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Solent MIG Ecosystem Map

CATAPULT
Connected Places

1 Introduction

To help visualise and understand the Solent region's impressive maritime innovation ecosystem, the core delivery team has developed an ecosystem map for Solent through extensive engagement with maritime stakeholders. This is a synthetic representation capturing the Solent's maritime assets, innovators, researchers, and organisations across the public and private sector.

Whilst it is recognised that the ecosystem map is large, the core delivery team understood that an initial mapping activity was required in order to clearly understand and communicate the scale of innovation and success in the region. Whilst the ecosystem map aims to be as comprehensive as possible, it is impossible to capture all relevant stakeholders within the scope and time of the project.

The ecosystem map should be considered as a live document which should be regularly updated and refined as more organisations and facilities are identified or attracted to the region. The following principles for the ecosystem map were determined for it to be relevant and accurate representation of the region, and deliver as much value as possible:

- **Transparent** - The “living” database must be open and crowd sourced by stakeholders in the region
- **Structured** – The ecosystem map must “make sense” and be accessible for the stakeholders
- **Administered** - The ecosystem map must be “maintained continuously” by an entity to ensure relevancy and accuracy

2 Methodology

Figure 1 below shows the high-level approach taken to establish Solent's maritime innovation ecosystem map.

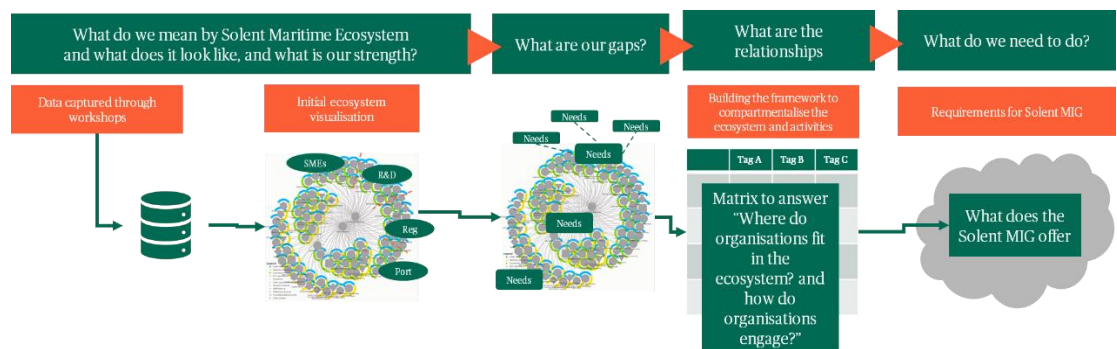


Figure 1 - High-level methodology for establishing the ecosystem map

The Solent maritime ecosystem map is built first by capturing landscape data through stakeholder workshops. The data captured includes key roles that have an influence on the end user, organisation and service environment, specifically:

- Different actors involved in service delivery e.g. SMEs, R&D, regulators, beneficiaries, etc.
- Key assets and facilities
- Maritime opportunities and activities

The core delivery team searched in depth also for players operating behind the scenes, as well as the ones not directly involved with the service but that have nevertheless an impact on it.

Geolocation tag was added to the text data based on their presence in the Solent. This allowed the data to be put through a GIS database. For simplicity, the map of this data was visualised through Google's MyMaps tool. See example below or access directly using the following link:

https://www.google.com/maps/d/edit?mid=11Qd6_rj60aOnLNwli3aT-23kLS3ACN1x&usp=sharing

