Innovative Foresight Planning for Business Development

European Union The European Regional Development Fund

The Interreg IVB North Sea Region Programme

Investing in the future by working together for a sustainable and competitive region

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ABOUT THE PROJECT

There is an increasing challenge for businesses to improve their performance in an expanding and highly competitive global economy. Foresight planning is an innovative approach to assessing future market trends and has been used in several parts of the North Sea Region. By combining competencies, cooperating and learning from other regions this project seeks to increase the benefits of foresighting to expand industries and individual businesses alike.

Foresight planning in the context of this project is to use the knowledge and competence of academic institutions, research institutes and the public sector, together with different businesses and companies to plan for the future and create a basis for innovative solutions. This type of foresight planning involves an active dialogue with industry, trade associations and individual companies. The supporting analyses comprise assessments of potential developments in markets, business turnover, employment, investment and exports.

The project was designed so that there is an effective interaction between the private and public sectors on international, national and regional levels. The foresight planning framework has been developed and adapted to all the regions and clusters involved and applied in real situations, providing experiences that can be developed into best practices. The transnational interactions through IFP have enabled the development B2B relationships and region-to-region cooperation.

Common challenges across the North Sea Region are the need for innovation, technology transfer, product development and the capacity and competence of the work force.

PROJECT OBJECTIVES

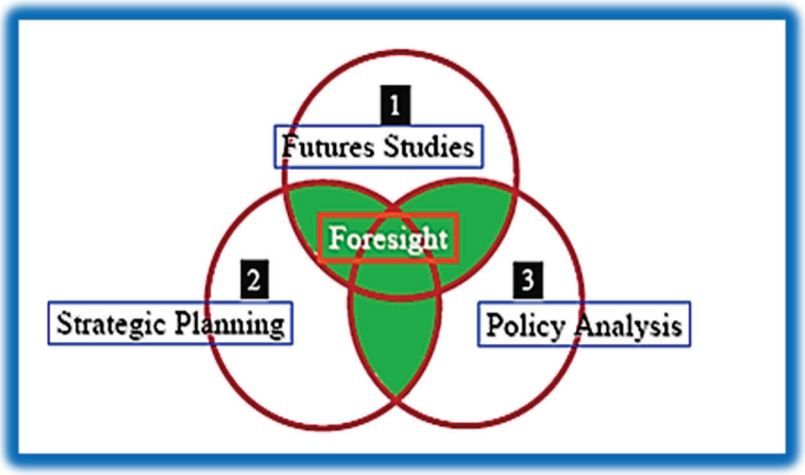
The project had four primary objectives;

1. To improve decision making by developing and applying innovative foresight planning as a tool for both the private sector and public bodies engaged in business development.
2. To apply the foresight planning approach on a transnational basis in key sectors resulting in action plans for future cooperation and identification of joint projects/business collaborations.
3. To create a forum for networking between businesses and regions in the North Sea Region.
4. To strengthen public sector facilitation by creating transnational networks and development of a foresighting toolbox.

Foresighting is a systematic process for projecting the longer-term future of science, technology, the economy and society with the aim of identifying the emerging generic technologies likely to yield the greatest economic and social benefits.

FORESIGHT PLANNING

Foresight planning in the context of this project is the active use of the knowledge, experience and competencies of organisations across the North Sea Region to plan for the future in an interactive manner. In particular foresight planning arises from the convergence of three strands of research and thinking; future studies, strategic planning and policy analysis.



CLUSTERS

The project has focused on four key industries that are of great economic importance to the North Sea region. However, the individual regions on their own do not have all of the components and critical mass to develop globally competitive clusters. The clusters within the IFP project were specific industry groups that used the project processes to promote and develop capability in a targeted manner. By working together and combining knowledge and expertise the project produced a coordinated process of foresight planning. This was then applied through transnational collaboration to create strategies and action plans which helped build capability in these clusters. Each cluster developed its' own priorities and objectives consistent with the overall aims of the IFP Project.

The project has brought together best practices in foresight planning from around the North Sea Region. It has established working groups within regional clusters to participate and form effective public private partnerships.

FOOD CLUSTER The food cluster used foresight planning to make the sector more competitive and improve the quality of food products to drive the expansion of the sector.

