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Developing a National Offshore Wind Supply Chain Database

Published on behalf of The Crown Estate

The Crown Estate

On behalf of the nation, The Crown Estate manages a highly diverse £6 billion property portfolio across the UK. It holds extensive marine assets including virtually the entire seabed out to 12 nautical miles where leases for the development of windfarm sites within this limit have been issued. The Energy Act 2004 gives The Crown Estate the right to issue leases for marine renewable development beyond the territorial limit within the Renewable Energy Zone (REZ) out to 200 nautical miles as well methane gas and carbon dioxide storage.

To date The Crown Estate has run the world's first wave and tidal commercial leasing round and four rounds of offshore wind development in these areas. Developers' appetite in the UK offshore wind industry has driven a commitment of just under 50GW through to 2020 and beyond. The largest is Round 3, which aims to deliver over a quarter of the UK's energy needs in 2020.

Optimat Limited

Optimat Limited is a consultancy established in 1989 with over 20 years experience supporting innovation, economic and supply chain development across the energy sectors. Over the last 10 years, Optimat's team of experts have supported major supply chain development initiatives for the offshore wind industry. This includes an international review of wind energy industrial development in Denmark, Germany, Netherlands, Spain and Portugal which identified situations and policy interventions that drove historical developments and how they are positioning themselves for the offshore wind market. Optimat has worked on major projects for government departments, industry support organisations and companies to develop opportunities in the offshore wind industry including:

- **Delivery of regional offshore wind supply chain development programmes**
- **Development of several renewable energy supply chain directories, profiling supplier capability strengths of engineering and manufacturing companies across the UK**
- **Approved expert advisors for regional support programmes to help SMEs diversify into the offshore wind industry**
- **Supporting companies with missions to overseas offshore wind markets**
- **Coordinating special interest groups to develop supply chain solutions for the offshore wind industry**

Clients include DECC, The Crown Estate, Scottish Enterprise, Highlands & Island Enterprise, Advantage West Midlands, One North East, NWDA, Envirolink Northwest, RESCO, emda and other industry support organisations.

The views expressed in this report are those of Optimat Limited and the content of the report does not necessarily represent the views of The Crown Estate.

Executive Summary

This report details the results of the first phase of a scoping study to assess the need for a centralised UK offshore wind supply chain database that will ensure buyer's choices are maximised and supplier's visibility is increased as the industry grows to meet 2020 offshore wind targets.

The study reviewed more than 20 company databases that currently exist which provide contact details of suppliers to the offshore wind industry to some degree. These can be categorised as either:

- ***Regional databases*** **- usually developed and owned by regional enterprise organisations to raise the profile, visibility and promotion of local businesses**
- ***National databases*** **- typically developed and owned by government departments / agencies eg DECC, UKTI, The Crown Estate etc and often used for awareness and promotional purposes**
- ***Industry databases*** **– typically managed by trade associations eg RenewableUK to promote their members products and services**

Results from this research indicate significant variation and fragmentation between the existing company databases in terms of how information is collected, categorised, verified and ownership of the data. Analysis of database requirements from 20 users including developers, Tier 1 and Tier 2 companies indicates that existing databases do not meet their needs.

Strong user interest (75%) suggests that there is a real market pull for a centralised UK offshore wind company database for the following reasons:

- **Need for information on companies across all of the UK with relevant capabilities and skills in order to develop an expanded offshore wind supply chain and meet future deployment targets**
- **Need for detailed company information such as financial standing, product/services provided, previous projects completed, accreditations held etc to help identify credible suppliers**
- **Need for information to pre-qualify potential suppliers prior to detailed vendor assessment**
- **Need to assess the capabilities and competencies of companies to safely work in hazardous offshore environments**

This research also identified the need for a future offshore wind supply chain directory to add value to both suppliers and users by helping to pre-qualify potential suppliers, providing information on tenders and provision of links to procurement portals.

A comparison was made with other approaches used in industry sectors such as automotive, oil & gas etc and indicates that centralised national company databases provide an effective model to support supply chain awareness and development that meets industry needs. These include both fee paying and free to register/use models with national and regional coverage.

The overall results from this research point towards the need for a central UK offshore wind supply chain database to support the industry moving forward. The following five potential development options were proposed and evaluated.

Option 1. Create a new stand alone centralised UK national offshore wind database managed by independent expert providers

Option 2. Build upon existing industry information system eg RenewableUK, Forewind etc as the basis for a centralised UK offshore wind supply chain database open to all companies

Option 3 Develop a new centralised UK Offshore Wind industry database and supplier pre-qualification/management system e.g. similar to FPAL for oil & gas or UVDB for utilities

Option 4 Integrate and amalgamate all existing regional and industry databases into one UK central system with a common product classification and search functionality

Option 5 Build upon an existing inter-regional database eg NWIP, SE/HIE as the basis to host a UK centralised Offshore Wind supplier database

Based on the overall results of the study, the following two development models have been shortlisted and recommended to be both taken forward for further consideration and compared against a detailed specification agreed by key industry stakeholders.

Model 2. - Build upon existing industry information system e.g. RenewableUK, Forewind etc as the basis for a centralised UK offshore wind supply chain database open to all UK companies.

Model 3. – Develop a new centralised UK Offshore Wind industry database and supplier pre-qualification/management system e.g. similar to FPAL for oil & gas or UVDB for utilities.

Model 3 would be a world first, raising the profile and competitiveness of the UK supply industry.

The study also concluded that skills gaps and skills shortages could contribute directly to supply chain capacity constraints that would impact on the UK's ability to deliver offshore wind deployment rates to meet 2020 renewable energy targets. Although skills issues are being addressed through several initiatives, the proposed centralised UK offshore wind supplier information system and supplier management facility could be designed in such a way as to help support skills development in the industry. It is recommended that value adding skills development support functions are also considered for inclusion in the product specification for detailed comparison between development models 2 and 3.

Initial development costs and availability of long term sustainable funding will be required to setup, operate and maintain a centralised UK supplier information system and supplier management service over the next ten years and beyond. Long term funding sustainability will be crucial over this period, where there is currently considerable uncertainty surrounding the future of regional government agencies. It is recommended that the development and ongoing

operation of the eventual facility is funded primarily through annual industry subscriptions. Initial public sector funding may be needed to cover the significant upfront investment required if this proves to a barrier to setting up a centralised UK facility.

To move forward, the following five steps are therefore recommended:

1. **Develop and refine the outline specification for a centralised UK offshore wind industry supply chain database with additional value adding support services**
2. **Provisionally test and validate the draft specification on key industry stakeholders**
3. **Hold preliminary discussions with potential host organisations to assess cost, investment and timescale implications and the feasibility of delivering the specified facility and services**
4. **Identify government and industry interventions that will facilitate development and delivery of an enhanced centralised UK offshore wind industry support facility**
5. **Procure the managed facility through competitive tendering**

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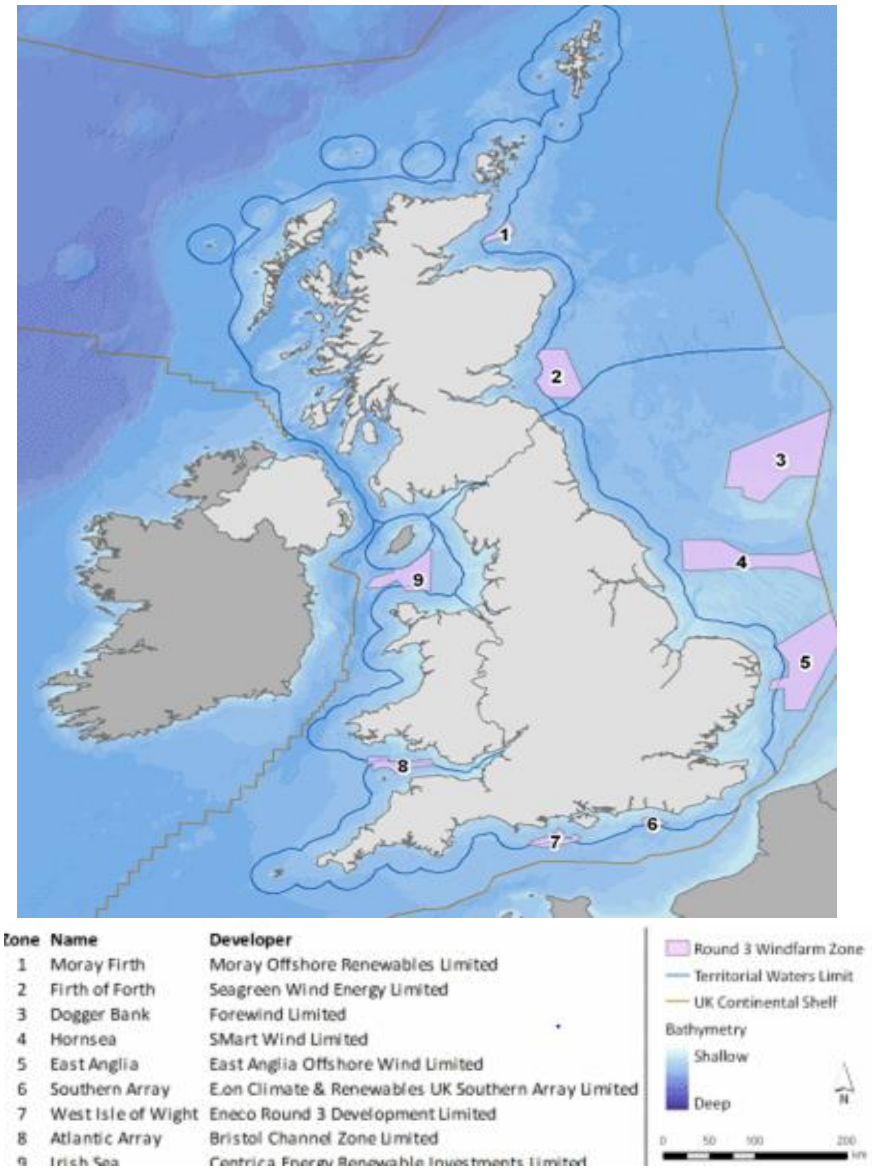
Chapter 1. Introduction

1.1 Background

The Crown Estate owns and manages the seabed out to the 12 nautical mile limit and also the rights to renewable energy development out to 200 nautical miles. It has a key role in the delivery of offshore wind, wave and tidal generation projects through the granting of site options and leases. This includes advancing projects that have the potential to deliver significant energy supply such as the Round 3 Offshore Wind programme which is intended to deliver 32GW for the UK and also the Scottish Territorial Waters Round that could collectively deliver over 37 GW of new capacity by 2020.



