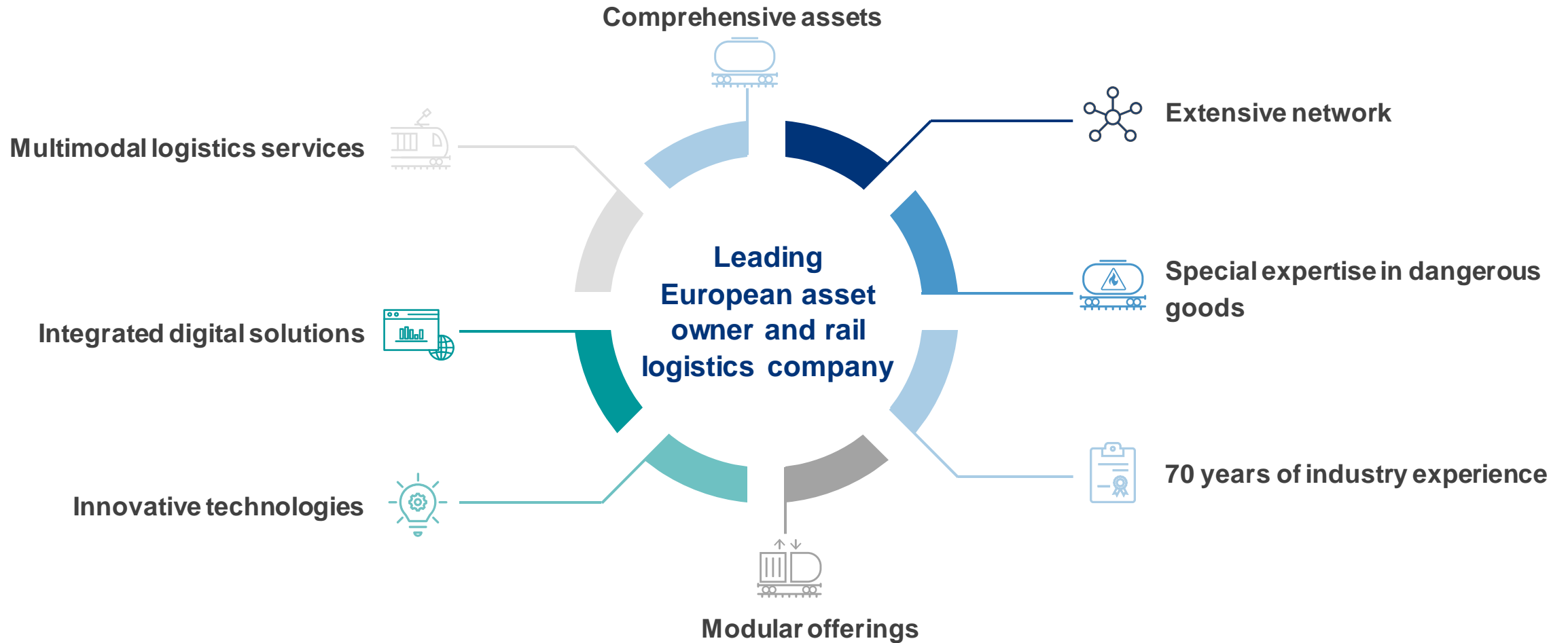


Budapest | November 2023

# VTG New Energies



# VTG at a Glance



# VTG in Figures

Key Figures for 2022

**84,000**

FREIGHT WAGONS



**5,000**

TANK CONTAINERS



**50**

LOCOMOTIVES



**2,100**

EMPLOYEES



**5**

WORKSHOPS



**467**

M EUR  
EBITDA



**1,306**

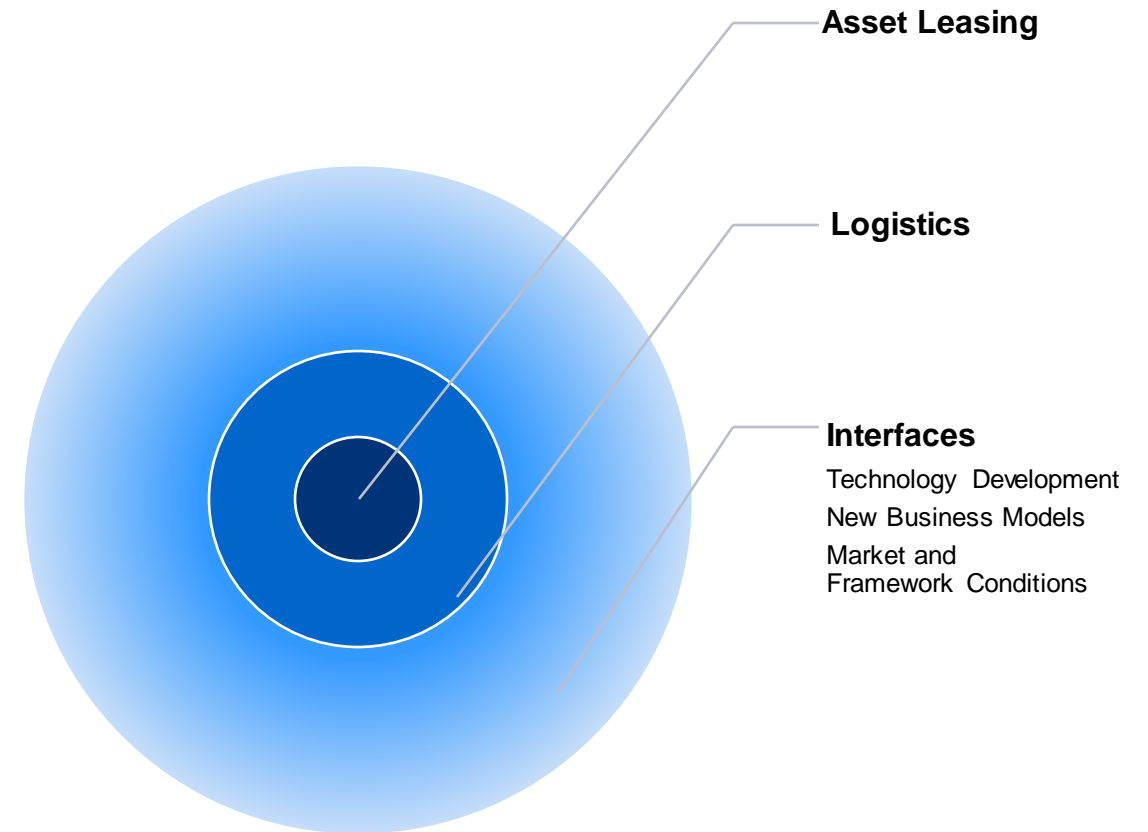
M EUR  
REVENUES



# New Energies @ VTG

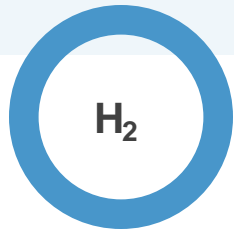
The VTG New Energies strategy aims to provide our customers with the best possible support in the transformation towards sustainable industrial processes.

- **Identify** customer requirements in the new markets.
- **Discuss** challenges and team up to establish fitting framework conditions.
- **Create** new networks of cooperation.
- **Develop** new strategic partnerships with customers and technology providers.
- **Implement** technological innovation for rail transport.



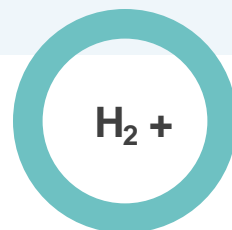
# New Energies @ VTG

“**New Energies** is the term VTG uses to describe all energies not yet transported by rail, as well as products that are already transported by rail but not for the purposes of energy use. This includes liquified natural gas, hydrogen and hydrogen derivatives. Furthermore, the definition includes carbon dioxide captured from industrial processes or energy production and sent for recycling or storage.”



## Hydrogen

- Compressed hydrogen
