

## MODULE 4

# CHALLENGES IN HYDROGEN LOGISTICS

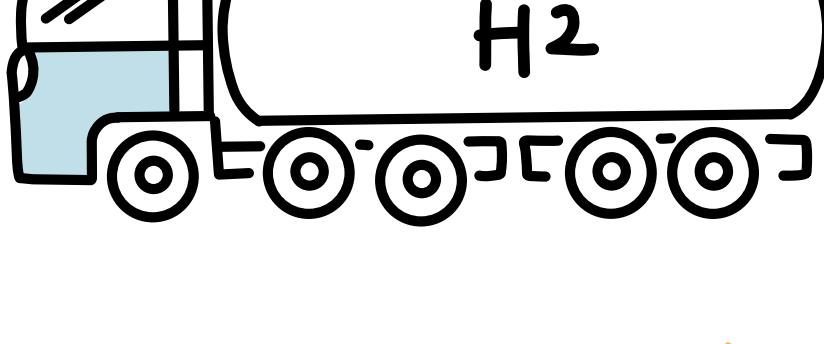
While hydrogen is regarded as essential for decarbonization and the future of energy, its logistics and supply chain management encounter considerable challenges. The successful implementation of hydrogen technologies necessitates overcoming economic, infrastructural, technical, and regulatory obstacles. Below, we delineate the critical issues that must be addressed to fully harness hydrogen's potential.

### Elevated Expenses

The expenses related to the production of green hydrogen, the development of transport and storage infrastructure, and the hydrogen vehicles remain elevated.

### Inadequate Infrastructure

The number of hydrogen refueling stations is limited, and the hydrogen pipeline network remains in its early stages of development.



### Security Threat

Hydrogen is a combustible and explosive gas that necessitates stringent safety protocols at every stage.

### No Regulation

Numerous facets concerning the production, transportation, and utilization of hydrogen currently lack a cohesive and comprehensive legal framework as well as technical standards.

### Storage Challenges

Storing hydrogen presents significant technical challenges, necessitating either very high pressures or extremely low temperatures.