Zone	Name	Developer
1	Moray Firth	Moray Offshore Renewables Limited
2	Firth of Forth	Seagreen Wind Energy Limited
3	Dogger Bank	Forewind Limited
4	Hornsea	SMart Wind Limited
5	East Anglia	East Anglia Offshore Wind Limited
6	Southern Array	E.on Climate & Renewables UK Southern Array Limited
7	West Isle of Wight	Eneco Round 3 Development Limited
8	Atlantic Array	Bristol Channel Zone Limited
9	Irish Sea	Centrica Energy Renewable Investments Limited

Round 3 Offshore Wind Licensed Sites

In 2010, The Crown Estate awarded nine round 3 Zone Development Agreements and has established five strategic workstreams with the appointed partners based on key issues facing the industry. This includes supply chain and skills where The Crown Estate has identified the need to

look strategically at information needs of the nascent UK supply chain and, in particular, what supplier data is held by various organisations, its accessibility and how it will be maintained and developed in the future.

Numerous databases currently exist that have been developed by various bodies such as government departments, trade associations, local enterprise agencies etc all of which could potentially be used by the offshore wind industry. There are also older supplier databases that could be reactivated in preparation for an enlarged industry. These databases are in addition to supply chain information kept in-house by most utilities and large OEMs. However, the categories of information, spatial coverage and level of company information provided in the different databases vary widely.

As the industry grows to meet 2020 offshore wind targets and UK companies enter the market or expand current offerings, there is a perceived need for a central supply chain database that can cover all of the UK regions so that buyers choices are maximised to create a competitive environment and to increase supplier's visibility. This study considers how this might be achieved, starting with an evaluation of systems that currently exist and making proposals for future development.

1.2 Study Objectives

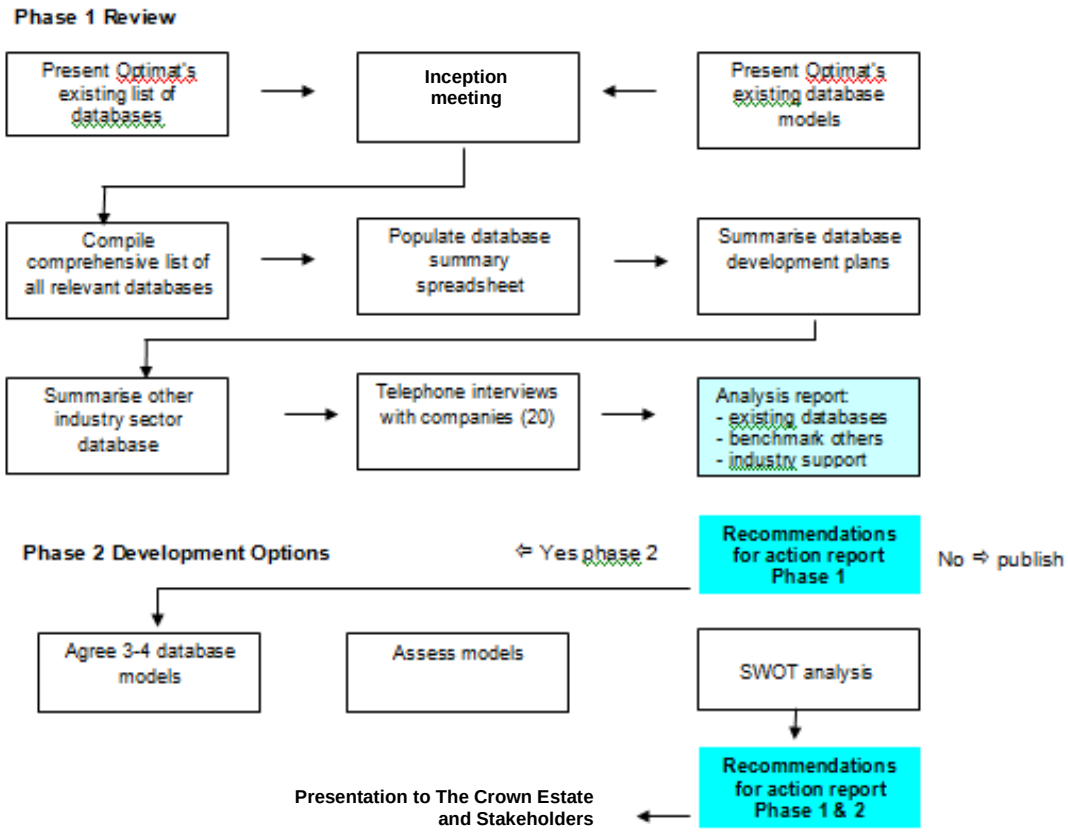
The overall aim of this study is to identify and characterise major pre-existing offshore wind supply chain databases and describe how a more centralised system could be created and maintained to effectively provide UK wide coverage. This will include assessing both demand and supply side needs, market pull and the potential benefits resulting from a centralised system to the offshore wind industry. The scope of the work to achieve these objectives has been split into the following two separate phases:

Phase 1: Opportunity Review and case for a centralised UK system (Chapter 1)

Phase 2: Development Options to create, fund and maintain a centralised national offshore wind database (Chapter 2)

1.3 Methodology

The overall approach adopted to achieve the study objectives is summarised in the following page.



Approach and Method

Results from the Phase 1 Opportunity Review are based on a combination of desk research, telephone and face-to-face interviews with database owners (20) and users (20) to assess market demand and pull for a centralised UK database.

Benchmarking of sector databases was also undertaken to identify good examples of effective industry supplier databases and potential development models for the UK offshore wind industry.

Chapter 2. Opportunity Review

2.1 Characteristics of Existing Offshore Wind Databases

Existing Databases

Over 20 existing supplier databases of various types have been identified that specifically cover the offshore wind sector or include offshore wind as a significant part of a wider renewable energy supplier database. These can be categorised into three main groups:

- ***Regional databases*** **- usually developed and owned by regional enterprise organisations to raise the profile, visibility and promotion of local businesses**
- ***National databases*** **- typically developed and owned by government departments/agencies e.g. DECC, UKTI, The Crown Estate etc, often based on regional database information and supplemented by in-house information**
- ***Industry databases*** **– typically managed by trade associations e.g. RenewableUK to promote their members products and services**

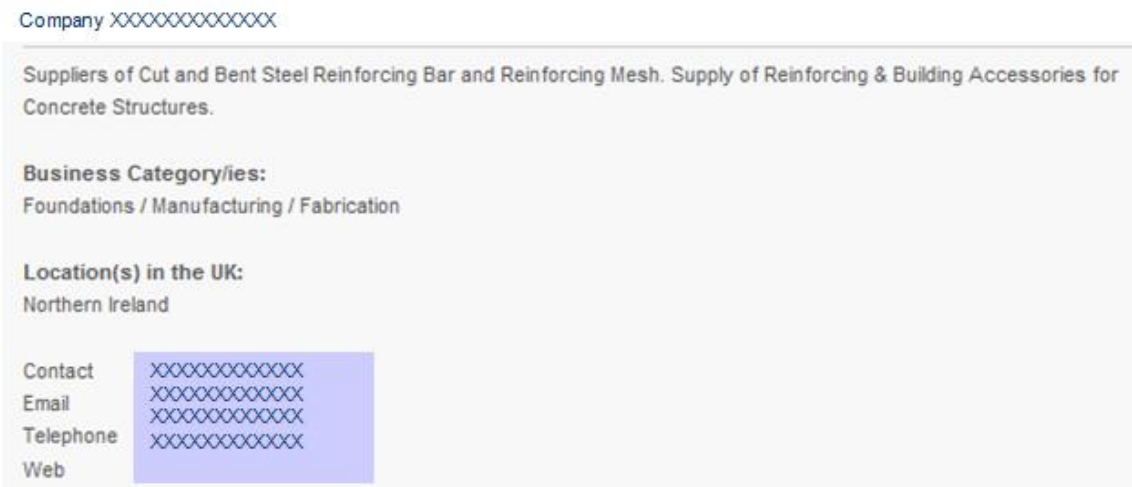
Database Name	Owner / Host	Type
The South East Marine Database	Marine South East	Regional
Mapergy	EEEGr	Regional
Renewable Energy Directory	Fife Council	Regional
Renewable Energy Directory	Regen SW	Regional
Yorkshire and Humber Wind	VEN Management	Regional
Members Directory	Renewables East	Regional
Envirolink	Envirolink NW	Regional
RESCO	EBC	Regional
Member Directory	NWIP	Regional
Sell2Wales	Welsh Assembly Gov	Regional
Kent Wind Energy Directory	Kent County Council	Regional
Wind supply	EBC	Regional
New offshore wind supplier database	Scottish Enterprise	Regional
New offshore wind supplier database	HIE	Regional
Energy company database	Invest NI	Regional
Energy company database	ONE	Regional
UK Offshore Wind Contacts Directory	Forewind	National
UK Renewables	DECC/PERA	National
UK Renewables	UKTI	National
Member Directory	RenewableUK	Industry
Member Directory	IPA	Industry
Energy Supply Chain Directory	NOF	Industry
Member Directory	SRF	Industry
Member Directory	EnviroBusiness	Industry

Categories of Existing Supplier Databases

Supplier databases range both in size (from 40 to over 50,000) and available formats (e.g. excel spreadsheets, hard copy directories, electronic storage devices, web enabled etc).

