



## WP7 Business model mapping and assessment

D7.3

### Mapping of all business models

Status: Final public version

15/02/2016



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 652629

## About MARIBE

MARIBE is a Horizon 2020 project that aims to unlock the potential of multi-use of space in the offshore economy (also referred to as Blue Economy). This forms part of the long-term Blue Growth (BG) strategy to support sustainable growth in the marine and maritime sectors as a whole; something which is at the heart of the Integrated Maritime Policy, the EU Innovation Union, and the Europe 2020 strategy for smart, sustainable growth.

Within the Blue Economy, there are new and emerging sectors comprising technologies that are early stage and novel. These are referred to as Blue Growth sectors and they have developed independently for the most part without pursuing cooperation opportunities with other sectors. MARIBE investigates cooperation opportunities (partnerships, joint ventures etc.) for companies within the four key BG sectors in order to develop these companies and their sectors and to promote the multi-use of space in the offshore economy. The sectors are Marine Renewable Energy, Aquaculture, Marine Biotechnology and Seabed Mining. MARIBE links and cross-cuts with the Transatlantic Ocean Research Alliance and the Galway Statement by reviewing the three European basins (Atlantic, Mediterranean, and Baltic) as well as the Caribbean Basin.

### Project coordinator



### MARIBE project partners



## Document Information

<b>Title</b>	Mapping of all business models
<b>Distribution</b>	Public
<b>Document Reference</b>	MARIBE D-[Type the number, e.g. 2.01]
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## Revision History

<b>Rev.</b>	<b>Date</b>	<b>Description</b>	<b>Prepared by (Name &amp; Org.)</b>	<b>Approved By (Work-Package Leader)</b>	<b>Status (Draft/Final)</b>
01	23-11-2015	Initial version (in Powerpoint format)	Roland, BMI	BMI	Draft
02	02-12-2015	Final deliverable based on review and feedback from partners	Roland, BMI	BMI	Final draft
03	15-02-2016	Public version	Roland, BMI	BMI	Final

## Acknowledgement

The work described in this publication has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 652629

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## Chapter 1 Introduction

The MARIBE project is about unlocking the potential of the Blue Economy in general and the Blue Growth sectors specifically. A business model case study approach is used to describe value creation of individual companies in the various sectors, i.e. Ocean Renewable Energy, Aquaculture, Marine Biotechnology, Offshore Mining, Oil & Gas, Tourism, Shipping, and Fishing. These case studies are meant to facilitate collaboration among companies and investors in exploring new growth opportunities.

This Deliverable provides a map of value creation in the Blue Economy from a business model perspective. It provides a big picture about the individual companies and sectors, as well as making explicit the exchange of value within sectors and among sectors. An introduction to the Business Model Canvas, the tool used for understanding these business models, is provided in Deliverable D7.1 *Innovation of a common language*.

### 1.1 The potential of the Blue Economy

Land and freshwater are finite resources while the clearing of forests or draining of wetland will deprive future generations of the benefits they provide. The maritime economy has the potential to create smart, sustainable and inclusive growth that is compatible with environmental objectives and the ecosystem approach.

The maritime or Blue Economy (BE) already represents a gross added value of almost €500 billion per year in Europe (European Commission, 2014). Blue Growth is the long-term strategy of the European Commission to support sustainable growth in the marine and maritime sectors as a whole and further harness the potential of Europe's oceans, seas and coasts.

### 1.2 Value creation and potential for growth

To unlock this Blue Growth (BG) potential it is crucial to understand how value is created, delivered, and captured today, and what the growth potential could be. Within the MARIBE project, 29 companies (21 companies from 4 BG sectors and 8 companies from 4 BE sectors) and their business models were mapped and assessed in order to create this understanding. Beyond understanding individual business models, similarities and differences between business models have been synthesised. This led to the identification of generic business models, which can be used for business model innovation. These generic models are described in Deliverable D7.4 *Innovation of existing business models*.