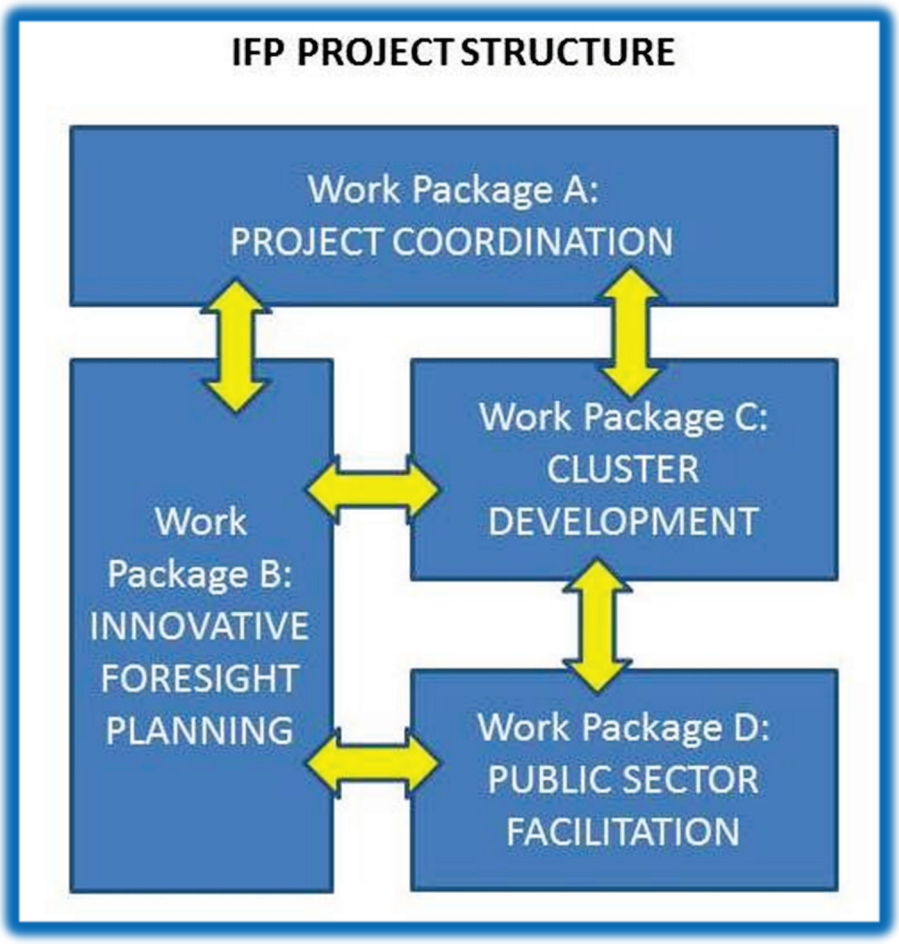
ENERGY CLUSTER This cluster focused on using foresight planning to accelerate the transfer of world class knowledge and technology from the established oil and gas sector into the emerging renewable energy sector with an emphasis on offshore renewables. The focus in the project was primarily offshore wind power and the development of the supply chain to support this sector.

ADVANCED TECHNOLOGY CLUSTER The Advanced Technology Cluster took on the challenge of developing and utilising foresight planning for technology clusters for the first time, emphasizing the importance of transnational cooperation.

FINANCIAL SERVICES CLUSTER The aim of this cluster was to use foresight planning as a tool for improving capital management in order to achieve an expansion of applied financial services.

PROJECT STRUCTURE

The Project was divided into four work packages with a high degree of interaction between the various packages:



WORK PACKAGE A: PROJECT COORDINATION

The focus of this work package was to coordinate the Project and its interactions with other projects, ensure the budget was effectively controlled and facilitate the timely and effective dissemination of results.

WORK PACKAGE B: INNOVATIVE FORESIGHT PLANNING

Activities under this work package included a study of materials detailing past developments and future trends in foresight planning, developing criteria for assessing and selecting best practices and structuring the method of Innovative Foresight Planning. The intended outcome of these efforts is that foresight planning will be incorporated as an instrument for the transnational development of businesses and business clusters.

WORK PACKAGE C: CLUSTER DEVELOPMENT

This work package aimed to deliver a growth in business opportunities and job creation through effective transnational business development. A variety of approaches were taken to achieve this objective including the preparation of detailed SWOT analyses of the clusters, delivering cross cluster business to business events and encouraging governments, businesses and academic institutions to enhance their cluster development activities.

WORK PACKAGE D: PUBLIC SECTOR FACILITATION

The challenge facing this work package was to enhance the breadth and depth of transnational networks within the region and to develop a tool box for public sector cluster facilitation based upon a comprehensive evaluation of best practice across the North Sea Region.

PROJECT PARTNERS

The partner organisations participating in the projects were drawn from around the North Sea region:

GREATER STAVANGER Greater Stavanger Economic Development, BI Stavanger, Innovation Norway Rogaland, iPax, SpareBank 1 SR-Bank , NAV Stavanger

