



Business models for biofuels

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Background



- Renewable fuels are an abundant raw material for energy production – different kinds of raw material are available almost everywhere.
- Non-traditional raw materials can often be used and the local availability can vary very much.

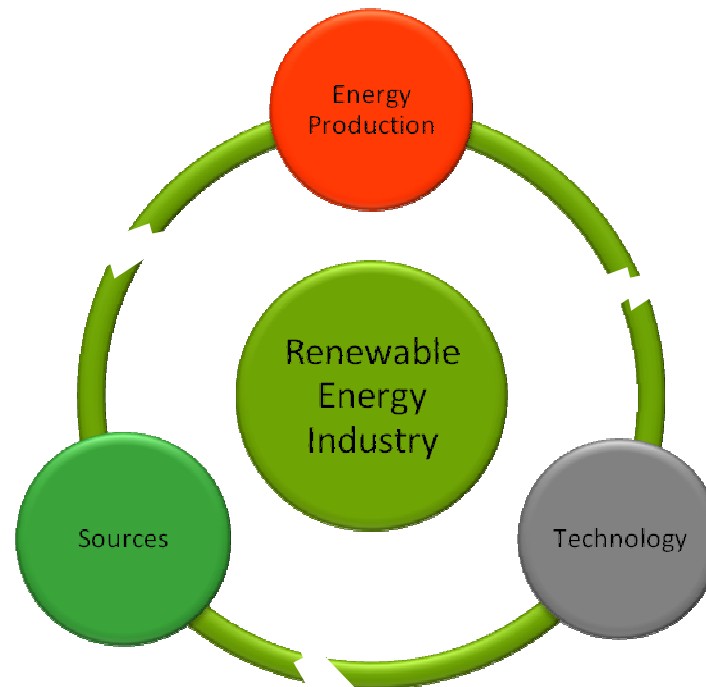
Maalax Bioenergy Company 's prices of waste handling are as follows:

Pig manure, solid:	1,5 euros per tonne	Mink corpses:	110 euros per tonne
Pig manure, liquid:	1,25 euros per tonne	Sick or dead animals:	100 euros per tonne
Sludge from waste water treatment plant:	43 euros per tonne	Slaughter house waste:	30 euros per tonne
Biological waste:	43 euros per tonne	Other type of biological waste:	65 euros per tonne
Mink and fox manure:	1,5 euros per tonne		

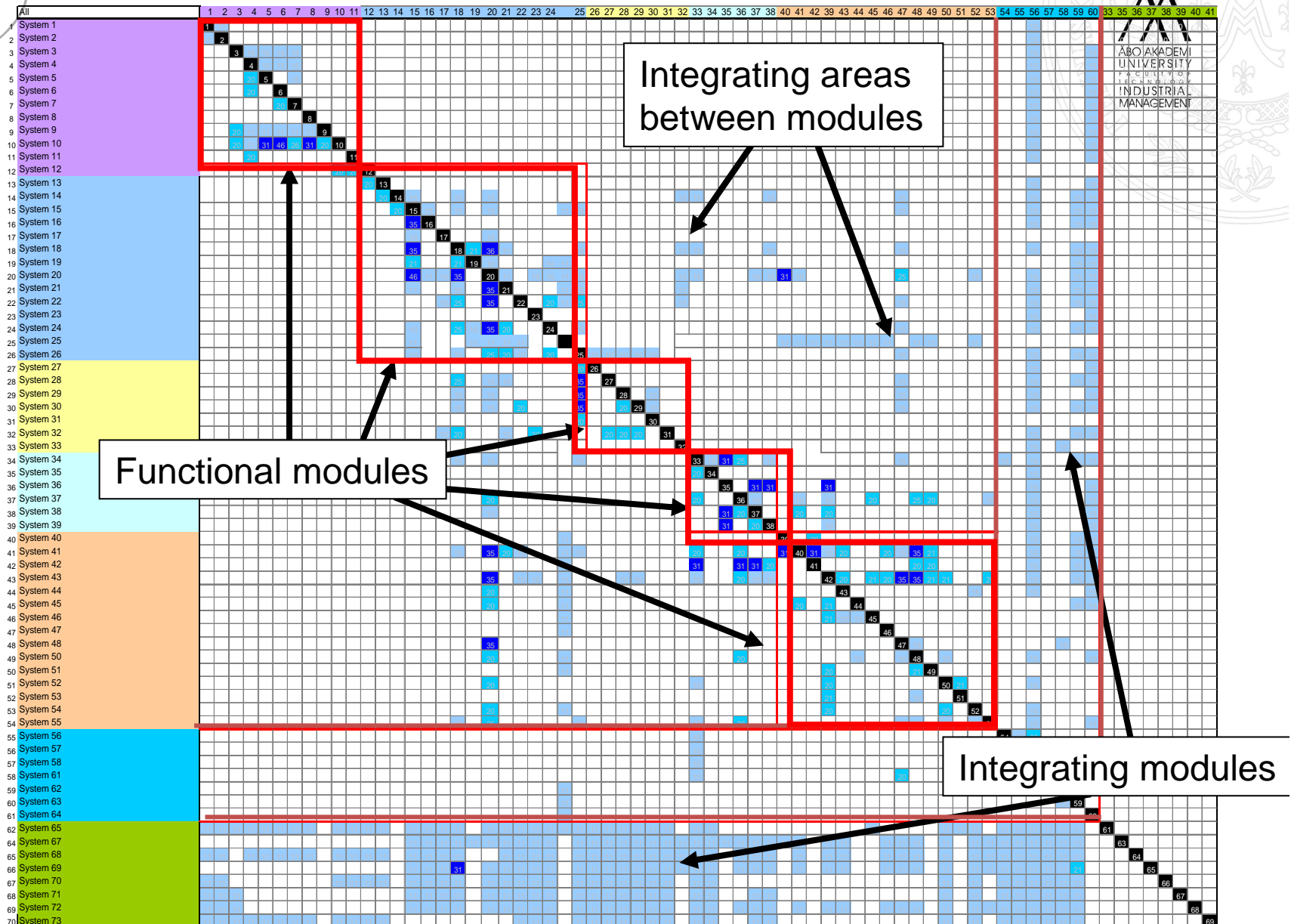
- There are many technologies available, new technologies and new ways of use are constantly developed.