17 business model case studies and 21 business model analysis reports were produced given the list of 21 selected BG companies from the Renewable Energy, Aquaculture, Marine Biotechnology, and Offshore Mining sector. These can be found in Deliverable D7.2 *Case studies for specific business models*, Part A and Part B (not published). For the companies from the Blue Economy sectors, i.e. Oil & Gas, Shipping, Tourism, and Fishing, only business model analysis reports were written. This created insights into each of the companies' ambition, context, and business model, yet also insights into the partnerships a specific company has with other companies. We used those insights to visualise value creation as described and shown in the next chapter.



## Chapter 2 Value creation and growth potential

The European Commission has an overall idea of how much value and jobs are created by each sector in the Blue Economy (European Commission, 2014). The MARIBE Sea Chart shown in Figure 1 below illustrates how value is created from a business model perspective. As mentioned before, the details of how each company creates, delivers, and captures value (i.e. the business model) can be found in Deliverable D7.2 *Case studies for specific business models, Part A*.

### 2.1 MARIBE Sea Chart

The Sea Chart in Figure 1 shows each of the sectors and the individual companies that were studied. The mature Blue Economy sectors are shown in the upper part of the chart. The Blue Growth sectors are shown below the orange line. The overall value and jobs created as quantified in the infographic previously mentioned (European Commission, 2014) have been included on this map as well.

