



Novozymes

- Sustainable Solutions

*Why sustainability is a great business strategy
and how we do it in Novozymes*

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Recognized as a sustainability-driven organization

Novozymes in the Dow Jones Sustainability Indexes (DJSI):

- Included in DJSI Biotechnology sector since 2000, and sector leader 2000-2007 and 2009-2012
- 'Gold Class' rating in 2010-2012 in Sustainable Asset Management (SAM) Sustainability Yearbook



Founding member of the Sustainability Consortium



Top 1% of Environmental Investment Organization carbon reporting



Best in Class Storebrand SRI



4 in Global 100 – listing the world's most sustainable corporations



Member of FTSE4Good Global and Europe



Member of SB20 by SustainableBusiness.com



PRIME status by oekom research



10 in Carbon Disclosure Project annual Nordic Leadership Index

Doing more with less

Decoupling economic growth from pollution and the use of natural resources

Pollution and the
use of natural resources

Business as usual

**Enzymatic and
microbial solutions**

Economic growth

Biotechnology
enables us to do
more with less

Enzyme technology is green technology



Juice: better utilisation of raw materials



Mozarella production: better utilization of raw materials



Baking: less waste



Brewing: better utilisation of raw materials



Soy degumming: better utilisation of raw materials



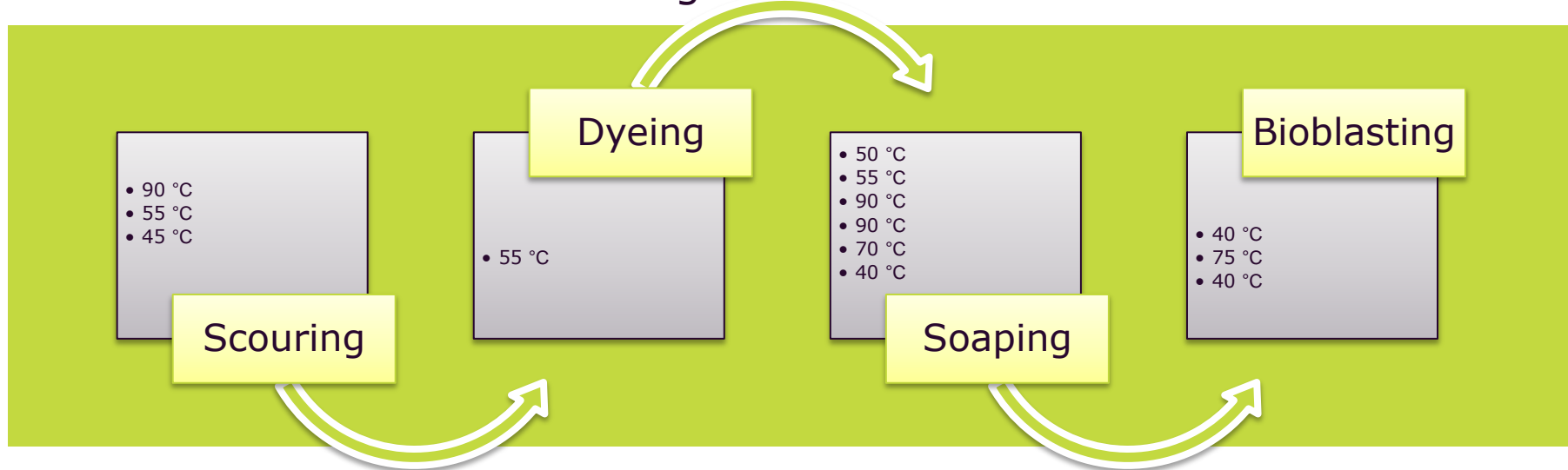
Livestock production: reduction of feed ingredients, reduction of pollution