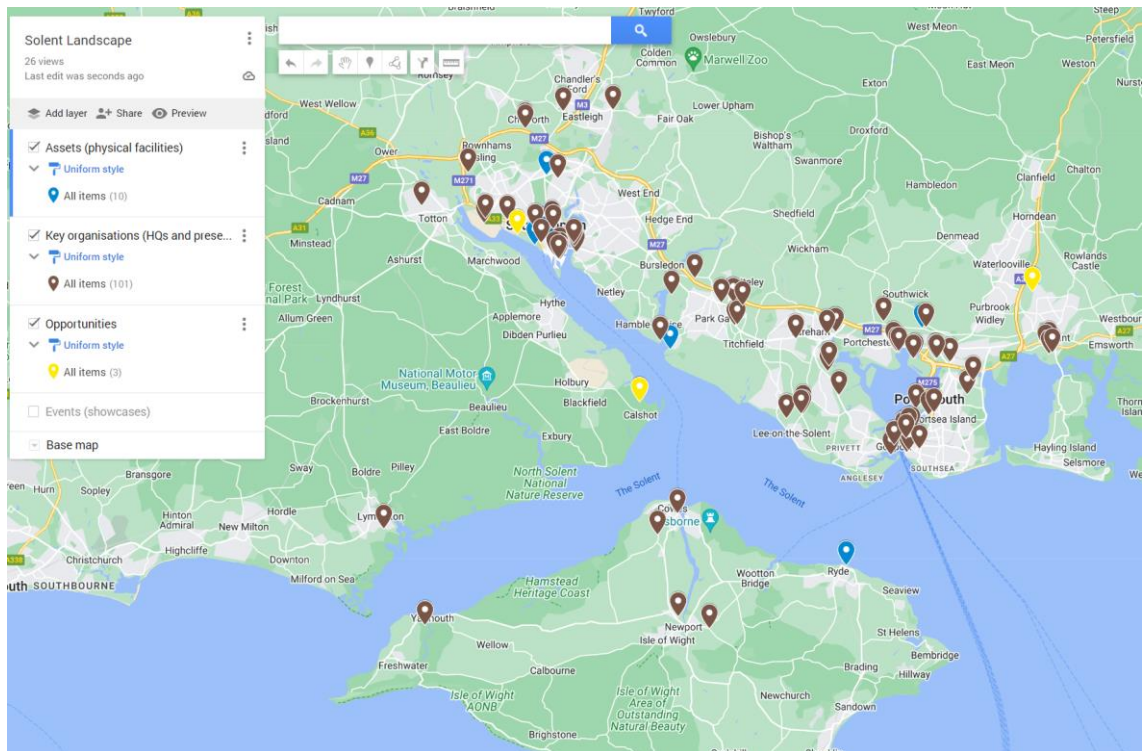


Figure 2 - Solent's landscape including its assets, key organisations, and opportunities

Table 1 - Summary of Solent's landscape

Solent's Landscape	Description	Number of entries
Maritime assets	These are state-of-the-art modern facilities and equipment such as testing facilities.	10
Key organisations	These are organisations within the maritime service environment that have a presence in the Solent region including world-class research institutions.	101
Maritime opportunities & activities	These are a mix of opportunities including maritime leisure and tourism activities such as large-scale competitive sailing and social events.	3
<i>Total</i>		<i>114</i>

3 Ecosystem Map

3.1 Future market drivers

Through engagement with Solent's stakeholders, three future maritime markets emerged from the broad base of sectors. These are agnostic to the specific roles within service delivery. For example, a ship builder can be aligned to any of the three market activity markets they contribute to. These are shown in the Figure 3 below.

Clean Maritime

Clean maritime relates to the combined infrastructure and innovation for transition to a future of zero emission shipping.

- This focuses on both the supply of new technology to reduce emissions including zero emissions propulsion technologies and renewable onshore power sources. As well as the demand side, where incorporating clean energy technologies in services.

Connected Maritime

Connected maritime relates to the ability to communicate using IoT, 5G, Satellite modes so as to enable new types of service and product into the maritime sector.

- This focuses on secure, sustainable and safe communication to facilitate new services in clean and autonomous maritime. As well as world class exploitation of earth observation data* to deliver net zero policy agenda.

Maritime Autonomy

Maritime autonomy relates to the enablement of autonomous services and products to be safely realised.

- This includes providing suitable test, certification and verification capacity. Remotely operated and fully autonomous shipping technologies is an immature market and in rapid development for collaboration opportunities.

Figure 3 - The three Solent maritime market imperatives

* Earth observation data is information gathered about planet Earth's physical, chemical and biological systems via remote sensing technologies.

3.2 Market opportunity and enabling technologies

Figure 4 presents the market opportunity and enabling technologies for each of the future market drivers discussed above. This also presents the foundation to build the networks and clusters to compete in a global market, while at the same time, acting as a priority mechanism for enabling technologies as the scale of demand and development grows.

