## Global Underwater Hub

## **The Blue Opportunity**

unlocking a depth of sustainable wealth under the ocean



How the UK's underwater industry will capitalise on the blue economy to deliver one of the biggest opportunities for growth and job creation in the country's energy transition and sustainable recovery from the pandemic.

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### Introduction

Like much of the activity undertaken by the UK's underwater industry, its contribution to the economy has largely been hidden from view. Until now. The rise of the blue economy and the acceleration of the energy transition are resulting in an unprecedented scale of opportunity on which the country can capitalise.

A new economic frontier beckons. The oceans hold rich resources with significant potential for the world's economies, for employment and for pioneering innovation and science. Our oceans are increasingly recognised as crucial in addressing the challenges facing the planet, from food security and climate change to the provision of energy and improved medical care. But at risk of over-exploitation, pollution, declining biodiversity and climate change, realising their full potential demands responsible, sustainable and innovative approaches.

Despite, or indeed because of, these challenges, the global blue economy is predicted to reach \$3trillion by 2030, according to the OECD (Organisation for Economic Co-operation and Development). The global underwater segment is forecast to grow from £50bn to £140bn per annum by 2035. And it is this future addressable market which presents such a compelling opportunity for the UK's world-leading underwater supply chain.

With its market leading position, the UK's underwater industry is arguably one of the country's biggest opportunities for growth over the next 15 years, and one that can help accelerate our net-zero ambitions.

The UK's underwater industry is a high-tech, export-driven engineering and manufacturing success story with revenues of almost £8billion, around half of which are exports, supporting almost 45,000 UK jobs. As such with its high growth potential, it is a strategically important sector in the UK.

Often described as NASA but on the seabed, the innovative and ground-breaking underwater industry is prevalent in several market sectors, from offshore energy and defence to aquaculture, telecommunications and seabed mineral resources.

Underwater skills, expertise and technology, honed in the UK, have been in global demand for several decades and currently command about a third of global marketshare (estimated at £24billion in 2018/19).

But as the opportunities for growth in all underwater market sectors become more compelling, competition from other countries has intensified. Brazil, Canada, France, Japan and Norway for example are investing heavily to challenge the UK's leading position and marketshare.

Unlocking this depth of opportunity under the oceans is key to meeting the long-term shift towards a low carbon society and sustainable use of the oceans' resources and, in turn, to creating significant additional revenues, jobs, technology and exports for the UK.

The challenge lies in taking action to ensure that the already globally competitive underwater industry in the UK has the skills and capability to capitalise on this ocean of opportunity.

Should the UK maintain its current market share, in line with global growth in the underwater segment of the blue economy, then by 2035, revenues could increase to £45 billion. This industrial transformation would create significant additional GVA, with the potential for a further 180,000 jobs.\*

This White Paper provides an overview of the industry, its outlook, the challenges it faces and outlines how this industrial transformation will be achieved.



<sup>\*</sup> Global Underwater Hub Business Case, authored by Scottish Enterprise, Subsea UK ONE and the Oil & Gas Authority.



## The UK underwater industry

The underwater industry comprises several market sectors: offshore energy, aquaculture, defence, seabed mining and telecommunications. Some of these sectors are mature but provide a strong base from which they can grow through diversification. Other emerging sectors such as offshore floating wind, CCUS and hydrogen production offer future growth potential and opportunities to support the UK's energy transition and net-zero ambitions. However, regardless of their maturity, they share common themes and challenges which can be addressed by collaborating to adopt and adapt existing technology or creating new technological solutions.

The underwater industry, with its specialist skills and expertise, science and environmental know-how, engineering and technology, cuts across all these vertical market sectors.

Generating revenues of £7.8billion, 43% of which are attributable to exports, the UK's underwater industry directly and indirectly employs 45,000 people.\*

A significant contributor to the UK economy, the industry directly supports £11 billion of gross value add (GVA) per annum.

