

Drivers for Marina 2020 in the Channel Region: A draft report

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1. Introduction

The Channel Arc Manche Integrated Strategy (CAMIS) project is a 4 year Interreg IV A funded project that has been running since 2009. CAMIS is a collaborative project between the south coast of England and the northern coast of France, with 19 partners involved from the Channel region. The primary objectives of the project are to have a better understanding of the maritime industries in the region, and use this to develop an integrated management and policy strategy for the Channel. The Marina 2020 proposal is one component of Strand 3 of the CAMIS project, which focuses on innovation and business clusters within the regions' diverse maritime sector. Figure 1 presents an illustration of the geographical spread of marinas across the Channel region, their density clearly highlighting the importance of marinas as a business sector.



Figure 1: An illustration of the location of marinas in the Channel region

The marine leisure industry makes a significant contribution to the national economy with a consistent rise in recent years. As part of the CAMIS project, we are aiming to examine the concept of Marina 2020 as a vision for UK and French marinas over the next decade. Marinas in the UK have a turnover of £113 million per annum, directly employing 1,700 people. In addition, the indirect business opportunities are estimated to support 600 further jobs with a turnover of an additional £7 million (BMF, 2007). Coastal marinas play an important role in employment, regeneration of coastal communities and tourism in coastal regions (BMF, 2007; Ramallal et al, 2010). Additionally, marinas are an attractive resource both for the tourism and recreational industries, and for other service based businesses (Ramallal et al., 2010). As a sector, they are a key provider of a diverse range of

services including traditional tourism related services, equipment design and manufacturing, marine insurance brokers, maritime planning and legal services to name just a few.

In spite of this, marinas are threatened by an increase in berth supply in Europe, coupled with improved accessibility through cheap flights to warmer destinations (BMF, 2007 p.9) and a lack of understanding of their potential by local authorities and government bodies. This displacement of activity caused by competition from other regions and a poor relationship with government has significant implications for marinas. In order for the marina sector to maximise its potential and role in society, an integrated approach to management and view of marinas should be taken (Paoli et al., 2008). Given their location, marinas are in a prime position to adopt an integrated approach to economic development, environmental sustainability, government and public requirements, science and research. In the midst of the economic downturn and a culture of increasing corporate environmental responsibility, marinas are facing a number of challenges in a bid to ensure their long-term financial security, environmental sustainability and diversification of the industry. As with all industries, the marina industry has had to adapt to new circumstances. While there have been negative impacts, there are also, however, potential new market opportunities from these changing trends; such as a financial influx associated with the ageing population, an increased level of eco-awareness among customers and users. It is expected that the Marina 2020 vision will be developed by the marinas acting as a mechanism through which these challenges can be overcome. The Marina 2020 vision links directly to the Marine Industries Strategy Framework (2011) which aims to increase awareness of the value of marinas. Marina 2020 has been proposed as a mechanism through which marinas in the Channel region can identify how they see the marina sector changing, using recommendations generated through this research to work towards a sustainable future.

1.1. Implications of the marina survey for Marina 2020

As part of the CAMIS project, a marina survey was administered aimed at evaluating marinas and their associated businesses within the Channel region. The survey highlighted some of the challenges facing the marina industry, including a lack of funding (particularly in French marinas); in the UK, it was noted that there tended to be a poor relationship with local authorities; and a need for better support for the marina sector. Additionally, the results of the survey indicated that marinas are keen to facilitate a move towards diversification of the services they provide in a bid to securing financial longevity. The results of the survey indicated that marinas in the Channel region have felt the impacts of the recent economic downturn, and are working towards mitigating these impacts. Participants suggested a number of options for developing marinas in the future:

- Redevelopment/ rearrangement of existing space or facilities to increase efficiency of marinas and increase customer base.
- Initiation of collaborative partnerships to allow combined advertising and PR.
- Provision of additional consumer services through diversification.
- Research into the role of marinas in developing the green economy and green energy sources.
- Better availability of funding for training and promotion of the maritime industry.

