



Transporting Plastic Feedstock for Chemical Recycling

Intermodal Solutions

OMV is a global **energy and chemicals group**. We aim to become a **leading supplier of sustainable fuels, chemicals, and materials by 2030**.

Sustainability and circular economy solutions are at the core of our strategy. Our goal is to be **climate neutral by 2050** at the latest.

39

billion EUR
in sales

21k

Employees



One of the largest
industrial companies
in Austria



Become an integrated sustainable chemicals, fuels and energy company with a focus on circular economy solutions.

Net zero
by 2050

in Scope 1, 2 and 3

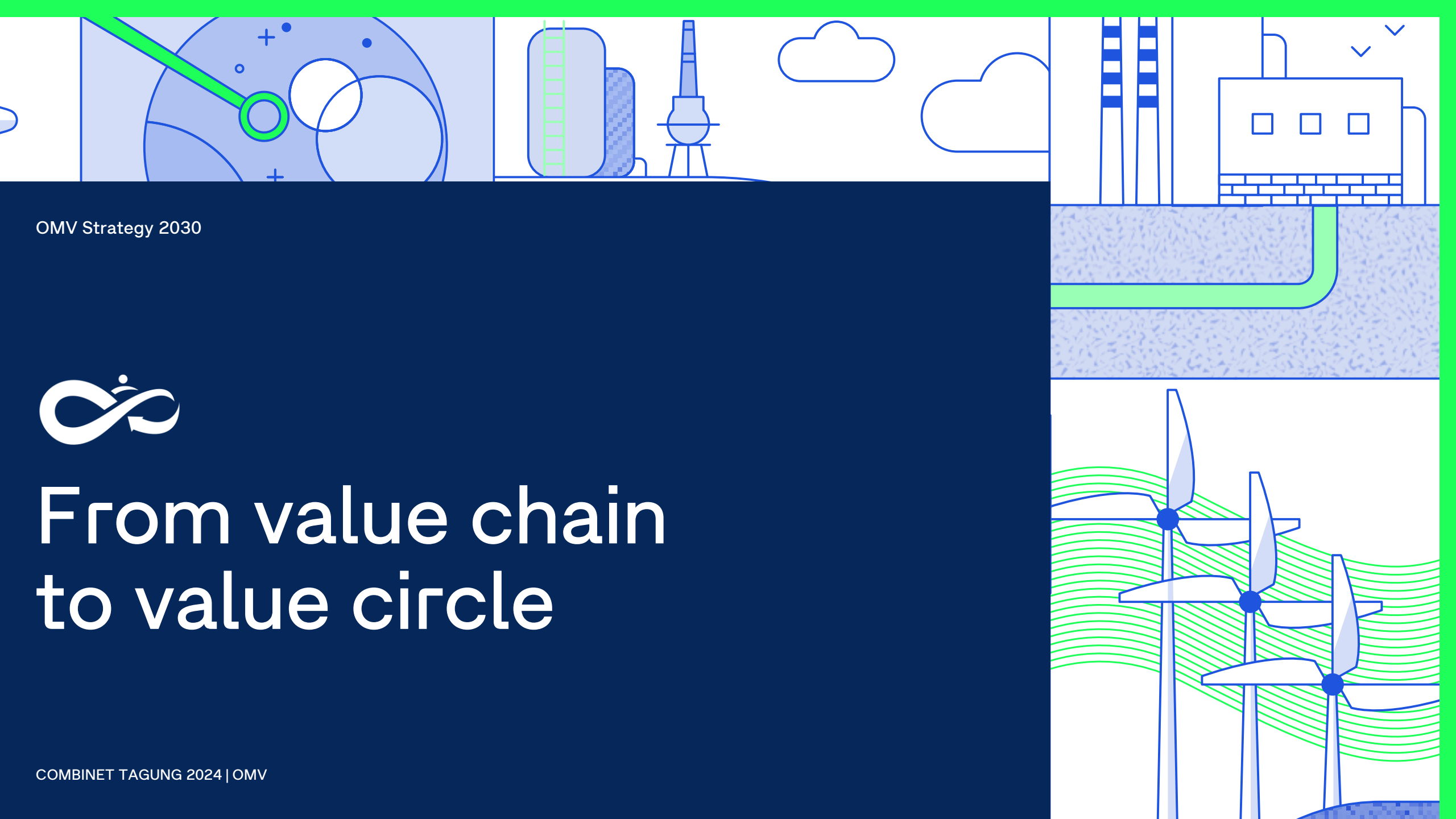


OMV Strategy 2030



From value chain to value circle

