
EDINBURGH NAPIER UNIVERSITY

Master of Science
in
Investment Promotion & Economic Development




**USE OF “TERRITORIAL INTELLIGENCE” IN THE
DEVELOPMENT OF INDUSTRIAL
CLUSTERS IN MOROCCO**

**CASE OF THE FIRST SEAFOOD PROCESSING
CLUSTER IN MOROCCO**

By
Manar ALAOUI HASSANI ATLAS

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Thesis submitted in partial fulfilment

of the Degree of Master of Science

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List of abbreviations

AMDI: Moroccan Agency of Investment Development
ANAFAP: National association of fishmeal and fish oil producers
ANICOM: National association of seafood freezing industries
ANP: National Ports Agency
APAPHAM: Professional Association of Deep Sea Fishing in Morocco
ANPME: National Agency for Small and Medium Enterprise Promotion
APROMER: Moroccan association of seafood exporters
ASMEX: Moroccan association of exporters
CCISA: Chamber of Commerce, Industry and Service of Agadir
CGEM UR: General Confederation of Enterprises of Morocco - Regional Union
CMC: Moroccan centre for economic situation
CNRS: National Centre for Scientific Research - France
CPM: Chambers of Marine Fisheries
CRI: Regional Centre of Investment of Souss Massa Draa
CRM: Customer relationship management software
CRSMD: Souss Massa Draa Regional Council
EACCE: Autonomous Establishment of Control and Coordination of Exports
EI: Economic Intelligence
ENSA: National School of Applied Sciences
EU: European Union
GDP: Gross Domestic Product
FAO: Food and Agriculture Organization
FENIP: National Federation of Industries of transformation and valorisation of marine products
FIPROMER: Seafood industrial federation
GIAC: Inter professional assistance groups
GIS: Geographic Information system
GPBM: Professional Group of Banks in Morocco
HCP: The High commission of plan
IAV: Hassan II Institute of Agronomy and Veterinary
ICT: Information and communication technology
IFREMER: French Research Institute for Exploitation of the Sea
IMF: International Monetary Fund

INRH: National Institute for Fisheries Research
ISPM: High Institute of Marine Fisheries of Agadir
IZU: Ibn Zohr University
MAD: Moroccan Dirham
MICNT: Ministry of Industry, Trade and New Technologies
MPM: Department of Marine Fisheries
OFPPT: Office of Vocational Training and Work Promotion
ONP: National Fisheries Office
ONSSA: National Agency for Food Sanitary Safety
R&D: Research and Development
SMD: Souss Massa Draa Region
SMEs: Small and Medium Enterprises
TEI: Territorial Economic Intelligence
TI: Territorial Intelligence
TIS: Territorial Information System
UBI: French Agency for International Development
UNICOP: National union of canned fish industries
WHO: World Health Organization
WTO: World Trade Organization

Abstract

Principles of participation and cooperation are at the heart of the current social, economic and environmental territorial development strategies: networks, clusters, federations, associations, unions, digital communication systems, geographic information systems, consultation workshops and civic dialogue...

In a globalized world, constantly moving and unpredictable, organizations have the need for complex models that require quick response time, flexibility and foresight, while taking into account the availability of resources and the vulnerability of their environment.

In this context, this dissertation examines the emergence of new knowledge, new methods and new professional practices for the collective intelligence to meet the challenges of territories sustainable development. Thus, this research explores the evidence which suppose that the territorial intelligence improves, in an interactive, iterative and forward-looking process, the understanding of the territory structure and dynamics and a collective mastery of the territory development, by associating the territory actors and community and insuring the mutualisation and cooperative exploitation of information.

The research addresses the Territorial Intelligence approach within the Souss Massa Draa cluster, as the first seafood processing cluster in Morocco. It demonstrates how important it is for this cluster to implement a comprehensive and systematic Territorial Intelligence system, to promote innovation and creativity and to sit the basis for strategic decision-making. The research method employed consists of a coordination of a literature survey and a research of perceptions of various stakeholders associated with this cluster in order to address how Territorial Intelligence can provide answers to the needs of the Souss Massa Draa cluster competitiveness. To conclude, suggestions are made on the key characteristics of an appropriate Territorial Intelligence system within this cluster and proposals are given on some key success factors in implementing such a system.

First Chapter: Introduction on the research purpose and background to the research area

I. Research purpose, method and approach

1.1 Research purpose

Clusters development is attributable to several factors, including technology and knowledge transfer, development of a skilled workforce in related industries, the benefits of agglomeration economies, and social infrastructure. But in a global economy, more competitive than ever, clusters are confronted with firms' location or relocation, and have to deal with investment volatility. The amplification of worldwide economic changes and the importance of innovation in the competitive processes outline a new form of economy. The production and research organization in the knowledge economy relies on increased interaction between different actors. In this context, territories play an important role. For Pierre Veltz (2002), in this new economic and technological context, it is the intelligence of combining multiple resources that makes the difference between the territories. Thus, territories have to act in a worldwide territories competition environment.

This paper will focus on two major and innovative aspects of clusters policy:

- The emergence of a new territorial industrial policy that combines public and private actors
- The emergence of a territorial intelligence around industrial clusters.

Thus, this research will try to demonstrate that territorial intelligence (TI) is more than ever a major factor in developing and strengthening the competitiveness of economic operators, including clusters and their members.

To reduce the scope of the research, the example of Morocco was taken. Its decentralized governance, taking into account the diversity and variety of each activity pool, led to the establishment of several sectoral plans and strategies to better fit the great dynamics of globalization. This research will concentrate on the fishing and seafood processing industry, for which a new strategy has just been announced by the Government: The "HALIEUTIS Plan". It is an integrated sectoral

approach that aims to develop a sustainable and competitive fishery. One of the main objectives of this new strategy is the creation of three seafood processing clusters in the country. Through this research I will try to address the TI approach within Souss Massa Draa (SMD) cluster, as the first seafood processing cluster in Morocco.

The main purpose of the research will be to demonstrate how important it is for this cluster to implement a comprehensive and systematic TI approach, to promote innovation and creativity and to sit the basis for strategic decision-making systems. The research results will try to address how TI can provide answers to the needs of the SMD cluster competitiveness in its development efforts (identification of partners, competitors or complementary clusters) and strengthening its position to develop internationally. Then, the research questions that will be addressed are:

-How “Territorial Intelligence”(TI) and “Economic Intelligence” (EI) systems and methods, can be applied in the further development of SMD Cluster?

-How the collect of strategic information, anticipation, heritage protection, monitoring developments would help the SMD Cluster to position itself against its competitive environment?

1.2 Research Method

According to the identified scope of this research, narrowed down to the study of single cluster in the country (the SMD cluster as a network of local actors), whose different stakeholders are already identified, the approach chosen is the “case study”. This approach perfectly fit the context of the research. In fact, the case studies are generally used to study particular phenomena in a particular setting, which is the case for this dissertation.

Indeed, this approach will be used to determine if the use of TI can contribute to the SMD cluster development, as it is the case for several clusters in the world that capitalize on TI systems to increase their competitiveness.

For this purpose, an inductive research method was adopted. In fact, the observation of empirical data was used to evaluate the efficacy of the dissertation theoretical frameworks, i.e. the contribution of TI to cluster development.

This confirms the choice of the case study approach which is considered as a pertinent method in terms of questioning accepted theory. Moreover, the use of case study approach is also justified by the fact that this research is primarily conducted in order to identify good practices in term of TI systems in favour of clusters development. Therefore, investigations have been implemented as part of a comparative approach to make the Moroccan clusters benefit from international success stories.

Primary sources of data have been used for this research, since this theme is conducted for the first time and the gathered information is not necessarily available, especially as the concept of TI remains relatively new in Morocco. Different tools have been used to acquire information in order to meet the dissertation purpose and address the research questions. Thus, a mixed data collection approach has been adopted: in addition to the use of observation, interviews have been conducted.

The first step was the identification of the target group and the persons involved in the field of TI and SMD cluster development:

- decision makers at the local and national level;
- local authority and government departments;
- universities and research institutions;
- professional associations, experts and consultants,
- industrial corporations / private businesses of the SMD cluster

A questionnaire was designed, tested and used to identify specific information or to confirm assumptions about the TI systems concept within the target group. Interviews were performed as face-to-face interview or over the phone. The interviews concentrate on some key questions and a free chat with the interviewee as well. To increase the willingness to fill out the questionnaire or to accept make interviews a management summary of the results was promised to be offered to the respondents. However, case study approach can have some limits. It is considered as be narrow in scope and then, the generalisation from it could be difficult. If we take the example of this research, it is not possible to adopt a sampling approach that seeks to generalise conclusions reached at the case of the Souss Massa Draa cluster, since the conditions and characteristics of each cluster (as observed unit) are unique and can't be generalized. However, the TI approach as a mean to foster clusters development can be generalized.

Another difficulty with the approach is that it is particularly useful for the analysis of organisations as static units; however, ensuring access and continuity to organisations observed can sometimes be problematic.

Those limits lead us to reflect on consideration of reliability and validity issues. Regarding the validity of the model, the survey lay on a universal approach for the implementation of a TI system that was exactly applied in order to select the most relevant variables to answer research questions and ascertain the causal relationship between the programme and the outcome.

Since the research involves the collection and analysis of perceptions around the concept of TI and its estimated impact on the development of clusters, the key variables were clearly identified in order to insure the validity and reliability of the research method adopted. Thus, through the investigation phase, all the concepts used in the research had clear and an unambiguous definition in order to make all respondents sharing the same understanding and interpretation of what the research is measuring. This can guarantee to make sensible and useful generalisations from the research findings.

1.3 Research objectives and approach

The overall aim and specific objectives of this research can be summarized as follows:

- Define the concept of TI system within the regional seafood cluster
- Test this concept with a wide range of policy makers and local actors
- Define a plan for implementing a TI system within the regional cluster

To achieve this purpose, a pragmatic approach structured in three phases has been adopted:

Research framing:

This first phase will be fully detailed in chapter 2 related to the description of the SMD cluster, its current status and future development. It includes:

- Description of the general context of the country
- Analysis of the Seafood processing cluster in Souss Massa Draa
- Identification of key stakeholders and local actors
- Development of the final approach to the research

Definition of Territorial Intelligence concept

This second phase will be fully detailed in chapter 3 related to the definition of TI Scheme within the SMD cluster. It includes:

- Development of the concept
- Testing the concept through interviews
- Analysis of the survey results

Proposal for the implementation of territorial intelligence system within the cluster

This research phase will be fully detailed in chapter 4 related to the implementation of TI Scheme within the SMD cluster. It includes:

- Finalisation of the concept
- Means and Governance terms
- Implementation plan

1.4 The extend of the research

The results of this research will be primarily intended for local actors and decision-makers responsible for identifying, promoting and defending the key issues of their territories. Indeed, policymakers in Morocco, where the contribution of EI to the economic strategy development is still embryo, (whether across the government or corporate) will benefit from the TI approach proposed for the development of the SMD cluster, and could then replicate this approach for other clusters.

They can also be interested in the research conclusions, the main stakeholders involved in the development of clusters (local authorities, government departments, universities, laboratories, professional associations, consultants, etc...). More generally, the research findings will be aimed at research institutes, in addition to political scientists, economists, business scholars, and development studies scholars.

II. Background to the research area: Current knowledge

TI was born within the information society from which it uses technologies and tools. It also shares the concerns of sustainable development and defends a global approach based on people's current and future needs, partnership and effort mutualisation. In the knowledge-based society context, TI presently emphasizes the link between knowledge production and territorial action, as well as the importance of the human and social capital in the innovation process.

The concept of TI was mainly handled by information and communication sciences and by knowledge management, as a cognitive and organisational process of economic sciences and geography, to analyse the territories structure and dynamic as geographic spaces and as a space of the human communities' project development.

The TI systems widely mobilize the information technologies to gather, share, analyse and exploit in a cooperative way, and then to diffuse pluri-disciplinary knowledge and multi-sector information. They are data-processing systems that broadly appeal to the geographic information systems, data statistical analysis and projects management and evaluation.

Defined as a cross-curricular theme affecting both trade, industrial, technology policies, as territory planning, EI has become a form of companies' competitiveness organization, but also a main for territories development. More and more Governments develop instruments and vital tools to the establishment of a TI system in order to avoid being in the position of follower according to Heinrich von Stackelberg (1932) theory.

So, the question is to know under what conditions a TI system can lead to local development? To properly address this issue, we will see in the first part of this section the contribution of TI by combining two approaches, the economic intelligence and the territory. Then in the second part, we will focus on the content of such a vision and its challenges in terms of cluster development.

2.1 From Economic Intelligence to Territorial Intelligence

Empirically, the economic intelligence is not a new phenomenon as several examples demonstrate the existence of such practices since the Middle Ages. Theoretically, the conceptual approach of EI was born in the mid-1980s and refers to M. Porter and V.E. Millar article about "*How information gives you competitive advantage*"¹. According to Porter, ICTs are transforming products, production processes but also the nature of competition by affecting firms five forces of competitive environment. Then, research and dissemination of strategic information becomes a necessity, both for firms and territories.

This assumption leads us to the study of EI as a device for management decision making (Bouchet 2006)². In his book "Organizational intelligence", Harold Wilensky (1967) defines EI as: "*the economic activity of producing knowledge, that serves organizations economic and strategic goals, collected and produced in a legal context and from open sources*". But, we observe that the definition of the EI concept may take different directions depending on the observed structures: enterprises, Government bodies or other entities.

According to Franck Bulinga (2002), the difficulty in defining EI is due to the complexity of this multidimensional concept that was evolved through several disciplines. For Bulinga, EI encompasses and goes beyond the simple monitoring device. The documentary information remains a part of EI , however, it fits into a process of knowledge production in a dynamic linking information to action. In fact, EI produced an "*InfoAction*", allowing a pro-activity and interactivity (Bulinga 2002).

With its multiple facets (monitoring, benchmarking, influence actions, knowledge management ...), EI can take into account the local and remote environment both in time and space. In other words, it is an instrument of good governance by and between the actors around shared or joint projects.

¹ M. Porter and V.E. Millar, (1985), « How information gives you competitive advantage », *Harvard Business Review*, 63 (4), july/august, pp. 149-160.

² Yannick Bouchet, Ph.D. Information & Communication, (2006) "Device of territorial economic intelligence and hybrid governance", Jean Moulin University, Lyon 3 France

This ties the definition given by A. July (2004)³, "*The economic intelligence consists in the mastery and protection of strategic information for any economic actor. Its three objectives are: the industrial competitiveness, the security of the businesses economy and the strengthening of the country influence*". This definition adds an essential element: "information protection and security".

But, is it EI permissible at territorial level? According to Jean-Maurice Bruneau (2004) we must distinguish between companies' business management and authorities' territory administration. These bodies with different activities have neither the same purpose nor the same strategy. Thus, a new concept was developed: Territorial Economic Intelligence (TEI) that is characterized by the relevance of the local actors' strategies. Some authors have attempted to define this new research topic, for example: designers of Zeknowledge⁴ web site, which connects monitoring to territory development; or Philippe Dumas (2004)⁵ and Jacques Fontanel and Liliane BeanShell (2005) or Philippe Clerc (2008)⁶, that implement the EI methods to territories management and governance.

However, according to Remy Pautrat and Eric Delbecque (2009)⁷, TEI, that is recently qualified "*territorial intelligence*", goes beyond management science framework or the application of specific EI instruments. The TI must be understood as a political response to the challenges of the open economy, i.e. as a profound renovation of industrial policy and territory planning.

Thus, TI is a new process for the exchange of strategic information at the local level. It encourages local dynamics and manages strategically the diversity (and therefore wealth) through local networking, including clusters. According to (Goria 2007)⁸ TI is primarily based on the implementation of EI and knowledge management actions for organizations and companies belonging to the same geographical area.

³ A. Juillet, (2004), « Référentiel de formation en intelligence économique », p. 2,

⁴ http://www.zeknowledge.com/intelligence_territoriale.htm

⁵ Philippe Dumas from the Atlantic Institute of Territories Development

⁶ Philippe Clerc, Director of EI, innovation and ICT at the Assembly of French Chambers of Commerce and Industry, (2008) "The social intelligence, the new territory of Economic Intelligence?", IFIE edition, Paris, France

⁷ Rémy Pautrat & Eric Delbecque, respectively President and Director of IERSE, (2009) "Territorial intelligence: synergy in the public-private encounter at the service of economic development" International Journal of Economic Intelligence 1 (2009) 17-28

⁸ Stéphane Goria, 2007 "Territoriality and Territorial Intelligence Devices: A functional investigation from Intelligence management and territory notions", Nancy 2 University, Vandoeuvre-lès-Nancy, France

Despite its multiple attempts of definition, the concept of TI remains not well known. It is often assimilated to the concept of economic watch or monitoring what makes it lose the strategic and prospective aspect of its definition. Generally, TI is based on the collective use of certain resources:

- To use ICT by promoting collaborative work
- To be aware of expertise and knowledge to federate into networks and then link information to action, and finally
- To transform information into relevant knowledge, accessible and deployable by policymakers.

Thus, Philip and Yann Bertacchini HERBAL (2003) gives a strategic dimension to the TI by defining it as *“an organizational culture based on sharing and processing of signals from economic actors, and intended to provide to the decision makers, decisive information”*

The territories increasingly need to differentiate themselves by creating new innovations that still unknown by competing territories. This implies a good knowledge of its environment and this requires a watch device. But the “watch” is insufficient and remains restrictive compared to the difficulties faced by territories.

In a similar perception, Y. Bouchet (2005) confirms that the TI is a tool to ensure medium and long term territory performance and is not simply available to ensure each company own performance. Then, it is necessary that local institutions are moving in the direction of the information pooling in order to anticipate the territory threats and opportunities.

In sum, we can conclude that the TI aims to strengthen the skills of a territory while anticipating competitors' trends in terms of innovation in order to maintain competitive advantage. So, it is a real strategy tool which is based on foresight. For H. DOU *“territorial intelligence makes it possible to define the best guidelines of what could be a global solution of the area attractiveness”*. The analysis and treatment of collective information are the most important way to enable decision makers to understand and interpret trends and market realities, the positioning and direction of its competitors, partners and customers' expectations.

2.2 The contribution of Territorial Intelligence to clusters development

The clusters are inherently considered as devices of skills and knowledge networking that aims, among other things, linking companies' researches in order to bring out products that can be developed, marketed and can compete at the international level. This type of structure allows SMEs to develop, and researches to be directly applied on the industrial sector (Knauf and Gorla 2009)⁹.

Tandler (2002) uses the term "Cluster" more loosely, focusing on geographic concentration of firms with significant "interlinkages" and an "associational dynamic". We can also note that the principal objectives of clusters are *"to reinforce the competitiveness of the national territory, to make the economic development dynamic, to create or maintain industrial jobs and to attract investments and competences at the European and world level"* (Leroy 2005). In fact, international institutions and consultants promote the approach as a way to boost industrial growth through upgrading, attract foreign investment, and Develop niches in highly competitive global markets (Porter 1990, 1998 and Schmitz and Musyck 1994).

In this context, it is important to remind Michael Porter works: both about the phenomenon of "competitive advantage", and its analysis of "clusters". According to Porter (1998) clusters are defined as: *"geographic concentrations of interconnected companies and institutions in a particular field. Clusters encompass an array of linked industries and other entities important to competition"*. Furthermore, Porter (1993)¹⁰ affirms that the nation's competitiveness is directly linked to the attractiveness of their multiple territorial productive conditions.

Then, we can underline that the public policy of TI has a theoretical foundation in management sciences. The completion of the "competitive advantage" model developed by Porter is closely linked to the concept of "cluster".

Moreover, the TI also reflects the requirements of new forms of management that could be applied to a particular cluster, especially "project management" related to the notions of competence and network. Indeed, the TI promotes the construction of operational networks of expertises that operate horizontally.

⁹ Stéphane Gorla & Audrey KNAUF, 2009 "Presenting a study of various functional forms of Territorial Intelligence implemented by the clusters towards the identification of new benefits" Nancy 2 University, Vandoeuvre-lès-Nancy, France

¹⁰ Michael PORTER, 1993 "Competitiveness of Nation", NY, USA

As stated by Dominica Genelot (2001)¹¹, *“The new factors of competitiveness are largely based on functions and cooperative networking. [...] And the overall efficiency of research and innovation is the result of complex processes. [...] But for this research to be transformed into effective innovation, it is essential to share information, to develop teams and knowledge networks, and to animate cooperation”*. We can then deduce from these definitions, that clusters are primarily focused on the notion of networks:

- Business networking (SMEs and large groups),
- Networking between the private sector (companies) and public sector (local authorities and administration, Research institutes)
- Networking between companies, research centres and training organizations.