AGDER Vest-Agder County Counsil

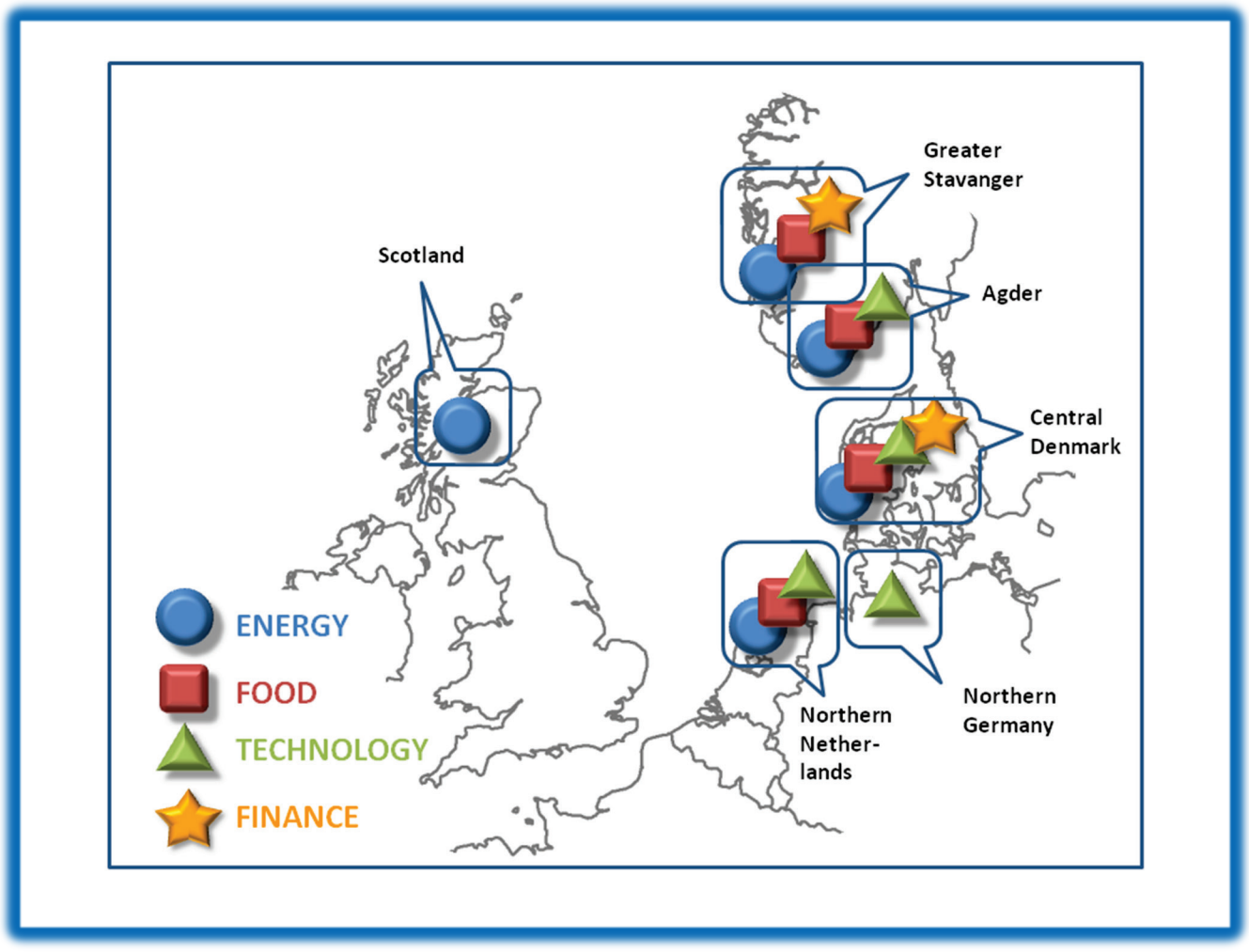
CENTRAL DENMARK Region Central Jutland

NORTHERN NETHERLANDS Provinces of Groningen, Fryslân, Drenthe, Northern Investment Agency (NOM) and Chamber of Commerce.

NORTHERN GERMANY Gesellschaft für Technologieforderung Itzehoe mbH (IZET)

SCOTLAND Scottish Enterprise

The participation of each of the partner organisations in the various work packages and clusters is illustrated in the map.



PROJECT OUTCOMES: WORK PACKAGE A

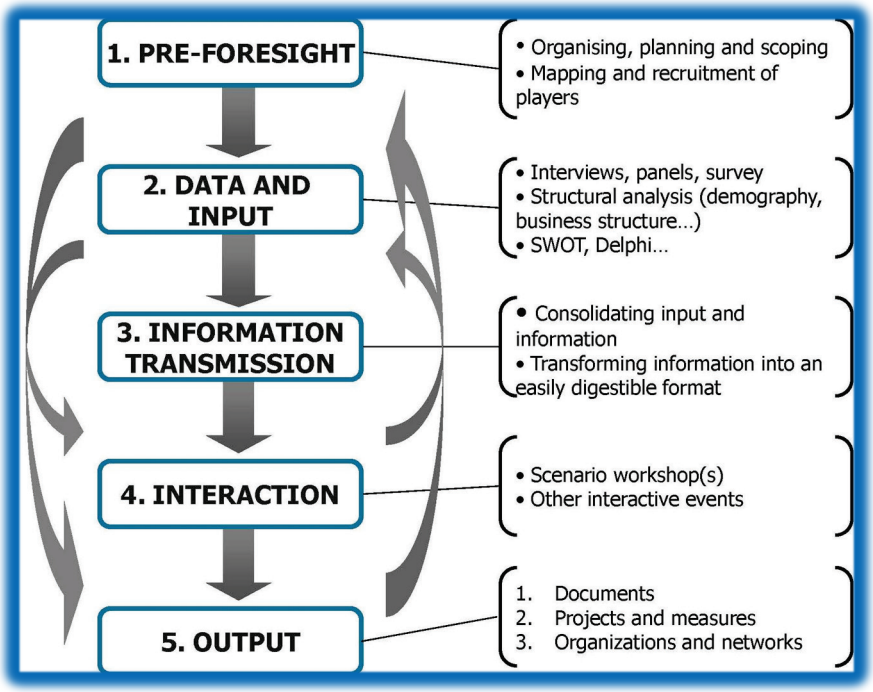
Work Package A has been highly successful in ensuring that the project was effectively coordinated and managed at all levels. Of fundamental importance has been the shared leadership vision created by the International Management Group (IMG). The IMG has ensured that there was always full and open discussion relating to all project decisions and consensus was reached in all cases without any need for voting. This consensual approach has resulted in the maximum possible level of transnational cooperation which, in turn, has created an environment where the overall impacts of the project have exceeded expectations. In particular the management approach has;

1. Created an atmosphere of co-operation and sharing between work packages and industry clusters.
2. Resulted in new models and methodologies being developed in an iterative manner, blending academic strength with real life pragmatism.
3. Willing and enthusiastic participation in all aspects of the project by all the project partners.

PROJECT OUTCOMES: WORK PACKAGE B

The focus of Work Package B was the development of a robust methodology for Innovative Foresight Planning. The IFP method was developed by NIBR, the Norwegian Institute for Urban and Regional Research, based partially on the existing literature on foresighting and partially on the experiences of the IFP partners. While the method needed some level of specificity in order to fulfill its purposes, the partners agreed that it should be fairly flexible in terms of its application.