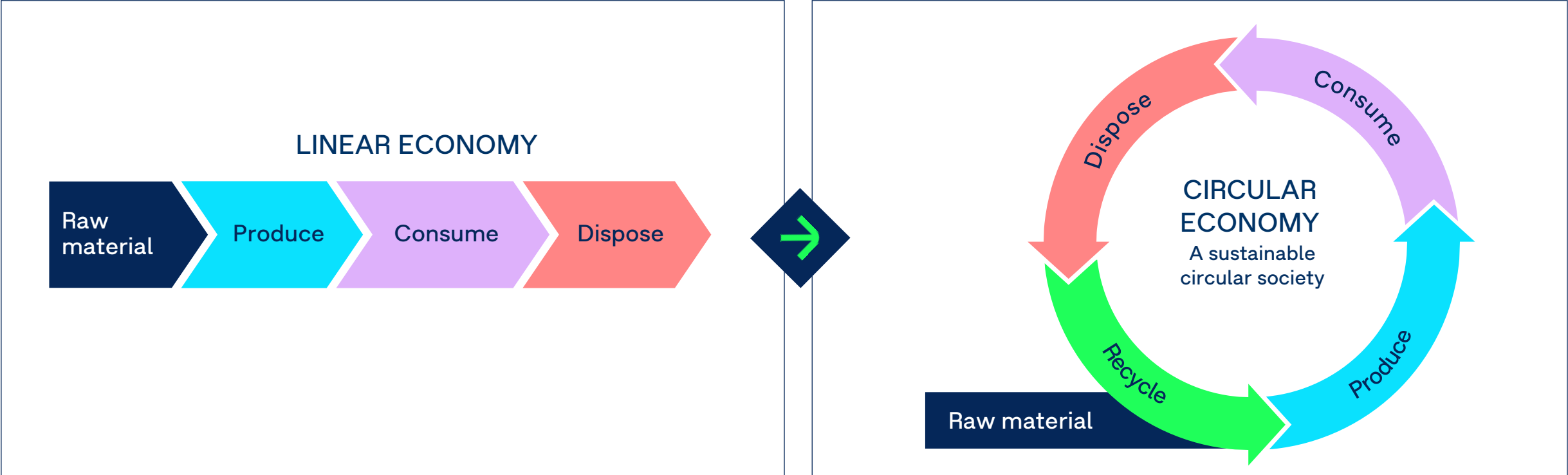
COMBINET TAGUNG 2024 | OMV



Fundamental shift from a linear to a circular society



OMV Strategy 2030



ReOil®

Chemical Recycling at OMV

The pioneering journey of OMV's chemical recycling and its unique experience will enable the global scaling of the technology



USPs of OMV's ReOil® technology enables a circular economy

- >30.000 cracking hours since 2019
- Unique position due to in-house development, OMV proprietary technology
- ISCC PLUS certified
- Unrivalled scalability to industrial size
- Experience in post-treatment, refinery/cracker integration and operation of large-scale plants
- Full project lifecycle support through Wood collaboration



