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**Research area: General aims**

Resource saving

**Key words:**

Industrial parks, Industrial symbiosis, Resource efficiency, CO2 emissions

**TITLE:****LOCIMAP – Low Carbon Industrial Manufacturing Parks****Background/Problem area**

In 2010 a group of 14 European companies and organisations responded to the European Commission's call to examine the future for low carbon manufacture at integrated industrial complexes (Parks). The LOCIMAP – Low Carbon Industrial Manufacturing Parks – project is the result and has been looking critically at the way European industrial complexes might develop strategies and technologies to meet the challenges foreseen. The energy & resource intensive sectors which lie behind the development of the parks we have in Europe are a very significant part of the economy. Nearly 7 million jobs and over 450,000 companies are involved.

**Objectives/Research results**

Supported with state-of-the-art technical and business know-how, the project will identify the practical paths for Europe to grow a revitalised low carbon industrial base. A major objective is to achieve much closer integration in manufacturing complexes so they can operate at increased efficiency both of energy and material use, and with lower emissions.

The project concept is based on re-examining the structure of industry parks using best practice benchmarks from across leading parks in EU and elsewhere, and the partner's proven record in Industrial Symbiosis. The focus will be on opportunities to:

- substantially improve energy & resource efficiency
- reduce CO2 emissions

Based on review of a comprehensive range of processes representing the full spectrum of energy sources and demands, the LOCIMAP project shall:

- Identify carbon targets for future manufacturing
- Identify manufacturing integrations and symbiosis and determine the requirements for enabling technology
- Define dedicated energy services to suit each such combination
- Calculate the low carbon potential arising and review against the original targets
- Review the dynamics of site operation to support such operations and the linkages needed into external supply chains
- Assess the impact on, and possible shift of, business paradigms as a result

**Application/Economic benefits**

Environmental benefits are significant. The analysis done shows that integrated industrial parks designed appropriately for process integration with optimised heat recovery have the potential to exceed the EU ETS 2020 and SPIRE 2030 CO2 reduction targets. Examples from LOCIMAP partners prove too that the socio-economic benefits of a park's integration with the nearby community are considerable. The existing resource and energy intensive industry in Europe is traditionally been sector focused, and this provides opportunities for things to be done very differently. Industrial Symbiosis seems to be the answer, but cannot be considered as a panacea. There are obvious questions as to how IS can be applied to existing industrial parks, what key technologies need to be developed and deployed, and what business models can support this change. LOCIMAP partners will propose answers to these questions.

**Period of time: 01.12.2012 – 30.11.2014**

**Remarks**

The Coordination and Support Action 296010 LOCIMAP is being coordinated by the North East Process Industry Cluster (NEPIC), UK. The project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration.

[www.locimap.eu](http://www.locimap.eu)