1.2. Aim of marina 2020

Marina 2020 is expected to encourage marina diversification, encouraging greater economic growth for the marina and the local community, promote clustering within and between marinas, increase awareness of available technologies, encourage knowledge transfer between marinas and improve relationships between marinas, their business units and local authorities.

2. Drivers for Marina 2020

Through analysis of the CAMIS survey, and information available through additional literature, it is clear that there are a wide range of drivers impacting the marina industry and its associated services, encompassing political, social, economic and environmental areas of concern. As with all sectors, marinas are striving to maintain their market position and ensure the long term sustainability of the sector. The entire sector is working towards furthering economic growth and development, whilst ensuring adherence to relevant regulations. Through research, a number of themes of drivers have been identified. These are discussed and summarised below.

2.1 Social Drivers

- *Need to improve relations with local governments*

One of the key issues facing marinas in the Channel region has been a lack of awareness and understanding by both the national and local government of the economic and social importance of marinas. A number of studies have found that this lack of awareness means that, traditionally, limited time and investment has been given to the marina industry (Robinson, 2009; Robins, 2011). Increasingly, however, this view is changing: marinas are beginning to be viewed as an important part of the community as a centre for skills and expertise, a business park, as well as traditional

recreational opportunities. It is expected that the development of the Marina 2020 vision would encourage better relationships with local governments on both sides of the Channel.

- *Increased inclusivity as a sector*

In a move away from the traditional perception, marinas are increasingly viewed as having a vital role to play within their surrounding communities. A common issue in coastal communities is an increasingly aging demographic. This can be viewed as both an advantage and a disadvantage to the marina industry. Whilst ensuring the needs of the older customers are met, there is an opportunity for marinas to utilise innovative technology to attract a new customer base. For example, there has been an increase in the use of smart phone and tablet based applications to monitor boat maintenance and evaluate marina services; utilisation of this type of technology could serve to invoke the interest of younger generations.

The marina industry is undergoing a transition and is no longer viewed as an elitist past time (Robinson, 2009), with it becoming increasingly accessible to a wider demographic. This is supported by a report by TSE Research Services (2009), which identifies sailing as being a predominantly male dominated activity, although the gap is narrowing. Widespread media promotion of female participation has worked to close this gap, creating a greater balance within the industry. It is expected that Marina 2020 would be an inclusive vision, taking this driver into consideration, and should work to further the advances made in making marina based activities accessible to all demographics. Additionally, sailing and traditional marina based activities have been shown to be most popular among the older groups. It is possible that one element of the Marina 2020 vision could be to reach out to a larger demographic through promotion of skills and training programmes, such as the RYA's Active Marinas could be a method of encouraging more people into sailing, into marinas and bring more money into the sector as a whole. Active Marinas promotes the provision of skills and education through practical workshops, engaging with a range of age groups. It could also be proposed that through marina 2020, generation y could be reached through the utilisation of smart phone apps e.g. the Volvo Sailing App. There are numerous opportunities for collaborative research in this area, and the Marina 2020 vision could involve the generation of smart phone applications with links to useful information for the Channel region's marina sector.

- *The London 2012 Olympic legacy for the Channel region*

The South Coast, namely Weymouth in Dorset, is the site of the sailing events for the 2012 London Olympics. There has been extensive research into legacy of large sporting events on the local

communities; it is expected that the high profile nature of the Olympics will raise the profile of the Channel region, particularly the south coast of England, as a sailing destination, promoting the marina industry (TSE Research Services, 2009). The Solent region, for example, is intending on capitalising on the promotional capacity of the Olympics and using it to further build its brand. The Olympics will also result in an increased awareness of the facilities available to customers in region, potentially highlighting areas requiring development or upgrading. There is an on-going effort to maximise the potential of the Olympic Legacy with campaigns such as the 'Inspire, Celebrate, Support' run by the RYA. Additionally, research has suggested that further economic benefit could be realised by encouraging marinas to diversify and to work with their associated services to deliver tourism and recreational packages to customers. One of the potential opportunities would be to work with sailing and yachting clubs to host sporting events. It is worth noting that the Olympics and the legacy that will follow will be a good platform for the region's marina industries, both in terms of the role in local communities as a social arena but also as a driver for economic growth.