The level of supplier information provided and product/service categorisation across the offshore wind supply chain and management/updating of information varies considerably between the different databases.

For web enabled databases, functionality of the systems can range from basic company backgrounds and contact details to more advanced data mining across the supply chain e.g. single/multi supplier searching by product, service, location etc. An example of basic supplier information provided in existing databases is shown below.



Basic Supplier Information

A number of databases provide more detailed information on track record, experience, products and services, quality approvals etc is shown below.

Detailed Supplier Information

Summary of Database Characteristics

Over 20 key comparison factors were used to characterise existing supplier databases to compare size, coverage, format, costs to suppliers, accessibility, level of information, searching and functionality. The characteristics of 20 existing UK supplier databases covering offshore wind are summarised below.

Database Name	Owner/Host	Key Comparison Factors																				
		No. of suppliers	Frequency of data updates	Specific to Offshore Wind? (Y/N)	UK coverage? (Y/N)	Specific to UK region? (Y/N)	Includes overseas companies? (Y/N)	Clear data ownership? (Y/N)	Ongoing external data reliance? (Y/N)	Uses prequal standards? (Y/N)	Data verified by third party prior to publishing? (Y/N)	Data 100% publicly available (without registering)? (Y/N)	Free for supplier to enter data? (Y/N)	Advertising used? (Y/N)	Online registration, search function ? (Y/N)	Search by product or service ? (Y/N)	Search by company name? (Y/N)	Search by accreditation, approvals, track record? (Y/N)	Search by post code or region ? (Y/N)	Provides single company data ? (Y/N)	Provides multi-company data ? (Y/N)	No. of categorisation levels?	No. of categorisation fields?
The South East Marine Database	Marine South East	1865	on line	N	N	Y	N	Y	Y	N	N	Y	Y	N	Y	Y	Y	N	Y	Y	N	3	113
Mapergy	EEEGr	>3000	1yr	N	N	Y	N	Y	Y	N	N	Y	N	N	Y	Y	Y	N	Y	Y	Y	4	110
The Renewable Energy Opportunity Directory	Fife Council	50	on line	Y	N	Y	N	Y	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	3	100
Renewable Energy Supply Chain Directory	Regen SW	350	on line	N	N	Y	N	Y	N	N	Y	Y	Y	N	Y	Y	Y	N	Y	Y	N	2	17
Envirolink	Envirolink NW	1097	on line	Y	N	Y	N	Y	N	N	Y	Y	Y	N	Y	Y	Y	N	Y	Y	N	3	181
RESCO	EBC	500	6 mt	N	N	Y	N	Y	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	3	200
Sell2Wales	Welsh Assembly Government	>50000	on line	N	N	Y	N	Y	N	N	Y	Y	N	N	Y	Y	Y	N	Y	Y	Y	7	>500
Member Directory	NWIP	450	on line	Y	N	Y	N	Y	N	N	Y	Y	Y	N	Y	Y	Y	N	Y	Y	N	3	180
Kent Wind Energy Online Business Directory	Kent County Counci	201	on line	Y	N	Y	N	Y	N	N	N	Y	Y	N	Y	Y	Y	N	Y	Y	N	3	190
Wind supply	EBC	500	on line	N	N	Y	N	Y	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	3	200
New offshore wind supplier database	Scottish Enterprise	400	on line	Y	N	Y	N	Y	N	Y	Y	Y	Y	N	Y	Y	Y	N	Y	Y	Y	NS	NS
New offshore wind supplier database	HIE	400	on line	Y	N	Y	N	Y	N	Y	Y	Y	Y	N	Y	Y	Y	N	Y	Y	Y	NS	NS
Energy company database	Invest NI	500	6mt	N	N	Y	Y	Y	N	N	N	N	Y	N	N	Y	Y	N	Y	Y	Y	1	100
Energy company database	ONE	450	on line	Y	N	Y	N	Y	N	N	Y	Y	Y	N	Y	Y	Y	N	Y	Y	N	3	180
UK Offshore Wind Contacts Directory	Forewind	780	none	Y	Y	N	Y	Y	N	N	N	Y	Y	N	N	Y	Y	N	Y	Y	N	2	26
UK Renewables	DECC/PERA	4400	2 yr	N	Y	Y	N	N	N	N	N	Y	Y	N	N	N	Y	N	Y	Y	N	1	1
UK Renewables	UKTI	4400	2 yr	N	Y	Y	N	N	N	N	N	Y	Y	N	N	N	Y	N	Y	Y	N	1	1
Member Directory	RenewableUK	630	on line	N	Y	Y	Y	Y	N	Y	Y	Y	N	N	Y	Y	Y	N	Y	Y	Y	2	22
Member Directory	IPA	41	12 mt	N	N	Y	Y	Y	N	N	N	Y	N	N	Y	N	Y	N	Y	Y	Y	1	7
Energy Supply Chain	NOF	366	on line	Y	N	Y	N	Y	N	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	N	2	84
Member Directory	EnviroBusiness	885	on line	N	N	Y	N	Y	N	N	N	Y	N	Y	Y	Y	Y	N	Y	Y	N	2	24
				43%	19%	95%	19%	95%	10%	33%	57%	5%	71%	5%	81%	86%	100%	19%	100%	100%	38%		

Supplier Database Characteristics

(Y/N – yes/no, NS – not supplied)

Based on the research analysis, the following key factors are useful indicators to compare the quality and accuracy of company information and the capabilities/functionality of existing company databases:

Data verification - the majority of existing supplier databases are web enabled with online registration and search functions. Most do not use pre-qualifications and rely on companies to complete information online, although data was said to be verified in just over half of the databases by third parties prior to publishing. There is however, a question mark over the

accuracy of information and relevance of some companies in the databases to the offshore wind sector, especially for very large databases based on attendees at supply chain events. Supplier information is over 12 months old in some databases and urgently requires updating. Several databases are currently being constructed and updated to provide improved information and functionality. This suggests that data verification would be a useful indicator for comparing the quality of data in the databases.

UK region specific information - all of the databases provide supplier information specific to UK regions, either exclusively to a region or through regional search functionality of the database. This suggests that collectively, either existing or planned future developments could provide comprehensive coverage of the UK offshore wind industry. Most of the existing databases however use bespoke software, often based on Excel and Access platforms. It will therefore be difficult to integrate existing databases. Eight of the regional database owners plan to harmonise the supply chain categorisation, although a standard classification still has to be agreed for the integration of regional databases into a centralised UK directory.

Search functions - most of the databases have online registration and search functions that provide supplier information to varying degrees and are therefore a useful indicator to compare the level of information provided. Most of the databases allow searching by product/service, company name, location etc for single companies, although only a third have multi-company search capabilities. This capability is useful for buyers looking to identify a list of potential suppliers for a specific product or service. Most of the databases do not inform the user as to whether the company is actively supplying the offshore wind industry or a potential supplier that has simply registered their interest online or attended an event. The latter is likely to be the case where existing databases contain thousands of companies. There is only four regional and one industry database that allows searching by accreditation, approvals, track record etc. This suggests that the overall majority of existing databases provide basic company information. A number of databases however, are currently being updated or developed with additional functionality.

Categorisation levels and fields – these are important indicators of how easy it is to drill down and interrogate databases and the coverage of the offshore wind supply chain from Tier 1 to Tier 4. Ideally, this should be two or three categorisation levels with sufficient product and service fields to adequately cover the supply chain. Some databases have for or more categorisation levels and hundreds of product and sub-product classifications. This can make data searching difficult and could influence the user's perception of the database usefulness to identify potential suppliers.

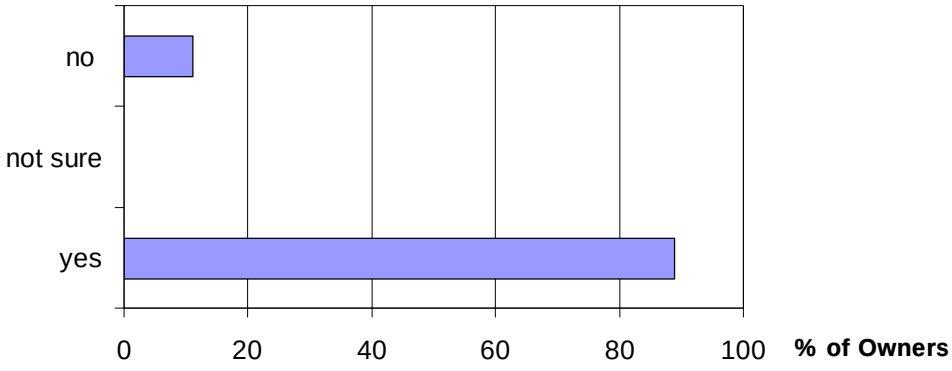
Frequency of data updates – most of the online databases have facilities that allow companies to update their information directly online or through the database owners. Feedback from the research suggests that company information in some databases is out of date, which is influencing user perceptions on their accuracy and value. A number of host organisations do carry out regular surveys of the companies and verify the updates, however considerable effort and resource can be required to police the databases and keep company information up to date. This suggests that any future centralised UK offshore wind database

will need to have effective methods and available resources in place to keep company information upto date.

Database Development Potential

Existing databases

Results from the research indicate that over 85% of the existing providers of all types plan to either update and or further develop their database capabilities.



