



# GOODBYO

**MULTI-COMMODITIES MICROBIAL-DRIVEN BIOREFINERY  
BASED ON FOOD-PROCESSING INDUSTRY WASTES, BIOGENIC CO<sub>2</sub>  
AND BIOPROCESS WASTEWATERS**

## **Deliverable 10.2 – GoodByO website**

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Lead: CIB

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2	13/03/2025	Francesca Dall'Ozzo	CIB	Website preview to all partner
3	20/03/2025	Mattia Scaramuzzino, Valeria Agostini, Laura Mols, Sebastien Bernacchi, Barbara Menin, Evangelos Rikos, Myrsini Christ	IIT, ChainCraft, Krajete, CNR-IBBA, Cres, Cres	Partner review
4	31/03/2025	Francesca Dall'Ozzo	CIB	Website online



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## 1 EXECUTIVE SUMMARY

The GoodByO project website, active at <https://goodbyo.eu/>, is designed as a central tool for communication and dissemination of project activities and results. Its responsive structure ensures an optimal user experience on any device, from desktop to smartphone.

The website aims to:

- Present GoodByO in a comprehensive way by illustrating its objectives, activities, and results.
- Keep users of the site up to date by providing information and updates to consortium members, stakeholders and target audiences on progress, milestones and new knowledge gained during the course of the project.
- Centralize resources by providing a comprehensive and easily accessible repository of all public documents, deliverables, publications, and materials produced as part of GoodByO.

To maximize its visibility, the website will be actively promoted through the project's communication channels (social media, newsletters, etc.). The website will be updated at least every three months to ensure that the information is always current and relevant.

## 2 LIST OF TABLES AND FIGURES

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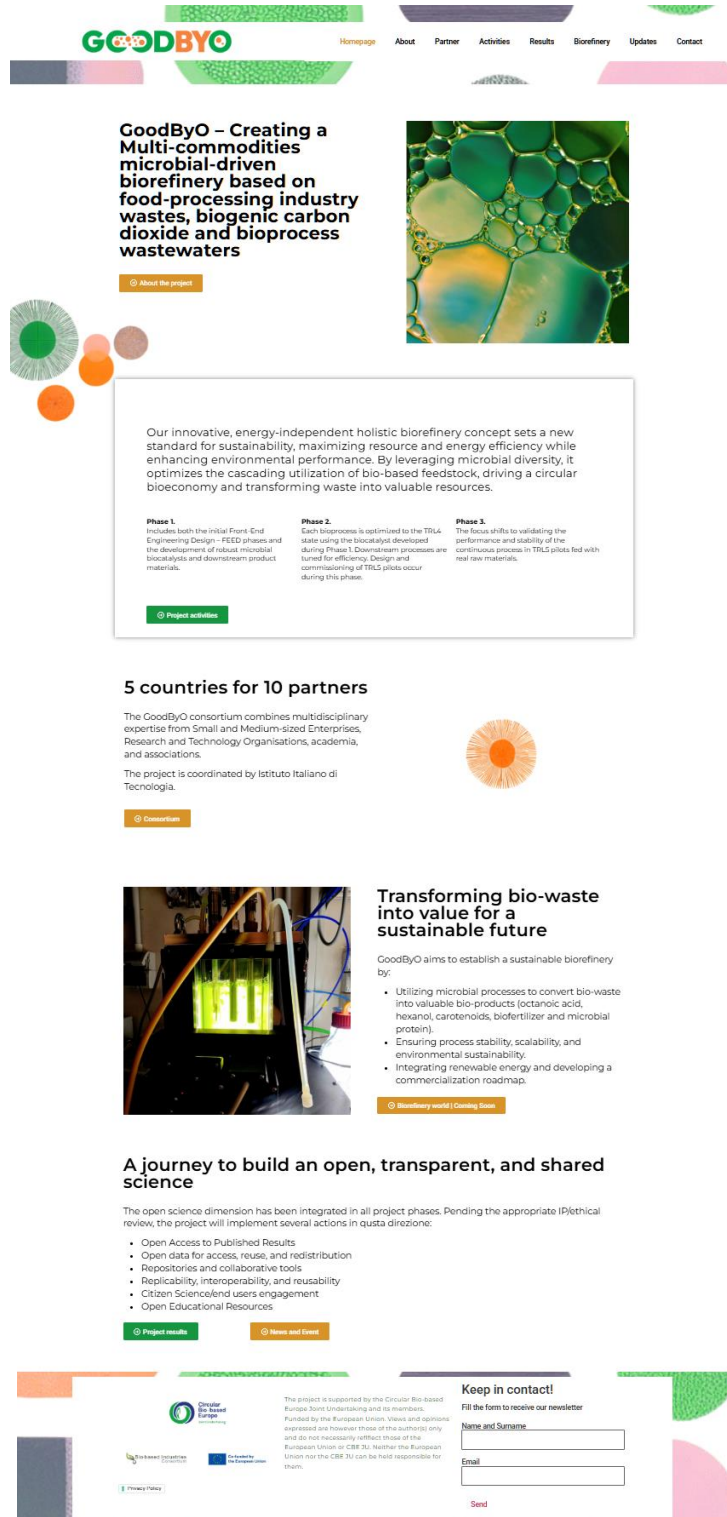
Figure 8. "Contact" page screenshot .....9