	UNDERWATER MARKET SECTORS														
45,000 employed	Offshore Energy						Aquaculture			Defence		Ot	Other		
£7.8 billion industry															
of which £1.8 billion is in renewables	Oil & Gas	Offshore Wind	ioning	ccus	Tidal & Wave	Hydrogen		Finfish	Shellfish	Mariculture	Submarines	Naval	Telecoms	Subsea Mining	
and 43% is exports	Ö	shore	miss		Jal 8	НŠ			꼰	<b>Jari</b> c	mqn		<u>le</u>	Sea	
= 1/3 of global market		Offs	Decommissioning		Ĕ					_	S			Sub	
Common	People & Skills														
Common cross-sector themes	Science & Environmental														
	Engineering & Technology														

#### **Growing up in offshore energy**

Underwater activity has been around since humankind started exploring the world underneath the oceans. From the very first divers to the invention of the submarine in the 17th century, there's been a desire to use the seas and their resources for our health, education, food and our security. Indeed, the early advances in underwater technology have their roots in defence, ocean science and oceanology.

However, it wasn't until our hydrocarbon energy supplies started to be harvested by ingenious subsea technology and techniques in the North Sea that the underwater industry came of age. Much of this ground-breaking technology and innovation was adopted and adapted from the defence and aerospace industries, addressing common goals of economics, safety and challenging environments. Subsea developments and tiebacks have allowed reservoirs to be accessed more remotely, cost effectively and with a smaller carbon footprint.

At the outset of North Sea oil and gas, such technological advances were akin to spaceflight, hence the comparison to NASA, but on the seabed.

As global deepwater and UK oil and gas production became more dependent on underwater techniques, a strong UK based supply chain evolved, providing world-class expertise to all the major offshore oil and gas provinces worldwide.

UK companies have developed some of the most successful products, techniques and underlying technologies to enable efficient, economical and environmentally robust subsea oil and gas extraction processes.

As a result, the UK is universally recognised as a global leader and pioneer in underwater technology and engineering with a supply chain that is renowned for project management, design engineering, asset and operational management, design and manufacturing of advanced equipment, research and development, safety management, training and education and professional services.

The subsea oil and gas sector, accounts for around 66% of the UK underwater industry's revenues\* and has a major role to play in delivering a net-zero future, helping to produce secure, affordable, safe energy and to develop future low carbon solutions.

#### **Transferred to Offshore Renewables**

The UK's underwater supply chain SMEs, the backbone of innovation in addressing industry demand, are driving forward capabilities which are highly transferable into marine and offshore renewables and other sectors.

Knowledge transfer across industries, adopting and adapting to the specific applications, is key to accelerating and resolving many of the challenges in offshore renewables. This sector now accounts for around one quarter (25%) of the underwater industry's revenues.\*

In the last two decades the UK has fully embraced offshore wind, and currently ranks as the world leader for deployed offshore wind farms with 11GW. With a significant infrastructure located under the water, the offshore wind sector is increasingly reliant on the capabilities of the subsea oil and gas supply chain in both the capital investment phase through design, manufacture and installation activities, and in the operating phase through inspection, repair and maintenance activities.

These skillsets and technology are directly transferrable, particularly to offshore fixed and floating wind, across the globe, as countries such as USA, China and other western European mainstays increasingly look to wind to broaden their energy portfolio.

Additionally, prospects are promising for the development of tidal current energy, directly followed by wave energy with a range of pilot projects currently deployed in UK

waters. The key to the future success of ocean energy relies on the rapid development of technological advancements and the successful completion of demonstration projects.

A multitude of opportunities exists for companies operating in the underwater industry, based on the strengths inherent in the offshore oil and gas supply chain, including project management and development; environmental, geophysical, geotechnical surveys; turbines and rotating equipment; seabed engineering; structural engineering; installation of platform and foundation structures, moorings, cable arrays and connectors; electrical systems; operation and maintenance services; diving, ROV, and underwater services and skilled technicians.

#### **Delivering in Defence**

With an admirable track record of rising to industry challenges and adopting its learnings and technologies to meet the demands faced in a range of underwater operating conditions, the defence sector has a strong supply chain, but recognises the value in cross-sector capabilities.

