



Partly funded by
eSymbiosis LIFE09 ENV/
GR/000300 Project

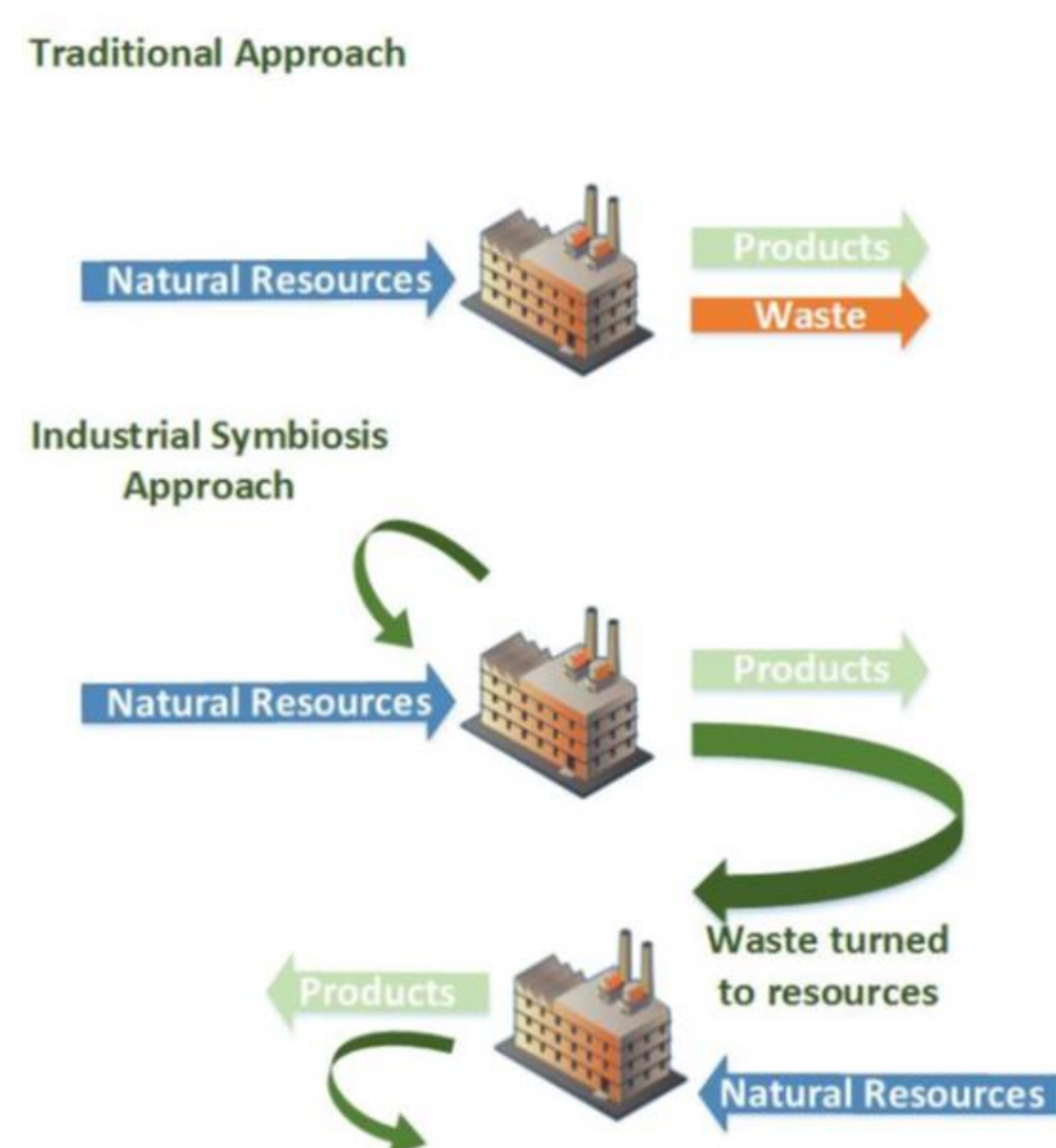


Project Information

- Start Date: 01/10/2010
- End Date: 30/06/2014
- Participants: 1 Local Authority, 2 Universities, 4 Private Companies
- Duration: 44 Months

Why Industrial Symbiosis?

