

# I – SUP Conference

***Sustainable industrial networks:  
a study of 4 cases of sustainable  
industrial cooperation in Europe***

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# Structure of the presentation

1. Introduction
2. Overview of the models of sustainable industrial cooperation
3. Lessons learned



# Introduction

**SINET:** Sustainable Industrial Network and Its applications on Micro Regional Environmental Planning

**Framework:** Asia Pro Eco Programme of the European Commission

**Partners:**

- NIR (International Council of Swedish Industry) Sweden
- VITO (the Flemish Institute for Technological Research) Belgium
- NetPEM (Network for Preventive Environmental Management) India
- CII (Confederation of Indian Industry) India



## **Overall objective of the SINET project:**

‘to develop and adapt solutions to promote sustainability of the micro regions, specifically through making the industry network of the micro region more effective and efficient, thereby making products, processes and services at the micro region more resource efficient and less polluting’

## **Main objective of the first part of the project:**

‘to identify examples of sustainable industry networks in Europe and to learn from the experiences acquired in those cases’

## **Many types of sustainable industrial networks**

Four types of sustainable industrial networking in Europe selected



# Models of sustainable industrial cooperation

The four European models and cases:

- The sustainable revitalisation model – Landskrona (Sweden)
- The park management model – Belgium and the Netherlands
- The industrial district model – Santa Croce sull'Arno (Italy)
- The industrial symbiosis model – Kalundborg (Denmark)



# The sustainable revitalisation model Landskrona - Sweden

Existing industrial parks can be made sustainable or 'sustainably revitalised' by systematically identifying potential synergies among companies and by forming a network of collaborating organisations.

This approach offers environmental, social and business profits.

Possible areas for cooperation are the exchange of waste, by-product and energy streams, sharing utilities and infrastructure, and exchanging human and managerial resources.



# The sustainable revitalisation model Landskrona - Sweden

## Promoter of the project

- The project was initiated in 2002 by the International Institute for Industrial Environmental Economics of Lund University in Sweden.
- The case of Landskrona is an interesting example of an initiative aiming at revitalising an existing industrial area.



# The park management model Belgium and the Netherlands

## ‘Park management’

- initiates cooperation between companies situated on the same site
- in order to strive for the development of a sustainable industrial site
- can result in an increase of the economic return and of the business competitiveness
- a reduction of the environmental impact
- a more intensive use of space
- better labour conditions
- the improvement of the individual environmental performances of the participating companies





# The park management model Belgium and the Netherlands

## Promoters of the project

- Project situated both in Belgium and the Netherlands.
- First part of the study started in 2003. Project is now in its second phase and will last until 2008.
- Promoters of the project:
  - Provincial Development Authority of the province of Western Flanders (Belgium)
  - Provincial Development Authority of the province of Eastern Flanders (Belgium)
  - Province of Zeeland (the Netherlands)
- Aim of the project: to promote and to introduce the concept of park management on several selected industrial sites in Flanders and Zeeland.
- Interreg project.



# The industrial cluster/district model Santa Croce sull'Arno (Italy)

## Sustainable cooperation

- In the 1970's the first environmental problems arose.
- Answer of the tanning industry: a policy of 'sustainable development'.
- Two tanners' associations were founded.



# The industrial cluster/district model Santa Croce sull'Arno (Italy)

## Sustainable cooperation

- With the support and assistance of the Tanners' Associations tanneries have tackled important environmental issues such as:
  - the construction of centralised purifying plants
  - creation of new industrial areas able to gradually absorb the tanneries relocating out of urban areas
  - salvage of by-products of tanning
  - reuse of the sludge resulting from purifying processes
- Rather than equip each company with a treatment system, the Tanners' Associations proposed to create solutions for each kind of problem for the district in its entirety.

