WP5 - SUCCESS FACTORS AND BARRIERS FOR ATTRACTING INVESTMENTS AND BIOENERGY SOURCE BASED INVESTMENT

Project acronym	EPIC 2020
Project title	Symbiotic bio-Energy Port Integration with Cities by 2020
Start/end date of the project	01.04.2013 – 31.03.2016
Project coordinator	City of Malmö
Responsible partner author	Simone Stancari AGIRE scarl Project Manager Tel: +39 376 229694 E-mail: stancari@agirenet.it
Deliverable due month	March 2016 (not official delivery)

Co-funded by the Intelligent Energy Europe Programme of the European Union

AGIRE – Energy Management Agency
Piazza Sordelo 43 – 46100 MANTOVA IT
tel +39 0376 2296944
www.agirenet.it stancari@girenet.it

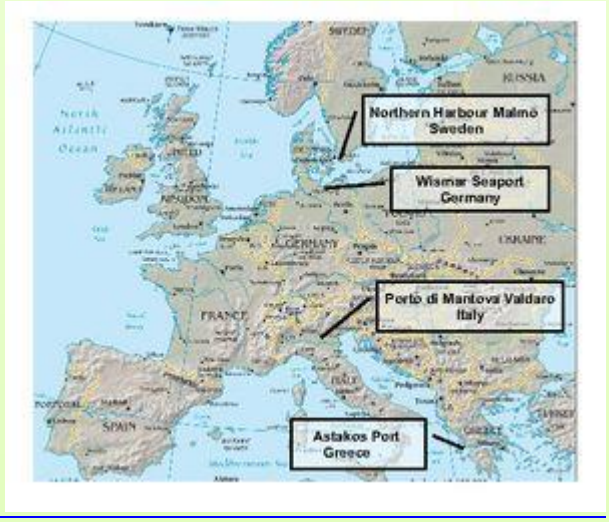
EPIC
Symbiotic bio-Energy Port Integration with Cities by 2020

WP5.1 Defining success factors and barriers for attracting bioenergy resource based enterprises and investments

Task 5.1: Interview to built a partnership common knowledge about financing possibility of biotech investments

EPIC 2020 European project premise

*EPIC 2020 aims at promoting the use of untapped bioenergy resource potential of ports and surrounding areas by applying the **industrial symbiosis approach**.*
*The **industrial symbiosis concept** is implemented where a number of industries can interact in order to gain from each other's flows of energy and materials such as biomasses and bioenergy resources.*
Ports provide crossing points between transport modes of goods and resources, nearby and on-site industrial activities in relation to the delivered resources in the port, and a nearby urban setting.
This untapped bioenergy resource potential adds up to a tremendous amount for such a small area.
Any interaction to promote bioenergy development will be cost efficient and provide high impact on the 2020 targets.
Four ports from northern to southern Europe are participating in EPIC 2020 together with a number of expert organizations and energy companies.



Port sites in interaction

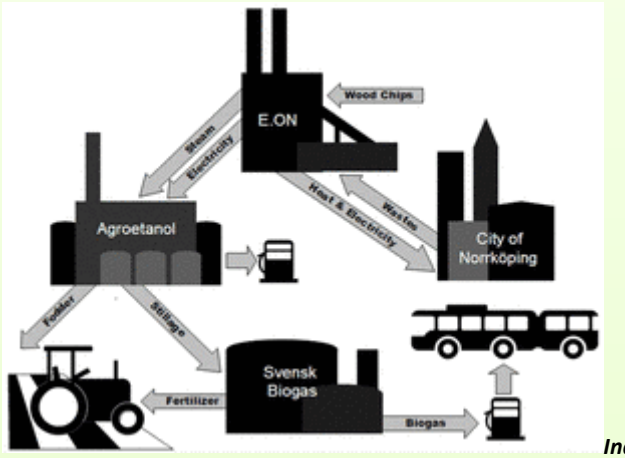
The project is divided in four developmental steps of industrial symbiosis where it is possible for ports, cities and industries to participate irrespectively of their present status on bioenergy issues today. These steps include:

- *building of networks,*
- *assessments of bioenergy resource potentials,*
- *analysis of bioenergy based business development and*
- *formation of public incentives for bioenergy port development integrated with cities.*

Challenges regarding urban economic and sustainable growth port areas, aligned with the potential of locally supplied bio energy resources and available and possible conversion technologies will be explored.
The EPIC 2020 aim is to create platforms for the transformation of port areas to urban-integrated energy systems, where local bioenergy resources are utilized sustainably.

