Circular economy in fur and wood industry: Material Match Making Platform (M3P/LIFE15/IT)

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Material Match Making Platform for promoting the use of industrial waste in local networks

- develop local networks to improve the treatment of industrial waste
- promote industrial waste use in other local businesses
- reduce industrial waste processing, storage and transport needs.
- demonstrate the utility of a digital online platform at European level for the recording, use and exploitation of industrial waste
M3P’s Local Networks

**Belgium**
- i-Cleantech Vlaanderen

**Spain**
- Confederacion Asturiana de la Construcción - ASPROCON

**Italy**
- Centro Tessile Cotoniero e Abbigliamento Spa
- Material Connexion Italia Srl
- Unione degli Industriali della Provincia di Varese

**Greece**
- Waste Management of Western Macedonia S.A. (DIADYMA S.A.)
Business segments by region

**Italy**/ Lombardy
Textiles and clothing
Plastic articles
Wood

**Spain**/ Asturias
Construction

**Belgium**/ Flanders
Multiple Sectors

**Greece**/ Western Macedonia
Fur
Wood
Local network research and waste identification

Research on the industrial areas (networks and clusters) to which the partners belong will allow optimization of industrial waste management at local level and overall lower environmental impact.

Data:

• Interviews with 230 SME’s
  (Western Macedonia: 25)
• Identification of 500 wastes
  (Western Macedonia: 30)
Local network research and waste identification

Ambitious targets...
How the SME’s will Involve???
Crucial issues

Identification of companies - low participation

Identification of waste (substances / objects)

Identification of finished products that could be manufactured with recycled materials

Transferability to other industrial environments / geographical areas / technology clusters
Action B1-2

- Interviews and fulfilling of questionnaires
- Workshops with SME’s for match making
- Target groups in the sectors of fur and wood

... in a few words: Industrial Symbiosis
E-platform

- One of the pillars of the LIFE M3P project is the development of the online Material Match Making Platform that will enable SMEs to exchange information to find alternatives to their waste.
- The online platform is the basis on which local networks will develop and companies will interact.
- It forms the basis of a "digital ecosystem" that strengthens the self-provision of local networks and allows for real industrial coexistence and a greener cyclical economy.
E-platform

- Data base
  - SME’s
  - Products/Waste
  - Technologies
  - Good examples
- Auto search engine
  - Labels/tags (tree of tags)
  - Search by tags
- Advanced search engine
  - Smart search
  - Search with the help of specialists

https://materialmatch.eu/
Creative Concepts
Creative Concepts
Creative Concepts

Essenza

For the garments are the waste of a casual and useless process. We believe we can give our material a new, glorious life. Our concept is a product without a specific function, a carpet or a tapestry, something really sensible and enjoyable in a more abstract way. It will be “wild” but also naturally chic.

For trimmings can be dyed using different herbs and spices in order to have a double result: the final product gives off a nice scent, fresh and spicy, and also can be coloured in a natural and soft way. For trimmings can be united in some patches, each one differently: the final result has unique visual and olfactory properties. Various combinations of scents and perfumes result in different patterns.

Human senses are playing the major role: you can smell it, touch it, smell it, feel it.
Creative Concept

Sänky

The idea and story

Sänky is a cat bed inspired by the Scandinavian style. Not only does it work by harbouring your pet, it is also a nice coffee table that can be placed in every living room.

Few elements are designed to be easily assembled together; three legs and two shelves, both made in pine wood, some metallic connections, and the bed. The latter is made entirely of felt, which came from the compacting and felting of fur trimmings, a waste of the fashion industry.

The concept is “back to basics”, with the creation of a product for animal from a material that came from the same animal world.

The lifecycle

Sänky is made only with materials that can be both reused or recycled, so after its lifecycle is complete, it can be disassembled, not causing any waste.

The product
Creative Concepts

GR1_ANIMAL SKIN
Creative Concepts
Creative Concepts

MATERIC LAMP

PRODUCT DESCRIPTION:
Materic Lamp made with real animal skin. A product created with an industrial Materials, natural, and reused as a design object. They are small: size, shape, the product line. The hero may be placed in a modern environment and hung from a ceiling. It can be made of different sizes depending on the installation. It is a very bright object, therefore the thickness of the material is made in art glass and illuminated with even light and its surface is placed with light, which is made of animal skin. The lamp is made of plastic, wood, and natural support. The lamp is made of plastic, wood, and natural support. The lamp is made of plastic, wood, and natural support. The lamp is made of plastic, wood, and natural support. The lamp is made of plastic, wood, and natural support. The lamp is made of plastic, wood, and natural support. The lamp is made of plastic, wood, and natural support. The lamp is made of plastic, wood, and natural support.

