



# Getting Building Fund

## ‘Silicon Wharf’ – Woolston Regeneration

Low carbon marine logistics technology and control centre

Project Business Plan

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## 1. Executive summary

The future of marine transportation is shifting towards low CO<sub>2</sub> emission vessels and a reduced number of crew at sea. This will be realised through a large number of multi-role electric and hybrid robotic vessels. Ocean Infinity has committed funds to build a fleet of these vessels and will locate its control, data, maintenance and engineering centre in the Woolston riverside regeneration area of Southampton. This project application is to match business committed funds to double the size of the control centre, establish a robotic operator training centre and collaboration space. This project will directly create 100 high value jobs, train operators of the future and support the local marine technology supply chain. It will seed a hotbed of innovation around low carbon marine logistics at a site ideally located within the Solent. It will lead to collaborative projects with other local tech companies and the Universities.

Ocean Infinity have worked with the Solent LEP to develop a shovel ready project for the Government's Getting Building Fund. The background property contract, architect's work and planning permissions are all complete. A proposal has been made for £1.4m in funding which is matched by £2.75m from Ocean Infinity to develop the Woolston site. Ocean Infinity are also making further investments in robotic vessels and the future operating costs to run and support them from Southampton. An additional £12m+ of orders have already been given to Solent based companies.

The Woolston area of Southampton has a proud maritime heritage having been the home to famous shipyards such as Vosper Thornycroft. Unfortunately this yard closed in 2004 and the area has had little economic success since. This project 'Silicon Wharf' will inject a new lease of life into the maritime industry in this area and create 100 jobs in the short term with more in the future. The site will be developed as a remote operations and data centre for robotic vessels, ensuring Woolston and the wider Solent area have a significant role in the next chapter of maritime development.

The funding would scale an existing plan. It would grow the size of the control and data centre (creating more jobs) and also, very importantly, create a training and development facility which can not only train operators of the future but also be used in collaborative technology projects with local universities and businesses.



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## 2. Company background

Ocean Infinity is the world leading marine robotics company that deploys autonomous robots, typically in fleet formation, to obtain large amounts information from the oceans and seabed. We deploy autonomous technologies to capture ocean data and deliver maritime solutions whilst minimising our environmental footprint.

Our team was formed in 2017 by a small team who were driven to transform ideas into reality, and to ensure that the company adopted a culture of curiosity, challenge and innovation throughout its divisions. An environment has been created that is built on trust, careful decision making and an ability to manage and manipulate large amounts of data. We serve a wide variety of market segments, including the energy sector, renewables, subsea cables, governments, and navies. We seek to rapidly provide answers for anyone needing information relating to oceans and the seabed.

Our core belief is that the seemingly impossible can be achieved with innovative, creative thinkers and cutting-edge technology have remained at the heart of the company. We operate two robotic fleets: The Armada fleet and the Infinity fleet. Our Infinity fleet is made up of fourteen autonomous underwater vehicles that are currently operating in oceans globally. Our Armada fleet will initially comprise of fifteen robotic ships that will be operational in early 2021. Our fleets are equipped with cutting edge sensors and navigation technology and can operate down to 6,000 meters depth. Not only do we deliver outcomes faster and at higher quality than anyone else, but we do so with the lowest environmental impact possible.

As our business continues to prove marine robotics in more and more applications we have most recently developed a 'shuttle' business which will provide low, and in some scenarios zero CO<sub>2</sub> emission logistics operations.

### **Pioneering Fleet Technology**

We have achieved a world first, setting industry standards by being the first company in the industry to pioneer the use of multiple AUVs deployed from a single vessel; improving efficiency and reducing costs at the early phases of field development design. Using a single-vessel, multiple AUV configuration demonstrated the ability to survey large areas of seabed at high-resolution to simplify route evaluation and save cost compared to single-AUV operations. It was synonymous with Ocean Infinity's desire to challenge industry norms, and to constantly strive to find safer, more efficient ways to operate and provide a higher level of service to clients.





The success of AUV fleet operations has placed the company at the forefront of change and this is clear with the build of our new and truly pioneering fleet of robotic ships. The Armada fleet will be the world's first carbon neutral shipping fleet. Our robotic ships use hybrid propulsion technology and will emit up to 90% less CO<sub>2</sub> than a conventional survey vessel. In certain applications we will be able to run fully electric, completely emission free. Any remaining carbon emissions that are produced by Armada operations will be sequestered via approved carbon offsetting programs. Environmental sustainability is at the heart of our business and we are dedicated to creating more sustainable solutions to protect our oceans.