Database Development Potential

The research suggests that nearly all of the regional database owners plan to retain their databases and are considering developing their functionality, capability etc at some time in the future. This may be on an individual regional database basis or by co-development with other regions to increase their regional coverage and reduce operational/management costs. We understand that some inter-regional shared offshore wind company databases, which are currently at different stages of development, include:

- **Scotland wide combining HIE and SE datasets**
- **NE England – NW England – Yorkshire & Humberside**
- **SW England – SE England**

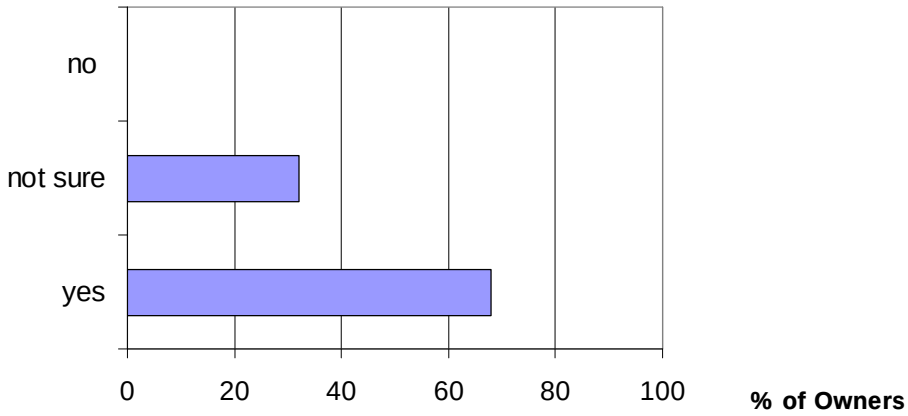
In addition to the inter-regional shared databases, there will be at least six existing remaining regional databases e.g. Fife, West Midlands, East of England, Northern Ireland and Wales, although the latter database has a wider UK coverage. Database owners are increasingly looking to enhance the value-adding potential of their databases. One option being considered by some inter-regional database owners includes linking to procurement portals and providing tender information, although these developments may be phased over a period of time.

National offshore wind databases owned by DECC and UKTI often use the same source of company data derived from awareness events. We understand there are no plans to update the databases, which are now out of date. Five industry databases managed by trade associations and industry bodies such as RenewableUK, NOF, SRF etc have a wider geographic

coverage of UK companies. They offer significant development potential to expand their databases to the whole UK offshore industry and provide value-adding support with skills development, market information, H&S issues, supplier approvals etc.

Need for a centralised UK database

Results from the study suggest that a significant proportion (68%) of database owners believe that there is a need for some kind of centralised UK supply chain directory.

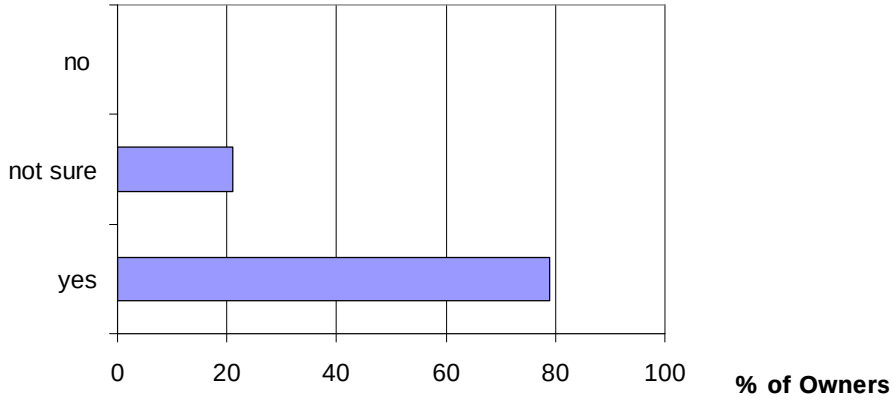


Need for a Centralised UK Company Directory

Strongest interest came from national and industry database owners, although there was some uncertainty, especially from regional database owners. This is not unexpected as a number of regions are either currently or plan to upgrade their databases in the near future.

Interest in a centralised UK database

Nearly 80% of the database owners expressed outline interest in the centralised UK database concept, although some said they would retain their regional databases to promote regional supplier chain capabilities, regardless of a national database.



Owner Interest in a Centralised UK Company Directory

It was generally recognised that buyers in the offshore wind industry will have a UK wide and international perspective with regards to supply chain development and will need to source company information regionally and nationally. A number of industry and regional database owners expressed interest in linking their databases to a centralised UK database in some way,

but at the same time keeping them separate. Due to the different systems involved, product classifications used and company dated collected, it is believed this would not be a feasible proposition.

Database Owner Issues

A number of issues were raised by database owners and are summarised below.

- Need to engage both suppliers and buyers by providing additional value adding information such as tender announcements, procurement portal etc
- A national centralised database will need to search by region or link to existing regional databases
- Keeping company data up to date is very important and companies need to be incentivised by accessing value-adding information
- A UK centralised database will need to be properly funded, resourced and managed
- Industry support organisations, such as trade associations operating membership fee based schemes could have issues providing database services to non-members
- Quality and relevance of companies could undermine the credibility of some existing databases
- There is a perception that the offshore wind industry will have to move to some form of supplier accreditation or pre-qualification scheme such as FPAL in the future, which will involve costs to both suppliers and buyers. Provision of these additional activities may need to be phased in order to retain company interest.

Comparison with Other Industry Sector Databases

A benchmarking exercise was undertaken to compare databases in other industry sectors to identify good practice and lessons learnt in creating central supplier databases that have resulted in significant benefits.

Achilles

This is one of the largest independent providers of qualified, comprehensive and up to date information for both buyers and suppliers in seven market sectors in more than 20 countries worldwide. In addition to providing a database of more than 50,000 suppliers, they provide additional supplier support services to more than 700 buyers in areas such as standard pre-qualification, supplier management, audits and assessments and EU procurement legislation.

Registration on the Achilles' Utilities Vendor Database (UVDB) and Verify involves a subscription fee and increases company visibility to the entire UK Utility industry. The UVDB and Verify services are used by National Grid and also over 80 utility organisations within the Utility industry, including the utility companies, principal contractors and other purchasing entities. Billions of pounds worth of contracts are sourced and awarded to over 5,500 registered suppliers and contractors annually.

The Achilles facility database provides a detailed multi-company search facility by product, service, location, key word and track record. An example of a company profile can be seen by linking to

http://www.oildir.com/OGDirectory/detailsprint.asp?SupplierID=10043419

The costs of operating the UVDB Supplier Management Service are shared between the buyers and the suppliers. Suppliers pay an annual registration fee to cover the cost of registration and the quality checking and validation of their information by Achilles. The information is independently validated and thus reduces the duplication of effort between the members and their suppliers and provides confidence to the buyers that they can rely on the information available to them. Membership costs for suppliers to register on the Achilles UVDB involves an annual fee set by their sector steering groups that is based upon the number of product codes a supplier registers against and covers the quality, checking and validation carried out by Achilles. Standard subscription fees are summaries below.

	Based on product code registration			
Tier Levels	Tier 1	Tier 2	Tier 3	Tier 4
No. of Product Codes	Up to 7 Product Codes	8-14 Product Codes	15-21 Product Codes	> 21 Product Codes
Annual Fee	£500	£625	£800	£1000

UVDB Standard Supplier Subscription Fees

In addition to the standard fees for registration on the supplier database, UVDB offers additional optional Services:

UVDB showcase (£155) - Allows suppliers to showcase their latest products and services in an area dedicated to the utilities sector.

- Marketing information - give further details of your company's capabilities outside the confines of the UVDB questionnaire
- Add logos, photos and customer testimonials and quotes.

UVDB notice (£335) - email notifications of contract notices matched to supplier product codes that are published in the Official Journal and gives access to a search facility and a database of thousands of contract opportunities. There is also two different cost structures for buyer organisations based on the level of annual procurement expenditure for either full search system advanced registration and/or performance feedback and Verify information.

ANNUAL PROCUREMENT EXPENDITURE BAND RANGE	Advanced Registration 2010 Annual Fee	Performance Feedback and Verification 2010 Annual FEE
Below £30 million	£5,900	£9,600
£30m-£100 million	£8,750	£12,850
£100m-£150 million	£12,950	£17,700
£150m-£300 million	£19,900	£25,400
£300m-£600 million	£25,700	£32,250
£600m-£1,000 million	£41,000	£48,800
£1,000m-£2,500 million	£52,650	£61,850

Standard Buyer Subscription Fees

FPAL

FPAL, is part of Achilles and provides similar buyer / supplier support services to the Oil & Gas industry. FPAL works to identify, qualify, evaluate and monitor suppliers on behalf of its purchasing members. It was established in 1996 totally funded by industry and steered by an industry-based committee, part the Achilles group founded by Sturla Sand in Norway in 1990 when he launched a supplier pre-qualification service for the country's oil and gas industry.

Today, Achilles employs around 580 people in 22 countries, offering truly global professional procurement services, with local expertise and 32 established supplier management schemes, serving more than 700 of the world's largest companies and around 55,000 registered suppliers.

Costs associated with FPAL are an annual registration fee for suppliers which is set by the FPAL Steering Committee and similar to UVDB e.g. standard (£656) and standard + notice (£991). The fee includes your registration on FPAL for one year and the quality checking and validation of your questionnaire by the FPAL team. The fee includes free advice from the FPAL team on how to register effectively and attendance at optional supplier workshops designed to ensure that you get the maximum benefit from your registration, including:

- **More world wide marketing exposure for registered Suppliers**
- **Free view access for any purchaser or supplier on the web**
- **Quick access to contact and web details**
- **Suppliers can search for their own sub-suppliers and contractors**
- **Suppliers can identify potential co-operation and alliance partners**
- **Suppliers can see what products & services are provided by other companies**

- **Useful tool for company staff, at any location, regardless of whether they are authorised users of the main systems**

FPAL purchasers pay substantially higher annual fees which are similar to those for UVDB shown above.