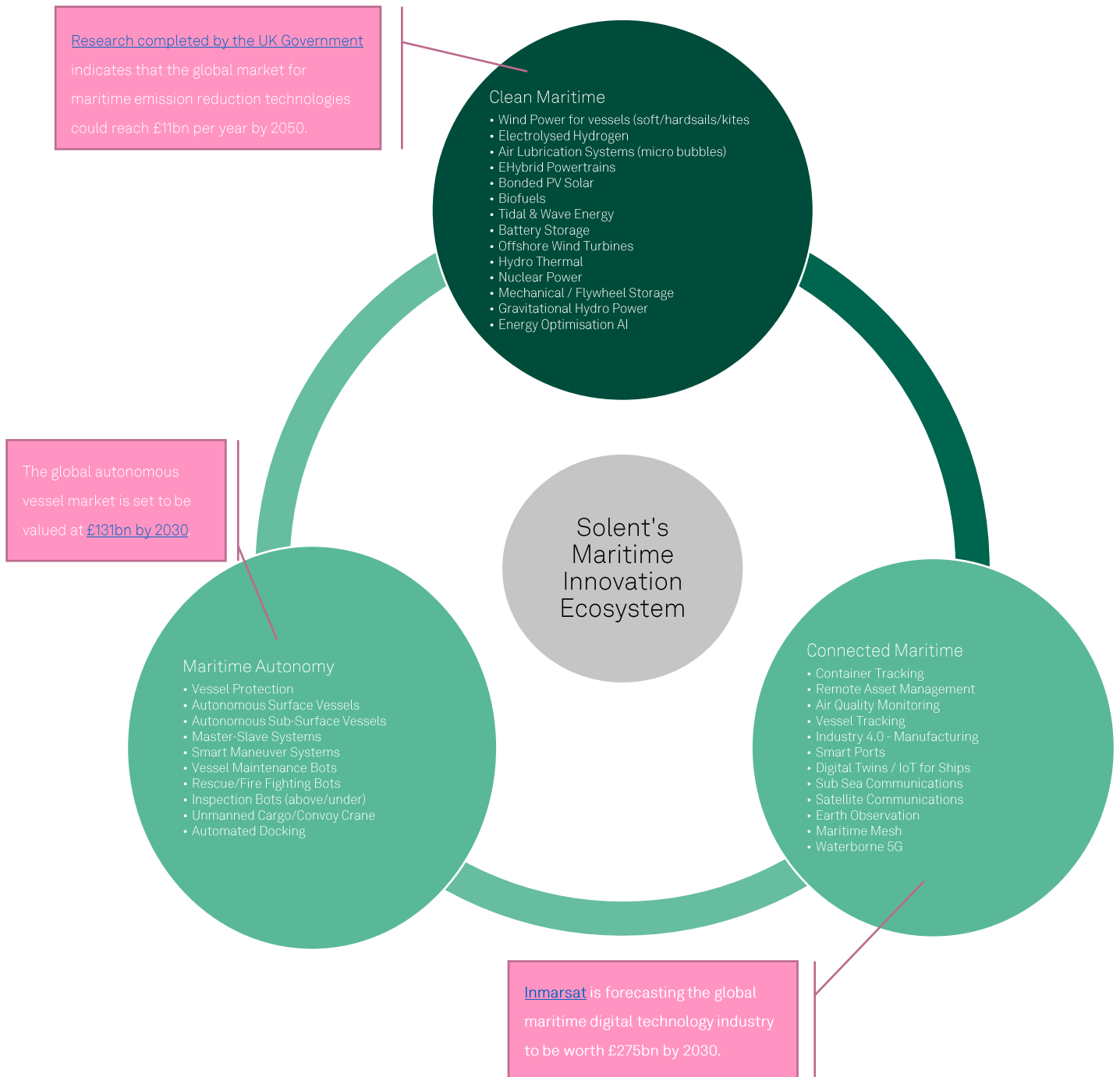


Figure 4 - Solutions within each maritime market opportunity

3.3 Solent's ecosystem

Solent is already leading in the maritime markets and can establish itself as a global leader in clean, connected, autonomous maritime. Examples of innovation in the Solent within each of the clusters have been identified in Figure 5 below.