- *Need for skills, training and education*

A key social driver is the recent community degradation that has been experienced by many coastal communities with low levels of investment, economic growth and employment. This has resulted in an exodus of younger generations from coastal communities, reducing the employment pool and threatening the legacy of traditional and necessary skills required to ensure a successful and efficient marina. Given the importance of marinas within the wider maritime sector, it should be assumed that these issues could have an impact on the marina industry. These social issues pose a threat to the longevity and growth of the marina sector, and addressing them should be viewed as a primary driver for the development of the sector. The development of the Marina 2020 vision could work to identify the gaps in training and skills provision, promoting the need for adequate support for apprenticeships and training programmes. This could simultaneously support the growth of the sector, tackle issues of youth unemployment and begin to reverse the challenges associated with coastal community degeneration.

Additionally, it is worth considering the role of marinas as an informal education forum that could be used to raise awareness of challenges facing the marine environment. Given the increasing popularity of marinas as a recreational venue, marinas could be used to provide education and suggest mechanisms through which visitors can change their behaviour for the benefit of the marine environment. This type of informal education has been adopted by a range of NGOs, and research has shown that the behaviour of an organisation can influence that of others, and could theoretically bring about changes in consumer behaviour (King and Toffel, 2007). They are in an optimum position

to influence the behaviour of their own customers and visitors through the implementation of environmentally friendly behaviours within the marinas.

2.2 Economic Drivers

The marina and leisure boating industry, like all other sectors, are working to ensure their long-term sustainability in a difficult economic market. In a bid to mitigate the impacts of the recession, marinas must work to ensure they can maintain their sustainability and generate long term financial development of the industry. Due to the current economic climate, there is increasing pressure on marinas to ensure they are providing a cost effective service to their customers, whilst ensuring their own long term financial sustainability through increasing their annual revenue. A number of schemes have been launched in recent years that aim to encourage marinas to expand their role within the local community, to take advantage of their own attractive qualities as a potential community and business hub. These include The Yacht Harbour Association (TYHA) Gold Anchor Scheme which includes in its criteria the role of the marina in the local community and the provision of additional services to existing customers and to attract new customers. Additionally, the Royal Yacht Association (RYA) is actively promoting their Active Marinas Programme which is working to increase efficiency and competence of marinas and boat users.

- *Marina efficiency*

As with all sectors, in order to remain sustainable in a volatile economic climate, marinas must implement efficient business strategies. In order to move with the changes in industry, marinas should adopt innovative technologies which will encourage growth within the industry. One of the challenges facing a number of marinas is a lack of available berths and lack of efficiency regarding utilisation of available space and resources. In order to maximise the economic potential of marinas, ideally berths should be full and information about berth availability should be accessible to customers. Another way in which marinas could ensure full berths would be to adopt a flexible berthing programme, such as the one being promoted by MDL Marinas. Their 'Freedom Berthing' Programme allows marinas to adopt a home marina and flexible berthing in any of MDL's marinas.

In terms of marina efficiency, marinas can also use shallow water options, such as the VersaDock (<http://www.versadock.com/index.htm>), which will allow marinas to utilise shallow water space through the use of floating pontoons and drive on docking. Use of dry dock and stacking within marinas ensures better use of marina resources and space with a range of benefits, including lower levels of biofouling, lower maintenance, and higher vehicular efficiency.

In addition, it is possible that there could be innovative tools through which marina efficiency could be enhanced. Applications for smartphones, tablets and PCs, such as Naivionics (<http://www.navionics.com/>), have been developed to provide the most up-to-date information on marinas and harbours to the users, through the use of 'Freshest Data'. This format allows users to update charts and information, and ensures that any changes to a marina are uploaded onto the system. This would provide the industry with a real-time view of berth availability and marina facilities. It is worth noting that the marina survey conducted by CAMIS suggested marina businesses would not be willing to upload information of this type. However, one of the products of the finalised Marina 2020 could be to work towards a successful marina cluster in the region, improving relationships in the sector, and encouraging more businesses to work collaboratively.

