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Executive Summary for Clustering in the Arc Manche

A Combined English and French Report

Dr Dawn Robins

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Executive Summary

This report draws together the findings of two detailed studies on the current and potential opportunities for innovation and business clusters in the maritime sector of the Arc Manche region. The report summarises these through a compare and contrast methodology and provides recommendations for future joint collaboration initiatives based on the political, economic, social and operational landscape that is identified.

1. Introduction to CAMIS

The CAMIS project (Channel Arc Manche Integrated Strategy) was given approval in June 2009 as part of the INTERREG IVA France (Channel) - England Programme, following on from the success of the Espace Manche Development Initiative (EMDI) project (Buleon and Shurmer-Smith 2008). The aim of CAMIS is to draft and implement an integrated maritime strategy for the Channel region whilst encouraging concrete co-operation schemes between stakeholders in France and the UK. The project brings together 19 British and French partners, including a range of local authorities and universities, to work together in light of the new EU and national requirements (Devon CC 2010). CAMIS takes the form of 6 Strands that look at specific facets of the maritime industry including transport, innovation, business clusters and safety.

Aims of CAMIS Strand 3 Business Clusters

The Strand 3 research has concentrated on Innovation and Business Clustering within four main thematic areas:

1. Marine Renewable Energy,
2. Marine Operations,
3. Marine Environment, and
4. Marina Tourism.

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The renewable energy theme has been chosen for its relevance in technology advancement, environmental impact, sustainability and economic and political interest. Marine operations include activities such as ballast and pollution control, fuel efficiency and hull design. The marine environment consists of policy development and awareness as well as research and development whilst Marina Tourism looks specifically at the marina industry and related business operations.

The CAMIS project is unique in that it not only aims to identify cluster activities within the four themes but it also aims to facilitate further cluster activities using the best practice that is identified. Therefore the project is disaggregated into three sections:

1. 3a – Identification of cross-border cluster opportunities
2. 3b - Cross-border cluster development
3. 3c - Thematic benchmarking activities

Although there has been a substantial amount of work into clustering and marine clusters there has been little research on the potential benefits from cross-border collaboration. It is the aim of this research to address this issue and from these aims the following objectives will be achieved:

1. Promoting genuine symbiotic business relationships throughout the region
2. Sharing best practice initiatives
3. Identification of sources of and opportunities for, innovation within clusters
4. Facilitating the development of existing clusters or the creation of new ones where they do not already exist
5. Enabling new channels to market

The following summarises the work that has been carried out in 3a – identification of cross border cluster opportunities – and highlights the interpretation of innovation and clustering whilst giving examples of where it has been found and how it is fostered.

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2. Background to Arc Manche Regional Maritime Policy

Although historically both maritime nations with long naval and trade traditions, both France and the UK have, more recently, tended to turn their backs on the sea allowing structural investments and coastal communities to decline. This trend has started to reverse with both governments recognising the importance of the maritime industry to a nation's growth and prosperity. Environmental awareness and the increasing need for sustainable transport have also given the maritime sector opportunities to evolve and develop its industries to adhere to EU policy, maximise its potential for innovation, and to diversify into renewable energy and tourism.

In 2009 France published the 'blue book' entitled 'National Strategy for the Sea and the Oceans'. This set out four main national strategic guidelines:

1. Invest in the future
2. Develop a sustainable sea economy
3. Promote the maritime dimension of overseas territories
4. Confirm France's place in an international context.

Furthermore, the Blue Book sets out the general ambition of an "integrated maritime policy" that brings together the actors concerned, goes beyond a sector-based approach, considers all scales of geography and time, and takes account of the impacts of choices made in the long term as regards environmental, economic, and social plans.

Also during 2009, the UK passed the Marine and Coastal Access Act which has the aim of achieving integration of the socio-economic needs of all marine users with the need to protect the marine environment and preserve biodiversity. The main sectors included in the policy were:

1. Marine management, planning and licensing – providing a consistent approach

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2. Marine conservation and fisheries management

3. Centralising data and information

4. Coastal access, and

5. Estuary management

The result is a more unified focus of marine activities leading to a greater awareness of the potential impacts.

The differences in policy focus are apparent between the two countries though – France has a more industry focused policy whereas the UK looks towards the environmental aspects. In France there is a dedicated ministry for maritime affairs - The Secretariat General of the Sea – whereas the maritime sector is absorbed into the Business, Innovation & Skills Department in the UK.

