Industrial Symbiosis
A driver of Green Growth in Nordic Regions
Case Kalundborg

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A network co-operation between:

- Six processing companies
- One waste handling company
- The Municipality of Kalundborg.
Philosophy:

- Exploit each other’s residual or by-products
- One company’s by-product becomes an important resource to one or several of the other companies
- The outcome is reduced consumption of resources and a significant reduction in environmental strain
- The partners also benefit financially from the co-operation
Material share

- Steam and Heat
- Water
- Wastewater
- Refinery gas
- Gypsum
- Ash
- NovoGro®
- Yeast slurry
- Liquid fertilizer
- Sludge
Requirements

- A number of company conditions must be fulfilled:
  - The companies must fit each other
  - There must be openness between the companies
  - A bottom up process based on trust is needed
- A number of territorial conditions must be fulfilled:
  - The companies must be located near each other
  - The municipality should help facilitating the processes
  - Local actors need to be involved
  - The bottom-up strategies should however not only be related to local actors, but also related to regional actors
- A number of overarching national strategies should be developed
  - Requires interactions between bottom-up and top-down planning to ensure that regions are competitive
Thank you for your attention