TRAINING COURSE

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

Index

This project has been funded with support from the European Commission. This publication 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.

1. INTRODUCTION

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

The word “innovation” is everywhere nowadays. But what exactly is **innovation**?

Therefore we should decide on a definition. Innovation isn’t solely represented by 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 defined as the introduction of something new or different. The act of innovating leads to the introduction of new products, new ideas, devices or methods. In this project, we focus on new or innovative materials, that can be used in the woodworking and especially in the furniture industry.

Innovation is the way out in a competitive competition. We hear it every day, to the point of annoyance. But putting innovation into practice is easier said than done. Especially for students, teachers and all learners in Vocational Education and Training (VET), for the many SMEs, that form the backbone of our furniture industry. Often the resources, time or knowledge are lacking to thoroughly renew the production processes and the products.

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. Often we rely on a search engine to inform us, but therefore we need specific search terms, we need to look for specific materials. And this might seem as looking for a needle in a haystack.

This is one of the reasons why this partnership decided to develop an innovative materials database for the furniture industry.

The database is developed with the help of several partners, knowledge partners, such as technology and research centres in the furniture industry. But also other knowledge centres are involved, such as educational partners, VET-institutions and employer organizations.

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

Together we hope that we can help you with creative innovation for the furniture industry.

Although innovation is more than just about materials and products - it is also about a new labor organization on the floor 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. Each school, classroom, workshop, company needs to have the right people! When a company has an innovative culture, it'll grow easily, despite the fact that the creative process isn't always simple. Tried-and-tested methods may be reliable, but trying out new things is a worthwhile experiment. Information on innovative materials and further, specific training is therefore a necessity.

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. And if you think that innovation is only for geniuses, hell no! Innovation is often a group activity and is definitely a teachable skill. Being innovative can start just by searching new materials for new purposes. The right innovative materials van lead you to new products and new opportunities.

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!

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

1.1. MIMWODD Project

Much of the furniture produced today is based on a wood and wood-composites, such as particleboard, often covered with a decorative coating or veneer. The knowledge of and use of new materials is one of the most important innovation elements in the development of new products for the wood processing and furniture industry.

This MIMWOOD-project aims to generate study methodologies and tools that facilitate vocational education and training institutes for the wood and furniture sector, to choose and select innovative materials. Many of these new materials can be used in the furniture sector. Unfortunately, the use of new or innovative materials is not included in the curricula of vocational education and training.

The pyramid of skills needed in woodworking and furniture sector shows that design and innovation for multifunctional products are one of the top skills. And with the MIMWOOD-project we want to show you how this could be included in the curricula or through specific training programs.

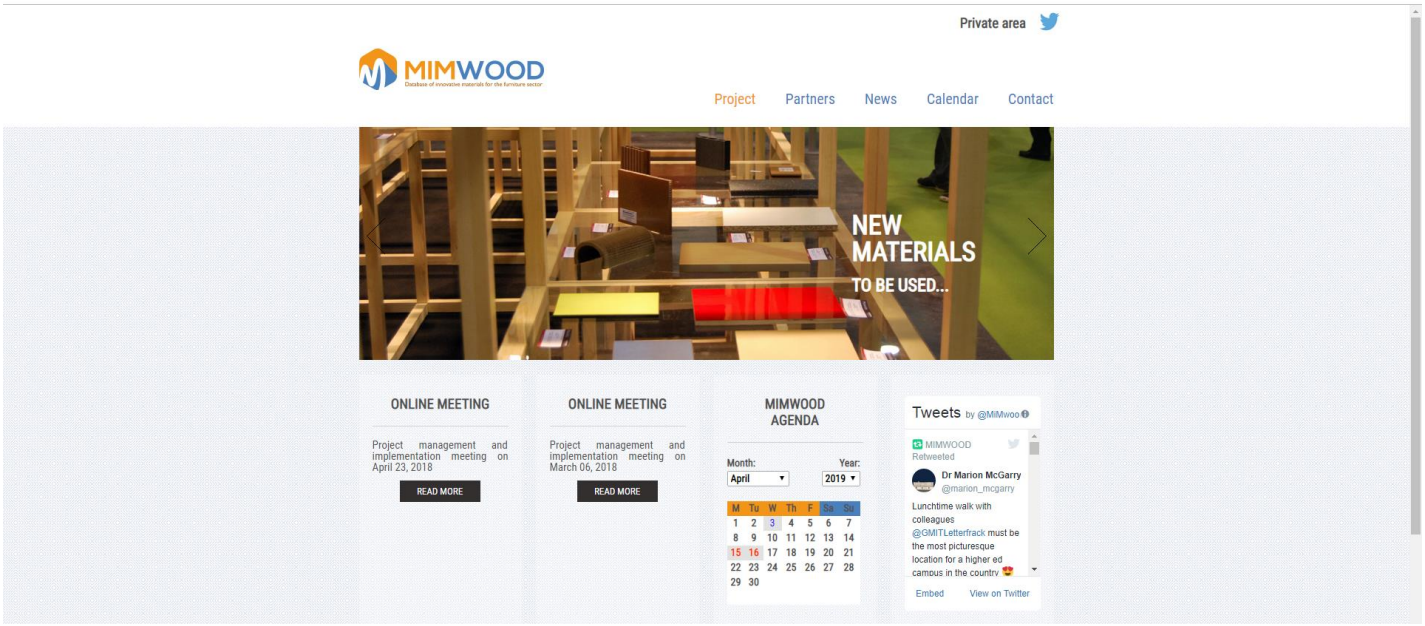
The MIMWOOD project aims:

- to facilitate the use of this information and to elaborate a tool to use in VET-centres, with the scope to have and analyze information on materials and to select the ideal material(s), in function of the desired product and properties.
- to provide a new, innovative methodology in the VET-centres, by providing teachers a tool that facilitate the updating of their knowledge about innovative materials, to familiarize students with research methodologies, and to analyze the capacity of use of materials in the development of new products.
- to provide the knowledge and tools to generate a technological surveillance system, which allows to acquire up-to-date information about new materials with possible application in the wood and furniture sector. We think of products derived from wood, as well as other materials.
- to create a tool to facilitate the updating of both teachers and students knowledge on new materials.

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

- to work with methodologies for research and analysis on the capacity of using these materials.
- to generate an innovative mentality for VET-students and VET-teachers.
- to facilitate the transition from school to work for youngsters in a European context.

MIMWOODproject.eu



Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

1.2. Glossary about main concepts

It is important to draw the attention to the difference between novel or innovative materials, as this "definition" often depends on the application.

A material can be innovative or novel in the (business-) market, but still be far away from use in the educational field or in VET-centres. On the other hand, a material can be innovative or novel for education/VET centres, but not yet in the professional market.

In general, we can a material as "innovative", even if this material is already used (on a regular basis) 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. For example innovative materials that are used in interiors or in exterior areas, which allow to develop projects, that would not be possible with the known traditional materials.

In contradiction, our wood and furniture industry and especially our VET-centres use commonly the "traditional" (wooden) 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.

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

2.CONTEXT

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM CIPFP CATARROJA FLA FEDERLEGNOARREDO GMIT WOOD.BE WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

2.1. Importance of using innovative materials in VET centres

In general, most of the VET-centres do not have a system of gathering information about innovative materials. The exceptions are Belgium and Italy, where most of the VET-centres do have a system. In Belgium, the information is gathered through visits of fairs, internal experts on materials, research on websites of providers and external visits of companies and suppliers. In Italy, the VET-centres with a surveillance system use the access to material databases, such as Matrec and Material Connexion, as well as samples of innovative, wooden panels provided by companies.

In Ireland, there was only one VET-centre referring to have a system of gathering information. The referred system is a specific section in the library.

In short, VET-centres mostly do not have a structured system of gathering information about innovative materials. Often, this task belongs to and depends on the teachers and their efforts to do the research, to read technical magazines, to visit fairs or to ask companies for samples.

Most of the VET-centres have knowledge of innovative materials. This knowledge comes from personal contacts of teachers and trainers with companies and suppliers.

Belgium VET-centres referred the knowledge on solid surface materials, such as Corian or Hi-Macs, in engineered wood such as Thermowood, Accoya and Tricoya, and also in bio-wood.

In Ireland, one of the VET-Centres referred the knowledge of Corian, Concrete Canvas and 3D-plywood. The other ones mentioned that it is a regular practice to introduce innovative materials in the design projects. These materials are often researched by the students, with help from teachers.

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

Italian VET-centres mentioned that teachers, on their own, get information on innovative materials at exhibitions or on journals. In particular for decoration and restoration, innovative materials are used, such as recycled wood panels, hemp panels for construction and architecture, coconut fibres, eco-polymers, faux leather, eco-glue, textile fibres, nanotextile and low emission wooden panels.

For Portuguese VET-centres, the knowledge of innovative materials comes from the contact with the suppliers, with modern companies and also from technical magazines, technical seminars and fairs and exhibitions.

The importance of innovative materials in modern industry of furniture is well known, particularly those with a strong component of design in products and projects. However, 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.

In our research, we can conclude that in three countries, most of the VET-centres use innovative materials regularly; in the other two countries VET-centres use only few innovative materials or nothing at all.

In Belgium, most of the VET-centres use innovative materials namely composites (Hi-Macs and Corian) and wood and wood based (Accoya, Thermowood and Tricoya).

For Irish VET-centres, the general trend is the incorporation of innovative materials into students' projects. Most of these innovative materials are glass, metal, paper, textile and leather, wood, wood-based, coating, adhesives and paints. We can see the same in Italian VET-centres, where innovative materials are used for design projects, especially textile, leather, wood and wood-based.

In Spanish VET-centres, only 35% use materials, that they consider as innovative. These materials come from local suppliers. But the information about innovative materials is only limited, because they consider innovative materials, these materials that are on the market for less than 10 years.

This project has been funded with support from the European Commission. This publication 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.

The use of innovative materials in VET-centres is not so important as it should be, considering the role these materials will have in modern European furniture industry in the near future. Despite the high price of the materials, which influences the use, there is also lack of information about innovative materials. What is innovative for VET-centres could be not so innovative for companies.

Very few VET-centres offer specific training on innovative materials. Belgium has two VET-centres who provide training for the use of solid surface materials. Also Italy has two VET-centres, who provide some specific training on innovative materials. The first case is not specific, but included into “wood technologies” training course and the second has its activity related with decoration and restoration, using more than innovative materials, they use common materials with rediscovery and new techniques.

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 them only refer to solid surfaces and engineered wood. Other materials are not mentioned at all, which could mean there is a lack of knowledge of these other innovative materials.

Most of the VET-centres trust on the efforts of the individual teachers to do the research, to visit fairs and companies, to have contact with suppliers to keep updated information on innovative materials.
There is definitively a need for more knowledge and a good structure to gather information about this subject. This way, VET--centres will have conditions to use and to teach about these materials, contributing for improving the professional competences in this area.

This project has been funded with support from the European Commission. This publication 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.

2.2 Importance of using innovative materials in company

In general, companies from all the countries get information about innovative materials from material suppliers and from wood and furniture fairs (65,1%). Also the design department represents a small percentage of a specific information source on innovative materials.
Considering the current scenario, it is expected that the MIMWOOD-database can give some autonomy to companies' technical departments. The information about innovative materials will be easily accessible on this digital platform. On the other hand, the MIMWOOD-training course is developed to guide all of the users in this tool.

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 come in second place, as equally important. The ecological characteristics come in last place, as these characteristics are still less valued by companies. Some companies refer to the price as a very important characteristic, to evaluate the possibility of use.

In general, companies use innovative materials, but in a limited way, often just to produce a special product or in a specific, special project. Sometimes companies mention they are using innovative materials, but they are not so innovative as it seems, because the materials they are using are on the market for already several years, some even for more than 10 years.

Nowadays, all these innovative materials are used to create modern furniture. However, wood is the first material that comes to mind, when talking about furniture. Wood has been there since man started making furniture. The modern times have introduced new and innovative materials that have been explored by modern furniture designers.

As a fact, the introduction of technology has created awareness that other materials can also be used in building furniture. Furniture designers have realized that other materials can be also durable, strong and moulded into desired forms or shapes.

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

Composites, plastic, steel (chromed, coated and anodized), glass and ultra-modern materials are visible in modern furniture manufacturers' sites. The use of these materials combines design, style and technology to create their brands' idea. Glass, mild steel, brass, stainless steel, acrylic, plastic, polycarbonate, poly-rattan, cardboard, natural or artificial stone, foam and leather are some of the wood alternatives. Upholstered furniture with a chromed or steel framework is very popular among customers.