- *Diversification of marinas*

In addition to ensuring marinas are operating at full capacity and efficiency, it is also proposed that marinas should continue to diversify their industry. Given their location, a number of marinas are being promoted as a social venue for local residents with services including restaurants, bars, cinemas and shops being more common place. Additionally, marinas are increasingly being developed as 'business parks' with a wide range of businesses choosing to locate offices on their premises because of the prime location. By providing facilities and units for use by other industries, marinas can further develop their role as a centre for employment, business, skills development and training. As a vision, it is expected that Marina 2020 will include work towards the generation of an integrated management approach to the marina sector, promoting marinas and their vital role in local economies, encouraging long term security and sustainability of our marina sector, and help to ensure a healthy, productive natural environment in which to enjoy the recreational pursuits traditionally associated with marinas. There are efforts to promote this integrated approach already evident within the sector; for example, The Yacht Harbour Association (TYHA)'s Gold Anchor Scheme which judges marinas based on their traditional services and facilities, their environmental awareness and compliance with relevant legislation and their integration within the local community. The vision for Marina 2020 fits well with this move towards sectoral integration within the marina industry; however, further work is required to identify the mechanisms through which this can be achieved.

2.3 Political Drivers

- *Fuel legislation*

Recently, a range of legislation has been passed that impacts the types of approved fuels available to the recreational boating sector. Up until recently, recreational boats were allowed to utilise duty free (red) diesel under EU legislation. However, the EU Directive (2003/96/EY) was not revised when it expired which has increased the cost of fuel for marinas and boat owners. Additionally, the Recreational Crafts Directive (94/25/EC and 2003/44/EC), which regulates the design of recreational boats, was amended in 2003 to include emission and noise levels. Given these changes in legislation, there has been an increase in the demand for alternative fuel types and innovative engine designs for recreational boaters. These changes in legislation have led to the development of alternative fuel types including biofuels and the use of electric battery engine systems. Electric engines are not a new concept, but fell out of favour when fuel engines became more popular in the 1930s. However, with changes in legislation and increasing eco-awareness among boaters and marina operators, these alternatives are back in the spotlight and there has been an increase in eco-innovation surrounding the design of electric boats, alternative engine designs and the utilisation of renewable energy sources. Obviously, as with all new technologies, there are strengths and weaknesses associated with each of these options. Although not as influential, it is also worth considering the implications of the MARPOL Annexe VI which limit marine fuel sulphur content to 1.5% in designated Sulphur Emission Control Areas (SECA), one of which is the Channel region. Since 2010, MARPOL Annexe VI limits SO_x to a maximum of 1.0%, to be reduced further to 0.1% by 2015 within SECAs.

The implications of the legislation impacting fuel types and boat efficiency should result in technological developments and an increase in marina based innovation. The Marina 2020 vision should be developed with a view to promoting innovation within the industry, potentially through encouraging collaborative research and development through clustering.

- *Environmental legislation and impacts on planning*

The UK is a signatory of the EU Marine Strategy Framework Directive (2007) which aims to establish 'good environmental status' for coastal and marine ecosystems around Europe by 2020. Following this, the implementation of the Marine and Coastal Access Act (2009) in England and Wales, and the subsequent development of the Marine Management Organisation (MMO) have the potential to impact on marina growth and management in a range of ways. Davis' Boatyard has already worked with the MMO regarding their site expansion, ensuring that the necessary dredging did not have an

impact on the adjacent Site of Special Scientific Interest (SSSI). Additionally, the boatyard implemented a water purification system to reduce the impacts of water runoff on the SSSI. Development of the Marina 2020 vision would support active communication between policy makers and the marina sector so that both groups can work towards a sustainable future for the sector, and the environment it is dependent on.

In order to adhere to environmental legislation, marinas will need to develop responsible methods of dealing with waste generated through both traditional and associated businesses. There are a range of techniques being used to address these issues including: recycling of waste water through ecological processing and treatment, design of environmentally friendly decking (Mobi Deck systems) and use of different energy sources.

