



ResC4EU
RESILIENT SUPPLY CHAINS FOR EUROPE

Interactive Demonstrator

... for Climate Neutrality



Try it now



<https://resc4eu.greentwin.app/demonstrator-3>

Overview

This demonstrator allows users to explore how different sourcing strategies, manufacturing locations, and transportation modes for carbon fiber bicycle frames affect their environmental footprint measured as Global Warming Potential (GWP). Users can compare four alternative supply chain scenarios, each combining different fiber sources (Chinese vs. German vs. Japanese), material processing approaches (virgin vs. recycled), and production locations, against a baseline reference scenario. By visualising complete supply chain networks and breaking down production and transport emissions separately, users can understand the trade-offs between material sourcing (virgin vs. recycled), transportation modes (sea vs. road), and manufacturing locations, supporting informed decisions about sustainable supply chain design.

The demonstrator is publicly accessible via the ResC4EU platform:
<https://resc4eu.greentwin.app/demonstrator-3>

Opportunities

Compare Environmental Impacts

Test five different supply chain scenario configurations and see how material sourcing, manufacturing location, and transportation choices affect carbon footprint.

Understand Trade-Offs

Discover the balance between using virgin vs. recycled materials, sea vs. road transport, and local vs. distant production facilities on overall sustainability.

Make Informed Decisions

Visualise complete supply chains and their emissions breakdown to identify the most environmentally efficient approach for carbon fiber bicycle frame production.

How It Works

The demonstrator guides users through an interactive workflow:

Step 1 - Select a Scenario from supply chain scenario configurations (Scenarios 1-5).

Step 2 - View the Comparison to see the GWP difference between your selected scenario and the baseline reference scenario.

Step 3 - Explore the Map by opening "Map View" to visualise the supply chain network and routes.

Step 4 - Analyse the Details using "Analysis" to see production and transport emissions broken down by stage, or "GWP View" to compare production vs. transport impact directly.

About the ResC4EU Project

The ResC4EU project aims to support EU businesses, especially small and medium sized enterprises (SMEs), to become more resilient and sustainable and be able to quickly adapt to supply chain disruptions such as experienced during COVID-19 crisis, geopolitical tensions or disasters by adopting advanced technologies. ResC4EU will provide an open space for collaboration, develop and provide models and tools that can assist SMEs in detecting and anticipating disruptions in their supply chains, and offering SMEs tailored support and training programmes as part of the ResC4EU Net-Zero Industry Academies. Further, manufacturing SMEs in need of implementing advanced technologies will be brought together with tech-savvy SMEs providing innovative solutions.

For more details: <https://cordis.europa.eu/project/id/101137643/results>



**Funded by
the European Union**



Demonstrator Owner

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