## 3 LIST OF ABBREVIATIONS

CA	Consortium Agreement
CBE-JU	Circular Bio-Based Joint Undertaking
EC	European Commission

## 4 Homepage

Figure 1. "Homepage" screenshot



## 5 About

Figure 2. "About" page screenshot

**GOODBYO** [Homepage](#) [About](#) [Partner](#) [Activities](#) [Results](#) [Biorefinery](#) [Updates](#) [Contact](#)

# The project GoodByO

GoodByO - Creating a Multi-commodities microbial-driven biorefinery based on food-processing industry wastes, biogenic carbon dioxide and bioprocess wastewaters is a project founded by the Circular Bio-based Europe Joint Undertaking work programme. The project aims to create a new generation biorefinery using food waste, biogenic CO<sub>2</sub> and bioprocess wastewaters to produce bio-based products.

GoodByO ambitions will be realized by achieving the following specific **objectives**:

- 1** Creating a microbial chain elongation technology to produce large-scale bio-octanoic acid from agri-food waste and gas fermentation effluent, while generating two residue streams as zero-cost feedstock for other GoodByO microbial factories
- 2** Developing a novel gas fermentation process using acetogenic bacteria for bio-hexanal production from biogenic CO<sub>2</sub> (biogas) and green H<sub>2</sub>
- 3** Establishing a cost-effective microalgal carotenoid production process leveraging bioprocess wastewaters and an innovative photo-bioreactor system
- 4** Developing a novel biological anaerobic biogas desulfurization process combined with sulphur-rich microbial biomass recovery
- 5** Validating the long-term stability of developed biocatalysts and continuous bioprocesses using real feedstocks to achieve consistent and scalable production performance
- 6** Designing a renewable energy-based power supply system for the multipurpose biorefinery using biomethanation as intermediate energy storage
- 7** Ensuring environmental benefits of GoodByO technologies compared to the current commercial processes
- 8** Developing a consolidated roadmap for GoodByO technologies scale-up and commercialization.

## Short term Outcomes

**Technological outcomes:**  
Novel energy-independent holistic biorefinery concept featuring enhanced environmental performance, and maximizing resource and energy efficiency. This approach harnesses the metabolic diversity of microorganisms and optimizes the cascading utilization of bio-based feedstocks, including agri-food wastes, biogenic CO<sub>2</sub> and bioprocess wastewater.

Setting an example for biorefineries and showing the feasibility and viability of integrating different microbial-based manufacturing processes.

**Economic outcomes:**  
Generating sustainable bio-based products at cost competitive selling price with benchmarks, as much as possible, in order to boost end users companies in substituting fossil- and palm-oil based products with bio-based ones.

**Environmental outcomes:**  
Promoting the use of biogenic CO<sub>2</sub> streams and biorefinery waste effluents as zero-cost feedstocks. RES-based bioprocesses with reduced GHG emissions, reduced waste production/disposal and increased water-recycling, compared to current benchmarks processes.

## Long term Impacts

**Technological Impacts:**  
Consolidating EU research and infrastructural leadership in Biotech, Circular Bioeconomy and CCUs fields. Integrating between Biorefinery and RES sectors.

**Environmental Impacts:**

- Minimising EU's greenhouse gas emissions by offering a greener solution to companies
- Reducing freshwater consumption by recycling bioprocess water effluents
- Decreasing EU's agricultural land use for animal feed production by offering sustainable solutions to conventional animal feed.
- Defossilising EU's manufacturing industries.
- Increasing the EU's raw material security, by reducing imports of fossil fuel and palm oil.

**Industrial/Economic Impacts:**  
Consolidating EU global leadership in Manufacturing Biotech-Industry.

- based on CO<sub>2</sub> valorization (Gas fermentation Tech);
- based on food wastes (Chain Elongation Tech)
- based on biorefinery wastewaters (Microalgae Tech)

Promoting the chemical storage of green H<sub>2</sub> within consumer goods.