Co-funded by the Intelligent Energy Europe Programme of the European Union

AGIRE – Energy Management Agency
Piazza Sordelo 43 – 46100 MANTOVA IT
tel +39 0376 2296944
www.agirenet.it stancari@girenet.it



Industrial symbiosis example

WP5 will formulate and start the implementation of bioenergy strategies for 2020 and beyond. This WP will transfer the results of WP2, WP3 and WP4 to a decision making and public policy level, with respect to local network co-operation and trans-european networking, the bioenergy resource and biomass flows at each industrial port site and the possibility of port development of bioenergy resource based conversion technologies and on the use and reuse of biomasses available in these areas. In WP 5 these identified prerequisites and possibilities will be used as a basis for the identification of strategies and policies at planning and regulatory level, but also at the operational level that can stimulate the availability of resources outside the project budget and that may be realized through the established networks' investments and future business development
Focus will be on a holistic view of the port areas as a part of the growing surrounding urban areas, where ports are believed to play an important role both in terms of reaching energy and climate goals and in terms of part of the overall spatial planning of the area. The identification of areas of feasibility in the participating port-city areas will be coordinated by AGIRE.

Task 5.2 - Defining success factors and barriers for attracting bioenergy resource based enterprises and investments

The cities of the future will need to be competitive in terms of the quality of life they provide to their inhabitants and the pre-requisites they are able to provide for those businesses (including the employees and families) that choose to have operations there. However, a key to realize those ambitions will be to attract and attain businesses that are willing to make efforts and the necessary investments in that direction in order to reach the 2020 goals. Thus, the profiling and marketing of bio resource based symbiotic ports areas is essential in order to attract business investments based on bio energy and bio mass resources.

***This survey has been undertaken towards other project partners to create a basic knowledge base** over the financing possibility for investment to reach 2020 targets. In this survey forward interviews with local network partners will take place. Further, input will be provided through the organization of workshops at the proposed 3rd Bio energy symbiosis network meeting where one key topic is to discuss the keys to success in this matter (see description of WP2). Based on that AGIRE, will define a "Guideline for partnership procedure", or bioenergy resource symbiosis based partnership roadmap that can be presented to port authorities, public bodies and country governors. It will include measures for finance investments (out from the EPIC 2020 project) relying on the local expression of interests and on the established network platform created by the EPIC 2020, which could be enlarged to other port areas in Europe. The work will be based on the information and results assessed and developed in Task 5.1 and the similar exchange between the local authority partners and knowledge partners will be performed.*

The main goal of this survey is to create a basic knowledge base over the financing possibility to reach 2020 goals and a guideline for partnership procedures.

***The concrete themes and milestones performed by this survey are**:*

Co-funded by the Intelligent Energy Europe Programme of the European Union

AGIRE – Energy Management Agency
Piazza Sordelo 43 – 46100 MANTOVA IT
tel +39 0376 2296944
www.agirenet.it stancari@girenet.it

EPIC
Symbiotic bio-Energy Port Integration with Cities by 2020

1) *Defining success factors and barriers for attracting investment and bioenergy source based enterprise;*
2) *defining a basic joint knowledge over the financing possibility for investments to reach 2020 targets. (M 26);*
4) *Organizing and hold the discussion topic at roundtable meetings in task 5.3 and at the proposed 3rd Bio energy symbiosis network meeting (See WP2)*
5) *Presenting the* ***guideline for partnership procedures*** *to port authorities, public bodies and country governors (M 32).*

The questionnaire has **5 direct factors** (feedstock, utilities, cluster management, local infrastructure and resources) and **4 indirect factors** (economy, labour, market, facilities). Each of macro factor is articulated in a number of micro factors. Macro factors are typical context elements in this sector, while micro factors have been chosen in order to better explain macro factors.
In particular:
INDIRECT FACTORS
1**. Economy**: economic situation, relevance of NIMBY (Not In My Back Yard) factor in decision making, participatory policy level, sustainability attention at policy level
2. **Labour market**: labour policies, industrial relation system, occupation vs qualifications
3. **Market access**: patent protection, price regulation, incentives
4. **Regulation facilities**: financial incentives, subsidies, licence/authorization
DIRECT FACTORS
5. **Cost related to feedstock**: supply market costs, supply market stability, biotech policy support
6**. Utility availability**: energy power, gas, water, district heating, etc.
7. **Joint cluster management**: cluster networking management, shared environmental services, shared research&development,
8**. Knowledge infrastructure**: cluster broadband connection, high speed internet connection availability, proximity phone net
9. **Local infrastructure resources**: port facilities, rail facilities, ICT cluster
The company interviewed have to write name, activity and port and then specify how relevant is each micro factor, then they are asked to rank the corresponding macro factor globally and, in the end, to quote the importance of each of the 9 macro factors out of 100 totally available points. The subsequent data elaboration considers the average between the relevance of micro factors and the global ranking of its macro factor balanced with the final distribution of 100 points to each macro factor.

