

# CRAFT INNOVATION FOR BEECH and INNOVAWOOD RESEARCH DATABASE

for wood-based materials, processes and  
products

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## 2 examples of European research for the forest and wood industry:

1. industry-driven cooperative research project (CRAFT for SMEs)
2. knowledge transfer system: 1.200+ research results available for the European companies!

# CRAFT INNOVATION FOR BEECH



Innovative solutions for  
improved processing of  
Beech (*Fagus sylvatica L.*)  
with red heartwood



## Project Objectives

- a) **FORESTRY PROBLEM:** 6+ mio m<sup>3</sup>/a red heartwood of harvested beech in Europe
- b) **INDUSTRIAL PROBLEM:** Red heartwood significantly restricts the log quality of beech logs and end products, therefore leading to severe economic losses



### RESEARCH OBJECTIVES:

1. to optimise the processing of beech logs containing red heartwood
2. to develop grading devices for red heartwood timber
3. to develop high-value products of red heartwood

# Partnership

S  
M  
E



MITTERAMSKOGLER GmbH (AT)



VAIMWOOD SL (ES)



BURGBACHER HOLZTECHNOLOGIE GmbH (DE)



HEMA ELEKTRONIK GmbH (DE)



FEDERICO GINER SA (ES)



UNIVERSITY OF FREIBURG (DE)



UNIVERSITY OF WEST HUNGARY, SOPRON (HU)



BOKU WIEN (AT)



AIDIMA (ES)



## Work Programme 2005-2006

1. international survey on existing processing technologies and products
2. industrial trials and lab measurements
3. yield increase of the valuable light beech wood:
  - a) by optimising the sawing of logs
  - b) by automated grading, using a prototype opto-electronic system
4. increase of the added value for red heartwood products:
  - a) by colour homogenisation (steaming, drying and UV-treatment)
  - b) by designing and manufacturing innovative products  
(Thermal Wood, glue-lam beams and design furniture)
5. design of an integrated concept to process beech logs containing red heartwood
6. feasibility study and market potential analysis

## Achievements so far...

- Analysis of steaming and drying technologies, schemes and schedules
- Analysis of UV treatment for colour homogenisation
- Design of a flexible opto-electronic machine vision system for grading by defect-free cuttings of beech heartwood
- Consumer analysis on heartwood-based furniture
- 3D CAD of selected furniture part and pieces
- .....



# Beneficiaries

<b>FORESTERS:</b>	<ul style="list-style-type: none"><li>• enhanced use of beech with red heartwood = improvement of round-wood markets in Europe</li></ul>
<b>SAWMILLERS:</b>	<ul style="list-style-type: none"><li>• automated opto-electronic grading and cutting systems</li><li>• innovative technologies for colour homogenisation and stabilisation</li></ul>
<b>CONSTRUCTION:</b>	<ul style="list-style-type: none"><li>• indoor uses: glue-lam, flooring...</li><li>• outdoor uses: thermo-treated floorings, claddings, doors, windows...</li></ul>
<b>FURNITURE:</b>	<ul style="list-style-type: none"><li>• modular design furniture</li><li>• outdoor furniture</li></ul>

