



Green Hydrogen Infrastructure Needs

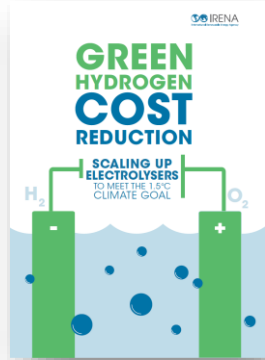
Presentation at “Hydrogen Readiness” Session, Innovation for Cool Earth
Forum 2024



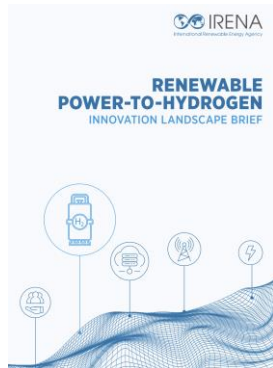
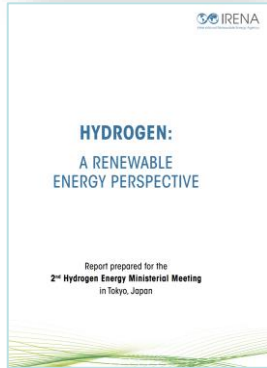
Roland Roesch, Director of IRENA Innovation and Technology Centre

IRENA's recent hydrogen work across the supply chain

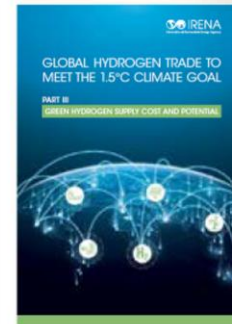
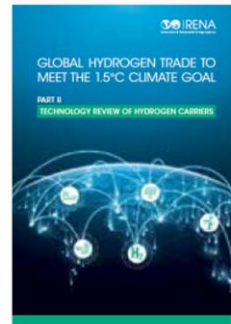
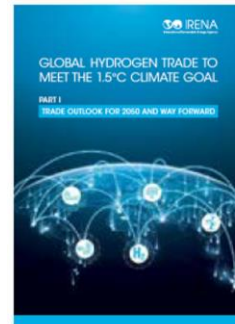
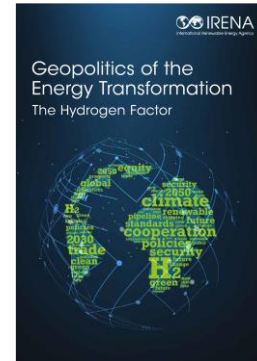
Supply



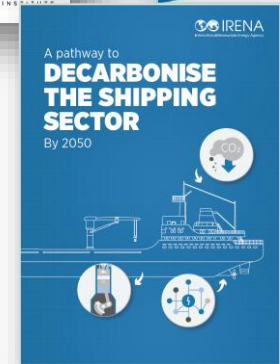
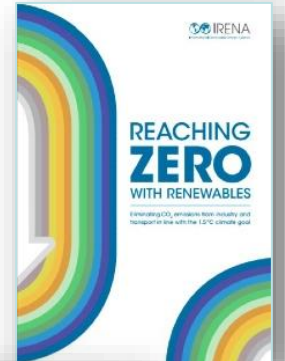
Sector coupling



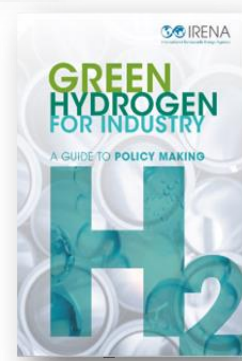
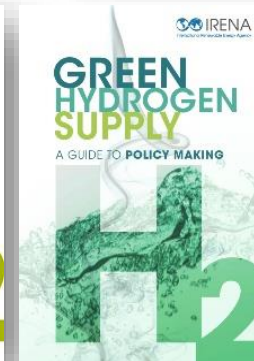
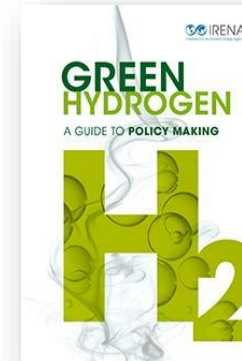
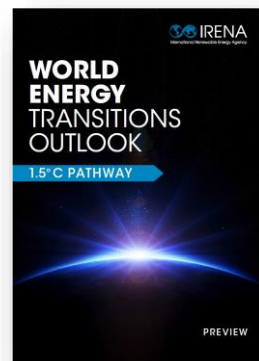
Trade



