

CARMO Tech4Timber

A demonstration of new technologies
for a better market

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69th weí-íeo
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Cofinanciado por:



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Overall objective

Transfer of technology from research centers to a private company, validation at operational and manufacturing environment based in the consortium

CarmoWood - Reference company among the pressure treated wood industry - consolidated presence in the construction market as project manager or product supplier. Its presence in Spain and France as well as in other parts of the world allows to support a broad dissemination of project's outcomes.

SerQ - Main responsible for the transfer of technology
Private Research Institute responsible for industrial and applied research and experimental development all along the wood forest product supply chain.

UC - Responsible for the scientific support to the implementation of the technologies. Responsible also the transfer of technology
Public University being a reference in higher education and research in Portugal.



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Portuguese market short overview

Companies competing often only on a cost basis

- Leading high technological profile companies to the
- necessity to implement a product differentiation marketing process
- necessity to reach external markets
- the commitment to push for the full implementation of European market rules

Low capacity to exploit the full capacity of timber resources available

- General lacking of timber grading technologies

High level of uncertainty (short and long-term availability and cost) over timber resources



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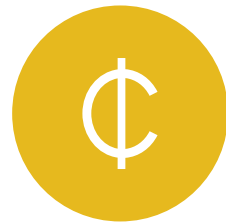


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Increasing the strength of industry by looking at customer-oriented strategies



PERFORMANCE



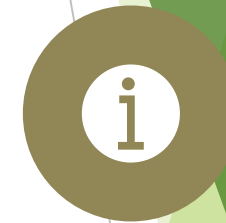
COST



SUSTAINABILITY

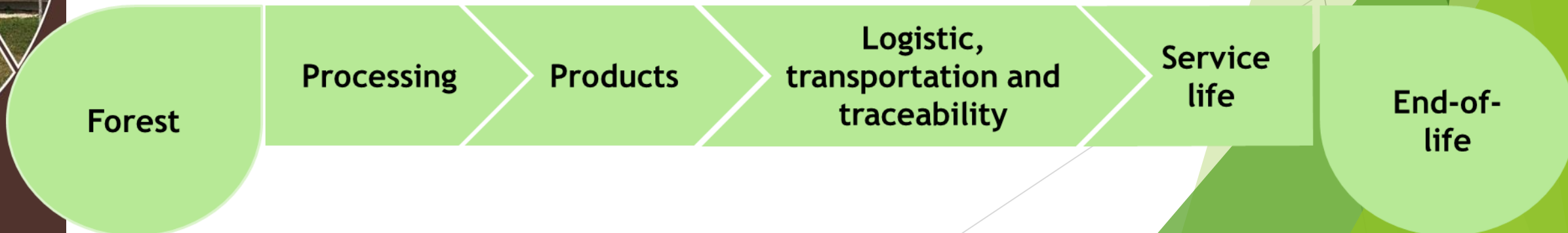


DELIVER TIME



INFORMATION

New technologies and process are continuously being developed along the chain



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- ▶ **ACTIONS - Demonstration events involving**
 - ▶ **Machine strength grading using MTG equipment**
 - ▶ Capability to reach market requirements
 - ▶ Optimization of the strength capacity of timber members
 - ▶ **Traceability of products using RFID Tags & Readers technology**
 - ▶ Capability to ensure and verify the origin and properties of the timber member
 - ▶ Examples:
 - ▶ Wood species
 - ▶ Origin and Sustainability (ex: FSC or PEFC certification numbers)
 - ▶ Strength class
 - ▶ Durability (treated for use classe ...)



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Machine strength grading



PERFORMANCE



RFID Tags & Readers technology

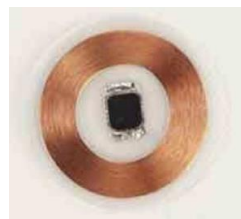


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INFORMATION

SUSTAINABILITY



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Performance



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Maritime pine timber produced in Portugal can be classified by MTG 960 (CEN/TC124 approval)

Handheld measuring equipment

Wireless connected to a PC

Allocates a strength class to the element



	Strength classes - EN 338								
	C18	C20	C22	C24	C27	C27	C30	C35	C40
Visual grading - NP 4305									
Machine grading - MTG 690									



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HOW FAR THIS TECHNOLOGY CAN TAKE HOME-GROWN MARITIME PINE TIMBER

	Strength classes - EN 338				
SETTINGS	R	C18	C24	C35	C40
C24 / Rejected	5%	95%			
C35/C24/C18/Rejected	4%	19%	9%	68%	
C40/C24/C18/Rejected	4%	17%	27%		52%



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OTHER ADVANTAGES FOR INDUSTRY FROM THIS TECHNOLOGY

Given the high level of uncertainty regarding availability of timber resources other wood species or provenances has sometimes to be applied for construction



TO THAT PURPOSE

MTG 690 can be applied to verify and ascertain the quality of timber received and delivered at construction site



Information

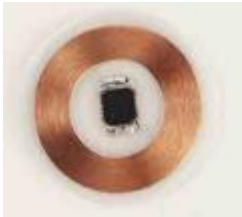


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RFID Tags & Readers technology



TAG



Insertion inside
the element



Reading of
information



Readability in the real-life tests and demonstrations close to 100%.
Sophisticated technology that opens up for new business applications compared to other methods is that it is not easy to cheat

Timber market is a special case where the ensurance of the sustainability is request.

Traceability by RFID technology allows to go further by ensuring this request in a individual basis (element) rather than in a batch basis.

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Traceability based on RFID contributes

Easy access to information about the characteristics of products and services

Digital information instead of paper-based information

Support to litigation by offering a quick way to verify the origin of the material

Support increasing awareness of consumers for the:

1. importance of knowing where wood products come from
2. how they are made (possible treatments)
3. Their impact on the world around them



Demonstration events



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Demonstration events planned

The project includes organization of seminars

1. In lab environment
2. In factory environment

Demonstration actions carried out by request of outside entities

Roadshow including by companies selected by the consortium for the demonstration of the technologies

Participation in trade fair





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Thank for your attention

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