Accordingly, the IFP method was structured as a generic model for foresight processes in order to achieve the appropriate balance between specificity and flexibility and is outlined in the diagram. For reasons of simplicity, the method is presented as a linear sequence of five stages. The curved arrows however signify that IFP processes will normally iterate between the stages. For instance, following a workshop (Stage 4) it may be deemed necessary to provide certain expert inputs



(Stage 2) which may in turn require transformation (Stage 3) for use in a second interaction stage. Outputs (Stage 5) may be delivered in many phases of the process, not just at the end, and activities subsumed under Stage 1 ("pre-foresight") including recruitment and planning, will normally proceed throughout the duration of the process.

There are five stages in the IFP method. The pre-foresight stage (1) is where the process is planned and structured. Decisions are made concerning the scope of the process, the time frame and the resources available. A process organization is set up and the staff appointed. Actor mapping, networking and recruitment are important tasks. Key events and milestones are planned.

The "data and inputs" stage (2) involves accumulating relevant inputs for the process at hand. These might include expert assessments and reports, but there is a variety of methods available for gathering

The method was not intended to be a fundamental departure from existing, established and proven methodologies; rather to provide the clusters with a flexible framework and set of guidelines within which they could operate.

inputs from the whole range of stakeholders identified in the first stage, for instance interviews, panels and surveys. Preparation of SWOT analyses would be carried out during stage 2.

A priority in foresight processes is to promote and facilitate interaction amongst the broadest range of stakeholders in the cluster. Widespread participation is a hallmark of the IFP foresight method, and the data and inputs accumulated in stage 2 should be made available to all the participants in order to inform and enhance the quality of their deliberations.

The data and inputs will often need to be consolidated in order to be useful for this purpose, as many participants will lack the time, capacity and appetite for digesting substantial volumes of expert reports and analysis. This activity is carried out in stage 3. A variety of approaches have been applied to achieve this including writing synthesis papers or presenting inputs orally at conferences, workshops and seminars.

Stage 4 can be regarded as the heart of the foresight process as this is the stage for direct interaction between the participants. Workshops, seminars, conferences and other kinds of events are organized and facilitated in order to exchange knowledge and opinions, discuss future developments, build common visions, reach agreement on plans and measures and, importantly, increase the degree of integration in the cluster groups in Work Package C through network building.

The outputs of the foresight process, stage 5, can be many and varied, as outlined in the later sections of this report.

> ***While specific plans and measures for future action are important outputs, the foresight method also underscores the importance of network building as this serves to integrate the cluster and provide basis for joint action.***

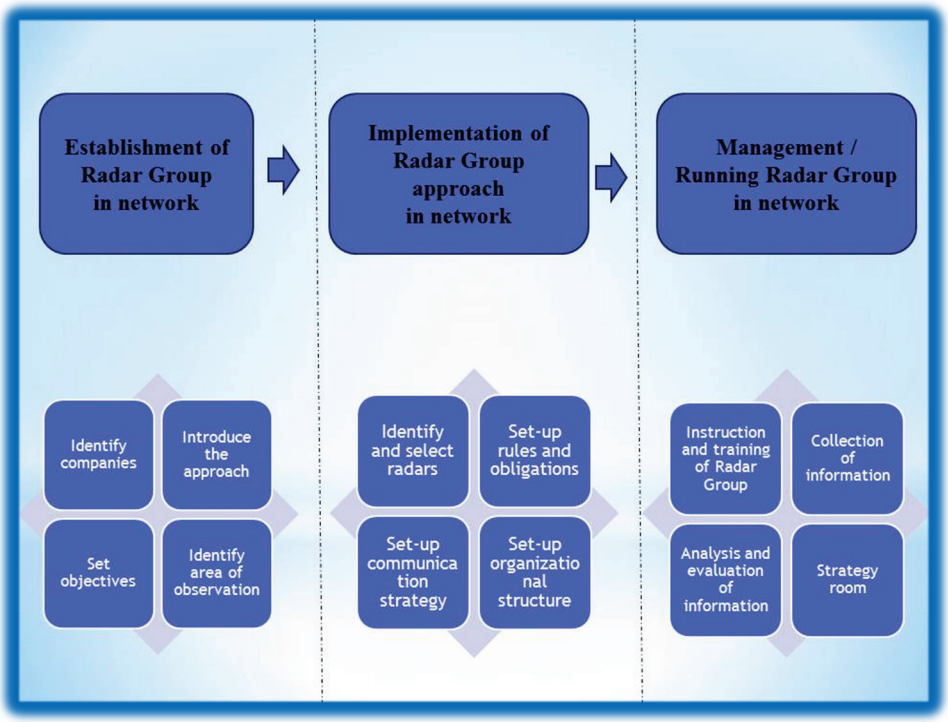
PROJECT OUTCOMES: WORK PACKAGE C

> ***The outcomes achieved in Work Package C have been characterized by productive and successful transnational cooperation, a flexible adoption of the IFP method to deliver optimum results for each cluster and effectiveness in building value creating business to business networks.***

ADVANCED TECHNOLOGY CLUSTER

The objective of this cluster was to create a basis for infrastructure decisions and strategic technology management relating to the specific needs of technology companies. The challenge was to develop and establish Innovative Foresight Planning with a carefully evaluated set of indicators for technology clusters for the first time, through transnational and cross cluster cooperation.

The partners engaged in the Advanced Technology Cluster of Work Package C have worked with the Helmut Schmidt University in Hamburg to develop the Radar Group Approach and apply it to business networks. The Radar Group approach was originally developed in the field of medical engineering, a fact that enhances its suitability for use in the rapidly changing competitive environment that surrounds technological change. The partners initially focused on using the Model for developing technology intelligence. However, based on their experiences they found it could usefully be applied to the broader topic of business intelligence. They have developed a valuable guide aimed at helping other business networks benefit from their work. The process they developed for the establishment, implementation and operation of a Radar Group is summarized in the diagram on the following page.