### 3. Project Description and Business Case

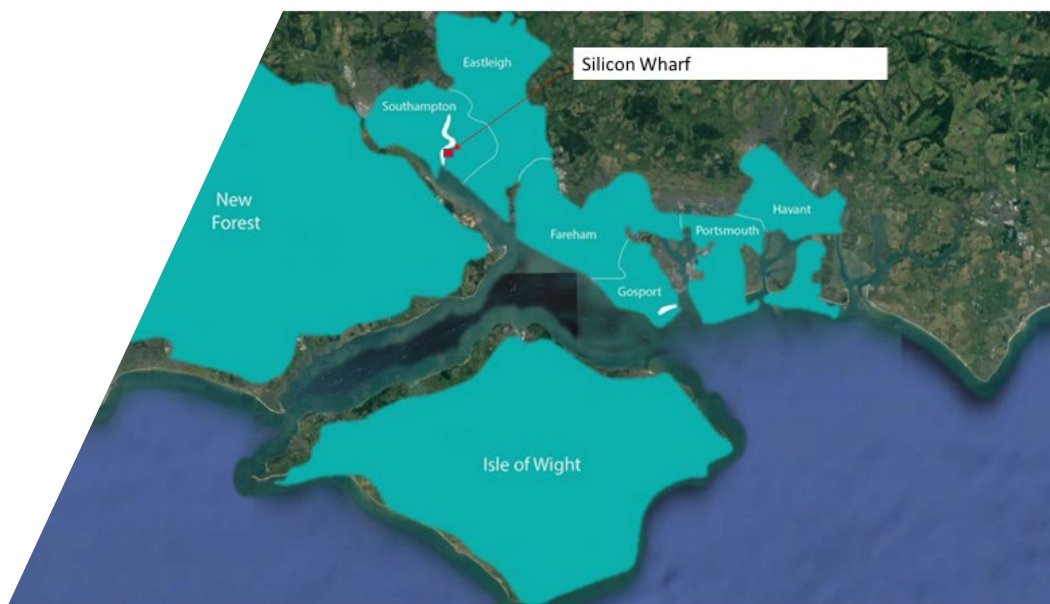
#### 3.1 Centre Description

This Getting Building Fund project is to deliver a low carbon marine logistics technology and control centre within the Woolston Riverside Regeneration Area. The objectives and public benefits of this centre are described within this business case.

The centre itself is being created on an area that was previously used for marine employment as a shipyard. It is shown in the image below:



The site is well located within the heart of the Solent Region and offers access to key businesses and organisations that all have potential to grow in the low carbon marine industry. The location is shown on the map below:



An empty building was erected for use in marine employment but has remained empty after several failed attempts at occupation. An image of this building is provided below:



Ocean Infinity have leased this building and are privately investing to make it an operations, data and maintenance centre for its new fleet of robotic ships. This includes some material enhancements to the building as represented in the image below:



Ocean Infinity is procuring a fleet of robotic ships and this Getting Building Fund support has been a significant help in reassuring investors and helping with the case to grow the initial fleet from 10 vessels (~£75m) to 20 vessels (~£150m). These robotic vessels will be used in the growing sector of low carbon logistics but also offshore data collection and inspection. The vessels are currently in build and a representative image of the 21m version is shown in the image below:





The Getting Building Fund supported project will achieve several objectives. The first is to grow the size of the remote operations centre to become a world class facility (we believe the largest in the world) and help set standards for how these should be built and operated. The GBF support will be used to double the size of the initially planned centre and an artist's image of the control space is provided below:



The centre will also house a training facility to be used in up-skilling people to be able to work in the field of low carbon marine logistics. This will include an operator station for training purposes, an ROV tank for training maintainers in the use of ROVs, and training spaces for working on control electronics, satellite communications equipment, electric motors and battery technology. An artists impression of a training control station is provided below courtesy of one of our project suppliers (Vard). The actual design built may vary from this.





The centre will also provide collaboration spaces where Ocean Infinity can work with local Universities and high-tech businesses to develop projects within the low carbon marine logistics sector. Several of these have already been identified including a major 'green marine' project starting in 2021 to develop the use of Fuel cells and Ammonia in the marine industry. This collaborative space will not only provide working desks/whiteboards and creative spaces for organisations to come together but also direct access to the operating centre, communication links and robotic ships. This collaboration zone is shown in the diagram below.



In addition to the control centre, training facility and collaboration zone this project will deliver 100 new jobs. Recruitment for these has already started and will continue during 2021/2. Many of the roles will require the training centre to be operational.

Detailed within this business case are the strategic, economic, financial, management and commercial cases. The team at Ocean Infinity are grateful to the Solent LEP for the support on this project and are available for follow on meetings and presentations to support the project.