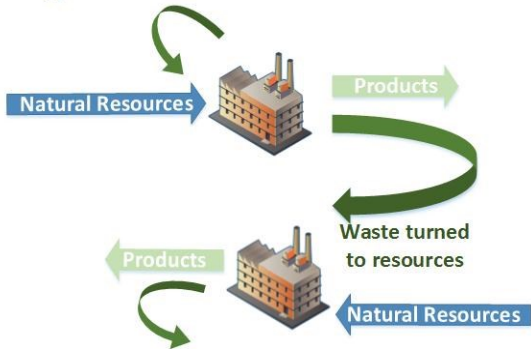


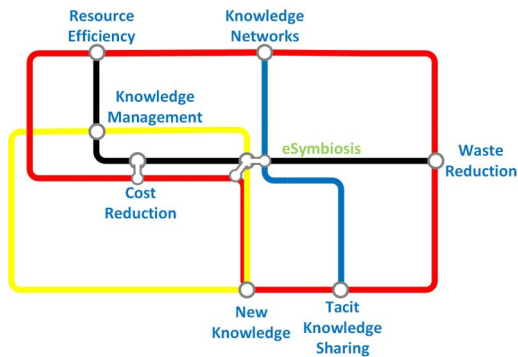
Traditional Approach



Industrial Symbiosis Approach



“One man’s waste is another man’s treasure.”



- Industrial Symbiosis (IS)
- Information Technology (IT)
- Industries
- Semantic Technologies



Project Information

www.eSymbiosis.eu
LIFE09 ENV/GR/000300

Partners



ENVIRECO CONSULTING



eSymbiosis
Knowledge-based Service for Industrial Symbiosis

Aims & Objectives

eSymbiosis develops a knowledge-based service to promote, demonstrate and advance Industrial Symbiosis (IS) in Europe.

- ◆ Consolidate practices and valuable knowledge base established IS practice
- ◆ Build features to support innovative solutions and policy approaches
- ◆ Build a knowledge-based approach to report measurable social, environmental and economic benefits
- ◆ To promote and to prepare and train industries to embark on IS and to use the service
- ◆ Deploy the widest possible application of scientifically verified technologies
- ◆ Provide means to disseminate IS widely offering the web service for demonstration, training and promoting of the IS concept
- ◆ Improve and increase the participation of SME's through the automated service
- ◆ Reduce the natural resource consumption (raw materials, energy, utilities) reducing waste streams to landfill
- ◆ Establish Industrial Symbiosis networks and recruit champions to disseminate IS



Technological Innovation

eSymbiosis takes advantage of advanced semantic technologies:

- ◆ Ontology Models
- ◆ Semantic Matching Algorithm
- ◆ Semantic Web Services

Semantics

A domain ontology representing IS practice is employed in to collect information for participants, store information, represent domain knowledge and identify semantic similarity between resources.

The use of semantics enables:

- ◆ Tacit Knowledge Integration
- ◆ Unified Controlled Vocabulary
- ◆ Semantic Partial Matching
- ◆ Knowledge Inference
- ◆ Multilingual Modeling



Web Service

eSymbiosis has been implemented as a web service offering:

- ◆ Online access (24/7)
- ◆ Dynamic pricing
- ◆ Capabilities to negotiate trade without mediation
- ◆ Low cost of operation
- ◆ Minimum time investment

Benefits

- ◆ Improved planning and decision making
- ◆ More opportunities for waste valorisation
- ◆ Processing technologies integration
- ◆ Promoting SME's participation
- ◆ Eliminating syntactic issues among users
- ◆ Machine interpretable information
- ◆ Multilingual Service