The Advanced Technology cluster has also been successful in applying this model and facilitating transnational business to business networking events in all four partner regions.

ENERGY CLUSTER

The objective for this cluster was to use Innovative Foresight Planning to accelerate the transfer of knowledge and technology from the mature and world-class oil and gas sector in the North Sea area into the emerging global renewable energy sector, primarily in the area of offshore wind where the opportunities for knowledge and resource transfer were considered to be highest.

The Energy Cluster concentrated their efforts on the rapidly developing offshore wind sector, a growing industry of strategic importance for all the Cluster participants. A number of landmark events were organized by the Cluster including a workshop in Aberdeen in May 2010 where over 100 influential delegates from all over the North Sea Regions met to discuss the issues surrounding the rapid growth in the offshore wind sector.

ABERDEEN EVENT MAY 2010

In May 2011 the Central Denmark Region hosted an event looking at the "*Supply Chain for Offshore Wind Power*". These events were successful in facilitating business to business contacts between

companies in the North Sea Region with the aim of developing the supply chain in offshore wind energy in the Region. Feedback from participants at both these events was very positive and indicates that the IFP Project has had a positive impact on the effectiveness of the energy cluster in the North Sea Region and the development of the offshore wind supply chain.

OFFSHORE WIND CRUISE: Managing director Arne Marthinsen (left) from the Norwegian company Einar Øgrey Farsund AS and Per Tønnesen, who is the project leader for the Norwegian business collaboration.

Following these highly successful events and the excellent cooperation achieved during the IFP project there is great interest amongst the project participants in continuing to work together to develop the transnational cluster. Some of the activities under discussion include mapping the offshore wind industry supply chain, follow up workshops and business to business networking events. It is also apparent that many of the businesses that have become engaged in the project will continue to utilise and leverage the networks they have developed.

IFP has led to the establishment of new business to business networks relating to offshore wind in several regions, such as NODE in the Vest Agder Region and Northern Netherlands Offshore Wind Suppliers Network (NNOW). The existing Danish network Danish Wind Industry Association (www.windpower.org) is a good example of how these networks enable SME's to offer their capabilities to large companies and multi-nationals involved in offshore wind activities. The NNOW cluster in The Netherlands is expanding its activities and has 75 companies on its participation list.

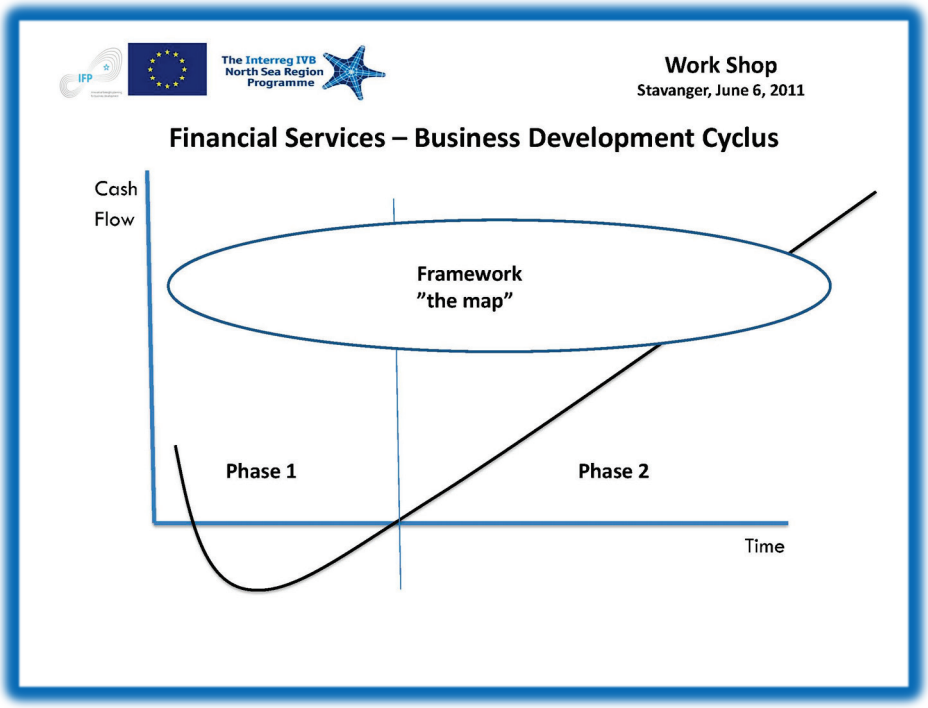
To complement the work on offshore wind an expert workshop was held in Brussels in December 2010 to discuss energy storage and smart grid solutions to accommodate the growing amount of power from wind energy in the electricity transmission systems. Some interesting and novel solutions were raised.

FINANCIAL SERVICES CLUSTER

The challenge for the financial services industry is both to serve the regional and national market better and also to expand on the international market, not least because of the globalization of industries. The objective for this cluster was therefore to use Innovative Foresight Planning to improve capital management as a basis for expanding applied finance services.

The work of the Financial Services cluster centered on the finance clusters in the Central Denmark and

Greater Stavanger regions. Both these regions have the largest financial clusters outside their respective capital cities measured by operating capital. The focus of their efforts was to exchange experiences and best practices, develop new approaches to business development through foresight planning and to expand business opportunities through transnational business development. The participating partners held a workshop attended by key players in the cluster with the objective of gaining a better understanding of financial services in relation to the business development cycle. This cycle was divided into three parts; the framework, start-ups/early stage development (Phase 1) and growth/expansion (Phase 2) as illustrated in the diagram.