The main objective of these links is the collaboration of all partners around technological cooperation projects to improve competitiveness. This cooperation of a relatively dense network is the focal point that will make each cluster visible and therefore more attractive.

If networks are at the centre of a TI approach, it is because they generate very significant productivity gains. Ernst D., Kim L. (2001) explains that: *“The main purpose of the networks is to provide the flagship with quick and low-cost access to resources, capabilities and knowledge that are complementary to its core competencies. The real benefits result from dissemination, exchange and outsourcing of knowledge and complementary capabilities”*.

Then, it can be deduced that the players' geographic proximity and relationships are very important elements that allow the linkage between partners from different areas around unifying goals. The networks are a necessity for the territories, and the clusters seem to be the perfect example for this assumption.

So, the question is not whether to know if knowledge dissemination can provide a competitive advantage to the cluster but rather how to master this knowledge within a network of actors. Then, two types of territories can be distinguished: territories which were able to integrate TI into their development and who master their environment changes, and those who have not undertaken this "revolution" and must follow the changes initiated by competitors.

¹¹ Dominique GENELOT, 2001, "Manager in the complexity" Insep Consulting Editions, Paris, France

It is now important to consider the TI as a source of wealth creation involving business, territorial and social logics. The establishment of a TI system within a cluster must allow a meeting and a transfer of available skills. For TI to be effective, it must come from mobilized and volunteers players. The goal is the emergence of a collective intelligence force that aims to improve the territory current situation.

From several empirical studies, B. PECQUEUR and JB Zimmerman (2004) have highlighted the common problem of "failure of coordination" between local players caused by misunderstanding of their immediate environment. Then, in order to ensure the success of a TI approach within a cluster it is essential to begin by mobilizing stakeholders around a common culture. Sharing the same idea, Yann Bertacchini (2003) defines the TI as a process in three stages: "The players are sharing information, they give credence to the received information, and soon as the communication process is established, the actors can create the appropriate networks and transfer their skills."

in addition, according to C. Marcon and N. Moinet TI can be qualified as "*economic intelligence actions conduct in a coordinated manner by the public and private actors in a localized area, to enhance economic performance and, thereby, improve the well being of local population*" (C. and N. Marcon Moinet 2006 p.99). To this must be added that the TI should not be considered as a finality but as a way to foster territorial dynamics that might create an economic and social development, improve social capital, protect knowledge, expertise and skills ... The goal is to create synergies that can stimulate innovation (as a focal point for cluster competitiveness) and master the territory endogenous and exogenous environment.

We can therefore conclude that one of the fundamental points of a successful TI system within a cluster is the existence of a public-private partnership. The role of government is central. Without a strong commitment by the Government or its local representatives, no TI system may emerge. The Government must be the "*centre of gravity of a Territorial intelligence device, because it is the only legitimate body to guaranty space organization*" (Delbecque 2006 p.172.). Then, one of its responsibilities is to facilitate the flow of information between different actors, playing the role of the network mediator, to assist SMEs through the sharing of information, and to use its local and international influence to ensure the actors economic security and protection.

Chapter 2: Description of the Souss Massa Draa Seafood Cluster: **current status and future development**

I. The current status of the fishing industry

Thanks to its openness to Atlantic Ocean and Mediterranean Sea, the length of its coastline stretching over nearly 3500 km, and an important exclusive economic zone, Morocco is considered as one of the richest fishing grounds in the world with significant assets in seafood industry development. This heritage gives the country the status of world fishing power. The overall national fisheries production was established in 2009 to 1.21 million T, with a landed value of about MAD 5 billion, an increase of 14% in volume compared to 2008.

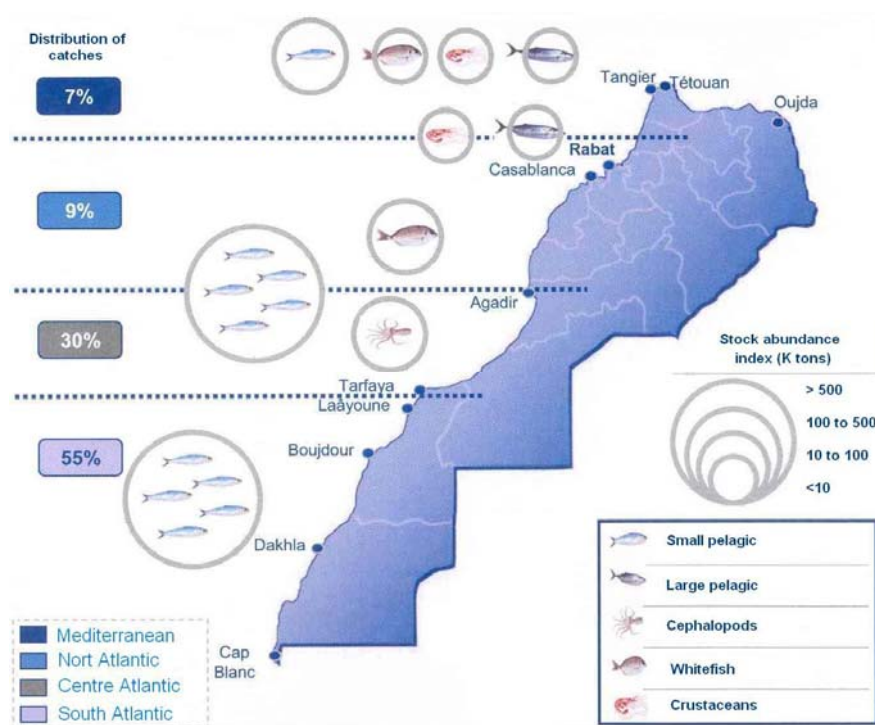
The estimated added value of the sector is around 3% of GDP. This sector generates 660,000 direct and indirect jobs, representing 55% of food exports and 16% of national total exports.

1.1 At the national level

1.1.1 Seafood resources and distribution of landings

The Moroccan exclusive economic zone is characterized by a variety of resources (about 500 species of which 60 are used). In terms of volume, the resource consists mainly of small pelagic which represent over 80% of catches in the national fishing zone. They are mostly concentrated in central and southern Atlantic (Figure 1). Morocco holds the largest stock of sardine *Pilchardus Walbaum*, a worldwide recognized species for its exceptional quality.

Figure 1: Geographical distribution of the resource (2008)



Source: Ministry of Agriculture and Maritime Fisheries

Two types of structures are hosting the landings of fishery products in Morocco: fishing ports and landing points located throughout the country fishing zones. (Figure2).

Figure 2: Distribution of the Moroccan landings structure

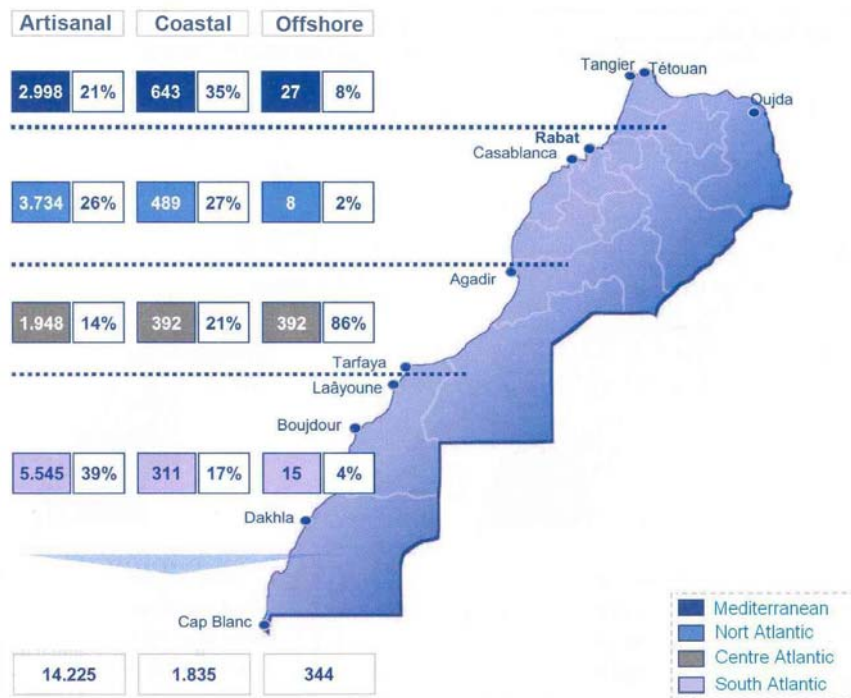
	<i>Mediterranean</i>	<i>North Atlantic</i>	<i>Centre Atlantic</i>	<i>South Atlantic</i>
<i>22 fishing ports</i>	8	7	3	4
<i>22 landing points for artisanal fisheries</i>	3	4	4	11
Total	11	11	7	15

Source: Ministry of Agriculture and Maritime Fisheries

1.1.2 Structure of the fishing fleet

The fisheries sector is organized into three segments: artisanal, coastal and offshore fishery. The operational fleet consists of 14,225 boats, 1,835 coastal vessels and 344 offshore vessels which were divided on the four main fishing areas of the national fishing zone: Mediterranean, North Atlantic, Central Atlantic and South Atlantic (Figure 3).

Figure 3: Distribution of the operational fleet in 2008 by geographic area



Source: Ministry of Agriculture and Maritime Fisheries

1.1.3 The industries of fishery products valorisation

With 422 land-based units and 359 at sea, the industry of the fishery products valorisation has generated an export turnover of MAD 13 billion representing a volume of 470.000T. This industry which contributes to 2% of GDP provides employment to 75.000 people. The valorisation industry is spread throughout the national littoral with a concentration in the cities of Agadir, Dakhla, Laayoune, Safi and Casablanca. The European Union, one of the world's largest importers of fishery products, is the principal client for Moroccan exports. This includes canned, semi-preserved, frozen and fresh fishery products.

The industries of fishery products valorisation can be presented as follows:

-Fish canning industry: Implanted in Morocco since the early 20s, the canned fish industry is the backbone of the valorisation of fishery products in Morocco. Over the years, this industry has accumulated a considerable know-how and experience that allowed the country to earn an international reputation for the quality of its products, making Morocco the world's largest exporter of the *Sardina pilchardus* Walbum specie. In 2008, production reached 161.000T corresponding to MAD 3.52 billion destined to the local market (20%) as well as exported to Europe and Africa (80%).

The industry employs 32.000 people, representing 50% of the total valorisation of the total land-based valorisation industry.

-Semi-preserved fish industry: Based primarily on the processing of anchovy *Engraulis encrasicolus*, the semi-preserved fish industry is currently represented by 34 production plants that employ 7100 people, and which has reached a record of 1 billion MAD in 2008. Morocco holds 50% of the US market for semi-preserved anchovies, and this industry has enabled the country to become a leader on the European market.

-Industry of frozen fishery products: This industry is developed around two main axes:

**Land-base freezing:* Initially oriented towards the valorisation of cephalopods, this industry has expanded over the years to benthic fish as well as small pelagic fish. A total of 190 freezing units allow a total production of 128.000T with a MAD 2.6 billion value. The privileged destination is the EU, with Spain as the main client.

**Freezing at sea:* With 359 vessels, Morocco holds the world's largest fleet approved for the EU market. It is valued at MAD 3.4 billion mainly destined to the Spanish (59%), Italian (15%) and Japanese (13%) markets.

-Industry of fresh fishery products packaging: Thanks to the proximity to markets of high fresh fish demand, this activity is mainly oriented towards the European market. The important coastal and artisanal fleets ensure a divers supply of noble and high quality fish. The industry includes: 21 shellfish packaging and shipping plants units and 76 fish packaging plants distributed throughout the coast. Production in this industry has reached 35.000T in 2008 valued at MAD 1.6 billion.

-Industry of fishmeal and fish oil: With 25 plants, the fishmeal and fish oil industry employs 1,260 people and generates an export turnover of MAD 783 million. Production in 2008 reached 57,000T of fishmeal and 16,000T of fish oil destined to an important national poultry market in continuous expansion as well as farming and aquaculture foreign markets, which are the main demanders of animal protein.

In 2008, this industry has switched into the upgrade of its plants in order to maintain its position in traditional markets and cope with international competition.

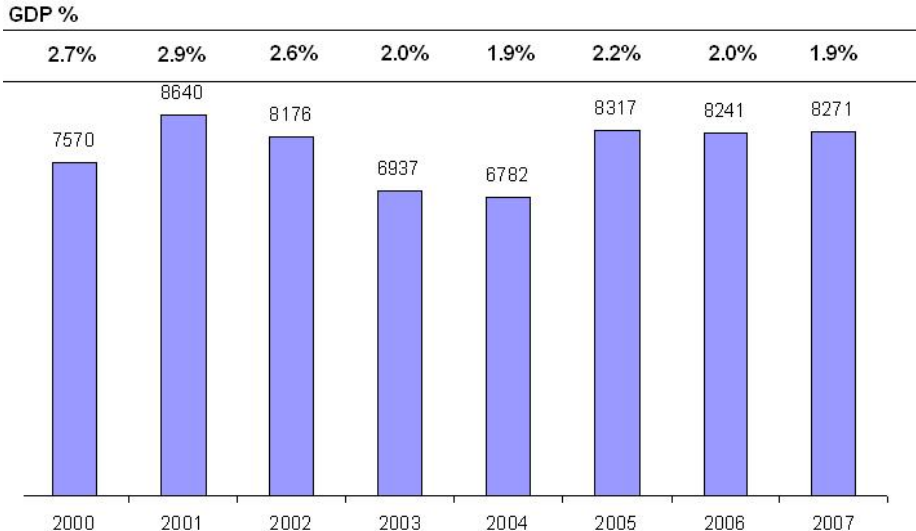
-Industry of seaweed treatment: The length of the Moroccan coast and its biodiversity had led to the development of a harvesting and treatment activity of commercially valuable seaweed. The main raw material is the *Gelidium sesquipedale* specie that allows the production of agar-agar, a gelling agent of large use in pastry and chemical and pharmaceutical industries. Morocco is the 3rd largest producer of agar-agar in the world. The seaweed treatment industry realized in 2008 a production of 920T for a value of MAD 174 million.

-Other activities: In addition to the main industries, the fishery products valorisation industry is expanded to other activities such as fish smoking, salting and drying, shrimp peeling, shipment of live crustaceans and the preparation of precooked dishes. In 2008, exports of salted, dried, smoked or in-brine fish reached 916T and MAD 26 millions.

1.1.4 Contribution of fisheries sector to national economy

With a contribution which varies from 2 to 3% of national GDP (figure 4), the fisheries sector is not yet a real pillar of growth. Its contribution is not significant enough compared to other sectors of the economy (agriculture and food processing 19.6%, real estate and business services 18%, Trade 15% ...)

Figure 4: Evaluation of the fishing industry added value (fishing, aquaculture and seafood processing industry): 2000-2007



Source: Ministry of Agriculture and Maritime Fisheries

The fisheries sector generates 170,000 direct jobs and 1.5% of the country's workforce. 490 000 indirect jobs are created by the sector that supports over 3 million people and plays a key role in the development of southern regions of the country. The turnover of the fishing industry grows at an annual average of 5% since 2001, driven in particular by the fishery products valorisation industry (figure 5). Also, 70% of the fisheries sector turnover is coming from exports (mainly composed of frozen and canned products).

Figure 5: Distribution of the fisheries sector turnover, 2007 (Million MAD)

	<i>Aquaculture</i>	<i>Seafood processing</i>	<i>Fishing</i>	<i>Total turnover</i>
<i>Sectoral turnover</i>	12	9806	6454	16272
%	0,1%	60,3%	39,7%	100,0%

Source: Ministry of Agriculture and Maritime Fisheries

Besides its contribution to the national economy, this sector is required to ensure the country's food security in a global context marked by the continued rise in basic raw materials prices. According to the Emergence Plan¹² the industry of "Marine Fisheries and Seafood processing industry", is recognized as an activity that can support more international competition and that could create thousands of jobs in 2013.

1.2 At the local level: Case of Souss Massa Drâa region (SMD)

There are 12 coastal regions in Morocco. They cover currently four distinct fishing zones¹³. Fishing activity may be seen as a real engine of economic growth by the investments it generates, the jobs it creates, the volume of traffic it causes and the demand for consumer goods that it maintains. This activity is the main factor of the economy modernization for several regions in the country.

1.2.1 Seafood resources and distribution of landings

With a coastline of 320km, Souss Massa Draa (SMD) has experienced a remarkable growth during recent decades. This area falls in the Central Atlantic fishing area, one of the most prosperous areas of the country (Figure 1).

¹² The Emergence Plan is the national industrial strategy that aims, over a period of ten years, increasing the GDP by 1.6 point per year, reduce the trade deficit and create approximately 440,000 jobs.

¹³ The four fishing zones are: Mediterranean, North Atlantic, Centre Atlantic and South Atlantic (refer to figure 1)

SMD region covers:

- two fishing ports: Agadir and Sidi Ifni
- a fisherman village: Immessouane
- four developed landing points: Immiouadar, Aglou, Sidi Boufdail and Rkount
- a fishing site: Taghazout
- 10 traditional landing points: Tiguert, Aghroud 1 & 2, Tamraght, Tifnit, Douira Sidi Rbat, GRISIM, Mirleft and Gzira

Through these different fishing points, the region represents a fish production of about 846,000 T valued at 6.9 billion MAD. The port of Agadir is considered as the biggest fishing port in Morocco with an offshore fishery, which accounts for more than 50% of the national offshore fisheries production in terms of value and weight (Figure6).

Figure 6: Production of the SMD region fish ports and landing points - 2008
(Weight in Tons and Value in thousand MAD)

Ports and landing points	Offshore		Coastal		Artisanal		TOTAL	
	Value	Weight	Value	Weight	Value	Weight	Value	Weight
<u>Agadir</u>	1712455,04	33 727,40	365 933,00	81 360,00	33 000,40	5 543,00	2111 388,44	120 630,40
<u>Sidi Ifni</u>	**	**	64 984,31	29 084,76	26 287,22	2 925,12	91 271,53	32 009,88
<u>Imessouane</u>	**	**	**	**	12 323,00	687	12 323,00	687
<u>Taghazout</u>	**	**	**	**	3 512,00	88	3 512,00	88
<u>Imiouaddar</u>	**	**	**	**	8 360,00	251	8 360,00	251
<u>Sidi Boufdail</u>	**	**	**	**	3 030,00	117	3 030,00	117
<u>Rkount</u>	**	**	**	**	406	16	406	16
Total SMD	1712 455,04	33 727,40	430 917,31	110 444,76	86 918,62	9 627,12	2230 290,97	153 799,28
Total Morocco	2585215,04	67027	3240 343,00	737979	1032 867,00	41 405,00	6858 425,04	846 411,00
% SMD / Morocco	66,20%	50,30%	13,30%	15,00%	8,40%	23,30%	32,50%	18,20%

Source: National Fisheries Office

1.2.2 Structure of the fishing fleet

The operational fishing fleet of the principal ports of the SMD region includes many units, which is represented at 73% by artisanal fishing, at 18% by Coastal fishing and 9% of offshore fishing. The 237 SMD operational offshore vessels cover 70% of the total national offshore fleet. (Figure 7)

Figure 7: Distribution of the SMD fleet (by fishing segment) 2008

Ports	Offshore	Costal	Artisanal	Total
<i>Agadir</i>	236	307	1362	1905
<i>Sidi Ifni</i>	1	151	511	663
Total SMD	237	458	1873	2568
% SMD	9%	18%	73%	100%
Total Morocco	339	1836	11154	13329
% SMD / Morocco	70%	25%	17%	19%

Source: Central Atlantic Chamber of Marine Fisheries

1.2.3 The Seafood processing industry in Souss Massa Draa

The seafood processing industry in SMD region is particularly important because it holds considerable potential for investment, employment, exports and added value creation. However, the development opportunities available in this sector face many constraints. It suffers from a relative loss of competitiveness, a decline in competitive position in some markets and more and more aggressive international competition. SMD landings remain too uncertain to meet the needs of the local seafood processing industry. Thus, the supply of this industrial sector is mainly associated with the neighbouring regions fisheries landings. Indeed, 50% of the raw materials processed in the SMD region come from other regions in the south of the country. These supplies consist of approximately 80% of pelagic. Agadir's seaport, which makes the city the uncontested capital in the field of maritime fishing and subsidiary activities, appears as the first link in a chain that extends more and more towards the south, where seafood processing industry is developing considerably.

