SUSTAINPACK

The future in fibre based packaging

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The global packaging market 2004

- Paper and board: 39%
- Rigid plastics: 19%
- Flexible plastics: 12%
- Metal: 17%
- Glass: 7%
- Other: 6%

Source: WPO/Pira International
Market structure and growth

Source: Ernst & Young, Summary of the report: The Global Packaging Market - the top 100 players.
Packaging and the European Forest Industry

European forest industry total turnover is 400 Billion Euro

40% of Paper and Board production goes to the packaging area

Fibre based packaging makes up 39% of packaging consumption globally
Sustainpack platform

Sustainable Packaging Tool Platform fulfilling packaging demands using renewable resources

The objective is to establish breakthroughs in the fibre based packaging value chain
I am recoverable

I use renewable resources

I am efficient and protective

I use less material

"The sustainable packaging"
"The communicative packaging"

I am calling

I am original

Buy me

I feel bad
I am recloseable

I am easy to empty

I am easy to read on

I am easy to open

I am easy to recover

"The easy packaging"
"The freely formed packaging"

I’m not only square
Project challenges

- Focus on minimisation of resources, renewable resources, recovery

- Packaging innovation in a holistic perspective
  - Safe, hygienic, value-added packaging for consumers
  - Contribution to marketing and brand recognition
  - Value chain efficiency

- Knowledge dissemination into a fragmented non-academic business downstream in the value chain
Innovation and Sustainable Development in the Fibre Based Packaging Value Chain

- An Integrated Project in the EU 6th Framework Research Programme
- In the area of 'Nanotechnologies and nanosciences, knowledge-based multifunctional materials and new production processes and devices'
- Includes 35 partners from 12 European countries
- Total budget 30 M€ over 4 years, of which 16.8 M€ from EU.
- Started June 2004 and ends May 2008
- Co-ordinator STFI-Packforsk AB, Sweden.
The Sustainpack geography
Sustainpack visions

- Knowledge Platform
- Technology Platform
- Prototypes
- Product Development Process
- Demonstrators
Sub-Projects

- **Sub-Project 1 - Technology Mapping in the Fibre Based Value Chain**
  - Deeper understanding of pull features

- **Sub-Project 2 - Lean and Effective Fibre Based Packaging**
  - 30% strength increase
  - Nanofibrils/Nano clay processes
  - Mechano-sorptive creep understanding
Sub-Projects

- **Sub-Project 3 - Fibre Based Composite Films**
  - Knowledge increase in adhesion between polymer-matrices and nanoparticles
  - Development of models for calculation of mass transport

- **Sub-Project 4 - Protective coatings**
  - Development of new coating materials
  - Spot-printing progress
  - Microencapsulation
Sub-Projects

Sub-Project 5 - 3D composite packaging

• Successful development of thermoplastic composite
• Processing of bio cushioning material

Sub-Project 6 - Communicative packaging

• Development of sensor material and printing of sensors
• Anti-counterfeit (magnetic ink, fibre modification, etc)
Project progress

PULL DRIVEN (CONSUMER, RETAILER, FILLER)

DELIVERABLE ACTIVITIES

DELIVERABLE SUB PROJECT

DELIVERABLE PROJECT

PUSH DRIVEN (RESEARCH NEEDS, STATE-OF-ART)

Through fundamental research
find the best possible routes
to success

18 M

Focus on best routes and create
material demonstrators. Open call to
include more industry

36 M

Create packaging demonstrators through
integrating breakthroughs from different
sub-projects

48M

Application focus guided by findings in Technology Mapping sub-project
www.sustainpack.com

Thank you for your attention