

# Innovation Strategy

April 2022



***Solent Freeport: A thriving hotbed of innovation, centred around our globally renowned business base and R&D assets to catalyse an innovation revolution in maritime, autonomy and green growth.***

# 1. Context

## 1.1 Local innovation opportunities

### Overview

The Solent boasts a rich innovation ecosystem, built around world class research assets, world leading expertise, and businesses that are developing and commercialising the ideas that will be tomorrow's mainstream. We are a globally facing region with immense knowledge assets within our academic, research, and industrial spaces, an established model of collaboration across these assets and a successful track record of delivering commercially successful and transformative innovation. The region also punches above its weight in terms of innovation activity, ranked in the top 10 LEP areas for percentage of its workforce in R&D related professions, and recording comparatively high investment in R&D and innovation assets.

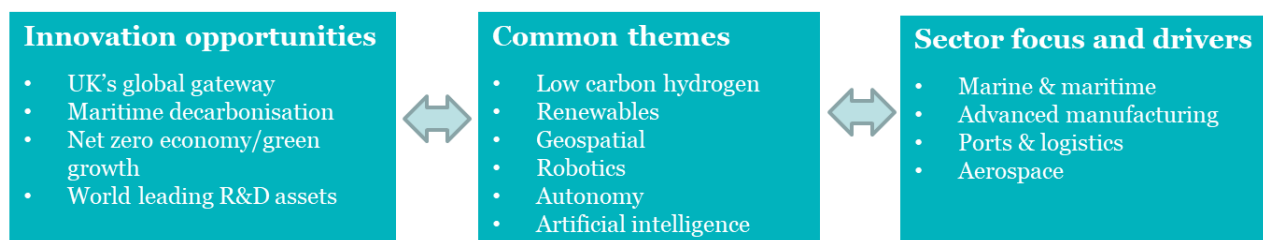
Freeport status will 'turbocharge' the Solent's innovation impact and existing innovation ecosystem by expanding the critical mass of economic activity taking place within and through our international Ports and through the opportunities this creates to stimulate complementary innovation activity and applications across the portfolio of Freeport sites.

Our Innovation Strategy sets out the added innovation value and contribution that the Solent Freeport can make by focusing private and public-sector investment in R&D, curating a dynamic environment that brings together innovators to collaborate in new ways, and by providing controlled spaces to develop and trial new ideas and technologies. This will also bring wider benefits by creating new markets for UK products and services, driving productivity improvements within our key sectors, and securing jobs and investment to the Solent region.

### Innovation Opportunities, Drivers and Common Themes

In conjunction with Solent Freeport partners, a number of opportunities have been identified for innovation in the Freeport area, and to attract innovative business to locate in the Freeport Zone. These are summarised in the diagram below and reflect the Solent's role as a globally significant trading gateway, blending its illustrious history across the marine and maritime sector with our world-class centres of learning, research and innovation and the critical role the region is already playing in pioneering a Net Zero economy. The Solent is already at the vanguard of maritime autonomy, maritime robotics, clean maritime fuels, maritime propulsion systems, port operations, and maritime defence; we want to build on our unrivalled pedigree in maritime innovation as globally the industry looks to decarbonise.

Figure 1: Solent Freeport innovation opportunities, drivers and common themes



Within these innovation opportunities there are a number of common themes around which we see much of the Solent Freeport's innovation activity coalescing, and where there are particular areas of competitive advantage amongst Freeport partners. These reflect the global drive towards more sustainable, greener shipping and more efficient operations within the maritime industry and related sectors.

Whilst a key focus of the Freeport's innovation activity will relate to the marine and maritime sectors (given the inherent competitive advantages the Solent offers in this respect), there will also be significant innovation opportunities for a range of other high growth sectors such as advanced manufacturing, aerospace, ports and logistics. Collectively, these sectors are expected to drive much of the innovation activity taking place within the Solent Freeport.

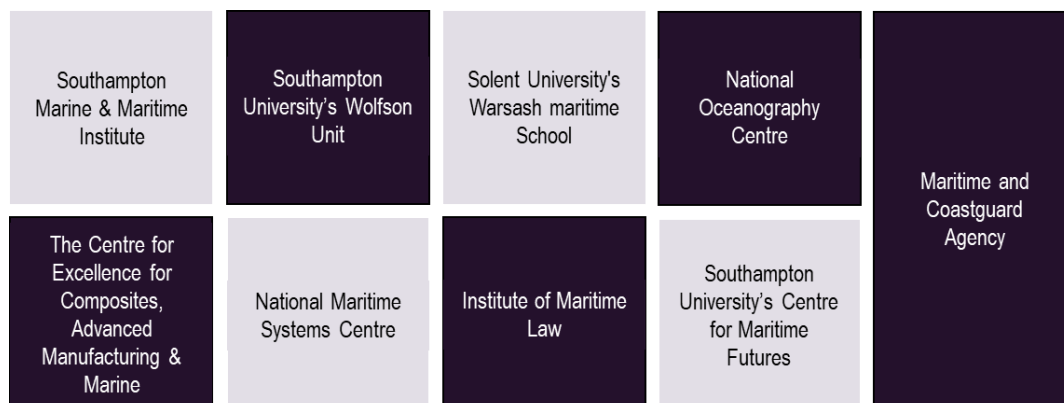
## 1.2 Existing local innovation initiatives

The Solent is home to world-class centres of learning, research and innovation through its universities, research institutions and business networks which act as places of transformation. In particular, the region supports a global leading marine and maritime cluster which is supported by numerous related R&D establishments, which have strong expertise in the area. The sector not only provides the industry and innovation base necessary to be at the leading edge of new growth opportunities, but also acts as a nationally recognised test-bed for a range of enabling and emerging technologies. For instance, the Solent region is pioneering research in marine and maritime autonomy and robotics, with cutting-edge projects including the application of emerging autonomous vehicle technologies, the development of hydrogen-powered water transport, and pioneering state-of-the-art shore-to-ship power solutions.

The Solent boasts world-leading marine and maritime research establishments. For example, the National Oceanography Centre (NOC) in Southampton undertakes research in large scale oceanography and ocean measurement technology, working with Government and business to translate the latest research and technology into practical advice and applications. With a campus within the Port of Southampton, the NOC would be able to offer incubating firms and researchers the full spectrum of business incentives offered by a Freeport. Increased investment and funding from a Freeport could be used to encourage investment in AI technology and its applications within coastal maintenance, such as the monitoring of marine and maritime environments.