Significant collaborative work has been underway for several years between UK Defence Solution Centre (UKDSC) and Subsea UK on behalf of the Ministry of Defence (MoD) and the Royal Navy looking to use the underwater industry's expertise to explore how advanced underwater technologies and innovation can be applied in naval operations and in-water engineering challenges facing the UK's submarine fleet.



Today's submarines rely on an array of external underwater and surface sensors to gain complete battle space awareness. UK underwater capability is strong in sensor technology such as vision systems, surface radar and underwater sonar. In addition, underwater expertise in intelligence gathering is increasingly important to submarine activities.

The capability within the underwater supply chain of particular interest to the defence sector includes diving, remote vehicles, inspection and repair. The key driver is autonomy to remove human intervention, thereby reducing risk and improving efficiency.

#### **Emerging in Aquaculture**

The UK's aquaculture sector, largely driven by activity in Scottish waters, contributes £1.8billion annually to the Scottish economy and supports 9,000 jobs according to Scottish Government statistics.

As this established sector, populated by small scale but highly innovative companies, grows and moves into deeper waters with more remote operations, offshore engineering expertise, automation, and robotics will be required.

These key strengths, offered by the underwater industry, along with its academic marine research capability, cross-over with environment assessment and marine monitoring as well as the development of intricate intervention tooling and job-specific sensor and monitoring are already supporting the aquaculture sector and will play a pivotal role in driving it forward globally.

#### **Communication under the sea**

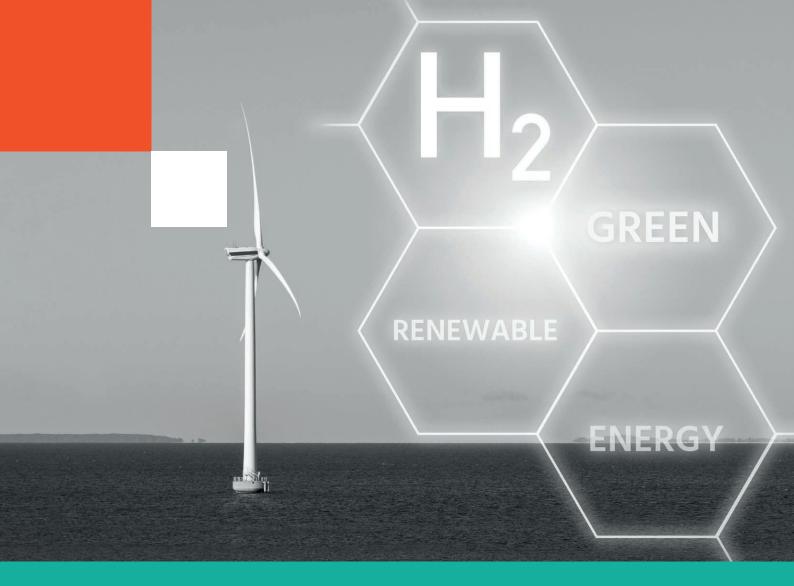
Global demand for internet and data transfer has led to the rapid growth in fibre optic cable laying under the sea. Telecom infrastructure companies have delivered or are delivering projects to connect various parts of the world using submarine cable systems. Currently, 99% of the data traffic that is crossing oceans is carried by undersea cables.

The market leading design and manufacturing companies for undersea cables are largely based in the Americas and Far East. But with its strong subsea pedigree, UK companies offer specialisms in deep water installation which are highly appealing to this market.

The defence sector is one of the most significant users of underwater wireless communication (UWC) systems. UWC has been gaining traction in various military applications to transmit data and information in an underwater environment. The applications range from submarine communications to diver communications and remote underwater monitoring, command, and control. Reliable communication plays a critical role in strategic markets such as military and defence where unreliable or unsecured underwater communication systems may introduce unacceptable risks.