Moreover, the SMD region, through its various industrial areas, concentrates nearly 40% of the seafood processing units in Morocco, with 59% of freezing at sea units and 47% of Morocco semi-preserved units (Figure8).

Figure 8: Distribution of the SMD seafood processing industry units

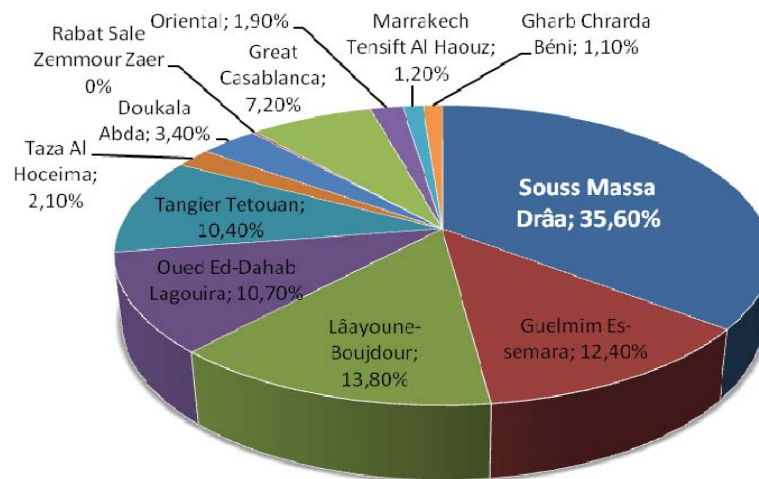
Activities	Agadir	Sidi-Ifni	Total SMD	Total Morocco	% SMD / Morocco
<i>Fish canning</i>	15	**	15	45	33%
<i>Semi-preserved</i>	14	2	16	34	47%
<i>Frozen fishery</i>					
=> <i>land-based</i>	38	1	39	190	21%
=> <i>at sea</i>	211	**	211	359	59%
<i>Fresh fishery packaging</i>	9	**	9	97	9%
<i>Fishmeal and fish oil</i>	5	1	6	25	24%
Total	292	4	296	750	39%

Source: Central Atlantic Chamber of Marine Fisheries and the Direction of Fishery Industries

1.2.4 Contribution of local fisheries sector to national economy

During the 1998-2007 period, the added value of fisheries and aquaculture in the SMD reached MAD 2.208 billion, placing the region at the forefront nationally. Thus, the SMD region produced the largest average added value of fisheries and aquaculture sector (figure 9), contributing to 35.6% of the national fisheries added value.

Figure 9: Structure of regionalized fisheries and aquaculture added value during the period 1998-2007



Source: Direction of Studies and Financial Forecasts, Ministry of Economy and Finance

At the regional level, the fisheries sector represents 7% of the regional GDP and 6% of created jobs. Food processing industries (mainly food and seafood processing) represent 70% of the regional industry (with a sectoral turnover of MAD 7 million). The SMD is considered as the largest seafood exporter region in Morocco. The region fishery products constitute nearly 60% of total Moroccan exports, while its frozen products represent nearly 20% of national exports.

1.3 Fisheries sector main Stakeholders

In accordance with Government's development strategies, and the role assigned to the seafood processing industry, the revitalization of this sector is a country priority thanks to its socio-economic potential and its ability to develop wealth and employment creation. However, the success of this sectoral strategy is based on the involvement of public / private stakeholders, both locally and nationally. These actors are called to cooperate and pool resources to boost this strategic sector.

1.3.1 Professional organisations

Professional organizations in the fisheries sector are in place, both at national and regional level. They develop an inter-professional dialogue to address all the technical and commercial problems affecting the performance of their industry. They are able to play the role of technical, economic and trade cooperation for their members and toward public institutions.

***Chambers of Marine Fisheries - CPM:** Established in April 2, 1997, four Chambers of Marine fisheries and their federation cover all the Moroccan sea zones. They grant useful guidance for professionals and provide information on all aspects related to the activity, whether technical or legal. They also have a role to play in the development of regional economic policies and the development process of decentralization. To enhance the institutional landscape of the sector, these institutions should strengthen coordination within the sector. SMD depends on the Centre Atlantic Chamber of Maritime Fisheries.

***Professional Associations:** The organization of the profession differs across occupational categories. The ship-owners and Industry professionals are relatively organized, on the other side, artisan fishermen and fish traders are little or not structured. In recent years, the sector has seen the creation of a large number of associations of ship-owners, Industry professionals and fishermen at the regional and national levels. These associations are organized around the different branches of activities: coastal fishing, offshore fishing, fishing industry and aquaculture. Ones of the most active professional associations are: the Coastal fishing ship-owners syndicate of Agadir and the Professional Association of offshore fishing ship-owners in Morocco.

***The National Federation of Industries of transformation and valorisation of marine products - FENIP:** it comprises seven associations operating in different sectors: *The national association of fishmeal and fish oil producers (ANAFAP), The national association of seafood freezing industries (ANICOM), The Moroccan association of seafood exporters (APROMER), Seafood industrial federation (FIPROMER), The national union of canned fish industries (UNICOP), Seaweeds processing industry (Agar-Agar)*

- At the regional level the most active of those associations is FIPROMER. It is a regional federation representing the industries of valorisation and elaboration of seafood: fish canning, freezing and semi-preserving.

1.3.2 The institutional environment

The Moroccan fisheries sector benefits from the existence of institutional structures offering consultation, information, guidance and research tools both within the different professions and between the private and public sector.

***Department of Marine Fisheries – MPM:** Created in April 7, 1981, the MPM assumes a major role in the dynamics of the sector. It is primarily responsible for developing the marine fisheries strategy. Its main activities are focused on the competitive upgrading of the sector through the promotion of the quality and the improvement of means of production, product diversification, the conquest of new markets, and the support of professional training. At the regional level the department is represented by the Maritime Fisheries Delegation.

***National Ports Agency - ANP:** It is a public establishment. The technical supervision of the Agency is provided by the Ministry of Equipment and Transport. The ANP's main missions are to ensure the development, maintenance and modernization of national ports, and ensure the optimal use of port facilities by improving port competitiveness and procedures simplification.

***National Fisheries Office - ONP:** Created in February 21, 1969, the ONP is under the supervision of the Ministry of Fisheries and subject to financial control of the Ministry of Finance. The role of the ONP is organized around two main tasks:

- the development and modernization of coastal and artisanal fishing
- the organisation of fishing products marketing and commercialisation

From June 1, 2010, the ONP becomes the single port-users point of contact with the administration. The status of 'Global Operator "comes after a concession agreement signed between the ONP and the ANP in September 2009. This decision aims to limit dysfunctions and reduce the number of ports stakeholders.

***National Institute for Fisheries Research - INRH:** It is a public institution with a scientific vocation, created on July 29, 1996. The INRH was established to undertake all research, studies, experimental activities and land-based or sea works. It is also responsible for developing, preserving and enhancing fisheries resources and aquaculture. The independence of the INRH must guarantee a certain degree of neutrality between the profession and the administration and thus enable it to gain

credibility. The INRH Regional Centre of Agadir is responsible for implementing the programs and studies of fisheries research in its area of jurisdiction. It focused on the following segments: the offshore, coastal and artisanal fisheries and shellfish farming.

***Centre for Seafood Products valorisation and Technology of Agadir:** opened in February 24, 2004, this specialized centre depends on the INRH. Its mission is to undertake, in consultation with experts, studies and research in the field of processing and exploitation of marine products, particularly in the following areas:

- creating new lines of seafood for the local market and export;
- developing derivatives by the extraction of high added value molecules
- realize qualitative analysis of fresh or processed seafood products
- insuring support for upgrading processing units of fishery products
- demonstration of new processes and dissemination of research results
- anticipating the technological innovations.

***Autonomous Establishment of Control and Coordination of Exports -EACCE:** Public body operating under the supervision of the Department of Marine Fisheries and administered by a board composed of representatives of government and private food processing exports. The EACCE is primarily responsible for ensuring compliance of Moroccan food for export regulatory requirements and ensure proper compliance with all mandatory provisions relating to the protection of human health. The EACCE has a regional delegation in Agadir.

***Ministry of Industry, Trade and New Technologies - MICNT:** This department is primarily responsible for the development and implementation of trade and industrial policy of the Government. Recently, the department presented its policies under the "Emergence Plan ", which establishes a new government strategy on the industrial side. One of the pillars of this industrial strategy is the modernization and revitalization of the seafood processing industry. Thus a project to develop seafood cluster in Agadir is conducted in close collaboration with the department of marine fisheries and the active support of the MICNT. At the regional level the department is represented by a local delegation of trade and industry

***Souss Massa Draa Regional Council (CRSMD):** Founded in 1997 as part of decentralization initiated by the Kingdom. The main functions of CRSMD concern the elaboration of the regional socioeconomic development strategy and the establishment of the regional scheme of territorial planning. Another mission of the CRSMD is to adopt the necessary measures for the promotion of cultural activities and the support of social and solidarity actions

***Ibn Zohr University – IZ University:** This University embarked on the reform of its training and research structures in order to optimize its means and resources. So the university offers various research facilities to meet current expectations and anticipate the future needs of its socioeconomic environment. These areas of research are spread across three major disciplines:

- Science and Technology
- Economics, Legal and Social
- Humanities and Arts

As part of the training provided by IZ University, it recently launched a professional license on "Aquaculture and Seafood valorisation". It is a multidisciplinary license which aims to train managers able to meet the needs of technical and commercial competences in the field of aquaculture and seafood processing.

***Regional Centre of Investment of Souss Massa Draa -CRI:** Created in 2002, the CRI is the territorial administration for regional investment facilitation and promotion. It represents the single contact with entrepreneurs and investors. Furthermore, the CRI is actively involved in the establishment of a competitive investment climate and adopting new measures to increase competitiveness and diversify the regional economy.

***General Confederation of Enterprises of Morocco, Regional Union of Souss Massa Draa -CGEM UR:** Founded in 1994, the CGEM UR represents employers at the regional level. The Confederation's mission is to broaden the representation of the region companies in order to increase employers' weight as a proposing force against local and national institutions. CGEM UR also aims to promote regional entrepreneurs, to defend their interests and strengthen consultation and dialogue with social partners.

***Chamber of Commerce, Industry and Service of Agadir -CCISA:** it has a dual mission. It represents tradesmen, industrial operators and service providers. So the CCISA has representatives at parliament, provincial councils and at committees of several public offices. In addition, the CCISA has an advisory mission to expose some proposals that could contribute to the development of trade, industry and services to the Government.

***Hassan II Institute of Agronomy and Veterinary -IAV:** It is a superior training and research institute regarded as a leader institution in the life and earth sciences. The skills of the IAV cover several areas including: Agriculture and agricultural resources, Agro-Industries, Environmental and Natural Resource Management...

At the regional level the IAV is represented by the Horticultural Complex of Agadir

***Office of Vocational Training and Work Promotion -OFPPT:** it is the instrument established by the Government for the development of human resources and their perfect fit to the market demand. Created in 1974, the OFPPT is the first operator in Morocco in vocational training. Support, advice, training, information and promotion of employment, are the main axes of the OFPPT mission. At the regional level, the office has more than twenty training centres in various disciplines.

II. Development Prospects for a Seafood Processing Cluster in Souss Massa Draa region

2.1 Fisheries sector development and competitiveness Strategy

2.1.1 Presentation of the "Halieutis" strategy

The Department of Maritime Fisheries has launched in 2009 a new strategy for the fisheries sector development and competitiveness, baptized "Halieutis" Indeed, Morocco has implemented all means in order to infuse a new dynamic in the fisheries sector, through the launch of the Halieutis plan. This is a comprehensive strategy that has the ambition to offer an organized and conducive framework to all the fishing industry related activities and to promote its development in order to make the sector a real growth driver for Moroccan economy.

Halieutis represents an integrated sectoral vision which aims to develop sustainable and competitive fishing, to preserve fishing heritage and to develop the GDP of the sector. This new strategy is based on three key points:

-Sustainability, in order to ensure a sustainable exploitation of fish resources for actual and future generations:

- Ensuring the resources perenity
- Providing visibility to economic actors to invest
- Modernizing the fishing effort and motivating fishermen to be actors for sustainable industry

-Efficiency, providing the sector with needed tools in order to meet optimal quality from landings to commercialization:

- Ensuring optimal quality in the products treatment
- Creating more transparency along the value chain
- Providing mechanisms to achieve efficient markets

-Competitiveness of products and its high valorisation in most important markets:

- Ensuring the availability and regularity of quality raw material
- Gaining market share at national and global level

-Transverse actions:

- Encourage a real integration between the sector upstream and downstream
- Improve cooperation between all stakeholders for an effective sector management and development

2.1.2 Development prospects highlighted by "Halieutis" plan

The implementation of Halieutis strategy will provide new development perspectives to the seafood processing industry especially by:

- Supporting industry's orientation towards most important markets.
- Facilitating industry's access to raw materials.

- Promoting national fishery products and eco-labelling of fisheries.
- Developing landing equipments and infrastructures.

In fact, Halieutis Strategy targets ambitious development goals for the domestic fishing sector by 2020. (Figure 10)

Figure 10: Halieutis strategy development goals for the domestic fishing sector by 2020

	2007	→	2020
GDP <i>fishing, aquaculture and industry, MAD billion</i>	8.3	+13.6 billion MAD	21.9
Direct land employment <i>Industry and aquaculture</i>	61.650	×1.8	115.000
Indirect employment	488.500	+21.500	510.200
Importance of informal sector <i>% of sector turnover</i>	>30%	÷2	<15%
Export of sea products <i>US \$ Billion</i>	1.2	×2.6	3.1
Global market share <i>volume, % market</i>	3.3%	+2 points	5.4%
Fish production <i>in thousand Tons</i>	1.035	×1.6	1.660
Aquaculture production <i>Ton</i>	<500	+200.000	200.000
Import <i>Raw material for industry, Ton</i>	30.000	×4.3	130.000
Domestic fish consumption <i>kg per person per year</i>	10 to 12 Kg	×1.5	16 Kg
% of species sustainably managed <i>species caught under quota</i>	5%	+90 points	95%

Source: Ministry of Agriculture and Maritime Fisheries

2.1.3 The core projects of the "Halieutis" strategy

The Halieutis strategy is based on four projects that will form the basis for the fisheries sector as engine for economic development in Morocco. These projects can be described as follows:

-Project n°1: Aquaculture - *Make aquaculture a major growth engine.*

To achieve this goal four coastal areas were identified for developing aquaculture activities: Tangier, Oualidia, Agadir and Dakhla.

The strategy has also identified the possible types of aquaculture in Morocco:

- Fish farming: Bar, Sea Bream, Lean, turbot, Dover sole
- Shellfish farming: oysters, mussels, clams,
- Crustaceans farming
- Algaculture of laminar

-Project n°2: fisheries location planning - *planning the fisheries location on the basis of quotas*

The project objectives can be summarized as follows:

- Achieving the maximum sustainable yield for 95% of landed resources (against 5% today)
- Changing the behaviour of fishermen to make them more responsible
- Provide good visibility for professionals to encourage them to modernize the fishing fleet and to develop processing industries

-Project n°3: New fishing port in the south of the country - *Developing landing infrastructure and equipment*

To exploit the additional potential of southern stock of small pelagic, the new fishing port will be located in the south of Laayoune city. This port will enable the landing of approximately a million tons of small pelagic and will accommodate a fleet of 120 ships. This project will be carried out on 150 linear feet of dock and will create 27,500 jobs

-Project n°4: Industrial clusters for fishery products - *Creating three clusters on the North, Centre and South of the country.*

The designated locations to accommodate the three clusters are:

- Tangier-cluster: it will be dedicated to processors of fresh and frozen and ready to eat white fish and shellfish. This project will require an investment of MAD 300 million and will have a processing capacity of 100,000 tons. It will create 7500 jobs
- The Dakhla/Lâayoune-cluster: It will be dedicated to primary processing and stabilization industries of small pelagic. This project will require an investment of MAD 3 billion and will have a processing capacity of 990,000 tons. It will create 6000 jobs
- The Agadir-cluster: This unit will be dedicated to developed processing industries of small pelagic and demersal. This project will require an investment of MAD 6 billion and will have a processing capacity of 500,000 tons. It will create 20,000 jobs

2.2 Variation of Halieutis strategy at the regional level

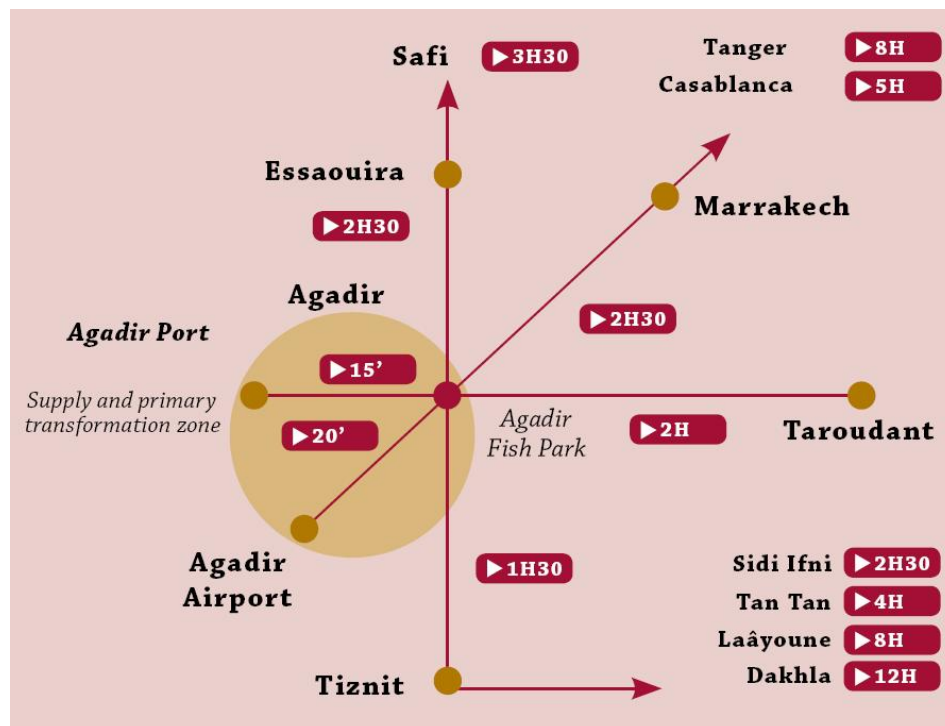
Among the key ideas on which the Moroccan fisheries strategy is based is the concept of competitiveness. It was therefore important to boost regional competitiveness through the promotion of land-based seafood processing industries. Thus, one of the pillars of this axis (as seen in the previous section) is to create a new fishing port at the south (55% of the geographical concentration of resources and the main supply source of the SMD region) and three clusters in the north (Tangier), Centre (Agadir) and South (Laayoune) of the kingdom.

For this purpose, the city of Agadir has been designated to host "HALIOPOLIS" the first cluster dedicated to the promotion of seafood processing industry in Morocco. The opportunity to create this cluster in Agadir was analyzed as part of a positioning study initiated in close collaboration between the fisheries department and local bodies. Several assets motivate the choice of Agadir:

- Strategic geographical position, close to fishing resources and commercialization places (figure 11)
- Different types of fishing and fish species
- Know-how and qualified manpower for the seafood processing industry
- Complete transport infrastructure network: airports, ports, highway, paved roads, etc.

- Important port infrastructure: five important landing area, with Agadir as the first fishing port of the country and first transformation platform
- A number of production and industrial units to support processing industries (packaging, input, etc.)
- The presence of research and training institutes and establishments

Figure 11: Representative Schema of Agadir privileged situation



Source: MEDZ Company

In addition to the "Halieutis plan", completion of the seafood processing cluster also falls under the "Emergence Plan", and fits the Five-Year Plan 2008-2013 of the SMD development.

2.2.1 The HALIOPOLIS Agadir Fish Park

The concept of HALIOPOLIS Park is a part of a sustainable development approach. It was launched on September 29, 2009 by HM King Mohammed VI. It is an innovative industrial complex for a new generation of industrial parks that will provide a diverse range of services. HALIOPOLIS Park can accommodate different activities (Figure 12):

-Industrial activities

*Seafood processing industries: fish canning industries, semi-preserved, frozen...

*Processing support industries: Industrial packing, inputs processing...

-Logistic activities:

*Distribution logistics, orders management, transportation management, labelling, packaging...

The park also offers various services:

*Companies' services: Vocational training, administrative one-stop shop, Logistics and maintenance, Bank, Post office, Analysis laboratories, etc.

*People's services: Hotels, restaurants, Hygiene and health, Leisure spaces, etc.

