Our region has some of the leading research assets in Britain. Exeter University is a member of the Russell Group, Plymouth University is a Tier One member of MarRI-UK¹ due to its leading position in marine engineering. The Met Office is one of only two World Area Forecast Centres globally² and the UK Hydrographic Office's Maritime Data Solutions are used on 90% of the world's ships trading internationally³.

This distinguished slate of scientific and technological excellence is not matched, however, in commercial success. The UK Research and Development Roadmap⁴ shows us trailing in R&D expenditure relative to the size of our economy – behind Cumbria and Northumbria, and ahead of only

¹ <https://www.marri-uk.org/>

² <https://www.metoffice.gov.uk/services/transport/aviation/regulated/mo-wafc>

³ <https://www.gov.uk/government/organisations/uk-hydrographic-office/about>

⁴

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/896799/UK_Research_and_Development_Roadmap.pdf

Cornwall, Lincolnshire and Shropshire in England. Estonia has a population only 72% of ours yet has produced four ‘unicorns’ – no business in our area has come close.⁵

As we seek to maximise our economic recovery from the pandemic, to improve productivity and to strengthen average earnings, each of these tasks will be made harder due to our relative weakness in commercialising innovation. Creating conditions in which more innovative start-ups are founded and more scale-up to meaningful size could make a significant contribution to our future economy.

Background

The LEP Board agreed on 15th May 2018 to establish an Innovation Board, Adrian Dawson of Plymouth University subsequently drew up Terms of Reference which were agreed on 18th September 2018. Unfortunately, the initiative then rolled into the long grass, nothing subsequently happened until February 2020 when Heart of the South West was one of six regions selected by BEIS to participate in a pilot UK-specific version of MIT’s Regional Entrepreneurship Acceleration Program (REAP)⁶. The team formed to participate in REAP also formed the Innovation Board, with the REAP process being used to develop an initial set of recommendations.

MIT has a notable record in fostering innovation and entrepreneurial growth, a 2009 study found that firms founded by MIT alumni had a collective turnover of \$2 trillion.⁷ 49 regions from across the world have used the REAP process to shape their approach to fostering entrepreneurship.

For Heart of the South West, the need for action is pronounced, as the table below illustrates.

Measure	HotSW	National	Notes
Start-ups per 10,000 working age population ⁸	63.3	91.4	2018
Proportion of high growth firms ⁹	4.8%	6.1%	2018
Export (goods) relative to GVA ¹⁰	10.1%	17.8%	2017
Export (services) relative to GVA ¹¹	7.7%	14.6%	2017
Patent applications per 1m active population ¹²	46.5	132	Devon only, 2017
Active graduate start-ups in LEP region ¹³	44	114	2016
Business investment in R&D per inhabitant ¹⁴	€139.7	€410.3	Devon only, 2017

Productivity is 82.7% of the national average, a relative decline from 2004 when it was 84.9%.¹⁵ HotSW ranks 31st out of 38 LEPs. For business investment in R&D we rank 32nd.¹⁶

These indicators of poor business dynamism come despite the region’s strength in academic R&D: the prime issue (and therefore opportunity) lies in the business environment. In a survey of HotSW

⁵ <https://thehustle.co/estonia-tech-incubator/>

⁶ <https://reap.mit.edu/reap-uk/>

⁷ <https://news.mit.edu/2009/kauffman-study-0217>

⁸ MIT REAP Evidence Review HotSW p.29

⁹ Ibid

¹⁰ Ibid p.30

¹¹ Ibid

¹² Eurostat/MIT REAP Evidence Review HotSW p.33

¹³ Smart Specialisation Hub/HEBCI/MIT REAP Evidence Review HotSW p.37

¹⁴ Eurostat/MIT REAP Evidence Review HotSW p.58

¹⁵ Data for 2018, ONS Sub Regional Productivity/MIT REAP Evidence Review HotSW p. 23

¹⁶ Smart Specialisation Hub/HEBCI/MIT REAP Evidence Review HotSW p.59

entrepreneurs carried out within the REAP process, only 5% described the region's innovation ecosystem as 'vibrant', 53% opted for 'emerging' or 'early', 17% called it 'dormant'.¹⁷

Furthermore, within our region commercialisation of innovation is geographically concentrated, as is illustrated by the distribution of Innovate UK grant awards – primarily in the Plymouth-Exeter corridor with a further cluster in North Devon.¹⁸ If we are to deliver inclusive growth, we cannot exclude the bulk of our geography, and especially not the more remote communities where indices of deprivation are often high. It is also essential to ensure that Somerset is fully supported.