Researchers are showing interest in measuring and monitoring underwater pollution through the application of underwater wireless sensor networks. UWC helps in monitoring the activities of companies in the oil and gas industry to keep a check on their contribution to underwater pollution. Such monitoring solutions are aimed at controlling underwater pollution and detecting climate change. As the demand for the fifth generation of wireless communication rises, researchers around the world are unleashing the potential of next-generation (5G) networks on underwater wireless communication (UWC).





## The scale of the opportunity

Our oceans, covering around 70% of the planet, are a source of health and wealth. They serve as waterways for trade and contain rich, valuable and diverse resources. In addition to producing nutritious food, oceans and coastal areas provide many socio-economic benefits in terms of employment, recreation and commerce as well as other crucial natural resources.

The UK is universally recognised as a global leader and pioneer in underwater engineering and technology which support the sustainable extraction of these valuable resources.

Overseas competitors cast covetous glances at the UK's excellence in environmental research, protection and management, project management, design engineering, asset and operational management, design and manufacturing of advanced underwater equipment and systems, research and development, safety management, training and education and professional services.

With such a pre-eminent capability in underwater technology and engineering, the UK is in an enviable position to exploit this enormous economic value.

According to the OECD (Organisation for Economic Co-operation and Development), the blue economy is predicted to reach \$3trillion by 2030.

The global underwater segment is forecast to grow from £50bn to £140bn per annum by 2035. This future addressable market presents unprecedented opportunities for the UK's underwater industry.

#### Offshore energy and energy transition

World leaders almost universally recognise the need to transition towards a low carbon future and tackle the issues of climate change. This will require a change in how energy sources are generated and sustained.

According to DNV's Energy Transition Outlook 2021 coal, oil and gas currently meet 80% of the global energy demand, by 2050 this is set to reduce to 50% for oil and coal with natural gas as the cleanest source. This pattern is mirrored in the UK, with natural gas set to decline from 70% to 50% of energy supply by 2050. With a mix of indigenous and imported gas required to meet these needs, there is a clear requirement for the sector to produce cleaner oil and gas.

In the near-term, the outlook for the oil and gas sector is strong. Global capital investment in oil and gas between 2022 and 2025 is expected to match the investment in offshore wind at approximately £170bn (source Westwood Global Energy). The investment consists of conventional expenditure, which has been a mainstay of the subsea supply chain, and expenditure targeted towards new technology solutions such as electrification, carbon capture utilization and storage (CCUS) and hydrogen production.

The synergies between existing technology and expertise in the underwater industry and what is needed to fulfil the CCUS and hydrogen opportunities are viewed as almost perfect.

Today hydrogen is created on commercial scale by extracting from natural gas (brown hydrogen) or coal (grey hydrogen). However both processes produce large quantities of  $CO_2$  as a by-product. CCUS is very closely linked to the transition

towards a hydrogen economy; the concept of blue hydrogen involves current extraction techniques using power from renewable sources coupled with disposal of CO₂ using CCUS.

Green hydrogen utilises electricity from renewable sources, such as offshore wind, to power electrolysers which have the ability to create hydrogen from water without the combustion of fossil fuels.

The opportunity for the underwater industry centres around concept and front-end engineering and design, covering the complete CCUS and hydrogen lifecycle. The role of the underwater industry will be critical, particularly where redundant subsea architecture has the potential to be repurposed for transport and long-term storage of  $\text{CO}_2$  in geological formations. New facilities such as substations, high pressure pipelines, high voltage cables will be required to integrate renewable power with offshore hydrogen generation and transport.

Several CCUS cluster groups have formed across the UK including two in Humberside and Teeside, which have recently secured government funding, and the Acorn project in Scotland which is earmarked for future funding.

Meanwhile, with the end of life approaching for a number of existing oil and gas fields, decommissioning presents an important economic opportunity for the UK.



An estimated £15.3 billion will be spent in the next 15 years on decommissioning activities in the UK sector of the North Sea. Over 50,000 items of subsea infrastructure will require to be removed amounting to 18% expenditure worth £3 billion to the subsea supply chain.

