

## Heart of the South West Local Enterprise Partnership

### LEP Board Paper Agenda item 8

**Report title:** Innovation – Maritime and Environmental Science Accelerator

**Date:** 28/3/22

**Purpose:** This paper is for **noting**

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

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

**Non- LIS purpose:** N/A

**Timing:** Ongoing

**Financial Impact:** Proposed investment of £128.3m

**Decisions requested:** None

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### Summary

During 2020 and early 2021, the region participated in the MIT Regional Entrepreneurship Acceleration Program (MIT REAP). The recommendations from that work were approved at the LEP board in November 2020.

Since then the Innovation Board has been working with the two universities to specify the deliverables in greater detail, cost the programme and engage with key stakeholders.

The three elements of the programme are:

- creating the world's first Maritime Autonomy Assurance Testbed in Plymouth at a cost of £53m
- building an environmental intelligence solutions hub in Exeter for £60m
- establishing a South West Technopole to commercialise our R&D assets, for £15.3m

for a combined cost of £128.3m over five years.

Subsequent engagement with ministers and officials has been positive.

## **Background**

We have some incredible research strengths in key emerging areas of science. Six of the world's top climate scientists are in the UK, all are based in Exeter – which is also the city with more climate scientists than any other on earth. In Taunton, the UK Hydrographic Office produces data solutions used on 90% of international shipping. From Plymouth the Mayflower Autonomous Ship is pioneering AI-powered uncrewed shipping and the Smart Sound provides a unique marine testing ground.

Despite this, we have a poor record at capitalising on these assets. Business investment in R&D, Innovate UK grants and patents are all around a third of the UK average per head. This, inevitably, feeds into our region's poor record on productivity and pay.

The REAP process developed a proposal to address this through the creation of a Marine and Environmental Science Accelerator - a three legged stool consisting of the elements mentioned above.

Firstly, it would see the creation of the world's first Maritime Autonomy Assurance Testbed in Plymouth. Maritime autonomy had been identified by DIT as one of its High Potential Opportunities, and it's believed that hosting the testbed that drives the definition of international standards will be key to establishing a commercial lead. This element of the proposal has been developed by a consortium including Lloyd's Register, the National Physical Laboratory, the National Marine Laboratory and the University of Plymouth. It would capitalise on Plymouth's Freeport status but also reach out to other assets in the region – such as Appledore Middle Dock now used as a testing ground by both universities.

Secondly an Environmental Intelligence Solutions Hub would be formed in Exeter leveraging the huge investment in the Met Office's supercomputer. A forecasting model developed by the University of Exeter and the Met Office can predict the climate grid square by grid square anywhere on earth as far forward as 2070. The Hub would serve the purpose of translating this into commercial opportunity. It would both engage with clients directly – large corporates, foreign governments – and also propagate spin-outs taking specific products to market. Aside from the economic opportunity, converting the science into workable, available solutions is clearly key in addressing climate change.

The third leg is the Technopole: supporting start-ups and scale-ups by priming relationships with academics, investors and more. Our geography can serve to dilute, this virtual operation will concentrate; we've been told by venture capital that it will be essential for us to corral related businesses together and create critical mass for them to devote attention to our region. Crucially, the Technopole will support businesses regardless of where in the region they may be based. Whilst the majority of R&D driven businesses will inevitably set up in the major centres, including in our excellent science parks, when entrepreneurs do wish to set up a high tech business in a more peripheral location it can have an outsized impact – so supporting that is key.

Saw one leg off the stool and it falls over. Maritime autonomy depends on environmental intelligence to work, addressing climate change through floating offshore wind requires autonomous support vessels – and unless we can commercialise the science effectively we will not only fail to bring the economic and societal benefits to the region, we'll also fail to deliver practical benefit from the excellent theoretical work.

The vision is for Britain to be the global leader in climate science and maritime autonomy, and for the South West economy to be strengthened by a growing cadre of high technology businesses.

This would:

- make a sizeable contribution to Britain as a Science Superpower
- grow investment in R&D, and do so outside the Greater South East
- use R&D to level up a region with low rates of productivity and pay
- grant greater opportunity to school leavers in places where fewer go on to residential university
- boost UK exports
- support our Net Zero goal
- capitalise on prior work by government in establishing the Plymouth Freeport, rescuing Appledore shipyard, and investing in the Met Office supercomputer
- support the policies set out in the National Shipbuilding Strategy and the Levelling Up White Paper

Three LEP directors - Stuart Brocklehurst, Judith Petts and Lisa Roberts – have met regularly with Sir Geoffrey Cox to discuss these proposals. Sir Geoffrey arranged for a meeting with the Secretary of State for Levelling Up Housing and Communities, other meetings have taken place with officials and advisers.