A number of important marine and maritime establishments based in the Solent and driving innovation are highlighted below.

Figure 2: Local marine and maritime innovation assets

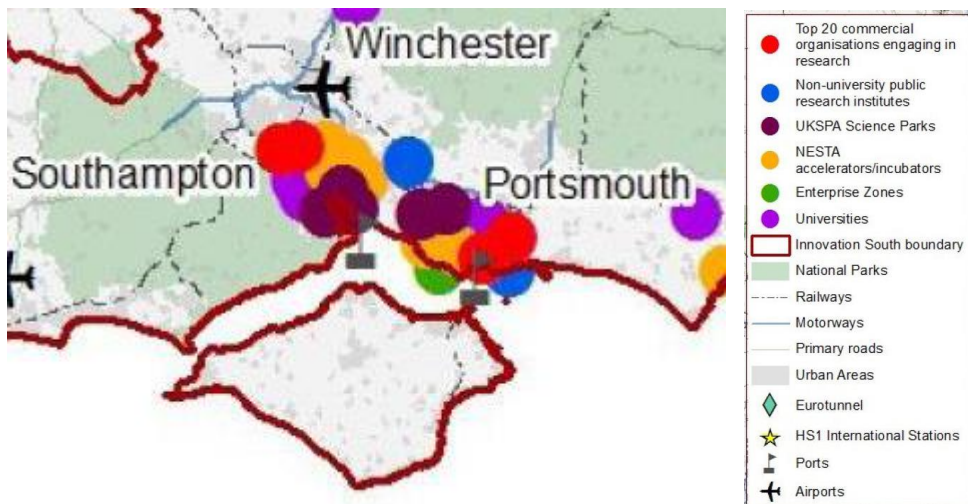


The region's three Universities - Southampton, Portsmouth and Solent - each have significant specialisms in marine and maritime and wider disciplines that can have direct applicability to the Freeport. This includes pioneering approaches to connected autonomy and the South Coast Centre of Excellence for Satellite Applications, which is identifying ways to embed and grow satellite applications in Transport and Logistics, Autonomous Systems, and Offshore Assets while utilising cutting-edge technological developments in Artificial Intelligence, Earth Observation & Navigation, and Communications.

Significant recent investments in research facilities include the Fareham Innovation Centre, the University of Portsmouth's Future Technology Centre and the Centre for Creative and Immersive Extended Reality (CCIXR) based at the University of Portsmouth. Such institutions are leading research into cutting edge technologies such as robotics, autonomy research (including the application of emerging autonomous vehicles), and energy (including the development of hydrogen-powered water transport and shore-to-ship power solutions).

The Science and Innovation Audit undertaken by Innovation South on behalf of the Department for Business, Energy and Industrial Strategy (BEIS) highlights an extensive network of innovation assets within the Solent region, including three world-class universities, public research institutes, accelerators/incubators and commercial organisations engaging in research (Figure 3).

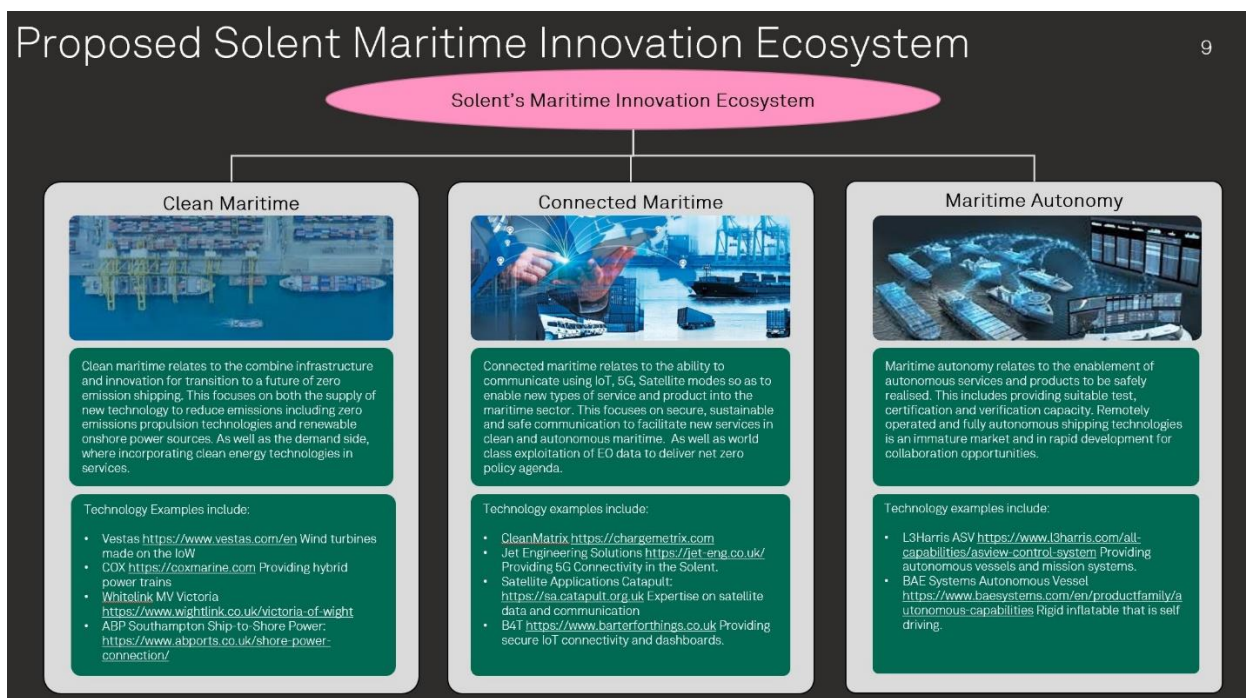
Figure 3: Key innovation assets in the Solent



Source: [Innovation South, Science and Innovation Audit Report, 2017](#)

A ground-breaking collaboration has recently been established between Maritime UK Solent, Solent Maritime Enterprise Zone and Connected Places Catapult to ensure the Solent's maritime innovation cluster maximises its full potential on the global stage. The Solent Maritime Innovation Gateway (Solent MIG) has been designed to act as a catalyst for transforming the Solent Maritime region, and driving maritime innovation by connecting and interacting regionally, nationally and internationally with investors and innovators. It responds to the challenge the Solent has in co-ordinating its significant maritime innovation activity by providing a single point of access to the Solent's maritime innovation ecosystem and growth network. The MIG will have a physical presence within the Solent Freeport and the maritime innovation hub facility.