In order to understand the demographics of the two regional areas that make up the Arc Manche the trends in employment and industry were analysed. Data collection is no standardised in the EU and there are differences between the two countries is the manner in which data is collected and used. This makes it difficult to compare and contrast the different regions and counties. French data can be taken to regional level (Table 1) whereas UK data tends to be national or collected at the now defunct regional status of SouthEast and South West. Table 1 shows employment in northern France.

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Table 1 Employment in three maritime sectors in the Northern French regions

Number of jobs	Traditional maritime sectors	% in France	Coastal tourism	% in France	Fishing and products of the sea	% in France
Bretagne	41 500	**18.0**	30 400	**14.6**	18 500	**28.6**
Basse-Normandie	20 000	8.7	10 300	4.9	6 100	**9.4**
Haute-Normandie	33 500	**14.5**	11 300	5.4	2 400	3.7
Nord-Pas-de-Calais	20 800	9.0	14 100	**6.8**	5 500	8.5
Picardie	/	/	/	/	/	/
France	230 700	100.0	208 200	100.0	64 700	100.0

Source: Edater, 2011, based on the report by the Policy Research Corporation, 2008

Both Haute Normandie and Bretagne are well served by the traditional maritime sectors whereas Basse Normadie appears strong in the fishing industry and Nord-Pas-De-Calais the tourism industry.

Overall the population density of the two country regions is also dissimilar with the South of England having a greater population density than the north of France. The French region of the Arc Manche is also larger than the UK region therefore the difference in population density is more marked. This will impact on the size and scope of maritime industry along the coastlines and could make a difference to planning and policy implications.

It is not possible to highlight the same trends in the UK but Table 2 gives an overview of the different maritime industries in the UK, and the change between 2001-07, at a greater sector depth rather than location.

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Table 2 Comparision of Turnover and Employment in the UK marine Industry Between 2001 and 2007

Sector	Turnover £bn		Employment	
	2001	**2007**	**2001**	**2007**
Oil & Gas	9.20	4.00	25,000	20,000
Shipping	5.12	10.80	31,500	38,400
Manufacturing	5.20	3.87	40,600	51,000
Shipbuilding	2.54	1.95	24,000	25,000
Marine Equipment	2.66	1.92	16,600	46,000
Maritime Services	4.54	3.01	13,800	14,100
Ports	1.69	19.40	25,000	138,000
Defence	6.66	8.19	61,500	74,760
Leisure	1.61	2.95	26,378	35,680
Renewable energy		0.67		600
Construction		0.59		6,200
Decom Platforms		0.08		1,200
Other	2.82	2.45	30,460	30,833
Telecom	0.50			
R&D	0.61	0.80	8,040	10,360
New Technologies	0.23			
Education & Training	0.14	0.07	1,100	350
Ocean Survey	0.10	0.10		
Navigation & Safety	0.32	0.45	4,200	5,000
Aggregates			2,000	1,670
Fisheries	0.92	1.02	15,120	13,453
TOTAL	**36.84**	**56**	**254,738**	**410,773**

Source: Seavision (2011) Facts and Figures

There has been a significant growth in the number of employees between 2001 and 2007, especially in the tourism sector and the marine equipment and port sectors. Fisheries have seen a decline over the same period and a significant drop in training has occurred – despite the increase in employees.

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Table 3 isolates the tourism sector growth in terms of value and finds the Southeast dominates in terms of value share.

Table 3 BMF Coastal Marina GVA 2005

	GVA Core Operations £'ooo	GVA Impact £mil	% Regional Share	Total GVA £mil	GVA Impact as % of Total GVA
Southeast	23,661	171	34.3%	166,300	0.10%
Southwest	12,233	89	17.7%	84,600	0.10%
Total UK	69,000	500	100%	1,090,300	0.05%

Source: BMF 2005[1]

Since 2009 there has been a change of government and also policy direction in the UK. The regional development agencies have been disbanded and this has meant many of the maritime support agencies have also disappeared. The recession has impacted on the amount of support that can be offered by both countries to both industry and innovation and diversification has risen as a consequence of this reduction in public support.

3. Research methodology

In order to achieve the aims of identifying innovation and cluster potential in the Arc Manche region various research methodologies were used. The UK research was carried out by the University of Chichester and the French research was conducted by the French consultancy company Edater. The University of Chichester led the research phase and instigated some of the methodologies that were used.

In the first instance, a database of marine and maritime companies was developed for the UK side of the project with the intention of populating it with French

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[1] BMF (2005). Economic Benefits of Coastal Marinas, British Marine Federation

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companies as the project progressed. The following map highlights the density of maritime industries along the coastline and main towns.

