MIMWOOD

Database of innovative materials for the furniture sector

Number of project: 2016-I-ES0 I -KA202-025558

www.MIMWOODproject.eu/plataforma

MIMWOOD
Database of innovative materials for the furniture sector

Co-funded by the
Erasmus+ Programme
of the European Union

SUMMARY

Project description
GOALS
OUTPUT
STEP
PARTNER

What is innovation?
VET CENTERS INNOVATION
COMPANIES INNOVATION

Technological surveillance
WHAT IT IS
WHO MAKES IT
MIMWOOD CONTRIBUTION

Mimwood Library
CHARACTERISTICS
DATABASE STRUCTURE
HOW TO CONTRIBUTE

PROJECT DESCRIPTION
Goals

- ✓ All users, teachers, students, co-workers need to have updated knowledge and skills on the properties and specific characteristics of innovative materials.

- ✓ Develop a SYSTEM of TECHNOLOGICAL SURVEILLANCE for innovative materials for the wood and furniture sector.

- ✓ Develop a tool (digital era) that will provide information on the evolution of innovative materials at an international level.

PROJECT DESCRIPTION
Goals

The MIMWOOD project therefore aims:

- ✓To facilitate the use and accessibility of this information for teachers and students
- ✓To provide the knowledge and tools to generate technological surveillance systems in VET centres
- ✓To work with methodologies for research and analysis on the capacity of using these materials
- ✓To generate a mentality of innovation at the VET centres
- ✓To facilitate the transition for the European youth from school to work in a European context.

PROJECT DESCRIPTION
Final results

METHODOLOGICAL GUIDE and **COMPUTERIZED DATABASE** in specific innovative materials for the wood and furniture sector which will lead to generate new skills in the field of lifelong learning, forcing a constant and continuous update (C-VET linked) of the teachers and students of vocational training on properties and specific characteristics in innovative materials.

This database is a LIVING and DYNAMIC tool that must be maintained and updated by the VET centers, in a parallel way to the evolution of the material trends in the productive wood and furniture sector.

PROJECT DESCRIPTION
Steps

Open educational methodological guide on technological surveillance.

Facilitate the development of a surveillance system in the area of innovative materials in the VET centres by applying a competitive intelligence system.

Computerized Database.

Practical tool, a surveillance system customized for vocational training centers.

Training course / case study.

Application of the concepts that have been collected in the methodological guide on the use of the developed computerized database

PROJECT DESCRIPTION
Partners

Coordinator:

AIDIMME
METAL-PROCESSING, FURNITURE, WOOD AND PACKAGING TECHNOLOGY INSTITUTE

Partners:

FLA
FEDERLEGNOARREDO

CIPFP Catarroja
Centre Integrat Públic Formació Professional

CFPIMM
CENTRO DE FORMAÇÃO PROFISSIONAL DAS INDÚSTRIAS DA MADEIRA E MOBILIÁRIO

WOODWIZE
nooit op eigen houtje
vous allez envoyer du bois

WOOD.BE

GMIT Letterfrack
GALWAY-MAYO INSTITUTE OF TECHNOLOGY
The Furniture College

WHAT IS INNOVATION?

- Innovation means **new products**, **new materials**, **new devices**, **ideas** or **methods**, but also by the process of uncovering new ways to do things. It can also pertain to modifying business models and adapting to changes to achieve better products and services.
- Innovation is the way out in a competitive competition.
- The time to find everything yourself is already behind us for a while. It is impossible to follow all the innovations in the furniture sector, all the innovative materials, all the new products.
- Although innovation is more than just about materials and products - it is also about a new labor organization and new business models – we focused in the MIMWOOD project specific on the materials that could be used in furniture design.
- But there is another essential element for successful innovation: an innovative mind, or a mind that opens up for innovation.
- Innovation is **vital** in the workplace because it gives companies an edge in penetrating markets faster and provides a better connection to developing markets, which can lead to bigger opportunities, especially in rich countries. Innovation can also help develop original concepts.
- With this project and the proposed materials library, we hope that many of our vocational training institutes deliver well-educated and motivated young people, who want to cooperate enthusiastically in the future of our furniture industry. Those educational institutions are also your partners in innovation ... because no innovation without the right talent!

VET CENTERS INNOVATION

- Most of the VET-centres do not have a system of gathering information about innovative materials.
- VET-centres mostly don’t have a structured system of gathering information about innovative materials. Often, this task it depends on the **teachers** and their efforts to do the research, to read technical magazines, to visit fairs or to ask companies for samples.
- Some of the innovative materials are quite expensive. This is why some VET-centres don’t have the possibility to buy or use it in their pedagogical practices and workshops.

VET CENTERS INNOVATION

- The use of innovative materials in VET-centres is not so important as it should be
- Very few VET-centres offer specific training on innovative materials.
- Our survey shows that the knowledge of innovative materials is very limited in all VET-centres in general. Besides, they don’t have a specific system of gathering information on innovative materials.
- Most of the VET-centres trust on the efforts of the individual teachers to do the research, to visit fairs and companies

COMPANIES INNOVATION

- Companies from all the countries get information about innovative materials from material suppliers and from wood and furniture fairs (65,1%).
- When companies evaluate the characteristics of innovative materials for possible use, the most important characteristic is the potential of the material for processing and manufacturing. After this, the visual and technological issues and ecological characteristics.
- In general, companies use innovative materials, but in a limited way.