*Complementary services: Research and Development, Business incubator, etc.



Figure 12: Ground plan of HALIOPOLIS Agadir Fish Park



Source: MEDZ Company

In order to develop this innovative concept, the MEDZ Company¹⁴ has been appointed as the delegated contracting authority of the project.

¹⁴ MEDZ is a subsidiary of the holding CDG Development (100% subsidiary of Groupe Caisse de Depot et de Gestion CDG). The CDG is a public financial institution, created in 1959. Its main mission is to contribute to the mobilization of long term savings and ensure its investment in relevant projects that help to promote the country's economic development.

This company was selected for its experience in developing new generation industrial parks and for its mission to promote the establishment of regional clusters in Morocco (tourism, industry, offshoring, new activities, etc.).

This park is an important component of the regional cluster dedicated to the promotion of seafood processing industry by mobilizing synergies around common innovative projects (figure13). The commercialisation of this industrial zone was officially launched on May 28, 2010.

Figure 13: Agadir Fish Park in figures

Total surface area	150 HA
Transformation potential	500 000 T => Including : • Relocated industries : 150 000 T • New industries : 350 000 T
<u>Program</u>	
■ Transformation industry	46 Ha
■ Support Industries	26 HA
■ Logistics activities	27 HA
■ Service activities	10 HA
<u>Investment</u>	
■ Park settlement	MAD 265 million
■ Development	MAD 6 billion
<u>Job creation</u>	20.000 jobs => Including 13 000 direct 7 000 indirect
<u>The Park's development and management</u>	
The creation of a dedicated company, in partnership with :	
■ The Souss Massa Drâa Council	8%
■ Igrane Fund	15%
■ Crédit Agricole du Maroc - Bank	22%
■ MEDZ	55%

Source: Regional Centre of Investment of Souss Massa Draa and Souss Massa Draa Regional Council

2.2.2 The Agadir Fish Hub

Agadir Fish Hub is an association of the different sector stakeholders (Figure 14). This cluster is primarily designed to promote and develop the seafood processing industry in the SMD region. Thus, industrial, scientific and training players' convergence will have several advantages:

-A source of innovation: stimulate the flow of information and expertise in promoting the emergence of new products and innovative projects.

-A source of attractiveness: Promote international visibility by the concentration of players in a single territory.

The challenge of the constitution of this cluster is to create new work habits, where cooperation between actors from different backgrounds is central.

Figure 14: Players of the Agadir Fish Hub



Source: MEDZ Company

The cluster was officially established by the creation of the regional fisheries and seafood processing industry association "Agadir Fish Pole" on April 2nd, 2010. The association's main tasks can be presented as follows:

- Combine on the geographical area of SMD, the efforts of businesses, training centres and research units, public or private organizations and local authorities in a partnership approach designed to create synergies to develop innovative projects and increase the region attractiveness.
- Develop regional, national and international innovation, research, training, technology transfer and entrepreneurship in the field of fishing and seafood processing industries.

2.2.3 Accompanying measures

In addition to measures to improve the seafood processing attractiveness, other incentives can be taken at national level to support the development of the park. These are: tax measures, assistance device, training and recruitment, and support scheme for the relocation of businesses to the new fisheries park.

2.3 The emergence of the Souss Massa Draa Cluster for seafood processing industry

2.3.1 "Agadir Fish Pole" association: Context and objectives

According to the government industrial development strategy defined by “Emergence Plan” and “Halieutis Plan”, business operators wishing to cooperate and pool resources to boost this strategic sector, came together to create the Association of the Seafood processing industry regional Cluster called "Agadir fish pole".

In addition to the Souss Massa Draa Governor as honorary member, the association consists of three categories of members:

Founding Members:

- Souss Massa Draa Region Council (CRSM)
- Chamber of Commerce, Industry and Services of Agadir (CCISA)
- General Confederation of Moroccan Enterprises (CGEM UR)
- Chamber of Centre Atlantic Maritime Fisheries (CPM)
- Regional Centre of Investment – Souss Massa Drâa (CRI)
- Seafood Industrial Federation (FIPROMER)
- Ministry of Agriculture and Maritime Fishing;

Institutional and R&D members

- Ministry of Industry, Trade and New Technologies
- Autonomous Establishment of Coordination and Control of Exports (EACCE)
- National Office of Fisheries (ONP)
- National Port Agency (ANP)
- National Institute of Fisheries Research (INRH)
- IBN ZOHR University and its faculties (IZ University)
- Higher Institute of Marine Fisheries (ISPM)
- The Training and Work Promotion Office (OFPPT)
- Hassan 2nd Institute of Agronomic & Veterinaries

Associate members:

They include professionals who have a business located in the region, and have relationship with the cluster's objectives:

- SMEs and big companies in the field of fisheries
- Seafood processing units
- Processing support industries
- Service providers
- Logistics operators

The major objectives of the "Agadir Fish Pole" association are:

- Develop the exploitation of fishery products
- Strengthen the cluster technical and business competitiveness
- Develop creativity and innovation;
- Serve as a forum for dialogue and exchanges between the association members;
- Develop synergies between the association members, particularly with regard to:
 - Cluster promotion and marketing;
 - Skills Development;
 - Innovation and new technologies development
- Strengthen the role of the association and expand its influence
- Acting as interface for national and foreign partners
- Represent the members of the association in various events and forums
- Increasing the region's industrial activity
- Promote partnership opportunities with national and foreign operators
- Promoting the region growth and employment

2.3.2 "Agadir Fish Pole" association: organs and functions

The main organs of the Regional Cluster Association are: the General Assembly, the Board of Directors, the Executive Board and a permanent administrative structure. The role and responsibilities of each of these bodies are determined bellow.

The General Assembly: It comprises all members of the Association that usually meets once a year at the invitation of its president.

The General Assembly roles are:

- Review the reports submitted by the Board of Directors;
- Review the financial report
- Approve the annual accounts
- Review the auditor's report
- Elect Board

If needed, or upon request of a members majority, the president shall convene an Extraordinary General Assembly

The Board of Directors: It consists of 32 members¹⁵, divided into four categories:

- Professionals of the private sector (10 members elected);
- Administrations and public institutions (6 members);
- Training and R&D institutions (5 members);
- Local authorities (3 members);
- In addition it includes the Souss Massa Draa Region Governor and the eight founding members.

The Board's role is to:

- Provide the association general guidance and orientations;
- Perform continuous monitoring of the association management;
- Define criteria for selecting projects;
- Prepare activity reports.
- Provide the association links with its environment.

The board also has the following powers:

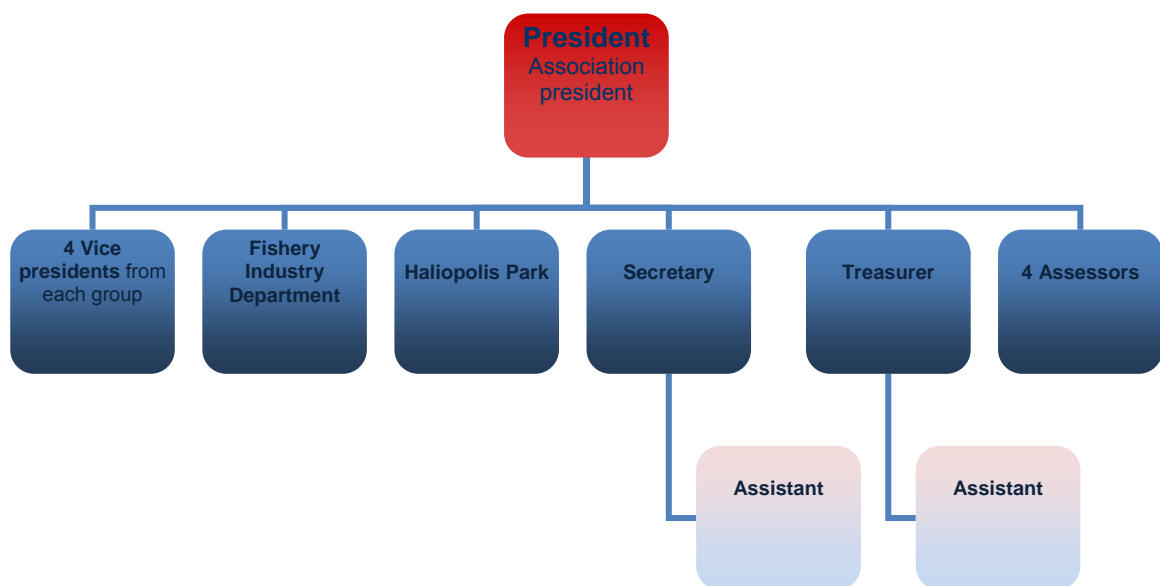
- It represents the association in all circumstances vis-à-vis third parties;
- It shall convene extraordinary or ordinary general assemblies
- It performs the general assemblies resolutions
- It may establish committees for a specific objective

¹⁵ For more information about the association members please refer to the following section: 2.3.1 "Agadir Fish Pole" Association: Context and objectives

The president or vice presidents: The Board of Directors appoints the association president which must imperatively be elected from professionals. The president shall assume the association general direction and represents its dealings with third parties in all circumstances.

The association vice-presidents may carry out specific functions assigned to them by the President through a written delegation.

The Executive Board: It comprises 15 members



The executive board members are elected by the Board of Directors.

Its role is to:

- ensure the effective implementation of the association general guidelines;
- provide support to the Board of Directors;
- prepare the Board of Directors;
- consolidate the thematic views;
- evaluate the proposed projects to ensure comprehensive monitoring and projects consistency
- annually evaluate the projects progress
- prepare the financial report.

The permanent administrative structure (director and permanent staff):

The director is recruited by the President with the consent of the Board of Directors as a permanent employee of the association. He leads the permanent staff.

The permanent staff consists of an operational team (2 or 3 senior officer and one logistics officer). These are personal employees or secondment employees in charge of the carrying out the tasks entrusted by the Director.

The main tasks of the Director are:

- implementing the board decisions
- providing the cluster secretariat
- preparing the necessary documents for the cluster meetings
- managing the permanent staff

2.3.3 Interest and benefits accruing to stakeholders within the cluster

To better examine the contribution of SMD cluster and its internal influence, it is important to realize the interest and benefits accruing to its stakeholders. Indeed, the cluster is regarded as a "collaborative" grouping, whose objectives and priority tasks are identified by the members who join the process.

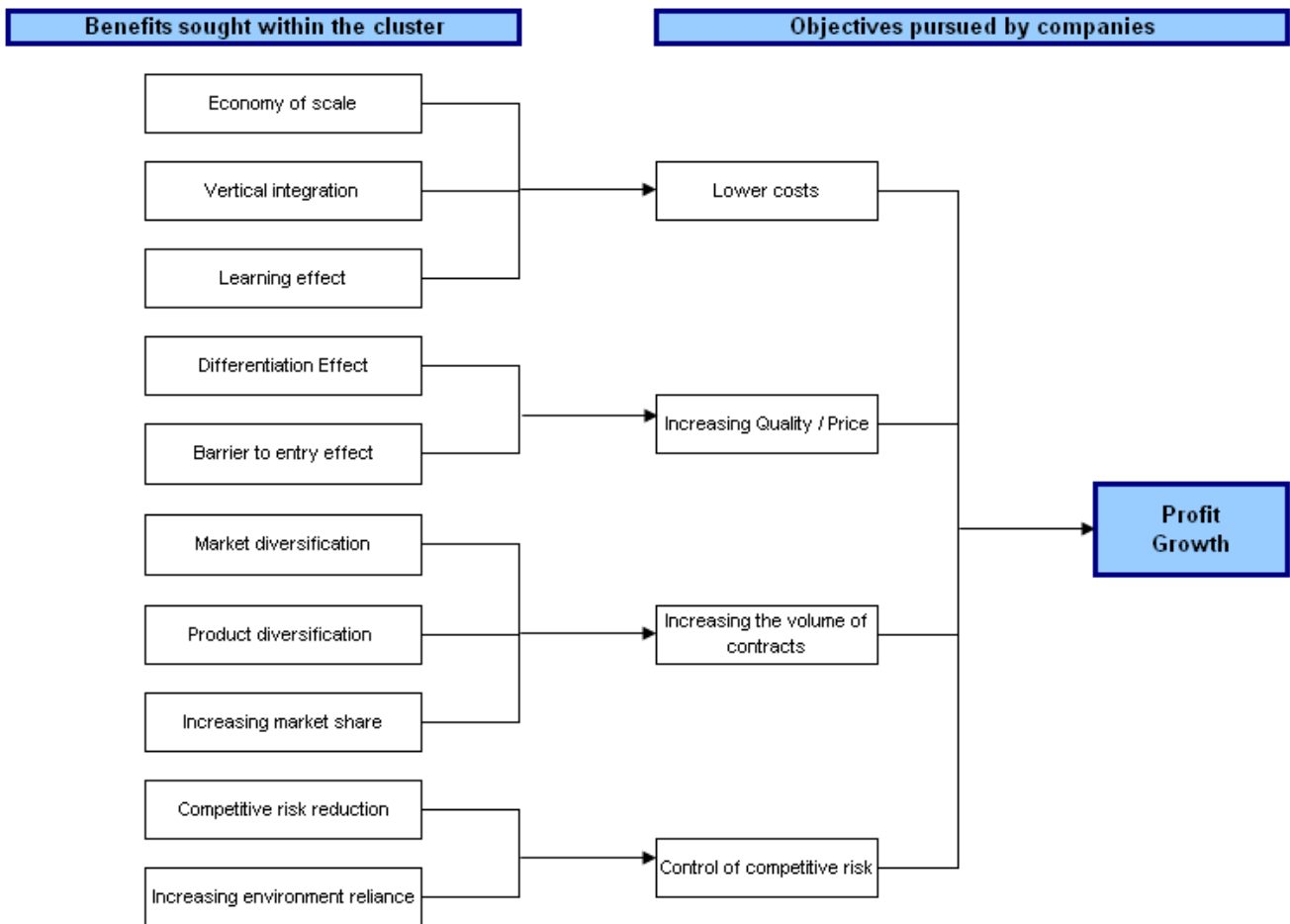
The main actors in the SMD cluster can be divided into three categories (whom benefits to be derived within the cluster are different): companies, training and research institutes, and government and public authorities.

These three different members work together and trace the objectives and tasks of the cluster, that will be continually updated based on extensive consultation with new members. Thereby, communication and awareness of the involved actors become a prerequisite for any initiative aimed at developing industrial clusters.

The benefits to be derived by companies from the cluster:

The following chart (Figure15) summarizes the key benefits to be gained by companies within the seafood processing industry cluster and links those benefits to the different objectives which they pursue.

Figure 15: benefits to be derived by companies from the cluster



In conclusion, it may be emphasized from this scheme that the main benefits derived by companies from their involvement in the cluster are related to:

- Increased access to support services, training, information, advice, expertise...
- Access to new markets;
- Access to specific facilities or equipment;
- Access to new partnerships;
- The sharing of certain costs;
- A better understanding of their markets;
- The innovation best practices;
- The possibility of obtaining funding to accelerate the development and marketing of innovative and differentiated products to develop new facilities, etc.

The benefits to be derived by training and research institutes from the cluster:

The cluster, as an interface between the training and research systems and the business communities, allows:

- To adapt the educational content of training to business needs
- To improve the quality of teaching (professional intervention, alternate courses, meetings, visits ...)
- Contribute to the reduction of unemployment
- Develop new training courses for professionals
- Develop new courses, networking with other national training institutions and / or international ones
- To receive funding for the implementation of new trainings
- To initiate research projects and R&D in collaboration with businesses
- To ensure a better use of research, etc...

The benefits to be derived by government and public authorities from cluster:

Clusters allow a better implementation of sectoral policies at the local level, and especially their coordination.

Several studies have shown the benefits and impacts of clusters for the territories: economic development, attraction, employment, export...etc

2.3.4 Key factors to the cluster development

In order to maximize the benefits generated by the SMD cluster for its members; three preconditions are considered as key success factors:

- 1- A strong community mobilization and local initiative. It should seek a consensus among the different partners who are building a common project.
- 2- A joint-governance (based on a public – private) and state actions must be focused and directed towards the territory where the success factors are present. Then, the proactive approach must be replaced by a participatory approach. In this regard, public policies promoting clusters development should be consistent with the objectives pursued by the companies.
- 3- The capacity and quality of leadership and teams' management, and the presence of a leader who arouses membership mobilization.

This leadership plays a fundamental role to identify, inform, persuade, mobilize and assist companies in the conducting of joint projects. The cluster animation largely explains the level of results that can be generated within the cluster. "Confidence, competence and friendliness" are the basis of the development process of interaction between stakeholders within a cluster to make it more and more competitive.

However, in a context of globalization, knowledge economy substantially alters the competitive conditions between cluster firms and among territories. Indeed, the territories are now considered as "development actors", which identify them more and more to companies of a new genus, with new kinds of governance, and developing new innovative strategies. The EI is to become conscious of this new reality, to organize accordingly information networks and to assure its specific and relevant treatment. Through the next chapter, I will try to demonstrate how EI applied to the territory can be used in the development of the SMD cluster of seafood processing. I will concentrate on the importance of developing TI systems in the first national experience on fishing clustering. Then, a survey was developed to demonstrate that TI is more than ever a major factor in developing and strengthening the competitiveness of economic operators, including clusters and their members.

Chapter 3: Definition of Territorial Intelligence Scheme within the Souss Massa Daa Cluster: from theory to practice

I. Territorial intelligence: a new approach for economic development

1.1 Innovative instrument for territorial management and marketing

Economic Intelligence (previously designated to enhance the competitiveness of companies) is currently competing among local decision makers, more and more actively seeking a non-budgetary lever to promote their territory economic development. Consisting on the implementation of EI principles across the local business community, TI becomes an essential instrument of territorial management.

In his book published in 1993, *“The competitive advantage of nations”*, Michael Porter proposed a concept of creating value based on local resources, *“Even if we think in terms of global competition, the nation’s competitive advantage sources are primarily local. Some universal factors such as capital, raw materials and even knowledge are highly mobile, and businesses can use a cheap workforce. However, what it is not mobile is the concentration in the same region of know-how, applied technologies, companies, suppliers and highly specialized and interconnected institutions, representing sufficient critical mass to spur innovation and success”*. In other words, the economic organization of a territory is one of the major bases of political territorial attractiveness.

But the economic organization of a territory is not only a factor of attractiveness. For Ludovic Francois (2008)¹⁶, the concept of TI appears to be: *“resolutely modern and goes beyond the dynamics of clusters”*. For him, the process of EI is based on both circulation fluidized information, but also on the offensive actions of market conquest, whose purpose is obviously the competitiveness of a given territory.

¹⁶ Territorial intelligence: the intelligence applied to the territory, under the direction of Ludovic Francois, Lavoisier Publishing, December 2008

If one takes the example of the establishment of a TI system within a cluster; and refers to the definition given by the Inter ministerial Committee for Planning and Territorial Development (France), there is clearly underlined the concept of "mastery of strategic information". This definition is presented through the three following points:

- Cluster is a partnership approach. Accordingly, it encourages networking of local industrial environment conducive to collaborative management of strategic information (by setting up a technology monitoring and watch cell in most cases);
- The innovative character of the clusters activity that provides to companies therein an important competitive advantage. This involves a greater protection of the science and technology heritage against economic or industrial espionage, intellectual property rights violation and counterfeiting...
- The international visibility of clusters represents a potential for improving the image of its members. At this stage, the cluster can allow local decision makers to enjoy a significant multiplier effect in terms of attractiveness, through territorial marketing.

Then, it can be concluded that the TI approach proposes to manage the local territory and to link monitoring and public policy at the service of territorial economic development (as part of an industrial cluster for example).

Declined at the territorial level, its purpose is to enable territories to effectively promote the reception of new investments, while supporting local businesses. TI can therefore be treated as a new form of industrial policy because it constitutes a lever of economic activity, thanks to an approach built around the strategic information and influence (Ludovic Francois 2008).

Finally, TI confers a very beneficial cost-effective to the community, since it relies on a monitoring, watch, organizational, and communication tasks.

1.2 Territorial Intelligence Process

In the era of globalization, local authorities are urged to use analytical and operational tools in order to better manage their territories. The techniques used in this field can learn from the techniques used by companies (in EI systems).