Globally the prize is bigger, removing the deepwater infrastructure in areas such as West Africa and Gulf of Mexico will require sustained innovation. Subsea infrastructure can be removed in single pieces or sections and generally utilises construction support and dive support vessels.

#### Offshore wind

Offshore wind is forecast to grow rapidly in the UK, Europe and globally. Currently the UK has 11GW deployed, with the UK Government targeting 40GW by 2030 and ranging between 75-150GW by 2050. Similarly, international demand is set to grow with 235GW of new offshore wind capacity to be installed over the next decade under current policies. (source: Global Wind Energy Council Report 2021).

In the next five years, global investment in offshore wind projects is estimated to total approximately £170bn (source: Westwood Global Energy), of which up to £40bn is forecast in the UK. With the underwater elements, such as cables, foundations and structures making up 30-40% of the expenditure to achieve this, the potential for the underwater industry is vast. Significant operational expenditure is also required to operate and maintain offshore wind infrastructure which has a lifecycle of around twenty years. In addition to the required underwater inspection, repair and maintenance, there is an opportunity to introduce new technology and embrace digitalisation

and autonomous operations to deliver a step-change in managing these assets longer-term.

To date, offshore wind has generally been deployed in relatively near-shore and shallow water locations but, increasingly, developments are set to be located further from shore and in deeper waters. Floating offshore wind is rapidly emerging as the next frontier as countries without shallow coastal waters look to exploit their resources. This offers new technical opportunities to the marine and underwater communities with the transfer of offshore oil and gas subsea skills, knowledge and practices increasingly sought after by floating offshore wind developers.

#### Wave and tidal

With some of the best environmental conditions in the world for wave and tidal energy systems, the UK remains at the forefront of technology development in this space.

A number of pre-commercial devices have been deployed in UK waters as the sector strives towards technology convergence. With a recognised niche in providing reliable and predictable power on a localised scale, wave and tidal systems have a role to play in the energy mix.

Whilst it is recognised that tidal and wave energy systems have a higher levellised cost of electricity (LCOE) than offshore wind, the inclusion of wave and tidal energy systems for the first time in Round 4 of the UK's Contract for Difference (CFD) scheme offers developers and the supply chain a route to mature the technology, reduce life-cycle costs and grow the sector.



#### **Defence**

Analysis by the UK Defence Solutions Centre (UKDSC) indicated a total global maritime market worth almost \$800billion to 2029. Of this total, the underwater market comprises submarines and unmanned underwater vehicles which, when combined, are forecast to be worth \$287billion (source: UKDSC Project Onyx Report, 2019).

The maintenance and engineering support services across the whole defence budget accounts for around one third of total turnover and is a rapidly growing area as the UK moves towards the development of a more service-based defence economy.

As a result of the UK government spending review, defence science and technology spend is on the rise. The Defence Science and Technology Laboratory (DSTL) ensures that innovative science and technology contribute to the defence and security of the UK. Around 60% of the Ministry of Defence (MOD) science and technology research programme, managed through DSTL, goes to industry and academia to deliver.

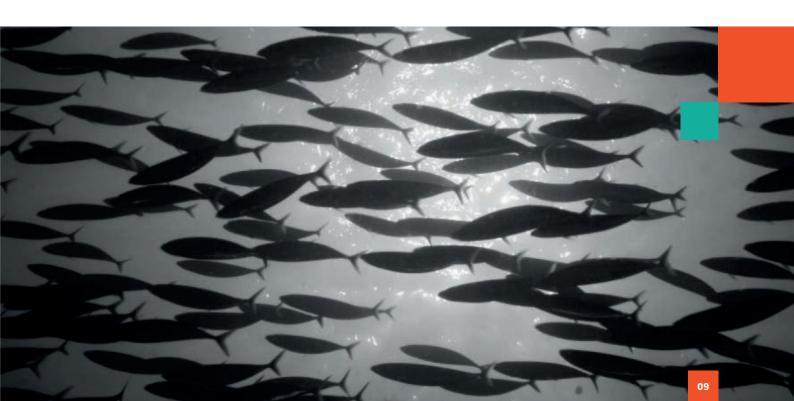
#### **Aquaculture**

Global aquaculture production exceeds beef production and amounts to almost half of all fish and shellfish consumed on earth. With a need to feed two billion people by 2050, expectations are that aquaculture demand will increase by 35% in the next 20 years. The global catch of wild capture fish is reaching stagnation point and experts say that virtually all new seafood will have to be farmed.