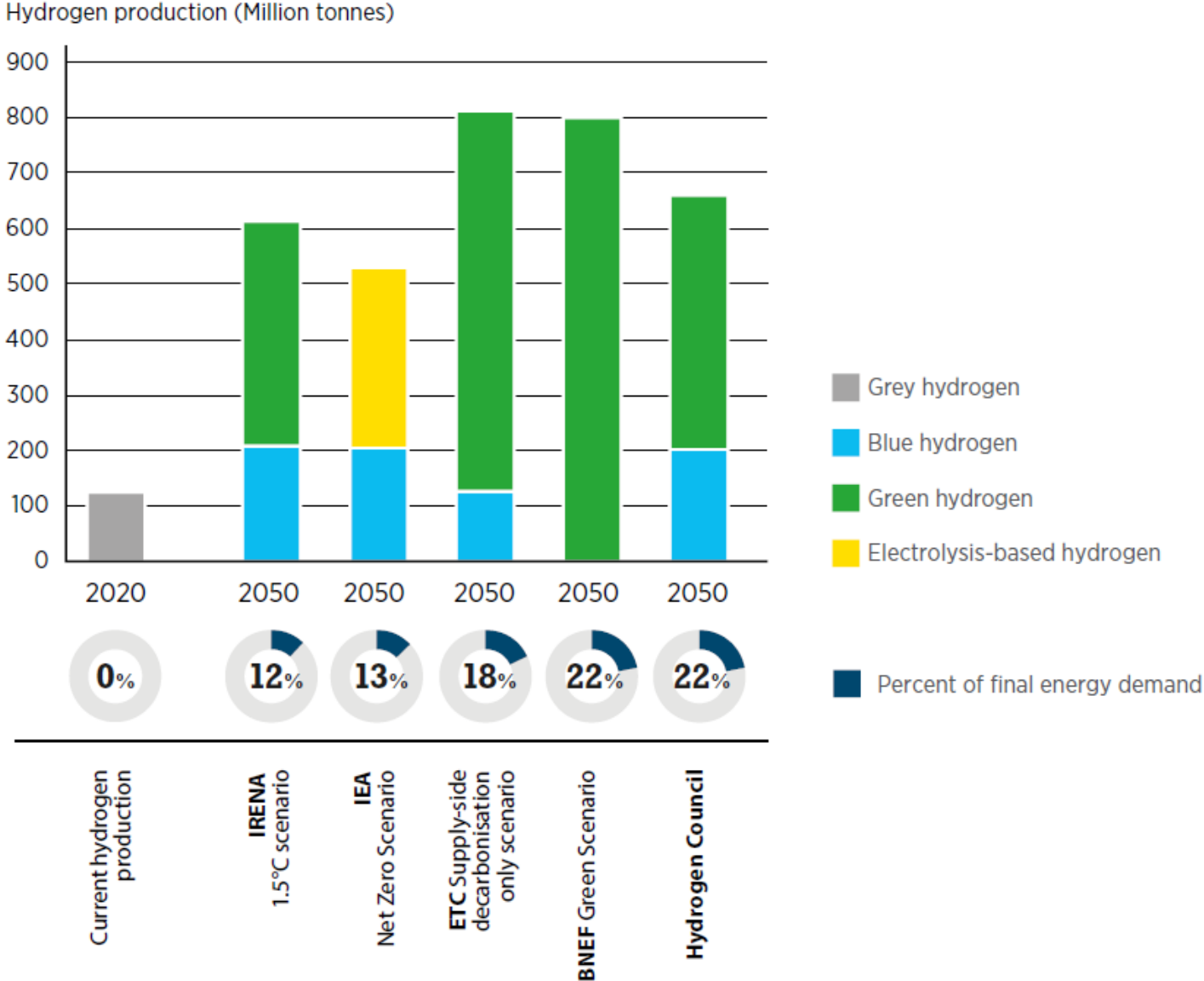
Demand



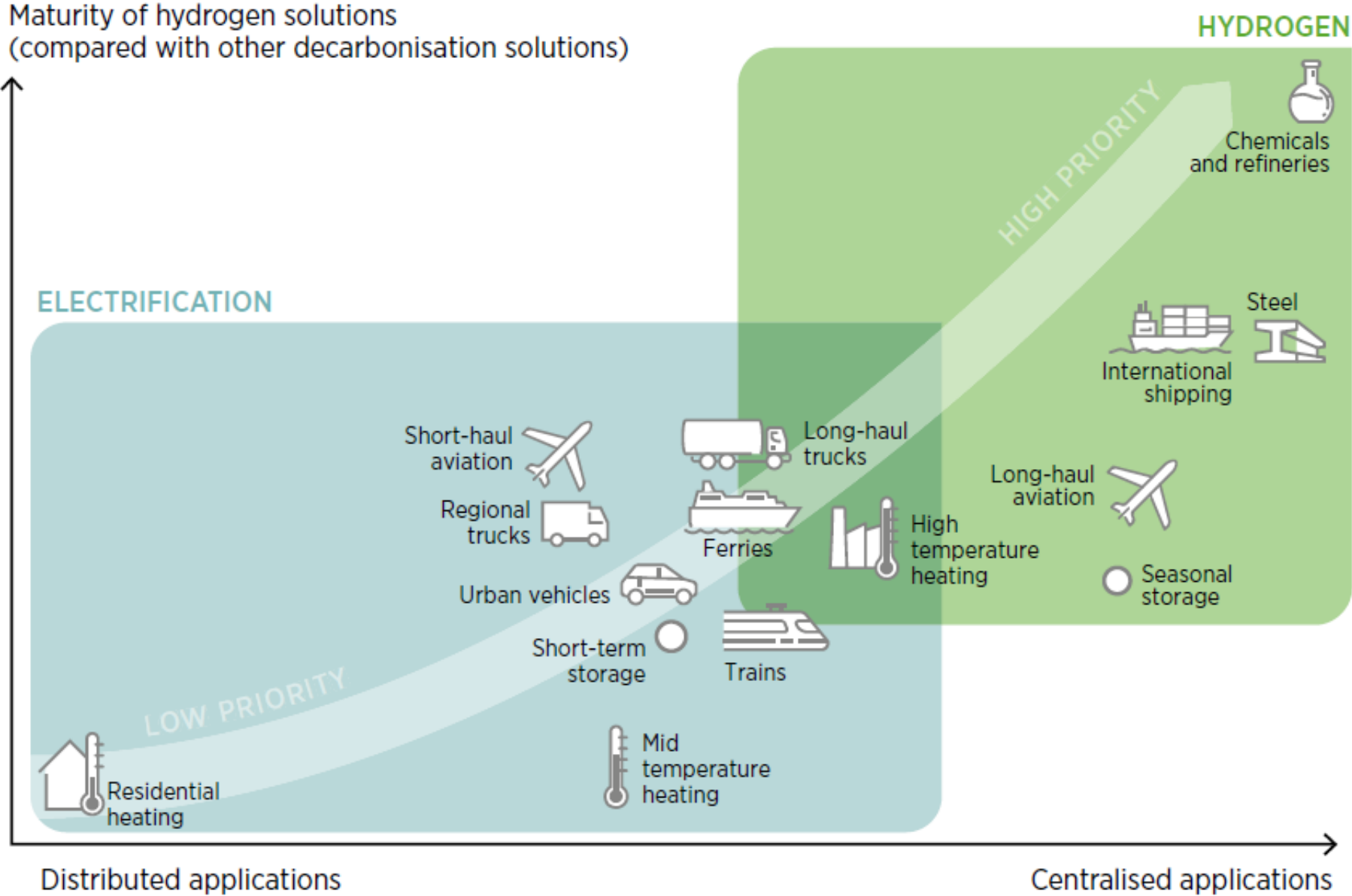
Cross cutting & Innovation Frameworks and Policies