In the context of UK marinas, it is also worth considering that, while many marinas are owned by independent companies, the coastal area on which they are built is owned by the Crown Estate. Therefore, it should be expected that, over time, marinas will be required to renew their leases with the Crown Estate, in addition to working with the MMO. Marinas will need to be aware of this process when considering development and growth of their sites. The collaboration expected to be generated through the development of Marina 2020 could ensure an awareness and understanding of these processes.

2.4 Environmental drivers

- *Marine Conservation Zones and Marine Protected Areas*

From a UK perspective, the Marine and Coastal Access Act stipulates the development of a network of marine conservation zones (MCZs) and marine protected areas (MPAs). Possible sites have been identified through four regional projects – Balanced Seas, Finding Sanctuary, Net Gain and the Irish Sea Conservation Zones, and are currently undergoing consultation. It is highly likely that there will be areas of conflict between the MCZ development and marina and recreational boating regions – for example, it has been proposed that the area between Portland and Studland becomes a SSSI, which would have an impact on the level of development approved in this area. The MCZs will be designated with a range of regulations and restrictions over activities in the area which may have a negative impact on the development/ expansion of marinas, dredging activities, vessel types that can be used in certain areas and anchoring. Additionally, granting of licenses is the remit of the MMO – this means that the application process has changed, something that will need to be considered in the case of marinas wishing to expand/ develop their land and/or water sites.

The Marina 2020 vision for future sustainability in the marina sector has the potential to play a significant role in achieving the goals set out by policy makers. If marinas and their associated businesses become involved in the development of the vision and its implementation, adhering to environmental legislation could be more accessible through an enhanced awareness of obligations, of new technologies to address environmental issues and collaborative research and development.

- *Regulation of environmental impacts*

Given their location, marinas and their associated businesses can have a significant impact on the surrounding marinas environment. Impacts are caused by a range of activities including the use of antifouling paint, cleaning and maintenance of the boats and yard which can cause runoff, disposal of sewage and waste from boats, transportation of invasive species, and poor resource efficiency, often resulting in a high carbon footprint. The Marina 2020 Vision will support marinas in terms of their responsibility towards the marine environment, and aims to promote work already being utilised within the sector.

There are a range of initiatives and tools currently used within the sector to encourage compliance with environmental legislation, including the Green Blue's Marine Toolkit and the adoption of Environmental Management Plans (EMPs). EMPs are being adopted by a range of sectors to ensure businesses comply with relevant environmental legislation, and the marina sector is no exception. An EMP is developed by an organisation, increasingly as part of their business strategy, to ensure compliance with legislation and policy, to meet environmental goals (such as use of renewable energy sources) and to evaluate environmental responsibility. By developing an effective EMP, a marina can ensure awareness of relevant regulations, standard operating procedures (SOPs), promote best practice for environmental management within the business and identify training requirements. The benefits of implementing an EMP are diverse, including: improved environmental performance, ensured compliance with legislation, efficient use of resources and disposal of waste, increased attraction to environmentally aware customers, increased staff and customer awareness of issues and positive recognition for the marinas. It is expected that the Marina 2020 vision will help to address the challenges in this area by encouraging collaboration and knowledge exchange on the environmental issues common to all marinas. By working together, and potentially developing effective clusters, marinas could develop joint EMPs and work collaboratively on innovative ways to address these challenges while ensuring high profitability.

- *Fuel restrictions/ red diesel legislation*

As discussed under the political drivers section, there has been a change in the legislation impacting maritime fuel resources. It is expected that, in addition to furthering the marinas financial stability, the vision of Marina 2020 would also take the environmental issues associated with marinas into consideration. For example, MDL marinas are working towards using FAME (biofuel) free and low sulphur fuel types and ensuring that their marinas have access to more environmentally safe fuel types. In addition to being more environmentally favourable, MDL marinas have found that fuel of this type is used more efficiently by vessels than traditional diesel based fuel types, resulting in less blockages and reducing the time and cost associated with maintaining vessels using this type of fuel. Research has found that business are often unaware of their environmental impacts, lack tools and resources to make the necessary changes, are sceptical of the benefit to them and concerned about the perceived cost and time requirements associated with adopting environmentally favourable practices (Revell et al, 2010). Through the development of Marina 2020, it is expected that the marina industry will be able to engage in knowledge transfer and share best practice that will allow marinas to develop in such a way that is economically beneficial to them and environmentally sustainable.