The Solent MIG has recently concluded an exercise to map the Solent's world-leading maritime innovation ecosystem and this provides a valuable evidence base for Freeport partners; it identifies world-leading innovation capability, commercial potential and strengths in the Solent for Maritime Autonomy, Clean Maritime and Connected Maritime, around which the Solent's maritime innovation ecosystem will be further developed through the Freeport (see below).



With assets such as the Southampton Web Science Institute (WSI) and the QinetiQ Innovation and Collaboration Hub, the Solent has existing and growing expertise in the area of digital and disruptive technologies in particular, offering huge potential to draw together world-leading expertise to collaborate across multiple disciplines to become a world leader in digital knowledge and innovation and to pioneer technologies for instance around climate change adaptation and decarbonisation.

Meanwhile, the Solent’s new Institute of Technology will deliver innovative learning opportunities for the region’s maritime, engineering and digital technology workforce, with a key focus on an employer-led curriculum and inspiring learners across the region to develop higher technical skills in Maritime Engineering and Digital Technologies to drive green innovation.

### 1.3 Engagement with local innovation stakeholders

Development of the Solent Freeport has involved extensive engagement with local innovation stakeholders and partners across the wider region, recognising the critical role they will play in supporting the Freeport to deliver its Innovation Strategy. A summary of engagement to date is provided in the table below.

Organisation	Description and dates for engagement to date	How the stakeholder will support Freeport innovation objectives	How the Freeport supports the objectives of the stakeholder
University of Portsmouth	Ongoing engagement to help shape the Solent Freeport Innovation Strategy, including convening and leading stakeholder innovation workshops at both OBC and FBC stage (July 2021, December 2021, February 2022)	<ul style="list-style-type: none"> <li>• Lead SFCL Associate member for innovation</li> <li>• Key role in delivering innovation across the region and providing specialist research facilities for Freeport businesses and partners, including the Centre for Enzyme Innovation</li> <li>• The University’s Future Technology Centre provides world-class facilities to assist Freeport companies take advantage of new production technologies translating innovation into business growth</li> <li>• Providing practical expertise to support private sector Freeport partners to bid for and leverage innovation funding</li> <li>• Promoting innovation across the wider Solent SME community, building on strong track record (e.g. the Portsmouth Business School is accredited for their work with local SMEs through the Small Business Charter)</li> </ul>	The Solent Freeport will maximise the impacts of key research facilities such as the Future Technology Centre by attracting and developing a significant cluster of innovative businesses in the Solent and associated pool of talent ideally placed to benefit from the training
University of Southampton	Ongoing engagement to help shape the Solent Freeport Innovation Strategy, including participating in stakeholder innovation workshops at both OBC and FBC stage (July 2021, December 2021, February 2022)	<ul style="list-style-type: none"> <li>• Key role in delivering innovation across the region and providing specialist research facilities for Freeport businesses and partners</li> <li>• E.g. The Southampton Marine and Maritime Institute is currently leading research on the storage and use of hydrogen as an alternative fuel for zero-emission shipping to accelerate the maritime sector in tackling decarbonisation</li> <li>• Providing practical expertise to support private sector Freeport partners to bid for and leverage innovation funding</li> <li>• Promoting innovation across the wider Solent SME community</li> </ul>	The Solent Freeport will maximise the impacts of key research facilities such as a new world-leading, high-impact research and innovation centre that will act as the national focal point and international gateway for UK industrial decarbonisation (recently awarded £20m from UKRI)

Solent University	Ongoing engagement to help shape the Solent Freeport Innovation Strategy, including participating in stakeholder innovation workshops at both OBC and FBC stage (July 2021, December 2021, February 2022)	<ul style="list-style-type: none"> <li>• The new Institute of Technology will deliver innovative learning opportunities for the Freeport's maritime, engineering and digital technology workforce</li> <li>• Key role in delivering innovation across the region and providing specialist research facilities for Freeport businesses and partners</li> <li>• Providing practical expertise to support private sector Freeport partners to bid for and leverage innovation funding</li> <li>• Promoting innovation across the wider Solent SME community</li> </ul>	The Solent Freeport will maximise the impacts of key research and training facilities such as the new IOT by attracting and developing a significant cluster of innovative businesses in the Solent and associated pool of talent ideally placed to benefit from the training
Maritime UK Solent	Ongoing engagement to help shape the Solent Freeport Innovation Strategy, including participating in stakeholder innovation workshops at both OBC and FBC stage (July 2021, December 2021, February 2022)	A key partner bringing together the Solent's marine and maritime innovation assets to champion the region as a globally significant maritime cluster	Freeport designation adds significant value through its policy levers to strengthen the UK's premier global gateway. It will provide Maritime UK Solent partners with the tools to grow the Solent's marine and maritime sector for the benefit of local communities
Solent MIG	Participating in stakeholder innovation workshops at FBC stage (December 2021 and February 2022) Ongoing 1-2-1 liaison and input to shape the Solent Freeport Innovation Strategy	<ul style="list-style-type: none"> <li>• The Solent MIG will play a key role in delivering innovation collaboration objectives of Solent Freeport by providing a single point of access to the Solent's maritime innovation ecosystem/networks</li> <li>• The Solent MIG has recently mapped the Solent's world-leading maritime innovation ecosystem and this provides a valuable evidence base for Freeport partners</li> </ul>	The Solent Freeport provides the critical mass and investment opportunities to realise specific world-leading innovation capability and commercial potential identified by the MIG in the Solent for: <ul style="list-style-type: none"> <li>• Maritime Autonomy</li> <li>• Clean Maritime</li> <li>• Connected Maritime</li> </ul> Solent Maritime Innovation Hub will provide a physical presence for the Solent MIG
Solent Maritime Enterprise Zone (MEZ)	Ongoing engagement to help shape the Solent Freeport Innovation Strategy, including participating in stakeholder innovation workshops at both OBC and FBC stage (July 2021, December 2021, Feb 2022)	The Solent MEZ is working collaboratively in creating a centre of excellence for maritime research, innovation, education, skills and training, whereby strengthening the Solent's innovation ecosystem and support network	The Solent Freeport will maximise the impacts of MEZ activity by attracting and developing a significant cluster of innovative businesses in the Solent and associated pool of talent ideally placed to benefit
Solent Growth Hub	Participating in stakeholder innovation workshops at FBC stage (February 2022)	Providing dedicated business support service for all businesses in the Solent, including those looking to expand and grow within the Freeport	The Solent Freeport will maximise the impact of the Growth Hub by developing a cluster of innovative businesses locally
National Oceanography Centre	Participating in stakeholder innovation workshops at FBC stage (December 2021)	The National Oceanography Centre, which has a campus within the Port of Southampton, would be able to offer incubating firms and researchers the full spectrum of business incentives offered by a Freeport	Increased investment and funding from a Freeport could be used to encourage investment in AI technology and its applications within coastal maintenance, such as the monitoring of marine and maritime environments
CEbotiX; the National Centre for	Dedicated engagement with FBC development to inform the	Opening in spring 2022 and based at the National Oceanography Centre in Southampton, CEbotiX, will play a key role in	The Solent Freeport provides the critical mass of innovative maritime businesses and