**Keep in contact!**  
Fill the form to receive our newsletter

Name and Surname

Email

## 6 Partner

Figure 3. "Partner" page screenshot

The screenshot shows the 'Partner' page of the GOODBYO website. At the top, there is a navigation menu with 'Partner' selected. Below the menu is a map of Europe with several locations marked by orange dots, representing the project's partners. The main content area is a grid of partner profiles, each with a logo, name, role, and a short description of their expertise and contribution to the project. The partners listed include:

- itc** (Interdisciplinary Technological Center for the Bio-based Chemicals): Project Coordinator, interdisciplinary research hub in Turin, Italy.
- CHANCEFACT**: Partner, transforms organic residues into sustainable medium-chain fatty acids (MCFAs).
- krjete**: Partner, dynamic player in industrial biotechnology focusing on defossilization of production lines.
- Brite**: Partner, leading Greek SME specialized in developing innovative nanomaterials for energy applications.
- MUNI SCI**: Partner, one of the Czech Republic's top academic institutions.
- IBBA**: Partner, driving innovation in Sustainable Agriculture, Institute of Agricultural Biology and Biotechnology.
- Politecnico di Torino**: Partner, one of Europe's leading universities in engineering and architecture.
- TU Graz** and **ICEBE**: Partner, largest technical university in Austria, focusing on sustainable bioprocesses.
- CIB**: Partner, Italian biogas and biomethane production chain in agriculture.
- KAPE CRES**: Partner, promotion of Renewable Energy Sources, Rational Use of Energy and Energy Saving.

## Related projects

GoodByo is part of the Circular Bio-based Europe Joint Undertaking work program. The program finances other Research and Innovation projects focused on bio-based chemicals.

[Click here for more information](#)

The footer section contains logos for 'Circular Bio-based Europe', 'European Union', and 'Project Partners'. To the right, there is a 'Keep in contact!' section with a form to fill out for a newsletter subscription. The form includes fields for 'Name and Surname' and 'Email', and a 'Send' button.

## 7 Activities

Figure 4. "Activities" page screenshot

The screenshot displays the 'Activities' page of the GoodByo website. At the top, there is a navigation menu with links for 'Homepage', 'About', 'Partner', 'Activities', 'Results', 'Biorefinery', 'Updates', and 'Contact'. The main heading is 'Work packages' with a sub-heading 'Activities'. Below this, a grid of 11 colored boxes represents the work packages, arranged in two columns: the left column contains packages 1 through 6, and the right column contains packages 7 through 11.

Below the grid is a detailed process flow diagram. It is organized into three phases:
 

- PHASE 1 (M1-M12):** TRL 2-3, labeled 'FEED & BIOCATALYSTS DEVELOPMENT'. It includes sub-phases WPI-5 and WPI-5, with tasks: MF1: Fermentative carbon-chain elongation; MF2: GAS FERMENTATION for HEXANOL PRODUCTION; MF3: ANAEROBIC BIOGAS DESULFURIZATION PROCESS; MF4: MICROALGAL CAROTENOID PRODUCTION.
- PHASE 2 (M13-M26):** TRL 4, labeled 'BIOPROCESSES DEVELOPMENT'. It includes sub-phase WPI-5 and a task: DESIGN & COMMISSIONING TRLS PILOTS.
- PHASE 3 (M27-M42):** TRL 5, labeled 'GOODBYO TECHNOLOGIES VALIDATION'. It includes sub-phase WP6.

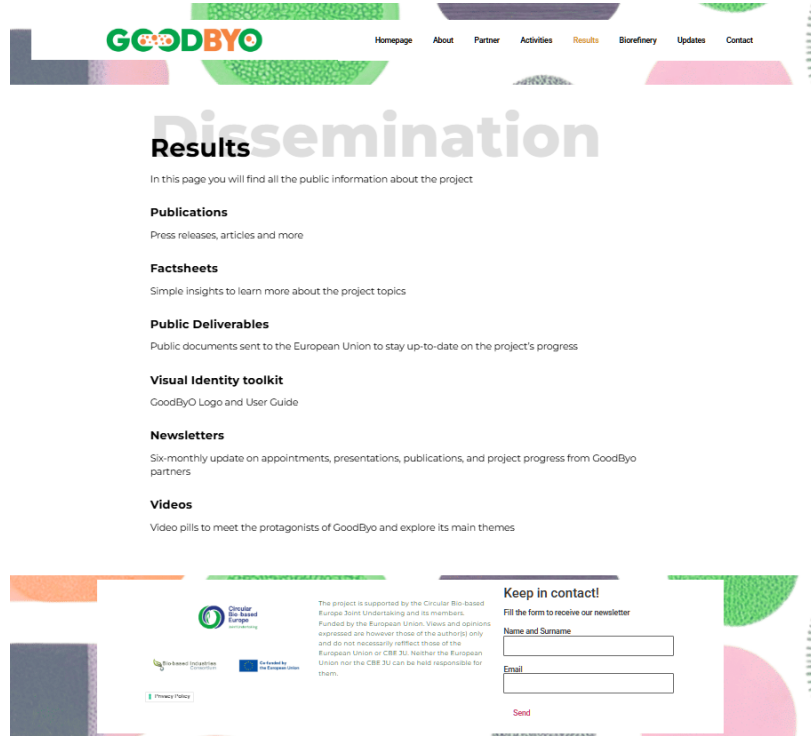
 Below the phases, three additional work packages are listed:
 