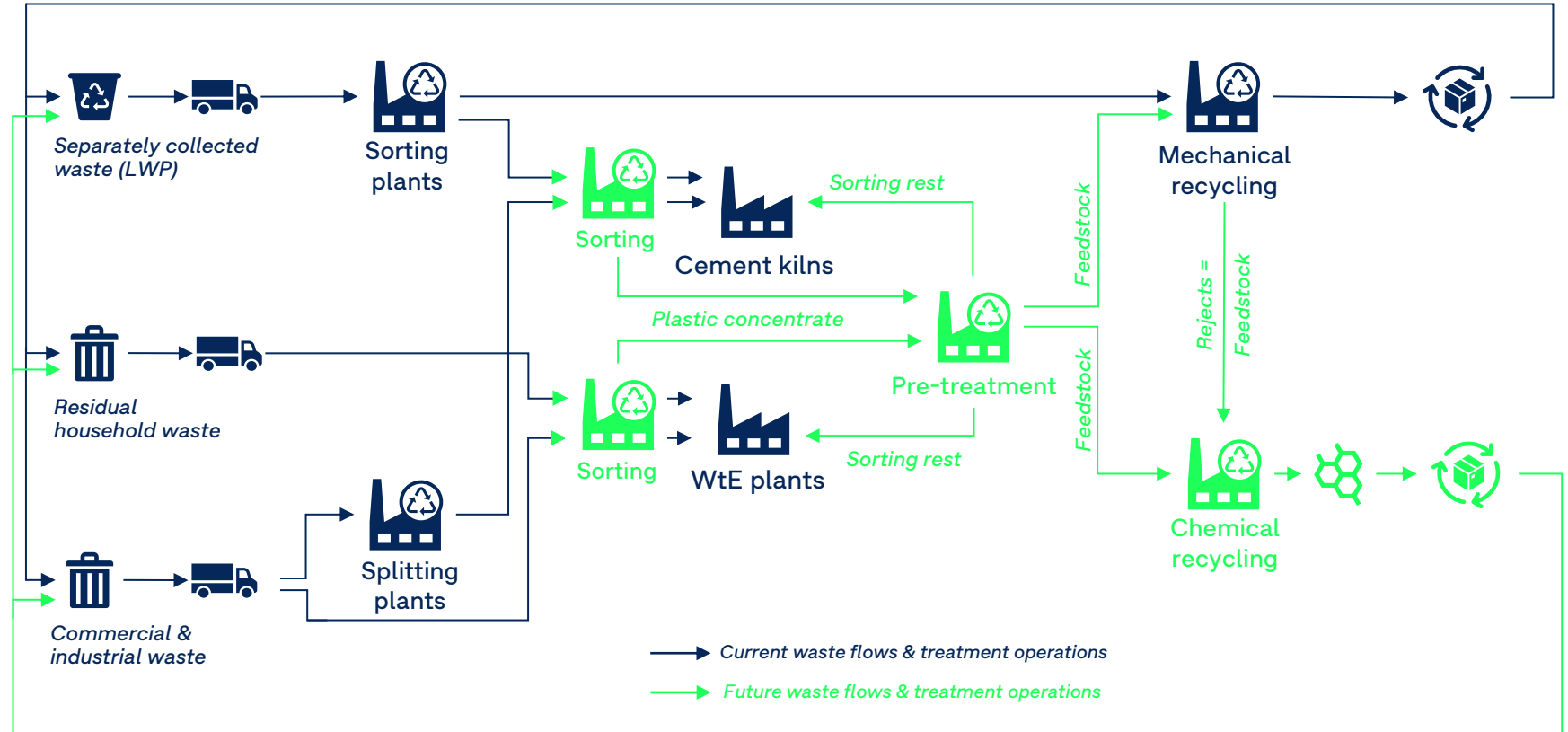


ReOil® addresses plastic waste streams which are unsuitable for mechanical recycling & currently go into incineration

Chemical recycling addresses plastic-rich waste streams which are not suitable for mechanical recycling

- Sorting rests generated during conventional LWP sorting
- Plastic rich waste fractions which can be extracted from residual waste before incineration
- Plastic-rich commercial and industrial waste fractions

These fractions need to be further sorted and cleaned to meet specifications, and OMV is investing in dedicated pre-treatment plants for the production of ReOil® feedstock



OMV and Interzero establish joint venture to build and operate Europe's largest sorting facility for chemical recycling



Construction and operation of innovative, **fully automatic, sorting plant** with capacity of up to 260,000 tonnes per year in Walldürn, Germany.