Please, as project partner, answer to the following question to define barriers and success factors for investment in the field of bio resources in the harbours oriented to a circular economy with the local communities. If you need a contribution by the bio-tech enterprises you are in contact (local/external bio-tech ent.) forward to them this questionnaire and collect the feed back to send to us for a larger statistical sample.

Your contribution will be part of the EPIC project that aims at improving the sustainability relationship that districts have port with the local community.

See the following pages and fill the questionnaire about financing possibilities about bio-tech plants in your region.

Thanks for your contribution!

Co-funded by the Intelligent Energy Europe Programme of the European Union

AGIRE – Energy Management Agency
Piazza Sordelo 43 – 46100 MANTOVA IT
tel +39 0376 2296944
www.agirenet.it stancari@girenet.it

EPIC
Symbiotic bio-Energy Port Integration with Cities by 2020

Questionnaire (project task 5.1)

Name of Entity you represent: *PROVINCIA DI MANTOVA* *Address: VIA DON MARAGLIO N.3 - MANTOVA* *Website: www.provincia.mantova.it* *Email: urbanistica@provincia.mantova.it*	****Which kind of entity/institution/enterprise you represent?*** □ *Commercial* □ *Services* □ *Biobased productive enterprise* *Other entity (specify) public autorithy*

Do you belong to one in the following sectors? Please, specify

a.	Biomass :	☐production	☐harvesting	☐logistic	☐transformation
b.	Forest residues:	☐production	☐harvesting	☐logistic	☐transformation
c.	Agriculture:	☐production	☐harvesting	☐logistic	☐transformation
d.	Chemistry:	☐production	☐harvesting	☐logistic	☐transformation
e.	Plant supplier	☐production	☐installation	☐logistic	☐transformation
f.	Research:	☐production	☐harvesting	☐logistic	☐transformation
g.	Other: specify : public adminitstration				

---

1. ***<u>In choosing a location</u> for a new establishment of the entity of bio-tech which you belong, and evaluating the indirect factor influencing your future choice:***

   a. ***How would be relevant the actual economic situation?***
   [1] [2] [3] [4] [5] [6] [7] [8] [9]
   not so relevant indifferent very relevant

   b. ***How would be relevant the Nimby (Not In My Back Yard) factor for your choice?***
   [1] [2] [3] [4] [5] [6] [7] [8] [9]
   not so relevant indifferent very relevant

   c. ***How would be relevant the local participatory policy level for your location choice?***
   [1] [2] [3] [4] [5] [6] [7] [8] [9]
   not so relevant indifferent very relevant

   d. ***How would be relevant the local sustainability policy level attention for your location choice?***
   [1] [2] [3] [4] [5] [6] [7] [8] [9]
   not so relevant indifferent very relevant

   e. ***How would be relevant an already existing knowledge entities (R&D centres, Universities, Training model performer, ect) ?***
   [1] [2] [3] [4] [5] [6] [7] [8] [9]
   not so relevant indifferent very relevant

   f. ***How would be relevant an already existing local bio-based bench-mark experience for your location choice?***
   [1] [2] [3] [4] [5] [6] [7] [8] [9]
   not so relevant indifferent very relevant

Co-funded by the Intelligent Energy Europe Programme of the European Union

AGIRE – Energy Management Agency
Piazza Sordelo 43 – 46100 MANTOVA IT
tel +39 0376 2296944
www.agirenet.it stancari@girenet.it

Globally, how is the indirect factors/entrepreneurial climate relevant to you?
***(Def.* Entrepreneurial climate= *"the set of tangible and intangible factors that are shaping the performance of entrepreneurial firms in a geographically and politically defined area such as a city")* :**

[1] [2] [3] [4] [5] [6] [7] [8] [9]

not so relevant indifferent very relevant

---

2. **If you were establishing a new bio-tech enterprise or a new its unit in a cluster site, how relevant would be the aspects related to labour market?**

(***Description:*** *"A labour market in an economy functions with demand and supply of labour. In this market, labour demand is the firm's demand for labour and supply is the worker's supply of labour. The supply and demand of labour in the market is influenced by changes in the bargaining power.Tthe labor market is considered as the market mechanism of supply / demand, which regulates the exchange of labor in a manner substantially similar to any other commodity"*)

a. **competitive positioning of enterprises**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

b. **occupational matching adequate qualifications**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

c. **legal regulation of the labor market**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

d. **labor policies and employment (national and / or local)**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

e. **industrial relations systems**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

intervention of support institutions meeting supply / demand (job centers, private agencies operating income, employment offices).
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

f. exhisting labor unions

[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

How are they globally considerable as aspect influencing a new location for a bio-tech investment?