MIMWOOD-database can give some autonomy to companies' technical departments. The information about innovative materials will be easily accessible on this digital platform.

COMPANIES INNOVATION

- Composites, plastic, steel (chromed, coated and anodized), glass and ultra-modern materials are visible in modern furniture manufacturers' sites.

- The use of these innovative materials in furniture making does not mean that wood is totally replaced.

- Modern furniture has not completely given up on using wood.

INNOVATION OF THE MATERIALS

- "innovative material" even if this material is already used in the wood and furniture industry during 3 or 4 years. Mostly, these materials are used in the industry, because of its differentiation in terms of technical and aesthetic properties.

- In contradiction, our wood and furniture industry and especially our VET-centres use commonly the "traditional" materials. As these are well-known materials, no surprises will come up when working with these materials. On the other hand, there will be less or no innovative use of these well-known wood species.

TECHNOLOGICAL SURVEILLANCE
What it is

Organized, selective and permanent process to gather information on science and technology from the outside and from the organization itself, as well as to select it, analyse it, spread it and communicate it. Its objective is to turn this information into a knowledge that may allow to take decisions with a lower risk and to anticipate the changes.

Technology surveillance deals with the available or emerging technologies, techniques and innovations in any field which are able to contribute to new products or processes. Its **objective** is to gather information, select it, analyse it, spread it and communicate it in order to turn it into knowledge with the aim of taking decisions with a lower risk and being able to anticipate the changes.

Benefits of implementing a Technology Surveillance System:

- To observe and research systematically the signs of change and innovations
- To facilitate the identification of the technological fields
- To facilitate the relation between the internal or external technology surveillance providers and their clients in the organization.
- To acquire information in order to convert it into knowledge and facilitate the decision-making according to the collected data.
- To collect all the valuable information and to stay ahead in different topics

Technology Surveillance embraces every kind of documentation that may help the analysis and consideration of the business management strategies, mainly.

TECHNOLOGICAL SURVEILLANCE Process

The creation of a technology surveillance system embraces:

- Trade fairs and events
- News about the organisation activity sector
- Opinions about the activity sector (experts, clients)
- Publications of interest (regulations, patents, newsletters)

Technology surveillance concepts can be used in different fields.

TECHNOLOGICAL SURVEILLANCE Process

- The starting point is to include new materials, techniques and technologies in teaching material, products and projects and to no longer use obsolete materials.
- Teachers regularly attend trade fairs, visit companies and product presentations, organized by suppliers, sector organizations or by research and development centres.
- To include the obtained information in the teaching material, courses and projects and to make the samples available through a physical materials library.

  Colleagues should inform each other during course meetings, where you can integrate a specific the agenda item, such as "product presentation".
- To integrate also visual materials, photos, etc… Nearly all innovative materials and/or techniques should be available, if not physically, then by websites, links, articles, etc…

TECHNOLOGICAL SURVEILLANCE

- This project provides a system for support of the technology surveillance for new and innovative materials, that can be used in VET-centres for wood and furniture.
- Sectoral training and R&D organizations can play a key role.

  This can be shared with each other, or can be included in the schools' library or database.