The understanding of this cycle and its associated features is essential if the issue of access to capital for new and growing business is to be addressed. Various regions have initiatives and strategies in place to tackle these funding issues and the project has facilitated a shared understanding of the relative strengths and weaknesses of these schemes. In the fullness of time this will allow the regions to adapt their schemes so that there is a definite and progressive movement towards best practice across the entire North Sea region. The remaining challenge is to develop the network still further.

FOOD CLUSTER

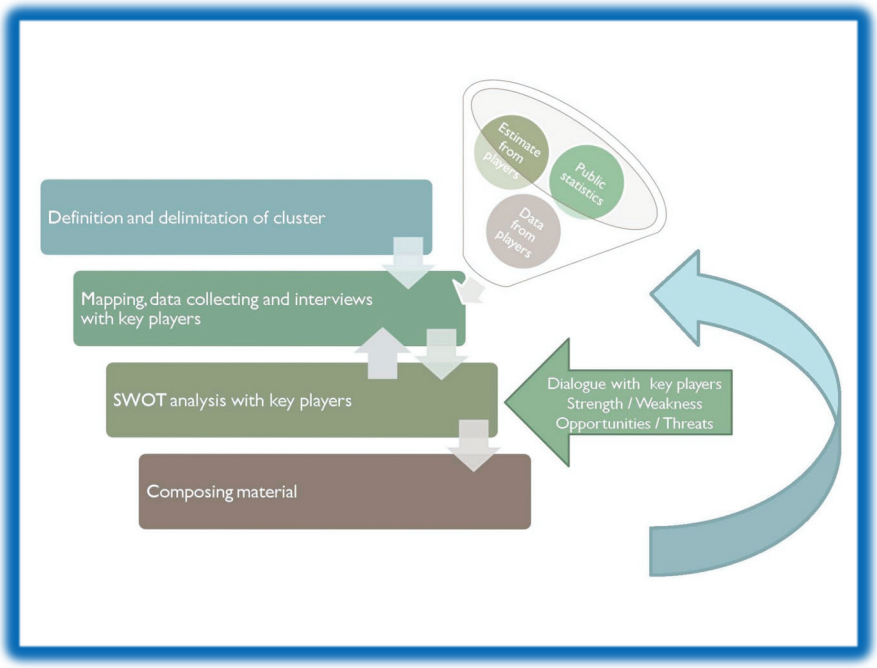
The objective for this cluster was to use the Innovative Foresight Planning to make the food sector more competitive and to improve the quality of the food products in order to expand the cluster.

> ***The remarkable differences between the cluster members could be turned into a strength and a lot could be learned from others experiences.***

The IFP project taught the participants a great deal about innovation, not only regarding food

processing itself but also relating to the processes within the food cluster. The cluster facilitators played an important role in adopting a pragmatic and flexible approach to executing the project. Occasionally the participants found that stepping backwards in the process turned out to be very useful in the innovation process.

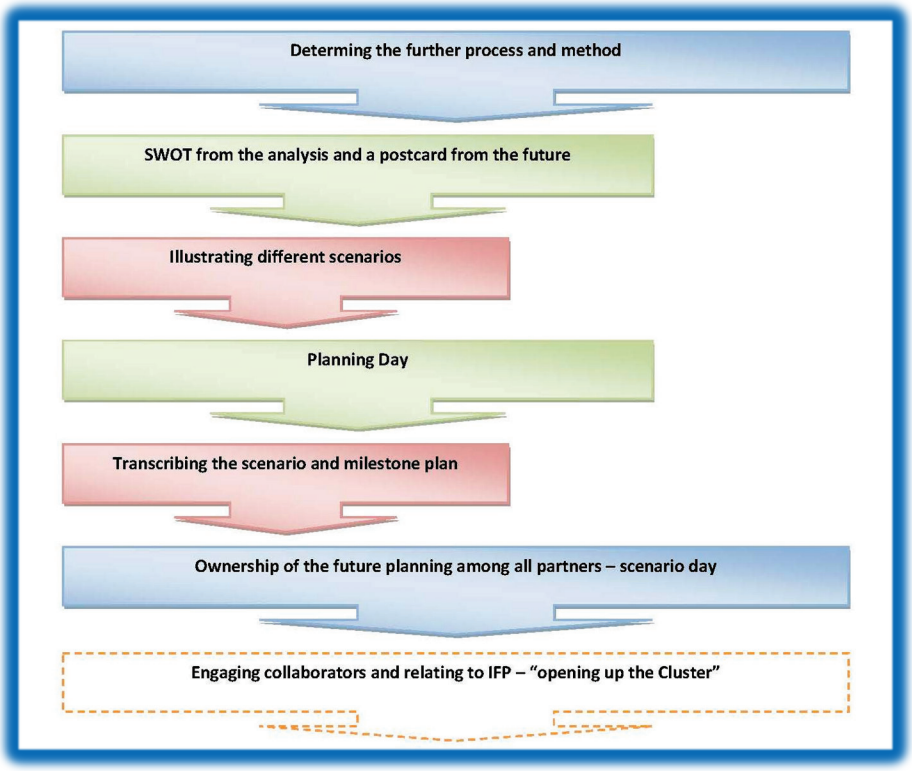
The partners engaged with the Fishery Cluster looked at ways of addressing the key challenges facing the industry; global competition, quotas limiting catch and growing fishery investment outside the North Sea Region. Their overall aim was to develop the cluster so that the value of landed fish can be maximised and service levels in the value chain can be increased in order to improve competitive performance. By a process of engagement with key industry players and utilizing the IFP methodology they made the transition from project to effective cluster.



Their experiences indicate that the development of effective and productive clusters is fundamentally about humans and human relationships.

The illustration on the right shows how the cluster applied the IFP model to their requirements.