Industrial Symbiosis (IS) is an innovative approach that brings together companies from different industries with the aim of improving the resource consumption and reduce waste while delivering economic, environmental and social benefits to all participants.



Why Semantics?

- Reducing **conceptual** heterogeneity
- **Standardised** vocabulary
- Eliminating **syntactic** issues
- Removing “**jargon**” barrier
- Inference of “**new**” knowledge
- Integration of **tacit** knowledge
- Semantic **partial** matching
- Allow **multilingual** modeling

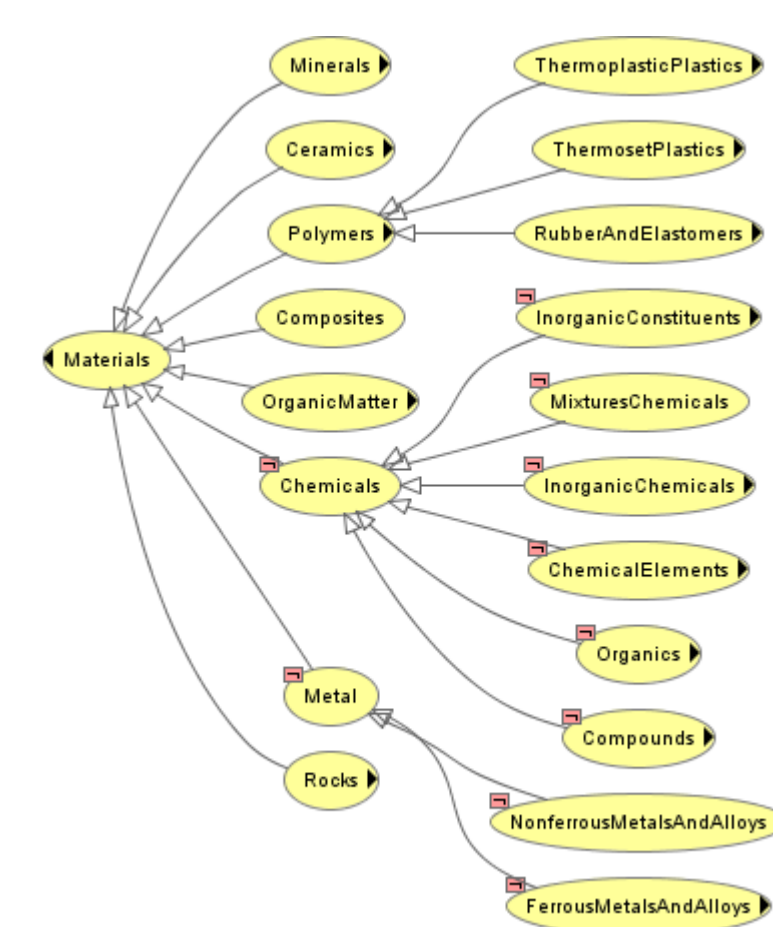
Aims & Objectives

- eSymbiosis develops a web based platform for Industrial Symbiosis (IS) communities, offering **automation** and facilitating IS practice
- Builds features to support **innovative solutions** and policy approaches
- Facilitates IS implementation at local, **regional** and **national** level
- Promotes and prepares and trains industries to use this IS service
- Reduces the **natural resource** consumption (raw materials, energy, utilities) reducing waste being landfilled
- Improves and increases the participation of **SMEs** into the IS activities