EXISTING MATERIALS DATABASE

MatériO

www.materio.com

Material Lab

https://www.material-lab.co.uk

Material connexion

www.materialconnexion.com

Materfad

http://es.materfad.com

Matheriautheque

https://www.citedudesign.com

MaterialDistrict

www.materialdistrict.com

Materioteca

www.materioteca.it

Innovatheque

www.innovatheque.fr

Matrec

https://www.matrec.com

Matech

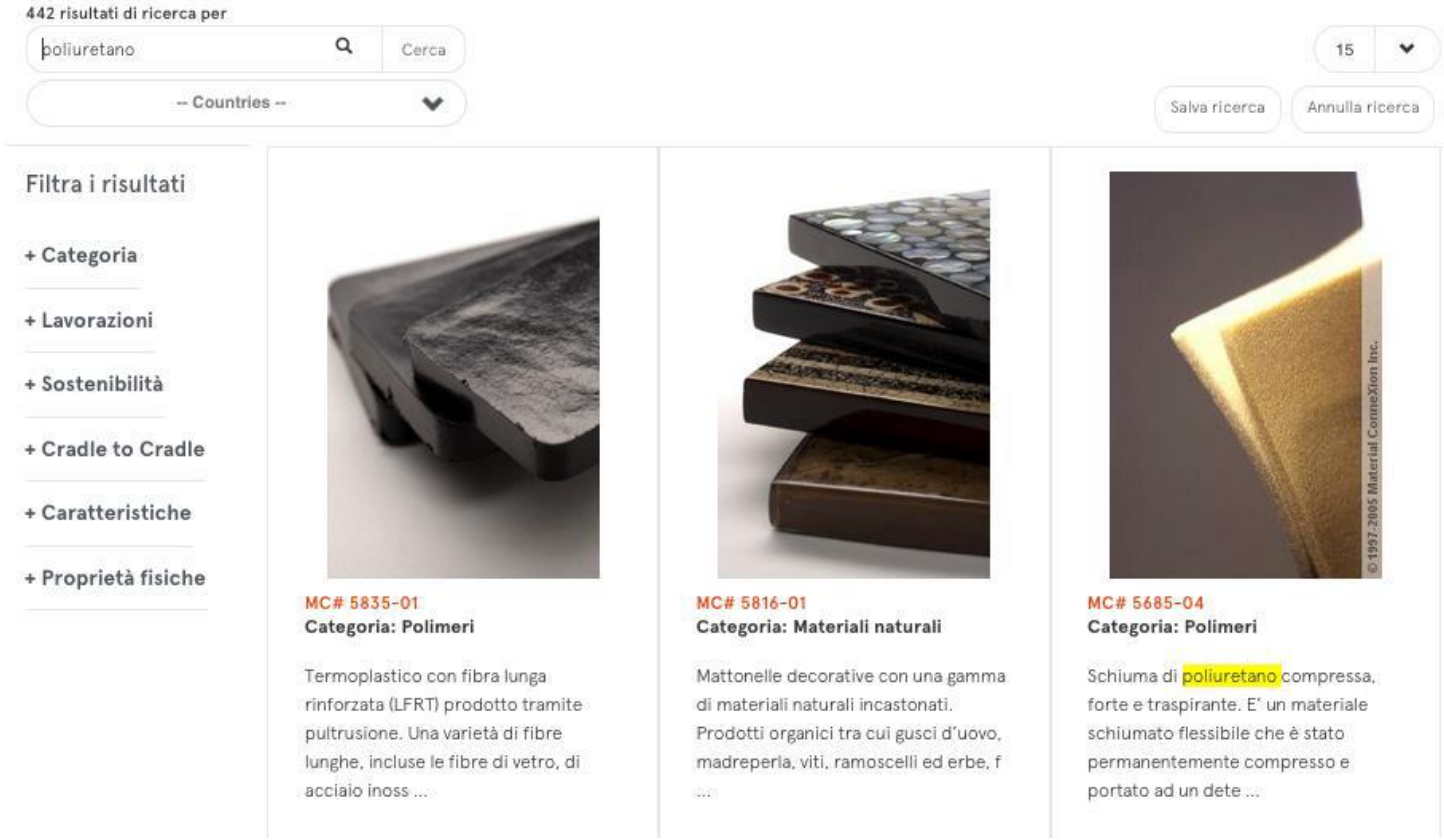
www.matech.it

Materials design

materialdesign@unife.it

EXISTING MATERIALS DATABASE

Material connexion



https://www.youtube.com/watch?v=CnNFAHkVM04

MIMWOOD MATERIALS LIBRARY

MIMWOOD materials library is a thinking area created to find solutions in the materials for the furniture and habitat sector.

This space has been created to provide a database with information about the new existing materials in the market in order to facilitate the materials' choice during the conception phase of a product.

This Specific database which consist of a practical tool (digital era), that provide structured and targeted information (on the evolution) of innovative materials at an international level.

The aspects related to the selection of the material depending on the properties, use and demand.