Developing the awareness of the advantages of using these innovative materials is a challenge for professionals and companies. By using these innovative materials, industry is able to preserve the trees and, in general, environment. Metal alloys and glass are widely used to build modern furniture and these can withstand weather conditions and humidity. Furthermore, they can be moulded using industrial tools and can be reproduced easily. The best thing about plastic and composite materials is their ability to be moulded into various forms and shapes from a simple product design. Of late, aluminium is used to create light weight furniture for the home.

The use of these innovative materials in furniture making does not mean that wood is totally replaced. A traditional, classy home would still look better with wood furniture. The choice of furniture actually depends on the total appeal of your home.

Besides, modern furniture has not completely given up on using wood. Timber is still very much a part of modern furniture production. In fact, modern furniture introduced the use of wood together with these innovative materials, so it is possible to see a combination of wood and glass, wood and leather, wood and steel, etc…

This project has been funded with support from the European Commission. This publication 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.

2.3. Other material's libraries in the world

2.3.1.MatériO

hello@materio.com

www.materio.com

matériO' Paris showroom

8 rue Chaptal 75009 Paris

T : +33 (0)1 40 82 98 48

MatériO was created in 2000 by a young French team, curious about science, industry, materials, design and innovation. MatériO is above all a technology watch service, selecting specific, atypical and innovative materials. It is dedicated to architects, designers and any creative professionals. Our teams constantly identify materials all over the world, in complete independence toward their manufacturers. Once selected, manufacturers are invited to send us samples in order for our members to be able to see and touch the materials in our physical material libraries (today in Paris, Brussels, Praha, Seoul, Shanghai, Shenzhen, Casablanca, Abidjan).

MatériO is an innovation and inspiration tool. They believe that innovation may come from meeting new materials, just when the client feels like it or when in search for a specific project.

MatériO is a private company, independent of the manufacturers indexed in its database. This service is indeed only financed by its users.

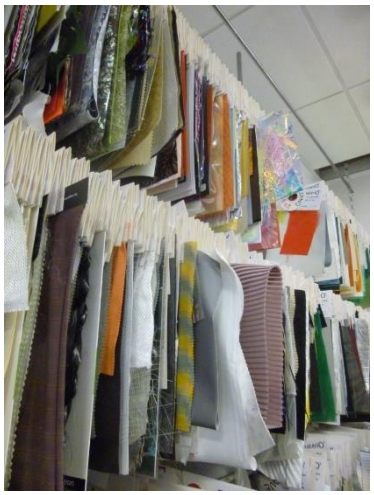
The virtual material library houses the entire set of references our team carefully selected (over 5000 manufacturers contact details). This online tool offers extensive answers to member's queries, thanks to surprisingly intuitive, user-friendly and original research functions. A must-have tool!

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM CIPFP CATARROJA FLA FEDERLEGNOARREDO GMIT WOOD.BE WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

Both physical and online databases are updated on a daily basis and grow through the addition of the latest novelties on an international scale.

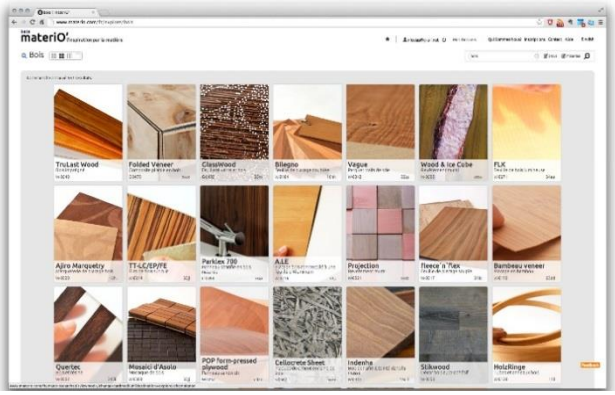
PRICE:

Web membership 210€TTC/year	**Web+ Showroom membership 310€TTC/year**	**Pack 4 930€TTC/year**
Unlimited personal access to the online database	Unlimited personal access to the online database and unlimited personal access to the showroom	4 unlimited personal access to the online database and 4 unlimited personal access to the showroom.



matériO'

This project has been funded with support from the European Commission. This publication 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.



Co-ordinator
AIDIMME
METAL-PROCESSING, FURNITURE, WOOD AND PACKAGING TECHNOLOGY INSTITUTE
CFPIMM CENTRO DE FORMAÇÃO PROFISSIONAL DAS INDÚSTRIAS DA MADEIRA E MOBILIÁRIO
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

2.3.2.Material Lab

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

info@material-lab.co.uk

Material Lab

10 Great Titchfield Street

London

W1W 8BB tel: +44 (0)20 7436 8629

Material Lab is a design resource studio and materials library in London, created especially by the UK's leading tile manufacturer Johnson Tiles in 2006, who listened and responded to what the architect and design community wanted.

It's a place where inspiration and creativity go hand in hand, where you can immerse yourself in surface coverings of every kind, no matter what they're made from.

Supported by some of the biggest global surfacing brands, our partners include Johnson Tiles, VADO, Karndean Designflooring, modulyss, Dulux Trade, Formica Group, Tektura and Flowcrete. If it's latest trends, tips, or just tempting ideas, immerse yourself in experimenting at Material Lab.

Take away a selection of samples from our partners free of charge, let us work with you and together you're guaranteed a unique result.

We're whatever you want us to be: your muse for inspiration, your hub for sharing ideas, networking and meeting your clients… it's up to you. Welcome to our world, we've made it yours.

This project has been funded with support from the European Commission. This publication 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.

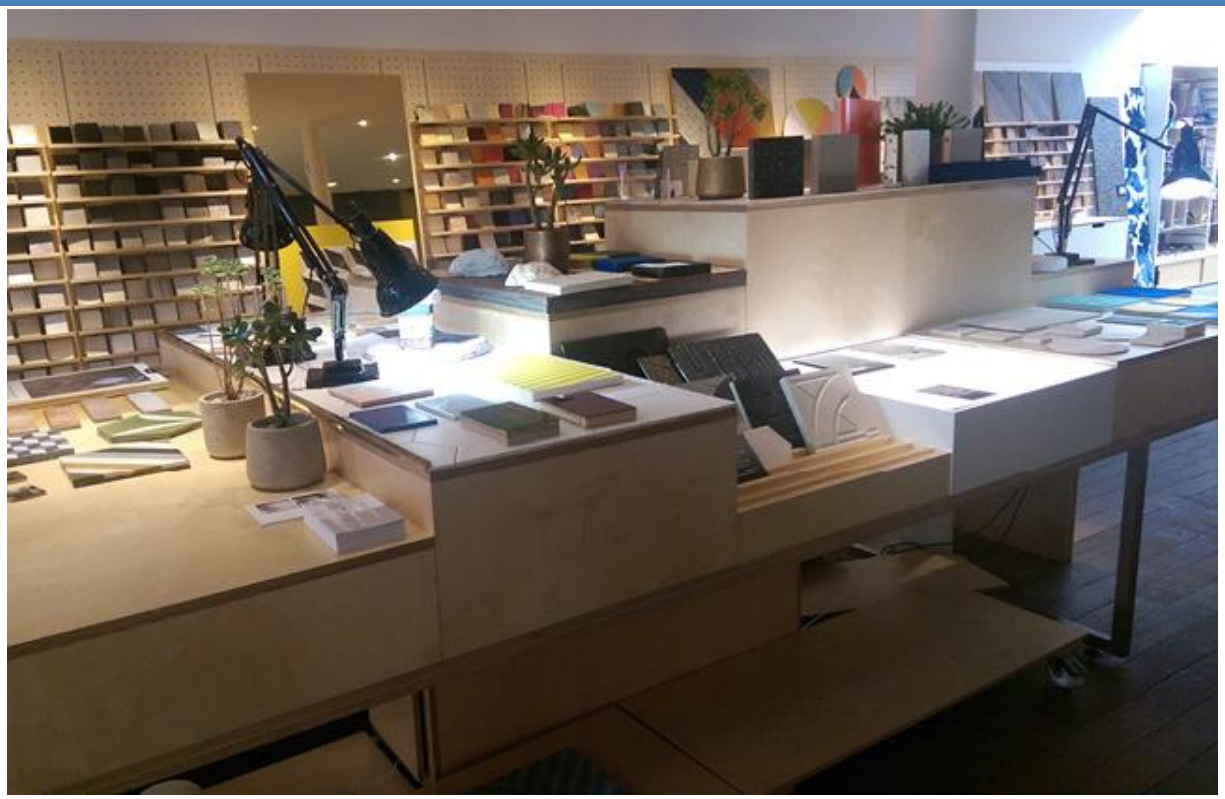
PARTNERS:

Take away a selection of samples from our partners free of charge, let us work with you and together you're guaranteed a unique result.

We're whatever you want us to be: your muse for inspiration, your hub for sharing ideas, networking and meeting your clients… it's up to you. Welcome to our world, we've made it yours.

JOHNSON TILES (manufacturer of ceramic tiles) °, VADO (British bathroom brassware manufacturer), MODULYSS (modulyss design, manufacture and supply high-quality carpet tiles), TECTURA (Tektura focus on contract-quality, fabric-backed vinyls); KARNDEAN (floor); FLOWCRETE UK (leading manufacturer of specialist flooring solutions); FORMICA; DULUX; MAYFAIR.

This project has been funded with support from the European Commission. This publication 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.



WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

2.3.3.Material connexion

www.materialconnexion.com

info@materialconnexion.com

101 Park Avenue, 4th Floor

New York, NY 10178

+1 212 842 2050

Bangkok · Bilbao · Daegu

Milan · Skövde · Tokyo

Material ConneXion® is the largest international research and consultancy centre for innovative materials. Materioteca of exclusively commercial type.

The result of the research, provides only information of nature:

-numeric (code, date of insertion, value of innovation)

- text (name, family, applications, country of production and name of producer).

This project has been funded with support from the European Commission. This publication 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.

The showroom counts hundreds of samples exposed permanently, with the ability to see and touch new materials.

The physical archive in Milan premises contains over 4000 materials, of which about 2500 are permanently displayed, and can be consulted by subscribers by appointment.

Equipped with Material Point, reference points for the material Library, Material Connexion allows collaboration with private individuals and institutions, creating a very rich network both in Italy and in other locations around the world. High prices, research aimed exclusively at trade; there is no research or advice, but only information transmission. Database division into 8 chemical categories and not for families.

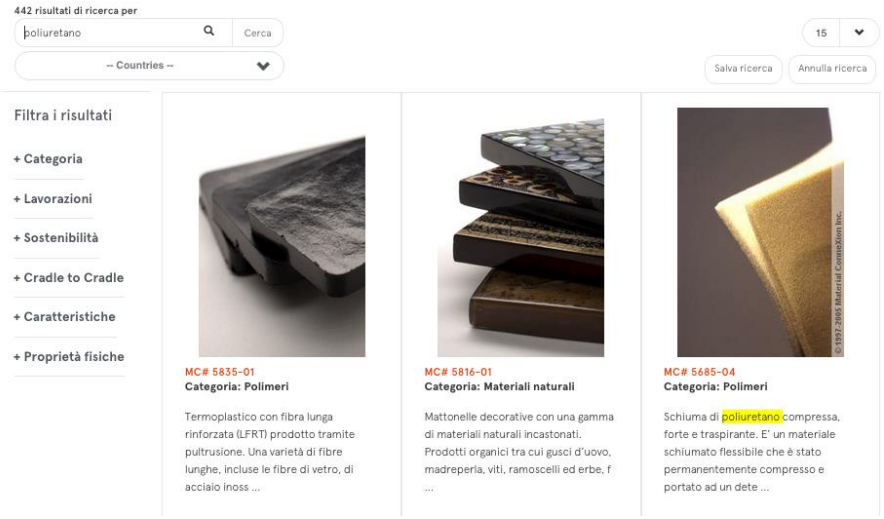
NUMBER OF MATERIAL: Both physical and online archives, has more than 7,000 materials. Every month the Library is enriched with 40 new materials and technologies selected by an international and interdisciplinary jury of experts.

DATABASE CRITERIA: Category, workmanship, product name, sustainability, certificates, characteristics, physical properties.

PRICE: Database membership, 250 euros by year

PUBLICATIONS: Material (R)evolution, Active MATTER, MATTER Magazine, Material Innovation: Product Design, Architecture.

This project has been funded with support from the European Commission. This publication 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.



Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

2.3.4 Materfad

http://es.materfad.com

info@materfad.com

Barcelona (Spain) + 3 sites in Mexico + Chile

Pl. de les Glòries Catalanes, 37-38

08018 Barcelona,

T:+34 932 566 778

Materfad, materials centre of Barcelona, develops a research and technological watch in the field of new materials and provides consulting and training services to companies, professionals, universities and technology centres.

Materfad research is free, the centre is subsidised by public funds.

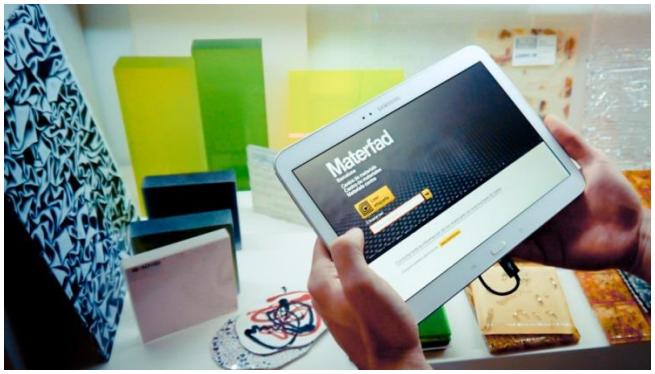
Materfad Barcelona has a global network of affiliated centres with which it shares its mission and objectives: Materfad Aguascalientes, the material centre of the UAA (Mexico), Materfad Valparaíso, of the University of Valparaíso (Chile), Materfad Medellín, of the University Pontifícia Bolivariana and Materfad Guadalajara, of MIND Mexico.

Materfad facilitates technology transfer between sectors as different as biotechnology, construction, transport or textiles, among others. His work of technological surveillance brings him an exhaustive knowledge of the technologies and new materials used at the multisectorial level. This allows you to detect materials and technologies of a certain sector with potential to be applied in another, offering this knowledge to companies and professionals who use Materfad's consulting services.

This project has been funded with support from the European Commission. This publication 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.

In Materfad, all the families of materials (biomaterials, ceramics, composites, polymers, etc.) are represented. Its transversal nature makes it a catalyst for innovation among universities, technology centres, companies, designers, industrialists, engineers and architects.

The materials, processes and technologies included in Materfad are commercially available and represent a complete multidisciplinary vision on innovation in the field of materials.



Materfad
Barcelona
Centre de materials
Centro de materiales
Materials centre

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

2.3.5.Matheriautheque

https://www.citedudesign.com

alexandre.peutin@citedudesign.com

Cité du design

3, rue Javelin Pagnon

42000 Saint-Étienne

The matériauthèque of Cité du design in St Etienne, France.

The matériauthèque is more specifically intended for professional audiences, whether they are designers, industrialistes, researchers, teachers, or students and school public. Services are only accessible by appointment.

It leads to uncover the vast possibilities afforded by materials. The matériauthèque brings together 850 samples and it provides access to 2 specialized databases on materials and theirs transformations. It also supplies access to partners databases (MateriO, Materiautech de plasturgie,…). More precisely, technicals infromations, examples of applications, specialised texts can be found. The various materials are referenced by product and by process.

The presentation showcase is accessible to all from the media library.

The matériauthèque of the Cité du design is designed as an interface for networking regional skills. The different centres of expertise and technical centres specializing in materials and processes will be represented in the matériauthèque. Technical centres offer personalised responses to visitors wishing to be connected with material specialists and quickly find appropriate contacts.

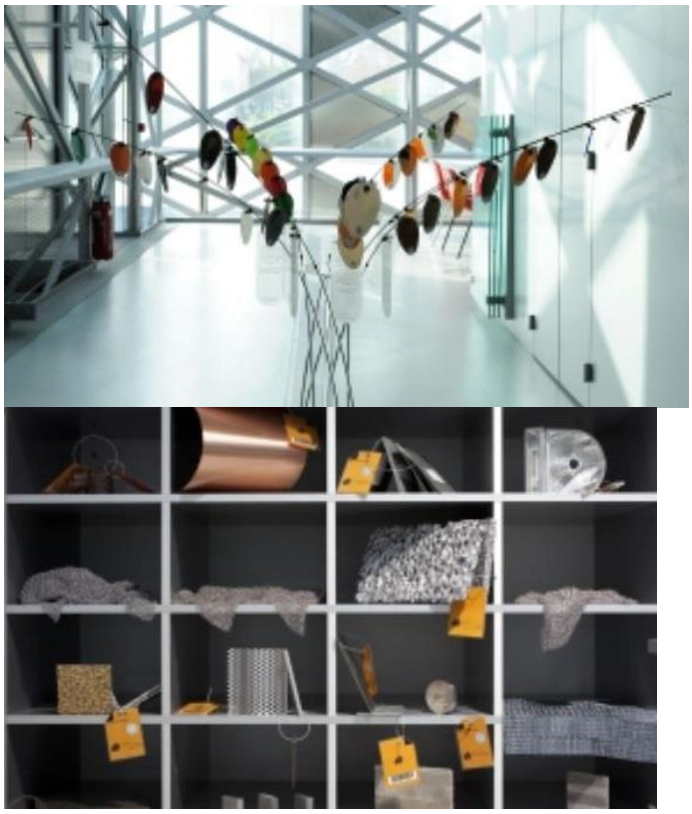
There are different memberships: for the showroom, it costs 65€ TTC/year; for the internet, it costs 100€TTC/year and for the integral, it costs 150€TTC/year.

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

PRICE:

Showroom from 65€ TTC/an	Internet from 100€ TTC/an	Intégral from 150€ TTC/an

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.



Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

2.3.6.MaterialDistrict

info@materialdistrict.com

www.materialdistrict.com

Amsterdamsestraatweg 43-A2

1411 AX NAARDEN (Amsterdam area)

The Netherlands

T +31 (0)20 71 30 650

MaterialDistrict is the world's leading match-making platform in the field of innovative materials. It empowers global innovation by match-making material needs with material solutions and it encourages joint innovation towards a better, more sustainable and higher quality society MaterialDistrict's value as a high-end materials inspiration source is clear: R&D and design professionals of all industries are using our platform to discover new material solutions. They periodically throughout the year organise expositions at MaterialDistrict Rotterdam and via the MaterialDistrict Expo.

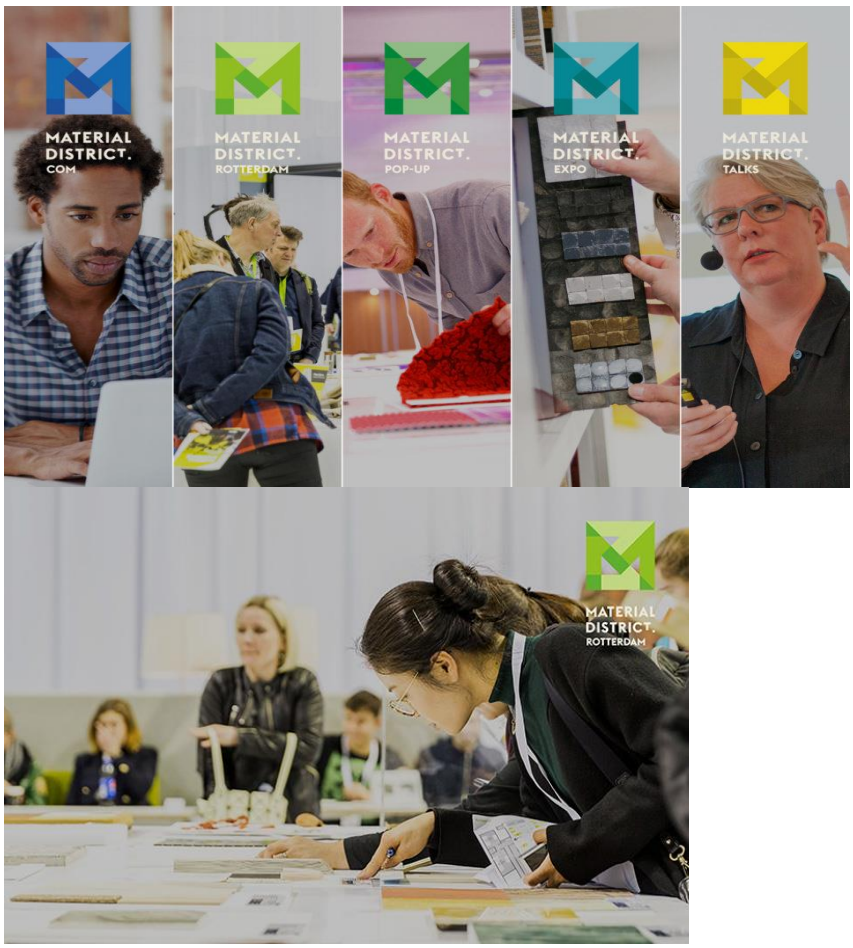
MaterialDistrict Rotterdam is the only annual exhibition in the world that brings material manufacturers and specifiers together from across industry sectors. The exhibitors are guaranteed a great experience and success in connecting with diverse, yet relevant audiences. The exhibition attracts a dynamic mix of leading (design) agencies, architects, R&D professionals, specifiers, students, brand managers, buyers and other material professionals from all industry sectors.

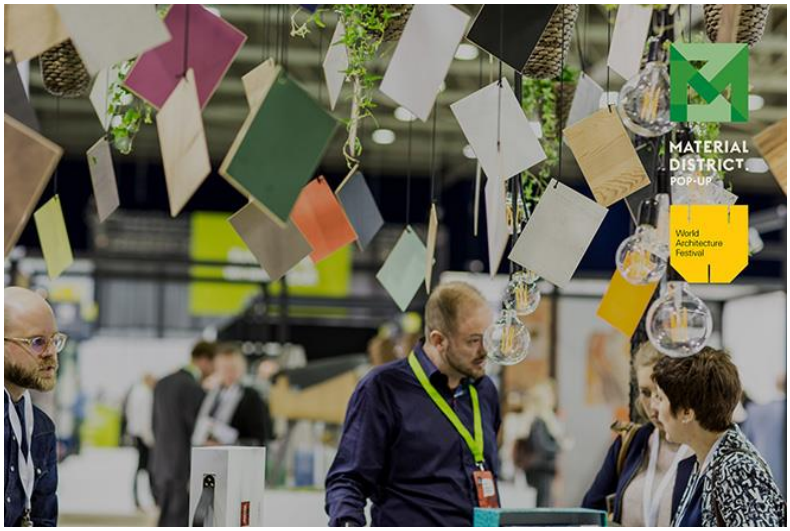
MaterialDistrict brings together an average of 350.000 page views a month, 115.000 registered members, 68.000 newsletter subscribers and 27,500 followers on social media.

There are six market sector categories – 'Architecture', 'Interiors', 'Textiles & Fabrics', 'Urban & Landscapes', 'Products', and 'Print & Sign'.

The various materials are referenced by product and by process. Moreover, the digital database is accessible free of charge.

This project has been funded with support from the European Commission. This publication 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.





Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

2.3.7.Materioteca

www.materioteca.it

info@materioteca.it

Via Savona, 97

Loft B3

20144 Milano

Italy

Materioteca is an activity non-profit been born for promoting, to spread and to develop the knowledge of the performances, potentiality and application formality of the organic materials between the planners and the users. From when they are disembarked to Milan in 2008, they have free assisted a fed number of creative, middle one a day, to the beginning of their search of materials and fit technologies to the realizations of their projects.

Materioteca has created some connections, also multiple, among firms and planners, from which interesting new applications were born or notable upgrade of those existing. Point of meeting and dialogue, where designer, product manager, responsible of R&D and technicians interact and they collaborate for studying and to set innovative products.

Their assistance allows saving time and errors of planning. It also may enable the fit material to be found and the value to be created.

The new materials, technologies and applications are maintained up to date on. It is true to say that the respect for the environment is inherent in their DNA. There is not material more or less sustainable: they are the products to have more impacts or less elevated.

This project has been funded with support from the European Commission. This publication 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.

Their partner database is accessible too. They are sharing a lot with the Plastic Consult S.r.l., it has the more professional profile of the sector.

This project has been funded with support from the European Commission. This publication 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.

WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

2.3.8.Innovatheque

www.innovatheque.fr

Institut Technologique FCBA / Innovathèque
10, rue Galilée
77420 Champs sur Marne Paris

Innovathèque Grand-Est
27, avenue de l'europe
Schiltigheim 67300 Strasbourgh

Innovathèque is the integrated resource centre at FCBA, specializing in monitoring and consulting in innovative materials and processes, dedicated to designers, architects, engineers and creative from all sectors.

