

OUTPUT FACT SHEET

Pilot actions (including investment, if applicable)

Version 2

Project index number and acronym	CE1125 CIRCE2020
Lead partner	ARPAV - Regional Agency for Environmental Protection and Prevention of Veneto
Output number and title	OT3.1 Pilot actions to test the business model and quality standards verifications
Investment number and title (if applicable)	-
Responsible partner (PP name and number)	PP4 IFKA Public Benefit Non-profit Ltd. for the Development of Industry
Project website	https://www.interreg-central.eu/Content.Node/CIRCE2020.html
Delivery date	12.2019

Summary description of the pilot action (including investment, if applicable) explaining its experimental nature and demonstration character

The donor company develops product and services that make life easier for people with very personal and private medical conditions. It offers a wide selection of products to meet the different needs of their customers. Their portfolio offers a range of innovative ostomy bags that make the consumers feel secure and confident. Quality is the most essential point in their operation because it is a medical product. They need to work with primary raw materials, no secondary resources could be integrated into their production system.

A special waste stream was identified resulting from the production of these medical tools. Since it is a medical product, there is a strict and thorough quality check at all phases of the process. For instance, even at the end mechanical tests occurred, during this procedure additionally appr. 1% of the total production will become waste at the end. In the technology process, there are many units where the plastic waste is generated from the cutting-out.

Due to the production lines and the quality control mechanisms of the given company this is the biggest amount of homogenous waste - 5000 tonnes - generated by the company.

The waste composite plastic has irregular shape; it contains:

The composition of the production waste at the donor company	Range [%]	Average value [%]
PE	50-70	60
PP	12-25	15
PET, aPET	10-20	15
PVC	0-10	5
EVA	0-10	4
PA	1-2	1

The previously applied waste management technology of the critical amount of plastic waste is incineration with energy and steam recovery. The aim is to change the present waste management system and develop the present treatment choice to a higher and more efficient level or - being a critical material- to produce valuable products from these waste plastics.

Possible recipient - a recycler - company whom we initiated negotiations and tests, is committed to environmental protection. Its products are produced through efficient recycling of municipal and industrial plastic waste. The production is environmental friendly, since the raw materials used for their production previously have been transferred to landfill sites without utilization.

The shredded multilayer plastic is delivered to this plastic waste utilization site where the next plastic products can be manufactured from the waste:

- grass grids,
- pavements,
- reusable storage bins - that can use the donor company in their transportation processes.

The high quality of the products is constant; the products have a very long lifetime. They are extremely resistant to weather, moisture, rot, fungi, parasites and everyday chemicals, do not absorb water, and therefore do not freeze and crack in winter. They require minimal maintenance, so there are no renovation costs.

At the moment only outside application of the new products (pavements) is possible because it contains chloride (PVC content).

Max. 3.000 characters

NUTS region(s) concerned by the pilot action (relevant NUTS level)

The Hungarian pilot area, the Tatabánya Industrial Park is situated in the Central Transdanubia region. It is approximately 450 ha, out of which one third belongs to the public administration of Tatabánya and two thirds to Környe. Based on its area it is one of the largest industrial parks in Hungary. The area is characterized by the diverse variety of companies which are operating in the area, such as automotive, plastic industry, rubber industry, electronics, healthcare and logistic companies.

Max. 500 characters

Investment costs (EUR), if applicable

To develop new processing lines and procure machines possible recipient company needs financial support. There are some opportunities which are offered by the Hungarian operative programs. Also financial support is needed to perform the laboratory measurements and research & development tasks by the university to prepare the product info sheets.

Expected impact and benefits of the pilot action for the concerned territory and target groups and leverage of additional funds (if applicable)

Donor company	No dependence on incinerators Bypass shredder - at the moment it requires lots of energy and maintenance Environmental benefits - good reputation Gets products (like boxes) from their waste
IFKA	Material recycling of the whole amount of waste composite plastic instead of incineration - CE solution Implementation of industrial symbiosis - good practice
Recipient company	Produce valuable and marketable product from the waste Appearance of new products Development - technology, more production lines...

Max. 2.000 characters

Sustainability of the pilot action results and transferability to other territories and stakeholders.

The producer company is committed to the environment issues and they also have several factories in Europe, the mother company works in Denmark. Currently the waste is incinerated by all of them. So if we will find an effective alternative solution it would be implemented in other countries to reduce the waste amount. Due to the complexity of the composition and because of the quantity it is quite a challenge to identify producers who can deal with this material. The aim is to develop a continuous, long-term and sustainable relation in this respect. The recipient company can produce valuable and marketable products from the waste but it needs to develop its production line, more machines and production lines are needed.