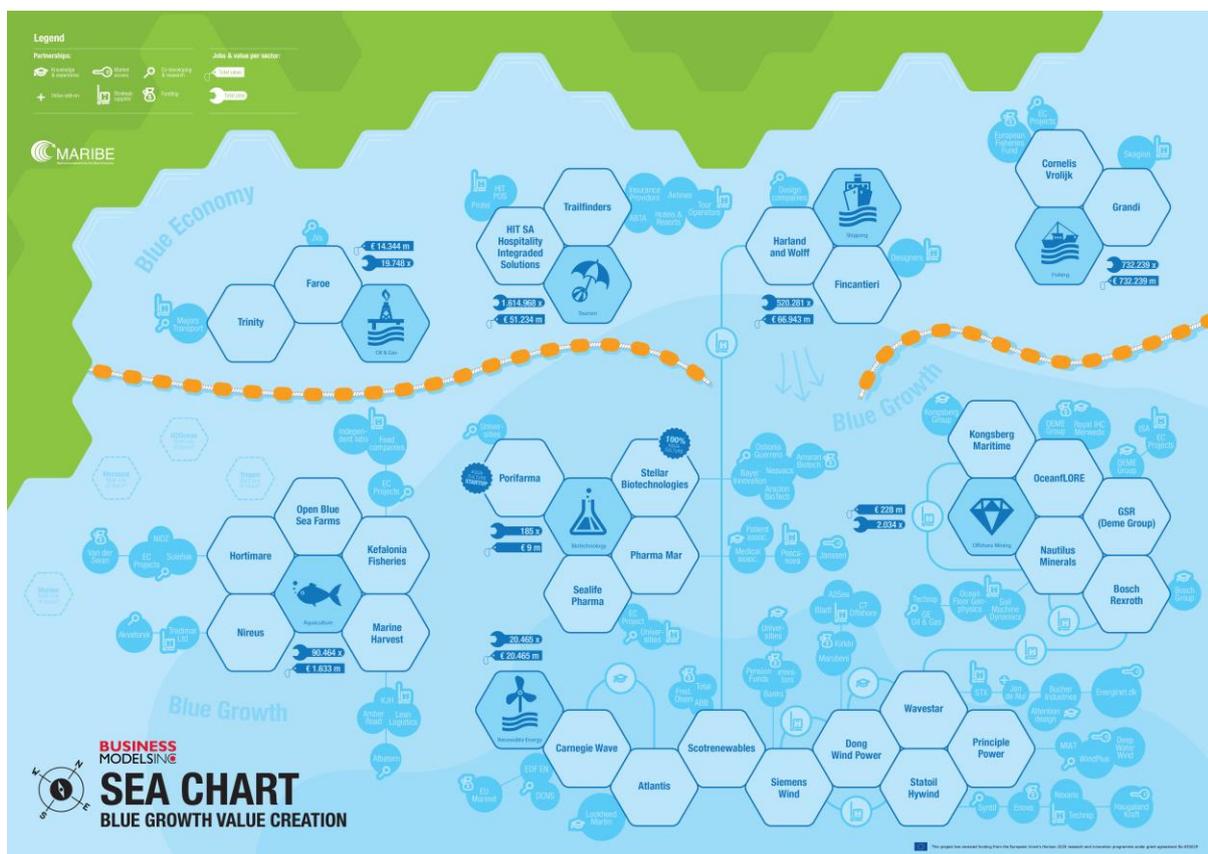


Figure 1: MARIBE Sea Chart visualising value creation in the Blue Economy

For each company its key partners are visualized in the blue bubbles, with an indication of the type of partnership. Seven different partnerships are identified:

1. **Value add-on:** Partner company provides an add-on to one or more value propositions.



2. **Strategic supplier:** Partner company supplies components of the product/service or an entire product/service.
3. **Market access:** Partner company provides access to existing markets or helps create new markets.
4. **Funding:** Partner company provides funding for one or more activities in the business model.
5. **Co-developing & research:** Partner company is involved in (technology) development and research activities.
6. **Knowledge & experience:** Partner company provides their knowledge and experience.
7. **Combined use of space/resource:** Partner company shares the same space or resource (because of geographical proximity).

The Multi Use Platforms are shown in the lower-left side of the Sea Chart.

## 2.2 Interesting Observations

The following sections describe a number of observations from looking at the Sea Chart in Figure 1.

### 2.2.1 Value networks are being reconfigured

Blue Growth companies are connected to companies from Blue Economy sectors mostly through a strategic supplier (Partnership Type 2), funding (Partnership Type 4), or knowledge and experience (Partnership Type 6) partnership. The early stage companies from the emerging BG sectors focus on delivering their promise and tap into existing value chains within the Blue Economy wherever possible. Existing knowledge and experience is leveraged through people and partners with extensive maritime knowledge and experience.

The map also shows that the BG sectors seem to begin pulling value away from the BE sectors. Value networks are slowly being reconfigured. For example: Harland & Wolff (BE Shipping) is divesting in shipbuilding and offering more and more services to the renewable energy sector.

### 2.2.2 Renewable energy leads the way

The highest number of partnerships (35 partner companies) are seen in the Ocean Renewable Energy sector. These BG companies have many partnerships with BE companies from the Oil & Gas sector. There is one oil & gas company that is active in both the Blue Economy and a Blue Growth sector (Renewable Energy). This company is Statoil, which is doing adjacent innovation (offshore wind) as well as disruptive innovation (floating wind) with their Hywind floating wind turbine (together with Siemens).

### 2.2.3 Combined use of space is still a floating idea

So far, there are no identified partnerships of the type *Combined use of space/resource* (Partnership Type Nr. 7) for these 29 companies. The concepts and ideas are considered by some of the companies, such as Hortimare and Kefalonia, who were both involved in the Mermaid project. However, none of the proposed applications (e.g. a Multi-Use Platform



(MUP)) has been turned into partnerships that create shared value. For that reason the conceptual designs for enabling multi-use of space, like Mermaid, H2Ocean, Tropos, and Marina (see also deliverable D5.1 *Review of multi-use and multi-purpose platform projects*), are still not realised.

The only existing example where two sectors are combined is Stellar Biotechnologies, which has fully embraced Aquaculture. Stellar Biotechnologies is simultaneously a biotechnology and a cutting-edge aquaculture company. Porifarma seems to desire to operate in a similar way, yet they are still searching for their initial market.



