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REPORT OF THE SEMI-PRODUCT DISSEMINATION TO OTHER SECTORS OF THE COMPOSITES INDUSTRY 03/2023

UBS



European Regional Development Fund



Partners

PP Leader: UBS

Partners involved:

EcoTechnilin

Teillage Vandecandelaere

Content

Dissemination to sectors other than the nautical, advertising and automotive industries was done in several different ways. First of all, the partners presented the semi-finished products through competitive clusters, by carrying out a market study, by participating in thematic trade fairs and finally by focusing the theme of the closing event on the future of biocomposites.

1. Dissemination through clusters

This dissemination can be defined in two actions, firstly the collaboration with the poles with which relations are already established and secondly those with which the partners have no link.

a. Clusters already known by the partners

The clusters with which the partners have collaborated the most are also involved in these subjects. For example, B4C works with companies in the aeronautics or renewable energy sectors, with teams working on eco-design. The Pôle Mer Bretagne Atlantique also works on these subjects as well as on defence by working with companies such as Naval Group or Thalès. These clusters have regularly relayed the news of the project to their members, in their newsletter reaching hundreds of actors in these sectors.

b. Clusters not already known by the partners

The list of identified clusters working specifically on these themes is given below:

- Aeronautics: Aerospace Valley
- Defence: SAFE Cluster
- Rail: i-Trans
- Renewable energies: Pôle DERBI
- Transport: NextMove



The partners have not identified a cluster specifically dedicated to the construction or sports and leisure sectors.

Regarding dissemination to the railway sector, the UBS spoke at a meeting organised by the SNCF on 21 November 2019 and delivered a presentation entitled "Integrating biobased materials: a real alternative for more ecological and economic performance?".

No further action was taken with these clusters.

The COVID health crisis slowed down and reduced exchanges with clusters in sectors other than those targeted. Furthermore, at the same time as the above-mentioned clusters should have been contacted and actions launched, coordination within UBS changed. The project manager Chloé Joly was replaced by Lise Dugor. The latter's understanding of the project and of the dissemination activities took several months and the focus was on the project conferences rather than on the link with new clusters, especially as the indicators and target groups had already been reached.

Dissemination to other sectors was therefore mainly achieved through market research and participation in trade fairs, as detailed below.

2. Market research to target the best sectors

Market studies were conducted by the partners EcoTechnilin and Depestele in 2021 and 2022. These studies aimed to identify niche markets for the project's semi-finished products.

For EcoTechnilin, the study confirms the market's interest in developing this new product. The conclusions of the study are as follows:

- Three sectors stand out as priorities: Sport & Leisure, Furniture, Transport
- These sectors are to be favoured for the implementation of new solutions in natural fibres. They are showing interest in Flower veil in two applications, mainly the production of composites with low mechanical properties and surfacing to mask the embuvement of heavy fabrics.
- This veil has many strengths that should be capitalised on: lightness, anti-vibration properties, thinness, ecological aspect, aesthetics, compatibility with many transformation processes.
- This veil will find its sector if it is supported by good communication.

With regard to Teillage Vandecandelaere, the market research revealed the following points:

- The main sectors that emerge from this study are: Marine, Rail, High End Automotive, Sports and Leisure and Wind Energy.
- In the Marine, Rail and Automotive sectors, the volumes envisaged will be very high very quickly, at around 10,000m² per year. For Sports and Leisure and Wind Energy, proofs of concept have yet to be completed. For Sports and Leisure, the



volumes will be low, however for wind power, a minimum of 100m² will be required and on a wind farm of 50 turbines, an industrial POC represents an NCF surface of several tens of thousands m².

- The low carbon footprint, the aesthetic appearance and low density of the flax reinforcements, the vibration and shock absorption capacity and the good permeability of the bi-axial reinforcements are the main assets of the targeted products. Questions arise about the recyclability of both flax-based and synthetic fibre-based composites. Made in France is favourable but the higher price is a limiting factor to their use.
- In the marine, automotive and wind energy sectors, they can be put on the market fairly quickly, but for the rail sector, a long-term vision is required due to the rate at which rolling stock is renewed. The development of light trains for local services is a new emerging market with new constraints and opportunities. It has long-term prospects and is being developed by start-ups.

3. Participation to trade fairs

The partners EcoTechnilin and Teillage Vandecandelaere have effectively disseminated their semi-finished products at important national and global composite trade fairs.

Partner Depestele went to Dusseldorf in October 2019 to attend the K Tradefair, Europe's largest trade fair specialising in plastics and composites. This was a unique opportunity to meet all the players in the sector. The objective was to discuss with these players the marketability of the products developed in FLOWER in various sectors of activity. The first prototypes of biaxials and linen grids developed in the project were discussed.

During the project, the partners also visited the JEC World trade fair in Paris twice, organised by the global composites organisation JEC. In March 2019, the industrial partners EcoTechnilin and Teillage Vandecandelaere individually had stands at the fair and promoted the semi-finished products under development. At the May 2022 edition, all partners joined forces on a single stand where finished semi-finished products were displayed and partner Teillage Vandecandelaere had an additional stand. Hundreds of people visited these two stands and were interested in the FLOWER products. These visitors, who have created a link with the partners and wish to integrate FLOWER solutions, come from the aeronautics, construction, renewable energy and many sports and leisure sectors. A real desire to diversify the use of semi-finished products emerged from these events.

In the end, the partners did not take part in the Composites Meetings in Nantes, as fairly important contacts had been made at the two exhibitions mentioned above.



4. Project closing event

The closing event was intended to welcome participants from different sectors. However, the event had difficulties in attracting a large number of participants.

The event was of course open to all, as indicated in the communications published on social networks and transmitted to the competitiveness clusters and stakeholders contacted.

However, UBS, as the lead organiser of this event, chose to keep the event 100% face-to-face, not allowing participants to connect via a videoconference link.

Conditions external to the project (transport strike in France) led to cancellations of participation in the day and therefore to a lower attendance of people unknown to the project.

The dissemination of semi-finished products at this event to other sectors was therefore not possible.

However, the planned commitments were met, as the event was open to all sectors and the theme was "future trends in biocomposites", broadening the scope of biocomposites to include sectors other than boating, automotive and advertising. In addition, the conference featured three experts who have worked in aeronautics, transport and urban construction.

CONCLUSION

The dissemination of the semi-products to other sectors than automotive, nautism or advertising was mainly carried through the participation to trade fairs and also thanks to the help of external cabinets who carried market studies for EcoTechnilin and Teillage Vandecandelaere.

This dissemination was a success as the partners have found new companies interested in using the semi-products. Although the commercialisation of the product will take some time, clients from the building or luxury sectors are already willing to buy them when available.

On top of this, the partner EcoTechnilin has started a collaboration in the framework of another project to use flax in the rail sector with a semi-product dedicated to it.