Figure 1 Location of maritime industries in the Arc Manche region
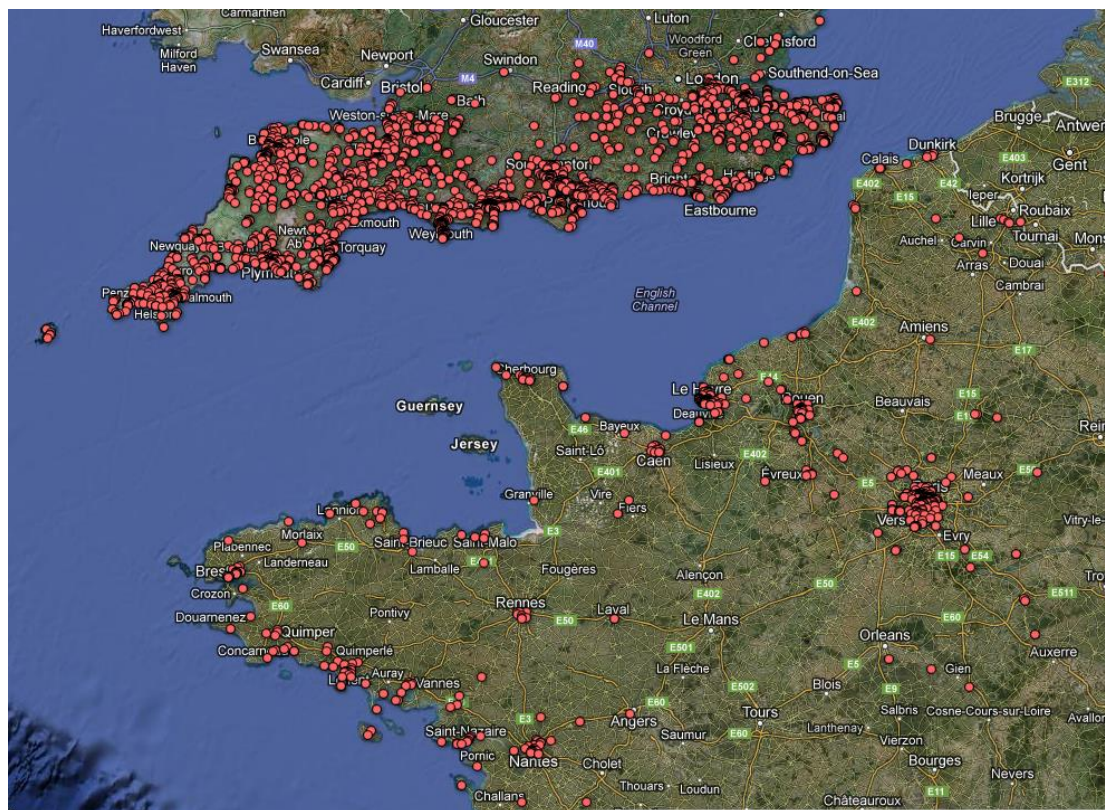
The database includes nearly 7,000 companies in the UK and 2,000 in France. It is the intention for the data collection to continue through the life of the project.

Understanding the regionally specific maritime industries would also impact on the type of cluster activity that would occur therefore the reports use secondary data obtained from governmental sources and previous literature to outline the specialisms of each county and region and note their strengths in innovation and clustering.

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In order to ascertain the prevalence of clustering along the UK coastline the database was analysed for potential themes such as named clusters, sector specific density areas and research centres[2]. Once potential cluster activity was found interviews were carried out via face-to-face and telephone with stakeholders and secondary data sought to clarify policy drivers. In France clusters are policy driven and facilitated therefore clusters were identified through secondary data searches and additional information requested from cluster representatives. The findings for both countries were analysed and recommendations for additional collaborative activity outlined.

During the research phase of the UK work it was identified that innovation was an important aspect of maritime clustering and the innovation aspect of the project was absorbed into the cluster research from this point forward.

4. Innovation

A commonly accepted definition of innovation is the successful introduction of a new or improved product, process or service to the marketplace (Hobday, 2005). Joseph Schumpeter characterised innovation as a "creative destruction" (Tidd, 2006). According to Freeman and Engel (2007), Innovation is about developing new ideas and marketing them for financial gain. It is the financial aspect that distinguishes innovation from invention in a university laboratory or research centre(Freeman and Engel, 2007). Innovation now constitutes a fundamental part of business research and it is estimated that for a businesses to excel in the future they will have to innovate; thus innovation has become an integral part of the decision making process and business functioning for many business models today.