The prospects for marine aquatic products are predicted to come from sustainable sources in general and organic aquaculture. Additionally, growing algae shows significant long-term growth potential for a range of sectors including health, cosmetics, food and food processing, green chemistry and energy.

Experts believe that key areas of success for the UK will come from academic research into fish welfare and marine monitoring, but there are also signs of excellent long-term prospects for growing algae coupled with biofuel research, an area in which some of the major oil companies have already invested billions worldwide.





#### Seabed Mineral Extraction and Undersea Cables

Deep (more than 500m) seabed mineral extraction is currently a relatively small market. However, subject to demand for rare minerals and political climate, the sector could grow almost hundred-fold by 2030 according to allied market research.

The UK underwater industry could make key contributions in the environmental, robotics, machinery and intelligence areas of the seabed mineral extraction industry. These capabilities could be used to protect the world's marine environment. The seabed mining extraction industry's biggest risk is the potential impact on the environment, exacerbated by the relatively unknown nature of the deep ocean ecosystem and processes. With the UK having many of the best marine environmental scientists in the world, along with leading edge technology and research, the country could play a major role in ensuring sustainable seafloor and sub seafloor resource extraction.

The global demand for minerals and resources for the development of battery technology, particularly in the automotive area, will increase dramatically. This will lead

to the inevitable exploitation of the seabed where the density and concentration of such minerals are up to eight times greater than in surface deposits, and often at great ocean depths.

The UK can lead the world with its expertise in marine science and environmental management. Moreover, the key expertise needed in deep sea mining are those very capabilities the underwater industry has honed in the North Sea such as vessels, mooring and buoyancy systems, process, pumping and power systems, risers, umbilicals, cables, diving, ROVs and AUVs, controls sensing, monitoring and communication.

With the increased reliance on data and digitisation trans-continental underwater connectivity for commercial, scientific and national defence activities, the global undersea cable system market size is expected to double in size to around \$30.8bn by 2026 according to Reportlinker.com. With strong synergies from offshore renewable cable systems design, manufacture and installation, the UK supply chain companies are uniquely positioned to play a significant role.





## The challenge

With an extensive, forty-year track record of pioneering ingenuity, the UK's underwater industry supply chain and world-class research and development capability boasts a highly skilled, mobile and well-trained workforce. Supported by an excellent education and training network, the industry has the willingness and ability to diversify and capitalise on the opportunity presented by the energy transition and the blue economy.

#### **Strategic Leadership and Intelligence**

But unleashing this potential requires addressing the challenges facing the industry, not least of which is the increasing competition from other countries.

Given the scale of the opportunity, countries like Norway, France, Canada, Japan and Brazil are investing heavily in challenging UK's competitive position with significant public sector intervention and investment.

Unlike some of its competitors, the UK doesn't have a single authoritative body that provides the leadership, support and co-ordination for the blue economy sectors. The underwater industry needs direction in navigating the future landscape of its market sectors including clearly identifying the opportunities and the timeframe in which they will come to fruition.



This lack of leadership and the fragmented nature of the underwater industry means that there is little collaboration between the sectors. The current UK position can be strengthened by bringing together existing skills and knowledge to develop technology and services for use in multiple sectors.

Moreover, there is a growing need for commercially focused market intelligence that will provide clear routes to market to inform strategic decision-making within the supply chain. Greater visibility of the opportunities and clarity around accessing funding and specialist support are also crucial to growth.