- *Renewable and alternative energy sources*

Marinas, as a sector, are embracing the use of alternative energy sources with a number of UK marinas harnessing the energy potential of solar energy and other alternative sources. By utilising these sources, marinas can reduce their carbon footprint, reduce their own energy consumption and identify methods in which they can increase energy efficiency within the marina. Previous work conducted through the CAMIS project indicated that, in general, there was a lack of government support for developing new energy sources. This is an area of interest to marinas as they are ideally situated to take advantage of the energy resources provided by the marine environment. As discussed throughout this report, marinas are increasingly committed to reducing their environmental impact and some are making progress towards dependence on only marine renewable energy. Within the industry as a whole, there appears to be a movement towards adopting green energy systems, with MDL marinas using 100% renewable energy sources as of October 2010. Further research into the potential for renewable energy in marinas suggested that marinas could utilise solar energy, biomass fuel and heat pumps. In addition to utilising renewable energy sources, it is also proposed that more work could be done to further marinas role in the marine renewable industry.

2.5 Technical drivers

As with other maritime industries, the importance of effective communication between businesses and with customers is vital to the promotion of a successful industry. The marina industry is no exception. Recently, there have been significant technological developments in communications within the sector, and the demand for these advances are sure to drive changes and growth for marinas.

- *Communications technology*

One of the key areas being driven by technological changes is that of communication. As mentioned earlier in the document, with the development of smart phone technology, there are a range of platforms through which information about marinas can be communicated. Increasingly, applications are being developed that when utilised effectively will work to increase marina efficiency, such as Marina Management Software from Seatizenpro (<http://www.seatizenpro.com/marina-management-software-Advantages.html>).

Additionally, there have been developments in the on-board communication and positioning tools ensuring efficient use of energy and provision of the most up to date information to users. There have been developments in GPS systems (such as NavSim), provision of weather information to vessels and provision of information about berthing spaces. It is possible that there will be some overlap between the types of technologies developed for use in ports and the marina sector. The synergies between the two would be something that the marina 2020 vision could work to promote, thereby engendering collaborative research and design initiatives.

- *Development of new energy systems*

As previously mentioned, there has been a movement towards more environmentally favourable and energy efficient technologies within the maritime sector. This is partially due to political drivers through the ratification of a range of legislation mandates, but also due to an increasingly environmentally aware society. Marinas and their customers are utilising green technologies and this technological evolution will have significant implications for the marinas sector. For example, there have been advances in battery technology which will allow the development of more energy efficient boats and reduce dependence on traditional fuel sources. As the use of batteries becomes more widespread, marinas will need to provide adequate facilities in order to maintain their customer base. The Marina 2020 vision can work as a tool to identify these industry drivers and ensure marina stakeholders are aware of the opportunities available to them.

Additionally, there has been an increase in the use of renewable power sources. For example, the use of solar panels can already be seen in a range of UK marinas through promotion by MDL marinas. These solar panels can be used to provide a more resource efficient and sustainable power source to the businesses unit and complementary facilities provided by marinas, reducing the carbon footprint of the marina. It should be expected that this movement towards renewable energies will require the creation of new facilities in some marinas which may be costly. However, the adoption of new technologies also has the potential to create new business and employment opportunities for the local communities. Additionally, it will work to attract eco-conscious visitors to the facilities and could act as a market advantage for the businesses in a marina.

In the context of on board alternative energy sources, there are examples of on-board wind and solar power and propulsion. By utilising this type of technology, boat users can power on-board communication systems, autopilots etc. without the use of the engine, reducing energy consumption and cost for the user. Again, this movement towards alternative energy sources provides the industry with a range of eco-innovation opportunities that could be met through collaborative business relationships, and promoted through effective knowledge exchange. Obviously, as these technologies advance, there may be a decreased dependency on berthing facilities; however, by working towards achieving the goals set out by the Marina 2020 vision, and acknowledging these industry drivers, marinas will be able to work to mitigate any potential negative impacts.

