

#### 15<sup>th</sup> INNOVAWOOD GENERAL ASSEMBLY

28-30<sup>th</sup> MARCH 2017 Gustavelund Hotel, Tuusula (Helsinki) , Finland

# WBP Tech Innovative Wood Based Composites Technology



### Introduction



DEMad –Wood Engineering Department of Technology and Management School of the Polytechnic Institute of Viseu



Drastic reduction in the number of students and consequent need to find alternative forms of financing

The size and importance to the national economy of the wood-based panels industry (particle boards and MDF)



Implementation



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# Formaldehyde emissions laboratory (50 m<sup>2</sup>)



Resin characterization laboratory (70 m<sup>2</sup>)



Laboratory of surfaces, finishing and mechanical testing (120 m<sup>2</sup>)

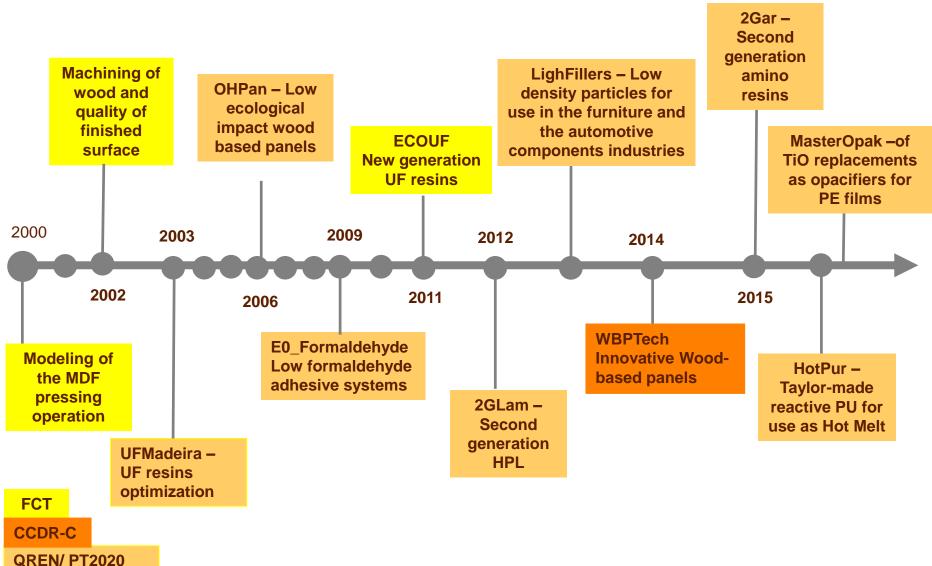
Accelerated aging and conditioning laboratory(70 m<sup>2</sup>)

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## Major projects







#### R&D project in co-promotion (Portugal 2020)



#### 2GAR

#### **Development of second-generation amino resins**

Budget ≈ 800 000 euros



#### Goals:

- Development of amino resins with high stability at temperatures between 5 and 40 ° C for at least 2 months (increase transatlantic transport ability).
  - Amino resins functionalisation in order to provide the resilience and the elasticity required for the manufacture of flexible cork agglomerate panels.
- Increased Sustainability of the Final Product, developing a formaldehyde based resin incorporating natural based raw materials



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#### R&D project in co-promotion (Portugal 2020)



#### **HotPUR**

Development of taylor made reactive polyurethane resins for use as hotmelt in the wood industry

Budget  $\approx$  700 000 euros





Goals:

Develop a formulation for polyurethane based glue for use as a reactive Hotmelt with the following characteristics:

- be able of being used in demanding situations, in particular on an edge banding line (solid edge) of an industrial door production unit.

- be possible to modify the formulation to allow the initial strength of the bonding to be adjusted according to the needs of each process.

- be possible to adjust the application viscosity independently of the application temperature.



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### Muito Obrigado for your attention



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