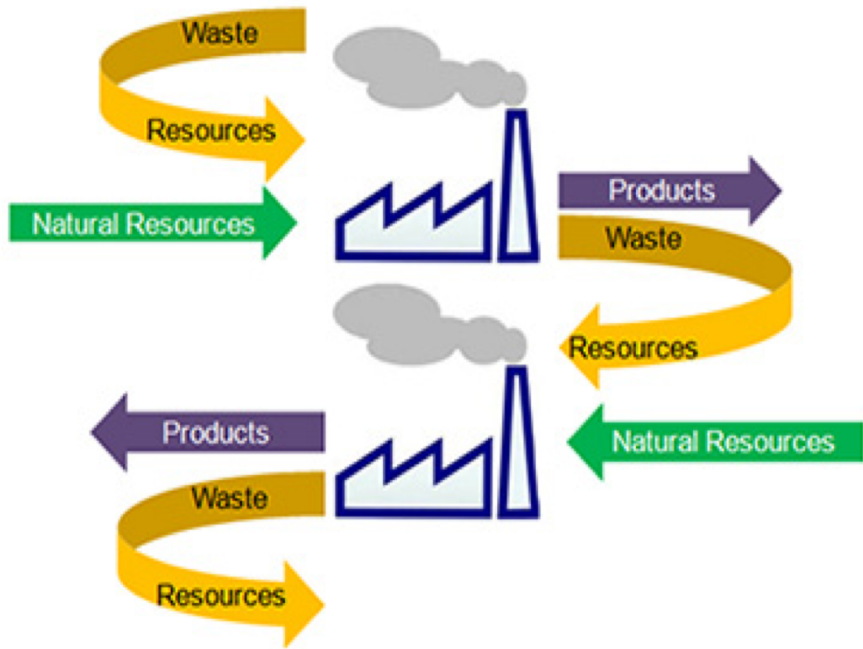


# Industrial symbiosis



## Group 5

Ilvija Ašmane

Vaida Steponaviciene

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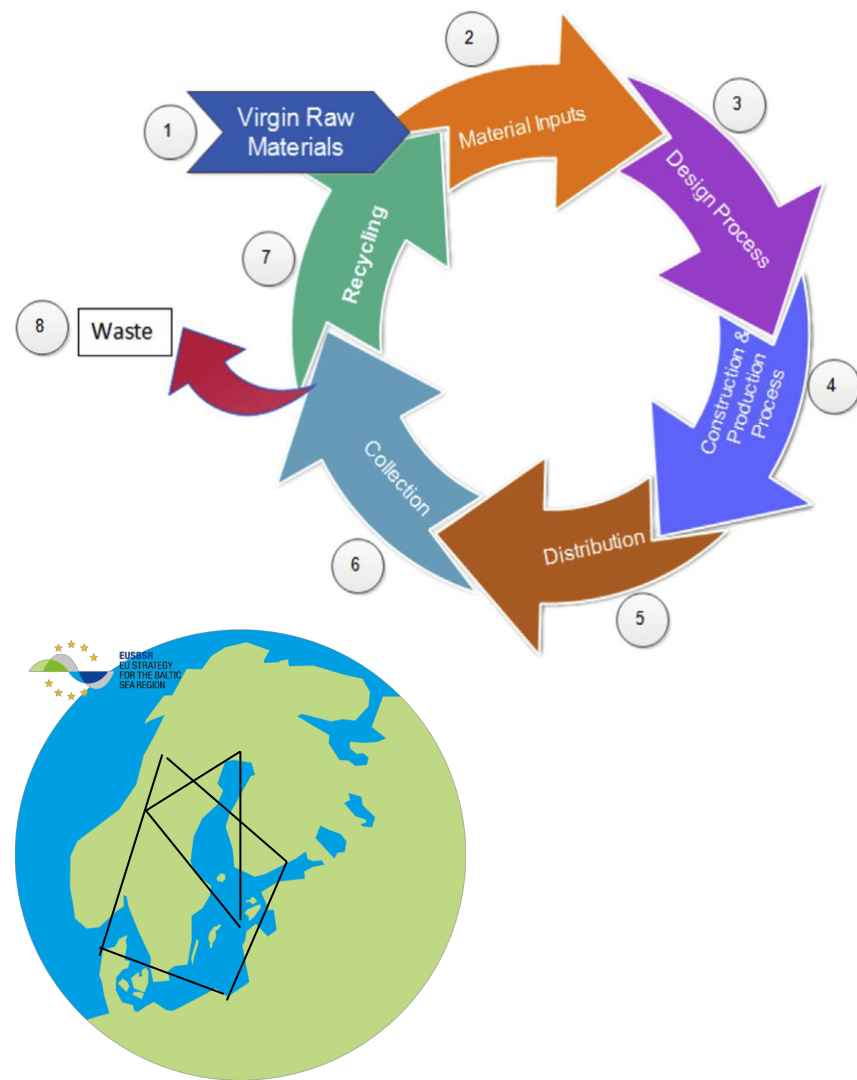
Vida Gintautaitė

Hans-Olof Stålgren

21. - 23.01.2019 Vilnius, Lithuania

# Our tasks and questions:

- Examples of industrial symbiosis,
- Methods to screen and evaluate valuable side streams,
- Raising awareness about industrial symbiosis among civil servants,
- Promote a transnational cooperation in this theme.



# Definitions, Pedersen

## SYMBIOSIS IS:

Collaboration between different organisms for mutual benefit



## INDUSTRIAL SYMBIOSIS IS:

Collaboration between different industries (companies) for mutual economic and environmental benefit

[www.symbiosis.dk](http://www.symbiosis.dk)

# INDUSTRIAL SYMBIOSIS

BY-PRODUCTS

INDUSTRIAL  
NETWORKING



ECONOMIC AND  
ENVIRONMENTAL  
BENEFITS

RAW-MATERIALS

# INDUSTRIAL SYMBIOSIS IN KALUNDBORG

- The Symbiosis is based upon commercial agreements between independent partners
- The Symbiosis is not an invention - just common sense
- The Symbiosis was created as a “non-project” made by a “non-organization” (bottom up)

*But there are also top down approaches*



# Conclusions from Kalundborg, Pedersen

- Participants must fit together, but be different
- Large, continuous waste streams
- Each project must be economically viable
- A short physical distance between the participants
- A short mental distance between the participants



# **Industrial symbiosis are often quite big**

Kemi Tornio > several 1000 employees

Kalundborg

> 4000 employees

Sotenäs

> several 100 employees



# Our suggestions

- Get input from the Rural Networks in BSR about the interest in transnational cooperation (TNC) between the countries within LEADER Smart Village initiative or between the National Rural Networks or .. ?
- Form a TNC about methods for industrial symbiosis in small communities.
- Join the BSR Industrial Symbiosis Roadshow.
- Funding: LEADER in the Rural Development Program, NCM (some seminars...) .. ?



# Your task in group discussions

Please discuss in smaller groups:

- Does it have to be so big?
- How can an industrial/company symbiosis at a very small scale, be established? Is it even possible?
- Describe an industrial symbiosis in a small community!
- What kind of companies do fit in best in such a small symbiosis?
- What are the most valuable side-streams for a bio-industrial-symbiosis?
- Where or how is the youth involvement perspective?