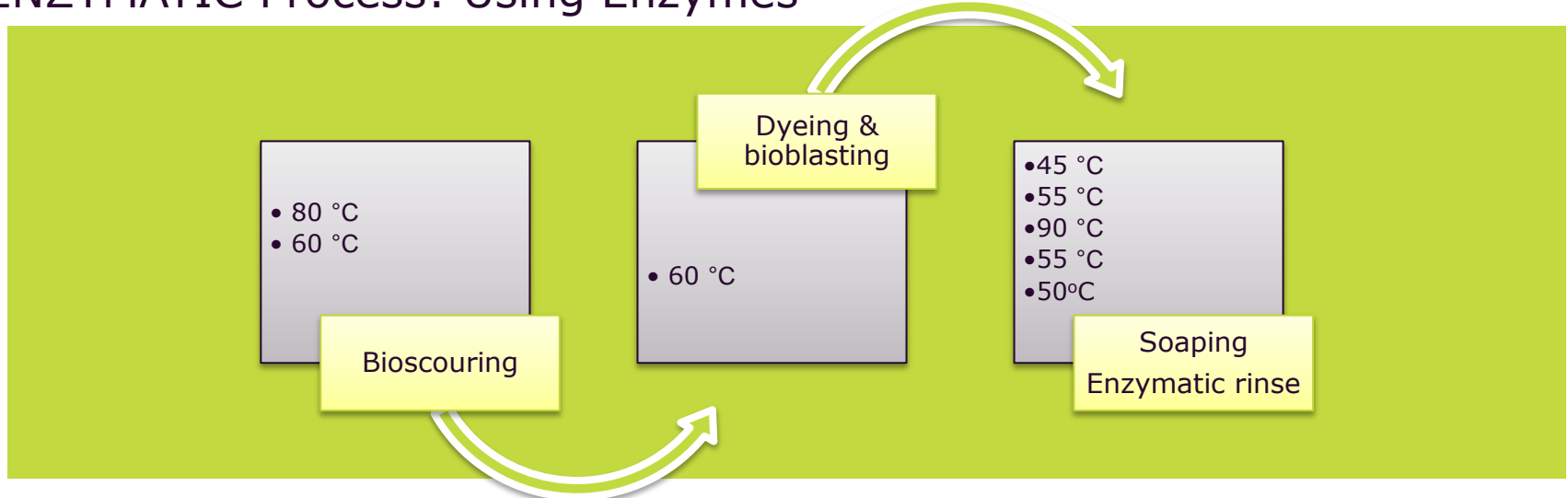
Leather production: reduction of chemicals

