INTERNATIONAL KNOWLEDGE TRANSFER FOR ADVANCING OFFSHOREVÄST

Pre-study brief: Overview of potential knowledge transfer partners in three regions

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OFFSHORE VÄST

LightSwitch

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Summary

The purpose of this pre-study has been to lay the ground for a knowledge transfer process between OffshoreVäst and an international partner organization during the spring of 2015. The work has consisted of identifying and evaluating possible partners in five countries, performing further research and analysis of three selected potential partners, as well as formulating recommendations regarding next steps.

It has resulted in the following recommendation to OffshoreVäst management:

- Initiate a knowledge transfer process with Aberdeen Renewable Energy Group to be carried-out before June 2015
- Focus on how to manage the offshore sector's transition towards sustainability by working closely with actors from both the fossil and renewable energy sectors
- Include preparations for organising network building initiatives between member organizations in the two regions during the fall of 2015

Introduction

OffshoreVäst is an initiative for promoting the Swedish offshore sector. The vision is to "develop industry segments and technology areas where Sweden is world leading through the creation of strong R&D environments, innovation capacity, high quality and competitiveness, based on a firm commitment to sustainable development". An overarching focus is to build on existing world class competence in areas such as environmental technology, marine biology, materials technology, manufacturing and human factors, in order to create a positive impact on the environment and global climate.

OffshoreVäst gathers 67 companies, universities and research institutes that work together in areas such as offshore wind power, marine renewables and offshore service and maintenance as well as offshore oil and gas extraction. It is funded by VINNOVA, Region Västra Götaland and the members.

The offshore sector faces a number of challenges that are driven by global macro trends. Firstly, ever increasing evidence and concern about the anticipated devastating impacts of human-driven climate change, as well as the rapid development of renewable energy technology, will cause a large-scale transformation of industrial systems. For the offshore sector this means that oil and gas extraction activities will have to be greatly reduced and eventually cease to exist. Accordingly, the development potential for the sector lies in environmentally efficient shipping, offshore renewables, aquaculture, and other similar activities that can exist in a sustainable society.

Managing the transition from industrial systems based on fossil energy to sustainable alternatives is a great challenge for actors in the offshore sector, especially since key competencies and investment capital are dominated by vested interests, often represented by oil and gas companies and their suppliers. Secondly,

globalisation and the rise of developing economies bring increased competition, putting additional pressures on firms in developed economies to develop their innovation capabilities. There are however also significant business opportunities awaiting those companies that are capable of adapting their products and business offerings to the new economic landscape.

OffshoreVäst has an important role to play when it comes to supporting Swedish actors in managing these challenges, both for creating job opportunities as well as for stimulating and facilitating the transition to a sustainable society. However, this is no easy task and the initiative itself faces a number of challenges, revolving around how to organize, coordinate and carry out activities and projects, avoid competing for firms' engagement with other similar initiatives, motivating actors to participate and collaborate, as well as formulating well-defined goals that can be followed-up and evaluated.

Currently, OffshoreVäst is developing a new strategy and prepares for a major funding application. It is important to seek external advice and sources of knowledge to ensure a successful strategy development process, especially since there are many similar initiatives abroad that can serve as partner organizations and engage in a mutual learning process. In order to initiate such a knowledge transfer process between OffshoreVäst and an international partner, there is a need to create an overview of potential partner organizations, analyse their suitability, and identify a possible focus area for the process.

Therefore, the purpose of this pre-study brief is to lay the ground for a knowledge transfer process between OffshoreVäst and an international partner during the spring of 2015. It has been developed in six steps:

1. Discuss OffshoreVäst's challenges during a start-up meeting with OffshoreVäst management. The challenges have guided the research and analysis work throughout the project.
2. Identify and briefly evaluate possible partner organizations in Norway, Scotland, Germany, Ireland and Canada, and select three organizations for further research. A complete list of the organisations that were identified can be found in the Appendix, together with a short motivation regarding their suitability.
3. Perform web research and interviews with the three selected organizations. The sources of information that have been used can be found in the Appendix.
4. Analyse the obtained information and recommend next steps, in terms of which partner organization that would be most suitable for knowledge transfer and how the process could be designed and executed.