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[2] Research centres are known facilitators of collaboration with industry

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1. Current Innovation models being used in the Arc Manche region

The Regional Innovation System (RIS) is one of the most modern approaches for supporting innovation and assessing the effects of innovation on specific regions and its contribution to economic development. It is an innovation policy that promotes regional science, technology and innovation with the participation of regional stakeholders (Zabala-Iturriagagoitia et al., 2008). Business clustering is intertwined with the model of RIS as the latter provides necessary conditions for the formation of clusters, it is associated with knowledge spillovers and encourages innovative activities through R&D and investments in technology.

The European Research Area (ERA), an initiative launched in 2000 as part of the Lisbon Strategy (Bruijn and Lagendijk, 2005), aims to integrate research programmes and structural funds to improve the European competitiveness in the "knowledge society" (Heraud, 2003). The ERA is based on the concepts of the RIS and can bring together regional development organisations, universities, local authorities, stakeholders and sponsors.

In France, innovation is policy driven and regional authority led. Each region has a centre for encouraging innovation through start-up companies, industry collaboration, advice, and financial or infrastructure support. An example of this system is seen in the Haute-Normandie Regional Agency for Innovation, SEINARI. It was set up by the State (DRIRE / SGAR, DRRT), the Regional Council, and OSEO, to intervene:

- "as facilitator of the Regional Innovation Network, to make its action consistent and professional, and
- as sole guide for innovation projects (directly, in the case of "creation / incubation" innovation).

In respect of governance, 3 types of situation co-exist in the French Channel Area:

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1. *shared by three Regions*, the mode of governance set up was not done so on an ex nihilo basis, but enables existing arrangements to be adjusted to the new economic context;

2. *also applies to three Regions*, the choice of governance was guided by a need for refocusing existing bodies on a handful of key arrangements; and finally,

3. *an original mode of governance*, and is based on a GIP (Groupement d'Intérêt Public – Public-Interest Grouping).

In the UK innovation is encouraged through the national technology strategy board (TSB). The TSB provide government funds for competition led innovation projects utilising collaborative relationships between industries within a supply chain system. One of these projects is the OWEL Marine Demonstrator led by Offshore Wave Energy Ltd. in conjunction with IT Power, A&P, Mojo, Gifford, NaREC, Plymouth University (PRIMaRE), NPL and DNV. The OWEL team have developed a highly practical, cost-effective and environmentally friendly design for a Wave Energy Converter.

Although not specifically used, the RIS methodology for innovation is the most widely used system in the UK but due to the demise of the regional development agencies the funding, support and impetus is now provided on a national scale or a local scale via the Local Enterprise Partnerships (LEPs).

Innovation is an important aspect of clustering and collaboration and provides a significant driver for cross border collaboration to take place.

5. Clustering in the Arc Manche Region

Whether formal or informal, clustering in the maritime industry is diverse and specific to local regions, technologies, personalities and demands. The basic activities and benefits of clustering are the same across the Arc Manche region but they differ in the organisational, financial and management structure. Clusters are facilitated in France by local government and need policy and support. The approach is very 'top

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down' and natural clustering – although doubtless occurs – is not facilitated. There is a known amount of clusters in France whereas in the UK clusters are generated by a need, an innovation, or a desire by an individual/company to collaborate. The clusters in the UK tend to form without the brand 'cluster' and evolve into clusters as they become successful. It is not easy to determine the amount of clusters in the UK due to many of the clusters being unaware that they are, in fact, clusters.

That said, clusters are appearing along the south coast of England in four distinct ways:

1. **Innovation and Technology** driven clusters consisting of a few companies working closely on a specific project. Within this cluster type there can be two distinct themes:

    a. Single project based cluster that works to a known timescale and financial commitment. Cluster activities are purely based around the research and development of a new technology and there are no joint marketing, branding or member benefits although some cost efficiency may be apparent through the collaborative business plan. Cluster is only sustainable during the life cycle of the project.

    b. Research and development centre based clusters where, similar to the single project cluster, activities centre on projects and are time specific, but sustainability is achieved through crossover of knowledge and the birth of new projects and innovative ideas. The sustainability is achieved usually due to the central hub of the research centre facilitating this process.

2. **Branded** marine networks that encourage cluster activities through either a niche market or collaborative membership benefits. Evaluating the benefit of these clusters is difficult due to the difficulties in monitoring the impact of networking on future business. Sustainability tends to be achieved only if the membership remains at a level that ensures the fees cover the cost of administering the cluster.

