



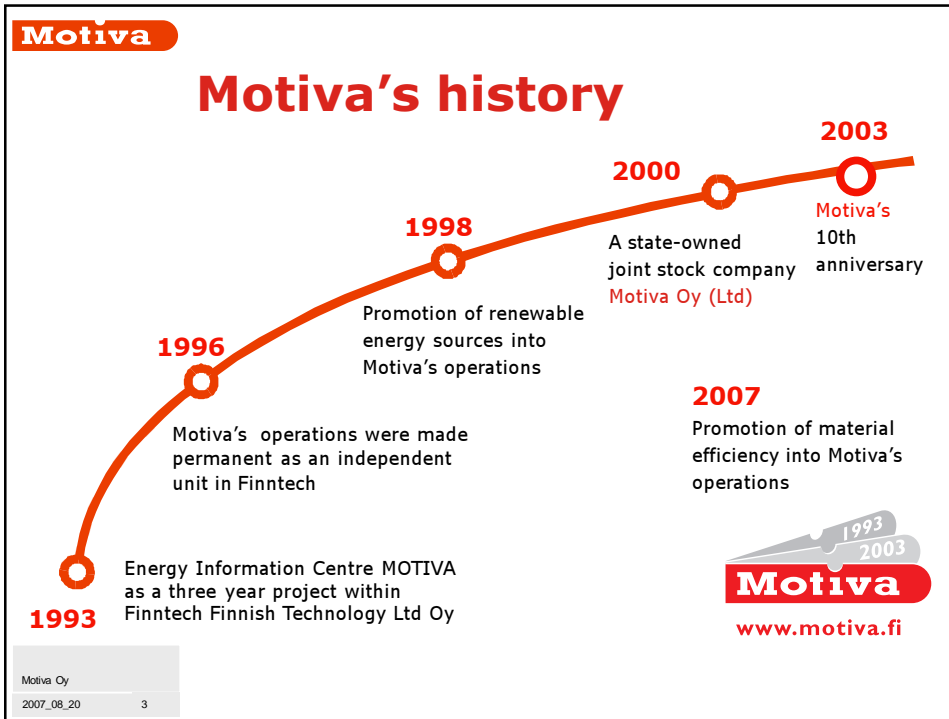
Functional materials and intelligent solutions
-leverage to resource efficiency

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Motiva's expertise and project services

- to promote energy efficiency
- to promote material efficiency
- to accelerate the uptake of renewable energy sources



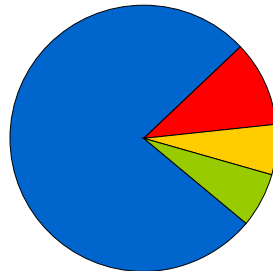
- Motiva**
- ## Motiva's customer groups
- Government and other public administration
 - Government-owned business entities
 - Energy industry
 - Manufacturing industry
 - Public and private services
 - Stakeholders of the built environment
 - Households and consumers
 - Transportation companies and organisations
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Motiva's key figures

2007

Turnover	4,4 M€
Personnel	29

Invoicing according to customer group



Ministry of trade and Industry	69 %
Other public administrations	12 %
Domestic enterprises	10 %
International clients	9 %

Forms of operation

- to prepare, support and monitor national **energy efficiency action plan** for industry, energy production, municipalities, transportation and building sector
- to develop and market **energy and material audits and analyses**, together with other methods of energy and material saving
- to accelerate the **introduction of advanced energy-saving technologies**
- **influence people's attitudes** in favour of energy conservation and permanently change their habits of using energy
- to provide **project management services**