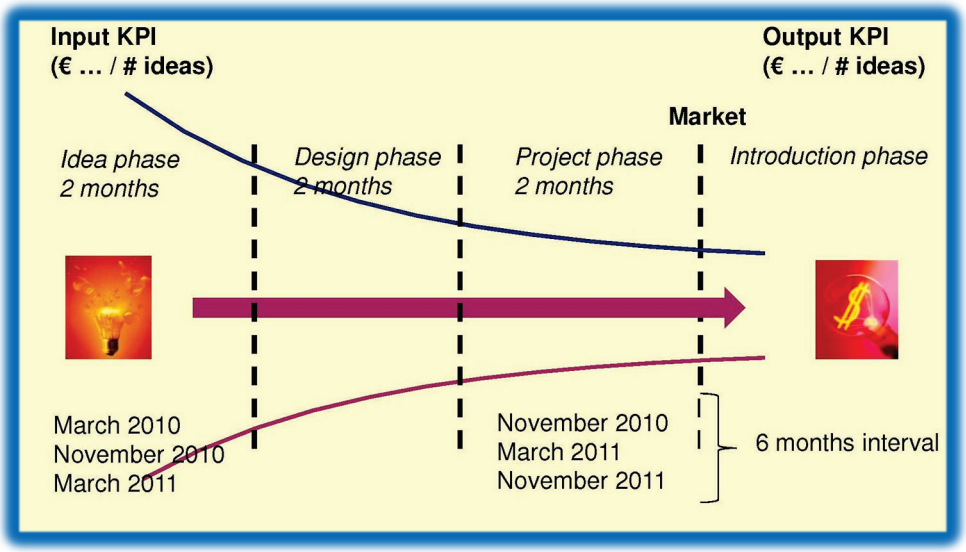
By working through this process they delivered a number of important outcomes. There is now strengthened co-operation between partners, a joint marketing effort including events and a website, an



extensive quality control project and a new sales initiative "Vestkystens Fiskekasse" (North Sea fish in a box). Future developments of the cluster are already being planned with the aim of adding additional partners and building relationships with knowledge providers.

Overall the food cluster has concluded that implementing an inspiring innovation process as a cluster of companies is more successful when executed with external support and facilitation. Furthermore, there is clear value in participating in a broader network that includes knowledge institutes and public organisations. These organisations make it easier to understand new trends and insights that can be incorporated into strategies and support the application for supplementary funding. One challenge is that public funding is always temporary so it is crucial to plan to continue the process with private money.

The Innexus network in Northern Netherlands has developed from the work of the food cluster. The network aims to increase innovation and support the development of competencies for new businesses within the network. Innexus has shown that by working collaboratively they have been able to improve co-operation with academic institutions, get better access to financing programmes and improve their capacity to innovate. Innexus takes collaboration within a network to a new level with members adopting a common innovation process, shown in the illustration. The work of Innexus is already showing positive results and will continue after the completion of the IFP Project.



The Cluster also organized and hosted a successful innovation seminar in the Netherlands and a transnational business to business event in Stavanger.

PROJECT OUTCOMES: WORK PACKAGE D

The work carried out in Work Package D (WPD) examined how public sector organisations can facilitate the development and success of industry clusters. This included a review of what policy instruments public authorities have for clusters of businesses and institutions and an analysis of the application of policy in the North Sea Region. The work package also examined how clusters develop, focusing specifically on the role of public authorities in this development.

In the Northern Netherlands, Central Denmark, Northwest Germany, East Scotland and South West Norway WPD examined whether, and in what way, public authorities utilise cluster policy to increase innovative capacity.

Previous research has shown that clusters mostly form without help from the public authorities. Porter and many other researchers assert that the public authorities should refrain from creating clusters themselves; rather focus their attention on strengthening and supporting developing clusters. This can be done by recognizing a cluster and then removing obstacles and inefficiencies and improving labour, infrastructure and rules. Other researchers, notably Desrochers and Sautet conclude that: "There is no role for public authorities in cluster development". Their view is that public authorities are no better able to predict future successful sectors, networks and technologies than market players. They argue that clustering should be a bottom-up process, driven by strong leaders from the private sector. Equally there is no doubt that public procurement policy has a clear role in strengthening specific clusters or industry capabilities.

The IFP Project has demonstrated that by developing and adapting the Radar model, which was principally developed for large companies, it is possible to successfully apply the approach to transnational business to business networks of SMEs.

Jim Davis – Scottish Enterprise

"The issue of public procurement should be taken into account as well. The US and France are good examples. For instance, the aerospace/aircraft industry is strong in the US because of the strong experience in the defence industry."

Kim Nedergaard Jacobsen - Manager of Midt Vind, Central Denmark

"If we don't support our own industry by indirect subsidies or help in the short term other countries, especially from Asia and some European countries will give Danish industry unfair competition."

