



Integrated Catalytic **Recycling** of  
Plastic Residues Into Added-Value  
Chemicals

NEWSLETTER 6 – December 2022

## The 3<sup>rd</sup> period of the iCAREPLAST project started

Welcome to the **iCAREPLAST** newsletter!

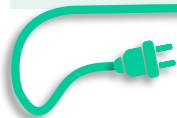
This is the sixth edition of our newsletter series.

This SPIRE project started in October 2018 and has received funding from the European Union's Horizon 2020 research and innovation programme (G.A. N° 820770).

**iCAREPLAST** addresses the cost and energy-efficient recycling of a large fraction of today's non-recyclable plastics and multi-layered films. The process combines chemical routes (pyrolysis, catalytic and separation steps) to produce valuable chemicals.

Please, visit the website in order to learn more about the **iCAREPLAST** project in general, as well as find more detailed information on upcoming activities: <https://www.icareplast.eu/>

Your **iCAREPLAST** Team



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# About iPoint

iPoint-systems ([www.ipoint-systems.com](http://www.ipoint-systems.com)) was founded in Reutlingen, Germany, in 2001. iPoint is a leading provider of software and consulting services for environmental and social product compliance and sustainability. iPoint empowers companies to collect, analyze and report all necessary data to assess the environmental, social, and economic impacts of their products and related processes. By digitalizing the lifecycles of products and supply chain relationships iPoint's software solutions support enterprises to manage compliance, risk, and sustainability.



Umberto is one of the leading Life Cycle Assessment (LCA) software solutions for sustainability professionals supporting companies in analyzing the environmental impact of their products. Thereby helping to develop sustainable products, optimize environmental footprints and improve corporate sustainability. iPoint Product Sustainability is an enhancement of Umberto and enables the full power of LCA. Umberto serves as the calculation engine in iPoint Product Sustainability, enabling companies to automate LCA calculations for the entire product portfolio and integrate LCA results into other relevant business processes.

[Visit: iPoint Product Sustainability Software](#)

## What is iPoint's role in the iCAREPLAST Project?



*LCA software solution and consulting for modeling and evaluating the environmental and economic efficiency of the iCAREPLAST system*



*Developing API Interface for real-time LCA*



*Development of a user-specific visualization dashboard for the analysis of LCA and Life Cycle Costing (LCC) results.*

In the framework of the iCAREPLAST project, a real-time visualization dashboard was developed that uses iPoint's REST API in the iPoint Product Sustainability Web application. The goal is to improve monitoring capabilities for plant managers without LCA expertise to gain insight into the environmental performance of the iCAREPLAST plant. With the developed dashboard and interfaces, plant managers can easily monitor the environmental impact of different material types and energy sources and make the most environmentally friendly choice, whether on-site or off-site. On top of that, the analytical features in iPoint Product Sustainability allow the creation of possible scenarios to compare environmental impacts by changing the default parameters of the LCA model. The built-in features help make operational decisions based on environmental hotspots that have the potential to reduce environmental impact.

## iCAREPLAST - LCA workshop



A live demonstration of LCA was made for the iCAREPLAST project partners in September 2022. The online meeting was organized by iPoint. A series of operational scenarios were prepared to demonstrate the results in live LCA visualization dashboards.



Each of these scenarios was run while changing the pyrolysis, alkylation, and oxy-combustion temperatures, and the percentage of each plastic mix used. The real-time results of the created scenarios were displayed in iPoint Product Sustainability and in the Microsoft Power BI visualization dashboard at intervals of 5-10 seconds. The implementation of the live LCA for the iCAREPLAST was successfully performed based on the digital simulation of the pilot plant.

## iCAREPLAST Videos

Several videos were prepared as learning resources, about the different technologies involved in the iCAREPLAST project. Stay tuned on our website!

[Visit iCAREPLAST Training Material](#)



### Upcoming events

**Workshop “Strategies for the treatment of plastic waste. Status and perspectives”**

**19<sup>th</sup> January, 2023.**

**Location: URBASER Alfonso Maíllo Innovation Centre, Zaragoza (Spain).**

The goal of the event is to discuss on topics related to the plastics industry and recycling processes, focusing on:

- ❖ Current situation of the plastic recycling market and perspectives within the framework of the circular economy.
- ❖ Emerging projects associated with the mechanical and chemical processes of recycling. Current issues and challenges.
- ❖ Current regulatory framework, with respect to Spain and the European Union.



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