CONCEPT DETAILS:

PIECES OF ANIMAL SKIN

PRODUCT REALIZATION:

BUSINESS MODEL:

CIRCULAR ECONOMY

CIRCULAR DESIGN CHALLENGE FOR LIFE MAP

PROJECT DESCRIPTION

CONTENT:

The use of industrial waste material is focused towards an innovative design model,able to put the materials in the following way:
- Reuse of natural materials
- Elimination of the energy use
- Biodegradable material
- Recycled plastic: sustainable
- Lower consumption: LED lights
- Less production steps
- Less waste during the production

FABRICS OF Animal skin:
- Height: 100 cm, Length: 100 cm, Thickness: 0.3 cm, Colour: beige

The role of the industry that uses leather for leather goods is to supply the production with the same or similar materials as in the past, and also to sell out.

The key resource for the production of Materic Lamp is the leather. The production is made in a workshop held in a manufactory, where it is used in a traditional plastic and recycled material. This is the key resource for the production of Materic Lamp, where no animal is used or killed. It is the key resource for the production of Materic Lamp, where no animal is used or killed. It is the key resource for the production of Materic Lamp, where no animal is used or killed.

The key activity of the production of Materic Lamp is the use of waste material according to manufactory instructions and material.
Creative Concepts

PHONE LIGHT

PRODUCT DESCRIPTION:
The product is Phone Light, where the energy source is the cell phone that is placed under three solar panels, which creates a minuscule atmosphere. The product is made of natural materials that are moldable and are used in the production of a compact but at the same time, light weight. The shape and design have been adapted to various needs that take inspiration from nature, which are molded with a smooth surface and a river stream. A simple design with a basic power button, while the finished result is easily recognized. The logo does not require electricity but only a source of light such as the mobile phone. Lighting thus becomes a point of composition that everyone can afford to purchase and use. It has a great ornamental effect and it is able to create a particular atmosphere. It’s a new light product, accessible to everyone. It is distributed in any store, in particular the ones that sell gadgets and household.

CONCEPT DETAILS:

PIECES OF ANIMAL SKIN

PRODUCT REALIZATION:

BUSINESS MODEL:
The main partner in the industry that saw leather for its sustainable production. During this reduction, materials were transformed into leather. The manufacturer of leather goods needed to supply the leather material. The main aspect for the production of Phone Light is the sustainability and the sustainability of the material. The key activity of the production of Phone Light is the transformation of the material according to the production of a compact and light weight.

CIRCULAR ECONOMY

DISTRIBUTION

USE

REUSE

SCRAP

PRODUCTION

The purpose of the innovation is to use new technology for the production of Phone Light. The product is produced with a material that is sustainable and can be recycled. The material is flexible, it can be used to take part in the production of the product. Production waste and scrap is an important aspect in the production of Phone Light. The material is sustainable and can be recycled.
Creative Concepts

LEATHER MASH

PRODUCT DESCRIPTION:

The project is Leather Mash. It is inspired by the technique of origami-mash with the zeros that are seen in framed paper. The leather used is industrial waste material that is very thin and thus the edges of the zero, they are three sheets of paper. The project is about the provision of continuous paper to produce different shapes of different shapes with smooth or rough surface. These simple polyurethane models first creating the forms with the 3D printers, an easy material to work with, then the transforming which is a technique of casting plastic material coming from a transparent plastic pipe, where pneumatically is used, the creation of the various forms in a few minutes. Then these containers are filled with leather waste and finally applied a set of leather and then a set of leather layers. The simple forms are printed using a laser 3D printer, which can be placed on a piece of furniture at the entrance of the house, allowing people who move into the house to put on them, they bring with them, such as, keys, telephone, currency, etc. With a few layers they are removed and therefore is an innovative aspect of leather use, with the aim of satisfying the wants of the aesthetic of the objects. The process of realization is quite simple and does not involve excessive steps. It is thought that the design concept is suitable for leather. This idea allows us to put the product on the market at a competitive price.

CONCEPT DETAILS:

PIECES OF ANIMAL SKIN

PRODUCT REALIZATION:

CIRCULAR ECONOMY

CONTENT:

For reuse of the industrial waste material have been designed for an innovative design model, aimed to respect the environment in terms of recycling, recovery of non-recyclable materials or remaining industrial materials - Reduction of the energy saving - Biodegradability of natural - Structure of the basis in renewable materials - Late production stages - Less waste during the production.

BIZNESS MODEL:

The research is the industry that uses leather for the food chain production. During that production process, waste products or waste material that has been used to produce Leather Mash. The production of leather goods would be possible, to supply the waste material at low cost. The main challenges that arise are:

1. The proposed value in the production process is the use of non-recyclable material in an innovative way. It is an innovation project that seeks to provide a new solution for the production of Leather Mash. The production process is the production of Leather Mash in the production of leather goods, which is a very difficult process, as it involves the use of different materials, including leather. The production process is the production of Leather Mash in the production of leather goods, which is a very difficult process, as it involves the use of different materials, including leather. The production process is the production of Leather Mash in the production of leather goods, which is a very difficult process, as it involves the use of different materials, including leather. The production process is the production of Leather Mash in the production of leather goods, which is a very difficult process, as it involves the use of different materials, including leather.

