Doing business in the bio-economy development of new business models

Symposium on Wood Products Industries in Future Bio-economy Business

Lahti

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Our vision

“The Forest Industry drive growth in the global bio-economy!”
Markets for Swedish soft wood 2015

- **Sweden**: 29%
- **Europe**: 43%
- **Middle East and North Africa**: 17%
- **Asia excl. Middle East**: 9%
- **Other incl. USA**: 1%

**Core**

**Weak growth**

- Europe 43%

Production 18,1 Million m³

Source: SCB/Skogsindustrierna
“From volume to value” – study 2014 (to 2014)

Divergent

Convergent
# Wood manufacturing, margins, 2004 - 2013

<table>
<thead>
<tr>
<th>Sub-sector</th>
<th>Growth</th>
<th>Margins</th>
<th>Critical factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi family/ build. systems</td>
<td>↑ 10 %</td>
<td></td>
<td>Industrial processes, Compeative</td>
</tr>
<tr>
<td>Single house</td>
<td>→ 9 %</td>
<td></td>
<td>Political decisions</td>
</tr>
<tr>
<td>Windows</td>
<td>→ 11 %</td>
<td></td>
<td>Critical component</td>
</tr>
<tr>
<td>Kitchen/bath</td>
<td>→ 12 %</td>
<td></td>
<td>Fashion</td>
</tr>
<tr>
<td>Flooring</td>
<td>→ -3,5%</td>
<td></td>
<td>Competition</td>
</tr>
<tr>
<td>Edge glue/ panel</td>
<td>→ 3 %</td>
<td></td>
<td>Competition</td>
</tr>
</tbody>
</table>

Source: University of Linköping
Wood manufacturing, margins, 2004 - 2013

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“From volume to value” – study 2014 (to 2014)

Turnover 85 → 130 Billion SEK
Case: value chain construction
How wood “lost” the building sector......

Result of the “big fire” in Sundsvall 1880
Up to 1994 this was what was allowed...
Wood in Construction in Sweden - Challenges

- Wood banned for a long time in multi storey buildings, (1880 to 1994)
- In 1994 the rules was changed allowing higher buildings
- Absence of wood based solutions in the building sector resulted in a low level of knowledge about wood constructions within the building sector
- Up to 1995 almost no research activity in this field and low presence of our industry in the academia
- Insufficient production infrastructure
  - Timber-frame producers focused on single-family
  - Wood products industry export-oriented

There was a need for a new strong strategy!
How to get wood into the building process

Create a simultaneous PULL and PUSH effect

- **PULL**
  - The political processes focusing on the need for housing, employment and a proactive climate policy
  - Harmonized building rules, nationally and internationally
  - Know how building on wood construction in the building sector

- **PUSH**
  - Business development in the sector moving the house manufacturers forward in the building value chain
  - Development of the industrial- and building processes in order to increase efficiency
The strategy in brief

- **Research programs** in order to tackle the critical issues on, fire, static, acoustics and building process
- **Create strong (regional) research/development clusters** with participation from companies, academia and society
- **Some initial political recognition and support** in order to compensate the fact that wood had been banned and to achieve a more fair/even situation of competition between different building materials
- **A national wood building network of communities** and counties
- **Promotion of “Building with wood” on European level**
- **Standardisation** work on European level in order to create a bigger common market place supported of a common research program within the frame of CEI-Bois BWW activity
- **Development of the industry** (House manufacturers)
Forest and Wood industry programs

- 1998
  - Forest and wood programs
  - BWW Strategy

- 2003
  - NRA and sector program
  - Wood Manufacturing

- 2006
  - WG Construction part of Cei-Bois (Europe)

- 2009
  - BWW Development cluster (AU, FIN & SWE)
  - Wood cities, promotion

- 2013
  - LWE 1
  - LWE 2
  - TCN (north) / CBBT (south)

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WWI detour around the construction industry
What we thought 1996

Property developers

Projects

Construction industry “consolidatet”

Components

WWI
WWI detour around the construction industry

What happened!

Projects → Property developers → Construction industry → Projects

Components
A value generator ....

- The building value chain is very different from the traditionally one in sawmilling
- The wood part of the total value of an house unit is little
- Even if we includes all wood related products they represents less than 10 % of the total costs at end customer
- Solid (CLT) or semi solid buildings have a wood part of close to 15 %
- The value development from sawn goods to building on site is more than 10 times
Different ways into the business

Forward integration
“The hard way”

Property developers

Construction industry
“consolidatet”

Projects

Components

WWI

New construction ind
“End of monopoly”

Property developers

Construction industry
“consolidatet & SME:s”

Projects

Components

WWI

Investors
“Money talks”

Property developers

Construction industry
“consolidatet”

Projects

Components

WWI

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Two (three) lines of development

- On-site and prefabricated light weight constructions
- Volume elements "off site building"
- Cross laminated timber (CLT). Enable high to build high rise

1994  2000  2015
What we have achieved

- One family houses ~ 90%
- Multi family houses, 2-storeys ~ 50%
- Multi family houses, >2-storeys ~ 10%
- Halls (sports, Industry, shopping) ~ 30%
- Bridges ~ 20%
(Wood) building ready to take off!


Population increase

Started “units”
European BWW reday to take of .......

Create Knowledge Network
Institutes
Universities
Industry

Define products
Structural wood
Glulam
CLT

Create legislative framework
Fire
Durability
Acoustics
Statics
Products
Indoor climate
Climate

Create supporting framework for innovation
Biz models
Systems
Cross-disciplinary
Education

New actors

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Timber is in fashion!
Stockholm Central station built with glue-lam elements 1925

Thank you for your attention!