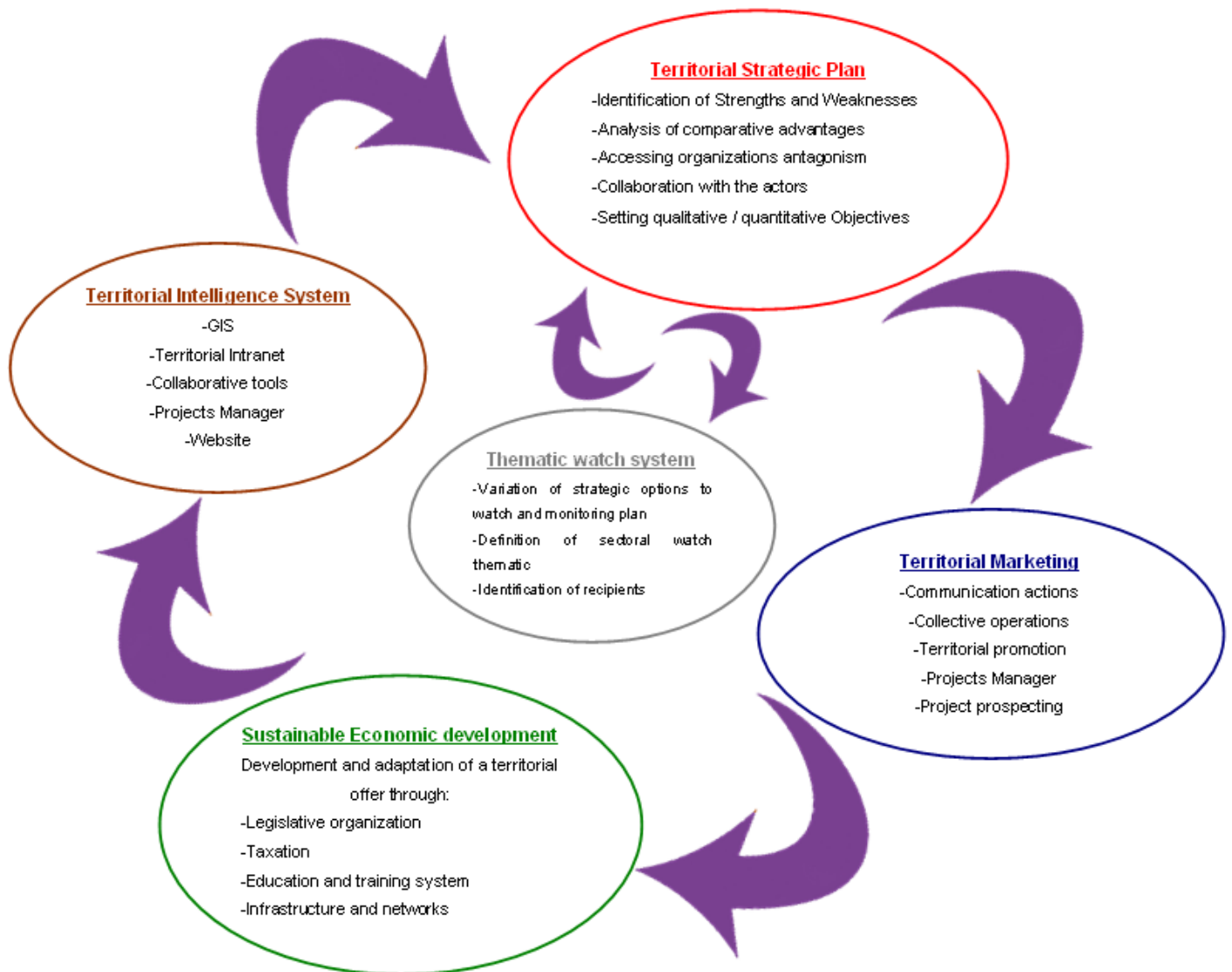
However, the multiplicity of public and private agents can lead to inefficiencies in the implementation of strategic actions. Thus, if a territory wants to start an intelligence process, it is very important to verify the existence of certain homogeneity of governance, and ensure that there is not a very high level of antagonism that could impede the implementation of the actions planned. Such approach can be adopted for varied objectives:

- Knowledge of their territories to better manage their resources
- Capacity for rapid reaction to crisis situations
- Control of infrastructures (roads, networks, activity area ...)
- Identification of other territories good practices in order to undertake a benchmarking
- Knowledge of skills and mastery of products and local resources to achieve territorial marketing.

The TI process provides the link and the connection between TI systems, watch and monitoring actions, strategic planning and territorial marketing, in order to promote a sustainable economic development...,

this can be summarized in the following schema (Figure16)

Figure 16: Territorial intelligence process



Source: http://www.zeknowledge.com/intelligence_territoriale.htm

However, the mutual interest of communities and local companies to engage in joint EI approach can be described in the following points:

From the perspective of the territories, we can expect:

- Many skilled jobs creation on site, with a more attractive business environment;
- A better match of local development policies to cyclical conditions, through the possession of relevant information on the macroeconomic and industrial context;
- A better anticipation of socio-economic risks, through knowledge of international variables, strategies implemented by the competing territories, and systemic risk (factors that indirectly impact the territory sustainability);

- Detection of new opportunities for value creation through knowledge of the expectations of international actors (in terms of territorial planning for example);
- A perfect mastery of new information and communication technologies in order to use them for influence purposes.

At company level, economic intelligence provides:

- Possession of strategic information useful to their competitive positioning;
- A better understanding of market risks, demand trends and the discovery of business opportunities and technology partnerships;
- A better protection of sensitive information, know-how, and their scientific and technological heritage;
- A greater control of new forms of risk, becoming more and more common: image and reputation attacks, hostile financial transactions, computer attacks, lobbying...

1.3 Methodology for implementing a territorial intelligence system

Territorial intelligence, as any economic intelligence action, must come from a specific strategy that includes:

- 1-The definition of the TI system implementation objectives
- 2-The definition of the TI system scope and content
- 3-The identification of a list of partners and knowledge sources that will supply an eventual watch and monitoring system
- 4-The identification of the technical tools to manage this operation: monitoring and watch, transmission and collaboration tools. This element comprises:
 - Information collection process and methods
 - information storing techniques
 - use, reporting and information sharing
- 5-The implementation of an operating unit empowered to manage the system

According to this last element of the system, it is important to ensure that the political will allows the implementation of a strategic plan, which may lead to territorial marketing action or investment policy, so a clear and precise definition of the required budget.

Furthermore, it is important to remember that TI action is not limited to a territorial information system (TIS). The TIS can be very useful but not enough to make TI. Systems like geographical Information Systems GIS or intranet must absolutely be connected to a system of action, watch and monitoring, after a clear definition of the territory strategic objectives.

Then, the implementation of a TI approach requires:

- The creation of a network of information sharing between the socio-economic actors
- The creation of a network of influence
- The transmission of knowledge to allow the access to useful information that may enable the survival and development of local businesses
- To defend the territory interests through the monitoring of competing territories

1.4 Territorial intelligence tools: objectives and classification

The TI tools usually use techniques and methods of space geographic analysis, quantitative and qualitative statistic, processing of territorial information, data-processed management of information, communication, projects management and evaluation, etc.

The pluri-disciplinary and multi-sectorial character of the information contents is combined with their formal variety (data, indicators, tables, graphs, maps, etc.) implies a rigorous information management. The appropriation of these techniques supposes that the actors acquire new skills, through expert skills transfer towards the actors. This transfer is made on the mid-term in the training, but also on the short-term by the projects accompaniment.

The information sharing and the data cooperative analysis favour the partnership work. The actors' participation (to the indicators choices, the results interpretation and the process of projects submission) strongly modifies the tools use. The public result restitution, the users' access to the information, their participation to the observation and evaluation activities, more and more imply the communicational tools and decision-making process.

Thus, the objectives of the TI tools and methods implemented can be summarized as follows:

- To improve communication on actions and projects between partners
- To have a better traceability of information
- To develop the capacity of information processing
- To capitalize and better managing the territory knowledge and know-how (Knowledge Management)
- To improve the transmission of information (for business and territories)
- To develop the ability to analyze strategic positioning of the territory.

The media used for the implementation of a TI system are based on database architecture but can also supports multimedia like photos, videos... These tools can be classified into three broad categories:

Collaborative work Software:

This tool allows its users to create knowledge through information sharing between the territory actors; they also help liquefy the transmission of information that makes users reach business analysts and experts, exchange files and information... These tools can be integrated with an intranet.

Project or production management software

This tool is used to capitalize the business knowledge through projects organization. It can help to capitalize knowledge at the project level but also at the team level. This is a software solution for territory project management which let the user schedule a project or production tasks related or not to TI action.

Customer relationship management software (CRM)

Often used for customer calls managing in services as "Helpdesk". The answers given to customers are based on a knowledge database which is itself permanently supplied. The CRM will help decision makers to better understand their environment in order to adapt their territorial development policies. It also should allow different players to collaborate through sharing information on any interaction with their internal or external environment.

1.5 Territorial intelligence return on investment

For local authority in charge of territorial development, the results of a TI action will be measured by the level of employment in a given territory or the number of businesses locating or developing. In fact, these two parameters are essential for the local authorities that collect such taxes related to jobs and therefore from people established on its territory and to recover the investment business tax that will create a development and investment capacity in service and social public facilities across the territory.

Thus, establishing a territorial watch cell on the environment in which they operate, carrying out actions of territorial marketing bind with the distinctive capabilities and strengths of the territory, allow at the medium and long term to consolidate a sustainable economic development strategy.

II. Analysis of survey results related to the establishment of Territorial Intelligence System within the SMD seafood processing cluster

2.1 Summary of general concepts:

2.1.1 Regional Seafood processing cluster - Founding Principles

A cluster can be defined as the combination on a given geographical area, of enterprises, training institutes and research units, public involved in a partnership approach to derive synergy of innovative joint projects. This partnership is facilitated by the strong involvement of public authorities and institutions, both local and national.

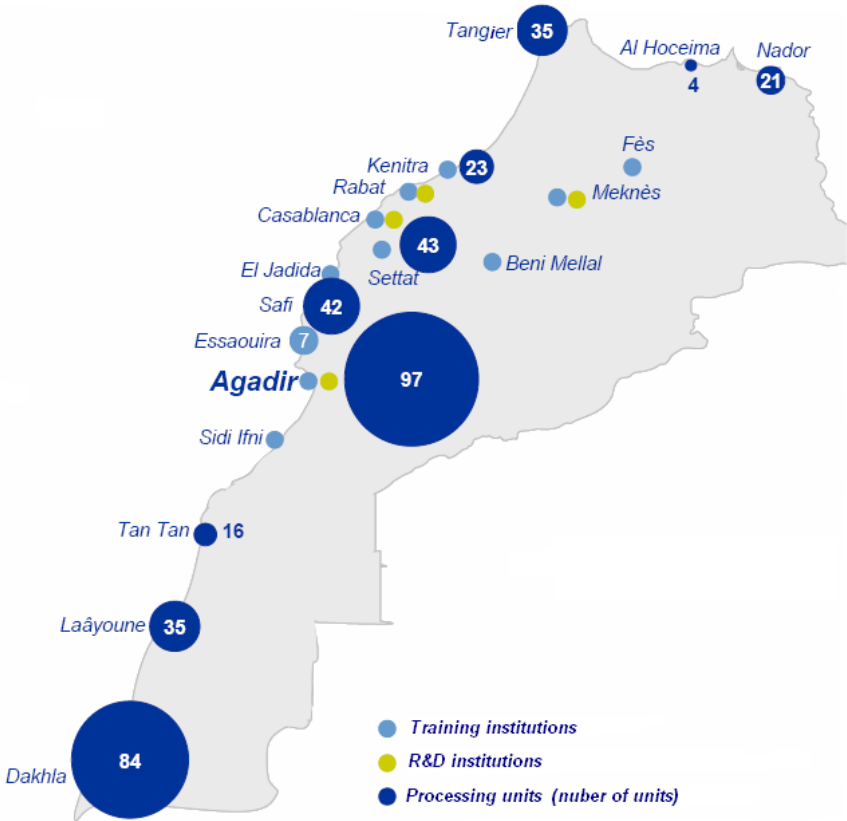
Through this actors networking, the most important objective of a cluster establishment is the creation of new wealth and employment development.

In order to facilitate this partnership approach, it is necessary to bring these potential players in a given geographical area and provide an optimized industrial environment (land, labour, logistics ...).

Conscious of this imperative, the Moroccan authorities and the sector stakeholders were mobilized to create regional fishery and seafood clusters that will increase the performance of the sector.

Because of its main advantages (figure 17), Agadir was appointed as the first city to host a fishing and seafood processing cluster. To meet the needs of the industry professionals, the "Agadir offer" is composed of two types of complementary areas of activity: the "HALIOPOLIS" industrial and logistics area and the "Agadir Port" supply and primary processing area.

Figure 17: Concentration of fishery and seafood stakeholders in Morocco



Source: Souss Massa Draa Regional Council

For this purpose, a separate legal entity was created to represent and animate the cluster. It is the Regional Association of Fishing and Seafood Processing Industry called "Agadir Fish Pole". This governance structure is composed of industry players, scientists, academics and local and national authorities. Furthermore it is important to note that if these partners have agreed to get involved in this process, it is primarily because they are impregnated with the collaborative aspect of competitiveness clusters.

All these elements represent a favourable environment for the development of network strategies with the aim to create, guide and motivate the links among actors that will enhance the competitiveness of their territory. In this context, a TI approach seems required.

2.1.2 Territorial Intelligence System - Founding Principles

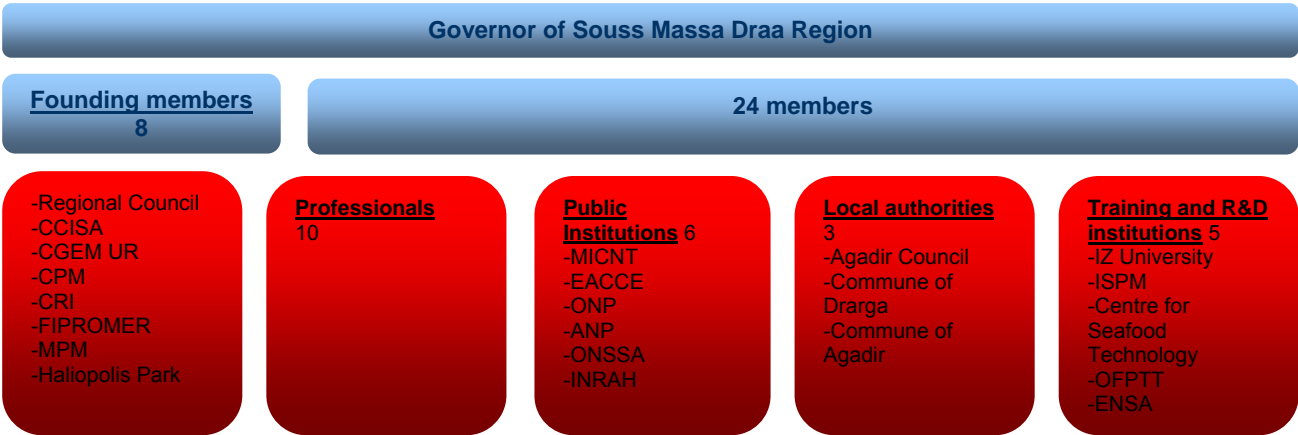
It is important to remember that the process of TI is built around four essential components. Indeed, this process provides the link and the connection between TI systems (in conjunction with measures of watch and monitoring actions), the territorial strategic plan, the territorial marketing actions, and finally the adoption of a regional offer to ensure a sustainable development planning. (Refer to Figure 15)

The starting point is designated as the establishment of a TI system. This component has been widely explored through a series of interviews with the majority of local sector stakeholders. In fact, the test of this concept has covered five key steps (refer to the section 1.3.Methodology for implementing a TI system – Current Chapter)

2.2 Summary of the survey background

2.2.1 Targets, objectives and analysis methods:

As part of this work, the “Agadir Fish Pole Association” members have been identified as a target population on which the concept of territorial intelligence has been tested. This population includes 33 members over five categories of actors¹⁷:



¹⁷ To have more information about the abbreviations please refer to chapter 2 (1.3 -Stakeholders in the fisheries sector and SMD seafood cluster) or refer directly to the list of abbreviations.

The main objectives of this survey are:

- To gather the reactions following the presentation of the concept
- To evaluate the attractiveness of an TI system and the expectations of the various stakeholders
- To assess the attitudes and dispositions of each member about the possibility of implementing such a system within the regional seafood cluster.

The test of the concept has assessed the perceptions of the above five categories of actors across the progress of the concept presentation, from the TI system objectives to the management of such a system. (Figure 18)

Figure 18: The progress of the TI concept presentation

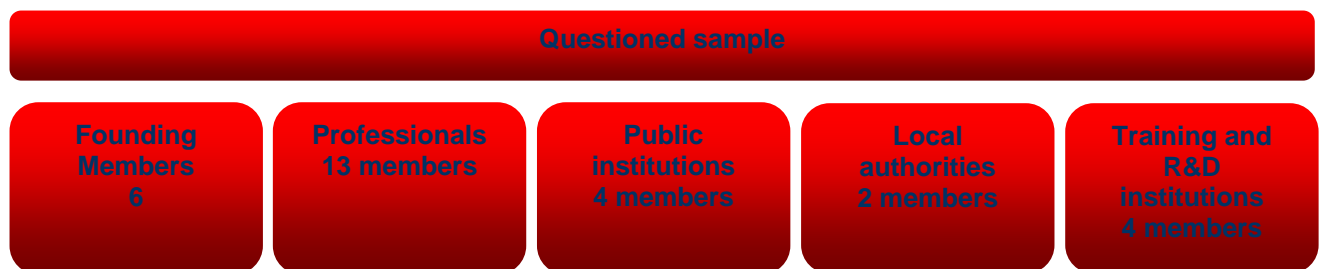


2.2.2 Means and method

The test of the concept of TI System was conducted among a sample from the target population (“Agadir Fish Pole Association” members). The identified sample represents 75% of the target population. Also, the data were weighted during data collection to give each category of actors its real weight in the total target. We therefore obtain the following sample:



Since the category of professionals contains only processors of seafood and a few fishing companies, the survey sample was also expanded to six additional professionals (Representatives of some vital components of the seafood processing value chain) that has been recommended by the cluster members to be a part of this study. Those professionals concern the following areas: support industries (2 respondents), logistics (2 respondents) and fisheries and seafood processing consulting (2 respondents). This brings our sample to 29 respondents that are distributed as follows:



2.2.3 Method of administration

A questionnaire was designed, tested and used to identify specific information or to confirm assumptions about the TI systems concept within the questioned sample (appendix I). Interviews were performed as face-to-face interview or over the phone. The interviews concentrate on some key questions and a free chat with the interviewee as well.

The structure of the questionnaire is as follows:

- Axis1: Objective of the implementation of a territorial intelligence system
- Axis 2: Content of the territorial intelligence system
- Axis 3: Source of information and knowledge
- Axis 4: Technical tools for the territorial intelligence system management
- Axis 5: Territorial intelligence system management

As part of this survey, respondents are mainly:

- Corporate directors
- Public, training or R&D institutions directors or their representatives
- Highest levels of local authorities' representatives
- Professional associations or chambers presidents or directors

79% of respondents were met personally and were subjected to an interview which lasted between 30min and 1hr. regarding the remaining 21% respondents, the standard questionnaire was sent to them by Email (lack of availability of those persons). Their responses were collected by Email, after a phone conversation with each of them to explain the outline of the questionnaire.

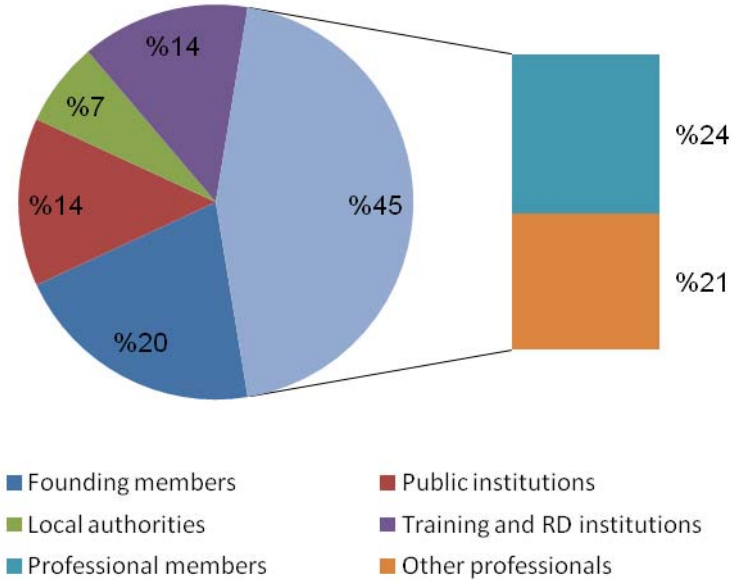
All questionnaires were completed and returned between 08 and 19 July 2010. Analysis of data was performed using the SPHINX software.