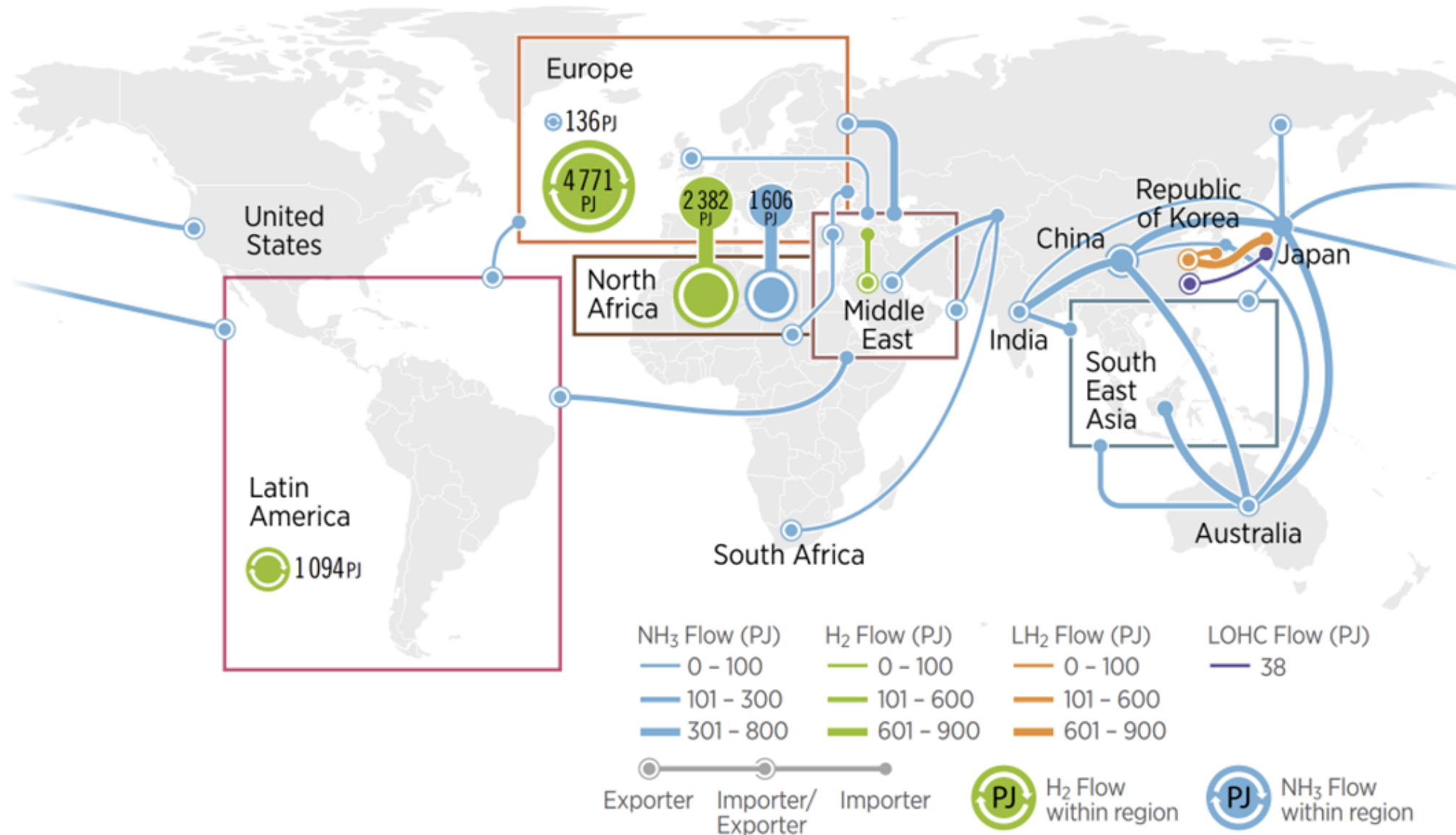
Estimates for global hydrogen demand in 2050