- Liquified hydrogen
- Liquid organic hydrogen carriers (LOHC)



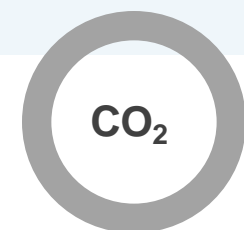
## Hydrogen Derivatives

- Ammonia (NH<sub>3</sub>)
- Methanol (CH<sub>4</sub>O)
- Power to Liquid (PtL)
- Sustainable aviation fuels (SAF)
- ...



## Liquefied Natural Gas

- Fossil liquified natural gas
- Bio liquified natural gas
- Synthetic liquified natural gas



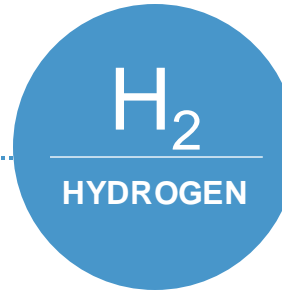
## Carbon Dioxide

- Carbon Dioxide

# New Energies @ VTG

Transport Solutions & More

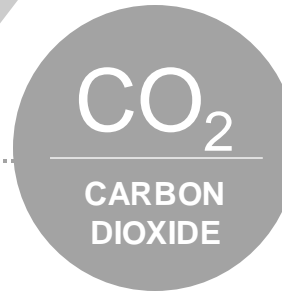
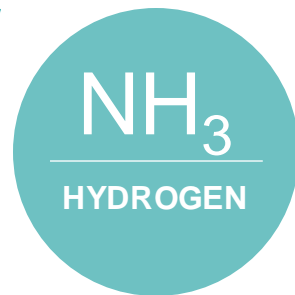
Rail Tank Car & Tank Container



MEGC



Rail Tank Car & Tank Container



Rail Tank Car & Tank Container



# New Energies @ VTG

New Loading Concepts - Driver for higher Efficiency and Safety

## Traditional CO<sub>2</sub> market - (un)loading

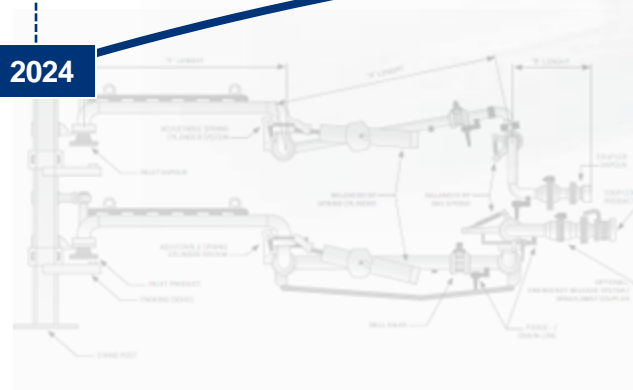
- Manual connection procedure
- Product flow time high
- Manual disconnecting procedure
- FTE intensive

TODAY

## Modernised RTC advanced (un)loading

- Improved product flow time
- Reduced manual (dis)connecting efforts
- Less FTE intensive

2024



## Modernised RTC automated (un)loading

- Constant simultaneously high product flow
- Minimized manual effort for (dis)connecting at RTCs
- 1 FTE for all procedures
- Improved handling security

2026

## Modernised RTC advanced loading



**Thank you for  
your attention!**