#### Building on heritage, knowledge and network

Government and industry formed Subsea UK in 2004 to promote the subsea oil and gas sector at home and abroad, maximising its international and diversification potential.

This well-established and trusted organisation, represents, promotes and supports the growth of around 300 companies. It has been successful in helping the sector to flourish and to gain recognition as a crucial and diversified industry in its own right.

However, as a self-sustaining membership organisation, Subsea UK had limited resources and was unable to provide the strategic leadership and market intelligence as well as dedicated specialist support required.

Building on Subsea UK's heritage and retaining its experience, knowledge, network and membership, the Global Underwater Hub is seen as the key to unlocking the underwater industry's potential in all its vertical market sectors.









# How the UK will capitalise on the opportunity

The opportunity for the UK's world-leading underwater industry is one that cannot be missed. Indeed, the potential of this industry must be exploited for both the economic and environmental benefits to be accrued.

In understanding its inherent strengths and exploring its constraints, a compelling case was made for a new fit-for-purpose, strategic organisation that would provide the required leadership, support and co-ordination for the industry to maximise the opportunities presented by the blue economy and the energy transition.

With support from the UK and Scottish Governments, the Global Underwater Hub (GUH) has been created to harness and support the underwater experience and expertise across all its market sectors, promoting collaboration and cross-fertilisation to deliver a step-change in the development and internationalisation of technology and services.

A new strategically focused, intelligence-led organisation, the GUH will transform the UK's underwater industry into one of the largest and fastest-growing industries in the country, accelerating the drive to net-zero and creating high value sustainable jobs and exports.



Harnessing the UK's combined underwater expertise in engineering, environmental science, technology, services and skills, the GUH will enable the UK supply chain to successfully compete in the underwater sectors of offshore energy, defence, aquaculture, telecoms and subsea mining across the globe

Led and governed by industry, the GUH will deliver significant export growth, promote cross-sector collaboration and innovation to fast-track solutions for multiple underwater challenges, develop skills and capabilities to drive UK competitive advantage and support the accelerated growth of new and existing British underwater businesses.

The GUH will provide access to the largest, cross-sector underwater community in the world and offer commercially driven market intelligence, expertise, contacts and specialist support to attract new investment and build value in the UK's underwater industry.

#### The business model

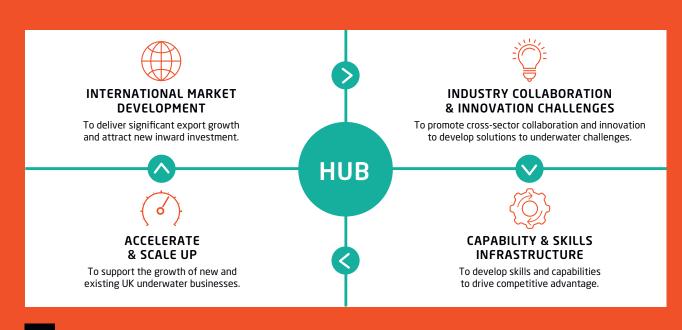
As an intelligence-led organisation, the GUH will provide access to commercially-driven market insight and analysis, along with multi-sector expertise to identify, assess and prioritise the opportunities to help companies make the right decisions about growing their business.

Concerted efforts around global market data-sharing and partnership working with a dedicated team of experts, analysts and researchers will ensure companies have access to the latest market insights making sure they are better informed and connected to the specific global growth opportunities which are right for them.

The GUH will connect companies with the market opportunity to deliver the underwater solutions of the future and promote cross-sector collaboration among companies, organisations, technology centres and academia to drive innovation and meet industry demand and challenges.

This multi-sector collaboration will ensure cross-sector challenges and opportunities are shared, enabling R&D efforts to be coordinated, tackled and solved with outcomes shared across the industry. An example is in underwater robotics where remotely operated vehicles, initially designed for offshore oil and gas installation and maintenance operations have evolved into autonomous vehicles and are being used in offshore wind, the maintenance of seabed telecommunications cables, the management of fish farms and for through-water communications in the defence industry.