3. Summary of Drivers and potential components of Marina 2020

From the above it is clear that there are currently a diverse range of drivers impacting the marina industry in the Channel region. These are summarised in Table 1.

Table 1: Summary of the drivers identified for the Marina 2020 Vision

Social	Environmental	Technical	Economic	Political and Legal
Changing demographic <ul style="list-style-type: none"> - Aging population - Increased disposable income from older generations - Loss of skills through young people leaving coastal communities - 	Fuel restrictions – MARPOL, red diesel	Communications technologies <ul style="list-style-type: none"> - Use of Apps to upload information - Dependency on user information to keep up to date 	Increased costs of running and owning a boat <ul style="list-style-type: none"> - Cost of fuel - Cost of berthing - Cost of through life support for boats 	MARPOL legislation
Ethical consumerism	Implementation of MCZs and MPAs, marine spatial planning	New boat designs to adhere to environmental legislation.	Impacts of the global economic recession	Marine and Coastal Access Act (2009)
Urbanisation and congestion around marinas	Issues associated with climate change and mitigation	Changes to marina infrastructure through mobile docking systems and dry docks	Pressure to diversify services in order to ensure sustainability	EU Marine Strategy Framework Directive (2007)
Role of marinas in communities <ul style="list-style-type: none"> - The Marina village concept 	End of life disposal/ recycling	Automated on-board communication and navigation systems	Potential implications associated with legislative changes	Safety and security implications – maritime surveillance
Need to improve relationships with local government and community	Implementation of EMPs	Use of alternative energy sources both on-board vessels and within marinas.	Pressures from emerging markets and competition from other regions outside the Channel region.	Implications associated with lease renewals and the Crown Estate.

Social	Environmental	Technical	Economic	Political and Legal
Increased accessibility to the marina sector – change in the types of users.	Energy efficiency and movement towards renewable energies. Reduction in Carbon footprint. Resource efficiency – recycling and reuse		Opportunities associated with the promotion of the ‘green economy’. <ul style="list-style-type: none"> - Role in renewable energy development - Exploitation of a rise in ‘green’ consumer behaviour 	
	Implications of green shipping		Potential impacts of the Olympics	

Throughout the discussion of the drivers of the marina industry, it is evident that innovative advances in technology development and further research into alternative solutions to challenges currently facing marinas are needed. Technological advances in the sector would allow marinas and associated services to ensure they are providing the most cost-effective, resource efficient and environmentally favourable service to boat owners.

Based on earlier research, Robins (2011) found that marinas in the Channel region have the potential to provide a diverse range of services to local communities including:

- Recreational boating and berthing.
- Site of commercial activity.
- Research and development.
- Centre for entertainment and leisure.
- A hub for the local community.
- On and off shore renewable energy development.
- Information technology
- Development of environmentally sensitive operations – i.e. more fuel efficient vehicles, more environmentally favourable fuel, boat design.
- Support for associated marine supply chains
- Links to boating tourism
- Expansion of associated consumer services
- Development of business clusters

Based on this and the research conducted into the various drivers of the marina industry, the Marina 2020 Vision for the Channel region is tentatively defined below. It is expected that this definition will be refined throughout the research process, reflecting the views of marina stakeholders.

Marina 2020 serves as a vision aimed at ensuring an economically stable future for the marina sector, fulfilling its role within the local business and social community, working towards service diversification and long term sustainability, through collaboration, diversification and knowledge exchange within the sector. Additionally, the Marina 2020 Vision will ensure the marina sector acts as a responsible steward for the marine environment, ensuring compliance with environmental legislation and promoting a healthy and productive marine environment.