It should be noted that the nature of this pre-study has limited the analysis to fairly shallow sources of information, making it reliant on the image that the studied organizations wish to mediate. This underlines the need for a more thorough knowledge transfer process that can reveal not only what type of activities that the organizations engage in, but also how they are carried-out and what results they bring.

Overview of potential knowledge transfer partners

The three potential partner organizations that have been selected for further research are presented in the table below.

	Maritime Cluster Northern Germany	Aberdeen Renewable Energy Group	Irish Energy and Resource Cluster
Region	Northern Germany	Scotland	Ireland
Sector	Maritime	Renewable energy	Maritime
Members	200	170	79
Staff	9	3	3

Maritime Cluster Northern Germany[1]

National and regional context

Germany is Europe's largest economy with a strong focus on export and a reliable base of internationally competitive firms. It has high public spending on science and innovation with corresponding investment by the private sector. The maritime sector in Northern Germany consists of around 4 600 firms, employing about 113 000 people and generating around 33 billion Euros in turnover. The research intensity is high and there are around 135 universities and research institutions active in the sector. The three most important supply chains are shipbuilding, yacht and boat building, and offshore wind. Shipbuilding is by far the largest employer, with key competencies including design, construction, assembly and component integration. Prominent actors include Adolf Würth, Siemens Marine & Shipbuilding and MAN Diesel & Turbo. When referring to the Northern German maritime sector, three federal states are normally included: Hamburg, Lower Saxony and Schleswig-Holstein. Hamburg is the largest centre of the German maritime economy, generating about two thirds of total turnover and employing more than half of all people working in the sector.

Background and sectorial focus

In 2011, the three Northern German states of Hamburg, Lower Saxony and Schleswig-Holstein launched the joint maritime cluster management venture Maritime Cluster Northern Germany (MCNG). The goals, tasks, focal points, structures, cost and financing arrangements were laid down in a trilateral agreement, between the state-level government agencies.

MCNG is geared to the maritime economy of Northern Germany and all its sectors. Its main task is to initiate inter-state collaboration projects, expand the existing networks and strengthen regional competences. The main focus is on the following sectors:

- Shipbuilding and its wider supply chain
- Marine engineering, in particular for the offshore engineering and offshore wind energy industries
- State-specific integration of shipping companies, shipping, ports and harbours
- Education and academia
- Maritime services

However, they also operate in other maritime sectors such as aquaculture, maritime safety and security, and maritime environmental technology. MCNG considers it an important role to act as a moderator at the interfaces between these adjoining technological fields.

In the offshore renewables area, the focus is almost exclusively on offshore wind energy. Wave and tidal energy is rarely mentioned, which is because Germany lacks significant natural resources and has few technology developers focusing on these technologies.

Vision and goals

MCNGs stated goals are:

- Strengthening the competitiveness of businesses in regional and international markets
- Increasing the region's net value added

[1] The section about Maritime Cluster Northern Germany is based exclusively on web research, since the authors were unable to get in touch with representatives for direct questions. The specific sources of information are listed in the Appendix.

- Safeguarding and creating future-proof jobs
- Promoting the transfer of technology between the academic and business communities
- Developing innovative projects
- Cooperating with other clusters
- Looking after member companies
- Extending the membership base

Project and activities

MCNGs activities are conducted, as far as possible, in collaboration with existing institutions, associations and regional networks, so as to avoid any duplication, exploit synergies and generate added value for the maritime economy. The most important functions are:

- Providing information, communication and networking between industry, academia and government
- Supporting cooperation and implementation of innovative ideas
- Identify themes and ideas and initiating innovation projects
- Planning and conducting themed workshops and working groups
- Providing market support for companies and promote internationalisation
- Supporting in education and training
- Public relations and cooperation with other clusters

