

Application of Industrial Ecology to the INSPIRA Zone: Territory Planification and New Activities

Authors : Mary Hanhoun, Jilla Bamarni, Anne-Sophie Bougard

Abstract : INSPIR'ECO is a 18-month research and innovation project that aims to specify and develop a tool to offer new services for industrials and territorial planners/managers based on Industrial Ecology Principles. This project is carried out on the territory of Salaise Sablons and the services are designed to be deployed on other territories. Salaise-Sablons area is located in the limit of 5 departments on a major European economic axis multimodal traffic (river, rail and road). The perimeter of 330 ha includes 90 hectares occupied by 20 companies, with a total of 900 jobs, and represents a significant potential basin of development. The project involves five multi-disciplinary partners (Syndicat Mixte INSPIRA, ENGIE, IDEEL, IDEAs Laboratory and TREDI). INSPIR'ECO project is based on the principles that local stakeholders need services to pool, share their activities/equipment/purchases/materials. These services aims to : 1. initiate and promote exchanges between existing companies and 2. identify synergies between pre-existing industries and future companies that could be implemented in INSPIRA. These eco-industrial synergies can be related to: the recovery / exchange of industrial flows (industrial wastewater, waste, by-products, etc.); the pooling of business services (collective waste management, stormwater collection and reuse, transport, etc.); the sharing of equipments (boiler, steam production, wastewater treatment unit, etc.) or resources (splitting jobs cost, etc.); and the creation of new activities (interface activities necessary for by-product recovery, development of products or services from a newly identified resource, etc.). These services are based on IT tool used by the interested local stakeholders that intends to allow local stakeholders to take decisions. Thus, this IT tool: - include an economic and environmental assessment of each implantation or pooling/sharing scenarios for existing or further industries; - is meant for industrial and territorial manager/planners - is designed to be used for each new industrial project. - The specification of the IT tool is made through an agile process all along INSPIR'ECO project fed with: - Users expectations thanks to workshop sessions where mock-up interfaces are displayed; - Data availability based on local and industrial data inventory. These input allow to specify the tool not only with technical and methodological constraints (notably the ones from economic and environmental assessments) but also with data availability and users expectations. A feedback on innovative resource management initiatives in port areas has been realized in the beginning of the project to feed the designing services step.

Keywords : development opportunities, INSPIR'ECO, INSPIRA, industrial ecology, planification, synergy identification

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