The sorting facility will be the **first of its kind** to produce feedstock for OMV's chemical recycling on a large industrial scale.



The input for the sorting plant essentially involves **mixed plastics** that have **not been recyclable until now**, especially those collected separately from the yellow bag and the yellow bin recycling system.



Production start of the new plant is expected to take place in **2026**.

Quo vadis, Logistics?

“Classic” OMV Logistics



- Outbound focused
- Liquid bulk material
- Transport of hazardous goods (ADR)
- Unimodal

ReOil® OMV Logistics



- Inbound logistics for a 24/7 operations chemical recycling plant
- Dry cargo
- Non-ADR
- Transport of waste
- Intermodal approach

Logistics Challenges and Requirements for the ReOil® Project



01 Legal requirements for transports of waste within AT

02 Legal requirements for transports of waste within EU

03 ISCC+ certification of ReOil® feedstock



04 High volumes and long distances from various sources

05 Light material weight / low density

06 Sources without a direct connection to the railways

07 Defined loading and unloading requirements



Selecting the right Equipment for Intermodal Logistics

1



2



3

PARAMETERS FOR EQUIPMENT SELECTION

- General system suitability, general reasons for exclusion
- Loading volume, load capacity
- Loading and unloading options
- Specially required additional equipment and/or specific infrastructure for transport or loading and unloading
- Buffering options, storage options
- Equipment availability
- Plant operations

SYSTEM SELECTION - GENERAL VARIANTS

- CT systems with swap bodies and containers
- CT systems with craneable trailers
- CT system with INNOFREGHT containers
- MOBILER (RCA) system for handling without terminal
- Specialised CT systems for non-craneable trailers
- WASCOSA 'Flex Freight System' and comparable systems for separating wagons and superstructures

IDENTIFIED EQUIPMENT ALTERNATIVES

- 30 ft container side-loading, tilttable, stackable
- 40 ft container side-loadable, tilttable, stackable
- 45 ft container rear-loadable only, tilttable, stackable
- Moving floor trailers craneable, rear-loadable only, self-unloading, not stackable

Optimizing Intermodal Logistics for Success in the ReOil® Project



Road to Success

- 01 Building up a resilient logistics chain
- 02 Strategic sourcing and long-term partnerships with logistics providers new to OMV
- 03 Defining requirements along the intermodal supply chains
- 04 Using simulation software to plan the future supply chain
- 05 Getting transparency in intermodal transport chains by using existing and new IT solutions





OMV



Thank you!



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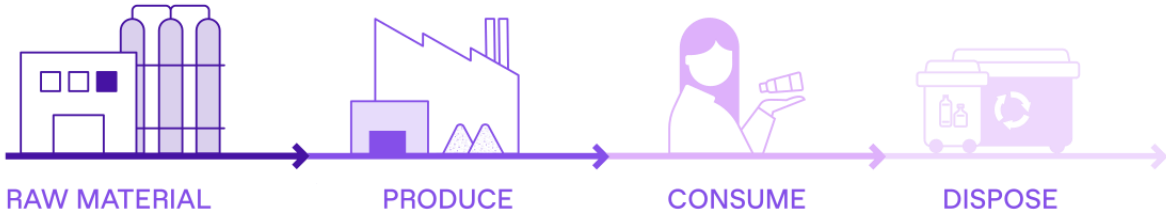
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Fundamental shift from a linear to a circular society