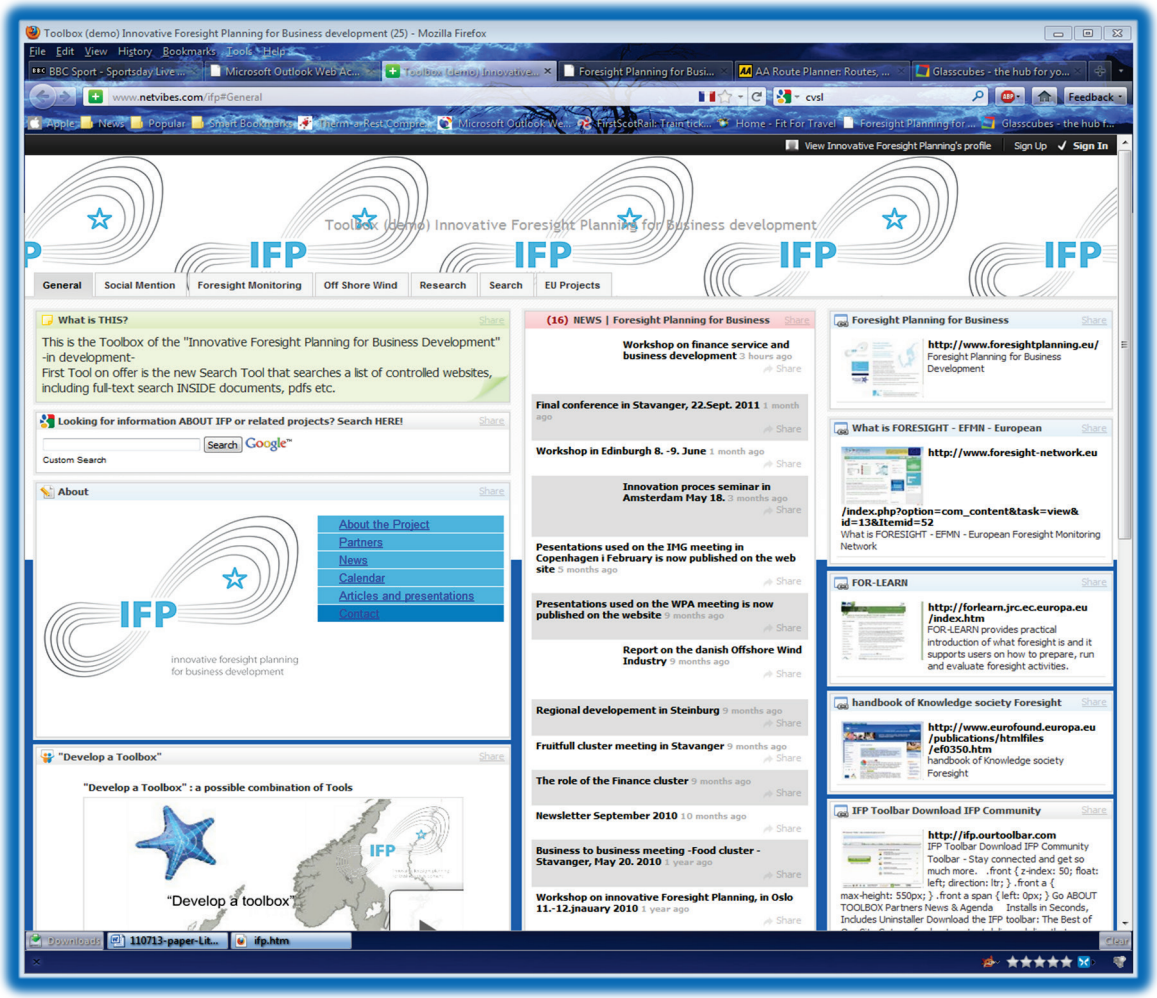
The Cluster Policies white book distinguishes five different types of cluster policy:

1. Broker policies, which are used by all countries, in which consultation and cooperation are stimulated between companies, the public authorities and other institutions. In addition, demand side policies are mentioned, by which the public authorities encourage new ideas and innovative solutions.
2. Research and development are financially supported by all the regions. Several programmes run simultaneously to fund the different types of research and development.
3. Training policies aimed at upgrading skills and competences which are necessary for the clustering of SMEs.

4. Measures to promote international relations are mentioned as the fourth type. In Scotland, Norway and the Netherlands, the public authorities promote clusters. Denmark and Germany leave this to the cluster organizations.
5. Creating the general conditions for the success of clusters and innovation. If the framework conditions in the different regions are compared, it is striking that only Schleswig-Holstein imputes a poor quality of some conditions to itself. The other respondents do not see any conditions in their region which prevent a cluster from developing.

The international partners in the IFP project have selected the best practices of public policy and have developed a toolbox for application of this best practice. Nevertheless the study has concluded that if regions place too much trust in best practices from other regions, they undermine their own possible competitive positions, which are based on unique, regional characteristics. Competitive advantage for a cluster is achieved precisely by distinguishing oneself from competitors.

One significant outcome from Work Package D has been the development of an Innovative Foresight Planning toolbox that is freely available for use by any interested organisation, cluster or public body. A screenshot of the toolbox home page is shown below and the toolbox can be accessed at: www.netvibes.com/ifp#General.



PROJECT CONCLUSIONS

The Innovative Foresight Planning project has proved highly successful in both developing a pragmatic and effective approach to Innovative Foresight Planning for business development and implementing it to provide tangible results for critical industry clusters. By harnessing focussed transnational cooperation and collaboration business to business networks have been developed and strengthened and the business development objectives of the project met.

The project has compiled best practices around the North Sea with respect to Innovative Foresight Planning. Working groups within industry clusters have formed successful and value creating public private partnerships. The value of transnational cooperation and collaboration has been clearly demonstrated. The importance of promoting, facilitating and developing effective business to business networks to enhance business development has been confirmed.

The North Sea region has acknowledged strengths in its research base, a number of key industries and strong clusters located in the partner regions. However, to build on these strengths and to maintain and improve global competitiveness and sustainable economic growth, there is a need to improve linkages within and between the clusters, at a regional and trans-national level. This requires an integrated, transnational approach to identifying opportunities within the region and in the global market. The synergies that have been demonstrated in this project will then allow the regions, research institutions and businesses to work together to exploit the opportunities that undoubtedly exist.

Without any doubt whatsoever it can be stated that cooperation bears fruit. The value of networking, both regional and transnational, cannot be overstated.

FURTHER INFORMATION

Further details on the IFP project can be found at www.foresightplanning.eu

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