The activities and projects are focused on a number of thematic areas. Within the area ship efficiency, emissions and safety, there are projects about desulphurisation and after-treatment of exhaust emissions, LNG supplies, maritime IT, and combating piracy and terrorism. Within the area offshore wind energy, work about structural monitoring, repair and maintenance, and access systems is being undertaken. And within the area offshore oil and gas, the focus is on new developments in deep sea engineering. In addition, the cluster has projects concerning aquaculture, leisure boats, and maritime law. Furthermore, additional topics emerge through the regional offices, whose staff regularly visit businesses from the maritime sector to learn about specific wishes, technological needs and specific ideas for development projects, quickly finding ways to turn them into new products, processes and services. Their work also involves looking for innovative partners, clarifying questions about subsidies, establishing contacts to academia and supporting businesses in their international marketing efforts.

Organisation and funding

MCNG is run from a central office in Kiel and has regional offices in Hamburg, Lower Saxony and Schleswig-Holstein. The host organisation is the Business Development and Technology Transfer Corporation of Schleswig-Holstein (WTSH), based in Kiel. In total, MCNG has nine employees.

The organisation is overseen by a committee made of up two representatives from each of the three North German states; these representatives do not necessarily have to be employed by the respective state government, but can also come from other stakeholder organisations. MCNG also has a cluster management team made up of a cluster manager, an international project development officer, an assistant and a press officer. Their main tasks are to initiate inter-state collaboration projects, expand existing networks and further regional competencies.

Network and collaboration

MCNG is made up of leading businesses, research institutions, industry associations, universities and maritime industry networks from Hamburg, Lower Saxony and Schleswig-Holstein. It has a member

network with over 200 organisations, and also benefit from strategic partnerships with businesses and research institutions outside the cluster.

Challenges

It has not been possible to obtain any information about MCNG's challenges.

Aberdeen Renewable Energy Group (AREG)[2]

National and regional context

The UK maritime services sector supports approximately 537 500 jobs in total, contributing about 0.9 % of GDP. The UK is the uncontested world leader in the development of the offshore renewables sector. In 2009, the UK government's Renewable Energy Strategy set a target of generating more than 30% of electricity from renewable energy sources by 2020. Given the country's low starting point this was a huge challenge. To meet this target, offshore renewables, in particular wind, was singled out as the sector with the highest potential. Thanks to bold policy and significant government investment it is estimated that offshore wind will be meeting around 10% of the UK's electricity demand by 2020. While promoting the deployment of commercial offshore wind farms in UK waters, the government has also provided a favourable climate for R&D in the emerging wave and tidal sector.

Scotland is the UK offshore renewables champion. It is estimated that Scotland is home to up to 25% of Europe's tidal power, 10% of its wave power and around 25% of the European offshore wind resource potential. In fact, the Scottish government has a stated goal of meeting 100% of the region's electricity demand from renewables by 2020. Development of the wind, wave and tidal industry and supply chain is seen as a key guarantor for securing Scottish economic development in the medium to long term, particularly seen in the light of a declining oil and gas sector.

The development of the UK's and particularly the Scottish offshore renewables sector depend to a high degree on the country's maritime legacy with significant historical competence in shipbuilding and current expertise relating to offshore and subsea operations in the oil and gas sector. Old shipyards are being revived as hub ports for offshore wind deployment and wind farm developers depend on local and regional knowledge and experience of offshore operations. In 2013 about 3 000 Scottish jobs were related to offshore renewables sector but this number is growing steadily, especially as ever more companies in the conventional offshore petroleum sector see the potential in renewables and prepare for the decommissioning of North Sea oil wells.