2.3 Results of the test of territorial intelligence System concept

-Identification of respondents:

All the “Agadir Fish Pole Association” member categories was represented in the identified sample, which is characterized by a high proportion of professionals due to the addition of the seafood processing support activities.

Figure 19: Sample structure according to the member categories

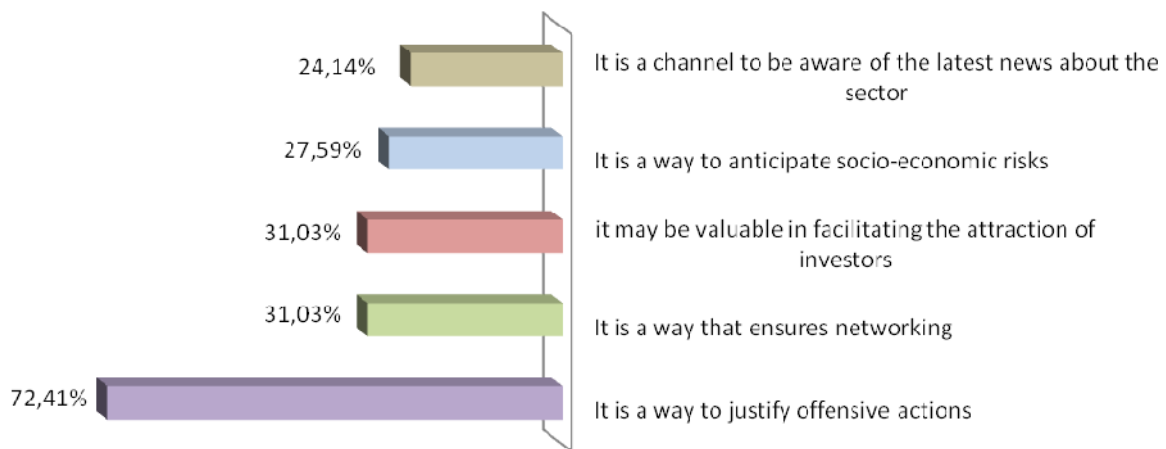


2.3.1 Objective of the implementation of a TI system

In general, the association members are aware of the importance of a fluidized flow of information and knowledge within the Seafood processing cluster. Indeed, 90% qualifies this flow to be very important against 10% who consider it somewhat important element. Furthermore, this perception of information and knowledge flow within the cluster can be closely related to its definition as given by the cluster actors. In fact, over 72% of respondents qualify it as a mean to justify offensive actions which is important for the competitive positioning of the regional cluster, through the establishment of a competitive watch device on which will be based the future territorial marketing actions.

Also, 60% of respondents considered that the knowledge flow is an essential mean to ensure the networking of the local industrial environment on one hand, or the promotion of regional investment on the other.

Figure 20: Description of knowledge and information flow within the regional cluster



This convergence in the definition of the information flow between the cluster members indicates a predisposition to engage in TI approach in order to centralize information, facilitate strategic decision making and then increase local competitiveness. This hypothesis will be confirmed by other indicators.

A direct question was addressed to all respondents about their perceptions of the implementation of such a system within the regional Seafood processing cluster. All respondents welcomed the idea with 86% who find this initiative very important and 14% found the idea somewhat important.

This positive trend is also justified by the importance attached by respondents to the objectives that can be assigned to the TI system. Indeed, it is clear from the survey that the vast majority of respondents (86%) are sensitive to the benefits of such a system, including those relating to:

- The capacity for strategic analysis of the territory positioning (65%)
- The Knowledge of the territory, in order to better control the resources (52%) and
- The management of knowledge and know-how to make a territorial marketing (45%)

2.3.2 Content of the territorial intelligence system

Regarding the definition of the TI system scope, more than 76% think that this scope should cover seafood processing industry as well as other fields, including: fishing, logistics and support industries. However, the interviews showed that over 79% of respondents broaden the system scope to other areas of information including:

- 48% want to see the system covering the areas of innovation, R&D and technology transfer especially since the seafood processing industry is so far limited to a primary level of processing
- 44% want to see the system covering services associated with industrial activity: local network services (water, electricity, ICT, urban transport, renewable energies...), administrative services (tax, analysis laboratories, customs...), financial services...

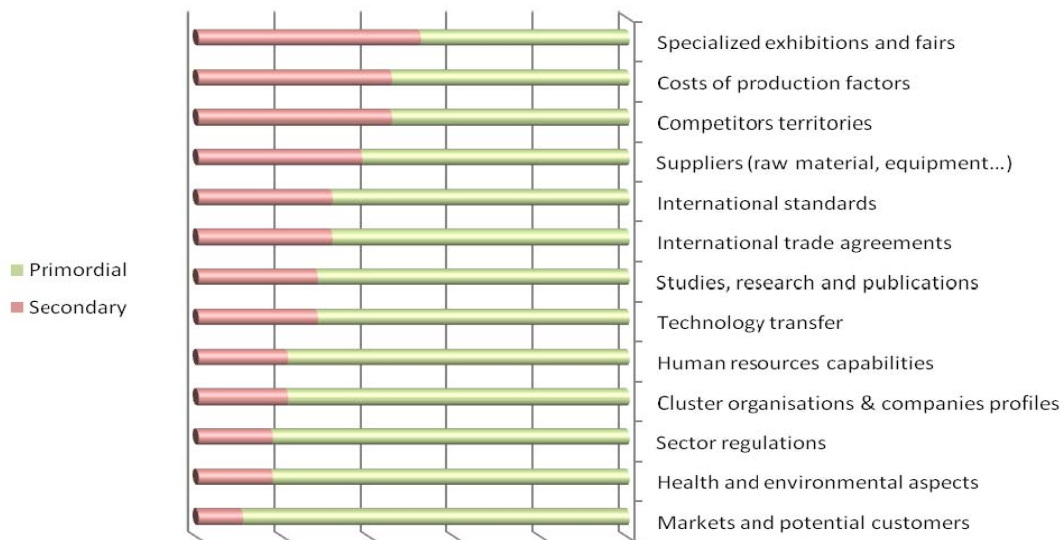
Moreover, “markets and potential customers information” appears as the most popular among respondents. Thus, nearly 90% deem this information as essential to be held and controlled. It is followed closely by controlling the current regulations, health and environmental aspects that are considered by 83% of respondents as being crucial information.

In third place, the interviews focused on information such as profiles of the activities of cluster organizations/companies and data related to human resources. These aspects have been designated as essential by 79% of respondents. Furthermore, 72% of them attach great importance to information related to innovation, R&D or technology transfer.

All these fields of information confirm the three main objectives of the TI system implementation:

- Strategic Analysis of the positioning of the territory
- Management of knowledge and know-how
- Control of resources

Figure 21: Importance of information fields



Other additional fields of information (not less important) have been mentioned and proposed by the interviewees and can be summarized as follows:

- Investment incentives and modernization actions: technical assistance, financial support and grants, training devices, tax incentives, and availability of land devoted to investment...
- Infrastructure (transport, transit ...) and port logistics (capacity, features, facilities...)
- Watch over IP: processes patenting, trademarks
- Fishery resources in terms of availability, consistency and quality
- Sector new entrants (investors and entrepreneurs) as well as potential investors
- National policy and strategic orientation in the regional level

The interviews also show the commitment of the respondents to assume the establishment and maintenance of such a system. Indeed, 97% of interviewees consider themselves able to contribute to the enrichment of the system through a regular supply by one or more of the above information.

2.3.3 Sources of information and knowledge

Throughout the survey, there are two main sources of information: information from the cluster members themselves, and external sources (from outside the cluster). Both are regarded as prerequisites for the maintenance and sustainability of such a system.

Regarding internal sources of information, they correspond to each category of members. Consistent with expectations of potential users of the system, the fields of information from this source can be summarized as follows:

Information from public institutions

-Information related to administrative procedures and formalities, standards, existing regulatory framework and ways of improvement of public services are considered as the most relevant information that may emanate from public institutions (96%)

-Information related to the sector monograph (updated statistics, public administration performance in accordance with its specific attributions, territory management and planning, infrastructure and logistics, market organisation...) and information on national strategies and their interpretation at the local level occupy the second place in term of relevance (45%)

-Other fields of information ranked in third position include: investment incentives and studies, benchmarks and public partnership agreements.

Information from local authorities

-The most relevant information that can emanate from local authorities is related to the investment attractiveness device (60%)

-The information on structural projects ranks second (environmental management of the cluster area, cooperative agreements and partnerships, infrastructure management, management of primary services include hygiene, safety, connectivity, improving quality of work ...) (50%)

-Respondents also grant importance to the local strategic orientations that occupy the third position (spatial planning, urban planning, sustainable development and environmental protection, attractiveness policy...) (30%)

-Other fields of information were also reported (but less frequently) include: marketing efforts conducted to promote the territory (positioning, investment opportunities, territorial offer and new products niches, exhibitions and fairs ...).

Information from training and R&D institutes

-The most relevant information that may emanate from training and R&D institutes is mainly related to applied research programs especially those related to identifying new fields for seafood products enhancement (experiments and tests on land-based or at sea processing, new added value product niches, business process innovations, new inventions and technologies, sustainability and energy efficiency...) (88%)

-Secondly, the cluster members would like to identify strategic information on human resources (existing qualified profiles, statistics on graduated resources from specialized institutes, the pool of employment suited to market needs ...) (50%)

-In addition, information on the available training programs ranks third. This information covers the following aspects: existing training mapping, new training modules, applied training, staff training... (50%)

-Finally, it was mentioned the importance of implementing a technology watch device for the sector (technology transfer from competing territories, exchanges between universities, seminars and conferences...) (42 %)

Information from professional associations

-According to respondents, the most relevant information that may emanate from professional associations is related to the capitalization of business experience (Sector weaknesses and strengths, good practices, industrials expectations and needs, knowledge and know-how developed in the territory, market monitoring, the industry integration...) (44%)

-In second place, the cluster members desire to share updated databases on the professional associations members (Profiles of activities and products / services of the cluster companies, sector turnover, jobs created, means domiciled in the private sector, costs of production factors...) (33%)

-The third field of information concerns the industry lobbying and the action adopted by professional associations on the basis of industry competitive intelligence.

Information from professional chambers

-Respondents want to be informed on sectoral issues on which the professional chambers are accessed by the government (projects under study and projections of national policy, members interests and expectations, sector news in terms of regulation, incentives and organization ...) (44%)

-In second place, they would be informed about the professional chambers action plan (promotions programs, sector improvement proposals, companies modernization programs, participation in specialized exhibitions and fairs ...) (33%)

-In addition, databases of suppliers and service providers, relevant data on the availability of raw materials, the evolution of fishing, as well as new ideas for export (good practices) and imports (inputs competitive pricing...), may also emanate from the chambers.

Information from professionals taken individually:

-What is mainly expected by the cluster members is the sharing of accurate information held by professionals, in order to update credible databases (activities, products and services, production, market development, cost of production factors, innovation, market research...) (59%)

-Also, information on the professionals' proposals is an important: need (assistance, investment opportunities, human resources profiles and staff training...), problems and constraints (unfair competition, supply, marketing ...), improvement proposals (59%)

Regarding external sources of information, they can be divided into nine categories. According to the system potential users' expectations, these sources can be summarized as follows:

1-National organizations

Source	Fields of information
Ministry of Housing, Urban Development and Spatial Planning	-Territorial Planning -Urban planning -Geographic Information Systems
Technical Centre for food processing	Research and surveys conducted for seafood processing industry

National Agency for Small and Medium Enterprise Promotion (ANPME)	-Consolidated benchmark for seafood processing industry -SMEs modernization support and assistance Programs
Ministry of Foreign Trade	-Import / Export procedures -Free Trade Agreements -Trade conventions -Studies and statistics
Moroccan Centre for Export Promotion (Maroc export)	Promotion policy for improving the competitiveness of Moroccan exports
The High commission of plan (HCP)	-National Planning -Oriented studies -National Statistics -National macro and micro economy Conditions
Moroccan centre for economic situation (CMC)	Moroccan economy Observatory which is developing an information system about macroeconomic, sectoral, demographic and commercial analysis and forecasting surveys
Moroccan Agency of Investment Development (AMDI)	-Investment Promotion and marketing actions -Opportunities and incentive devices -Territorial Offers
Ministry of Economy and Finance	-Tax regulations -Customs Regulations -Legal Texts -Economic indicators, statistics, and key figures

2-International organizations

Source	Fields of Information
FAO virtual information centres	Centres for marketing, information and advisory services for fishery products: Infosamak, Infopeche, Infofish, Globefish, Eurofish, Infopesca, Infosa, Infoyu...
FAO and WHO - Codex Alimentarius	-Guidelines and other texts on food standards -Consumer Protection Regulations -Standardization works related to food and food processing
IMF, World Bank, WTO, USAID, European Commission	Reports and studies on fisheries and aquaculture or enhancement of seafood processing industries
French Agency for International Development – UBI France	Further studies on specific markets

3-Publications, journals or magazines

Source	Fields of information
-Food magazine, (Morocco) -Food news (UK), -Alimentaria (France) -Lineaires (France) -Resagro (Morocco)	Collecting and updating information on food distribution and food processing
Moniteur du commerce international - LEMOCI	Collecting and updating information on imports and exports
-Le marin (France) -Produits de la mer PDM (France)	Collecting and updating information on the fisheries sector
-Valorisation des produits de la mer (Canada), -Sea Food Processing (UK)	Collecting and updating information on the seafood processing industry
Brochures and magazines published by regional and national chambers and associations	sector news & Events at the regional and national levels

4-Universities and R&D institutes

Source	Fields of Information
Mauris-Lamontagne Institute (Canada)	Results of academic research and applied studies in fisheries and the exploitation of marine products
French Research Institute for Exploitation of the Sea - IFREMER	-Source of knowledge, innovation, monitoring and expertise for the world of the sea -Monitoring on the international fisheries
Technical Institute for the seafood development – ID Mer (France)	-Develops solutions for the industrial seafood processing as part of exclusive contracts: *Development of finished product *Development of industrial preproduction *Enhancement of co-products *Design of production unit *Environmental Studies...
National Institution of agricultural and seafood products– Franceagrimer (France)	Business intelligence, markets knowledge, markets regulation and measures, sectoral crisis warning, international technical cooperation actions
National Centre for Scientific Research CNRS => Institute of Biological Sciences	-Biomass and environmental Studies conducted for the sector

5-International clusters

Source	Fields of Information
International clusters in different sectors	-Methodology and approach to managing and promoting the cluster -Watch system implemented
Competing clusters: -Boulogne sur Mer, France -Brest, France -Nantes, France -Vigan, France	-Cooperation agreements, joint commissions, Possibility of twinning -Organization of seminars and conferences -Technology Transfer -Identification of good practices

6-Diplomatic Representations

Source	Fields of information
Economic Counsellor from Moroccan embassies abroad	Studies related to fisheries and Seafood processing industries
Economic counsellor from foreign embassies in Morocco	

7-Internet:

- Conduct a competitive, technological, regulatory watch and monitoring actions
- Consult institutional sites of organizations related to the sector
- Subscript on specialized sites dedicated to trade in the sector:
 - *www.fis.com: World leader in seafood information and services (commercial fishing industry)
 - *www.sea-ex.com

8-International conferences, fairs and exhibitions:

- International Boston Seafood Show (Boston –USA)
- European Seafood Exposition (Brussels – Belgium)
- Shanghai International Fisheries & Seafood Expo (Shanghai –China)
- MSE Seafood and Processing (Rimini – Italy)
- Seoul Seafood Show (Seoul – Korea)
- Trondheim exhibition (Trondheim – Norway)
- Japan International Seafood & Technology Expo (Tokyo – Japan)
- Conxemar 2010 (Vigo –Spain)
- China Fisheries & Seafood Expo (Dalian – China)
- Halieutis exhibition (Agadir – Morocco)

9-National professional associations:

- The National Federation of Industries of transformation and valorisation of marine products - FENIP
- Professional Association of Deep Sea Fishing in Morocco (APAPHAM)
- The national association of fishmeal and fish oil producers (ANAFAP)
- The national association of seafood freezing industries (ANICOM)
- The Moroccan association of seafood exporters (APROMER)
- The national union of canned fish industries (UNICOP)
- Seaweeds processing industry (Agar-Agar)
- Inter professional assistance groups (GIAC): they include associations formed by agencies and professional associations of enterprises. The most relevant group in our case are: GIAC Fishery, GIAC Food processing, GIAC transport and logistics
- Moroccan association of exporters (ASMEX)
- Professional Group of Banks in Morocco (GPBM): it centralizes sectoral databases of specialized banking institutions

Through the survey, it is clear that the cluster members have perfectly mastered the relevant information sources to be explored in the case of development of a TI system within the cluster.

Also, 90% of respondents are ready to set a dedicated budget for the acquisition of strategic information that will form the basis of offensive actions which is important for the competitive positioning of the regional cluster

2.3.4 Technical tools for the territorial intelligence system management

<i>Information access and update</i>

The maintenance and updating of the TI system inputs are based primarily on contribution of the cluster members themselves. Indeed, they are convinced that the success of such a system is mainly conditioned by the membership, and the pooling of efforts around a common goal: “ensuring the competitiveness of the cluster”.

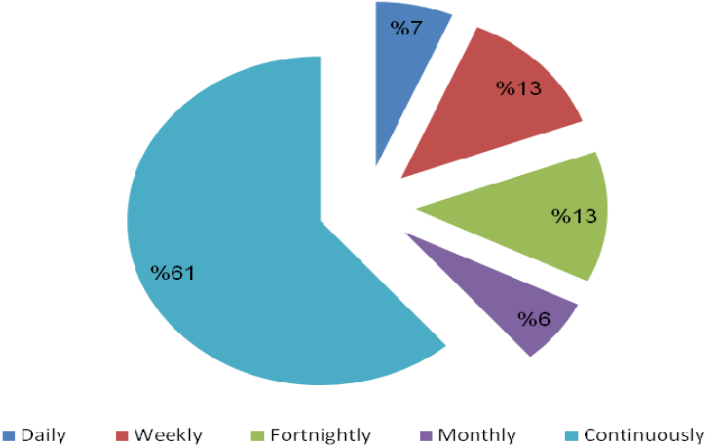
This is confirmed by responses on the question about the key means to maintain and update the system’s data, since more than half of respondents considered that the updating of such a device is mainly done through permanent coordination meetings with cluster members and the establishment of a monitoring and watch cell through the Internet.

Regarding external sources of information, they rank second with two main information updating means:

- The agreements with training institutes and research for free access to studies results
- The agreements with certain institutions to freely access their databases

Through the mastery of information sources and data collection means, the TI system can build up a specific database for the cluster. However, and since the diversity of information sources and nature, data updating should be continuous as and when new information becomes available to supply the system.

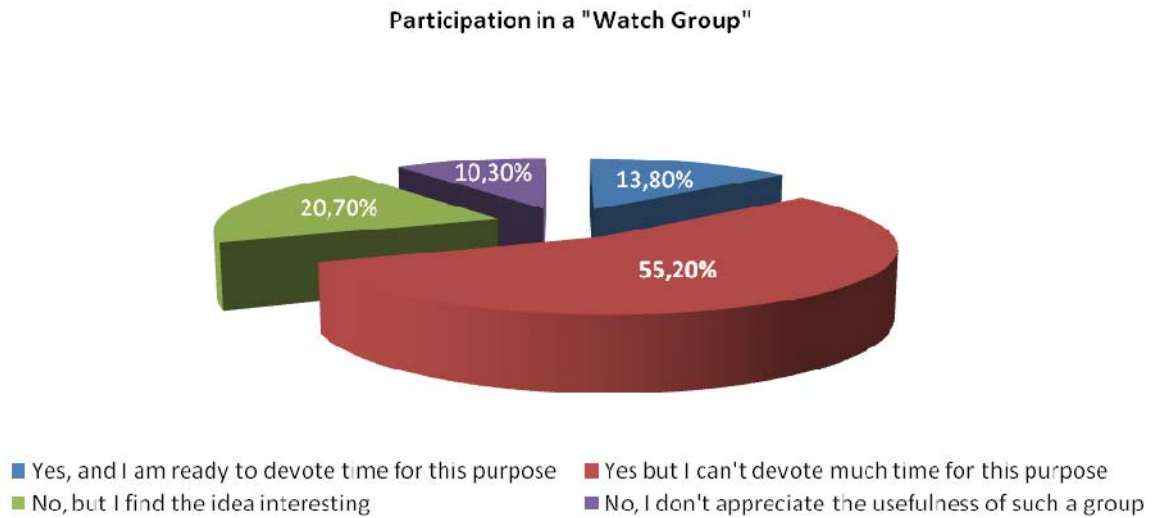
Figure 22: Frequency of the TI system updating



Also, 69% of respondents are ready to join a "watch group" responsible for maintaining and updating the cluster TI system, but without committing to devote much time for this purpose.