Innovathèque was created in 1998 to initially meet the needs of furniture manufacturers and is owned by FCBA.

Today, it is a unique reference in France in terms of research, technological exchange and innovation on matter, its quintessence. The reference database contains more than 2,000 samples on stock and every year 250 new materials selected for their innovative character. Services are only accessible by appointment. Samples from manufacturers around the world are classified by family (agro-materials, metals, plastics, glasses, composites, leather, ceramics, paper/paperboard, processes, systems).

Because the choice of a material or manufacturing technique is crucial to the success of an innovative and responsible project, their team of designers, materials engineers and ergonomists offers the client a multitude of services tailored to its needs and accompanies him in the technical development of his ideas.

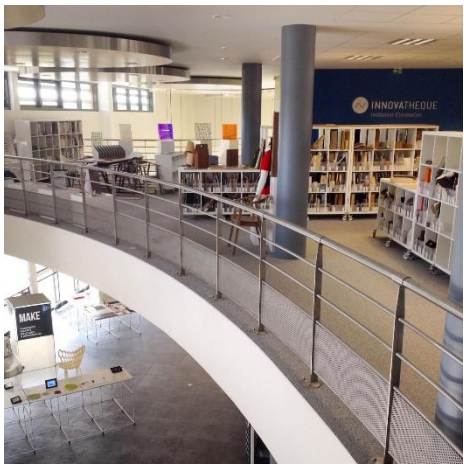
This project has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

They provide 2 showrooms (in Paris and Strasbourg) that collect thousands of rigorously selected material samples based on innovation criteria. All these references are stored in an online technical database with a sharp search engine, giving the client access to information sheets (photo, contact of suppliers, characteristics, performance, environmental and health impact, etc.)

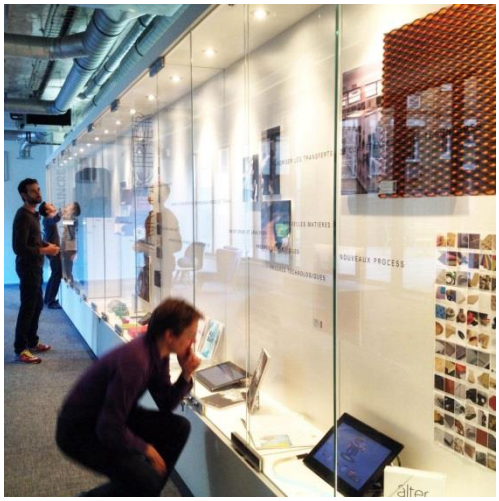
Every month they publish the "Letter of Innovation" (free registration) which informs people about the latest in Innovathèque's design, materials and actions (reports from fairs, thematic dossiers, industrial testimonials, etc.).

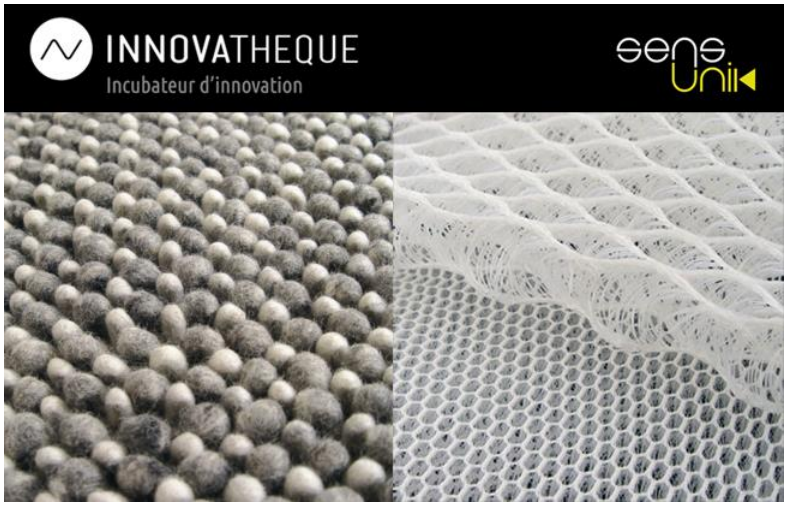
PRICE:

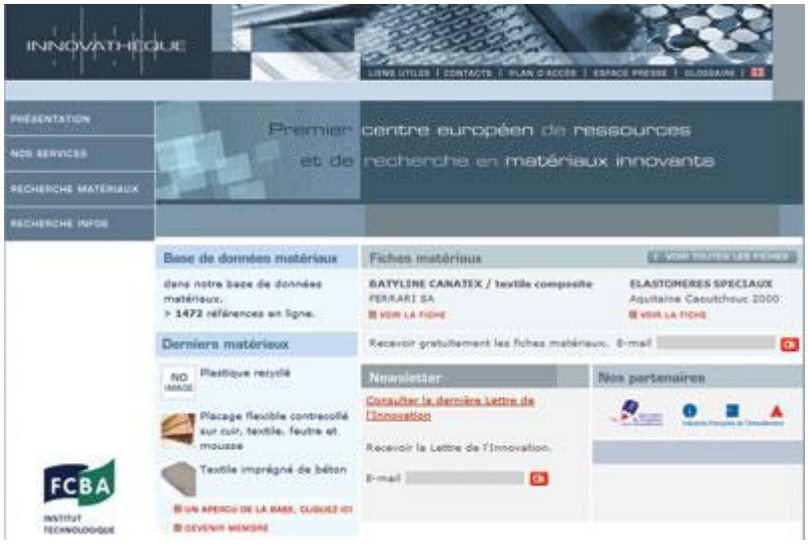
Access Material library 100€TCC/hour	**Pack PLus 490€TCC/year**	**Pack Web 250€TTC/year**	**Pack school 500€TTC/year**
Access to the showroom on appointment with counsellors.	unlimited access to the database and access to the showroom on appointment.	unlimited access to the database.	5 unlimited access to the database.



Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.







Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

2.3.9.Matrec

https://www.matrec.com

HEADQUARTER AND RESEARCH CENTRE

Via delle Palombare, 43c

60127 Ancona (AN)

info@matrec.it

MATREC Centre in Florence

Design Campus di Calenzano – Facoltà di Architettura – Università degli Studi di Firenze

Via Sandro Pertini, 93

50040 Calenzano (FI)

Conceived by the architect Marco Capellini, Matrec was established in 2002 and immediately became the protagonist of the international design for sustainability and eco-innovation. Matrec is the first EcoMaterials Library dedicated to environmentally sustainable materials and to their use in the world of industrial production, architecture and design. Matrec is aimed to companies as support for research and development of environmentally sustainable products and services. It's also aimed to architects to design buildings through the choice of materials with a low environmental impact (green building), to designers to search for innovative materials and solutions of ecodesign, and to Universities and Research Centres as support for research of new design and materic solutions.

Matrec makes available to its subscribers information on environmentally sustainable materials (recycled, natural, bio) from all over the world, divided by categories and supported by a description sheet, including composition, technical and environmental properties, applications and references the company producer. In addition, news and newsletters on ecodesign, new materials, green marketing, and environmental strategies show international scenarios of different market sectors.

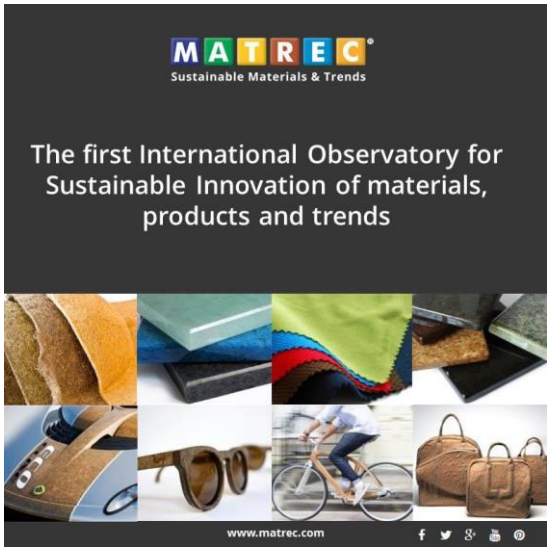
This project has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

STANDARD	BUSINESS	EXECUTIVE
8€/month annual subscription of 96 € + VAT for Italy	39€/month annual subscription of 468 € + VAT for Italy	79€/month annual subscription of 948 € + VAT for Italy
SUBSCRIBE	SUBSCRIBE	CONTACT US

Valid for 12 months
The subscription renewal is not automatic

PayPal

ACCESS TO MATREC.COM	STANDARD	BUSINESS	EXECUTIVE
Single access*	✓	✓	✓
Access by IP**	✗	✓	✓
MATERIALS SECTION	**STANDARD**	**BUSINESS**	**EXECUTIVE**
Full access	✓	✓	✓
Materials search	✓	✓	✓
Material sheets compare	✓	✓	✓
TRENDS SECTION	**STANDARD**	**BUSINESS**	**EXECUTIVE**
Full access	✗	✓	✓
Search trends and video	✗	✓	✓
REPORT SECTION	**STANDARD**	**BUSINESS**	**EXECUTIVE**
Reports	✗	✓	✓
SERVICE	**STANDARD**	**BUSINESS**	**EXECUTIVE**
Newsletter	✓	✓	✓
N°1 dedicated Trend report	✗	✗	✓
Consulting/research 4 hours	✗	✓	✗
Consulting/research 10 hours	✗	✗	✓
Webinar/video by Matrec	✗	✓	✓
Presentation of material samples	✗	✗	✓



Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

2.3.10.Matech

info@matech.it

www.matech.it

Corso Stati Uniti, 14/Bis 35127 Padova - ITALIA

Tel.: +39 049 8705973

Fax: +39 049 8061222

Vincenza . Bari . Bergamo . Calabria

MaTech is an activity of the “GALILEO Science and Technology Park” (STP Galileo), whose mission is to promote the fi rms’ growth in competitiveness by carrying out innovation services.
In order for a company to keep a high degree of competitiveness, it is necessary to uphold product innovation also by carefully choosing the materials which such products are made of and their manufacturing process.

By means of technology transfer, materials and technologies already in use in some sectors can become a source of innovation for other kinds of products and, thanks to the economies of scale present in existing production lines, can help the emergence of effective, cost and time-contained research activities.

This is MaTech’s field of expertise: our firm provides companies and designers alike with the know-how and analytical skills of a group of young professionals specializing in different technological fields. They will deal with the research of the most appropriate materials as well as collaborate to the development of new projects and solve your technological issues.

This project has been funded with support from the European Commission. This publication 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.

MaTech suggests innovative materials for the development of new products; it solves specific design issues (cost reduction, improving technical properties, identifying alternative suppliers, benchmark analysis). The material library coordinates creative brainstorming sessions aimed at selecting new materials for functional or aesthetic product enhancement. It organizes training/refresher courses on innovative materials and their possible usages. MaTech also organizes guided visits to our innovative material stock place and showroom, thus leading the research path with the most appropriate creative inputs.

Initially, MaTech assesses the preliminary feasibility of each request for collaboration, which is then followed by a customized offer tailored on the needs and requests of every single client.

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

2.3.11.Materials design

materialdesign@unife.it
+39 0532 29 36 48

md material design
Department of Architecture of Ferrara
Palazzo Tassoni Estense
via della Ghiara 36
Ferrara, Italy.

The Material Design research laboratory – hereinafter referred to as MD Lab - operates within the Department of Architecture of the University of Ferrara.

Even if limited to a period of just twenty-five years, the history of the Ferrara's school is full of events, qualifying choices, rewarded results, and reputation gained at national and international level. The school focused on the direct and collaborative relationship between students and teachers committing to support with continuity the strategic effort to recruit young teachers and constantly leading them towards an academic career, sometimes drawing freely and dynamically within the professional world; the teachers, in any case, are expert in teaching and active in research. Equally consistent was the effort to select qualified students re-formulating, year after year, the access procedures and the number of students enrolled in the courses of study in accordance with the organisational changes brought forth by the university reforms and of the spaces that gradually became available with the progress of the renovation works of the monumental architectural building of Palazzo Tassoni Estense.

For more than ten years the Ferrara School of Architecture has been in the top CENSIS rankings that qualitatively evaluate university courses of study nationwide; the last survey of 2016 (related to the academic year 2009-2010.