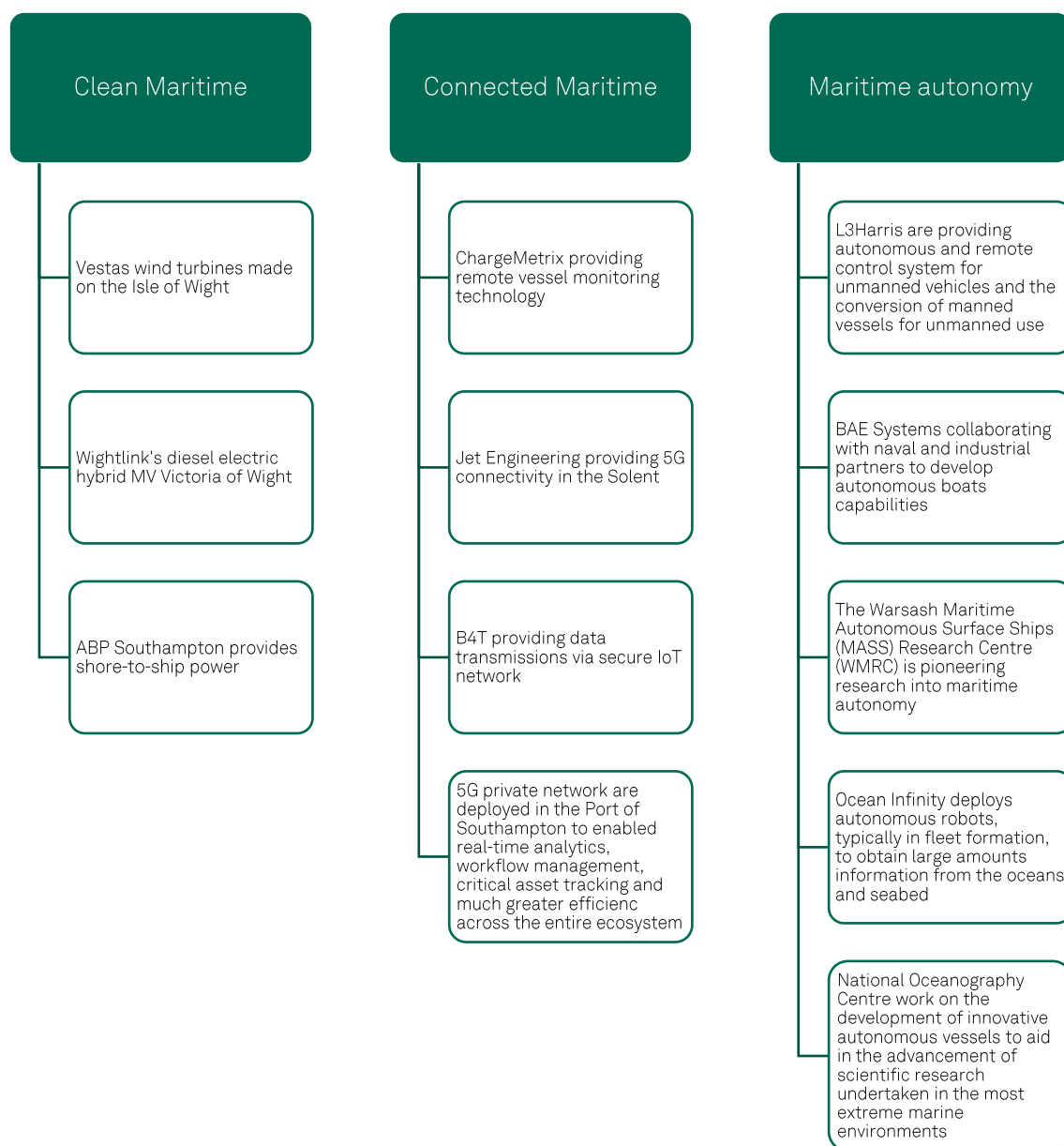


Figure 5 - Examples of the Solent's innovation within each of the maritime market opportunity

Figure 6 below shows a cluster map representing the Solent's maritime innovation ecosystem. This was created by placing the maritime markets at the centre of the worksheet and then positioning the players around these based on their target maritime imperatives.