This implies that the majority of respondents are ready to help maintain the system, but only 14% will be available to devote time for this purpose. Also, it is important to note that 75% of respondents willing to fully devote themselves to the "watch group" are training and R&D institutes.

Figure 23: Cluster members eventual participation in a "Watch Group"



Storage media and information reporting tools

Through the interviews, three tools that can materialize the TI system have been proposed to the interviewees. These tools include¹⁸:

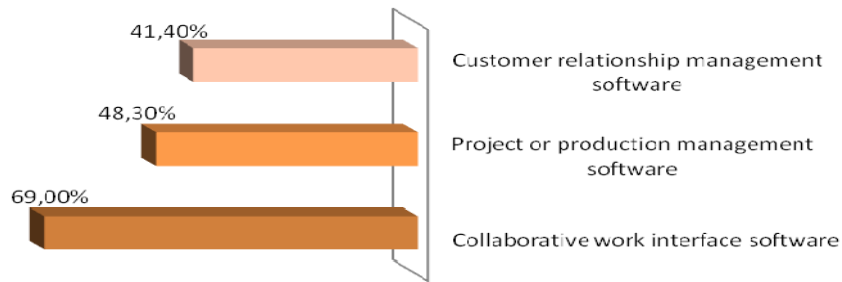
- Collaborative work interface software (e.g. intranet)
- Project or production management software
- Customer relationship management software

After introducing the three tools to all interviewees, the most appropriate one that can materialize TI system for the regional cluster is the collaborative work interface software through the establishment of an intranet interface. Indeed, 69% of respondents chose this tool and are ready to consult it frequently.

However, 50% of them think that it would be useful to combine the intranet with one of the two other tools that are not of lesser importance. But this should be done in a second phase when the system will run smoothly and become more mature.

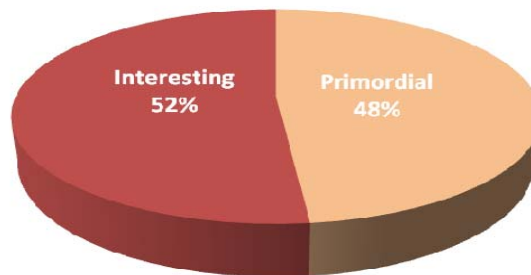
¹⁸ Please refer to the presentation of these three tools in section : 1.4 Territorial intelligence tools: objective and classification

Figure 24: Favory TI System tool



It also emerged from the survey that 52% of interviewees considered the establishment of an intranet interface is an important element in facilitating the fluidized circulation of information within the cluster members, against 48% of respondents who consider this tool as primordial.

Figure 25: The importance of establishing an intranet interface within the cluster membres



Then, we can conclude that the adoption of such a tool is quite possible for the 31% of respondents who selected the two other options:

- Project or production management software
- Customer relationship management software

Some important elements can reassure us about the adoption of such a tool by the cluster members are:

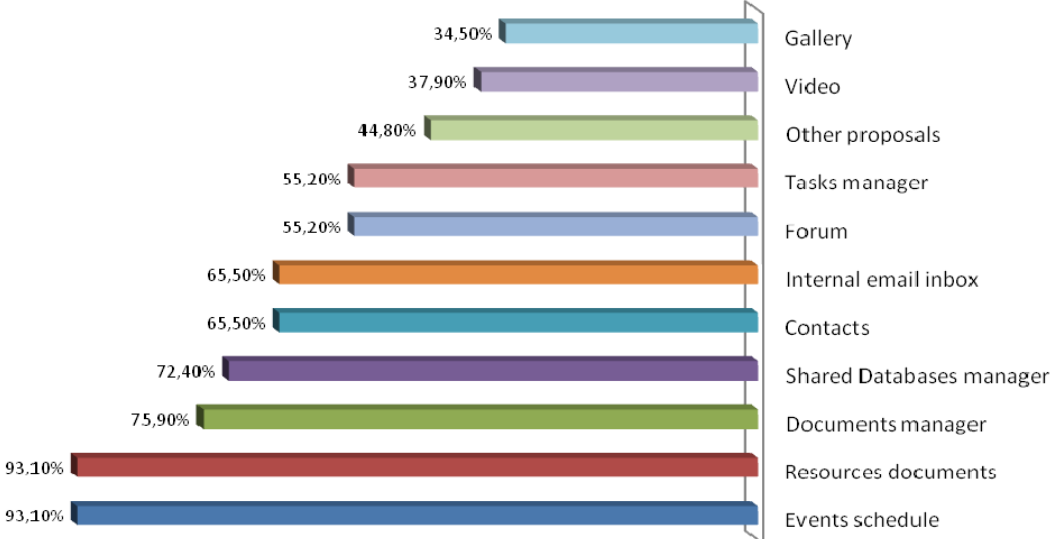
-100% of respondents have computers in their workplace.

-100% of respondents have Internet access, a tool with which the vast majority of them feel comfortable.

-86% of respondents use the net several times a day

It was also suggested to the interviewees a set of modules that can be available on the intranet if this tool is effectively implemented. Respondents' interests are shown in the following graph:

Figure 26: Intranet interface modules



It can be seen that the modules that most interest the interviewees are:

- Events schedule (Next meetings, B to B, Exhibitions and fairs...)
- Resources documents (regulation, sectoral agreements, administrative procedures...)

These two modules are closely followed by modules about: documents manager (studies, publications, market analysis, technological developments, institutional support ...) and shared database manager.

In third place, interest is focused on the mastery of contacts (partners, suppliers, service providers, potential clients...) and practical ways to keep an ongoing relationship with the cluster members including the establishment of an internal email inbox or the animation of a virtual forum.

Also, other interesting proposals have been suggested by the interviewees to better enrich such a platform:

-In order to ensure and guarantee a degree of transparency between the cluster members, it would be advantageous to provide:

- An internal affairs manager for the association (meetings and committee reports, general assemblies agenda...)
- A proposals, suggestions, criticisms and complaints open space

-To keep aware about what is happening elsewhere; it would be interesting to include a new module dedicated to competing territories: innovation, R&D News, cooperation actions...

-Integrating a window in order to directly access to the various partners websites

-Provide a banner dedicated to industry news: press releases, market reports, and links to other informational or commercial websites...

As complement to the intranet platform, other means of information sharing has been proposed by respondents as facilitating the fluidized circulation of strategic information and knowledge within the cluster members:

-To establish a Geographic Information System whom layers should be defined by the cluster members.

-To provide an electronic newsletter. This will identify the latest data and then encourage the cluster members to visit the intranet through hyperlinks

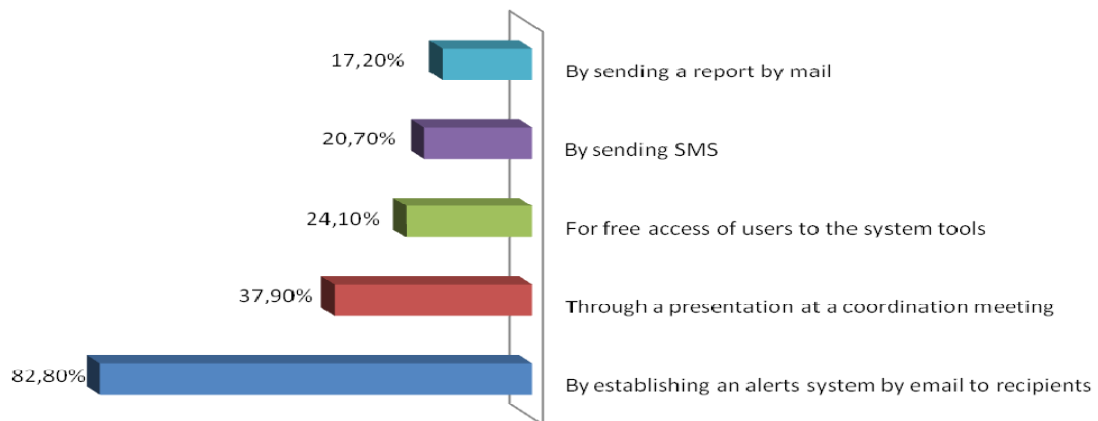
-Coupling the intranet to an Internet interface that will be accessible to all and will promote the cluster (while keeping a private access to the Intranet for the cluster members)

<i>Data usage, reporting and sharing</i>
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To access the TI system news, interviewees are more favourable to the establishment of an alerts system by email. This method appears more suitable for cluster members who claim to be fairly comfortable with the Internet tool, and check their email boxes several times a day (83% of respondents).

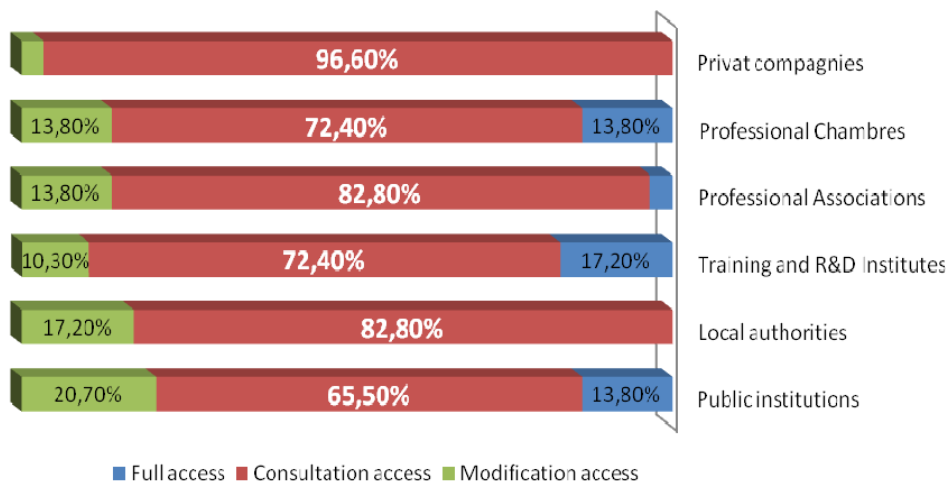
Otherwise, respondents prefer refer to conventional means, and chose to be informed through a presentation at a coordination meeting in which all cluster members will attend and take part in a debate.

Figure 27: TI System news access



Furthermore, an average of 80% of respondents consider that the access right allowed to the system users must be limited to consultation, and that information collected through the internal and external sources should be centralized, processed and disseminated through the TI system by dedicated management body.

Figure 28: Access right to the TI System

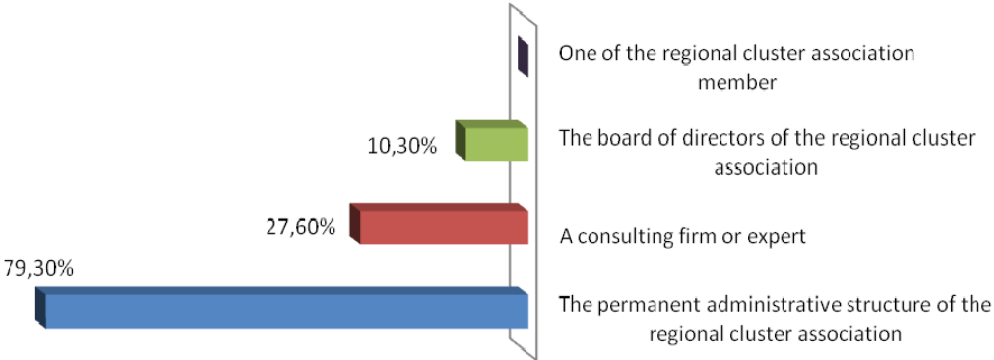


2.3.5 Territorial intelligence system management

In general, the vast majority of respondents (79%) agreed that the operational management of the TI system must be provided by the permanent administrative structure of the “Agadir Fish Pole Association” whose primary mission is to implement decisions of its Executive Board following a strategic plan.

However, it was recommended by a majority of respondents to delegate specific tasks and use sub-contracting (whenever necessary) and benefit from private expertise (while keeping the control) in order to ensure the most satisfactory results. Also, it has been proposed to use international technical cooperation and enjoy privileged relations between the Souss Massa Draa region and France, Germany and the Canary Islands.

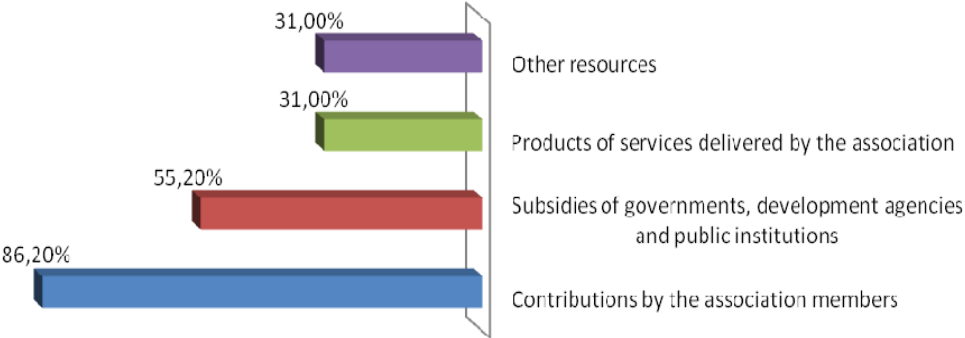
Figure 29: The responsible of the operational management of the TI System



Regarding the operating costs of such system, the interviewees converge to the same sources of funding, namely the contributions paid by association members (86%), followed by the subsidies of government, development agencies and public institutions (55%). However, 52% of respondents propose the combination of these two sources to cover the operation of such system.

In addition, 100% of respondents who suggested additional funding sources converge on the possibility of providing subscriptions to the system for paid services. For this purpose, the professionals' mobilization and will are required. Respondents are therefore convinced that if the professionals are satisfied with the device they will be ready to contribute financially to the success of such a system.

Figure 30: Operating cost of the TI System



In addition to financial aspect, other resources should be mobilized to ensure the system functioning. Human resources appear as the most important one. Respondents converge towards the idea of providing a multidisciplinary skilled team. Indeed, the most common profile is "information system and computer engineer" favoured by 67% of respondents. Other important qualifications are: the mastery of fisheries sector, food processing industry and management quality systems (46%). Also, knowledge of local marketing, project management and communicative skills are essential.

Regarding the status of the management team of such a project, 50% felt it should be an internal and permanent team recruited by the association for that purpose. Otherwise 33% propose that this team is mainly mixed: internal but may seek professional associations' assistance to strengthen the permanent staff or to proceed directly to subcontractors and outsource some specific requirements or tasks (Studies, survey, benchmarking ...)

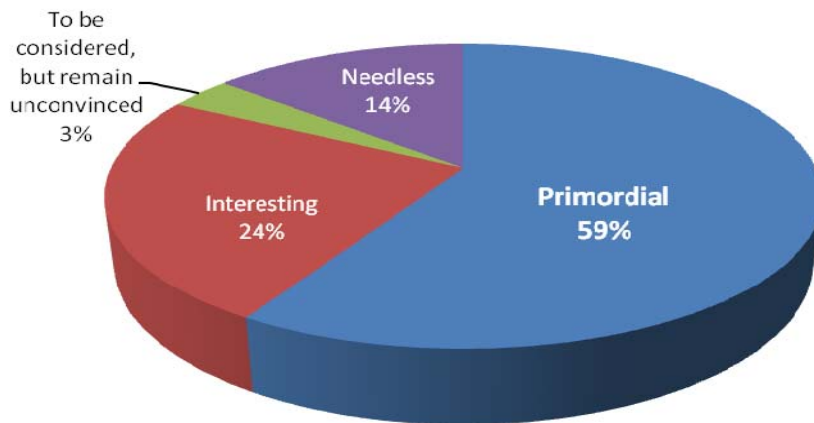
Three other categories of resources emerged from the survey:

- Materials and equipments: desktop platform, information management tools, computer hardware (computers, servers, scanners, printers ...), transport means...
- Informational and documentaries resources: Internet, magazines, reference books, federation of all members' resources (universities and research institutes libraries...)
- Methodological and technical resources: information management software, computer security, watch devices managed by different cluster members...

Finally, in order to ensure the success and relevance of such a device, the interviewees were convinced of the importance of providing an animation body of the TI system in addition to the body responsible for its operational management. In fact 59% describe the use of this second body as crucial to the success of the system, against 24% who find it interesting.

However, few people are willing to devote time to ensure (individually) the role of "system facilitator". This is confirmed with 58% of respondents which propose the establishment of a commission emanating from the association board to play the leadership role (while the association statute allows it).

Figure 31: Provide an animation body for the TI System



To sum up, a number of proposals have been identified by interviewees to support the implementation of a TI system within the cluster. These ideas could be summarized as follows:

1-The success of such a system is mainly conditioned by membership of all local stakeholders to combine their efforts and to mobilize in order to ensure the cluster competitiveness. To bring together players synergies the following actions are required:

- Informing people and assess their degree of involvement and commitment to contribute to the system functioning before embarking on such a project
- Identify key leaders who carry and support the action and who will lead other members to join such a project
- Conduct awareness campaigns about the value and use of such a system to persuade people to join it.
- Engage a renowned integrator in order to participate in the implementation of the system (sponsorship or patronage). This can give more credibility to the project
- Providing a simple and streamlined system, including only relevant and reliable data that will be effectively and regularly updated.
- Ensure the independence, the neutrality, the transparency, the reactivity and the security of the system.

2-Moreover, to ensure the proper functioning of the TI system, the following actions are proposed:

- Provide training for the system users
- Integrating the system into a process of continuous improvement and provide a regular monitoring in order to undertake corrective and preventive actions.
- Identifying, for each system user, a person who will act as an interface between the TI system and the association members
- Establishing an orientation committee in which registered the highest authorities in the region (Governors, communes' president, notables...) in order to support, implement and monitor the cluster strategic plans.
- Giving the system operator all the power to collect information in the best conditions. For this purpose, it is important that all the cluster members play their role as a supply source through the continuous updating of their data.
- Provide a good distribution of tasks to guide the strategic actions and place each actor in the chain of completion of such project

Conclusion Chapter: Proposal for the implementation of territorial intelligence system within the SMD cluster

I- Finalisation of the concept

1.1 Identification of the main objectives and content of a territorial intelligence system within the SMD cluster

In general, the association members are conscious of the importance of a fluidized flow of information and knowledge within the Seafood processing cluster.

In fact, cluster members are aware of the importance of knowledge dissemination juggled as:

- a mean to justify offensive actions which is important for the competitive positioning of the regional cluster, through the establishment of a competitive watch device on which will be based the future territorial marketing actions.
- a mean to ensure the networking of the local industrial environment
- a mean to promote regional investment

It also emerged from the interviews a real predisposition to engage in a TI approach within the cluster in order to centralize information, facilitate strategic decision making and then increase local competitiveness.

Thus, such a device can be designed as the primary way to:

- Develop the local capacity for strategic analysis of the territory positioning
- Know the territory, in order to better control the resources, and
- Better manage knowledge and know-how to make a territorial marketing

The TI system scope should cover the following fields, but to different degrees of importance:

- *Priority area:* seafood processing industry
- *Secondary area:* logistics and support industries
- *Tertiary area:* public services associated with industrial activities, innovation, R&D and technology transfer

According to the three main objectives of the TI system previously designed by the cluster members, the most important field of information to be gathered are:

Identified objective	Corresponding Information
Develop the local capacity for strategic analysis of the territory positioning	-Markets and potential customers information -Sector new investors and entrepreneurs -National policy and strategic orientation in the regional level
Know the territory, in order to better control the resources	-Profiles of the cluster's units -Data related to human resources -Current regulations, health and environmental aspects -Investment incentives and companies modernization device
Managing knowledge and know-how to make a territorial marketing	-Information related to innovation, R&D or technology transfer. -Watch over Intellectual Property Rights

1.2 Mastery of information and knowledge sources

Through the survey, it is clear that the cluster members have perfectly mastered the relevant information sources to be explored in the case of development of a TI system within the cluster. They are ready to:

- Contribute to the enrichment of the system through a regular supply by one or more of the above information.
- Set a dedicated budget for the acquisition of strategic information that will form the basis of offensive actions which is important for the competitive positioning of the regional cluster

Moreover, two complementary sources of information are regarded as prerequisites for the maintenance and sustainability of such a system: information from the cluster members themselves, and external sources (from outside the cluster).