Operational Excellence in Marine Robotics	Solent Freeport Innovation Strategy (early 2022)	the development, training and assurance of Maritime Autonomy; delivering the skills and expertise to realise Solent Freeport innovation objectives	workforce to engage and collaborate through CEbotiX
National Maritime Systems Centre	Ongoing engagement to inform the Solent Freeport Innovation Strategy	Innovation and Collaboration Hub to support SMEs and foster greater collaboration and innovation across the Solent Freeport	Maximise the impacts of the Centre by attracting and developing a significant cluster of innovative maritime businesses in the Solent that can benefit from collaboration opportunities
Connected Places Catapult	Participating in stakeholder innovation workshops at FBC stage (December 2021)	Connected Places Catapult is a key partner of Solent MIG – see above	See above (Solent MIG)
Solent Local Enterprise Partnership Board	Extensive ongoing engagement to inform the Solent Freeport Innovation Strategy	<ul style="list-style-type: none"> <li>• LEP Board members are also on the SFCL Board</li> <li>• Delivery lead for Solent Maritime Innovation hub</li> <li>• Funding complementary innovation initiatives to maximise the innovation impact of Freeport activity</li> </ul>	Key catalyst and delivery mechanism for achieving the LEP's long term economic growth ambitions for the region, as outlined in our Solent 2050 Economic Strategy

## 2. Strategy and projects

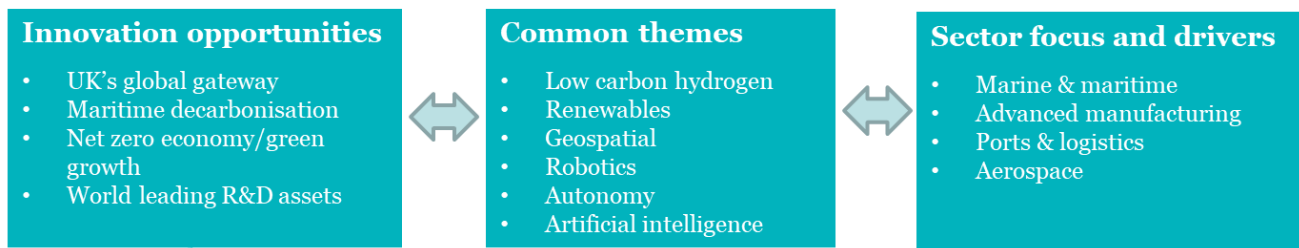
### 2.1 High-level strategy

The Solent Freeport will use its enabling powers, policy tools and levers to stimulate innovation and adoption by businesses within the Freeport as follows:

- Using seed capital funding to invest in the Solent Maritime Innovation Hub for the area (this will be a shared resource available to all);
- Using tax site designation to address viability gap and capacity challenges in the area through financial incentives for development, to attract R&D investment and a critical mass of innovative businesses to locate on key sites across the Solent Freeport; and
- Using retained business rates to fund Freeport-wide initiatives and activities to promote and foster innovation and cross-fertilisation of ideas across Freeport sites and wider innovation partners across the Freeport geography (such as research institutes and universities), to facilitate collaboration, and to leverage innovation funding opportunities.

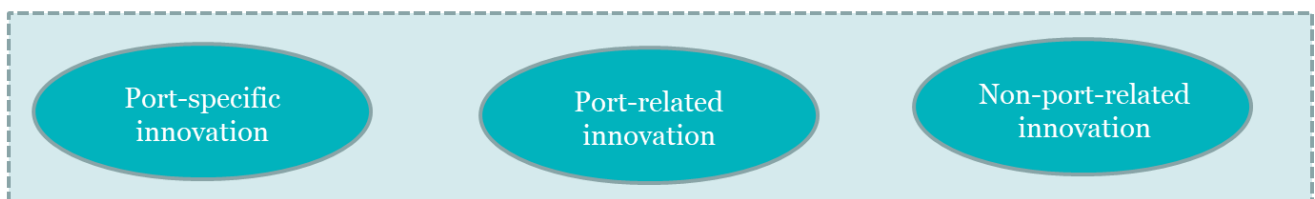
In responding to identified innovation opportunities in the Freeport area, our Innovation Strategy for the Solent Freeport centres around three key strands of activity; securing investment from high innovation businesses into the Solent; providing the critical mass of space, facilities and most efficient systems to foster new forms of, and greater diversity of, R&D activity; and bringing key businesses and research partners together to collaborate and leverage innovation funding opportunities (summarised in Figure 4 below).

Figure 4: Overview of Solent Freeport Innovation Strategy



## Responding to the opportunity – 3 key strands of innovation activity:

- 1 Securing investment from high innovation businesses into the Solent (see also Trade & Investment Strategy)
- 2 Providing the critical mass of space, facilities and most efficient systems to foster new forms of, and greater diversity of, R&D activity
- 3 Bringing key businesses and research partners together to collaborate and leverage innovation funding opportunities



We will use these activities to develop a thriving innovation ecosystem that unlocks and encourages innovative activity across three key areas:

1. **Port-specific innovation:** innovation that directly benefits air, rail or maritime ports (*such as 'Smart Port' technology being developed at the Ports of Southampton and Portsmouth to capitalise on autonomous technologies and improve optimisation*);
2. **Port-related innovation:** innovation that indirectly benefits air, rail or maritime ports or their supply chain (*such as development of autonomous vessels and systems technology at Fawley Waterside, and development of the next generation of marine autonomous technology at the Marine Robotics Innovation Centre/ National Oceanography Centre in Southampton*); and
3. **Non-port-related innovation:** innovation unrelated to air, rail or maritime ports that can take advantage of port-proximate locations or the Freeport wider offer (*such as establishment of a partnership with the Satellite Applications Catapult at Fawley Waterside to assist with trebling the UKs participation in the world-wide space industry*).