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3. **Local Authority or 3rd sector** branded marine clusters that are supported by the public sector and work alongside other public sector organisations to actively encourage sustainability in the marine industry. These clusters are rarely technologically facing and usually relate to policy and awareness.

4. **Naturally occurring** clusters based on a common interest or benefit and may be indistinguishable due to their inward focus.

Clustering is not government led, although there used to be funding available for developing clusters from the regional development agencies before their demise. Many of the clusters that were found are time constrained and all are evolving to take account of the supply chain, customer market, and changing technology and innovation.

In France, clusters have, since the early 1990's, been competitive by nature and sector specific and location orientated i.e. the Glass-Producing District of the Bresle Valley. Since 2009 there has been a move towards 'Business Clusters' – a complimentary scheme to position business innovation closer to the market. Many of these newly created clusters have already positioned themselves close to the competitiveness clusters and are increasing the opportunities for innovation at the business level.

The clusters in both countries were analysed from a county, a named cluster, and a themed perspective where applicable.

County and Regional Clusters

In the UK, each County works to its own unique strengths as they arise and have the opportunity to develop. The southwest has enjoyed significant funding through regeneration and EU convergence funding that has enabled it to develop a significant renewable energy sector and clusters for sustainable maritime industries. The southeast, in contrast, has had the benefit of a strong regional marine centre in

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Marine Southeast (MSE) and the need for specific clusters has either not been needed, or the necessary platform for this to occur has not been apparent.

The French regions work along the RIS strategy for innovation within the region and each region has its own particular strengths depending on location, access, resources and industry.

Regional Cluster types

In the UK, the majority of branded clusters were instigated by the regional development agencies funding and have struggled to survive once the cash flow stopped. The exception to this is Cornwall Marine Network (CMN) who has successfully generated additional income streams and has seen considerable benefits to member companies shown through an ever increasing membership. CMN are also collaborating with French industry where appropriate and the cluster is increasing in the demographic area it covers taking in Devon and parts of Dorset.

Cornwall has, in the main, micro companies operating around the renewable energy, operations and tourism themes. Devon and Dorset have strong marina tourism sectors and also has the environmental research centre Primare in Plymouth. The Solent area is the main maritime research and development region with the National Oceanographic Centre and many large innovation and operations industries whilst the SE of England has the two largest marinas in Europe and a strong renewable energy sector developing from the current and planned off-shore wind farms.

Technology clusters are apparent around the two research centres in Devon and the Solent regions. Branded clusters appear to work well with SME and micro industries and in areas of disadvantage (Cowes cluster protects from the large Solent region) and specific purpose (Chichester cluster developed from a specific need and dispersed once the problem had been solved). Devon and Dorset are areas of coastal significance and the Devon Maritime Forum successfully draws in interest from the environmental policy and industry sector.

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In France, the Bretagne area is the main leader for maritime industries with strengths in safety and security, ship building, fishing and environmental sustainability. Haute-Normandie specialises in logistics and products of the sea whilst Nord-Pas-de-Calais and Picardie are strong in logistics and transportation. There are three main competitiveness clusters in these regions: Bretagne Sea Cluster, Nov@log, and Aquimer. Between them they have over 600 members of which many are SMEs.

Themed Clusters

The organisational, policy and economic platform that has been apparent in each country so far is still pertinent to themed clusters. French clusters are still authority led with support from government sponsored agencies and British clusters are still either supported by TSB innovation funding, research centre collaboration or branded. Where this differs is around the marina tourism clusters that are apparent – or have great potential – in both the UK and France.

A separate research questionnaire was sent out to all marinas in the Arc Manche region and a good response was received from both sides of the Channel.

The research highlighted a variety of potential areas for collaboration and best practice was apparent in both countries in different areas of marina management. Cross border collaboration was observed between MDL and SODEPORTS as well as the marina cluster TransEurope marinas. Marinas also worked closely with the various associations and societies that represented them. In the UK some of the branded clusters, such as the Cowes Cluster and Cornwall Marine Network, provided opportunities to network with other local marine companies.

