

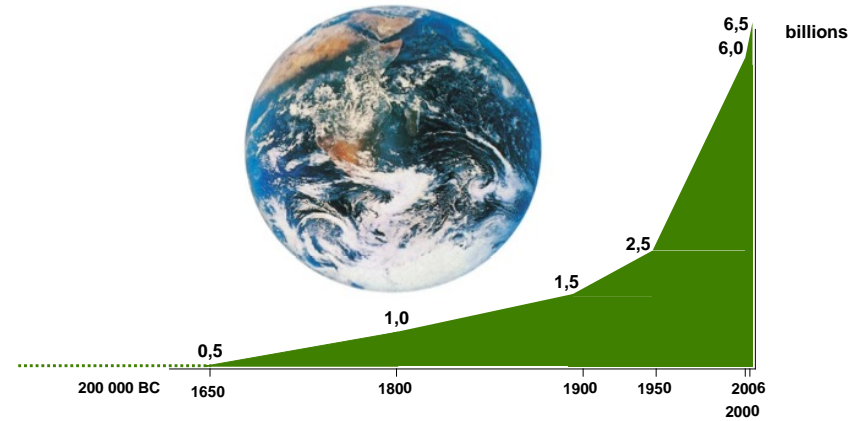
Building the biorefinery business in the future: case studie of a working integrated forest biorefinery

Hans Grundberg



© Processum Biorefinery Initiative AB 2008

Population Growth



© Processum Biorefinery Initiative AB 2008

The twin challenge



© Processum Biorefinery Initiative AB 2008

"Your jeans is a poison bomb"
(ekonominyheterna 2006)

Cotton production consume more than 11% farmer chemicals used on the earth and incomprehensible 25% of pesticides

- One pair of jeans consume
- 6600 litres water
 - 13,2 m² land
 - 0,5 kg chemicals
 - 103 different pesticides





Biorefineries

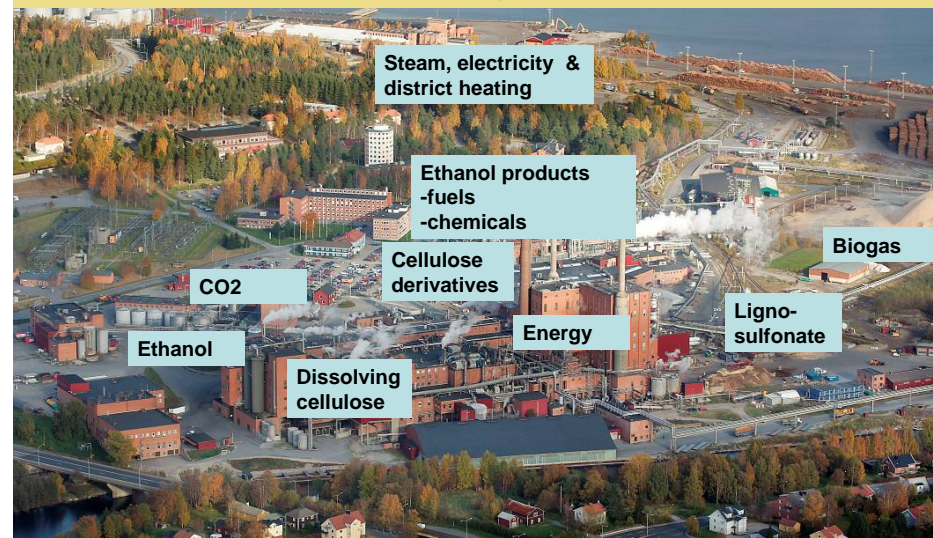
Wood, Crops, Grasses
Forestry or Agricultural Residues
Animal or Municipal Waste

Heat, Electricity, Fuels
Chemicals
Materials
Food, Feed, Fibre

Biochemical
and/or Thermo-chemical
Conversion

Biorefinery research will be supported in two FP7 Themes:
Food, agriculture and bio-technology and Energy

The Biorefinery of Örnsköldsvik



THE BIOREFINERY
OF THE FUTURE



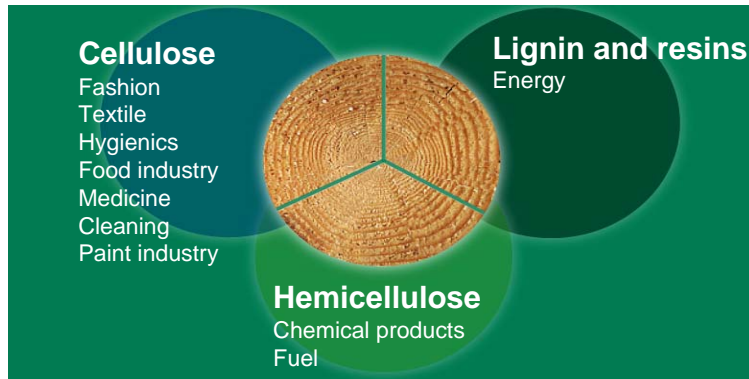
The Biorefinery of Örnsköldsvik



THE BIOREFINERY
OF THE FUTURE



Green platform



Lessons learned and challenges

- Vision and Communication
- Cooperation and integration
- Entrepreneurs
- Pilot units and Research resources
- Time!
- Separation and purification processes