4. Expected benefits of Marina 2020

Marina 2020 as a vision is expected to result in a range of benefits for marinas. The scope of these benefits will depend on the individual characteristics of each marina, their location, size, capacity and potential for growth. Based on the research done to date (Robins, 2011), it can be inferred that the benefits associated with Marina 2020 would be:

- Improved relationships between marinas and local authorities in the Channel region.
- Higher levels of environmental favourable practices with more marinas working towards the use and support of fuel efficient vessels, and the use of renewable energy.
- Improved marina efficiency through better utilisation of space and services e.g. Mylor marina, Cornwall has increased its capacity through improved utilisation of space and rearrangement of the marina.
- Reduced impacts on the marine ecosystems adjacent to marinas in the Channel region as a result of more environmentally friendly practices.
- Development of effective collaboration and knowledge transfer which encourages knowledge exchange between marinas, allowing the sector to become more financially stable, more environmentally sound and ensure adherence to national and international maritime policy e.g. Marine and Coastal Access Act, Marine Strategy Framework Directive, European Integrated Maritime Strategy.
- Diversification of marinas which will add to their long-term economic stability.
- Development of effective clustering practices between and within marinas across the channel region.
- Reduced costs and increased profitability for marinas through the development of effective clustering.
- Greater business diversification within marinas to increase profitability and further their role in the wider community. This also ties in well with The Yacht Harbour Association Gold Anchor Scheme.
- Facilitation of clustering and supply chain development through the promotion events being held by CAMIS.

As with all new concepts, developing the vision for Marina 2020 could potentially face some challenges. In order to develop an achievable vision for marinas in the future these issues must be considered. These may include:

- Developing new infrastructure associated with diversification (i.e. adoption of green energy practices, addition of consumer services, involvement in marine renewables) will incur additional costs for the marina, and could have an impact on the marine ecosystem adjacent to the marina.
- Diversification will result in increased industrialisation and may result in increased waste disposal and energy requirements. Infrastructure and services will need to be put in place to deal with these.
- Additionally, there is evidence to suggest that it may prove challenging to get marinas to agree to collaborate with one another. The CAMIS survey (Robins, 2011) indicated that while participants would be interested in collaborative activity, they would also be concerned about losing their competitive advantage. It is expected that, once refined, the Marina 2020 vision would promote further networking and clustering between and within marinas, building relationships and addressing any of the potential issues associated with collaboration.

5. Conclusions and next phase

While there are a range of factors driving the marina sector, each of these could be facilitated for through the development of effective clustering and collaborative business relationships within the sector. The Marina 2020 vision proposes a rich and diverse future for marinas, but input from the marina stakeholders will be needed to realise it. It is proposed that the Marina 2020 Vision could be recognised as a mechanism through which the wider marina sector could be guided to a sustainable future. The conceptual vision for Marina 2020, discussed in Section 4, has the potential to act as a blue print which should be used to develop practical actions points that will ensure the marina sector achieves the objectives set out by the vision. There are a range of potential ways in which the current aims of Marina 2020 could be realised, including the promotion of clustering and collaboration within the marina sector, increased knowledge exchange, collaborative research and development within the sector to name but a few. Further work on the Marina 2020 vision will be

conducted through engagement with stakeholders and will be used to refine the aims and action plan for Marina 2020.

The benefits of networking and developing collaborative business relationships can be applied to the marina industry. There are already international networking bodies for the marina industry which encourage the exchange of best practice, including; the International Council of Marine Industry Associations Marinas Group (IMG). By working collaboratively to achieve the goals set by Marina 2020, best practice recommendations for the marina industry can be identified. The CAMIS project is working to develop this vision with marina stakeholders and would be keen to facilitate projects to encourage clustering in the industry through the promotion of Marina 2020.

The next component of the Marina 2020 will be to identify the solutions to the challenges posed by the diverse range of drivers covered in this report. It is proposed that this will be done through a range of interviews, questionnaires and potentially a Marina 2020 workshop (based on the Pulling Together event). In order for the research to be representative, interviewees and participants will be approached from a range of backgrounds, including: local authorities (chambers of commerce, Local Enterprise Partnerships, and county councils), member of marina sector networks and groups (BMF, TYHA, MDL, and TEM), providers of additional services (chandlers, fuel providers, mechanics), and holders of business units within the marina (restaurants, cafes, insurance brokers, retail companies etc.).

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