The innovation objectives of the Solent Freeport build on and complement a wide range of existing policy objectives, strategies and plans at the local, regional, and national scale. At a UK-wide level, the Solent Freeport will directly contribute towards the Government's growth objectives within Build Back Better: our plan for growth (March 2021) around supporting and incentivising the development of creative ideas and technologies, as well as The Ten Point Plan for a Green Industrial Revolution (November 2020) and subsequent UK Hydrogen Strategy (August 2021) and Net Zero Strategy (October 2021) particularly around growth of low carbon hydrogen, zero emission vehicles and green ships.

The focus on maritime decarbonisation also aligns strongly with Maritime 2050, e.g. with Portsmouth International Port aiming to become the first zero emission port under the Clean Maritime 2050 Plan. Meanwhile, the Navigator Quarter adjoining Southampton Airport offers significant opportunity to realise Government's Jet Zero strategy to deliver net zero aviation by 2050 through a focus on sustainable technology within the aviation and aerospace sector.

There are also multiple opportunities to align our innovation ambitions for the Solent Freeport with Government's Innovation Strategy for the UK (2021), for instance through supporting businesses to responsibly adopt AI through an advanced technology centre within the Freeport, and utilising the Solent Maritime Innovation Hub to access funding opportunities through the new UK Advanced Research and

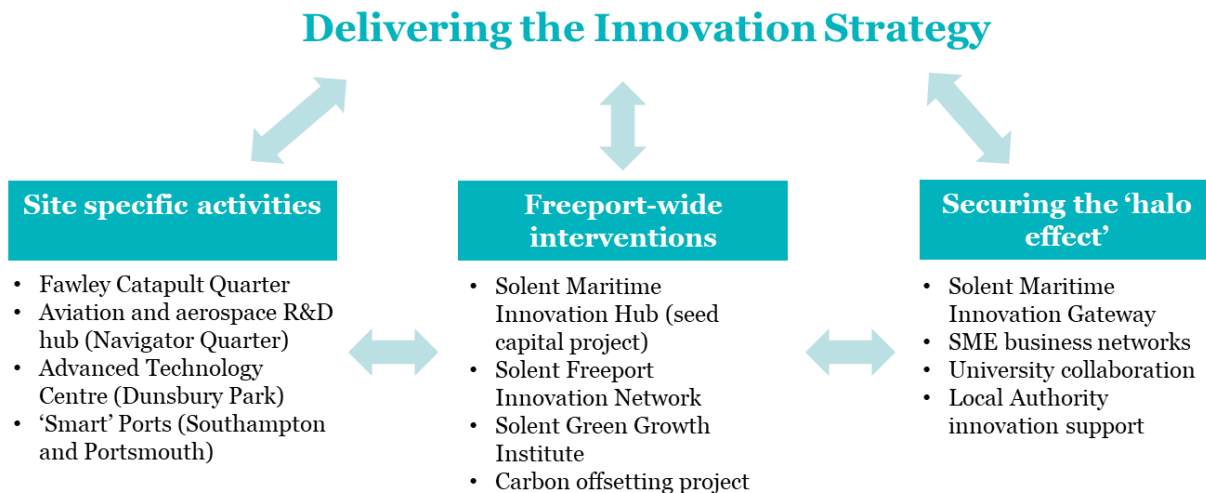


Invention Agency (ARIA). A key focus for innovation activity would be to monitor and interpret such initiatives for the benefit of Freeport partners, utilising our combined experience and infrastructure and liaising with colleagues from the Department for Business, Energy & Industrial Strategy (DBEIS).

## 2.2 Projects

Each individual customs and tax site has an important contribution to make in supporting a thriving innovation ecosystem across the Solent Freeport, and some specific examples of innovation projects and proposals currently being developed by Freeport partners are shown in the diagram below.

Figure 5: Solent Freeport Innovation Projects



Site-specific innovation activities and projects will be maximised and complemented through a range of Freeport-wide activities, interventions and initiatives. This includes the **'Solent Maritime Innovation Hub'**, a seed capital project which will operate in an expanded existing Solent Growth Hub and draw upon the range of existing support and incubators across the region within universities, research assets, the business base, and local authorities.

This will be complemented by the **Freeport Innovation Network**; a group of dedicated centres that reflect and support cutting-edge innovation within the diverse range of sector specialisms represented across the Solent Freeport. This includes the flagship **Solent Freeport Green Growth Institute (SFGGI)** which will translate the region's existing ecosystem of innovation into tangible and practical tools that help businesses decarbonise and support further innovation in the Solent.

By working proactively with our innovation partners across the wider region, our strategy also seeks to ensure that the **innovation benefits and opportunities directly arising from Freeport activity are diffused and maximised through a 'halo effect' across the wider Solent economy**. In this respect, the Solent Freeport will have a key co-ordinating role to play in promoting innovation across the wider SME community beyond specific tax and customs sites, building on the strong track record amongst Solent universities in working with SMEs on a range of R&D activity (such as the Portsmouth Business School Small Business Charter) as well as more recent partnerships such as the Maritime UK Solent funded Solent Maritime Innovation Gateway (MIG) which will help maritime businesses of all sizes build strong relationships in a flourishing environment of pioneering innovative technology. We will also leverage best practice and knowledge sharing support available from other sources such as the recently formed Freeport Innovation Network to ensure that innovation impacts can be accelerated and maximised across our region as far as possible.

Further detail about projects that will be delivered to respond to innovation opportunities in the Freeport area is included in the table below. We look forward to sharing details of further innovation projects as these are progressed in due course by Freeport partners.