Regarding internal sources of information, it can be summarized in the following table:

Cluster members	Fields of information
Public institutions	<ul style="list-style-type: none"> -administrative procedures and formalities -standards and existing regulatory framework -sector monograph -national strategies and their interpretation at the local level
Local authorities	<ul style="list-style-type: none"> -investment attractiveness device -local structural projects -local strategic orientations
Training and R&D Institutes	<ul style="list-style-type: none"> -studies results and research programs: new fields for seafood products enhancement -human resources -available training programs
Professional Associations	<ul style="list-style-type: none"> -capitalization of business experience -updated databases on the professional associations members
Professional Chambers	<ul style="list-style-type: none"> -projects under study and projections of national policy -professional chambers action plan
Private companies	<ul style="list-style-type: none"> -database on activities, products and services, innovation... -professional needs, problems and constraints, improvement proposals...

Regarding external sources of information, they can be divided into several categories: National or international organizations, publications, journals or magazines, universities and R&D institutes, international clusters, diplomatic representations, Internet, international conferences, fairs and exhibitions.

However, the maintenance and updating of the TI system inputs are based primarily on contribution of the cluster members themselves. Indeed, they are convinced that the success of such a system is mainly conditioned by the membership, and the pooling of efforts around a common goal of “ensuring the competitiveness of the cluster”. Also, and due to the diversity of sources and nature of information that can supply the system, its operational manager have to guarantee a continuous data updating as and when new information becomes available in order to ensure the efficiency of the TI device.

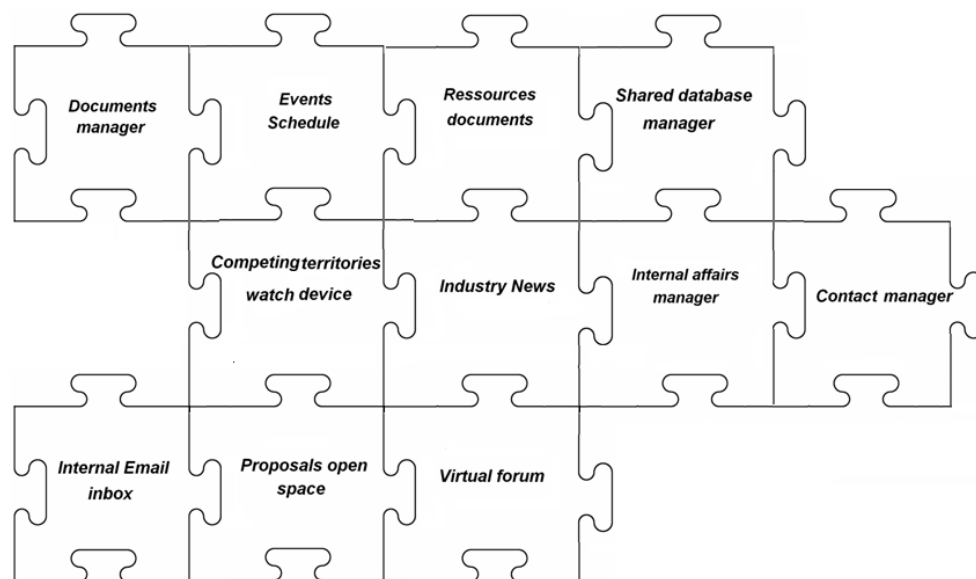
II- Means and Governance terms

2.1 Recommended model for the system materialisation

The most appropriate tool that can materialize the TI system within the regional Seafood processing cluster seems to be the collaborative work interface software through the establishment of an intranet interface for the cluster members.

The most important modules that can be available on the intranet are shown in the following figure.

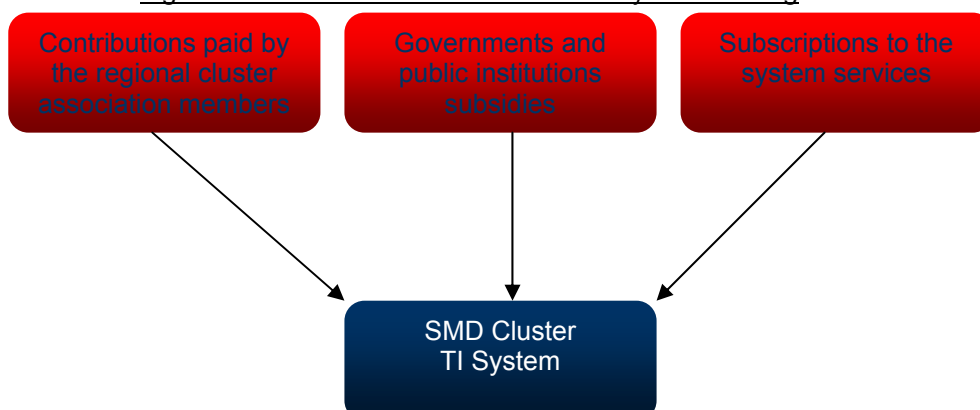
Figure 32: The most important modules that can be available on the intranet interface



2.2 Recommended model for the system funding

Three sources of funding are needed to ensure the implementation and operation of TI system within the cluster.

Figure 33: Recommended model for the system funding



2.3 Institutional composition and recommended model for the system management

The management of the TI system requires the establishment of four interdependent structures. (Figure34)

Figure 34: Recommended model for the system management



III. Implementation plan proposal

The success of such a system is mainly conditioned by membership of all local stakeholders to combine their efforts and to mobilize in order to ensure the cluster competitiveness. Then it will be very important to inform the different actors and to assess their degree of involvement and commitment to contribute to the system functioning before embarking on such a project.

3.1 Recommended implementation plan

After the identification of the TI system scope and its strategy, the action plan axis can be presented in the following table.

Theme	Subject	Action plan
System governance	Definition of the system operation	<ul style="list-style-type: none"> -Constitution of the four management structures -Definition of the governance model and funding arrangements -Place each actor in the chain of completion of such project
	Constitution of the management team	<ul style="list-style-type: none"> -Recruitment of the permanent multidisciplinary team members -Identification of two or three renowned sub-contractor to participate in the system implementation or management
Management device	Implementation of the management interface	<ul style="list-style-type: none"> -Computer Development of the Intranet -Appointment of a renowned integrator in order to participate in the implementation of the system (sponsor) -Finalization of the device module
	Provide an adequate working environment	<ul style="list-style-type: none"> -Giving the system operator: *all the means and resources to ensure the proper functioning of the system: materials and equipments, Informational resources, methodological and technical resources... *all the power to collect information in the best conditions
Information supply device	Implementation of gateways to the mean sources of information	<ul style="list-style-type: none"> -Definition of a secure information supply plan -Constitution of thematic watch cells -Identification of relevant and reliable data that will be effectively & regularly updated -Provide cooperation and partnership engagements with the mean sources of information

Quality management device	Implementation of continuous improvement process	<ul style="list-style-type: none"> -Conduct awareness campaigns -Ensure the independence, the neutrality, the transparency, the reactivity and the security of the system -Provide regular monitoring in order to undertake corrective and preventive actions -Provide training for the system users
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3.2 Conclusion

Through this work, I propose an innovative and pooled organization of information and knowledge to ensure the SMD seafood processing cluster development, competitiveness and attractiveness (collectively and for each of its different stakeholders). Thus, I suggest the implementation of a TI system within this cluster in order to allow local players to centralize strategic information (as a basis for strategic decision-making) in the objective to increase the competitiveness of the territory.

The survey has confirmed the importance of the adoption of a TI approach within the SMD cluster in response to the current economic changes. Indeed, the knowledge economy, the internationalization of production factors, the dominance of networks, and the use of ICT make territorial strategies development more complex. In this context, the territories become interdependent and TI is the system that will create wealth and enhance the territory by a very broad involvement of diverse actors.

The SMD seafood processing cluster stakeholders are aware of the importance of adopting and developing a tool for markets understanding, technologies monitoring and competitors innovation ability mastering. They need an innovative tool that will allow them to maintain the competitive advantage of their cluster and found offensive actions useful for its competitive positioning. Then, the TI process seems to be the best way to enhance and develop the territory, tracking skills and resources and to develop SMD seafood processing cluster competitiveness.

Furthermore, this work has also proposed an implementation scheme of a TI system within the SMD cluster. But this system represents only the first component of a TI process which is primarily designed to link watch cell (technological, marketing, regulatory or competitive watch...) to public policy in order to ensure a territorial economic development. The global approach goes through the development of marketing strategy and territorial management to ensure a sustainable economic development.

However, there is a set of prerogatives to meet before claiming to implement such a system within the SMD cluster:

- First, the TI system requires a national information policy. It is an important element to develop the access right to the information by making it available for all, and to create coherent structures (at the various level of the nation) to ensure the information dissemination.

- It is necessary to provide the means for the system use methodologies and technologies integration by the different stakeholders, in order to enable them to share and create information and knowledge.

- The coordination between the actors is one of the key points of the system effectiveness. This coordination involves the identification of potential complementarities between the actors and building learning capacity and collective action (around common values and standards).

- Strengthening of local actors through decentralization in favour of the system development.

- Finally, we can conclude that one of the fundamental points of a successful TI system within the SMD cluster is the existence of a real public-private partnership. Without a strong commitment by the Government or its local representatives, no TI system may emerge. The Government must play its role as network mediator, assist SMEs through the sharing of information, and use its local and international influence to ensure the actors economic security and protection.

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Appendixes

Appendix I

Establishing a Territorial Intelligence System within the regional cluster of fishing and seafood processing industry

This questionnaire is designed for members of the association of the regional cluster for fishing and seafood processing industry, and dedicated to research work in the Master of Science "Investment Promotion & Economic Development"- Edinburgh Napier University. It is an important component of a survey conducted as part of a dissertation under the theme: Use of Territorial Intelligence systems for the development of industrial clusters in Morocco - Case of the regional cluster of fishing seafood processing industry. Please give this questionnaire few minutes of your time.

The result of analysing the collected information can be communicated to any person involved in this work. However, I am personally committed to ensuring the anonymity of the respondents without exception.

Thank you for your cooperation.

Questionnaire

Identification of the respondent

Are you:

- Public institution representative
- Local authorities representative
- Training or R & D institute representative
- Professional association representative
- Professional chamber representative
- Professional of fisheries sector
- Professional of seafood processing industry
- Other professional

Axis 1: Objective of the implementation of a territorial intelligence system

1-In general, you may say that the fluidized circulation of information and knowledge within a cluster is:

- Very important
- Somewhat important
- Less important
- Not important at all

2- How would you describe the flow of knowledge and information within a regional cluster? (Many choices are possible)

- It is just a channel to be aware of the latest news about the sector (sectoral watch)
- It is a way that ensures the networking of the local industrial environment
- It is a way to justify offensive actions which is important for the competitive positioning of the regional cluster

- It is a way to anticipate socio-economic risks
- it is mainly a propaganda tool
- it may be valuable in facilitating the attraction of foreign or other Moroccan investors in the region
- Other proposals (to be specified):.....
.....
.....

If we define the **territorial intelligence** as:

-A system for linking an economic watch cell (technological, marketing, regulatory or competitive watch...) to public policy in order to ensure a territorial economic development (for an industrial cluster for example)

-Or in other words a system that allows local players to centralize strategic information to facilitate decision making in the objective to increase the competitiveness of the territory

3- How do you consider the implementation of such a system within the regional cluster?

- Very important
- Somewhat important
- Unimportant
- No idea on the question

4- Here is a list of objectives that can be assigned to a territorial intelligence system. For each goal, check the box corresponding

Objectives	Primordial	Important	Less important	Not important at all
Knowing the territory to better control the resources				
Respond and react rapidly to crisis situations				
Mastering the infrastructure (roads, networks, activity areas...)				
Identify other territories best practices to achieve a benchmark				
To capitalize and better managing knowledge and know-how to make a territorial marketing				
Improving communication on actions and projects between the cluster members				
To have a better traceability of information				
Developing strategic analysis capacity of the territory positioning				
<u>Other proposals:</u>				

5- Among the objectives listed in the table above, choose three that you consider to be priorities for the regional cluster competitiveness:

- 1 –
- 2 –
- 3 –

Axis 2: Content of the territorial intelligence system

1-If one tries to define the scope of the territorial intelligence system within the regional cluster, this scope will involve at least one of the following areas: (multiple answers are valid)

- Fishing
- Seafood processing industry
- Support industries
- Logistics
- Other (to be specified):
-

2- How important is the fact of being informed in the following areas?

	Primordial	Secondary
Markets and potential customers		
Suppliers (raw materials, equipment, services ...)		
Studies, research and publications		
Human resources capabilities		
Technology transfer (production, processing...)		
Sector regulations		
International trade agreements		
Health and environmental aspects and requirements		
International standards (export)		
Competitors territories		
Costs of production factors		
Specialized exhibitions and fairs		
Profiles, activities and product / services of organisations / companies of the cluster		

3- Can you give other fields of information that can be included in the territorial intelligence system (information omitted in the table above)?

- 1-.....
- 2-.....
- 3-.....
- 4-.....

4- Do you think that you can contribute to the enrichment of the system?

- Yes partially No

In what field of information?

.....

Axis 3: Source of information and knowledge

1-What are the fields of information that can emanate from the cluster members and that might supply the system?

Cluster members	Fields of information
Public institutions	1-..... 2-..... 3-..... 4-..... 5-.....
Local authorities	1-..... 2-..... 3-..... 4-..... 5-.....
Training and R&D Institutes	1-..... 2-..... 3-..... 4-..... 5-.....
Professional Associations	1-..... 2-..... 3-..... 4-..... 5-.....
Professional Chambers	1-..... 2-..... 3-..... 4-..... 5-.....
Private companies	1-..... 2-..... 3-..... 4-..... 5-.....

2- What are other sources of external information that could supply the system? (National or international institutions, journals ...)

Source of information	Fields of information

3- For information of high importance, do you think that it is important to establish a dedicated budget for the system data acquisition?

Yes

No

Axis 4: Technical tools for the territorial intelligence system management

1- Information access and update

a- In your opinion, what could be the primary means for maintaining and updating the system inputs: (Please classify the options in order of importance: 1 being the most important option)

.... Internet suscription

.... Journals / Newsletter subscription

.... Consulting firms and experts services (individual advice provided by the experts of the EI unit of the cluster through meetings, telephone calls, email, etc.)

- Coordination meetings with the cluster members
- Agreements with training and RD institutes for free access to studies results
- Agreements with certain institutions for free access to their databases (please specify potential institutions):

.....

 Other means (to be specified):

b- How often do you think this system should be updated?

- Daily
- Weekly
- Fortnightly
- Monthly
- Continuously (as and when new information becomes available)

c- Are you interested to participate in a "watch group", responsible for maintaining and updating the territorial intelligence system within the regional cluster?

- Yes, and I am ready to devote time for this purpose
- Yes but I can't devote much time for this purpose
- No, but I find the idea interesting
- No, I don't appreciate the usefulness of such a group

<i>2- Storage media and information reporting tools</i>

Explanation: the media used for the implementation of a territorial intelligence system are based on database architecture but can also supports multimedia like photos, videos...

* Computers and internet use:

a- Do you have a computer at your workplace?

- Yes
- No

b- Do you have internet access?

- Yes
- No

c- How often do you use the net?

- Several times a day
- Few times a week
- Rarely
- Very rarely

d- How often do you check your Emails?

- Several times a day
- Few times a week
- Rarely
- Very rarely

e- How comfortable are you in using the net?

- Very comfortable (technical knowledge)
- Comfortable (browsing, sending emails ...)
- Somewhat uncomfortable (delicate use)
- Not comfortable at all (you avoid the use of the internet)

*Intranet:

Explanation: Intranet is a private access "website" allowing access to a number of online modules (writing papers, discussion forums, events, reports, database...) each user being assigned a username and a password can interact within this space, according to the functions assigned to it, with other registered members.

a- The establishment of such a tool within the cluster members is:

- Primordial
- Interesting
- To be considered, but you remain unconvinced
- Needless

b- Which module do you want to find on this kind of platform if it is used by the system? (Many choices are possible)

- Events schedule (Next meetings, B to B, Exhibitions and fairs...)
- Resources documents (regulation, legislation, sectoral agreements...)
- Contacts (partners, suppliers, service providers, potential customers ...)
- Internal email inbox
- Forum
- Tasks manager (Making retro planning, following projects progress...)
- Documents manager (studies, presentations, publications, scientific journals, market analysis, technological developments...)
- Shared Databases manager
- Gallery
- Video
- Other proposals:

.....
.....
.....

c- How often do you think you will make use of the module of this platform?

- Frequently (several times per week)
- Occasionally
- Rarely
- Never

*Customer relationship management software (CRM)

Explanation: Often used for customer calls managing in services as "Helpdesk". The answers given to customers are based on a knowledge database which is itself permanently supplied. The CRM will help decision makers to better understand their environment in order to adapt their territorial development policies. It also should allow different players to collaborate through sharing information on any interaction with their internal or external environment.

a- The establishment of such a tool within the cluster members is:

- Primordial
- Interesting
- To be considered, but you remain unconvinced
- Needless

b- What kind of service could be delivered by this tool if it is integrated by the system? (Many choices are possible)

- Getting in contact or making appointment with a partner, supplier, service provider, a potential customer
- Information related to the sector (commodity prices, cost of production factors...)
- Contacts database management (partners, suppliers, service providers, potential clients ...)
- Documents manager (studies, publications, scientific journals, regulation...)
- Dissemination Network of competitor territories good practices
- Conduct marketing or prospecting campaigns through mailing, emailing, phoning....
- Other proposals:

.....
.....
.....

c- How often do you think you will make us of the module of this platform?

- Frequently (several times per week)
- Occasionally
- Rarely
- Never

**Project or production management software*

Explanation: this tool is used to capitalize the business at a knowledge organization projects. It can help to capitalize knowledge at the project level but also at the team level. This is a software solution for territory project management which let the user schedule a project or production tasks related or not to territorial intelligence action.

a- The establishment of such a tool within the cluster members is:

- Primordial
- Interesting
- To be considered, but you remain unconvinced
- Needless

b- What could be learned through the use of this tool? (Many choices are possible)

- Feedback on previous experience (avoid own mistakes or those committed by others)
- Cost optimizing
- Resource management optimizing
- Identification of good practices
- Capitalisation of knowledge and know-how
- Locating each actor in the chain of project completion
- Facilitating decision making
- Other proposals:

.....

1- Among the territorial intelligence tools listed below, and in view of the above, which one or ones do you think are the most relevant to be used in the system within the regional cluster?

- Collaborative work interface software (e.g. intranet)
- Project or production management software
- Customer relationship management software

2- If you have any suggestions for other tools that seem interesting to be used within the cluster members please list them:

.....

.....

.....

.....

3- Data usage, reporting and sharing

a- In your opinion, how can the cluster members access to the news procured by the system?

- By establishing an alerts system by email to recipients
- By sending a report by mail
- By sending SMS
- By an individual meeting with an expert of the unit operating the EI system
- Through a presentation at a coordination meeting
- Through free access of users to the system tools
- Other (to be specified)

b- What would be the access right allowed to each system user? Please check the option that seem most appropriate

Cluster members	Full access (administrator)	Consultation access	Modification access*
Public institutions			
Local authorities			
Training and R&D Institutes			
Professional Associations			
Professional Chambers			
Private companies			

*Add changes to his personal account

Axis 5: Territorial intelligence system management

1- In your opinion, who should be responsible for the operational management of such device?

- The board of directors of the regional cluster association
- The permanent administrative structure of the regional cluster association

- A consulting firm or expert (outsourcer)
- One of the regional cluster association member (to be specified):.....
- Other (to be specified):.....

2-How do you think the cost of this operating device could be covered?

- Contributions by the association members
- Subsidies of governments, development agencies and public institutions
- Products of services delivered by the association
- Other resources: (to be specified).....

3- In your opinion, which are the other resources to be mobilized for the implementation of the system?

.....

.....

.....

.....

.....

.....

.....

4- The election of an animation body of the territorial intelligence system is:

- Primordial
- Interesting
- To consider, but you remain unconvinced
- Needless

5- Are you ready to play the role of facilitator of the system within the regional cluster?

- Yes and I'm ready to devote time for this purpose
- Yes but I can't devote much time for this purpose
- No, but I find the idea interesting
- No, I don't appreciate the usefulness of such action

6-Do you have other ideas to promote the implementation of a Territorial Intelligence system within the regional cluster?

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Thank you for your valuable cooperation