Alongside inclusivity there is a second reason we need to draw upon the entirety of our region. We are sub-scale. Critical mass is vital for innovation ecosystems, a recent report for the Scottish government suggested that 5,000 pre-start-ups are required to produce one unicorn¹⁹. At the core of our challenge is our small scale, which is as unattractive to investors as it is to talent, and denies us the multiple positive network effects of shared learning and ideas, of staff moving between businesses or leaving to found start-ups, of entrepreneurs having sold their businesses becoming angel investors and mentors to the next generation. Achieving sufficient scale to, for example, attract the interest of venture capitalists will be challenging if attempted on the basis of any one locality within the region alone – indeed, it will be challenging if taken on the basis of the whole region, but at that scale it stands some stronger chance.

Further, the pandemic has sharply accelerated the acceptability of remote working and remote meetings – indeed, it has become essential for R&D businesses to offer permanent remote working in order to attract and retain staff, and physical networking events that moved virtual during the pandemic are increasingly opting to remain so, as they have attracted geographically dispersed participants they would lose if they returned to in-person meetings. This shift is an opportunity for Heart of the South West, it supports our aspirations to inclusive growth by making it easier to operate across our geography and makes the region as a whole a more acceptable location – the attractions of our natural capital are as strong as ever, the disadvantages of peripherality have (somewhat) reduced. The sudden cultural shift in openness to virtual activity also provides a potential solution to the challenge of pulling the disparate elements of our ecosystem together.

Finally, there is one further impediment to us garnering the benefits of commercialising innovation: culture. To return to the example of Estonia, the bleak post-Soviet economy of 1992 had progressed relatively little a decade later, but what had changed was a total commitment from the country's leadership to make theirs a tech-driven society. This single-minded focus brought great results – but is unlikely to be viable in our region with the wealth of competing sectors requiring support and sustenance. Nonetheless, greater celebration of entrepreneurship, normalising creating a business as a career path, inculcating enterprise through education would all make for a richer soil in which the seeds of other actions we can take could be planted.

¹⁷ MIT REAP Perspectives of Ecosystem Entrepreneurs HotSW p.8

¹⁸ <https://heartofswlep.co.uk/wp-content/uploads/2019/02/Accessing-Innovation-Support-in-Cornwall-the-Isles-of-Scilly-and-Heart-of-the-SW.pdf>

¹⁹ Scottish Technology Ecosystem Review p.13

Recommendations

These recommendations relate specifically to the task of building an effective innovation ecosystem in which R&D intensive businesses – those with the greatest propensity for high growth, and to benefit productivity and prosperity – have a greater likelihood than at present both to be created and then to scale.

1) South West Technopole

The LEP management team should draw up proposals to create a ‘South West Technopole’ – a virtual science park, providing advice and support to R&D intensive businesses regardless of location across the region and building sector-focused communities in our areas of relative strength.

This is vital both to bring relevant actors together to create critical mass and to support inclusive growth across our region, including in remote and disadvantaged locations.

2) Marine and environmental intelligence

The region’s strength in marine and environmental intelligence should be formally acknowledged in the context of a current national focus on place-based R&D. In communication with central government, MPs and other stakeholders the LEP should make the case for this to be recognised, in order to prepare the way for future funding opportunities.

A clear and consistent articulation of a core strength will be necessary to gain central attention and support.

3) A culture of entrepreneurship

The LEP’s communications activity should celebrate entrepreneurship showcasing a broad range of role models.

4) Access to finance

Once established the Technopole should be tasked to establish an angel investor network, to raise entrepreneurs’ awareness of and connection to sources of finance, and to create a density of investable businesses in order to attract greater investor interest in the region.

5) Strengthening skills

The South West Institute of Technology should incorporate entrepreneurship training into its programmes, including by use of the SETsquared Student Start-up course.²⁰

The Skills Advisory Panel should set out how entrepreneurship training could be made available to those on apprenticeship programmes.

In both cases, the training should distinguish between lifestyle and growth businesses, and position entrepreneurship as a choice that might occur at any stage within a career.

Other actions

Beyond the scope of these proposals, the universities should draw up proposals to maximise value creation from the academic research assets in the region.

²⁰ <https://www.setsquared.co.uk/programme/student-enterprise/>