Project name	Start/ end date	Key activities	Bodies responsible for delivery	Link to local innovation opportunities	Link to national innovation strategies, or initiatives
Solent Maritime Innovation Hub	01/07/22 - ongoing	<ul style="list-style-type: none"> <li>Day-to-day delivery of the Solent Freeport Innovation Strategy</li> <li>A high profile, creative, flexible and multi-user facility that fosters the innovation strengths of the Solent Freeport area</li> <li>To encompass a combination of virtual and physical support and activity</li> </ul>	Freeport in partnership with Solent LEP (under an expanded SLA)	Solent Maritime Innovation Hub will provide a focal point for the Solent's world-leading maritime innovation ecosystem	Aligns with a range of national strategies including Maritime 2050 and the UK Innovation Strategy
Solent Freeport Green Growth Institute	01/07/22 - ongoing	<ul style="list-style-type: none"> <li>Business support – developing tools for businesses</li> <li>Providing seed funding for innovation</li> <li>Creating testbeds for low carbon maritime technologies</li> <li>Training the green leaders of tomorrow</li> </ul>	Freeport in partnership with Solent LEP	Drawing on the region's existing expertise in low carbon technology and recent investment into pioneering innovations to specifically pioneer green growth skills and innovation	Aligns with a range of national strategies including The Ten Point Plan for a Green Industrial Revolution, Hydrogen Strategy and Net Zero Strategy
Cross-Port innovation group/network	01/07/22 - ongoing	<ul style="list-style-type: none"> <li>Joining up and leveraging innovation across the Solent's four Port gateways (Portsmouth, Southampton, Solent Gateway, Southampton Airport) and local universities to facilitate more effective joint working on 'port specific' innovation, for instance innovative port equipment, safety, emissions, decarbonisation and navigational safety</li> </ul>	Solent ports and universities	Opportunity to provide 'test beds' for technology due to the diversity of port operations, for instance testing equipment for 'innovators'	Aligns with a range of national strategies including Maritime 2050 and the UK Innovation Strategy
Fawley Maritime Innovation Centre	01/10/22 - ongoing	<ul style="list-style-type: none"> <li>A 100,000 sq ft multi-purpose innovation, R&amp;D, business incubation facility which will catalyse the 1m sq ft Fawley Innovation Business Park</li> <li>Looking to develop a maritime innovation cluster and help drive a maritime innovation strategy nationally towards a sector deal, working with BEIS, DfT Maritime, DIT, Maritime UK, NOC, MCGA, Ocean Infinity, etc. Expecting all universities to engage, probably to be coordinated by Southampton University's SMMI. Also making plans for a life sciences innovation centre focused on the interface between wellness and nutrition</li> </ul>	Fawley Waterside Ltd	The site has confirmed interest from a number of innovative marine manufacturing firms, with a focus on net zero, hydrogen propulsion and autonomous vessels	Aligns with a range of national strategies including Maritime 2050, UK Innovation Strategy, Hydrogen Strategy and Net Zero Strategy
Fawley Waterside Catapult Quarter	01/10/22 - ongoing	<ul style="list-style-type: none"> <li>A partnership with six Catapults is being established to create a 'Catapult Quarter' (Digital, Satellite Applications, Advanced Manufacturing/National Composites Centre, Connected Places, Energy Systems, Offshore Wind) in response to priorities for regionalisation in the recent BEIS Catapult Review</li> </ul>	Fawley Waterside Ltd	Building on local innovation opportunities across all Catapult themes	
Dunsbury Park Advanced Technology (Innovation and Skills) Centre	Delivery timescale is 2 years, dates dependent on	<ul style="list-style-type: none"> <li>A state of the art 33,000 sqft skills and innovation centre focusing on advanced manufacturing and engineering innovation, education and training in key areas including the development of new products, technologies &amp; process innovation</li> <li>To incorporate high quality business units, ancillary offices and training space</li> </ul>	Portsmouth City Council and Havant Borough Council	Focus on key cross-cutting technological enablers with particular application to Solent Freeport activity, for instance to promote and support technology innovation transfer from our flagship	Aligns with a range of national strategies including the UK Innovation Strategy

	availability of funding	<ul style="list-style-type: none"> <li>The centre will: <ol style="list-style-type: none"> <li>1. Provide a dedicated facility that is locally focused on supporting existing SMEs to maintain a competitive advantage within the advanced manufacturing &amp; engineering sector</li> <li>2. Enable local SMEs to work collaboratively together to develop products, processes and technologies to support supply chain opportunities &amp; sustainable growth in the long term</li> <li>3. Create a strong supply chain for inward investment opportunities</li> <li>4. Enable SMEs to work with the Higher and Further education sector to develop bespoke training programmes led by the private sector</li> <li>5. Provide a skills and training academy that is accessible by local residents in the neighbouring deprived wards of Leigh Park, developing a talent pool of local residents with the necessary skills to secure employment in growth sectors</li> <li>6. Deliver technical qualifications and pathways into employment to include apprenticeships, NVQs, T-Levels &amp; work placements</li> </ol> </li> </ul>		marine and maritime sectors to other locally and nationally important sectors such as aviation, artificial intelligence and clean growth	
Navigator Quarter R&D Hub	01/07/25 - ongoing	<ul style="list-style-type: none"> <li>Our vision for Navigator Quarter is to combine its unique rail and airport infrastructure with a R&amp;D 'hub', in partnership with the Southampton Science Park (SSP), and in demand industrial and logistics units</li> <li>To 'anchor' this we will deliver 8,700 sq.m of R&amp;D space at Navigator Quarter, which will include a 1,800 sq.m 'incubator'. The 'hub' is planned on the SIAL component of Navigator Quarter, and will include a focus on tech, logistics and aviation-related occupiers</li> <li>We expect to also to attract a similar sectoral focus on our site to with the Southampton Science Park, which has a range of hi-tech, bio and med tech sectors</li> </ul>	SIAL and potentially Southampton University/ Southampton Science Park	Presence of Southampton University and Southampton Science Park in close proximity to Navigator Quarter	Aligns with a range of national strategies including the UK Innovation Strategy and Jet Zero Strategy
Solent Hydrogen Integrated Cluster	TBC	Initial feasibility work to explore scope to facilitate an exemplar demonstration region for hydrogen in the Solent	Solent Freeport in partnership with University of Southampton	The Solent is a region with the constituent pillars to support a hydrogen economy and associated infrastructure. This includes its production, transportation and utilisation within the region and beyond	Aligns with a range of national strategies including The Ten Point Plan for a Green Industrial Revolution, Hydrogen Strategy and Net Zero Strategy

## 2.3 Resourcing

Day-to-day delivery and resourcing of the Freeport Innovation Strategy will be co-ordinated through the Solent Maritime Innovation Hub, a seed capital project which is being established as an expanded existing Solent Growth Hub. Its role within the Freeport is to:

- Provide end-users and landowners appropriate advice on facilitating innovation on their tax site, in particular offering links to innovation hubs across the area;
- Co-ordination of Freeport wide initiatives and programmes relating to innovation; and
- Monitoring the innovation activity across the Freeport to ensure the Freeport is meeting its objectives.

