

## Project Data Sheet

### *Symbiotic bio-Energy Port Integration with Cities by 2020 (EPIC 2020)*

#### Main information

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<b>Project's website:</b>	<a href="http://www.epic2020.eu">http://www.epic2020.eu</a>

<b>Benefits:</b>	<p>The key actors are ports and port authorities, industries/enterprises and associations located in ports, the cities and municipalities, regions/provinces in which the ports are located and external as well as cleantech companies and business investors.</p> <p>For all key actors the project is a chance to get involved in new communities and networks and to gain Knowledge regarding industrial symbiosis as concept. The project assisted the search for solutions to improve the city planning and increase both the attractiveness and increase the positive outcomes from harbour areas, it can contribute to the positive reputation of the municipality/city/region for local citizens, visitors and investors.</p>
<b>Keywords:</b>	EPIC2020, bioenergy, port
<b>Duration:</b>	April 2013 – May 2016
<b>Budget:</b>	1.841.273,00 Euro (EU contribution 79%)
<b>Contract number:</b>	IEE/12/807/SI2.645929

## Summary

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 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 small area. Any interaction to promote bioenergy development will be cost efficient and provide high impact on the 2020 targets.

Five ports from northern to southern Europe participate in EPIC 2020 together with expert organisations and energy companies. The project is divided into 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. These steps include the 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 in 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.

## Project's results

Result 1	Establish a dialogue with stakeholders by developing a joint bioenergy resource based symbiotic port and cities integration concept and creating know how on networking for promoting this approach through the establishment of five port site networks and a European transnational network.
Result 2	Assess the bioenergy resource potential by creating a clear and visualized picture of the interlinkages of biomass and bioenergy flows at the port sites and creating know how on the joint priorities, obstacles, potentials and best practices for the assessments in port areas.
Result 3	Trigger bioenergy resource exchanges (supply chains) and business activities by providing a clear picture on how to stimulate the establishment of biomass conversion businesses by combining down-stream and up-stream approaches. A biomass communication and logistics tool will be developed with the aim to stimulate bio resource based development at port sites.
Result 4	Create implementation strategies on a decision making level by developing a vision and a roadmap for bio resource based symbiotic port development, a profiling framework and a guideline for public/private partnership procedures and agreements.

## Lessons learnt

Lesson 1	Within the EPIC project it has been found highly valuable to establish site specific networks. The networking activities have served as a core in facilitating the development by sharing results that concerns biomass potentials, and trigger new cooperation's by showing opportunities to be investigated. It takes quite a long time to establish networks, but the next steps are much more time efficient once a network is in place.
Lesson 2	The combination of the holistic approach and bottom up approach is useful in this kind of development. The holistic approach is often taken by public actors that have a focus on regional development, while the bottom up approach is more business orientated. This means that cooperation between public and private actors is a key for success.
Lesson 3	Tools can be powerful in the development and to trigger a market if they are correctly developed and smartly used. EPIC stakeholder's expressed that by using the EPIC logistical tool and saw the available biomass market; they got convinced to invest in biomass systems.
Lesson 4	The creation of a vision and roadmap for a port of a region, can serve as an opportunity to increase the cooperation within an organization and between partners, at the same time as it is very useful to have these documents for a long term development of a region. Next important step is to continue sharing and anchor the vision in different stakeholder organisations.

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