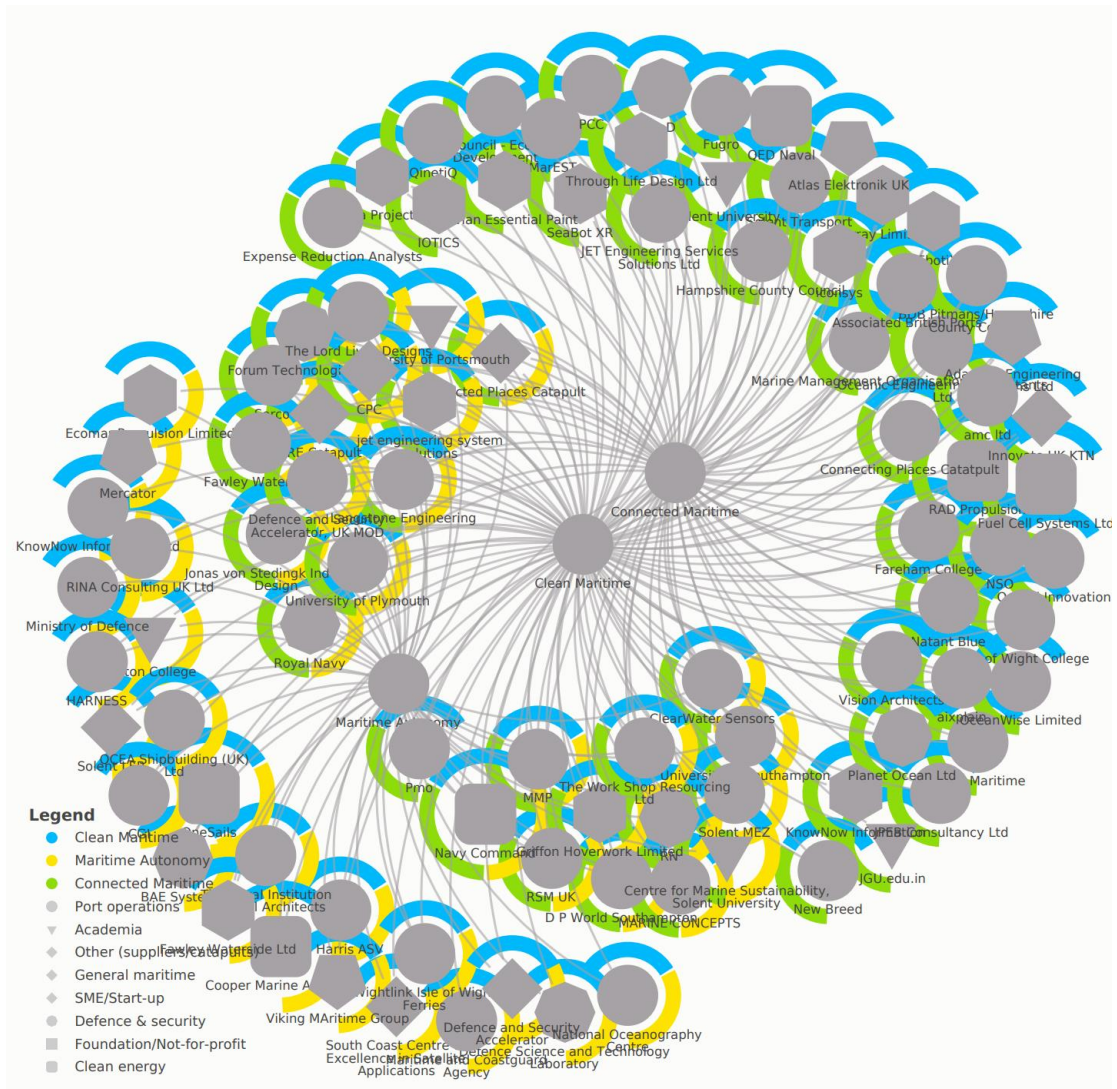


Figure 6 - Solent's Maritime Innovation Ecosystem Map

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info@cp.catapult.org.uk