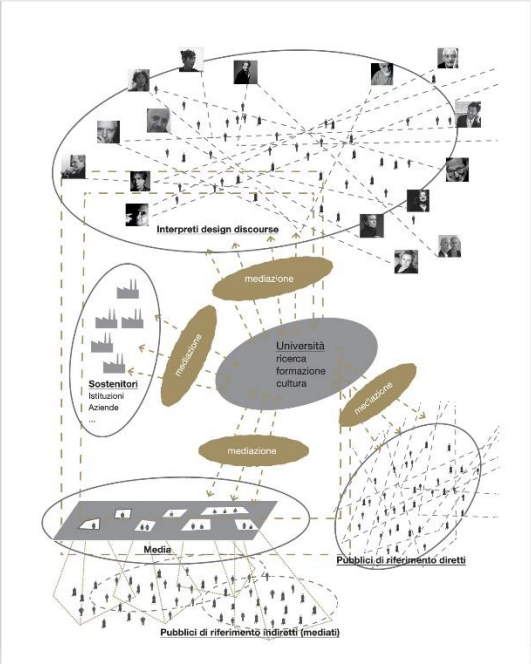
This project has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

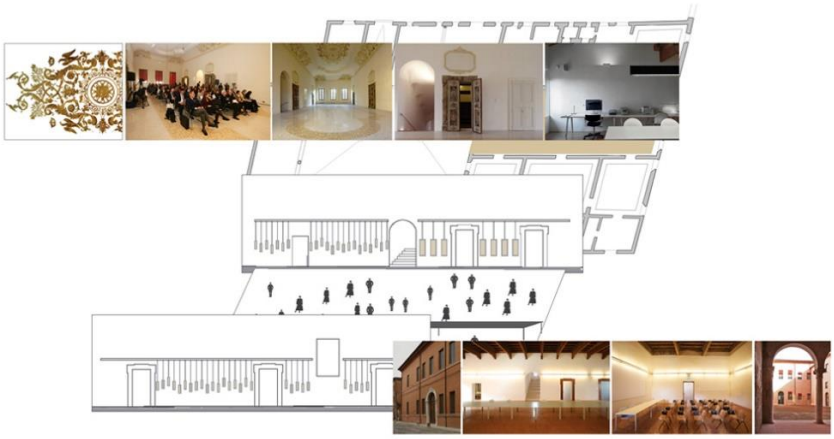
MD Lab was officially founded in 2008, coinciding with the beginning of the new course of study in design and with the challenges that it brought forth in terms of definition of a new teaching model, together with the launch of unique and unpublished lines of research.

Thanks to a research team with knowledge and interdisciplinary competence, MD Lab committed in recent years to meet the challenges of the "knowledge economy" and to promote collaborations and projects with institutions, public and private clients, trade associations, and manufacturing entities. The booklet *md. projects 2007-2015* – published below – documents in summary the projects, scientific publishing activities, exhibitions and events, works and artifacts created by MD Lab in its first season of life, independently or in collaboration with various supporters.

md
www.materialdesign.it

This project has been funded with support from the European Commission. This publication 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.





This project has been funded with support from the European Commission. This publication 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.

3. TECHNOLOGY SURVEILLANCE

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

The strategic management of information is essential to innovate and to survive in a complex and changing environment such as the present one.

Technologies, products and materials life-cycles are increasingly shortening. The **Internet** enables to access a huge quantity of information that many times turns out to be incomprehensible, increasing the risk of information overload.

Technology surveillance should be understood as a systematic **practice** oriented towards the research and analysis of specific and useful information.

Illustrious quotes:

*"The objective of surveillance is to **offer good information to the right person at the right time**." (Callon, Courtial and Penan, 1993).*

*"As it is not possible to monitor everything, the enterprise should focus **on a few critical factors of success** on which the company's good progress relies. These factors should receive a special attention." (Rockard and Bullen, 1981).*

In contrast **competitive surveillance** is an organized, selective and permanent process of constantly capturing information from outside the company, about science and technology. Information is selected, analysed, spread and communicated in order to use it as knowledge when facing changes and having to take up decisions with minor risks.

Definition according to standard UNE 166.006:2011 R&D management: technology surveillance and competitive intelligence.

More info @:

translate.google.com/translate?sl=es&tl=en&u=http%3A%2F%2Fblog.simbolocalidad.com%2Fla-vigilancia-tecnologica-y-competitiva

This project has been funded with support from the European Commission. This publication 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.

To carry out competitive surveillance, it should be very clear what are the **critical factors of the monitoring**, that is, external variables that affect in a direct and meaningful way to the development of the company. In addition, sources of information must be identified; those that will provide **INPUTS**, essential for surveillance, allowing to qualify and automate processes to finally make an analysis and dissemination of relevant information.

Source: AIDIMME

Specifically, competitive surveillance activities are directed to track major innovations in materials, products and processes, due to the fact that from those more interesting innovations will emerge, to improve the conditions of competitiveness in enterprises. It is also interesting to know materials applied in other sectors and products not scanned in order to have a **broader spectrum of innovation**, with different ways to consider materials and technology that processes them.

Source: AIDIMME

As a summary, **technology surveillance** deals essentially with the technologies available or just appear (technological trends), and are able to intervene in new products or processes; whereas **competitive surveillance** is directed to capture and analyse information about, current and potential competitors, data concerning customers and suppliers of products that could be substitutes and will deal in foreign signals that alert they can condition their legislative areas, standardization or market products.

That information, properly used, can **be key to detecting new business opportunities**, learn how the market evolution, avoid possible risks and/or threats, track the activity of competition and reach new ideas. With this information, the company can make **strategic decisions**. **The ultimate objective of the technological and competitive surveillance system is to improve business competitiveness.**

Source: AIDIMME

More info @:

translate.google.com/translate?sl=es&tl=en&u=http%3A%2F%2Fblog.simbolocalidad.com%2Fvigilancia-tecnologica-vigilancia-competitiva

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM CIPFP CATARROJA FLA FEDERLEGNOARREDO GMIT WOOD.BE WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

3.1. Definition

According to the standard UNE 166006:2011 R&D&i Management: Technological Watch and Competitive Intelligence System, the Technological Watch or Surveillance is an 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.

Another definition:

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 focused on the collection of information to convert it into a knowledge that allows the decision-making.
- To facilitate the identification of the technological fields embraced by the Technology Surveillance providers.
- To facilitate the relation between the internal or external technology surveillance providers and their clients in the organization.
- The concept of technology surveillance or competitive intelligence refers to the optimization of the necessary processes that allow 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 such as the use of new materials that make a difference and add value to the elaborated product.

This project has been funded with support from the European Commission. This publication 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.

The results obtained with the surveillance can have an influence when deciding the orientation of the innovation projects.

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

The creation of a technology surveillance system embraces:

- Trade fairs and events
- Competing Information
- 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.

In this case they are applied to determine and obtain information about innovative materials that may appear on the market and that may have an appliance in the furniture/habitat sector no matter from which sector they come. This will allow the VET centres to make decisions for its possible utilisation in the development of new products with innovative characteristics by the appliance and use of these materials.

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

3.1.1. Where and how to collect the information sources

Many means and sources should be considered to provide a comprehensive summary of the information related to the new materials or the innovative materials already existing in the market that can be used in the habitat:

- Selection of the surveillance areas and definition of the materials and products families.
- Selection of the information sources.
- Systematization of the searches.
- Definition of the information flow of the intern management of innovations:
    - Communication
    - Analysis
    - Selection of innovative materials

Softboard.

Veneer with a flexible behaviour over a rigid support, filled with foam, that creates a soft to the touch effect and acts as a sound insulating material (TSTsoft).

- Definition of the aspects of codification and digital storage of the information.
- Definition of a draft of the data sheet of the material.
- Definition of the bases of the users' management tool.

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

Among the sources that should check or monitor we can find:

- Selected documentary information of news, newsletters, articles, material databases and enterprises' websites.
- Information about innovative products of other industrial sectors to see its application in the habitat sector.
- Information about materials and products in sectorial fairs.
- Any other kind of information about materials that may reach the training centres.

Surveillance is both an attitude and a procedure of the whole organisation and for the whole organisation.

Surveillance should not be mistaken by benchmarking. The latter is usually focused on an aspect or function and a specific period of time. Surveillance is a continuous function, a permanent state of attention and decision-making.

3.1.2. Reasons to practice a systematic industrial surveillance

To detect the opportunities that allow:

- to know the art's status
- to counsel innovative designs

3.1.3. How to practice systematic technology surveillance in my enterprise?

Mainly, what should be done is a hierarchy of topics and objectives:

- Identifying "informational" resources
- Analysing different communication "circuits"
- Collecting the available information sources
- Determining the available resources: networks, databases

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM CIPFP CATARROJA FLA FEDERLEGNOARREDO GMIT WOOD.BE WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

3.1.4. Important sources to create technology surveillance

Fairs:

- **INTERZUM**

Materials and components for furniture Fair in Cologne every year in May.

As the world's largest trade fair in the sector of furniture components, Interzum is a must-see event for everyone aiming for success in the market for furniture production and interiors. That's because interzum offers a comprehensive overview of new technologies and designs, encompassing an extremely broad scope of products as only a leading international trade fair can.
http://www.interzum.com/

- **ZOW**

Cologne/Bad Salzuflen: Two cities, two trade fairs, one goal – to secure the position as global player for furniture production and interior design.
http://www.zow.de

- **JEC**

http://www.jeccomposites.com

- **MATERIAL DISTRICT EXPO**

https://materialdistrict.com/

- **DUCH DESIGN WEEK**

  Nouveuté materiauyx par les designers…

- **MILAN DESIGN WEEK**

  Nouveaux matériaux par les nouveaux produits d'avangarde…

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM CIPFP CATARROJA FLA FEDERLEGNOARREDO GMIT WOOD.BE WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

Newsletter: www.dezeen.com

Design magazines:

- Interni, Italy
- Intramuros
- Viewpoint, England
- Mix

3.2. Creation of a technology surveillance system

The main objective is to establish a methodology allowing, for innovative materials, to structure the search and obtain of innovative information about materials, marking the criteria to carry out the monitoring of information sources, the selection of interesting materials for sector and the definition of an assessment system for obtained results.

The starting point is to include new materials, techniques and technologies in teaching material, products and projects and to no longer use obsolete materials.

It is important that teachers regularly attend trade fairs, visit companies and product presentations, organized by suppliers, sector organizations or by research and development centres. During exhibitions at trade fairs (in BE and NL: Houtbeurs Utrecht, Houtdag Nederland, Ligna + Hannover, Interzum Cologne, Fensterbau Nurnberg, Carrefour de Bois in Nantes, Bois et Habitat Namur, Prowood, Batibouw...) new products are constantly being proposed. We may expect that teachers are interested and take these innovative materials, products and technologies back home and to their school.

Then comes the great challenge to include the obtained information in the teaching material, courses and projects and to make the samples available through a physical materials library. In this way, students are informed and learn to use the materials library, in addition to the theoretical knowledge

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

of new products. Colleagues should inform each other during course meetings, where you can integrate a specific the agenda item, such as "product presentation".

In this way, the materials library can be built up at a good pace. Don't forget 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…

Of course, there are product developments that have come, but have never achieved in the economic market value. From experiences we learn that even our furniture companies are not always aware of the existence of certain, new materials.

In some schools, the department for wood and furniture has very good examples and has already a nice amount of samples in their materials library. These schools should be put forward as good practices. Nevertheless, don't forget to keep up-to-date!

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. What might be useful is a further, good (or better) cooperation between VET-institutions and the industry, the manufacturers and suppliers of products and techniques. One might think of the development of cutting materials, the creation of lightweight panels, the creation of dismountable fittings for lightweight panels... that could be tested in schools and training centres, before this comes to the market.

Sectoral training and R&D organizations can play a key role in this, by taking initiatives to disseminate the results of research and/or (EU-)projects to the national VET-institutions. Newsletters, in which the local, regional and national trade fairs are included, can be a helpful instrument, to invite teachers to visit these fairs. In this newsletter, reviews of new and innovative products, materials or techniques could take up an important place. Today, there are also instructional videos of most innovative materials, products and techniques. This can be shared with each other, or can be included in the schools' library or database.

This project has been funded with support from the European Commission. This publication 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.

Students can also take part in this kind of technological surveillance.

They can look for and identify materials or products that are innovative. Collaborators of the group will be attentive, in their daily work, to detect innovative materials and should inform the whole group of the possibilities of new materials or innovative products.

The group can work together to achieve the objectives of obtaining technological innovations in materials and presentations of new features can be held during classes.