Auto Supplier Finder

The Society of Motor Manufacturers and Traders (SMMT) support and promote the interests of the UK automotive industry at home and abroad. Working closely with member companies, SMMT acts as the voice of the motor industry, promoting its position to government, stakeholders and the media. The system is based on matching supplier company capabilities to buyers requirements rather than company size or marketing resource, which is likely to be a valid model in offshore wind. The member database was created 13 years ago as a hard copy directory and has since developed into a web enabled online searchable database.

The supply chain directory is free to their 9000 members who register their details online, which are validated by dedicated staff. Products and services cover the complete supply chain from Tier 1 to Tier 4 including 4000 product / service fields in just 4 steps. An example of the database can be seen by linking to http://www.autosupplierfinder.com

The system is funded from the SMMT membership fees which provide much wider member services, based on level of turnover.

Aerospace

A|D|S serves more than 850 company Members based in the UK that range in size from small start-ups through to large corporations with global operations. They represent a comprehensive range of companies operating across four sectors including manufacturers, manufacturing suppliers, equipment providers, service companies and operators. The online directory provides a comprehensive search facility by product or service, location and word search, but provides basic company information.

Private

A number of company directories for renewable energy, including offshore wind have been developed by businesses in the private sector. One example is Pegasus Energy UK Ltd who has been promoting the Oil & Gas industry for over 20 years and plans to launch a new renewable energy supplier directory in January 2011. This facility allows companies to register their details online at no cost.

2.2 Database Requirements of the Offshore Wind Industry

Summary of Database User Requirements

Interviews were held with 20 database user companies across the offshore wind industry including three developers, four turbine manufacturers, three foundation/tower fabricators, two grid connection companies, three power train manufacturers and five mixed OEM's and service providers. This was to gain an understanding of database user requirements, procurement issues and options to enhance the effectiveness of existing databases.

Company	Type	Database User Requirments													
		Awareness of existing offshore wind company databases (Y/N)	Your company information currently stored in offshore wind databases (Y/N)	Are databases regularly used to source company information (Y/N)	Is data used for procurment purposes (Y/N)	Is data used for promotional purposes (Y/N)	Is data needed to pre-qualify potential suppliers (Y/N)	Do existing company databases currently meet your needs (Y/N)	Internal supplier databases used (Y/N)	Need for basic company information and contact details (Y/N)	Need for wider detailed company information eg products, services, accreditations, track record etc (Y/N)	Access company information from hard copies (Y/N)	Access company information online (Y/N)	Search by product or service (Y/N)	Search by region or post code (Y/N)
Company A	Developer	Y	N	Y	Y	N	Y	N	Y	Y	Y	N	Y	Y	Y
Company B	Developer	Y	N	Y	Y	N	Y	N	Y	Y	Y	N	Y	Y	Y
Company C	Developer	Y	N	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y
Company D	Turbine manufacture	Y	N	Y	Y	N	Y	N	Y	Y	Y	N	Y	Y	Y
Company E	Turbine manufacture	Y	N	Y	Y	N	Y	N	Y	Y	Y	N	Y	Y	Y
Company F	Turbine manufacture	Y	N	Y	Y	N	Y	N	Y	Y	Y	N	Y	Y	Y
Company G	Turbine manufacture	Y	N	Y	Y	N	Y	N	Y	Y	Y	N	Y	Y	Y
Company H	Foundation/Towers	Y	Y	Y	Y	N	N	N	Y	Y	Y	N	Y	Y	Y
Company I	Foundation/Towers	N	Y	N	N	Y	N	N	Y	Y	N	N	Y	Y	Y
Company J	Foundation/Towers	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
Company K	Grid connections	Y	Y	Y	Y	N	Y	N	Y	Y	Y	N	Y	Y	Y
Company L	Grid connections	Y	Y	N	Y	Y	Y	N	Y	Y	Y	N	Y	Y	Y
Company M	Drive train	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
Company N	Drive train	Y	Y	N	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
Company O	Drive train	Y	Y	Y	Y	Y	Y	N	Y	N	Y	N	Y	Y	Y
Company P	Port facilities	Y	Y	N	N	N	N	N	Y	Y	N	N	Y	Y	Y
Company Q	Subsea services	N	N	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y
Company R	Subsea cables	N	Y	N	Y	Y	N	N	Y	Y	Y	N	Y	Y	Y
Company S	Power systems	N	Y	N	N	Y	N	N	Y	N	Y	N	Y	Y	Y
Company T	Joining systems	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
		80%	60%	65%	75%	50%	70%	10%	100%	90%	90%	25%	100%	100%	100%

Database User Requirements

Database awareness and usage of existing offshore wind company databases is relatively high, especially by specifiers and buyers in developers and Tier 1 & 2 companies who tend to use them for sourcing and procurement purposes. This includes various regional, national and other industry databases such as FPAL and Achilles. Conversely, a high percentage of Tier 2 & 3 suppliers interviewed have registered their company information in offshore wind databases for promotional purposes rather than specifically for sourcing. 70% of the interviewees stated that company data is required to help pre-qualify potential suppliers, although most said that existing offshore wind company databases currently used do not meet their needs and many have developed internal databases. This suggests that future planned offshore wind company databases will have to provide a dual promotion / procurement function to effectively meet the needs of the UK offshore wind industry. Alternatively, each customer will have to develop their own in-house systems, which will not be efficient or help the industry overall. Online access to supplier information and flexible search functions by product/service and by location are required.

Overall, this research indicates there is a need for both basic company background data, contact details etc and also more detailed supplier information e.g. product/services offered, approvals/accreditations, track record, financial etc to help pre-qualify potential suppliers prior to more formal internal vendor assessment.

Database User Issues

A number of important issues were raised during interviews with database users and are summarised below:

- Supply chain enlargement will be required to address gaps and capacity constraints required to meet Round 3 deployment rates and achieve 2020 renewable energy targets
- The industry needs to attract new entrants that are innovative and will bring new technologies to the market, reduce costs and increase the UK's competitiveness in global offshore wind markets
- Health and safety working in the offshore environment and its potential impact on investor confidence is the number one issue for the offshore wind industry
- Competencies of new entrants and companies working offshore will be important and could lead to the offshore wind industry adopting supplier approvals for companies working offshore for pre-qualification purposes such as FPAL in oil & gas

These issues will need to be taken into account when considering development of future company databases that will support and provide benefits to the UK offshore wind industry.

Market Demand for a Centralised UK Database

Feedback from 20 company database users across the offshore wind industry indicated considerable interest and market pull for a centralised supplier database, which is shown by the chart below.

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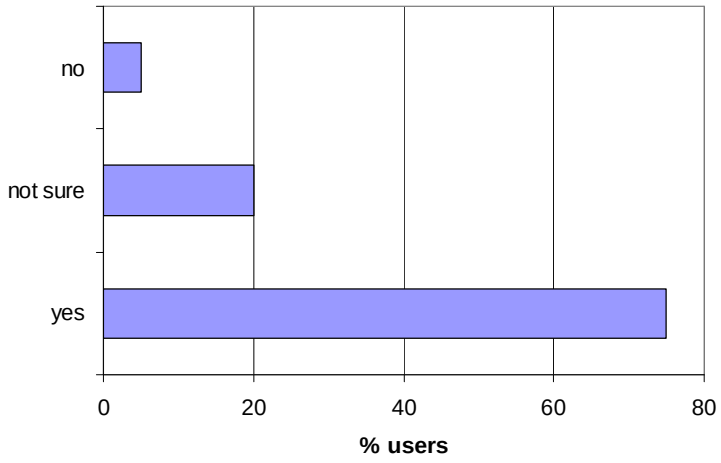


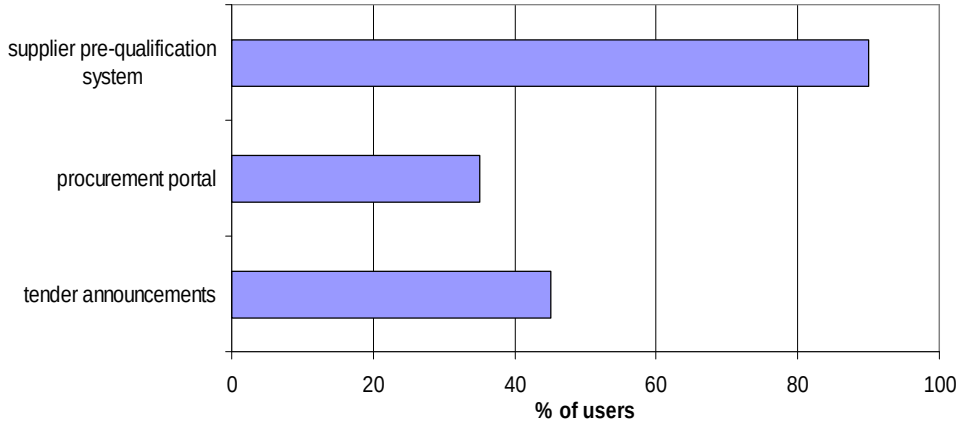
User Interest for a Centralised UK Directory

Strong interest is expressed for a central UK source of supplier information from users interviewed across the supply chain. There was general recognition by users that some form

of UK wide source of company information will probably be needed as the offshore wind industry develops and the supply industry expands to meet increase demand over the next five to ten years. Users however, also need to search for potential suppliers on a regional basis and this will need to be accommodated in a future centralised system. FPAL in the oil & gas industry and Achilles were often cited by users as possible models for the offshore wind industry, but this is likely to involve significant cost to suppliers and users in the short term.

Options to Enhance Database Effectiveness

Analysis of user feedback suggests that future company databases for the offshore wind industry should provide additional value adding information that will benefit the industry, as well as incentivise and encourage both supplier and user involvement.



Options to Add Value

The most attractive option for future offshore wind company databases from a user perspective, would be the provision of company information that will help with the pre-qualification of potential suppliers. This will not replace internal supplier approvals and vendor assessment procedures but help develop list of potential suppliers for further evaluation.