Background and sectorial focus

Aberdeen Renewable Energy Group (AREG) was established as a group of like-minded businesses in 2001 and formally incorporated as a not-for-profit independent company in 2003. The organisation covers the whole renewable energy spectrum (onshore and offshore wind, wave, tidal, biomass, hydrogen fuel cell, photovoltaic and thermal solar, hydro and geothermal). Given Aberdeenshire's historic legacy as the "oil and gas capital of Europe" however, AREG and its member companies place special emphasis on the offshore renewables sector. AREG members include energy businesses, engineering firms, research institutes, professional consultants and economic development agencies.

[2] The section about Aberdeen Renewable Energy Group is based on web research and a short telephone contact with an assistant/ coordinator from the organization. The specific sources of information are listed in the Appendix.

Vision and goals

The overall vision of AREG is to ensure that the Aberdeenshire region and its businesses play a major role in the global energy revolution. AREG seeks to build on Aberdeen's strong global position in oil and gas exploration with the aim of transferring existing skills into renewables to create a complete energy mix and diversifying the local economy. AREG and its members are fast establishing the region as a renewable energy centre of excellence through initiating and delivering key renewable projects and working with partners to identify business opportunities.

Projects and activities

As a membership organisation, AREG is unique in that it also delivers an ambitious portfolio of renewable energy projects and activities, designed to showcase Aberdeen City and the region's leading position in renewable energy[3]. This includes:

- Conceiving and driving forward plans to realise the European Offshore Wind Deployment Centre – a ground breaking facility proposed by Aberdeen Offshore Wind Farm Ltd (AOWFL), through a joint venture with Vattenfall and the French offshore engineering giant Technip
- Assisting in the delivery of EU funded hydrogen transport and infrastructure projects in Aberdeen
- Leading the development of a local biomass strategy
- Accelerating the transfer of upstream oil and gas expertise into offshore renewables
- Developing the local and national renewable energy supply chain and promote knowledge sharing and business opportunities
- Spearheading the region's drive into new energy markets and expanding global connections
- Offering business networking opportunities, support and market information to members

Organisation and funding

Aberdeen Renewable Energy Group started out as one of a number of focus groups initiated by Aberdeen City Council in 2001. Realising the renewables sector's job creation potential in the region they put together a bold strategy with facilitation by LOGIC, an oil and gas industry supply chain initiative of the early 2000's, aiming to support the growing renewable energy sector. AREG was subsequently set up as an independent non-profit organisation in 2003.

AREG has three full time staff and operates with its own board of directors drawn from the public and private sector. The organisation is financially supported by Aberdeen City Council.

Network and collaboration

To date AREG has about 170 members from the whole renewables supply chain. The majority of members are engineering related (including front-end design) and also active in the oil and gas industry. High profile members include Technip and W3G Marine.

The organisation holds a central position in the transition to, and development of, a Scottish sustainable energy system capable of also delivering world-leading expertise to the world market. Apart from its tight connection to Aberdeen City Council it also collaborates closely with sector organisation Scottish Renewables and the public trade & investment promotion body Scottish Enterprise and others. For example, Orkney Islands Council (OIC) has joined the organisation as a result of AREG widening its

[3] Although AREG's involvement in some of these development projects have been taken over by Aberdeen City Council as a result of a recent restructuring process.

membership base outside Aberdeenshire. Through its membership, OIC will gain access to a wide network of supply chain expertise, innovation and global connections whilst AREG and its members will benefit by gaining access to valuable new contacts and opportunities in the Orkney region, which is building considerable momentum in the wave and tidal sector.

Challenges

AREG has been the driving force behind several large-scale initiatives, e.g. the European Offshore Deployment Centre, the All-Energy conference and a major hydrogen infrastructure project, whilst also striving to build a robust renewables supply chain in the Aberdeenshire region. This has proved to be too ambitious for an organisation of AREGs size and they are therefore currently streamlining its activities to ensure quality in all its operations.