## Chapter 3 Unlock the potential

Section 3.1 presents lessons learnt based on the business model mapping and assessment (see also Deliverable D7.2 *Case studies for specific business models, Part A*) and the MARIBE Sea Chart in Figure 1. Section 3.2 presents recommendations for unlocking the potential to create shared value.

### 3.1. Lessons Learnt

Below are the overall lessons learnt about value creation within and across sectors relevant to initiating new partnerships. More detailed lessons learnt can be found in Deliverable D7.4 *Innovation of existing business models, Part A*.

#### 3.1.1 Winning Ambition

All BG companies have winning ambitions, focus, and are committed to change and/or disrupt markets. The companies from the renewable energy, marine biotechnology, and aquaculture sectors address big societal problems in entirely new ways. There are companies with business models that will enable entire new fields of value creation, such as Stellar Biotechnologies (immunotherapy) and Hortimare (seaweed farming for a wide range of applications). These companies are creating the future of energy, food, and medicine. The offshore mining sector is an exception. These companies are fulfilling a current need (supply of metals) in just another way.

#### 3.1.2 It is about the long-term and search

Companies and their investors are in it for the long-term. Almost all companies rely to some degree on public funding and grants to overcome the riskiest part of the technology development process. Most BG companies are still searching for a repeatable, profitable, and scalable business model. Several companies have to find an early adopter and/or prove commercial application of their idea or technology (e.g. Wavestar, Scotrenewables). Some have found their market and are already providing value to their customers (e.g. Carnegie Wave, Atlantis, Hortimare), while others achieved product-market fit and are ready to scale (e.g. Stellar, Open Blue, Pharmamar).

#### 3.1.3. Grow slowly through scaled prototyping

All companies are growing slowly through some form of scaled prototyping. Technology and customer value is developed first at small scale and proven before moving to the next level.

### 3.2 Recommendations

Below are overall recommendations related to the adoption of new concepts such as multi-use of space as well partnering. We also discuss the goal of creating new partnerships from a business model point of view.

#### 3.2.1 Multi-use of space

None of the 29 companies adopts Multiple Use of Space (MUS) or Multi Use Platforms (MUP) in their business model. Companies and entrepreneurs understand the basic idea and concept, but they do



not see how this is of practical value to them (as one CEO explained in a face to face interview). Many of the MUS/MUP concepts are at the design stage on paper and have yet to be realised in one form or another. It is difficult for companies to assess how and if the concepts could support them to grow their business. A MUS/MUP concept that looks good on paper is not enough for companies to consider and invest in it as a resource or enabler in their business model.

### 3.2.2 Current Partnerships

The BG companies are focused on getting their own business (model) off the ground and growing/scaling their business. Companies have partnerships that create value for both of the businesses involved. Companies invest time and money in those partnerships or activities that grow their business. Investors require companies to focus on getting traction and not work on side-projects that don't move the needle for the business (i.e. grow the value of the company in one way or another).

### 3.2.3 Facilitating new partnerships

Companies and investors these days have access to much better methods and approaches to develop their business, such as Customer Development (Blank, 2013), Business Modeling (Osterwalder and Pigneur, 2012; Osterwalder, Pigneur et.al., 2014), Lean Startup (Ries, 2011), Agile Engineering, and the Investment Readiness Level (Blank, 2013; 2014).

A number of the 29 investigated companies are working in similar ways, e.g. the scaled prototyping approach in the Renewable Energy sector. By taking small, iterative steps these companies learn what creates value and what doesn't.

These new approaches are also perfectly suited for exploring and designing new partnerships. These approaches enforce the articulation of a shared vision on the market, a deep understanding of each other's business models, and exploring synergies between the partner companies from a market and customer point of view. These approaches force two or more companies that want to work together to consider the riskiest part of their partnership first, i.e. the market opportunity, the customer or societal problem to be solved, and the customer willingness to pay for potential solutions.



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