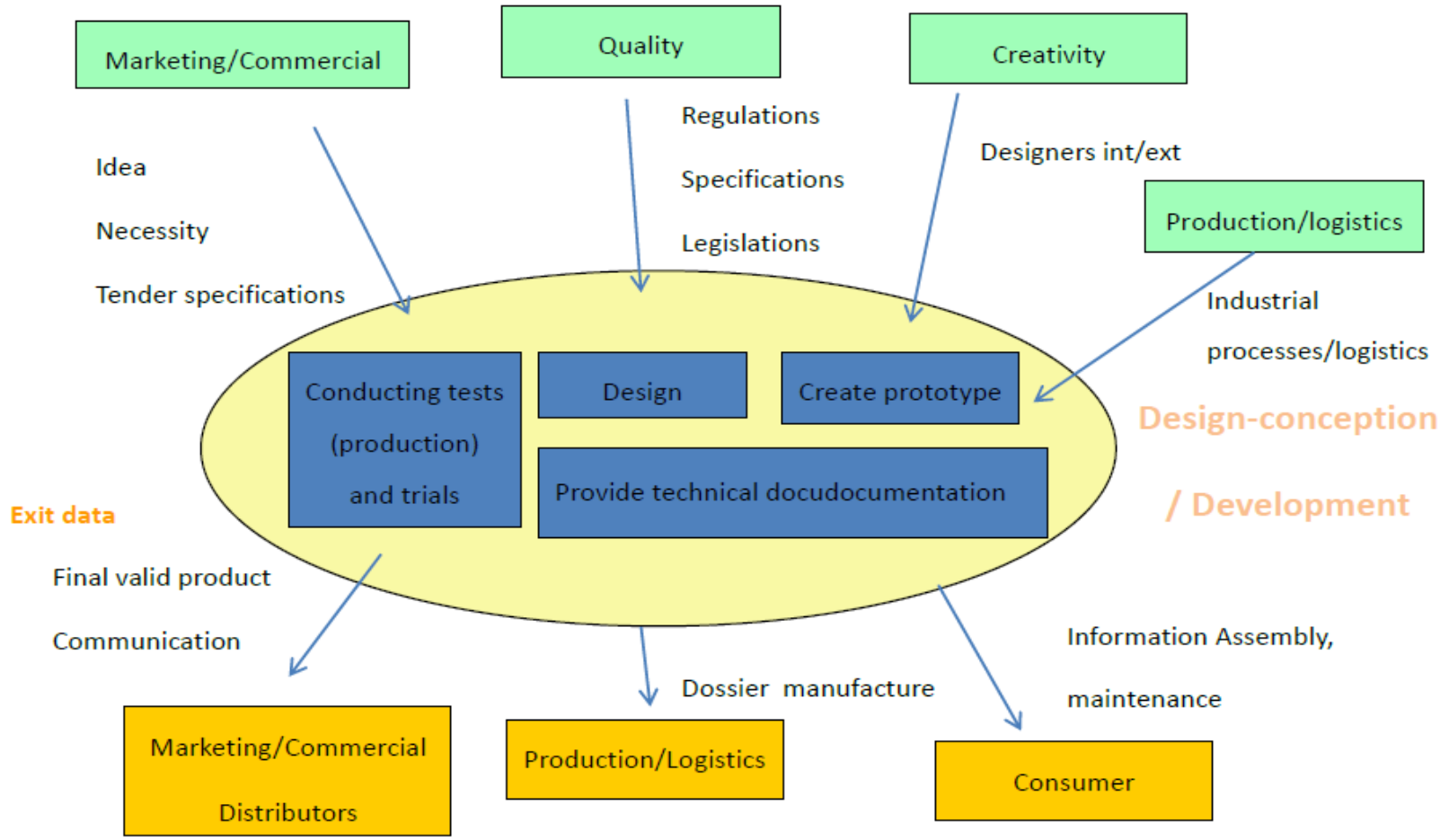
MIMWOOD MATERIALS LIBRARY
Uses

Both the students and teachers can use the tool for all the innovative aspects, and for the development of new products.

The product development has lots of phases, as it can be observed on the attached diagram. In order to do it, it is essential to know its properties or the added value that the selected material can provide to the product that is going to be designed.

It is essential to have basic information about possible materials.

MIMWOOD MATERIALS LIBRARY
Entrance data in a product development



MIMWOOD MATERIALS LIBRARY
Features

- ✓It is a tool that shows different types of materials based on their characteristics, as well as taking decisions about what materials should be used to create prototypes with determined characteristics that had already been defined in the phase of the concept of the project to develop
- ✓MIMWOOD's database is prepared to be translated to any language of the partners of the project
- ✓Each VET centre or their surveillance system should provide a list of places or possible information that could be useful to update the contents of the MIMWOOD database

MIMWOOD MATERIALS LIBRARY
Features

- ✓The structure of the database allows providing a lot of information about each material
- ✓The structure of the database enables to introduce links that permit the access to videos about these materials.
- ✓The implementation of new materials in this database is really intuitive and easy.
- ✓The structure of MIMWOOD's database permits to obtain information about the last materials that have been introduced in it.
- ✓Information about the providers of the different materials.