This prompted a 2014 independent review with the aim of optimising AREG's role in developing the renewables supply chain. As a result of the review it was decided that the organisation should be restructured in order to better provide membership services and more efficiently support the region's ambition of becoming a global sustainable energy hub. While the private-public partnership will continue to operate as a company, Aberdeen City Council is to bring AREG's economic development activities in-house. This is in order to increase resources and enable the organisation to concentrate on supporting its membership activities and providing supply chain services.

As part of the revised structure, a new AREG Board is to be formed while a new Advisory Board is being established by the Council to provide additional support for the development of AREG's membership services and to advise on the broader development of new local renewables projects. The Advisory Board will have a strong private sector focus.

In order to capitalise on new opportunities in the domestic and international renewables' marketplace, AREG have also opened up membership to companies and organisations outside Aberdeenshire.

Irish Maritime and Energy Resource Cluster (IMERC)[4]

IMERC brings together University College Cork, the Cork Institute of Technology and the Irish Naval Service in a strategic partnership for promoting and supporting the maritime sector in Ireland, with a focus on a developing campus area in Cork Harbour.

National and regional context

Ireland has just undergone the largest economic crisis since the founding of the state, and struggles to revive its industries and create new jobs. This has put an increased focus on the maritime sector. Ireland has the largest maritime area to land mass ratio in the EU, yet it derives only 1 % of its GDP from the maritime economy, which is well below countries such as the UK, Denmark and Norway. Thus, the maritime sector constitutes an important growth area.

Currently, the maritime sector in Ireland generates about 3.4 billion Euros in turnover and employs around 17 000 people. It comprises a large number of companies operating in sub-sectors such as shipping and transport, seafood production, hydrocarbon exploration, boat building, bio-discovery and technology.

[4] The section about Irish Maritime and Energy Resource Cluster is based on web research and a telephone interview with two representatives from the organizations. The specific sources of information are listed in the Appendix.

Background and focus

IMERC was founded in 2010 as a bottom-up initiative, driven by the challenges posed by the economic crisis and the opportunities identified in the maritime sector. It consists of two pillars: campus development (establishing test facilities and co-location for business and academy) and cluster development (developing networks and competence to promote innovation). The cluster development measures focus on global growth areas where market opportunities exist for niche products and services, for example:

- Offshore Energy (marine renewables and offshore hydrocarbons)
- Maritime ICT
- Shipping, Logistics and Transport
- Maritime Security and Safety
- Yachting Products and Services

Initially, most effort has gone to underpinning Ireland's position as an early leader in the nascent ocean energy sector.

Vision and goals

The IMERC vision is 'to become a research and commercial cluster of world standing, by realising Ireland's potential in the global, maritime and energy markets of tomorrow'. It is complemented by the following stated goals:

- To deliver a practical, applied and commercial focus to the research, teaching and training activities that IMERC will seek to influence in the areas of marine Energy, maritime security and safety, shipping, logistics and transport as well as marine recreation.
- To foster industry, academic and end-user relationships that can turn new research ideas into jobs.
- To consolidate a critical mass of expertise where an established academic track record already exists in ocean engineering, and ecosystem governance.
- To build new and additional research capacity around the themes of maritime operations and enabling maritime technologies.
- To ensure a process of public sector transformation within the IMERC partner organisations, characterised by a culture of collaboration, and an evidence-based approach to applied maritime research and innovation.
- To develop an expanded IMERC campus in Ringaskiddy, providing national facilities, industry suites and incubator units.

The desired impact is to develop an innovation ecosystem to support job creation in a unique cluster and campus location. During the first four-year period of existence, the more specific goals have been 70 new research jobs by 2014, five companies incorporated by 2015, and two foreign direct investment clients secured by 2016.

Furthermore, it should be mentioned that IMERC seems to have rather weak intentions when it comes to promoting sustainability. Rather, the initiative's overarching objective is to create jobs and revive the Irish economy.