Motiva Ltd Material Efficiency Centre

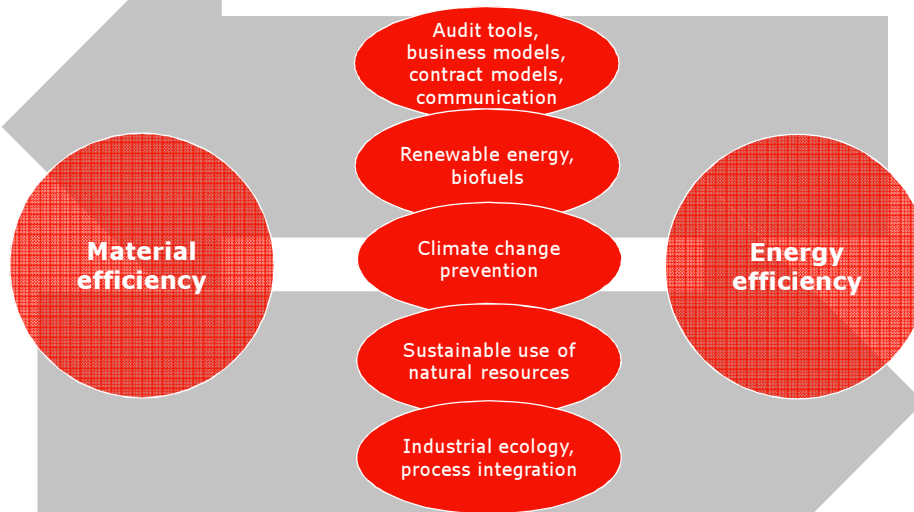
- Startup funding was provided by Finnish Ministry of Trade and Industry and Ministry of the Environment
- Concrete planning of the centre started on 21.5.2007
- First activities included writing of a business plan and forming relationships with interest groups and co-operators
- The centre was officially started as the material efficiency unit within Motiva Ltd on 25.2.2008

Driving forces of resource efficiency thinking

- Resource **costs**, productivity, competitiveness
- **Sustainable use** of natural resources
- **Environmental impacts** caused by resource use

Some effects of the driving forces

- The competitiveness of **value chains** changes in the shift towards more sustainable resource use
- Resource intensive value chains lose their market positions when more effective solutions appear
- Example: printed newspaper – digital media



Paths towards improved resource efficiency

Traditional way of resource efficiency thinking:

"New material solutions should be produced in a resource efficient way" (Still OK!)

Leverage effect thinking:

Intelligent material solutions have a **leverage effect** in value chain:

- a key to more efficient resource use in the value chain
- a key to improve environmental performance in value chain

Leverage effect -a simple case: food packaging

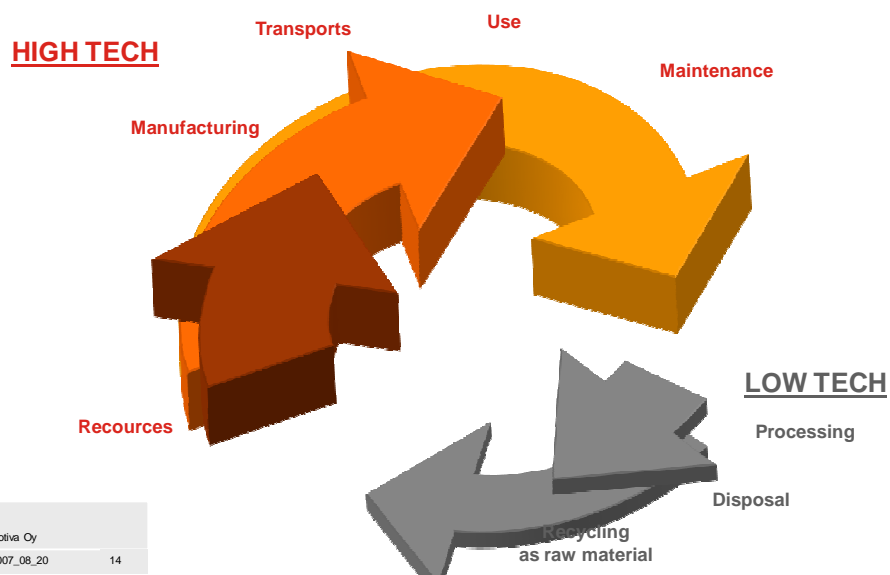
- The environmental impacts of the production and disposal of packaging material is usually small when the whole life cycle of the food product is considered
- More relevant is that the foodstuff itself end up to the consumer in a usable form
- The food packaging ensures conditions for a material effect value chain
- **Here the leverage effect works in the desired direction**



Some things to be conserved in new material solutions

- The trend: New products contain less material but more different materials and grades are used
- The **technology gap**: high tech production – low tech recycling
- Result: fuzzy material mixes and unwanted waste fractions
- Result: materials are lost for the economy...
- ...But: This may still be OK if resource efficiency in the **whole value chain** is radically improved.

Technology gap in value chains



Resource efficiency thinking in developing new solutions

- **Get help** -it saves time and money
- Recognise the value chain where you operate
- Recognize the bottlenecks of efficiency in the value chain
- Recognize the role of the new material solution in the value chain
- **Become part of the solution**, not the problem.

Motiva

www.motiva.fi/en/