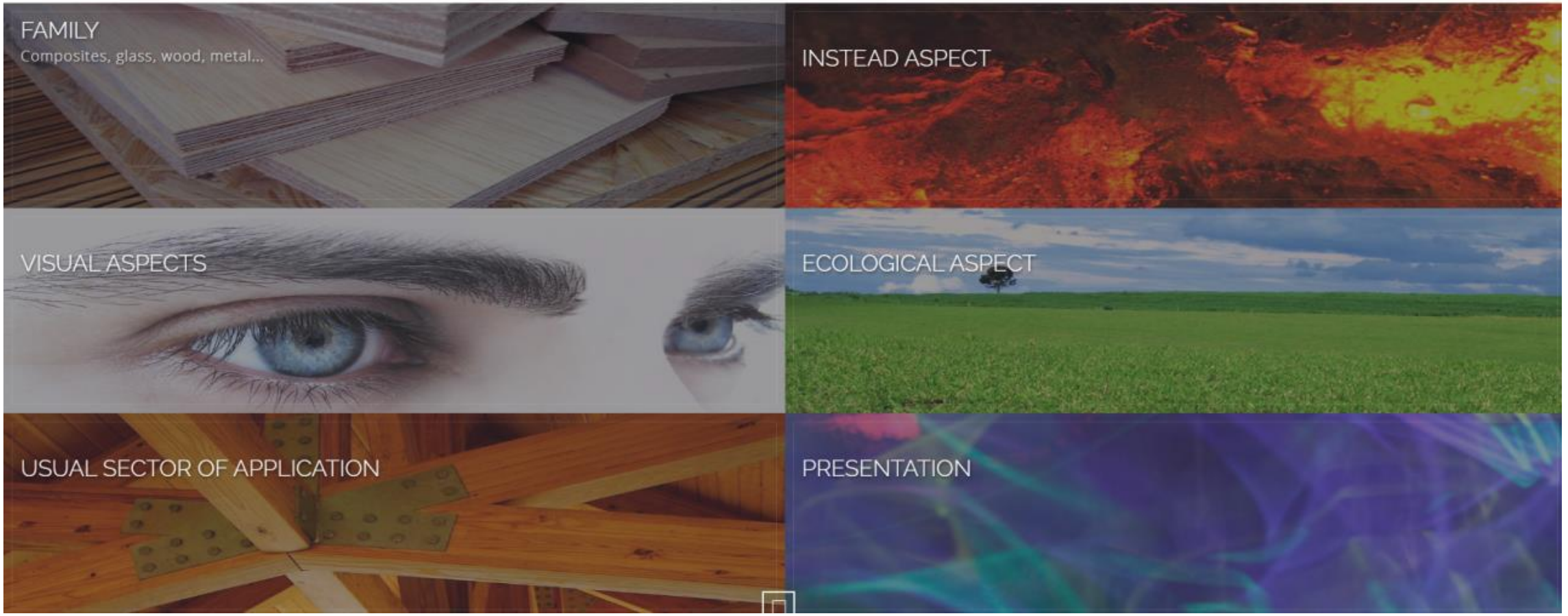
MIMWOOD MATERIALS LIBRARY

www.MIMWOODproject.eu/plataforma

MIMWOOD MATERIALS LIBRARY

MIMWOOD
Database of innovative materials for the furniture sector

"This project has been funded with support from the european commission. The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the commission cannot be held responsible for any use which may be made of the information contained therein."



DATABASE STRUCTURE

Keywords have been defined.

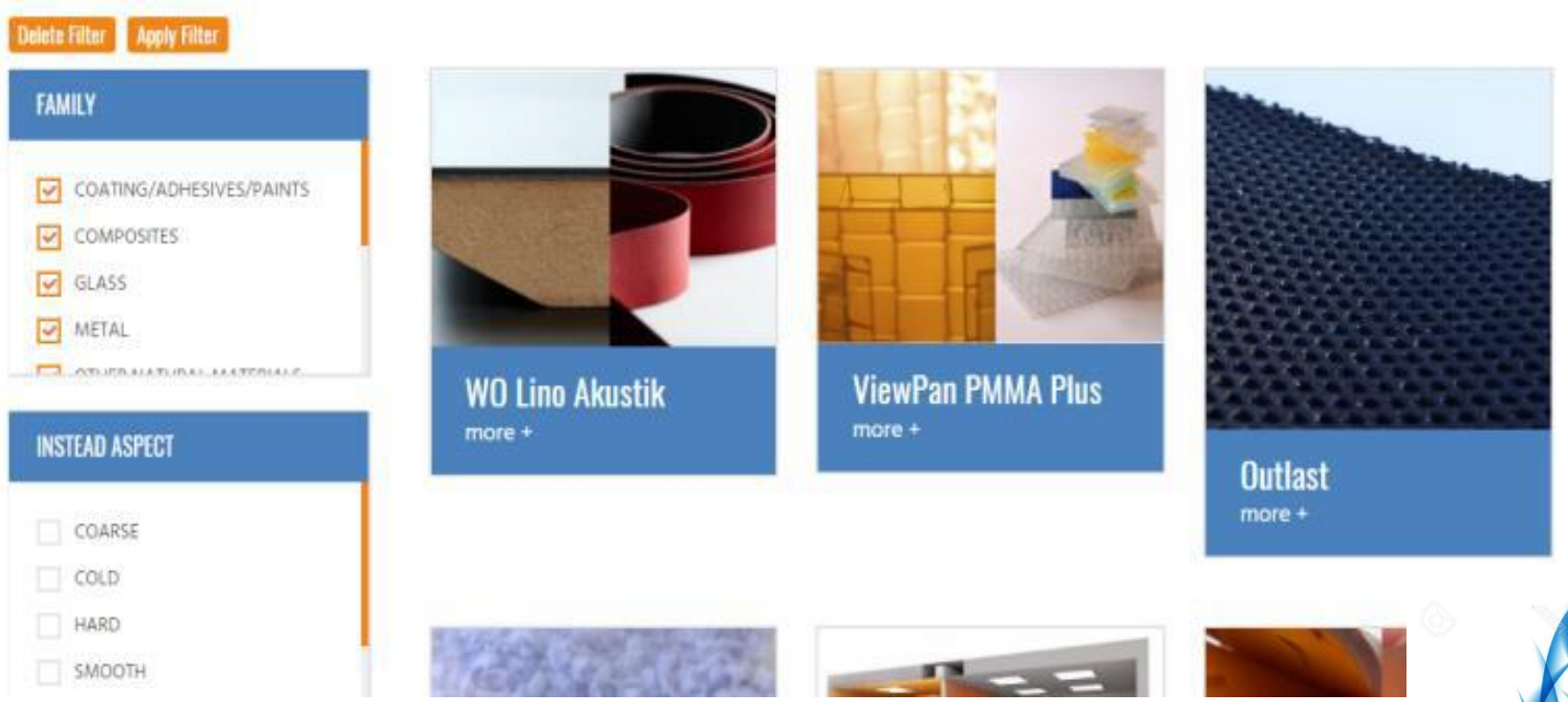
- Family
- Visual Aspects
- Instead aspects
- Ecological aspects
- Usual sector of application
- Presentation
- Technical properties

This enables the search of the materials based on the desired properties.