A centralised database facility that has tender announcements and provides direct or indirect links to a procurement portal for the industry would also appear to add value to buyers and suppliers and help increase its value to the industry. The Crown Estate endorsement of a central database is seen as particularly important by users as it would add gravitas and encourage industry wide engagement.

2.3 Conclusions and Recommendations for a Centralised UK Database

Conclusions

Overall, this research indicates that the existing 20 company databases evaluated generally serve their purpose of promoting UK regional, national and industry supply chain capabilities to some degree. Feedback from the market however, suggests that existing databases in their current form will not fully meet the offshore wind industry user requirements going forward.

Strong user demand (75%) was expressed for a centralised offshore wind UK company database for the following reasons:

- **Need for information on companies across all of the UK and by region, including relevant capabilities and skills, in order to develop an expanded offshore wind supply chain to meet future offshore wind deployment targets**
- **Need for detailed company information such as financial standing, product/services provided, previous projects completed, accreditations held etc to help identify potential suppliers**
- **Need for information to pre-qualify potential suppliers prior to detailed vendor assessment**
- **Need to assess the capabilities and competencies of companies to safely work in hazardous offshore environments**

Development of a centralised company database could potentially provide the international offshore wind industry with a single source of existing and potential UK supply chain capability, with a regional search facility. A centralised facility would also make it easier for the UK to respond to changing user needs and provide additional value-adding support to meet challenging Round 3 demands and the rapidly expanding global offshore wind market.

It is recommended that the development of centralised UK offshore wind supplier database is considered by the offshore wind industry and that existing database owners consider the feasibility of adapting or linking their existing company databases to a centralised system

Lessons learned from other industry sectors such as automotive, oil & gas etc suggests that a centralised national company database, often managed by industry bodies could provide an effective model for an emerging market such as the offshore wind sector. For example, the Society of Motor Manufacturing Trades (SMMT) developed their centralised company database from a hard copy directory providing basic company information to a user friendly online searchable database providing detailed company information (eg products/services, sales, previous projects, accreditation etc) on more than 9000 companies and is free to UK suppliers. Another example is First Point Assessment (FPAL) in the oil & gas industry that is used by the UK and international industry to assess suppliers and provides a pre-qualification function for companies working offshore. This has obvious parallels with requirements for companies working in the offshore wind industry, although significant costs would be incurred by suppliers and buyers involved.

It is recommended that both SMMT and FPAL models are evaluated to assess the potential benefits and demand if adopted and adapted for the UK offshore wind industry.

Feedback from users of offshore wind company databases including developers, Tier 1 and Tier 2 companies suggest that any future company database should also provide value-adding information, especially the inclusion of an industry recognised supplier pre-qualification

system. Other options to add value and enhance the database usefulness include the provision of tender information and links to procurement portals.

It is recommended that any future national offshore wind company database also provides additional value-adding information.

Although the 15 existing regional company databases are nearly all web enabled with online access, they currently provide different levels of company information, searchability, functionality and product/service classifications. These differences make it difficult for the user to search for potential suppliers across the UK and it is technically challenging to amalgamate all of the existing databases into a central UK database facility. This has started to be partially addressed by at least four inter-regional shared offshore wind company databases that are currently being developed or are planned.

It is recommended that developers of future inter-regional databases e.g. NWIP, SE/HIE etc collectively agree on common product /service classifications, searching / functionality, levels of supplier information and value adding information, in order to increase their effectiveness and benefits to the offshore wind industry. This would allow for easier amalgamation of UK regional company databases in the future.

Most of the existing UK national databases are out of date, apart from the Forewind / The Crown Estate database, which contains basic information on large numbers of companies that attended regional offshore wind events. These could provide the basis for a centralised database but will require more detailed supplier information and existing companies on the database need to be qualified in terms existing or potential suppliers to the offshore wind industry.

It is recommended that the Forewind / The Crown Estate database is evaluated to assess if it provides the basis for a future centralised UK offshore that can be developed to include additional value-adding information e.g. pre-qualification, tender information, procurement portal etc.

The five industry databases evaluated generally provide wider geographic coverage and often more detailed supplier information, although they are mainly based on trade association fee paying membership schemes. Their databases usually do not include non-members and therefore, could not include all companies and fully represent all UK suppliers as they currently stand.

It is recommended trade associations such as RenewableUK consider options to accommodate non-member companies within their member databases. This could offer additional promotional benefits to the host trade association.

Recommendations for Action

The study had concluded that a centralised UK company database with additional value-adding tender information, procurement portal and pre-qualification system would best meet user requirements and support the future development and expansion of the UK offshore wind industry. To move forward there is a need to:

- **Shortlist up to three potential development options for further evaluation**
- **Carry out cost benefit and SWOT analysis on the different models, and if appropriate**
- **Make recommendations on the development route for the preferred option**

In the following chapter, a detailed analysis including limited market testing of five potential development options is carried out.

Chapter 3. Development Options

Results from the previous research point towards the development of a centralised UK company database to meet future user needs of the UK and global offshore wind industry. It is recognised that significant investment has already taken place in more than 20 existing regional, national and industry company databases. Opportunities to integrate or amalgamate these databases are therefore, also considered in any option going forward.

Based on market feedback, analysis of user needs and good practice in other sectors, the following potential options are considered in this section of the report.

Option 1. **Create a new stand alone centralised UK national offshore wind database managed by independent expert providers**

Option 2. **Build upon existing industry information system eg RenewableUK, Forewind etc as the basis for a centralised UK offshore wind supply chain database open to all companies**

Option 3 **Develop a new centralised UK Offshore Wind industry database and supplier pre-qualification/management system similar to FPAL and UVDB**

Option 4 **Integrate and amalgamate all existing regional and industry databases into one UK central system with a common product classification and search functionality**

Option 5 **Build upon an existing inter-regional database eg NWIP, SE/HIE as the basis to host a UK centralised Offshore Wind supplier database**

Each of the above options will have different cost, management, resource implications and potential benefits to the UK, all of which are considered in the following appraisal of the options. The approach adopted to assess the potential development models is based on the following three activities:

1. **Opportunity shortlisting – to select three development options for more detailed evaluation**
2. **Assessing the steps required, their costs and timescales for development of each of the three shortlisted models**
3. **Analysing the SWOT of each model to accommodate future enlargement of the UK offshore wind industry**

3.1 Opportunity Shortlisting

Results from Phase 1 clearly identified a market pull for a centralised UK offshore wind supplier database and additional functions / activities to enhance its value to the industry. Based on market feedback analysis, the key requirements are defined in the following outline specification for a centralised UK system for the industry.

- UK and regional supplier information for procurement – provide a managed online searchable supplier database e.g. company products/services supplied, turnover, track record, approvals/ accreditations etc by region and UK wide, on-going maintenance, updating and helpline
- Tender announcements – provide a notice board facility for tender announcements
- Procurement portal – provide a managed PQQ and tender management facility for buyers
- Supplier management system – provide a supplier pre-qualification appraisal/approval system
- Funding sustainability – provide long term operational funding to host this system facility, recruit companies and update information for a centralised system

Each of the five development options were assessed and ranked using a traffic light system as either low, medium of high in terms of meeting the above outline specification:

	Development Option	Selection Criteria					Overall Ranking
		UK supplier information Suitable for procuremen	Tender announcements	Procurement portal	Supplier management system	Funding sustainability	
1	Create a new stand alone centralised UK offshore wind database managed by independent expert providers	high	high	med	low	med	med-high
2	Build upon existing industry information system eg RenewableUK, Forewind etc as the basis for a centralised UK offshore wind supply chain database open to all UK companies	high	high	med	low	high	med-high
3	Develop a new centralised UK Offshore Wind industry database and supplier pre-qualification/ management system eg similar to FPAL and UVDB	high	high	high	high	high	high
4	Integrate and amalgamate all existing regional and industry databases into one UK central system with a common product classification and search functionality	low	high	med	low	low	low-med
5	Build upon an existing inter-regional database eg NWIP, SE/HIE as the basis host the developed of a UK centralised supplier database.	med	high	med	low	low	med

Opportunity Shortlisting

LOW – meets little or none of the requirement

MEDIUM – meets some of the requirement or could easily be developed

HIGH – meets all of the requirement

Using the above selection criteria, models 1, 2 and 3 were shortlisted for more detailed assessment as they were judged to offer the greatest potential to meet the industry needs for a centralised UK supplier database. They offer value added support with supplier pre-qualification and a supplier management system. Of these model 3, a centralised UK Offshore Wind industry database and supplier pre-qualification/ management system (similar to FPAL and UVDB) was ranked as having the highest potential as it meets all the requirements for a detailed UK supplier database and provides a proven method of providing value adding procurement pre-qualification and supplier management support to the whole industry. This model, based on sector specific supplier management such as FPAL and UVDB under the Achilles suit of managed supplier and buyer support facilities, is funded through industry subscriptions offering long term sustainable funding of operations.

Model 4, integrating and amalgamating all existing regional and industry databases into one UK central system is likely to face considerable technical challenges to develop a common product / service classification and search functionality. It is also unlikely that host organisations would have the capabilities to provide supplier pre-qualification and supplier management systems to the industry. There are also issues and uncertainties about availability of long term funding with the current changes taking place in the public sector (i.e. the move from Regional Development Agencies to Local Economic Partnerships). This model was therefore ranked as having low - medium potential overall.

Model 5, which builds upon an existing inter-regional database as a host for the development of a centralised UK supplier database, was ranked higher than model 4 due to its potential to provide detailed supplier information suitable for procurement. There are however, similar issues surrounding host capacity to provide supplier procurement management support and sustainability of long term operational funding.

3.2 Model Analysis

A detailed analysis was undertaken on each of the three shortlisted models to assess the steps required, their development and on-going operational costs and the timescales needed to be fully developed. This was based on primary research to identify typical set up costs for the outline specification previously defined for a central company database that could eventually be expanded up to and greater than circa 5000 companies. Typical operational costs were also compared for on-going operation, maintenance and updating of the system. Development timescales covered the various steps to develop, set up and operate a centralised system for 100 or 200 companies registered with additional value added support service are described below.