- WP7-8: *In-silico* RES & Biomethanation-based Power System - Environmental, Techno-Economic & Social Assessment
- WP9: Future Implementation of GoodByO concept
- WP10-11: Dissemination & Communication - Project Coordination

At the bottom of the page, there is a 'Keep in contact!' section with a disclaimer: 'The project is supported by the Circular Bio-based Europe Joint Undertaking and its members. Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CBR JU. Neither the European Union nor the CBR JU can be held responsible for them.' This is followed by a contact form with fields for 'Name and Surname' and 'Email', and a 'Send' button.

## 8 Results

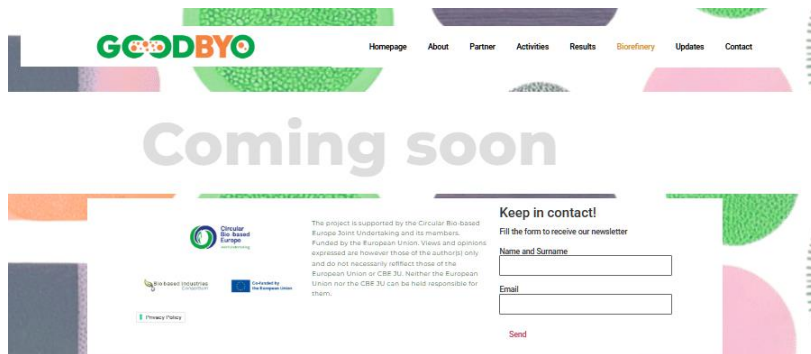
Figure 5. "Results" page screenshot



## 9 Biorefinery

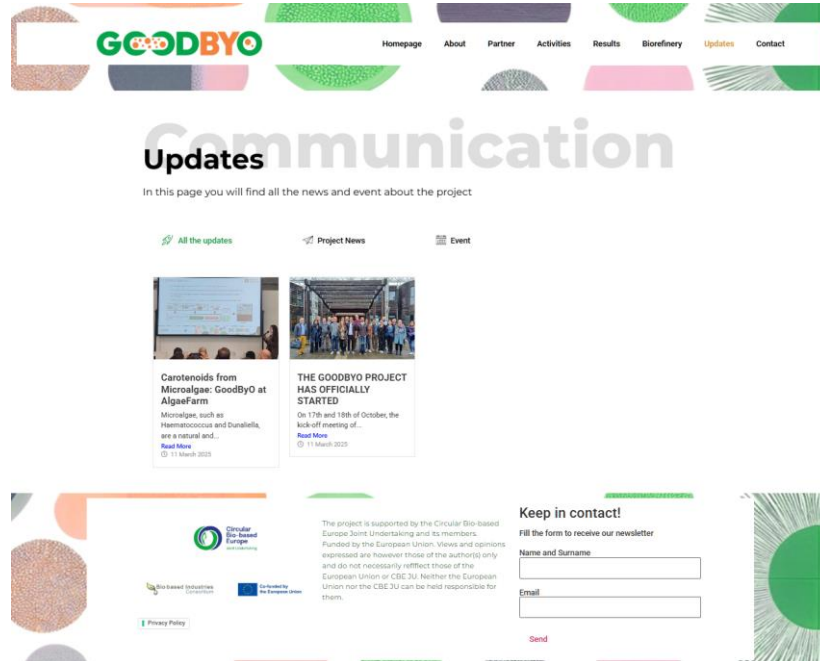
The Biorefinery section page will be built and put online during the development of the project to better detail the model proposed by GoodByo by comparing it with currently popular biorefinery models.

Figure 6. "Biorefinery" page screenshot



## 10 Updates

Figure 7. "Updates" page screenshot



## 11 Contacts

Figure 8. "Contact" page screenshot