DATABASE STRUCTURE

Family

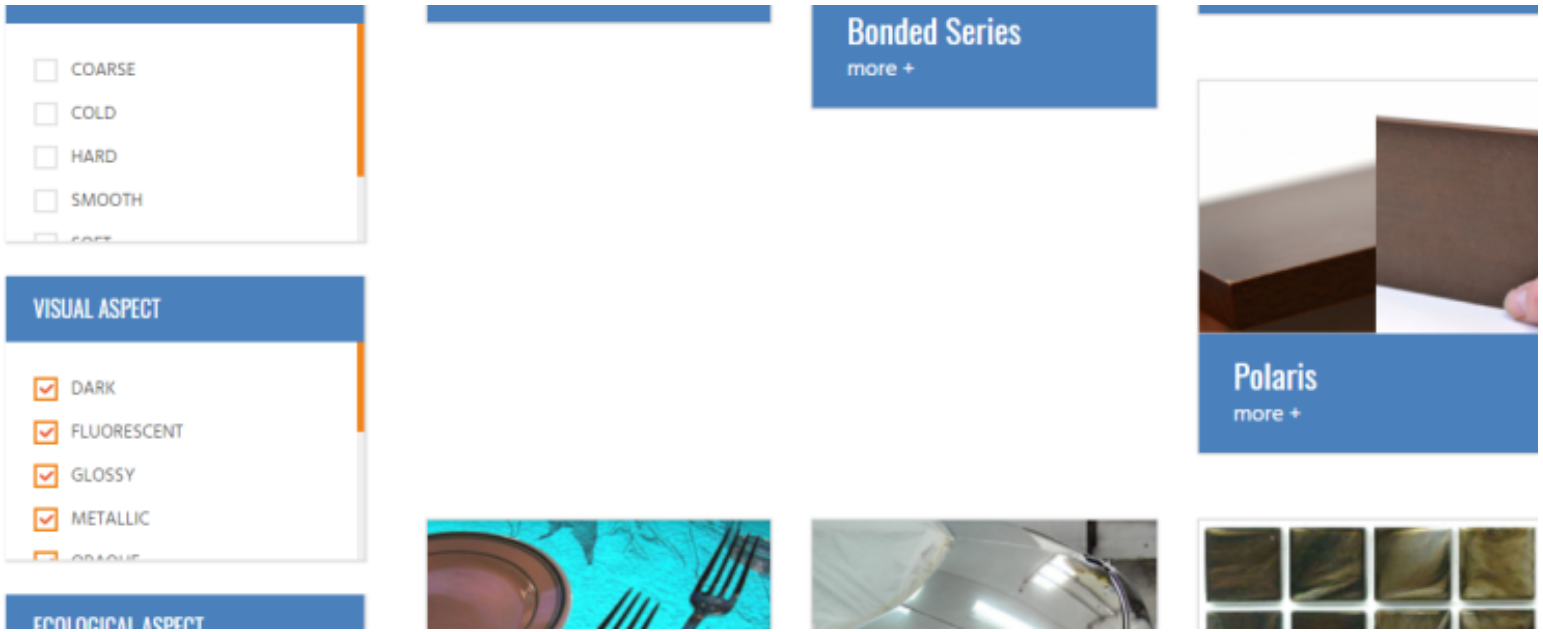
- Coating_adhesives_paints
- Composites,
- Glass,
- Metal.
- Other natural materials
- paper
- Polymeric_plastic_ruber,
- Stone_ceramic.,
- Textile and leather,
- Wood and wood based



DATABASE STRUCTURE

Visual aspect

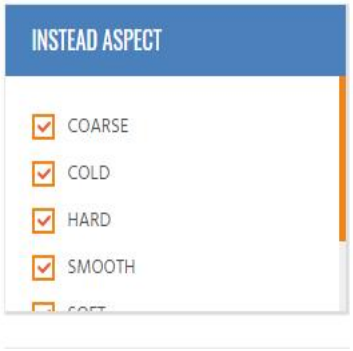
- Shine
- Pale
- Visual effect
- Fluorescent
- Metallic
- Opaque
- Dark
- Glossy
- Reveal
- Totaly transparent
- Partially transparent