[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

---

3. **If you were establishing a new bio-tech enterprise or a new its unit in a cluster site, how relevant would be the aspects related to market access?**

(***Description***: *"Openness of a country's markets to foreign goods and services. Market access situation reflects the government's economic policies regarding import substitution and free competition"***)**

Co-funded by the Intelligent Energy Europe Programme of the European Union

AGIRE – Energy Management Agency
Piazza Sordelo 43 – 46100 MANTOVA IT
tel +39 0376 2296944
www.agirenet.it stancari@girenet.it

a. **patent protection**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

b. **regulation of prices**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

c. **public investment in research**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

d. **incentives to private companies**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

How market access is globally influencing your new location for a bio-tech investment?
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

4. If you were establishing a new enterprise or a new productive unit in a cluster, how relevant would be regulation facilities as

a. **Lower urbanization costs**
[1] [2] [3] [4] [5] [6] [**X**] [8] [9]
not so relevant indifferent very relevant

b. **Subsidies/Incentive fees**
[1] [2] [3] [4] [5] [6] [**X**] [8] [9]
not so relevant indifferent very relevant

c. **Financial incentives**
[1] [2] [3] [4] [5] [6] [7] [**X**] [9]
not so relevant indifferent very relevant

d. **Licence/authorization process speed**
[1] [2] [3] [4] [5] [6] [7] **X**] [9]
not so relevant indifferent very relevant

How much relevant are globally the regulation facilities?
[1] [2] [3] [4] [5] [6] [7] [**X**] [9]
not so relevant indifferent very relevant

5. If you were establishing a new enterprise or a new productive unit in a cluster site, how relevant would be the costs related to Feedstock

a. **feedstock supply market costs (local short chain/local availability)**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

b. **feedstock market in the cluster / in the area (e.g. Virtual Exchange platform)**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

Co-funded by the Intelligent Energy Europe Programme of the European Union

AGIRE – Energy Management Agency
Piazza Sordelo 43 – 46100 MANTOVA IT
tel +39 0376 2296944
www.agirenet.it stancari@girenet.it

c. **potential stability of supply in the years**

[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

d. **existing local supply cluster agreement**

[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

e. **existing local bio-tech policy support**

[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

Considering all the previous issues, how relevant would be globally for a new bio-tech investment?

[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

6. If you were establishing a new enterprise or a new productive unit in a cluster site, how relevant would be the Utility availability (as energy power, water, natural gas, district heating etc)?

[1] [2] [3] [4] [5] [6] **[X]** [8] [9]
not so relevant indifferent very relevant

7. For your management in a new bio-based investment, how much would be relevant the following the joint cluster activities/services and factors as:

a. **A networking management of the cluster**

[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

b. **A joint administrative service**

[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

c. **A joint shared service for environmental services**

[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

d. **A joint shared service for research and development**

[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

e. **A virtual shared platform of the cluster to exchange energy-waste/byproducts**

[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

f. **Cluster joint promotion of the sustainability of your products/services**

[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

Co-funded by the Intelligent Energy Europe Programme of the European Union

AGIRE – Energy Management Agency
Piazza Sordelo 43 – 46100 MANTOVA IT
tel +39 0376 2296944
www.agirenet.it stancari@girenet.it

Do you think the cluster management of the previous factors would be relevant if designed and distributed by a cluster joint network you could belong?

[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

---

8. Is a knowledge infrastructure concerning for your potential establishing of a new productive about:

a. **local speed internet connection availability**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

b. **phone net in proximity**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

c. **cluster broadband connection**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

Globally, how are the knowledge infrastructures relevant for your location choice?

[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

---

9. If you were establishing a new enterprise or a new productive bio-tech unit in a cluster, how relevant are the local infrastructure resources of the site as

a. **Logistic common docks**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

b. **Cluster ICT**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

c. **Port facilities**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

d. **Rail facilities**
[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

Globally, how much relevant are those facilities for a new potential investment?