The group should work together to improve the service, to contribute to ideas and procedures, that benefit the furniture sector.

IDEA's and TO DO's

- exhibition visit
- product presentation
- gathering information
- collecting samples and information
- processing information
- making samples and information available in materials library
- keep up-to-date.

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM CIPFP CATARROJA FLA FEDERLEGNOARREDO GMIT WOOD.BE WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

Exercise: CASE STUDY ABOUT TECHNOLOGY SURVEILLANCE

Creation of a new surveillance system for new or innovative materials in the market.

Step 1: establish the work team that will be responsible of this surveillance.

- Person who coordinates the activities.
- Establish the selection of sources for the information research.
- Establish the timings when the prospecting of the selected information sources should be done.
- Establish the criteria for the materials' research.
- Define the person/people responsible of the materials' research through the information sources.
- Define the means that will collect the developments, for example, newsletter, bulletin…

Step 2: Select the materials which are considered that should be part of the MIMWOOD database and, subsequently, introduce them.

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

4. MIMWOOD materials library

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

4.1 Definition

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. Furthermore, it is meant to encourage and favour the technology transference to the students and teachers of the VET centres.

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.
Ej.

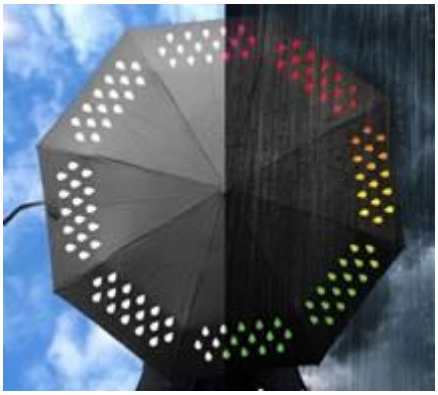
Biomimetic adhesive.

There are nanotubes that imitate the fibre bundles that compose the feet hairs of the gecko. They girdle even upside down in vertical surfaces.

Ej:

Hydrochromic coating.

Color changes depending on the humidity and it becomes transparent when it is high.



Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

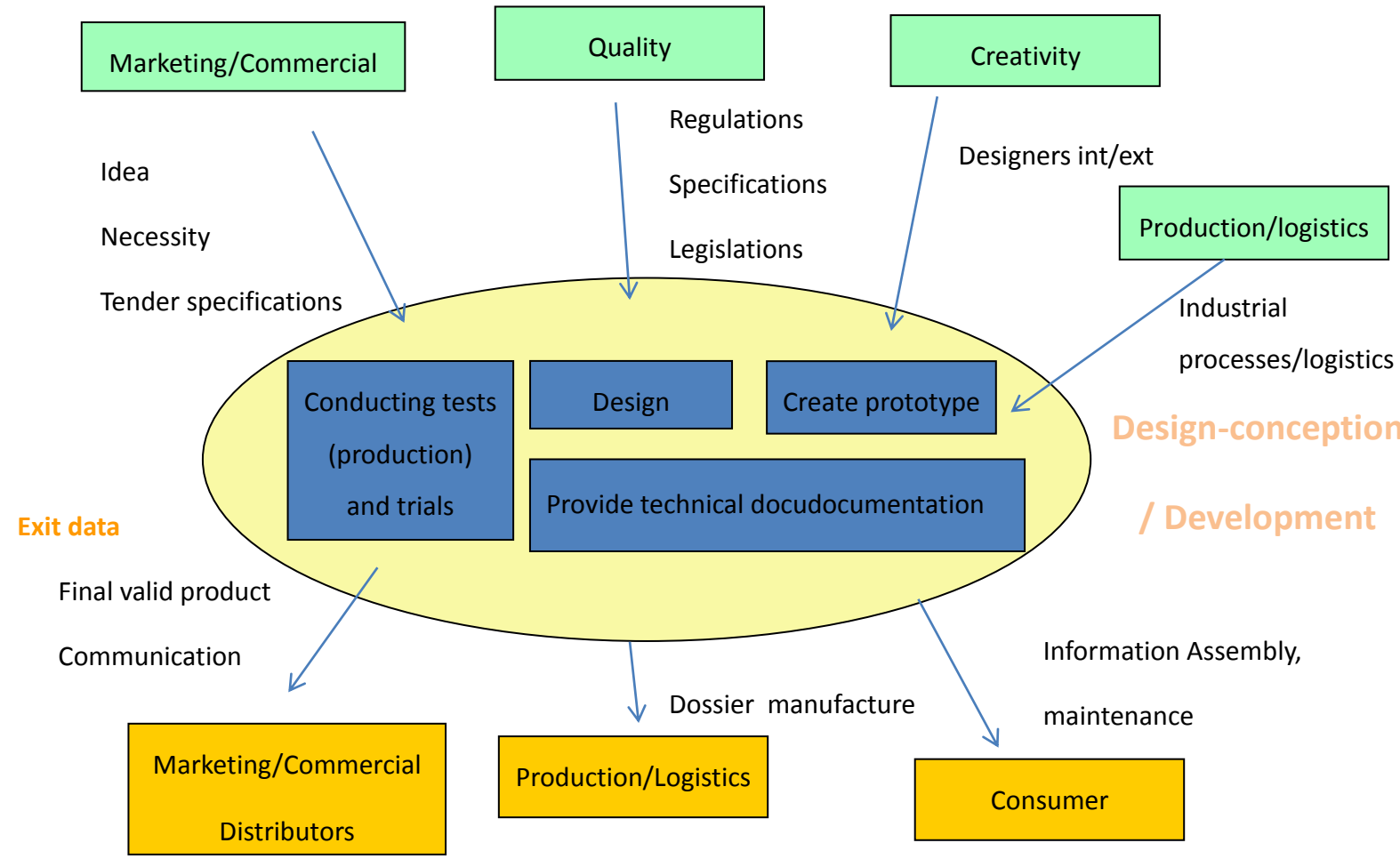
Both the students and teachers can use the tool for all the innovative aspects, and for the development of new products. For the training aspects concerning the use of (related) materials, there will be the aspect of more 'usual' materials, but the focus will be more on the new materials, requiring a continuous updating and training. Together with the production sector there will be an evaluation of the system, based on their demands and point of view.

The product development has lots of phases, as it can be observed on the attached diagram. A very important part of its design is the selection of the material that is going to be used. 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.

Because of that, it is essential to have basic information about possible materials. In order to do it, a materials' database is an indispensable source when taking the right decision about the material that should be used to develop new products, furniture and joinery pieces, and, above all, products that have an innovative component. This selection could be found both in the creativity and the design process, being the selected material used in the process of prototype creation.

This project has been funded with support from the European Commission. This publication 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.

Entrance data in a product development

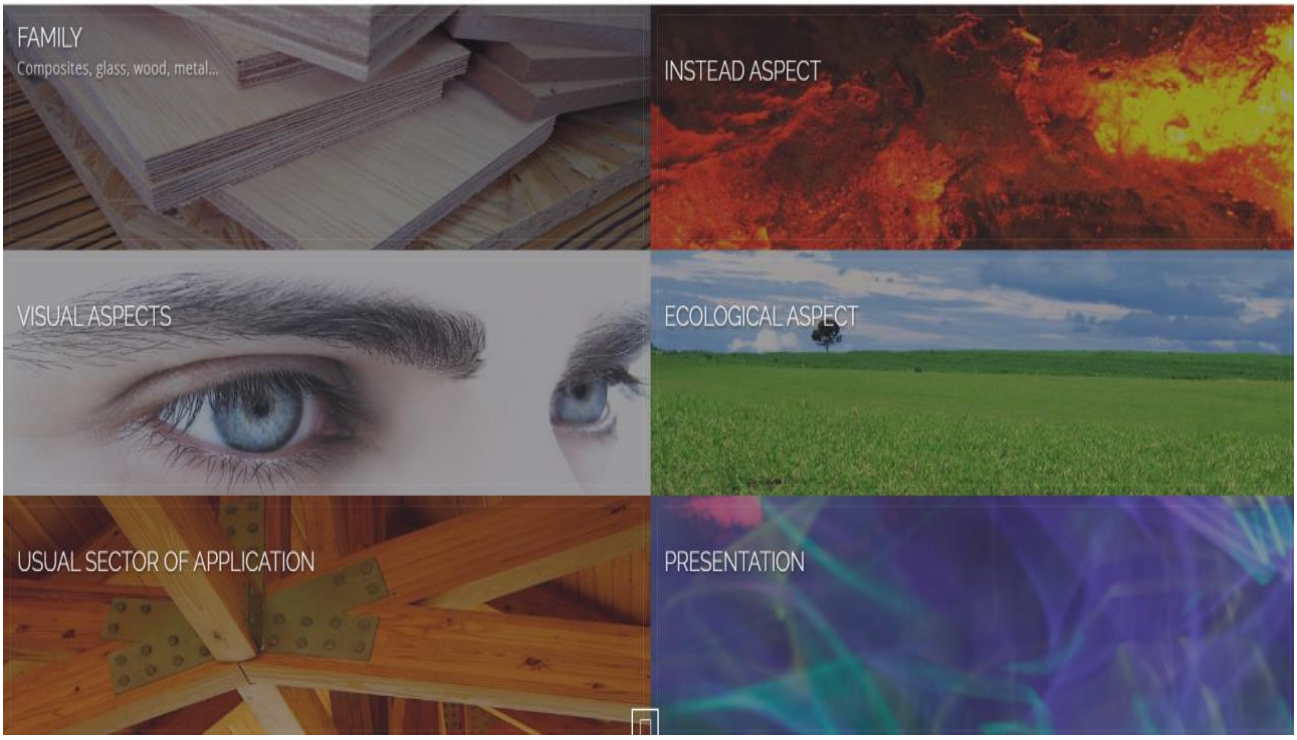


Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

4.2. Basic definitions of materials' categories

In order to establish the MIMWOOD materials library, some keywords have been defined. They enable the later search of the introduced information, provide information related to the properties of the materials that have been introduced and facilitate their search. In this case, the keywords are:

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

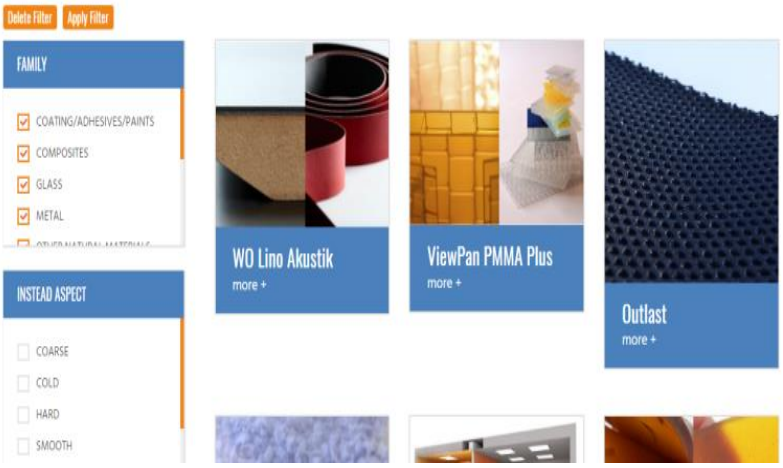


This project has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

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

Family:

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



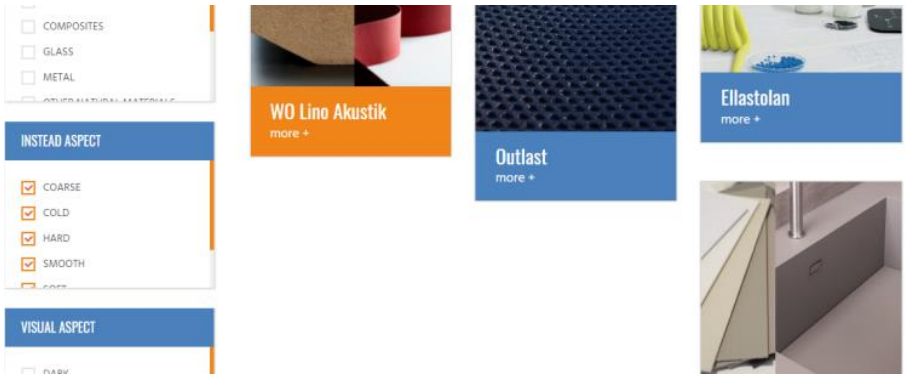
Visual aspect

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

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

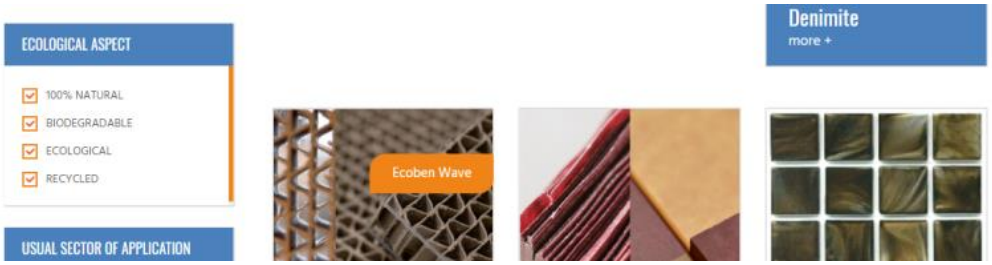
Instead aspects

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



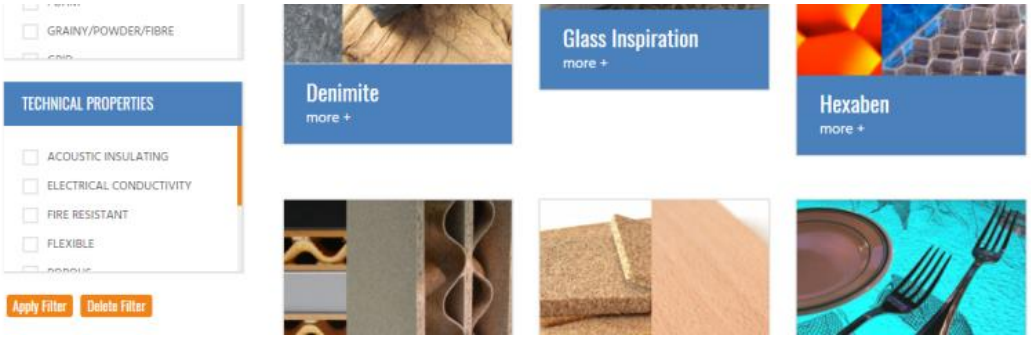
Ecological aspects

- 100% natural
- Ecological
- Recycled



Usual sector of application

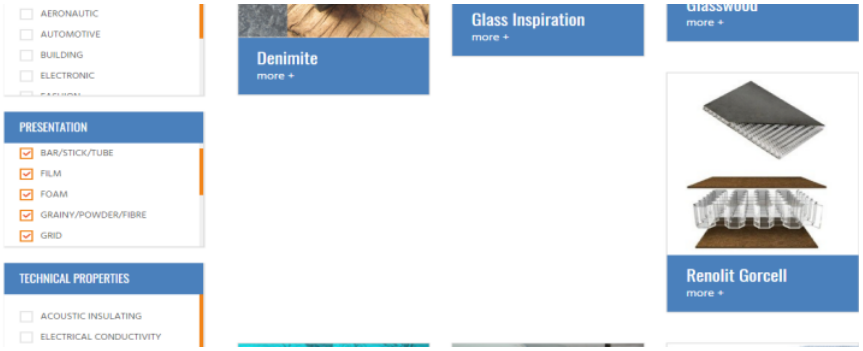
- Aeronautic
- Automotive
- Building
- Electronic
- Fashion
- Furniture
- Healthy
- Packakging
- Sports and leasure
- Transport



Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

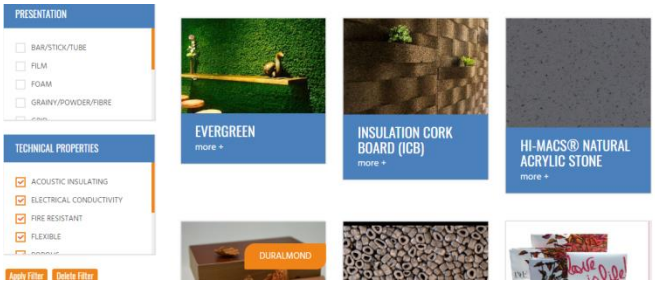
Presentation

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



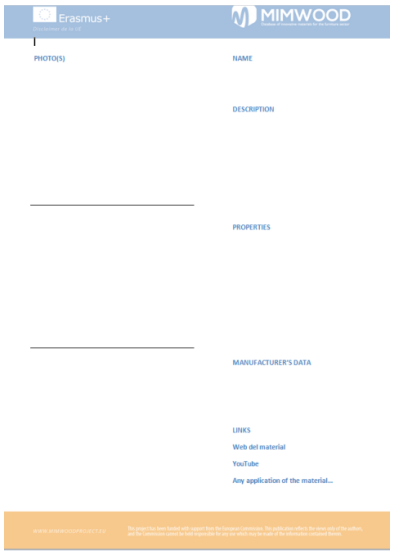
Technical properties

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



Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

While the keywords have been defined and the materials that are going to be part of this library have been identified, a file that compiles all the information that will be inserted afterwards in the database is created with the following information:



Photos

Name

Inscription

Properties

Manufacture's data

Links

Material web

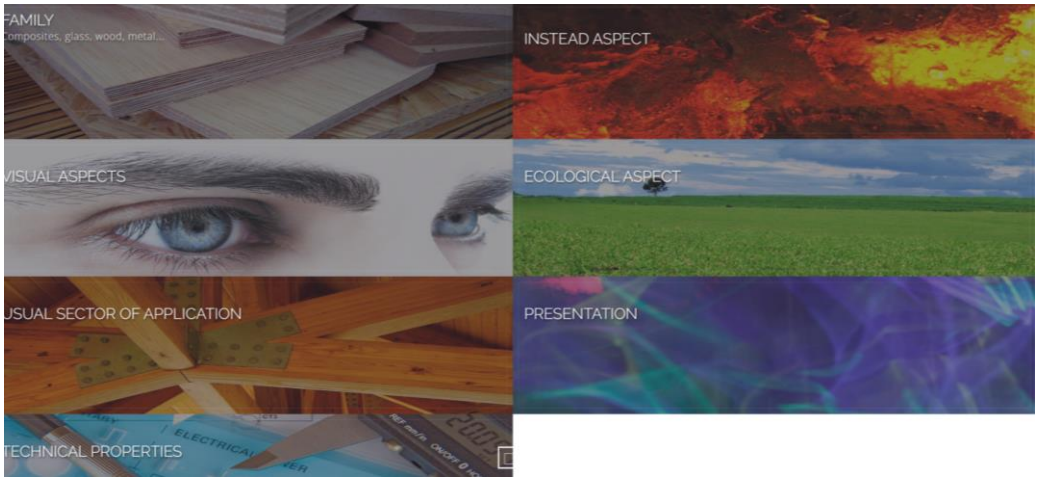
Youtube

Anny application of the material

4.3. How to Access the MIMWOOD database

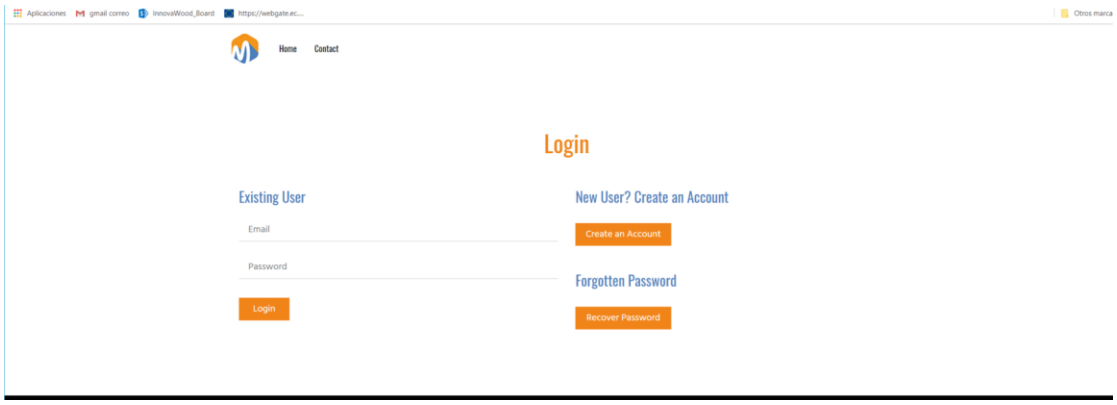
In order to access the MIMWOOD materials library, you should search this website: http://www.MIMWOODproject.eu/plataforma/

You will see this screen, which allows the user of the database to identify

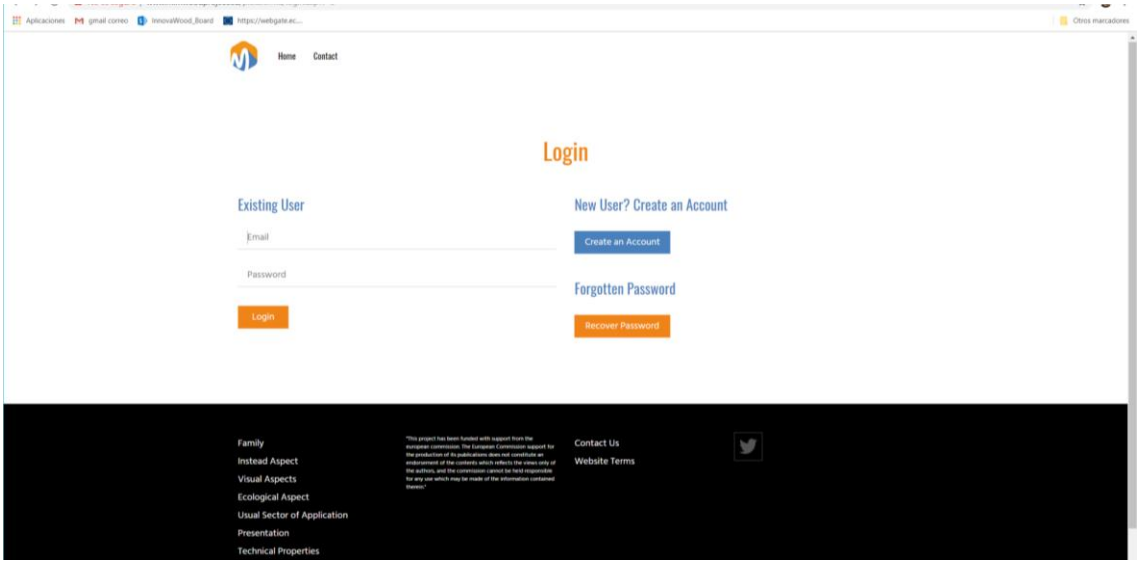


This project has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

By clicking in any of the images, the following screen will appear:

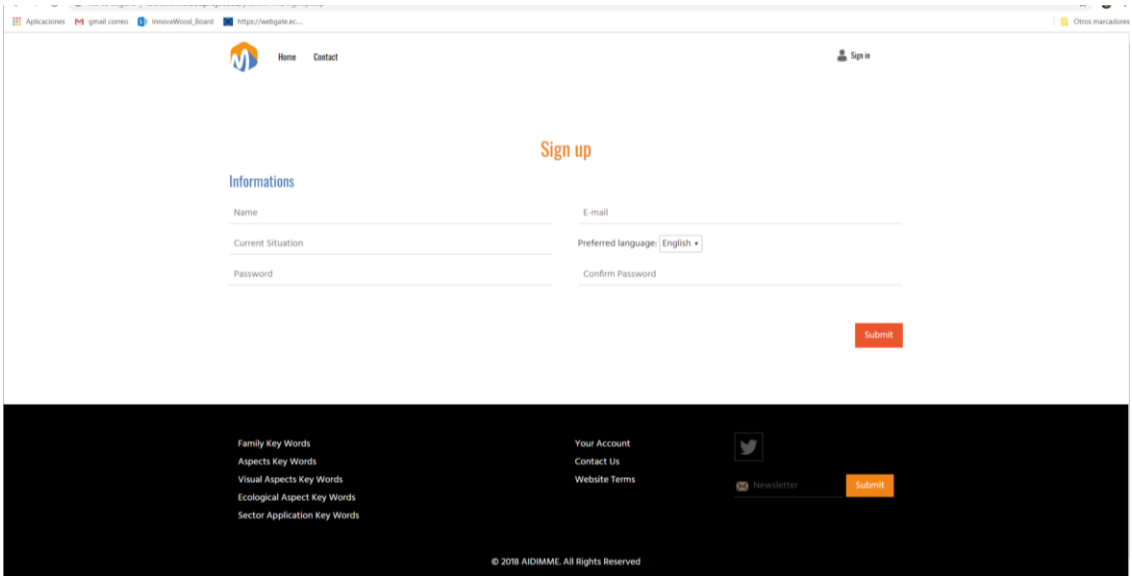


You should click on “create an account”, that will appear in blue

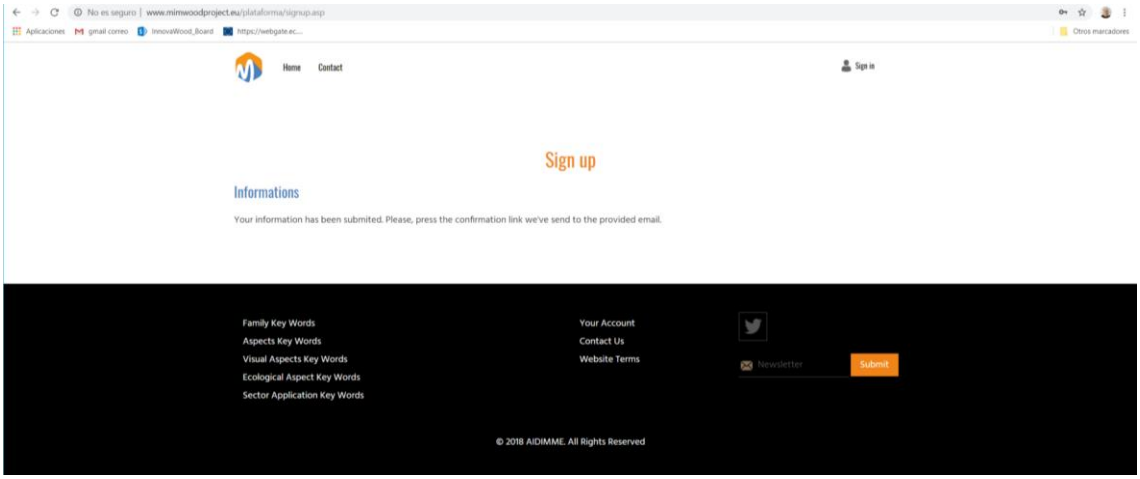


This project has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

And then subscribe by filling out the different fields that will appear:



Once the fields are filled out, you will see the following screen:



You will find the password to access the database and to be able to start using it in the provided email. Once in the database, you can search information about different materials based on the properties that appear.

This project has been funded with support from the European Commission. This publication 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.

4.4. How to contribute?

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

The maintenance of the database can only be carried out by people who can access to it as administrators. They can 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.

For that reason, in order to manage the database, it is necessary to create a technology surveillance system that allows to detect the incorporation of new materials to the market.

A technology surveillance system that obtains information from different sources such as:

- Other library materials of all over the world that periodically publish a newsletter with the new materials that are integrated in their databases and the characteristics of these materials.
- Information of the materials that are presented in the material fairs of all over the world and, specially, the ones about the wood and furniture sector.
- Enterprises that manufacture boards, varnishes or other type of materials that do not come from wood.
- Information about new designed products and the materials with which they have been manufactured.

Besides the technology surveillance system, work groups should also be designed. They should coordinate the activity and, based on the information that appears about these materials, should also determine if these materials could be useful in the wood and furniture sector or not and decide whether to select them or not.

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.

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM CIPFP CATARROJA FLA FEDERLEGNOARREDO GMIT WOOD.BE WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

5. DIFFERENT ROLES IN THE EDUCATIONAL FIELD

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM
CIPFP CATARROJA
FLA FEDERLEGNOARREDO
GMIT
WOOD.BE
WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

Both developing a Technology Surveillance System and using this database of innovative materials have two potential users such as students and teachers.

The definition of a Technology Surveillance system will allow obtaining information that, once processed, will feed MIMWOOD's database. Thus, it could update the information about innovative materials and it could allow taking decisions to determine which materials have already lost their innovative aspect and which should be deleted because they are no longer manufactured or have been substituted by others of the same manufacturer with new properties and characteristics.

The use of MIMWOOD's database should accomplish a series of milestones and expectations generated in the users, both teachers and students:

- Information database about materials:
  - showing what exists and what is new and used in the furniture industry
  - information about the properties of materials
  - information about transformation processes on materials
- Search possibilities: with keywords (on properties, on newest, on process, on material families…)
- Expand knowledge about materials

5.1. From the point of view of the STUDENTS:

This database is aimed to people between 16 and 20 years old + adult students

5.1.1. Applications

- When they work on a project, preparatory phase, in school or at home
- In classes, during lessons
- Out of interest, in school or at home because they have interest in knowing and learn about materials

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM CIPFP CATARROJA FLA FEDERLEGNOARREDO GMIT WOOD.BE WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

5.1.2. Type of information

- Search on characteristics
- Search on alternatives (if possible to define these materials as such)
- Search on processes to use with less common materials
- Search alternatives for the materials they know
- Browse through new materials

In order to do this research, students should familiarise with a series of concepts or should consider the following aspects:

- Material families existing in MATERIALIZA website
- Visual aspects that materials can feature
- Instead aspects
- Ecological aspect
- Usual sector of application
- Presentation
- Technical properties

5.1.3. Important characteristics of the website

- Easy to search
- Learn
- Be inspired
- Intuitive use, similar to applications/websites they know (no learning process on how to use the website)
- Visual feedback, not too much text: list of results with images
- Different levels of information: basics and more advanced (deeper search)
- Video's
- Pictures of applications
- Quick overview of most important characteristics

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM CIPFP CATARROJA FLA FEDERLEGNOARREDO GMIT WOOD.BE WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

- Possibility to make a list of “favorites”
- Share information with other students
- Possibility to search on smartphone or tablet
- They should have the feeling it saves time compared to a search on the internet (more efficient)
- Looks nice, playful aspect
- Possibility to choose language: English, Spanish, Portuguese, Italian, Dutch
- Possibility to post realisations of projects with certain materials.

5.2. From the point of view of the teachers

5.2.1. Characteristics

- From the point of view of the information research, they should accomplish the same requirements as the students, so they should consider:
    - Material families existing in MATERIALIZA website
    - Visual aspects that materials can feature
    - Instead aspects
    - Ecological aspect
    - Usual sector of application
    - Presentation
    - Technical properties

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM CIPFP CATARROJA FLA FEDERLEGNOARREDO GMIT WOOD.BE WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

5.2.2. Functions, use and maintenance

- It is a tool that can be used by teachers during classes or training courses, both from the point of view of analysing contents with students and showing 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.

- Teachers can add or delete information about materials in the website of their centre, acting as administrators of the web. In order to do it, the administrators of the website should be chosen in the VET centre. Thus, there should be a structure and any change should be done logically and under the premises defined at the centre for the maintenance of MIMWOOD's database.

- MIMWOOD's database is prepared to be translated to any language of the partners of the project; only each section of the database should be translated.

- 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.

- The structure of the database allows providing a lot of information about each material, as well as some images of the materials and the products that have been manufactured with these materials.

- The structure of the database enables to introduce links that permit the access to videos about these materials created by the manufacturers or to YouTube videos.

- At no time this database should be used with an economic purpose. It should be used as a tool of professional training because its aim is instructive.

This project has been funded with support from the European Commission. This publication 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.

- 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. That is to say, information about the last updates, something that could be interesting from the point of view of the teachers of the VET centre.

- Another important characteristic for the teachers is the information about the providers of the different materials. It allows the teachers to get in touch with them in order to get further information about any material or to request samples for a formative use or to use them in the development of a prototype designed by the students with innovative aspects or with specific properties, but never with a commercial intention.

5.3. Good practice. The case of the integrated public VET centre of Catarroja

The objective of this activity, which was conducted by the students of the centre, was:

- To familiarise the students with innovative materials existing in the market.
- To establish the utility that each one of them could have in different products, meaning, their usability.
- To create a prototype that involves some of these materials.

5.3.1. Developed activities:

A series of activities have been conducted in order to achieve the proposed objectives:

First of all, some groups of 4 students have been selected to work as a team.

The students have been given information of the Excel document developed during the project as a previous step to the materials' choice that should be part of the MATERIALIZA database and that had information about different materials organised by typology.

This project has been funded with support from the European Commission. This publication 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.

- Composites
- Glass
- Metal
- Paper
- Polymer, plastic and rubber
- Stones and ceramic
- Textile
- Wood
- Adhesives and paints
- Other natural materials
- Others

The information of the Excel is the following:

- Name
- Description
- Manufacturer
- Website

Example

Name	Description	Manufacturer	Website
Always Dry	The water sworn enemy	Nanex	www.nanexcompany.eu
Chrome-Hocker Silber	Metal coating for Wood	AREA Handelsges.m.b.H.	www.area.at/de
Cuir au carré	Panels of leather ready to fit	Cuir au carré	www.cuiraucarre.com
Hapi	Waterproofing coating for foam	Ehni Schaumstofftechnik GmbH	www.ehni-foam-tech.com
JAVA mosaic	Recycled coffee tile	Sonite Innovative Surfaces	www.sonitesurfaces.com
Metalis	Metallic surfaces	Inn deko	www.inndeko.com
MirraChrome	Sprayable reflective paint	Alsa Corp.	www.alsacorp.com
Okka	Pine needle acoustic or decorative panels	Okkastyle	www.okkastyle.com
Salmon Leather Fabric	natural salmon leather	Es Ltda.	www.essalmonleather.com
StamSkin	Furnishing textiles / Intensive use	Serge Ferrari	www.sergeferrari.com
EL WIRE	The EL WIRE is a thin copper thread covered in phosphorus that shines intensely when electric tension is applied	Olmec Advanced Materials Ltd/Surelight	www.surelight.com
EL PANEL	The EL PANEL is a plastic plate to which inks with an electrode effect have been applied, covered with phosphor that shines intensely when electric tension is applied	Olmec Advanced Materials Ltd/Surelight	hwww.olmec.co.uk/

Co-ordinator
AIDIMME TECHNOLOGY INSTITUTE
CFPIMM CIPFP CATARROJA FLA FEDERLEGNOARREDO GMIT WOOD.BE WOODWIZE
WWW.MIMWOODPROJECT.EU
This project has been funded with support from the European Commission. This publication 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.

The students have been given the mission to establish a proposal about the possible utility of some selected materials in their application to the furniture sector.

In order to do it they have accessed each material through the website that appears in the Excel document. With this information, they have been able to add some columns with until 3 possible uses of the selected materials to each one of the tabs of the Excel document.

Example:

Name	Description	Manufacturer	Website	1	2	3
Always Dry	The water sworn enemy	Nanex	www.nanexcompany.eu			
Chrome-Hocker Silber	Metal coating for wood	AREA Handelsges.m.b.H.	www.area.at/de			
Cuir au carré	Panels of leather ready to fit	Cuir au carré	www.cuiraucarre.com			
Hapi	Waterproofing coating for foam	Ehni Schaumstofftechnik GmbH	www.ehni-foam-tech.com			
JAVA mosaic	Recycled coffee tile	Sonite Innovative Surfaces	www.sonitesurfaces.com	bathtubs	walls	
Metalis	Metallic surfaces	Inn deko	www.inndeko.com	sculptures	cars	pieces of furniture
MirraChrome	Sprayable reflective paint	Alsa Corp.	www.alsacorp.com	cars	rockets	stained glass windows
Okka	Pine needle acoustic or decorative panels	Okkastyle	www.okkastyle.com	The website does not work		
StamSkin	Furnishing textiles / Intensive use	Serge Ferrari	www.sergeferrari.com	Solar Protection	Acoustic solutions	
El wire	The EL WIRE is a thin copper thread covered in phosphorus that shines intensely when electric tension is applied	Olmec Advanced Materials Ltd/Surelight	www.surelight.com	Outdoor decoration	Lamps	Lighting decoration Pieces of furniture
El Panel	The EL PANEL is a plastic plate to which inks with an electrode effect have been applied, covered with phosphor that shines intensely when electric tension is applied	Olmec Advanced Materials Ltd/Surelight	www.olmec.co.uk/	Cans	Rings	Solar Panels

This project has been funded with support from the European Commission. This publication 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.

2nd phase

Once the students have established the proposal about the possible application of the selected materials for each group, with the objective of putting their knowledge and skills in planimetry into practice, they have designed a 2D product.

In order to do it, some kind of furniture such as the manufacturing of a nightstand or auxiliary furniture have been proposed to them.

3rd phase

Once the previous phases have been executed, the students will develop a 3D prototype in order to see how the selected materials can be actually applied in a project that is going to be developed as well as their behaviour.

This project has been funded with support from the European Commission. This publication 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.