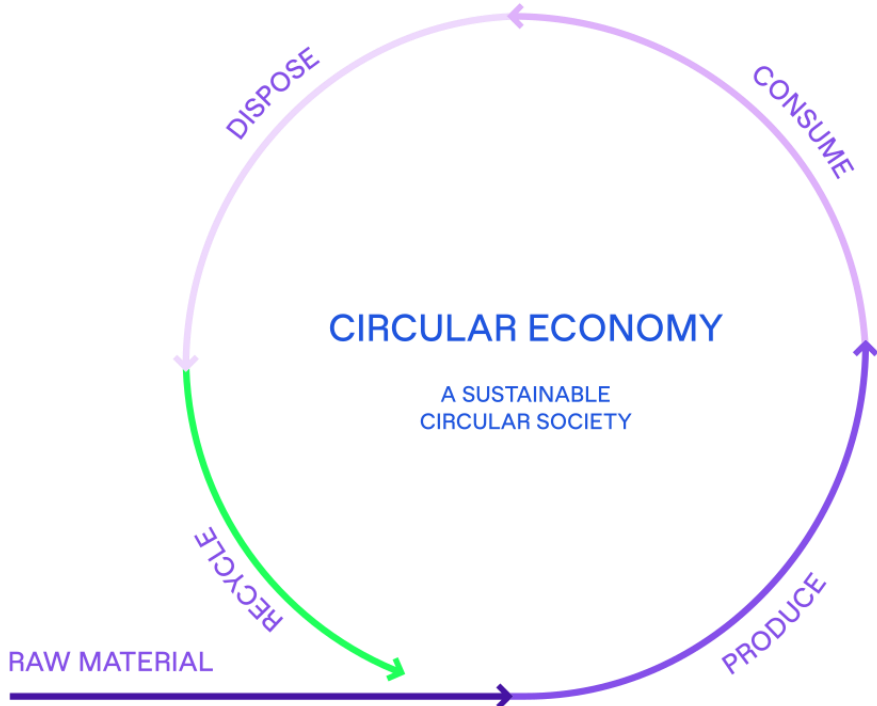
OMV Strategy 2030

LINEAR ECONOMY



CIRCULAR ECONOMY

A SUSTAINABLE
CIRCULAR SOCIETY



Policy developments will necessitate & enable the large-scale roll-out of chemical recycling in Europe by 2030



WASTE FRAMEWORK DIRECTIVE

Recycling rates

Sets targets for the minimum share of packaging and municipal waste which must be recycled (i.e., enter the final stage of recycling operations)



PACKAGING & PACKAGING WASTE REGULATION / SINGLE USE PLASTIC DIRECTIVE

Recycled content

Set targets for the minimum share of recycled plastic which must be contained in packaging placed on the market



SUPPORTING MEASURES

Recognition of **chemical recycling as recycling**

Recognition of **verified mass balance chain of custody** to calculate chemically recycled content

EU recycling targets

- 2025: 50% for plastic packaging¹, 55% for municipal waste
- 2030: 55% for plastic packaging¹, 60% for municipal waste

Future recycled content targets

- 2030: 30% for beverage bottles; 10% for contact sensitive application fields²
- 2040: 25% for contact sensitive application fields²

Recognition & calculation method

- Chemical recycling recognized i.a. in AT & IT; recognition foreseen in Coalition Program 2021-2025 of German Government (outstanding)
- Deal struck by EU institutions in March re: PPWR i.a. recycled content targets for sensitive application fields

¹ from separate collection (LWP)

² excl. PET; sensitive application fields are food contact, animal feed & cosmetics

IMPLICATIONS FOR VALUE CHAIN

- Policy developments will **facilitate the roll-out and industrialization of chemical recycling in Europe**
- Chemical recycling can **complement mechanical recycling and enable the fulfilment of increasing EU recycling targets**
- Chemical recycling can **meet the demand of brand owners and retailers with regard to recycled content in contact sensitive application fields**

Mechanical completion of the ReOil 2000 plant achieved in August; start-up expected still in 2024



Refinery integration

Post-treatment

Depolymerization

Input bunker storage