Boostalps 2.0
Workshop on Circular Economy in Textile Value Chain

Closing the loop: Life Material Match Making Platform project (Life M3P)

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Milano - July 4, 2019
Multisectoral Research & Innovation

Technological Observatory

Laboratories

Certifications

Sustainability

International Technical Regulatory

Training

500+ Accredited Tests by

1870 Tests

90 Employees

GB, GB/T, FZ/T, CPSIA Standards

CHINA USA

8.6 Million
Materials and Goods

- Textiles (fibres, yarns, fabrics)
- Leather
- Plastics
- Others: Metals, Glass, Stones, ...
- Clothes
- Personal Protective Equipment
- Home furnishing
- Technical textiles
- Food contact materials
Goals

- Apply a **model for Industrial Symbiosis**, online platform based
- **Realize matches between companies** offering waste stream and requesting materials
- Search for new applications of waste, based on **creative concepts**
http://www.lifem3p.eu/
## Working Progress

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Companies</td>
<td>330</td>
</tr>
<tr>
<td>Waste</td>
<td>935</td>
</tr>
<tr>
<td>Matches</td>
<td>20</td>
</tr>
<tr>
<td>Pilot Cases</td>
<td>13</td>
</tr>
<tr>
<td>New Concepts</td>
<td>152</td>
</tr>
</tbody>
</table>
Some matches

Plumage
Glass Fibers
Acetate Scraps
Powders and granules of synthetic polymers
Polyolephinic powders
Textile scraps
Silk Scraps

Non-Woven Fabrics
Yarns
Insulation Panels
Furniture Panels
Plastic Fillers
Gum Fillers (with compatilizers)
Flooring Products
Asphalts
Filters
Paddings
Techno-Polymers
Pilot Case 1: Feather and Down

- **Feather and down manufacturing company,**
  for padded furniture industry, clothing and bedding
- **About 150 ton/year (out of 2,500 tons)** of **by-product** of animal origin made by of waste and powders from feathers processing
- **Actually:**
  - Organic nitrogen fertilizer (➔ Agriculture)
  - Source of protein (➔ animal feed, cosmetics, etc.)
  - Incineration or Landfill
- **Expected:**
  - To treat waste (big and hard feather) to be spun
Pilot Case 2: PA 6.6

- **Scraps coming from fabrics cutting service**, fabrics made with several fibres, mainly nylon (polyammide 6.6) and elastane, so a pre-treatment for separation is needed.

- Actually:
  - Incineration or Landfill

- Expected:
  - Re-use of PA 6.6

- Needs
  - Separation of PA 6.6 from other fibres
  - Analysis of composition (fibres and percentages)
  - Determination of presence of additives, finishes, chemical agents and others that can inhibit the use
Pilot Case 3: Wastewater

• Manufacturer of self-adhesive sign making films, digital print media, laminates and automotive & deco films

• Actually:
  – About 70,000 liters/year of wastewater
  ➔ Contaminated with phosphates

• Requesting Company
  – Full operational concrete factory, different kinds of concrete and screed

• Expected:
  – Analysing water for quality measures
  – Under investigation
## Coming Results

<table>
<thead>
<tr>
<th>Impact</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction of waste</td>
<td>7,700</td>
<td>ton</td>
</tr>
<tr>
<td>Reduction of water consumption</td>
<td>12,700</td>
<td>m³</td>
</tr>
<tr>
<td>Reduction of the emissions of CO$_2$</td>
<td>7,000</td>
<td>ton</td>
</tr>
<tr>
<td>Reduction of use of non-renewable sources</td>
<td>10,700</td>
<td>ton</td>
</tr>
</tbody>
</table>
Innovative waste management and recycling methods in textile manufacturing make it possible to reduce and reuse waste. It helps cutting production costs while protecting the environment. ENTER works in five central European countries that are involved in the textile business, to promote innovative solutions for waste management that will result in a circular economy approach to making textiles.

WWW.INTERREG-CENTRAL.EU/ENTER
Goals

To promote new joint services

To reduce scraps and waste to prevent consumption of non-renewable resources

To promote Circular Economy and Industrial Symbiosis

To create a network among textile companies, associations and research centres by means of M3P Platform

TAKING COOPERATION FORWARD
### Pilot Cases

<table>
<thead>
<tr>
<th>No.</th>
<th>Pilot Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From residues to raw material – New recycling approach to handle textile waste from a finishing company</td>
</tr>
<tr>
<td>2</td>
<td>Generation of waste from manufacturing of technical textiles</td>
</tr>
<tr>
<td>3</td>
<td>Reduction of the waste generation through prolongation of the service life of textile products</td>
</tr>
<tr>
<td>4</td>
<td>Recollection, recycling and waste management of stock post-industrial and used post-consumer workwear</td>
</tr>
<tr>
<td>5</td>
<td>System of segregation and preparation of post-production waste</td>
</tr>
<tr>
<td>6</td>
<td>“Wool Waste” raw material development</td>
</tr>
<tr>
<td>7</td>
<td>Development of the waste management related in-house logistic system</td>
</tr>
</tbody>
</table>
Industrial Symbiosis

https://www.centrocot.it/site/en/
Conclusions

• M3P Platform seems to be a useful tool for both specific sector (e.g. textile) and multisectoral approach
• M3P Platform is running and used in 9 European industrial districts
• Involved Stakeholders show real interest
  – Companies
  – Public Authorities
• Results obtained so far are satisfactory and encouraging
## Ongoing Achieved Results

### Achieved Results at May 2019

<table>
<thead>
<tr>
<th>Companies</th>
<th>Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected</td>
<td>Involved</td>
</tr>
<tr>
<td>235</td>
<td>330</td>
</tr>
</tbody>
</table>

### Checking point

<table>
<thead>
<tr>
<th>Checking point</th>
<th>Registered users</th>
<th>Difference</th>
<th>Growth %</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 September (middle report)</td>
<td>124</td>
<td>0</td>
<td>0 %</td>
</tr>
<tr>
<td>31 December 2018</td>
<td>151</td>
<td>27</td>
<td>21.7 %</td>
</tr>
<tr>
<td>20 June 2019</td>
<td>246</td>
<td>95</td>
<td>62.9 %</td>
</tr>
</tbody>
</table>

### Registered users growth

[Graph showing registered users growth over time from 9/1/18 to 6/1/19]
Life M3P Acknowledgments

• **Good Practice** (Interreg Europe CircE)
  CircE Tool Survey identified 39 best practices

• **Showcase project**
  LIFE Programme Key Project-level Indicators Survey
  (Based on 101 of 444 validated Life 2014-2016 projects with impacts on waste)

• **C2M - Close to Market Initiative**
  Survey by EASME
  (One of the most C2M projects of 419 investigated)
Every end is a new beginning