The potential for increasing the efficiency and sustainability of marinas through collaborative working was found to be considerable. The main issues were identified as:

- Recognising potential from a policy perspective

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- o Incentivising through policy
- o Encouraging collaboration and maximising local potential
- Recognising potential from a business practice perspective
  - o Increasing awareness of best practice through knowledge transfer
  - o Allowing income diversification through collaboration
- Recognising potential from a geographical perspective
  - o Marinas are natural cluster agglomerations due to the location and infrastructure potential.
  - o Marinas attract leisure income and added facilities and opportunities could enhance this provision

The findings from the research suggested the following recommendations:

- Local Authorities in the UK could consider incentives such as funding and support to encourage marinas to hold training and awareness events, collaborate with local businesses, and increase business growth and potential
- Local Authorities in France need to recognise the importance of business collaboration within a marina and increase this potential through the development of commercial activities.
- Marinas in both countries should look to neighbouring marinas for opportunities in the area of bulk buying, transport, marketing and joint training initiatives, thereby reducing costs and increasing their commercial visibility
- It is recommended that UK marinas should consider supporting the business units within the marina by holding networking and awareness events and offering the marina as a potential business hub.

The research has identified that marinas on both sides of the Arc Manche have specific knowledge of best practice and niche markets that have evolved from the geography and demography of the locality. Further to the research the recommendation to increase the understanding of marina potential has resulted in

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the Marina 2020 Vision that will be developed in the next phase of the cluster project.

6. Cluster potential and recommendations

One of the main findings to come out of the research is the perceived lack of understanding of local authorities in the UK of the scope for increasing the economic growth of the local area through cluster benefits. Bridging this gap will be one of the objectives of the vision for marinas. It will be particularly important to ensure that marinas are the main developers of the vision whilst fostering support from local authorities for the activities to stand any chance of success.

The research found that whichever level of clustering is adopted in either country there are still three essential elements that need to be in place for a cluster to develop and remain sustainable. These are:

1. Trust
2. Leadership
3. Purpose

For a cluster to survive all three elements must continue otherwise the cluster will falter. Trust is essential – stakeholders need to trust each other for knowledge transfer to occur. A leader can come in the form of a local authority, large company or elected member but there needs to be someone who can direct the cluster activities and keep momentum. The purpose of a cluster can evolve as technology changes and project based clusters come to the end of the project and new innovation drives collaboration forward.

Cluster themes

Each of the themes emerged from the research as having potential for cluster facilitation.

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1. Operations - is an emerging sector that funding and policy intervention is helping to nurture on both sides of the Channel. This sector needs to build on the knowledge and technology innovation available in both the marine sector and other industry sectors. Cross-border collaboration will only be achievable if the policy drive is similar in both France and the UK.

2. Renewable energy – the UK leads in technological and policy implementation but France is adopting strategies for increasing this area for both innovation and practice. Collaboration at the technology level would be achievable and is occurring on an international basis in the innovation of energy devices. There is also scope to develop an Arc Manche cluster to develop, build and maintain off-shore farms in the Channel area. This would provide a cohesive and holistic approach to Channel energy maintenance.

3. Environment – collaboration in this theme is essential if the increasing congestion and diversity of activities continues. It is recommended that the current policy development and research in this area is disseminated with the view to developing a cohesive policy for the Channel.

4. Tourism – marinas have come through as being fundamental to economic development of coastal areas. There is scope for local, regional and cross border collaboration to increase knowledge transfer, develop skills and operations, increase mobility and enhance the visitor, member and business landscape.

Techniques and activities for clustering can cross themes and may encompass more than one theme. The challenge will be overcoming the differences in business culture and language as well as the differences in ownership, funding streams and policy focus.

7. Conclusions

Although there are apparent differences in how clusters are facilitated in the UK and France there are many similarities in their purpose and benefits. The research highlighted the significant challenges that will face the facilitation phase of the

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project – public and private industry ownership, language, policy focus, funding availability and research direction. These challenges also provide opportunities for increasing the understanding of best practice and therefore providing opportunities for growth stimulation and diversification.

From a national perspective there is a lot of scope for increasing clustering in the UK by facilitating growth and activity stimulation with current clusters and emerging clusters. In France the current clusters are established and require minimal facilitation and rather more support. The opportunities therefore lie in increasing cross border collaboration by developing an awareness of each countries strengths and opportunities and facilitating communication and growth development through shared objectives.

8. Moving forward

In order to take the research forward to the next stage it is proposed that a toolkit should be developed as part of the strand 3B activities which would include:

1. A bi-lingual portal developed by the University of Chichester and piloted in 3 or 4 areas to support a knowledge network
2. Events to encourage and promote growth, innovation and collaboration within clusters
3. The development of a Marina 2020 vision.

The full reports from the first phase of the Strand 3 Cluster project can be found on the CAMIS website.

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