Max. 2.000 characters

Lessons learned and added value of transnational cooperation of the pilot action implementation (including investment, if applicable)

- PVC content is problematic everywhere because of the chlorine: it limits the usability of the final product
- During the boot camp where experts from other countries were participated it turned out that platform where stakeholders can share their problems and ideas are necessary

Max. 1000 characters

Contribution to/ compliance with:

- relevant regulatory requirements
- sustainable development - environmental effects. In case of risk of negative effects, mitigation measures introduced
- horizontal principles such as equal opportunities and non-discrimination

In Hungary there is a tendency to foster manufacturers diverting industrial waste from landfills. Landfilling could be applied only in some specific cases. For instance, in 2018, the landfill tax was extended towards industrial waste as well with 20 euro/t value. However, in many cases, incineration is the popular treatment method. The legislation is not so promoting to move up to the waste hierarchy, but still more and more companies decided to find alternative solutions. No further obligation so far in this sense.

In our CE case the plastic is also in the center of EU attention, Closing the loop - An EU action plan for the circular economy (COM (2015) 614 Final) FROM WASTE TO RESOURCES: BOOSTING THE MARKET FOR SECONDARY RAW MATERIALS AND WATER REUSE it is mentioned as a “critical” area. The quality of plastic waste is extremely variable, which reduces its ability to be recycled for a quality secondary raw material.

Our proposed CE solution is in line with these tendencies namely the more ambitious target for the recycling of plastic packaging.

Max. 2.000 characters

References to relevant deliverables (e.g. pilot action report, studies), investment factsheet and web-links
If applicable, additional documentation, pictures or images to be provided as annex

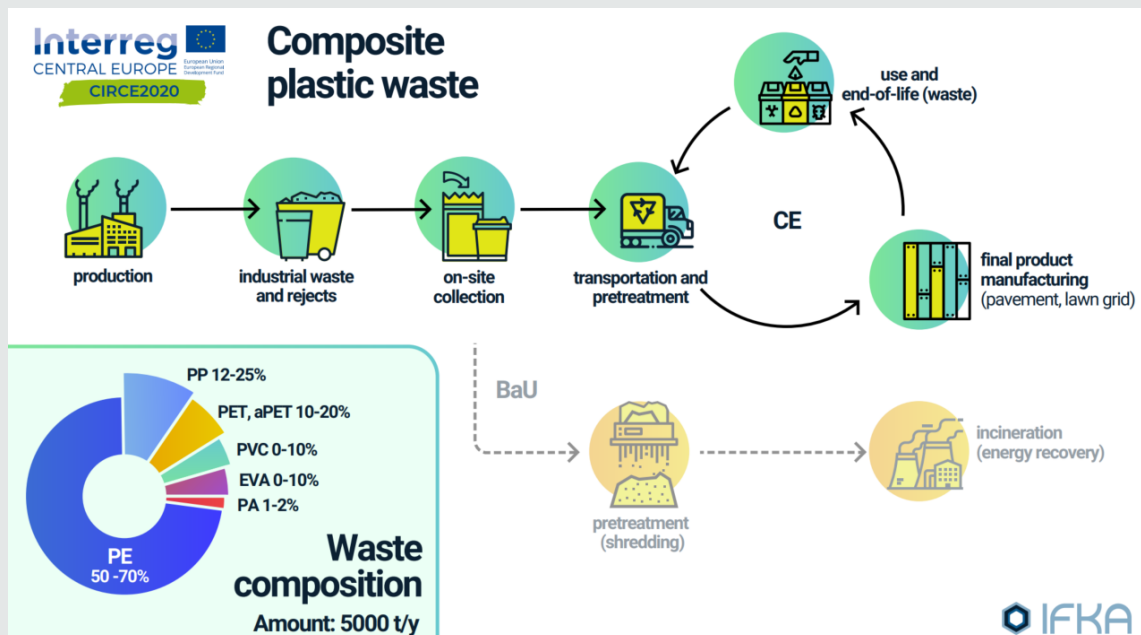
<https://www.circe2020-wiki.eu/>

https://ifka.hu/en/article/green_economy/projects/69

<https://ifka.hu/en/article/CIRCE2020-projekt-bemutatas>

<https://www.circe2020-wiki.eu/composite-plastic-waste-into-a-valuable-product>

Annex:



Max. 1.000 characters