Projects and activities

IMERC works to develop a research and commercial cluster by focusing on core companies, support mechanisms, human capital and physical infrastructure. Through the campus in Cork Harbour, it offers incubation spaces for start-up companies, campus based industry suites, collaboration in innovation partnerships, access to national test-bed facilities, and brokering and networking events. The staff work closely with companies and research institutions in order to understand needs and opportunities, create

networks, and facilitate different types of collaborations. However, IMERC does not take the lead on RD&D projects, but rather acts as an initiator and facilitator. In addition, IMERC works actively towards policymakers on national and European levels in order to lobby for certain policies and put the maritime sector on the agenda.

Organisation and funding

IMERC currently has three employees: a Director that brings leadership and high-level networking; a communications and innovation manager that handles most of the sector promoting activities; and a seconded person from the Irish navy that is responsible for facilitating collaborations between the navy and businesses. It is funded by its core partners, which contribute with one third each.

Network and collaboration

IMERC facilitates business-to-business connections and collaboration networks as well as organizes monthly company days, networking meetings and conferences. It is just about to launch a member network where companies will pay a small fee to associate with IMERC and get access to support and networking events. IMERC's international collaborations are very informal, although they have a few closer partners in the US and Canada. They do, however, seem very open to initiating collaborations with regions and clusters in Europe in order to identify and promote business opportunities.

Challenges

IMERC's main challenges have been to become embedded in the partner organizations and make them work together as well as to establish the maritime cluster as a concept through branding. In addition they have struggled with creating visionary master plans together with public agencies. They attribute their success to receptive leadership that makes top management understand the maritime opportunity as well as to having high-level representation on the governing board. Another success factor has been to work hard to make aims and activities understood by selling the IMERC idea. Also, having champions in each partner institution has been important. The initiative has not really met resistance, but rather struggled with making sure that each organization get value from the initiative and that the partners are treated equally. Currently, the challenges are to maintain momentum and keep developing the initiative, by bringing companies into the incubation spaces and raise capital to realize the vision.

Analysis

In this pre-study, we started by looking at possible knowledge transfer partners in Canada, Germany, Ireland, Norway and Scotland. After a brief evaluation, three potential partners were selected for further research, which resulted in the descriptions above. Moreover, the potential partners have been analysed based on criteria including sectorial focus, goals and activities, context and conditions, attitude to collaboration and potential for creating business opportunities with OffshoreVäst's member companies, and relevance for OffshoreVäst's challenges. The aim has been to identify pros and cons as to their suitability as knowledge transfer partners, and the results are summarized in the table below.

	Maritime Cluster Northern Germany	Aberdeen Renewable Energy Group	Irish Energy and Resource Cluster
Pros	• Relatively similar (wide) sector focus • Many member organizations are likely to provide good business opportunities	• Strong vision in regard to promoting a global and regional transition towards sustainability • Similar objectives (building on existing competence to enter new markets) • High potential for building business networks with OffshoreVäst • Organization recently reviewed independently – ensures deep knowledge of strengths and weaknesses	• Positive attitude to collaboration • Acts as an initiator and facilitator, rather than a lead in RD&D projects • Similar sector focus
Cons	• Low interest in collaboration and/or very difficult to reach • Strong connection to regional public agencies • Extensive activities and many staff • Weak links to the wave and tidal industries due to lack of natural resources and promising start-up companies	• Broad target sector covering all renewables, (although the offshore sector is clearly in focus) • Strong connection to Aberdeen City Council • Yet not confirmed whether they can commit to a collaboration	• Large focus on building physical infrastructure • Broader activities including business incubation • High-level support by partners and national public actors • Weak intentions when it comes to promoting sustainability

From the analysis, we believe that Aberdeen Renewable Energy Group is the most suitable partner for a knowledge transfer process that will feed into the on going OffshoreVäst strategy development. This is mainly because it has a strong vision for how to create regional and global benefits by managing the offshore sector's transition towards sustainability, but also since we see large opportunities for building business networks between Swedish and Scottish actors in the medium term. In addition, the recently performed independent review will facilitate the knowledge transfer process by providing extensive background material, as well as by validating findings and conclusions. There are also various related initiatives that can support and benefit from such a collaboration project. Examples include the recent UK–Sweden Ocean Energy Seminar, which gave rise to promising project ideas, as well as the initiative for creating a strategic innovation agenda for the Swedish offshore wind sector.

