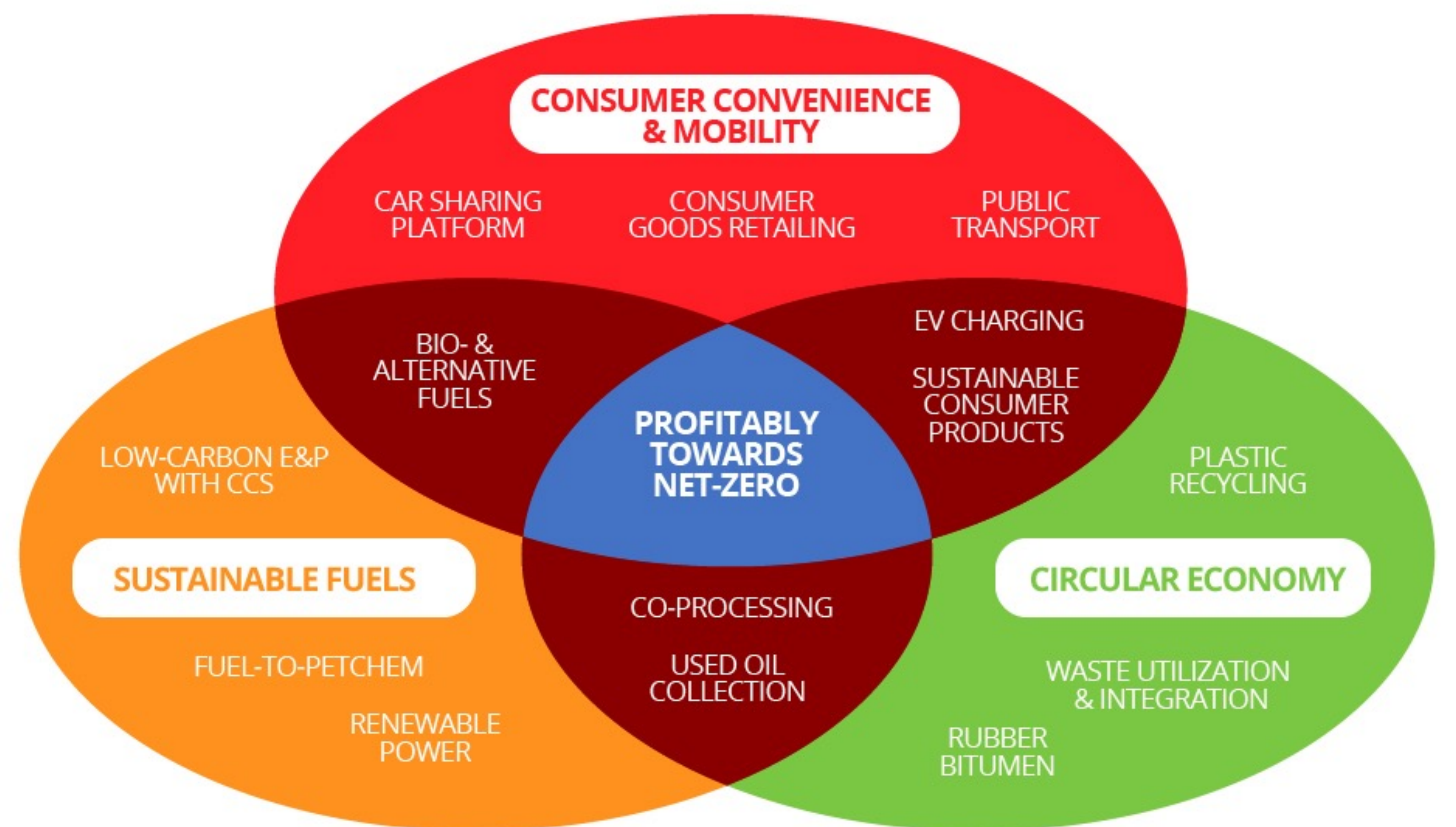


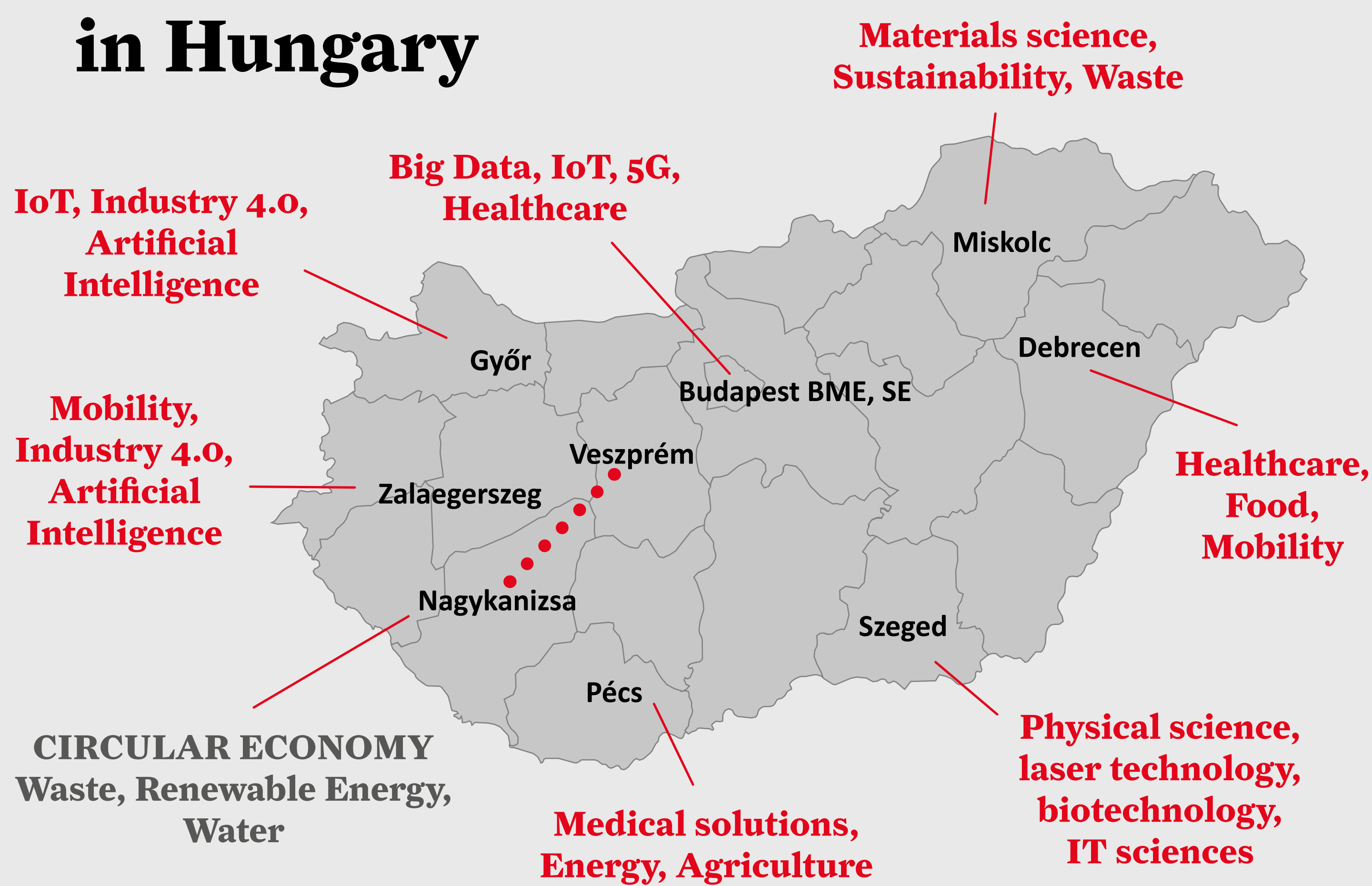
# SHAPE TOMORROW MOL Group Strategy 2030+