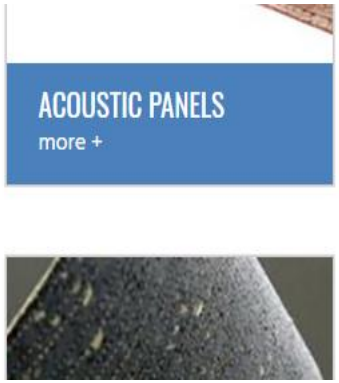


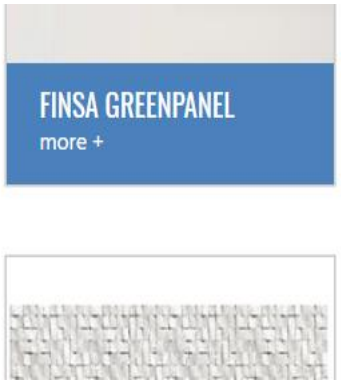
DATABASE STRUCTURE

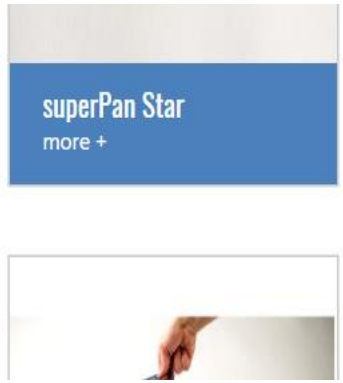
Instead aspects

- Coarse
- Cold
- Hard
- Smooth
- Soft
- Warm/hot









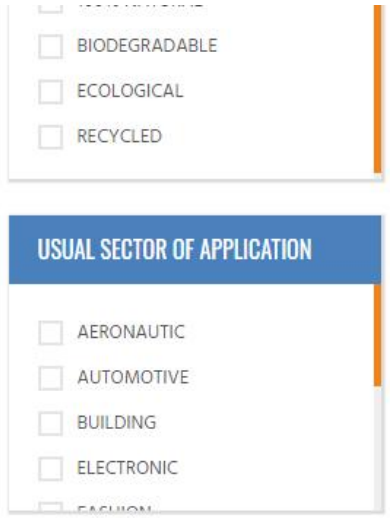
Ecological aspects

- 100% natural
- Ecological
- Recycled

DATABASE STRUCTURE

Usual Sector of application

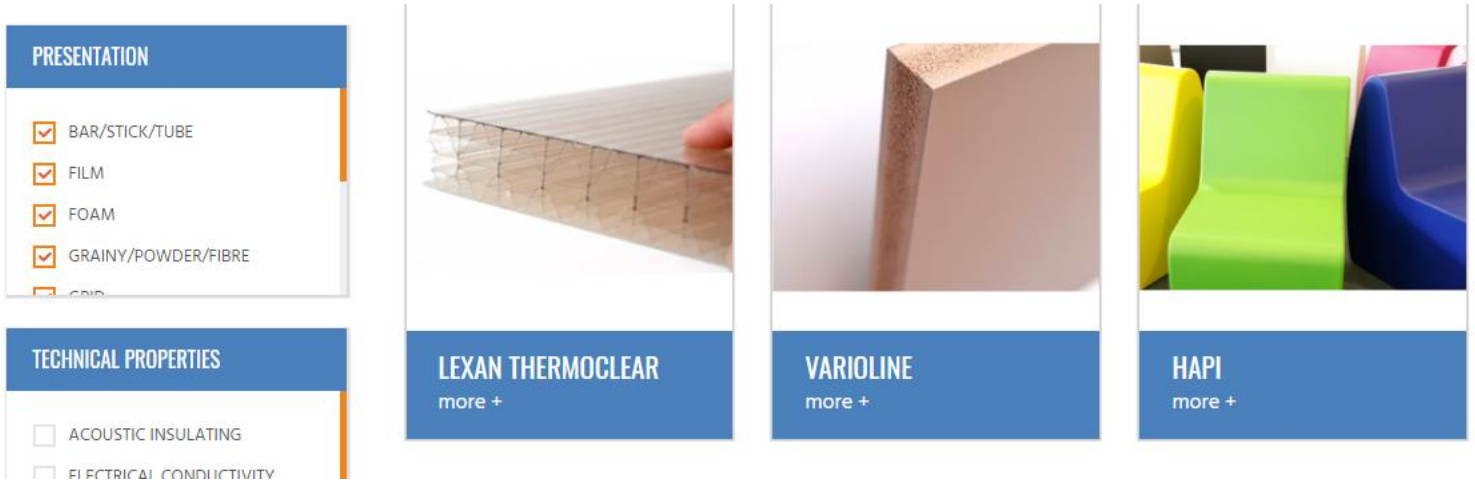
- Aeronautic
- Automotive
- Building
- Electronic
- Fashion
- Furniture
- Healthy
- Packakging
- Sports and leasure
- Transport



DATABASE STRUCTURE

Presentation

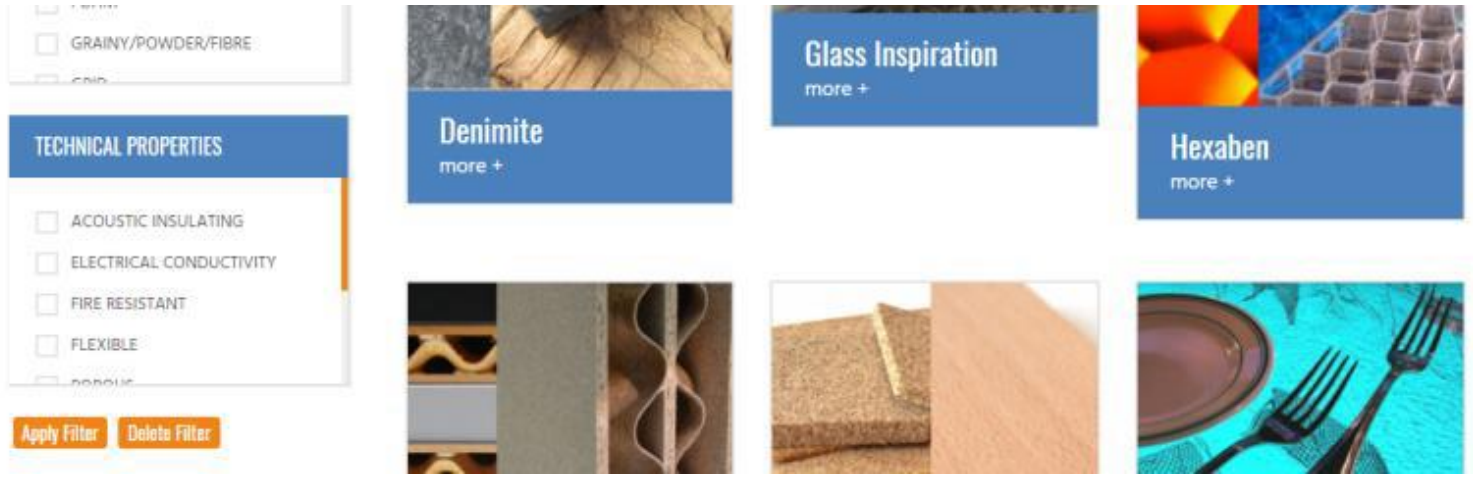
- Bar/stick/tube
- Film
- Foam
- Grainy/powder/fibre
- Grid
- Plaster/gel/liquid
- Plate/Board
- Sheet
- Tape
- Textile