Furthermore, the focus of the knowledge transfer process should primarily be the area where Aberdeen Renewable Energy Group stands out as a very good example – namely how to manage the transition towards sustainability by working closely together with actors in both the fossil and renewable energy sectors. Balancing the potential tensions between the two sectors' interests is a key issue for OffshoreVäst's strategy development process, and it is essential to have a well informed and clearly formulated plan to gain the confidence of both funders and member organizations. In addition, taking this fairly broad area as a point of departure will open up for exchanging knowledge and experiences around other more specific OffshoreVäst challenges.

Recommendations

Based on the findings of this pre-study, we recommend that OffshoreVäst reaches out to Aberdeen Renewable Energy Group, in order to initiate a knowledge transfer partnership focused on how to manage the offshore sector's transition towards sustainability by working closely with actors from both the fossil and renewable energy sectors. This will bring important and valuable input to the OffshoreVäst strategy development process and also lay the ground for future network building initiatives between member organizations in the two regions.

If the knowledge transfer process is going to feed into the strategy development process, and particularly be valuable for the upcoming funding application, it is essential that it is carried-out before June when the application to VINNOVA will be submitted. Therefore, we recommend a two-step project layout that is summarized in the table below.

Step 1 – Knowledge transfer		***Spring 2015***
Purpose	*Activity timeline*	*Resources*
Strengthen OffshoreVäst's strategy development process by transferring knowledge and experiences from Aberdeen Renewable Energy group Initiate a relationship that can lead to future network building activities and other collaborations	March – Define focus area and specific goals (LightSwitch and OffshoreVäst management) April – Desk research (LightSwitch) April – Knowledge transfer preparation, including interviews in Aberdeen (LightSwitch) May – Knowledge transfer workshop in Aberdeen (LightSwitch and 1-3 representatives from OffshoreVäst) May – Analysis and dissemination of results to OffshoreVäst stakeholders (LightSwitch)	Process leader (ca. 140 kkr) Travel expenses (tbc) In-kind (time) from OffshoreVäst management and Aberdeen Renewable Energy group
Step 2 – Network building and internationalization		***Fall 2015***
Purpose	*Activity timeline*	*Resources*
Build networks between Swedish and Scottish firms and research institutions Identify and facilitate business opportunities for OffshoreVäst member companies	August – Create inventory of member organizations and map complementarity September – Prepare network building activities in Scotland and Sweden October – Carry out network building activities (i.e. study visits/workshops with member companies from the two organizations) November – Follow-up and facilitate business opportunities	Process leader (tbc) Travel expenses In-kind (time) from OffshoreVäst management, Aberdeen Renewable Energy group, and the member companies

Appendix

Identified organizations in Canada, Germany, Ireland, Norway and Scotland

Canada			
Name	*Description*	*Motivation*	*Link*
West Coast Wave Initiative (WCWI) at University of Victoria	Research organization primarily focused on wave power in British Columbia.	Too academic and research focused.	www.iesvic.uvic.ca
Offshore Energy Research Association of Nova Scotia (OERA)	Not-for-profit organization promoting and funding collaborative research in offshore renewables in Nova Scotia	Too academic and research focused.	www.oera.ca
Ocean Technology Council of Nova Scotia	Business organization promoting the offshore sector in Nova Scotia	Industry association with too little focus on innovation.	www.otcns.ca
Marine Renewables Canada	Sector organization for the Canadian offshore renewables sector	Industry association that could be of interest. However, short-term business development for OffshoreVäst has low potential due to the long distance and the lukewarm interest (expressed during meeting in December 2014)	www.marinerenewables.ca
Fundy Energy Research Network	Research organization focusing on development of tidal energy in the Bay of Fundy	Too academic and research focused as well as too strong connection to specific local tidal resource.	www.fern.acadiau.ca
Institute for Ocean Research Enterprise	Member organization promoting ocean research in Canada	Too academic and research focused.	www.iore.ca