Atomism

- Companies focus on their own core business – not on how it performs as part of a larger system.
 - Roles and interfaces are unclear
 - Extent of system is unclear
 - High degree of uncertainty
- Companies see things through their own core knowledge.

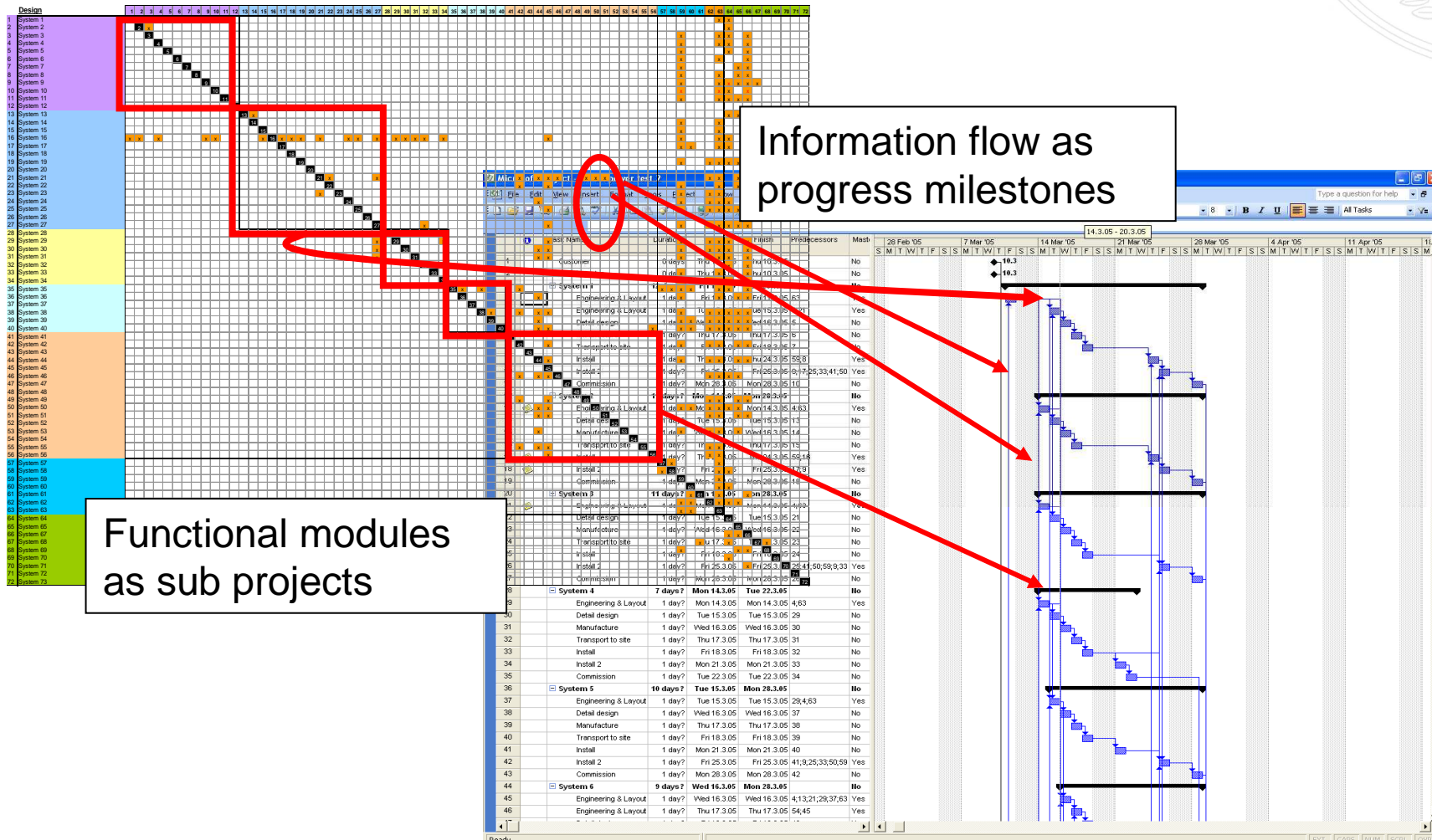


Modular process structure



Managing a modularised lifecycle

- The functional modules become sub-projects going through the project phases – this gives you parallel value creation.

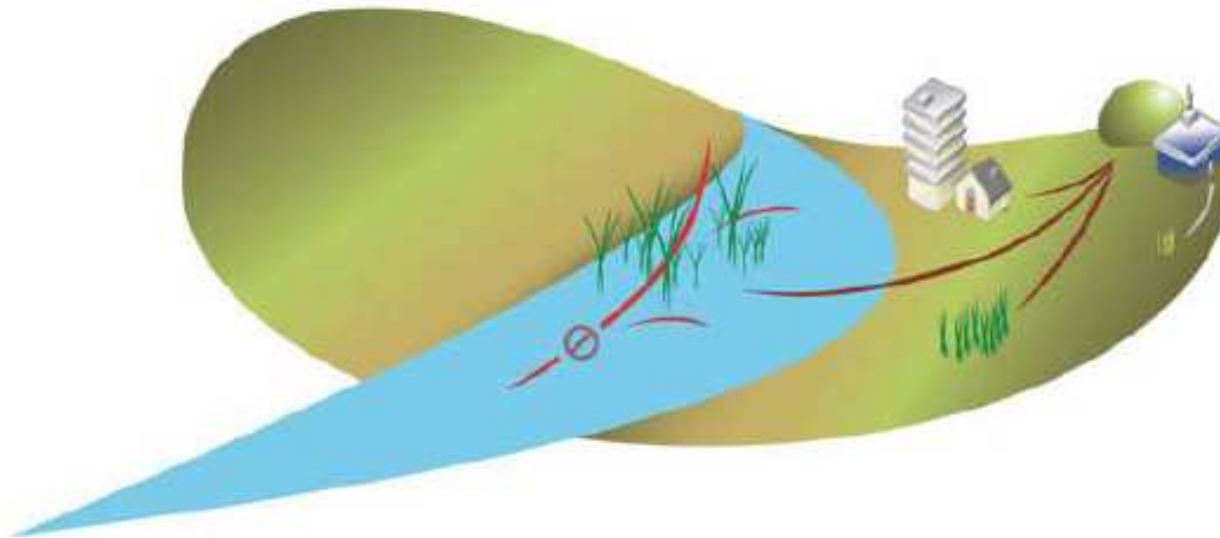


Valuing

Companies do not know how to price and sell value created in the value chain.

Example: using shorelines, wetlands and crop rotation fields (ley farming) to produce biogas for transport

Output: renewable fuel production that also reduces nutrient runoff





Business Models



- A business model is a tool to manage material and immaterial flows.
- When organized in an optimal way, beneficial flows can be strengthened, others can be changed, the harmful and economically unprofitable can be eliminated.
- Clarify and establish:
 - Roles and interfaces to ensure integration
 - Measures for monitoring the performance of the company and the system
 - Processes for managing the company as part of a larger system, managing uncertainty, innovation of cooperation

Business model for biogas in transport