SFCL will secure this expanded Growth Hub resource from the Solent LEP under a varied and expanded existing Service Level Agreement in order to provide increased delivery capacity for innovation.

The Solent Maritime Innovation Hub will encompass a combination of virtual and physical support and activity, including a high profile, creative, flexible and multi-user facility that fosters the innovation strengths of the Solent Freeport area. It will bring together existing and new businesses, alongside our three Universities and wider research and regulator assets such as the National Oceanography Centre and the Maritime and Coastguard Agency (MCA). It will provide a focal point for the Solent's world-leading maritime innovation ecosystem, and a physical presence for the recently launched Solent Maritime Innovation Gateway (MIG). The physical facility will provide flexible accommodation with shared bookable meeting rooms, workshop / test space and equipment. It will crowd in our innovators and assets and form an integral part of our value proposition to new investors at our tax and customs sites and so form a deliverable of both our Freeport Innovation Strategy and our Freeport Trade and Investment Strategy.

It will offer a world-leading facility for these emerging technologies and will support the drive for greater efficiencies within our port-specific, and port-related operations. Innovation will not be restricted to port operations and will look to address global maritime challenges and support the ambitions of the UK's Maritime 2050 strategy and the delivery of the Government's Clean Maritime Plan and support collaboration between the 10 Solent based organisations that were successful through the Clean Maritime Demonstrator Competition and others that may be successful through the forthcoming rounds.

The Solent Maritime Innovation Hub will work as part of the Freeport Innovation Network to provide a platform for the cross-sector innovation mission through Freeports and share knowledge, best practice and challenges for mutual benefits across regions for the members. It will also provide a central point for actors (from within the Solent, the wider UK and internationally), to come together to develop collaborative bids for funding. It will be available to showcase innovations and host events, including innovation challenge sprints, where experts come together to solve a problem. We will issue a call for challenges from our Freeport businesses and develop solutions.

It will host a SME grant fund programme (run for SFCL), which will be providing up to 50% match funding to support the testing, development and commercialisation of innovations (products and services), making available support from our research assets (testing and expertise) in a ground-breaking new programme.

Whilst maritime will be a focus for innovation activity (with particular areas of focus including clean maritime fuels, new methods of maritime proposition, autonomous marine vessels, subsea vessels, as well as port productivity innovations), the facility will provide a hotbed for all innovation. The facility will have a spirit of openness and collaboration at its core and will work with other UK Freeports to share intelligence and ideas. It will also provide a focal point for such collaborations both with UK partners and international partners. Maritime UK Solent is already working with Maritime Turku in Finland to develop bilateral relationships with the Solent maritime cluster.

The Solent Maritime Innovation Hub will also draw upon the range of existing support and incubators across the region within universities and local authorities. We believe that linking existing resources into a network of centres will be cost effective way of building the ecosystem, while focusing any additional resource on

specific new centres. This will be complemented by the Advanced Technology Centre at Dunsbury Park which will focus on key cross-cutting technological enablers with particular application to Solent Freeport activity, for instance to promote and support technology innovation transfer from our flagship marine and maritime sectors to other locally and nationally important sectors such as aviation, artificial intelligence and clean growth.

Beyond this, much of the innovation activity taking place within the Solent Freeport will be resourced and delivered directly by the private sector, through a range of commercial ventures, developments and projects proposed by individual customs and tax sites operators and their end business users (as set out above).

## **2.4 Funding**

The Solent Freeport will draw on a range of funding sources to deliver innovation activity and projects, including seed capital funding, retained business rates and private sector finance. Expected funding sources for our emerging innovation projects are summarised in the table below.

Project name	Cost	Funding Source(s)	Funding Status	Funding Start/End	Actions required to secure funding
Solent Maritime Innovation Hub	£1.65m	Freeport seed capital funding, Solent LEP, private sector	Secured, subject to seed capital projects being approved	01/07/22 - ongoing	Seed capital funding to be secured
Solent Freeport Green Growth Institute	TBC	Retained business rates pool	Not secured – but specified in retained rates approach	01/07/22 - ongoing	Retained rates to be secured
Cross-Port innovation group/network	TBC	TBC if requires funding – if so, retained business rates pool	Not secured	01/07/22 - ongoing	Retained rates to be secured, if required
Fawley Maritime Innovation Centre	Up to £44m	Private finance, local authority funding, retained business rates pool, some enabling site works to be funded through a Homes England loan	To be secured following tax site status confirmation, specified in retained rates approach	01/03/22 - ongoing	Retained rates to be secured, Homes England loan to be secured (March/April 22), issue Investment Memorandum (May 22), secure equity investment (Q4/22)
Fawley Waterside Catapult Quarter	Up to £8m	Private finance, local authority funding, retained business rates pool, some enabling site works to be funded through a Homes England loan	To be secured following tax site status confirmation, specified in retained rates approach	01/03/22 - ongoing	Retained rates to be secured, Homes England loan to be secured (March/April 22), issue Investment Memorandum (May 22), secure equity investment (Q4/22)
Dunsbury Park Advanced Technology Centre	£6m-£9m	Sources include Freeport seed capital (future rounds), Levelling Up Fund, Freeport retained business rates pool, Local Authority Capital	Not yet secured	01/07/22 - ongoing	Retained rates to be secured
Navigator Quarter R&D Hub	TBC	Private finance and retained business rates pool (if viability gap is identified)	To be secured following tax site status confirmation	TBC	Retained rates to be secured, if required
Solent Hydrogen Integrated Cluster	TBC	Retained business rates pool	Not secured	TBC	Retained rates to be secured

With regards to specific plans for accessing wider innovation funding, Fawley Waterside is currently developing green hydrogen electrolysis proposals and awaiting terms for the next round of BEIS Net Zero Innovation Portfolio grants (a total of £240m over 5 years) and contracts for difference subsidies (which could potentially exceed £1bn). Green hydrogen volume will depend on successful offtake relationships, but interest has already been secured from investors and from industrial partners such as Sumitomo Corporation.