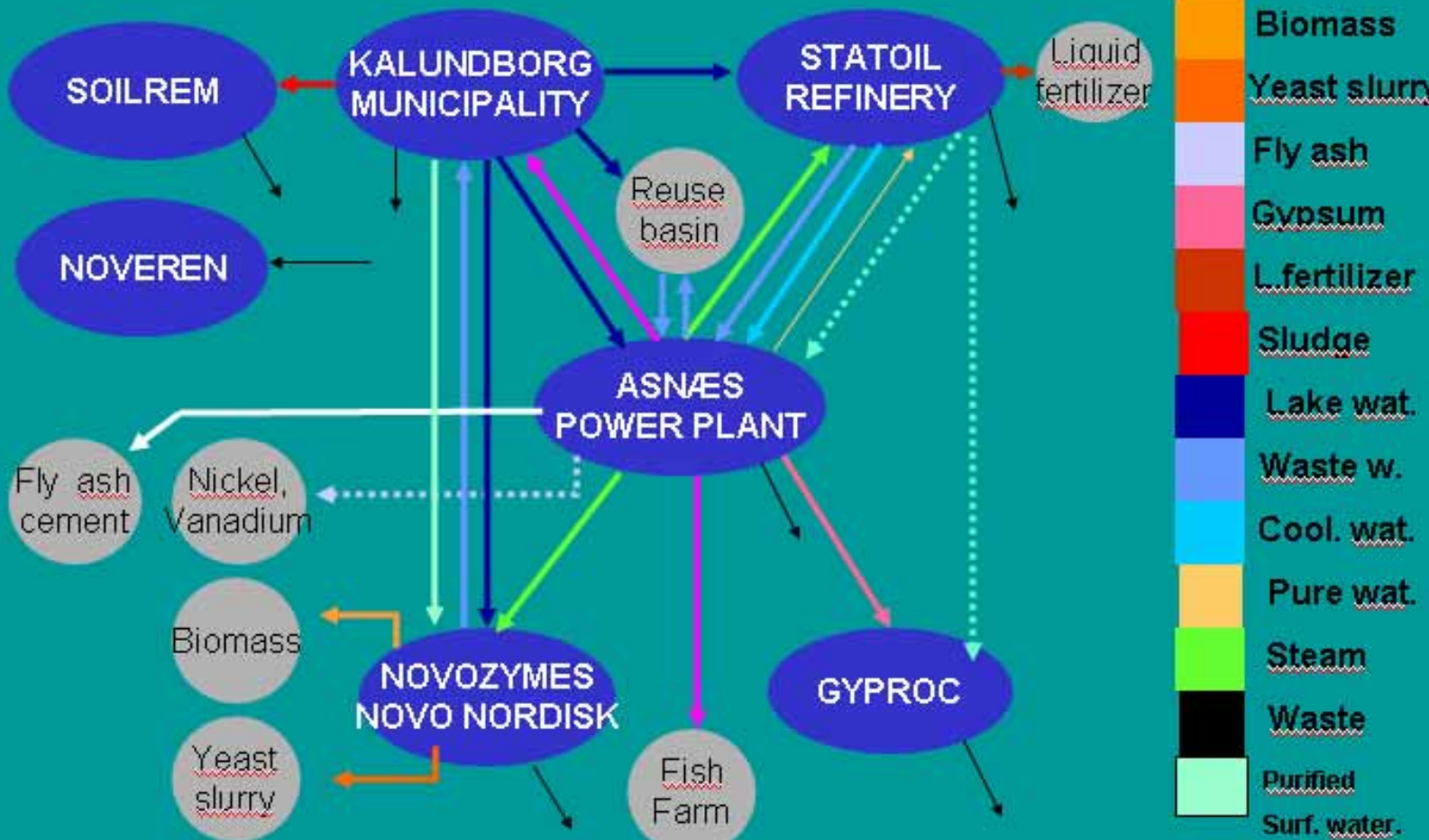


# The industrial symbiosis model Kalundborg (Denmark)

- Symbiosis: coexistence and collaboration of different organisms in such a way that each individual organism benefits from that coexistence.
- Industrial symbiosis: collaboration between different industries for mutual and environmental benefit.
- In Kalundborg industrial cooperation takes place between a number of companies and the municipality, all exploiting each other's residual or by-products mutually.
- The by-products (energy, waste, process water) of one company are exchanged into another company, so that a minimum of waste remains. This results in an optimum use of energy and water and in a substantial reduction of emissions.



# THE INDUSTRIAL SYMBIOSIS 2006



Jørgen Christensen, January 2006

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# Lessons learned

1. Sustainable cooperation between companies is a workable concept with positive economic and environmental results.
2. In the first place economic reasons and legal constraints urged the parties to cooperate closely.
3. Numerous examples of sustainable cooperation.
4. Dissemination of information on sustainable industrial cooperation is important.
5. Financial incentives can accelerate the process of sustainable cooperation.



# Lessons learned

6. Kalundborg is one of the few cases where sustainable industrial cooperation spontaneously arose. In most of the cases an intermediate organisation is needed to organise the cooperation between companies.
7. Sustainable industrial cooperation is a growing process.
8. An overall applicable blueprint for cooperation is not available.
9. Environmental legislation in the European Union will become increasingly stringent.
10. The bottom-line of the study of the European cases is that sustainable industrial networking integrates industrial and ecological excellence in order to create economic opportunities and to improve environmental performances.