2. The key activities for the production of Leather Mash are:

- Key Partners
- Key Resources
- Key Activities
- Key Comptant
- Key Risk
- Key Opportunities
- Key Costs
- Key Values

The value proposition for the production of Leather Mash is that it is a product that is easy to use and has many benefits. The production process is the production of Leather Mash in the production of leather goods, which is a very difficult process, as it involves the use of different materials, including leather. The production process is the production of Leather Mash in the production of leather goods, which is a very difficult process, as it involves the use of different materials, including leather. The production process is the production of Leather Mash in the production of leather goods, which is a very difficult process, as it involves the use of different materials, including leather. The production process is the production of Leather Mash in the production of leather goods, which is a very difficult process, as it involves the use of different materials, including leather.
Creative Concepts

SAWDUSTS
Creative Concepts

Vallo

Our concept is born from an experimental research started with the idea to show the intrinsic sand dust sensations, modifying its structure. From the beginning, the concept was designed to suggest a product relate to a primitive world, unaffected and raw, like the consistence of the material itself.

Taking the inspiration from the myths of ancient tribes, we explored different combinations of sand dust and filling materials, in order to create a more consistent and compact one.

Eventually, plaster and sand dust mixture allowed us to realize a tile with a coating purpose. We knew different compositions of forms, colors and textures to perfect the initial prototype. The final product is a tile with a classic shape, in which the roughness of the dough is highlighted by the irregular surface.

Vallo

The concept was inspired by the working made of the product, and its peculiarities. Indeed, sand dust is a thermal and acoustic insulator, which in combination with a plaster mixture allows the creation of a coating, thanks to their natural origins, and the quality of the gesso being a completely recyclable material, we decided a product that can be recovered after its disposal. Vallo can in fact be destroyed and re-processed just adding water.

When the lifetime of the product is completed, it can be reduced into a fine dust, allowing the separation of the materials. With these elements and the addition of water, then it will be possible to re-employ it in the creation of new products.
Creative Concepts

Building blocks for infants

4. Process of manufacturing

Filling: Identifying the required type of wood particle to be filled together with clear natural resin.

Coating: Cast the respective shapes in resin/grey using desired moulds.

Finish: Cleaning and getting rid of the unwanted parts and dirt. Adding finishes if necessary & painting.

Polishing: Polish the surfaces for the necessary gloss and shine and apply decorative stain/sticker.

5. Reference of colour, material and finish visualised for end product

- Bright Colours
- Grain pattern
- Smoked wood
- Organic Patterns
- Clear Base
- Metallic Coloured resin
- Wood, resin & filler materials
- Colourful Fillers

6. Why this concept?

- Degree of Innovation: Building blocks made in a concept-driven way. New material has been included in the architectural project design.
- Feasibility: The company already has the necessary know-how to execute this concept without any limitations.
- Scalability: Our designed, reusable plastic toys can withstand changes, easily fulfilling the company’s image.
- Viability (Business): With less demand to labour and discharging materials, generating sustainable, creative products for a new market segment.

21/03/2019
Creative Concepts

Acoustic Décor blocks

1. Looking from particle wood’s physical property, e.g. sound dampening, combining it together with aesthetic application for household and workplaces.

2. Short Description

The required particle wood have three different tonal variants and sizes. This property can be utilised to make creative solutions combining transparent natural glue or resin. Binding these particles together in repetitive shapes using moulds it can be mass produced for decorative and functional purposes. These blocks can be arranged in a specified pattern to create artistic decoration on walls of home and false panels of workplaces.

3. Advantage of material in this context

<table>
<thead>
<tr>
<th>Material benefit</th>
<th>WHAT People look for:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acoustic, Sound Absorbing</td>
<td>1. Aesthetic</td>
</tr>
<tr>
<td>Distinct Colour &amp; Texture</td>
<td>2. Customizability</td>
</tr>
<tr>
<td>3. Integrated Solutions</td>
<td></td>
</tr>
</tbody>
</table>

4. Process of manufacturing

Filling: Identifying the required type of wood particle to be filled together with clear natural resin.

Casting: Cast out the respective shapes in resin-filled pickling container

Finish: Cleaning and getting rid of the unwanted parts and dirt. Sanding to ease if necessary & painting.

Polishing: Polish the surfaces for the necessary gloss and shine and apply creative film sticker.

5. Concept Details

Peel the cover:
Peel the protective cover of the sticker to expose the glue area.

Solution:
Select a prepared sheet of acoustic block with required texture and tone.

6. Why this concept?

1. Degree of Innovation: Utilised as a material for decoration but in exactly this combination it can be mass produced for decorative and functional purposes.

2. Feasibility: The company probably has the technical know-how to achieve this concept within its facilities.

3. Desirability: Economically, strongly feasible. Can replace plastic & hair of wool, very attractive in appearance.

4. Visibility (Business): A truly innovative way to decorate and using materials generated from a waste product by a new method through mass production, keeping in mind also the ethical zero waste aspects.
Thank you!

To get in the e-platform: https://materialmatch.eu/