Dedicated, specialist expertise will support companies to scale-up and accelerate their growth while and industry-wide approach to the development of supply chain skills and capabilities, will ensure the UK remains a world-leader in underwater know-how and grows its global market share.





The GUH value proposition can be summed in three words: ACCESS, CONNECT and GROW.



#### **ACCESS**

Access to strategic market intelligence and multi-sector expertise to identify, assess and
prioritise the opportunities to help make the right decisions about growing your business



#### **CONNECT**

 Connect companies with the market opportunity to deliver the underwater solutions of the future and promote cross-sector collaboration among companies, organisations, technology centres and academia to drive innovation and meet industry demand and challenges



#### **GROW**

- Specialist expertise, market intelligence and collaborations to accelerate growth
- Support to develop supply chain skills and capabilities, ensuring the UK remains a world-leader in underwater know-how and grows its global market share

#### Bringing together people, places and ideas

With a physical presence in Aberdeen, Newcastle and Bristol, covering the regions with the largest clusters of underwater activity, the GUH will promote cross-sector collaboration between companies, organisations, industry bodies, technology and innovation centres and academia across the length and breadth of the UK.

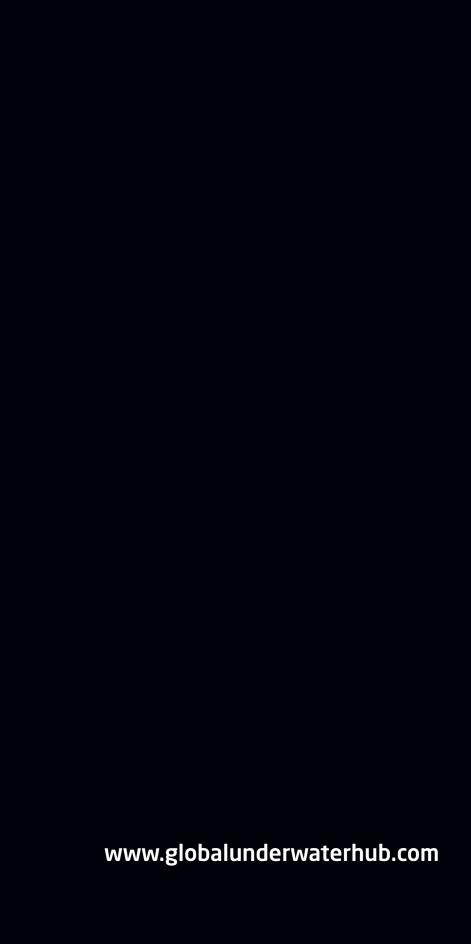




## **Summary**

The exponential growth of the blue economy presents an unprecedented scale of opportunity on which the world-renowned UK underwater industry can capitalise.

- The UK's underwater industry, currently valued at almost £8billion, has the potential to grow dramatically in line with the global growth projections for the underwater segment of the blue economy. Maintaining a third of a global market, set to increase from £50billion to £140billion, could deliver an additional £20billion, or more, in exports for the UK.
- The GUH has been established to transform the UK's underwater industry, creating high-value, sustainable jobs, technology and exports. It will accelerate the energy transition, helping the UK achieve net-zero targets more quickly.
- By harnessing, promoting and supporting all sectors of the industry, the GUH will deliver a step-change in the development and internationalisation of underwater technologies and services.
- This will cement and grow the UK's world-leading reputation, positioning the UK as a centre of underwater excellence globally and attracting inward investment.
- Through specialist support, it will help companies scale-up and accelerate their growth and work across the supply chain to develop the skills and capability that will drive the UK's competitive advantage.
- Led and governed by industry, with public sector funding, the GUH will help to shape policy and work with government in pursuit of its net-zero and economic growth targets.
- By promoting cross-sector collaboration it will fast-track service and technological innovation to solve challenges in multiple underwater sectors.
- This cross-fertilisation of ideas, technology and services will support the long-term shift towards a low carbon society and sustainable use of the ocean's rich resources.







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