The Solent Freeport Consortium Limited (SFCL) is actively exploring opportunities to secure wider government funding to support further decarbonisation activity through the Freeport, for instance through the £20m Clean Maritime Demonstration Programme to develop clean maritime technology announced in the Ten Point Plan for a Green Industrial Revolution.

Parts of the Solent Freeport geography are actively working with Government through the Future of Transport programme to shape transport innovation through Government-funded drone and sustainable freight trials and we want to use the Freeport innovation ecosystem to help shape technological innovation in these – and other – key areas.

Freeport partners are also currently developing funding proposals for a Solent Freeport-wide carbon offsetting project to explore how we can proactively utilise the Solent's unique maritime natural capital (from both land and sea) to remove carbon from the atmosphere and mitigate future effects associated with the various components of Freeport activity. Specific sources of innovation funding are to be identified.

## **2.5 Governance**

Implementation of the Innovation Strategy will be overseen by the SFCL Operations and Delivery Committee, to which the Solent Maritime Innovation Hub and expanded existing Solent Growth Hub will directly report. This will provide leadership, accountability and performance management responsibility for innovation activity across the Freeport.

Further details on these aspects are set out in Section 5.0 Management Case of the main FBC document.

### **Freeports Regulation Engagement Network (FREN)**

The Solent Freeport welcomes the creation of the Freeports Regulation Engagement Network (FREN) and proposes to utilise this from an early stage to explore, enhance and accelerate potential innovative opportunities with firms and regulators.

A particular area of interest and opportunity for the Solent Freeport is around creating testbeds for low carbon maritime technologies, providing insights to improve the roll out of these technologies nation-wide. The Solent Freeport Green Growth Institute (SFGGI) in particular will look to make use of the regulatory sandboxes offered through the FREN to create testbeds to pilot innovative ideas around multi-modal autonomous operations and low carbon propulsion mechanisms, for example, trialling of autonomous vessels and control systems is already underway in the Solent.

The Royal Navy has stated its interest in supporting the development of a regulatory sandbox for autonomous maritime around Fawley Waterside.

Furthermore, and linked to the aspiration amongst Freeport partners to explore carbon offsetting innovations, there is scope through the FREN to streamline existing processes around licensing and accreditation for coastal restoration projects, with the Solent taking a UK-wide lead on this across all Freeports.

The Solent Freeport will formally engage with the FREN via an identified FREN co-ordinator operating within the Solent Maritime Innovation Hub. We look forward to discussing further opportunities as the FREN becomes established.

## 3. Monitoring and Evaluation

### 3.1 Outputs

Solent Freeport innovation projects will deliver a wide range of benefits for businesses within the Freeport area through the private and public-sector R&D investment secured into the Solent, the dynamic environment it creates by bringing together innovators to collaborate in new ways, and through the provision of controlled spaces to develop and trial new ideas and technologies. Wider benefits will also be realised by the new markets this creates for UK products and services, the productivity improvements this drives within our key sectors, and through the jobs and investment secured into the Solent region.

A summary of expected innovation outputs at this stage is shown in the table below.

Output	Indicator	Target	Time	Projects that contribute to output
New technologies/ prototypes	Number of new technologies/ prototypes developed within Solent Freeport	At least 10	Within first 5 years of Freeport operation	Solent Freeport Green Growth Institute, Solent Maritime Innovation Hub, Fawley Maritime Innovation Centre, Fawley Waterside Catapult Quarter, Dunsbury Park Advanced Technology Centre, Navigator Quarter R&D Hub, Cross-Port innovation group/network
New innovation partnerships between private companies and academia	Number of new innovation partnerships in key Solent Freeport sectors inc maritime decarbonisation, ports & logistics and clean growth	At least 5	Within first 5 years of Freeport operation	Cross-Port innovation group/network, Solent Maritime Innovation Hub, Solent Freeport Green Growth Institute, Fawley Maritime Innovation Centre, Fawley Waterside Catapult Quarter, Navigator Quarter R&D Hub, Solent Hydrogen Integrated Cluster
Businesses supported	Number of new and existing businesses supported to adopt more innovative activity and operations	At least 50	Within first 3 years of Freeport operation	Solent Freeport Green Growth Institute, Solent Maritime Innovation Hub, Fawley Maritime Innovation Centre, Fawley Waterside Catapult Quarter, Dunsbury Park Advanced Technology Centre, Navigator Quarter R&D Hub
Innovation funding secured	Value of innovation funding secured to support innovation activity within Solent Freeport	At least £50m	Within first 5 years of Freeport operation	Solent Freeport Green Growth Institute, Solent Maritime Innovation Hub, Fawley Maritime Innovation Centre, Fawley Waterside Catapult Quarter, Dunsbury Park Advanced Technology Centre, Navigator Quarter R&D Hub, Cross-Port innovation group/network, Solent Hydrogen Integrated Cluster

### 3.2 Outline programme of future activities

Delivery of the Solent Freeport Innovation Strategy will be led by the Solent Maritime Innovation Hub which will bring together innovation stakeholders from across the Solent and beyond, and provide physical collaboration space to foster innovation activity.

In this context, an initial programme to deliver on this strategy has been defined as follows.

	Description of activity / timeframe
1	Establish the Solent Maritime Innovation Hub and expanded existing Solent Growth Hub, by mid-2022
2	Development of Implementation Plan for innovation activity, by end of 2022
3	Appoint a dedicated Innovation Programme Manager to oversee development and delivery of the Innovation Implementation Plan, by end of 2022
4	Create innovation challenge events linked to opportunities to strengthen port related and port specific operations within the three key areas of expertise/ global innovation strengths recently identified by the Solent Maritime Innovation Gateway: Clean Maritime; Connected Maritime; Autonomous Maritime
5	Attend VentureFest in November 2022 with a dedicated Freeport Expo
6	Seek to sign an MoU with Innovate UK to deliver tailored sessions in the Solent
7	Establish a test bed for new methods of marine propulsion with a project in delivery, by end of 2023