[1] [2] [3] [4] [5] [6] [7] [8] [9]
not so relevant indifferent very relevant

Co-funded by the Intelligent Energy Europe Programme of the European Union

AGIRE – Energy Management Agency
Piazza Sordelo 43 – 46100 MANTOVA IT
tel +39 0376 2296944
www.agirenet.it stancari@girenet.it

EPIC
Symbiotic bio-Energy Port Integration with Cities by 2020

CRITERIA RELATIVE RELEVANCE:
please, rank the criteria named in the previous questions by a percentage value in the hypothesis of choosing a new establishment of a your potential bio-tech entity in a industrial location/cluster , considering that the relevance sum at the bottom of the following table shall became 100% of your weight percentages.

	CRITERIA	**WEIGHT Percentage (%)**
1.	***indirect factors***	
2.	***aspects related to labour market***	
3.	***aspects related to market access***	
4.	***regulation facilities***	
5.	***costs related to Feedstock***	
6.	***Utility availability (as energy power, water, natural gas, etc)***	
7.	***Joint cluster service managements***	
8.	***ICT infrastructure***	
9.	***local infrastructure resources of the site***	
	CHECK IF THE TOTAL OF YOUR WEIGHTS HERE IS 100%→	**100%**

Thanks for your answers: its will be precious for EPIC 2020 project .
And now send your filled questionnaire to: **epic@agirenet.it**

Co-funded by the Intelligent Energy Europe Programme of the European Union

AGIRE – Energy Management Agency
Piazza Sordelo 43 – 46100 MANTOVA IT
tel +39 0376 2296944
www.agirenet.it stancari@girenet.it

EPIC
Symbiotic bio-Energy Port Integration with Cities by 2020

This questionnaire Information contacts:

AGIRE - Energy Management Agency	Energy Agency	Mr Simone Stancari Communication and Project Manager AGIRE | Energy Management Agency Piazza Sordello, 43 IT46100 Mantova MN Tel: +39 0376 229694 - 4 Fax: +39 0376 1999791 email: stancari@agirenet.it web: www.agirenet.it

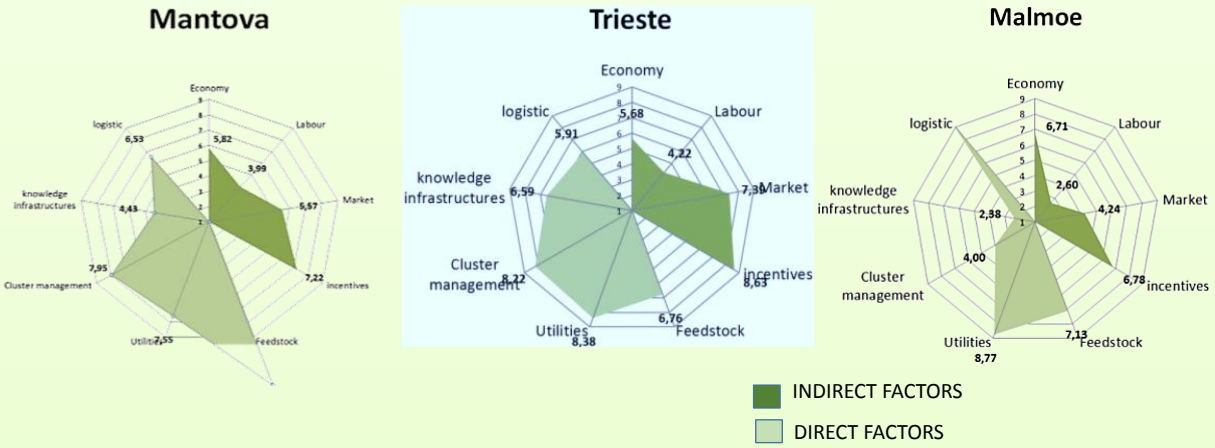
Epic 2020 project Information Contacts:

The city of Malmö	Municipality	Ellen Corke main contact person email: ellen.corke@malmo.se *Per-Arne Nilsson,* Head of Urban development and Climate, Environment Departement, City of Malmö Mobile +46 (0)70-658 99 51 email: Per-Arne.Nilsson@malmo.se

Co-funded by the Intelligent Energy Europe Programme of the European Union

AGIRE – Energy Management Agency
Piazza Sordelo 43 – 46100 MANTOVA IT
tel +39 0376 2296944
www.agirenet.it stancari@girenet.it

The result is represented in the following picture, referred to the ports of Mantova Valdaro, Malmö and Trieste.



Among **direct factors**, **utilities** (i.e. availability of utilities), and in two cases (Mantova and Trieste) the presence of **joint cluster management** are the most important factors, while among **indirect factors**, **facilities** (regulation facilities) is in pole position., followed by the **market** (market access) and **economy** (economic situation at local level).

Co-funded by the Intelligent Energy Europe Programme of the European Union