SB&WRC Project

Facility Presentation Sheet: Educational Exhibition at UniLaSalle

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Unilasalle
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1. Presentation of the Educational Exhibition

1.1 Description of the facility

UniLaSalle is an agricultural school with 4 research units, one of which is "Transformations & Agro-resources" (UP 2018.C103), which works on plant transformation and valorization. The unit is made up of two teams: The team "VAlorisation en Molécules et Matériaux INnovants" (VAM2IN) is interested in developing knowledge about the characteristics of agroresources and their consequences on the properties of biobased materials, to develop agromaterials with specific performances, in particular by playing on the capacity of transformation of certain chemical compounds of the agroresources operated during the manufacturing and to study the properties of these materials. Overall, this research axe aims to better understand the composition / structure / properties relationships of 100% biobased materials and aims to encourage a diversification of agricultural outlets.

One of the aims of the research is to forward to students beyond knowledge, the systemic approach and the skills necessary for the innovation approach on the model of multidisciplinary and multi-stakeholder approaches developed in research and more widely disseminate the scientific culture to the different actors and publics of the territories.
2. **Presentation of the educational exhibition of the SB&WR C project**

2.1 **Design of the exhibition**

One of the ways to communicate the results obtained in the framework of the SB & WRC project was the realization of an exhibition. For this exhibition to be keeping with the project, the goal was to create a modular and reusable scenography. To support it in the restitution of the project, the Unilasalle research team relied on the skills of a young architect, Léa Crédidio, who will soon graduate from the National School of Architecture in Normandy.

The supports of each prototype, from recovered metal door frames (Figure 1) and French certified wood, always in a sustainable development logic.

![Figure 1: Support for the prototype from door frame](image)

Each door frame is a painting that highlights an insulating material. In this painting, the insulating material expresses itself and tells its story, these characteristics, and its potential. The assembly is then designed by Bruno Letellier, craftsman, carpenter and cabinetmaker from the Normandy Region. The wood used to represent conversation bubbles and to allow the door frame to stand is French, from sustainable forest. The exhibition presented to visitors was a succession of door frames presenting each prototype of the SB&WR C project. The first overall view of the exhibition was done by 3D projection (Figure 2).

![Figure 2 : 3D prototypes supports](image)

Each door frame contains the main information on each prototype and allows to introduce all the studies carried out common to all prototypes. The contents of each door frame are detailed later.
The first frame corresponding to the prototype 1 (Figure 3) presents the raw material before implementation (corn marrow), the deposit data available from the raw material, the manufacturing process for the prototype development (thermocompression) and the main technical properties.

![Figure 3: Prototype 1 frame door](image)

The second door frame corresponding to the prototype 2 (Figure 4) presents the deposit data available from the raw material (polyester resulting from duvet waste), the manufacturing process for the development of the prototype, the main technical properties, as well as the legal analysis on the waste status.

![Figure 4: prototype 2 frame door](image)

The third door frame corresponding to the prototype 3 (Figure 5) presents the raw material before processing (wheat straw), the deposit data available from the raw material, the manufacturing process for the
development of the prototype (reorientation straw bale), the main technical properties as well as the environmental analysis.

The fourth door frame corresponding to the prototype 1 with a mixture of agroresources: maize pith and rapeseed straw (Figure 6) presents the raw material before processing (rapeseed straw), the deposit data available from the raw material, the main characteristics properties as well as economic analysis.
2.2 Schedule of the exhibition event

The presentation of the results of the SB&WRC project in the form of an exhibition started on 21 June 2019 with two introductory presentations highlighting the interest of biobased materials in construction and describing the SB&WRC project. After very enriching exchanges with the public, the visit of the exhibition in the experimental Greenhouses of UniLaSalle was able to start (Figure 7). This event generated the interest of 42 people. The present audience comes from very different backgrounds. In addition to members of UniLasalle, and Project partners, businesses, lecturers, members of local communities, students made the trip to attend this exhibition (Figure 8).
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