## PROFITABLY TOWARDS NET-ZERO

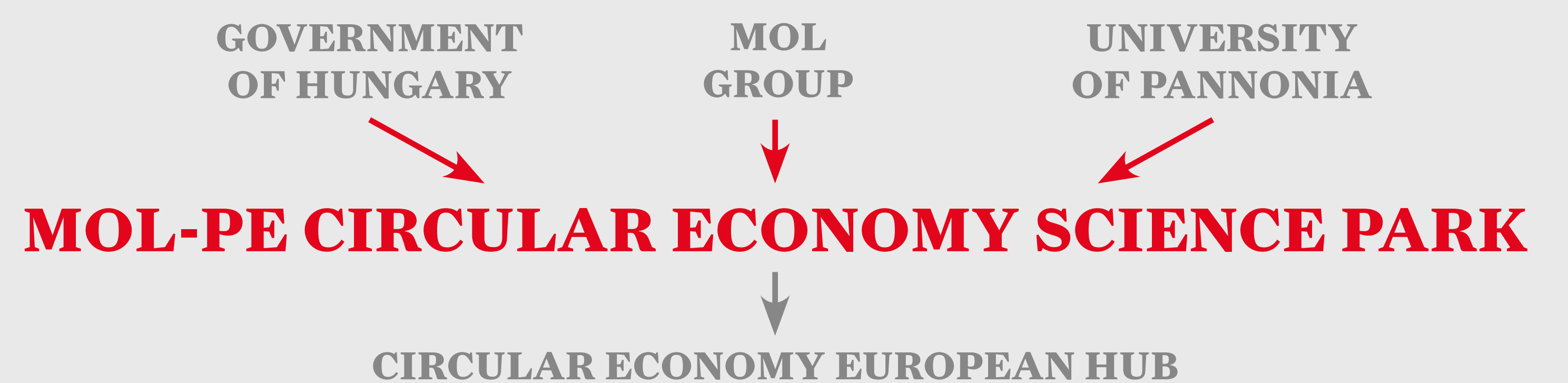
- ▶ **MOL** is the largest producer and user of **HYDROGEN** in HU
- ▶ own H<sub>2</sub> production plants: Danube Refinery (Százhalombatta) and MPK (Tiszaújváros)
- ▶ new H<sub>2</sub> production plants under construction at MPK's new polyol complex
- ▶ all current production is natural gas based (grey) H<sub>2</sub>, using SMR process
- ▶ a significant amount of by-product H<sub>2</sub> is also generated in MPK
- ▶ existing competencies for H<sub>2</sub> treatment, licensing, fire protection



## Science Parks in Hungary



## MOL Group & University of Pannonia to establish a Science and Innovation Park in Nagykanizsa



- ▶ MOL and the University of Pannonia will create a science and innovation park with a focus on the circular economy. The organisation's goal is to set up the European innovation and research center building on the knowledge base of the University of Pannonia, as well as MOL's management insight and professional expertise.
- ▶ Within the framework of the development worth about HUF 30 billion, a world-class research and development infrastructure will be established in Nagykanizsa and Veszprém. According to the plans, new facilities will be built over 18,000 square meters. A research and education center, an incubation center, three explosion-proof laboratory buildings, water technology laboratories and a researchers' apartment house will be built as part of the complex in Nagykanizsa, and further investments will be implemented in Veszprém to support RDI activities.
- ▶ The planned research and development, and utilization projects of MOL-PE Circular Economy Science Park Non-profit Zrt. aim to develop internationally competitive circular technologies and products. The major focus is on circular waste management, sustainable water management and renewable energies, e.g. hydrogen economy and battery recycling.
- ▶ One of the goals of the science and innovation park is to attract innovative companies, startups and spinoffs, facilitating job-creating projects to be created in medium term in the region.
- ▶ The scientific and technological research of the facility supports the implementation of the MOL 2030+ strategy.

## Flagship Projects

<b>#1 CHALLENGE</b> Sustainable chemical industry	<b>#2 CHALLENGE</b> Future of mobility	<b>#3 CHALLENGE</b> Renewable energy, energy security	<b>#4 CHALLENGE</b> Sustainable water management
<b>#1 GASIFICATION</b> WASTE RECYCLING: 1. Sustainable raw materials for chemical industry 2. Low carbon fuels	<b>#2 CIRCULAR LITHIUM ECONOMY</b> Recycling of E-batteries, solar panels and electronic devices (urban mining)	<b>#3 HYDROGEN</b> 1. Hydrogen mobility 2. Industrial H <sub>2</sub> use, production and adaptation to Hydrogen Valleys 3. Seasonal energy storage based on hydrogen	<b>#4 WATER MANAGEMENT</b> 1. Industrial water recycling 2. Microplastics
<b>#5 SUSTAINABLE WASTE MANAGEMENT TEST REGION</b> (Zala County)			

## Hydrogen

<b>#1 Hydrogen mobility</b>	<b>#2 Industrial H<sub>2</sub> use</b>	<b>#3 Seasonal energy storage based on hydrogen, exploiting the opportunities of domestic natural gas infrastructure to establish our regional role</b>
-----------------------------	--	---