Technological Innovation

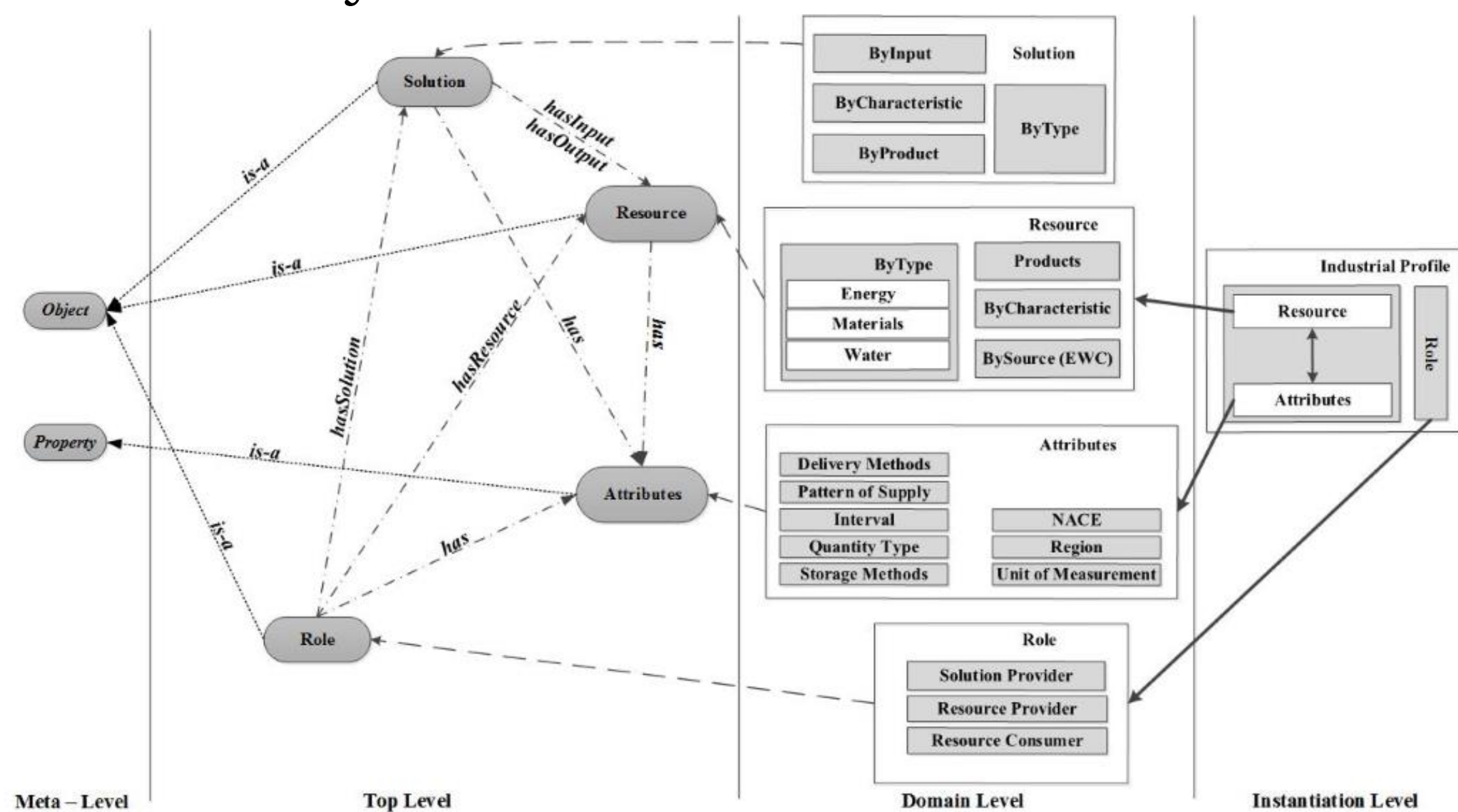
eSymbiosis takes advantage of a wide selection of advanced **semantic** technologies:

- Ontology models
- Semantic matching algorithm
- Semantic Web Services

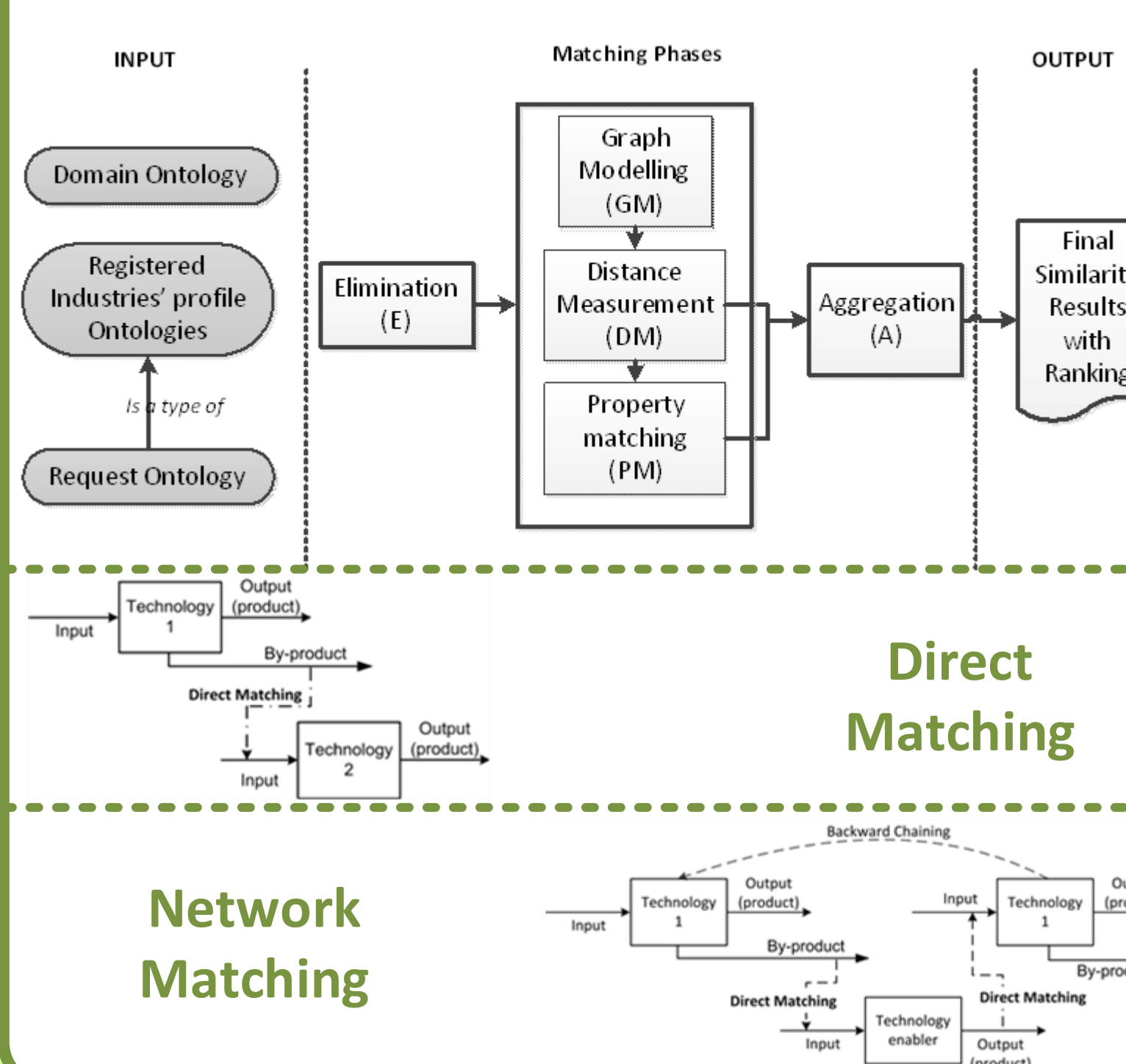


The Ontology Models

The domain ontology is used to **represent** the domain of Industrial Symbiosis



Semantic Matching Algorithm



Benefits

- Improved planning and **decision making** for establishing symbiotic synergies
- Presenting companies with more potential opportunities for **waste valorisation**, re-use and sharing resources
- Web service implementation offering **online access**, dynamic prices and capabilities to negotiate trade
- Removing “**jargon**” barrier
- Inference of “**new**” knowledge
- All the information can be **processed** by machines
- Integration of **tacit** knowledge
- Semantic **partial** matching
- **Multilingual** Service

Implementation

eSymbiosis is 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

The Project



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www.eSymbiosis.eu

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