ELEMENTAL TEXTILE: LCA Analysis

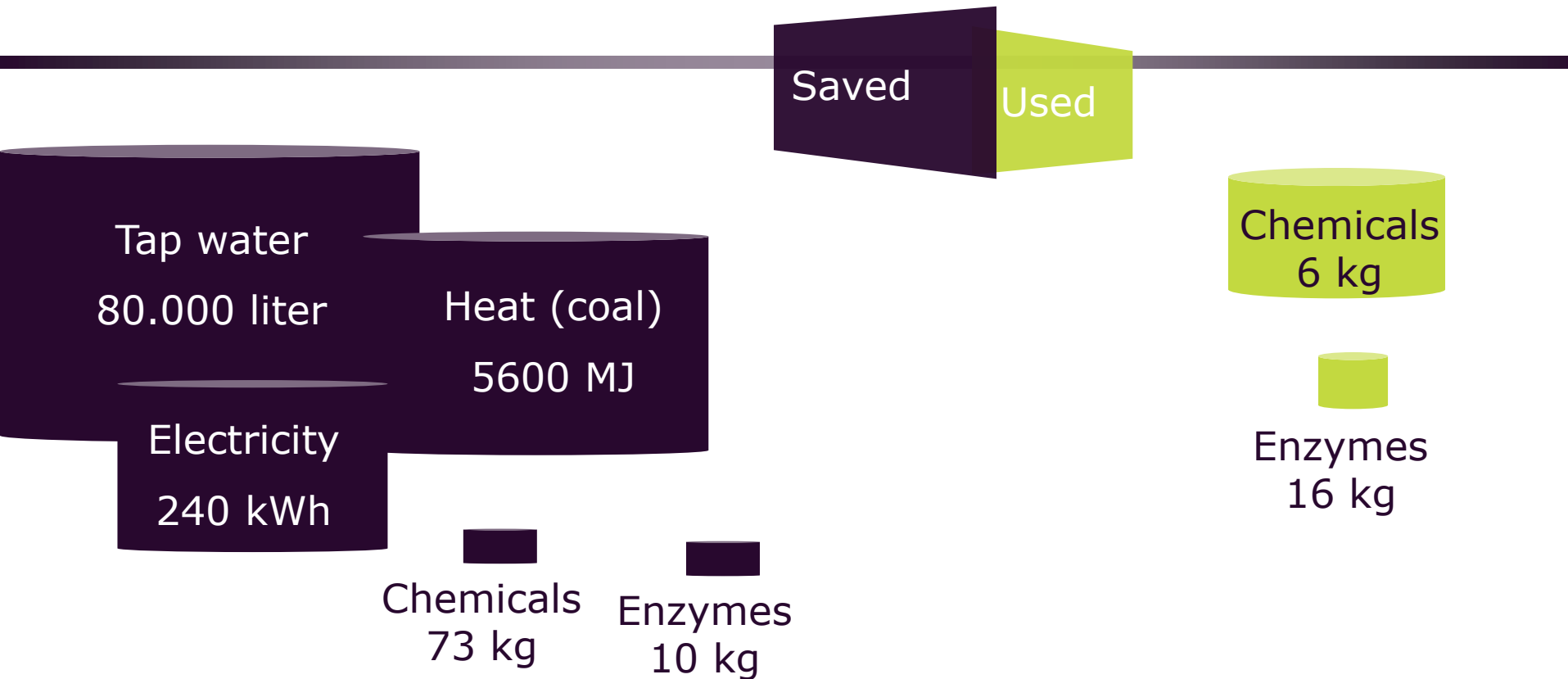
CONVENTIONAL Process: Using Chemical



ENZYMATIC Process: Using Enzymes



PROCESS WITH ELEMENTAL TEXTILES – CONSUMPTION AND SAVINGS



PERSPECTIVES

1 ton knitwear produced the with Elemental textiles saves:

- 70,000-90,000 liters of water
(600-700 people daily consumption)
- 1 – 1.3 ton CO₂

CO₂ saving corresponds to_

100,000 ton CO₂ corresponds to the
annual emission from
Around 25,000 cars



OUR PRODUCTS HELP REDUCE CO₂ ACROSS INDUSTRIES



Detergent:
100 kg CO₂
per ton of laundry



Animal feed:
80 kg CO₂
per ton of feed



Textile:
1100 kg CO₂
per ton of fabric




Cereals:
110 kg CO₂
per ton of bread



Agriculture:
15 kg CO₂
per ton of corn



Beverage:
25 kg CO₂
per 1000 litre of beer




Paper making:
150 kg CO₂
per ton of pulp



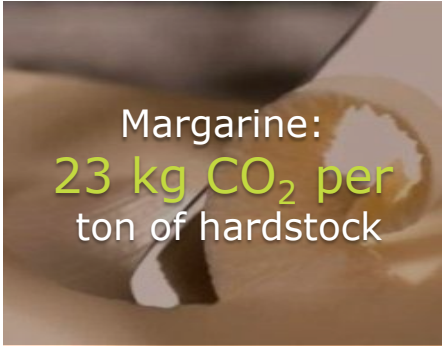
Leather:
100 kg CO₂
per ton of hide



Vegetable oil:
44 kg CO₂
per ton of oil



Dairy:
230 kg CO₂
per ton of mozzarella



Margarine:
23 kg CO₂ per
ton of hardstock



Cosmetics:
190 kg CO₂
per ton of fatty
acid ester