Model 1. Create a new stand alone centralised UK offshore wind database managed by independent expert providers

- ***Develop centralised UK supplier database system***

Starting a new web based database from scratch will involve considerable investment and time to develop the system, especially if there is a high degree of search capability and functionality. It would be important that the database software used allows for expansion to accommodate new entrants, possibly up to 2500 or higher, by building additional space or zones from the start. Recruitment of companies and population can also take considerable time, even though registration is carried out by the companies online. Company information also has to be validated by the host organisation and suppliers often have to be reminded to complete their online profiles. These host organisations are usually private companies such as Due North, Bravo Solutions, BiP Solutions etc. The development and recruitment process for this model will probably be longer than most of the other development models. Development timescales however, could be reduced if the host organisation has an existing company database as a starting point.

- *Develop tender announcement notice board*

  This facility can easily be accommodated on the host's web site or a dedicated website for the centralised supplier database. Tier 1 and Tier 2 companies would sign up for the facility which would be managed by the host organisation. The use of a separate dedicated website is often used so that all stored information is secured, managed and used for the one purpose. This could also be linked to a tracker facility to cover OJEC and other public sector tender announcements, assuming that both end customers and suppliers will use the facility and be linked using the same SIC Codes. The tender announcement facility that would provide a mechanism to help engage both suppliers and buyers was highlighted as a value added option by more than 45% of users during the research.

- *Create procurement portal*

  Feedback from the phase 1 research (see section 3.1 and 3.4) suggests that the procurement portal facility would benefit both suppliers (e.g. tender alerts and reduced cost of registering) as well as supporting buyers with pre-qualification to help shortlist potential suppliers on a project by project basis. This could include online registration, completion of electronic pre-qualification questions and managing documents. There was much less interest for posting full tender documents on a procurement portal that would be managed by the buyers using their normal processes. Development options to create and manage a procurement portal include internal development by the host organisation using standard of-the-shelf procurement management software such as PROACTIS or outsourcing the management of the whole facility to specialist managers. For the purposes of this study, costs and development timescales were compared for an externally managed system with links to the central UK database system, which could be provided by all three development models.

- *Develop sector supplier management system*

  Independent providers of managed supplier databases are experts in collating and managing company information. Some have developed capabilities to provide online vender assessment services, but would generally not have the necessary skills and

competencies to deliver complete supplier management services to the offshore wind industry, including supplier appraisal, auditing, pre-qualification etc. This capability would have to be developed within the host organisation, which may involve over a number of years to achieve a system viewed as credible by industry. The level of existing skills, capabilities and resources of different independent providers to provide a supplier management system, including pre-qualification for offshore wind projects is unknown. The associated costs are therefore not included in the figures below.

From the overall analysis, examples of costs and development timescales for this model were estimated to be:

Central database set up and recruitment costs……<£50k

Central database annual hosting, maintenance and helpline……<£50k

Externally managed procurement portal set up……<£30K

Externally managed procurement portal annual costs (50 tenders/yr and helpline).<£30k

Total development timescale……6-9 mth

(Note: the above quoted timescale does not include the time taken to develop a credible supplier management/auditing system)

Model 2. Build upon existing industry information system eg RenewableUK, Forewind etc as the basis for a centralised UK offshore wind supply chain database open to all UK companies

- ***Develop centralised UK supplier database system***

  This model builds upon an existing trade association database and so development costs should be lower and timescales shorter than for model 1, although the background database software, functions and datasets will probably need revising to fulfil the more detailed information requirements identified by buyers. This should also include additional categorisation to accommodate enlargement at a later date. A new associate member grade may have to be created if the system is to be operated by a trade association as they usually operate fee-based membership schemes, where there could be potential conflict with non-members obtaining benefits. Recruitment of companies will be carried out online for new entrants and could be extended to include existing trade association members. Company information will be validated, maintained and updated by the host organisation, which will involve significant resources.

- ***Develop tender announcement notice board***

  This facility could easily be accommodated on the host organisation's website which would have to be incorporated as part of a future development plan.

- ***Create procurement portal***

Costs and development timescales for an externally managed procurement portal would be the same as for model 1. An organisation such as a trade association however, is likely to be better equipped and resourced to manage a procurement portal internally. This could potentially reduce the ongoing operational costs and be managed by the same personnel managing the central database, as the main requirement is to support buyers with pre-qualification of suppliers on a project by project basis. For the purposes of this study, costs and development timescales were compared to an externally managed system with links to the central UK database system.

- ***Develop sector supplier management system***

  Trade associations linked to the offshore industry will generally not have the necessary skills and competencies to deliver complete supplier management services to the offshore wind industry. Considerable investment in people and IT systems would be needed by the host organisation. The long timescales and costs to develop the necessary skills and competencies would be a barrier for most trade associations as significant investment would be required. The level of existing skills, capabilities and resources of the different trade associations to provide a supplier management system including pre-qualification for offshore wind projects are unknown and therefore, associated costs are not included in the figures below.

From the overall analysis, examples of costs for model 2 were marginally less than option 1 and estimated to be:

Central database set up and recruitment costs……<£50k

Ongoing annual database hosting, maintenance and helpline costs…….<£50k

Internally managed procurement portal set up……<£25K

Internally managed procurement portal annual costs (50 tenders/yr and helpline)..<£25k

Total development timescale……3-6 months

Total development timescales were significantly reduced compared to option 1, although ongoing annual costs remain substantial for model 1 and model 2. These could be sustained through charging subscription fees to both suppliers and buyers which is common practice in other sectors. (Note: the timescale above does not include the time taken to develop a credible supplier management/auditing system)

Model 3. Develop a new centralised UK Offshore Wind industry database and supplier pre-qualification / management system e.g. similar to FPAL and UVDB

- ***Develop centralised UK supplier database system***

  This model uses existing database software platforms, such as Achilles, to create sector specific central UK supplier databases, which will need to be adapted specifically for the UK offshore wind industry. The whole facility and service would be outsourced and managed

by an organisation such as Achilles, where recruitment is carried out online and linked to various supplier qualification, approval and supplier management services. Development timescales will be relatively long due to the extensive supplier appraisal process.

- *Develop tender announcement notice board*

  A dedicated managed offshore wind sector facility could provide industry news facilities, which would be included as part of the overall system development. They could offer buyers a more confidential supplier selection service for specific tenders, as described below, rather than a tender notice board.

- *Create procurement portal*

  The solution proposed for models 1 & 2 have procurement portals with the potential for buyers to announce tenders, host online PQQ and tender submission and/or document management facilities. A solution based on a system such as Achilles offers buyers confidential approved supplier selection services for specific procurement requirements. Costs for this more confidential service are met by suppliers and forms part of a wider total supplier management service.

- *Develop sector supplier management system*

  This could potentially offer the UK offshore wind industry a comprehensive supplier management facility providing buyer services, supplier pre-qualification, auditing and approval for products and services involving different levels of risk. This supplier management model has been adopted in other related hazardous sectors such as oil & gas and utilities and offers a proven model for the offshore wind industry going forward. Although the initial set-up costs are relatively high, they could be co-funded by major Tier 1 buyers and the host organisation, for example Achilles, who currently supports the development of FPAL and UVDB. Ongoing annual operational costs however, are funded through buyer and supplier subscription fees and therefore provide a more robust long term sustainable funding model than either of the other models reviewed.

From the above analysis, the main costs for model 3 are associated with setting up a new centralised UK Offshore Wind industry database and supplier pre-qualification/management system are in the order of **£175k** for a 2500 size company facility. This includes supplier database and supplier management systems development, incorporating buyer/supplier recruitment, supplier assessment/selection etc. All ongoing operational, maintenance and upgrading of company details are included in annual subscription fees. Total development timescales for the facility are between 9 and 12 months, longer than for model 1 and model 2.

Overall, the analysis indicates that the costs to develop model 3 are approximately double that for models 1 and 2. However, these do not include provision of a supplier management system and pre-qualification for offshore wind projects, which offers considerable value adding potential to the UK industry. On-going operational costs for all models could become sustainable if subscriptions fees were applied to suppliers and buyers. The strengths,

weaknesses, opportunities and threats associated with each model are explored in the following section.

3.3 SWOT Analysis

The following SWOT analysis provides an assessment of the capability and flexibility of the three development models to support future enlargement of the UK offshore wind industry

Model 1. Create a new stand alone centralised UK offshore wind database managed by independent expert providers

Strengths

- A single searchable database covering all UK regions will avoid market confusion and reduce time for buyers in the supplier identification process
- Bespoke database software can be designed to accommodate future additional suppliers from the start
- Potential to develop value adding tender announcement notice board and procurement portal

Weaknesses

- No supplier appraisal /management/ auditing capability
- Will require upfront development funding
- No driver or incentive to encourage supplier engagement

Opportunities

- Share initial development costs with major buyer companies
- Share development cost with private sector directories
- Attract subscription fees from suppliers and buyers

Threats

- Companies will not pay subscriptions when there are free regional supplier databases unless the offering is sufficiently differentiated
- Longer development lead time
- Uncertainty of public funding to help establish a new UK centralised database

Model 2. Build upon existing industry information system e.g. RenewableUK, Forewind etc as the basis for a centralised UK offshore wind supply chain database open to all UK companies

Strengths

- Can provide value adding tender announcement / procurement portal internally and reduce setup and operational costs
- Building upon existing supplier database will reduce costs and development timescales

- **Will link supplier capabilities in other renewable energy sectors to support the expansion of the UK offshore wind supply industry**

Weaknesses

- **Will require the development of a common product/service classification for UK offshore wind industry**
- **No internal capability to provide supplier pre-qualification, assessment and supplier management services**
- **Not available to non members and some SME's may only have 10% of their business in wind and would not want to contribute to a non core trade association**