# Half way there....



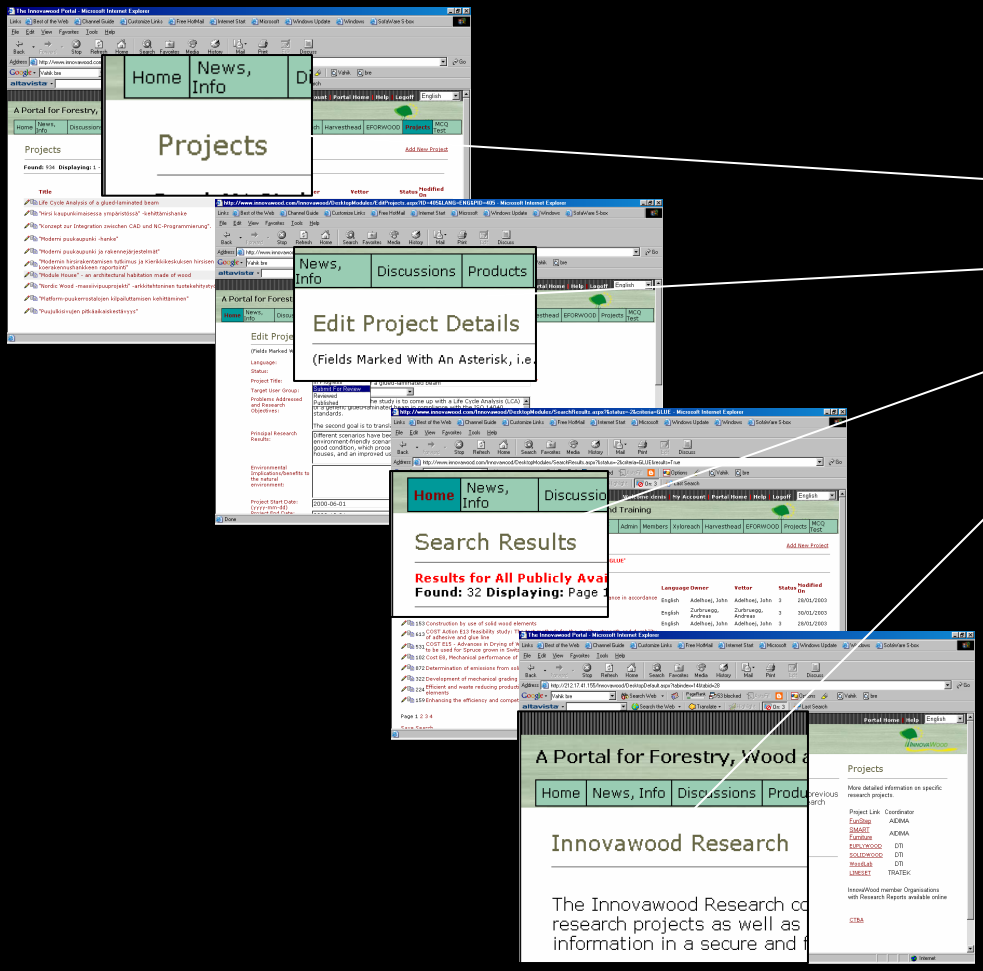
# INNOVAWOOD Research Database



End-user access to European RTD  
for the forest and wood industries

## Project Objectives

- Thematic Network
- Research Inventory
  - collate
  - assess
  - organise
  - disseminate
- .....results of research activities in the FWC
- National and EU projects - FP4, FP5, FP6
- Make accessible and understandable for companies in the FWC



# Partnership

<b>Co-ordination:</b>	<b>INNOVAWOOD</b>
Harvesting, logging and storage in northern Europe:	DLFRI (DK)
Harvesting, logging and storage in southern Europe:	IVALSA - CNR (IT)
1 <sup>st</sup> Transformation - Sawing:	TRATEK (SE)
Drying and grading:	BRE (UK)
Treatment and preservation:	CTIB (BE)
2 <sup>nd</sup> transformation - Machining:	SWOOD (CH)
Quality control and certification:	DTI (DK)
Timber construction, industrial design and application:	VTT (FI)
Gluing and WBPs:	FHG - WKI (DE)
IT tools for wood and furniture industries:	CTBA (FR)
Finishing:	AIDIMA (ES)
Monitoring and internet application:	CIRCA Group (IRL)

# Work Programme 2001-2004

- Database and infrastructure design and template for gathering data
- Identifying, contacting and communicating with researchers across 11 thematic areas
- Developing processes for contributing, evaluating, editing and publishing research summaries
- Impact Assessment
- Official launch: 1<sup>st</sup> May 2004 (Dublin)
- Dissemination activities
  - ⇒ LIGNA and other sector-specific fairs
  - ⇒ Demonstration in conferences
  - ⇒ Publications and other actions...

## Results 2005

- Dynamic Web Portal in place ([www.innovawood.com](http://www.innovawood.com))
  - Robust database on-line
  - Searchable
  - Multilingual Interface (8 languages)
  - Can be updated on-line by contributors
  - User registration
  - Enabled for continuous enlargement
- 1.200+ research summaries in the Research Inventory
- 11 Thematic Contact Groups in place, 600+ researchers from 20+ countries
- 100+ entries/month
- 2002 University-Enterprise Award for European Co-operation, by the Spanish Federation of Knowledge & Technology Transfer

# Beneficiaries

- EUROPEAN WOOD INDUSTRIES, especially SMEs - useful information about research across Europe in the FWC
- EUROPEAN COMMISSION - contribution to the development of the Lisbon strategy, mapping of R&D capabilities in Europe
- RESEARCHERS - exposure for their work and linkages to end-users
- ORGANISATIONS throughout the European FWC - stonger linkages between research, innovation and industry
- SOCIETY - more progressive and high-tech sector

# A tool for innovation...

OPEN ACCESS FOR ALL  
COMPANIES & STAKEHOLDERS IN  
THE EU FWC

([www.innovawood.com](http://www.innovawood.com))

please visit it  
and  
enjoy RESEARCH with us!!!!

