The Carbon Tracking Model

To optimize the integration of FPBO into FCC processes, REFOLUTION has developed an advanced digital carbon tracking model.

How does it work?

- Uses real-time experimental data and advanced analytical tools
- Applies innovative methodologies to track renewable carbon
- Enables accurate monitoring and prediction of carbon behavior during processing

Funded by the European Union

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Project partners

SINTEF, VTT, GRACE, Deutsches Zentrum für Luft- und Raumfahrt German Aerospace Center (DLR), cnrs, btg biomass technology group, btg bioliquids, btg-neXt advanced pyrolysis biofuel, etaflorence renewableenergies, university of groningen, OMV Forward for Good, Universität Rostock Traditio et Innovatio, moeve, NESTE

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REFOLUTION Project

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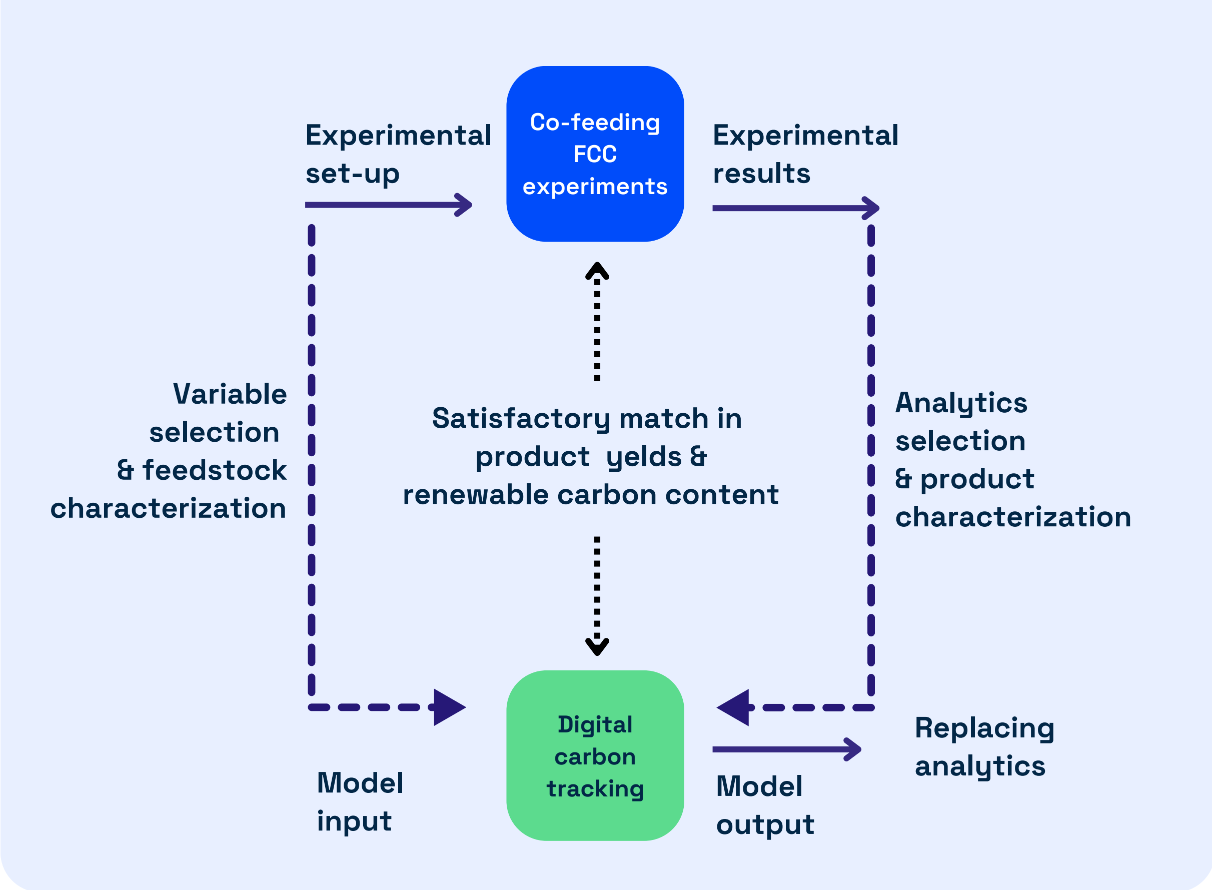
REFOLUTION

Enable refinery integration through transparent and traceable carbon accounting



BENEFITS AND IMPACTS

Operational Efficiency

Improves resource use and boosts product yields.

Sustainability

Integrating renewable feedstocks, contributing to emissions reduction.

Cost-Effectiveness

Replaces traditional, resource-intensive analytical methods.

Industrial Relevance

Designed to be scalable and easily implementable in existing refineries.

NEXT STEPS

REFOLUTION will advance the integration of the bio-kerosene fraction into SAF production pathways.

The next phase of work will include:

- Detailed characterization of the bio-kerosene fraction obtained from FCC co-processing.
- Experimental upgrading and hydroprocessing trials using refinery-scale equipment.
- Evaluation of compatibility with existing SAF production routes (e.g., HEFA, co-hydroprocessing).
- Assessment of the final product's compliance with international SAF certification standards.
- Analysis of process synergies and optimization strategies for blending with fossil or other biogenic streams.

These efforts aim to accelerate the industrial validation of FCC-derived bio-kerosene as a viable SAF feedstock.