DATABASE STRUCTURE
Presentation and technical properties

Technical properties

- Acoustic insulating
- Water resistant
- Electrical conductivity
- Fire resistant
- Flexible
- Porous



DATABASE STRUCTURE
Example

ViewPan PMMA Plus

Description

Honeycomb panel ViewPan® PMMA Plus offers bespoke colour options by combining the ViewPan® PMMA wave core with a wide selection of Madreperla coloured acrylic sheets. This kind of panel can be made in PET. Any application of the material... Decoration / Interior / Scenography ....

Properties

• Unique core design • Easily machined using standard equipment • Panels can be cut to size upon request • Strong and lightweight • ViewPan® PMMA Plus • Create bespoke panels by combining the Wave core with Madreperla coloured acrylic faces

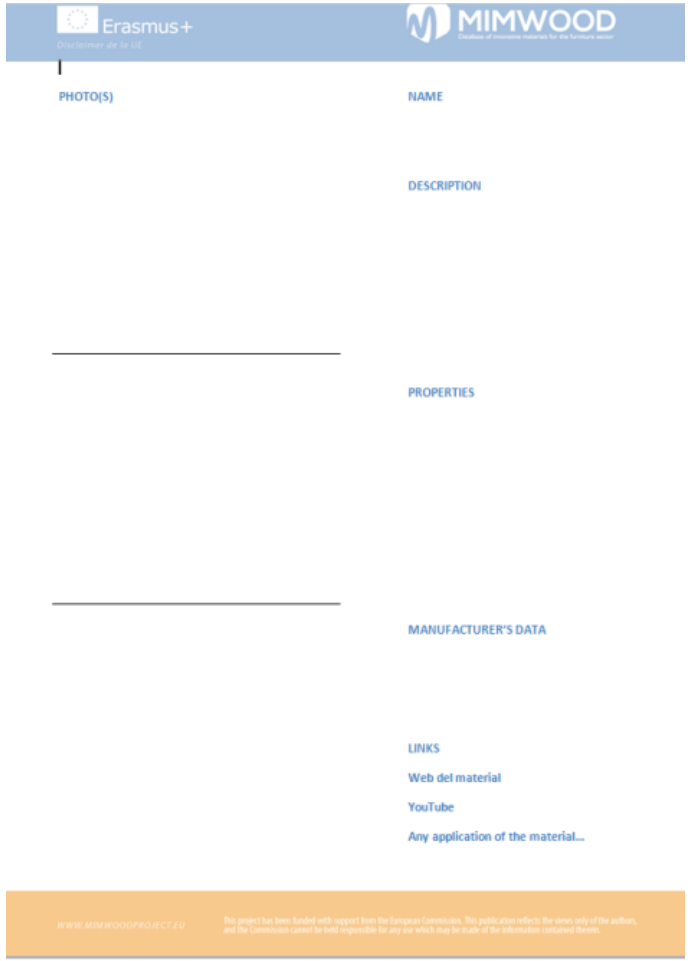
Manufacturer´s Data

Wacotech GmbH & Co
http://wacotech.de - info@wacosystems.de
+49-5221763130
Nobelstraße 4
32051 Herford
Germany

Links

Web: http://wacotech.de

The information appearing on this website is not commercial. Should you need further information, please refer to the material manufacturer official website.



HOW TO CONTRIBUTE TO THE MIMWOOD PROJECT

This database is absolutely dynamic and alive, which means that it requires maintenance.

Add new files or delete the ones about materials that are no more innovative or produced and that, consequently, are not able to be used

A technology surveillance system that obtains information from different sources such as: other library materials, material fairs and enterprises

HOW TO CONTRIBUTE TO THE MIMWOOD PROJECT

New designed products

Work groups should also be designed. They should coordinate the activity and, based on the information that appears about these materials

In a VET centre, this work group should be formed by a teacher that coordinates the activity and by a group of students who will collaborate with the teacher and who will learn how to manage a MIMWOOD database.

Thank you!

For more information:

www.mimwoodproject.eu

chiara.terraneo@federlegnoarredo.it

nicolas.sangalli@federlegnoarredo.it