Germany			
Name	*Description*	*Motivation*	*Link*
Renewable Energy Hamburg	Cluster organization for companies in renewable energy sector in Hamburg.	Wrong sector focus and too much of an industry association.	www.erneuerbare-energien-hamburg.de
Offshore Wind Industry Alliance	Cluster organization bringing together four wind energy networks.	Too narrow sector focus.	www.owia.de
Maritime Cluster Northern Germany	Cluster organization for the maritime sector.	Could be an interesting partner – chosen for further research!	www.maritimes-cluster.de

Ireland			
Name	*Description*	*Description*	*Link*
Irish Sea Maritime Cluster	Private maritime cluster initiative for Eastern Ireland.	Private initiative with too strong focus on business networking.	www.maritime-cluster.com
Irish Maritime and Energy Resource Cluster	National maritime cluster initiative.	Could be an interesting partner – chosen for further research!	www.imerc.ie

Norway			
Name	*Description*	*Description*	*Link*
Blue Maritime Cluster	Cluster organization for the maritime sector focusing on shipping and shipbuilding.	Too much focus on shipping and shipbuilding. Offshore renewables are not included in sector definition.	www.ncemaritime.no
ARENA NOW	Emerging cluster organization	Interesting, but narrow	www.arenaprogrammet.no

	for offshore wind power.	sector focus and still in an early development phase (just started).	
Maritimt Forum	Industry association for the maritime sector.	Industry association with too strong focus on shipping and shipbuilding.	www.maritimt-forum.no
Windcluster Norway	Cluster organization for the wind energy sector.	Wrong sector focus, though challenges could be similar.	www.windcluster.no

Scotland

Name	*Description*	*Description*	*Link*
Aberdeen Renewable Energy Group	Sector organization for the renewables sector in Scotland with focus on Aberdeenshire	Could be an interesting partner – chosen for further research!	www.aberdeenrenewables.com
European Marine Energy Centre	Research, test and demonstration centre for wave and tidal energy	Too much focus on concrete research and testing activities.	www.emec.org.uk
Offshore Renewable Energy Catapult	Innovation and research centre for offshore wind, wave and tidal energy	Too strong connection to public agencies and too large and well funded to have similar challenges.	www.ore.catapult.org.uk
Scottish Renewables	Sector organization for the renewables sector in Scotland	Sector organization with too little innovation focus.	www.scottishrenewables.com
DECOM North Sea	Industry initiative developing the North Sea oil/gas decommissioning supply chain	Too focused on the oil and gas sector.	www.decomnorthsea.com

Sources

Canada

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- Government of Canada websites
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- Institute for Ocean Research Enterprise
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- Marine Renewables Canada
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- Nova Scotia Marine Renewable Energy Strategy 2012
  - *www.energy.novascotia.ca/sites/default/files/Nova-Scotia-Marine-Renewable-Energy-Strategy-May-2012.pdf*
- Ocean Technology Council of Nova Scotia
  - www.otcns.ca
- Offshore Energy Research Association of Nova Scotia (OERA)
  - www.oera.ca
- West Coast Wave Initiative (WCWI) at University of Victoria
  - www.iesvic.uvic.ca

Germany

- International benchmark study of innovation systems commissioned by the UK Government
  - www.gov.uk/government/uploads/system/uploads/attachment_data/file/277090/bis-14-544-insights-from-international-benchmarking-of-the-UK-science-and-innovation-system-bis-analysis-paper-03.pdf
- MCNG website
  - www.maritimes-cluster.de

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  - www.windcluster.no

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