Opportunities

- **Potential for a host trade association to also provide skills development to support expansion of the UK offshore wind supply industry**
- **Potential to develop internal PQQ / supplier approval capability**
- **Offer new free or low cost associate member status to new entrants for entry in the supplier directory**

Threats

- **Existing members will not accept non-members (e.g. suspicion of cross-subsidy of non-members)**
- **Membership fees alone are unlikely to sustain long term operational costs for an expanded centralised UK offshore wind supply industry database**
- **Unlikely availability of public funding to help establish and run a new UK centralised database, particularly if the trade association is the main driver**

Model 3. Develop a new centralised UK Offshore Wind industry database and supplier pre-qualification/management system e.g. similar to FPAL and UVDB

Strengths

- **Provides a centralised UK supplier database, supplier pre-qualification, appraisal and total supplier management facility for the UK offshore wind industry**
- **Based on the proven Achilles / UVDB / FPAL model and can potentially deliver comprehensive value adding support services**
- **Is far more likely to raise the UK offshore wind supply chain capabilities, competencies and international competitiveness**

Weaknesses

- **Relatively high setup costs**
- **Slightly longer development timescales than other models**
- **Places additional costs on suppliers, especially SMEs having to subscribe to a number of different sector databases**

Opportunities

- **Provides the basis of a supplier approval 'passport to work' in the offshore wind industry**
- **Can provide different levels of supplier approval (and associated subscription fees) for low to high risk activities**
- **Phased development to accommodate future enlargement of the UK offshore wind industry**
- **Set up costs shared between industry and system developers**
- **Ongoing operational costs funded by buyers and supplier annual fees**

Threats

- **Requires early buy-in, collaboration and development funding from major Tier 1 companies**
- **Supplier subscriptions are a barrier to supply chain, especially for SMEs that may have obtain a number of pre-qualifications both offshore wind and other sectors**
- **Additional costs could put the UK supply industry at a competitive disadvantage**

Results from the SWOT analysis suggests that all three models have both strengths and weaknesses and could provide an opportunity for the development of a centralised UK offshore wind industry database.

Model 1 offers a good opportunity to develop a single supplier database for the UK offshore supply industry to meet UK and international buyer requirements. Its flexible bespoke database software can be designed to accommodate future expansion of the industry. It offers limited scope however, to deliver value added support with procurement, supplier pre-qualification and supplier management. This will become increasingly important for the offshore wind industry going forward due to increasing emphasis on rising quality standards and health and safety in hazardous offshore working environments.

Model 2 follows a proven approach for centralised supply chain development through a national trade association as in other more mature industry sectors e.g. automotive, aerospace etc. This would benefit from building on an existing industry support infrastructure and further developing supplier and buyer links to accommodate future expansion. It could also develop wider benefits such as providing skills development to address future skills gaps and supply chain capacity constraints. The main weakness for this model again is the limited potential to provide support with the procurement, supplier pre-qualification and supplier management needed to raise quality and health and safety standards. There could be options for the trade association to acquire this capability either in-house or partner with other organisations.

Model 3 follows an alternative proven approach for centralised supply chain development through an independent body providing a sector specific offshore wind industry database and a total supplier management system that has been successfully used in other hazardous and related sectors such as oil & gas (FPAL) and the utilities (UVDB) over a period of time. This level of supplier approval will be needed in the future as the offshore wind industry expands and new entrants come into the sector. Indeed, some major players in the offshore industry are already members of FPAL and UVDB. Early phased development of a similar independent

sector specific supply chain database and total supplier appraisal / management system would have significant benefits for the future development of the UK offshore wind supply industry. The research suggests this would be a world first, raising the profile and competitiveness of the UK supply industry. The main weakness of this model is the high capital expenditure and resources to set up the system, which will require significant investment by the offshore wind industry. Once established, ongoing operational costs are funded through buyer and supplier annual subscriptions providing long term sustainable funding.

Overall, the above analysis suggests that model 3 would deliver a more comprehensive system from the start to support the development and meet the future needs of an expanding UK offshore wind supply industry. Although model 2 would not provide a supplier management system for the industry, it could develop a procurement portal with lower start-up costs and has the potential to support skills development for the offshore wind industry if the trade association is already geared up. For example, RenewableUK already has the capability to provide a procurement portal.

3.4 Development Route

Define Requirements

Results from the SWOT analysis suggest that all three models have both strengths and weaknesses and could provide an opportunity for the development of a centralised UK offshore wind industry database. Two of the options (model 2 and model 3) appear to offer the best prospects to support the future development of the UK offshore wind industry, albeit providing different value adding support, namely:

Model 2 – will build upon existing industry information system e.g. RenewableUK, Forewind etc as the basis for a centralised UK offshore wind supply chain database open to all UK companies and would provide skills development support.

Model 3 – will develop a new centralised UK offshore wind industry database and supplier pre-qualification/management system similar to FPAL and UVDB.

Although industry funding is proposed for both models, there will be significant upfront investment considerations and long term resource implications for the host organisations. Model 2 will also have to take into account existing member requirements and may not even get off the ground. With a trade association, the problem is that any initiative like this would need to get full support of its membership which could delay development. They will both require extensive appraisal and pre-investment due diligence by potential host organisations.

The overall study findings indicate that both models would have merits and benefits for the UK offshore wind industry and therefore, should be taken forward for further consideration of delivering the following:

- Centralised UK offshore wind supply chain database
- Tender announcement notice board
- Procurement portal

- **Offshore wind sector supplier management system**
- **Offshore wind supply chain skills development**

A detailed specification will provide a useful comparison between the capabilities, resources and relative costs from different potential host organisations for the two different models.

3.5 Conclusions and Recommendations

Opportunity Shortlisting

Three development models were ranked as having either medium to high or high potential in terms of delivering a centralised UK offshore wind supply chain database, value adding support services and accommodating future expansion of the industry:

Model 1 - Creating a new stand alone centralised UK offshore wind industry database from scratch profiling companies from all regions of the UK, managed and hosted by independent expert providers.

Model 2. - Building upon existing industry information system e.g. RenewableUK, Forewind etc as the basis for a centralised UK offshore wind supply chain database open to all UK companies.

Model 3. - Developing a new centralised UK offshore wind industry database and supplier pre-qualification/total management system e.g. similar to FPAL for oil & gas or UVDB for utilities, which would be a world first, raising the profile and competitiveness of the UK supply industry

Overall analysis of model costs, development timescales and SWOT indicates that models 3 and 2 respectively offer the best approach to a comprehensive supplier information system and value adding support to meet the future needs of an expanding UK offshore wind supply industry.

It is recommended that development models 2 and 3 are both taken forward for further consideration and compared against a detailed specification agreed by key industry stakeholders.

Skills gaps and skills shortages will directly contribute to supply chain capacity constraints that will impact on the UK's ability to deliver offshore wind deployment rates in order to meet 2020 renewable energy targets. Although skills issues are being addressed through several initiatives, the proposed centralised UK offshore wind supplier information system and supplier management facility would be in a position to help support skills development in the industry.

It is recommended that value adding skills development support functions are also included in the product specification for detailed comparison between development models 2 and 3.

Development costs and availability of long term sustainable funding will be required to set up, operate and maintain a centralised UK supplier information system and supplier management

service over the next ten years and beyond. Long term funding sustainability will be crucial over this period, where there is currently considerable uncertainty surrounding the future of regional government agencies.

It is recommended that development and ongoing running of the eventual facility is primarily funded through annual industry subscriptions, with initial public sector funding of the significant upfront investment needed if this is a barrier to setting up a centralised UK facility.

Recommendations for Action

The study has concluded that development models 2 and 3 should be taken forward for consideration and detailed evaluation to deliver a specified centralised UK offshore wind supply chain databases and additional value adding supplier management service. Any allowances provided as suggested frequency of services below will be validated by the study.

- **Centralised UK offshore wind supply chain database**
  - create web-based online supplier database facility searchable by product/service, geographic or word search and capable of handling up to 2500 companies
  - develop common industry agreed product / service classification
  - develop standard company profiles detailing product/services, turnover, approvals, accreditations
  - develop structured fee based membership system
  - provide on-going recruitment of suppliers and buyers
  - update company profiles annually, maintain facility and provide helpline (100 enquiries per year)
- **Tender announcement notice board**
  - develop and maintain an online shared facility for buyers announce future projects
- **Procurement portal**
  - develop internal or external managed procurement portal to help buyers pre-qualify and shortlist potential suppliers on a project by project basis
  - provide PQQ questionnaires for online completion for interested suppliers
  - provide PQQ document management facility for buyers (50 PQQ's per year)
  - develop and provide helpline facility for suppliers (100 enquiries per year)
- **Offshore wind sector supplier management system**
  - provide standard supplier pre-qualification e.g. financial performance, health & safety, QA systems etc (100 enquiries per year)
  - provide confidential supplier matching service for buyers (100 enquiries per year)
  - provide a range of risk based supplier audits and appraisals for low risk e.g .onshore activities and high risk e.g. hazardous offshore activities (100 assessments per risk category per year)
  - maintain, update and validate information on all suppliers (cost per company)

- **Offshore wind supply chain skills development**
  - **deliver skills audit (questionnaire) surveys (1000 companies per year)**
  - **provide skills development support services (100 companies per year)**

To move forward, the following five steps are recommended:

1. **Develop and refine the outline specification for a centralised UK offshore wind industry supply chain database and additional value adding support services**
2. **Provisionally test and validate the draft specification on key industry stakeholders**
3. **Hold preliminary discussions with potential host organisations to assess cost, investment, timescale implications and feasibility of delivering the specified facility and services**
4. **Identify government and industry interventions that will facilitate the development and delivery of an enhanced centralised UK offshore wind industry support facility**
5. **Procure the managed facility through competitive tendering**