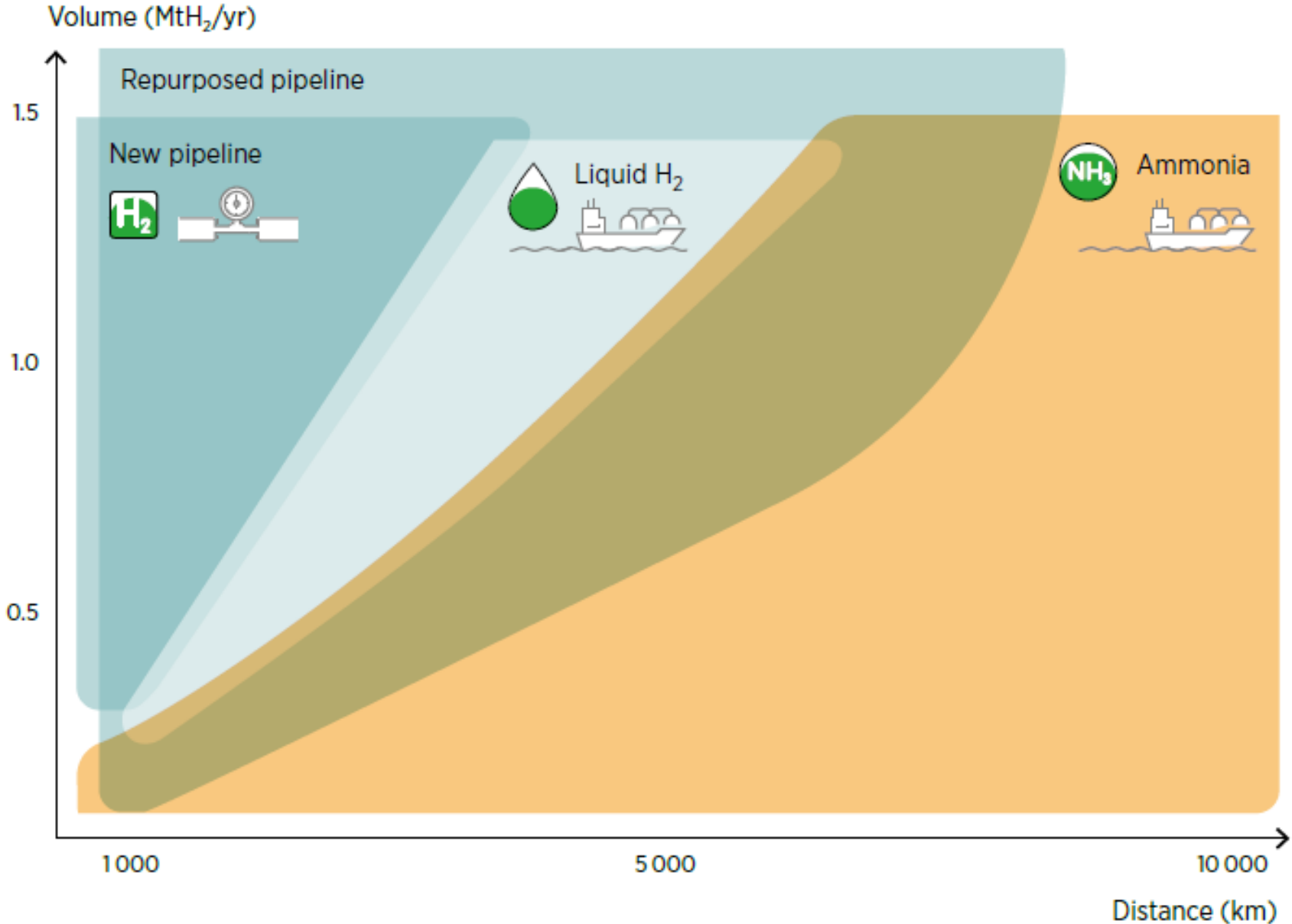
Clean hydrogen policy priorities



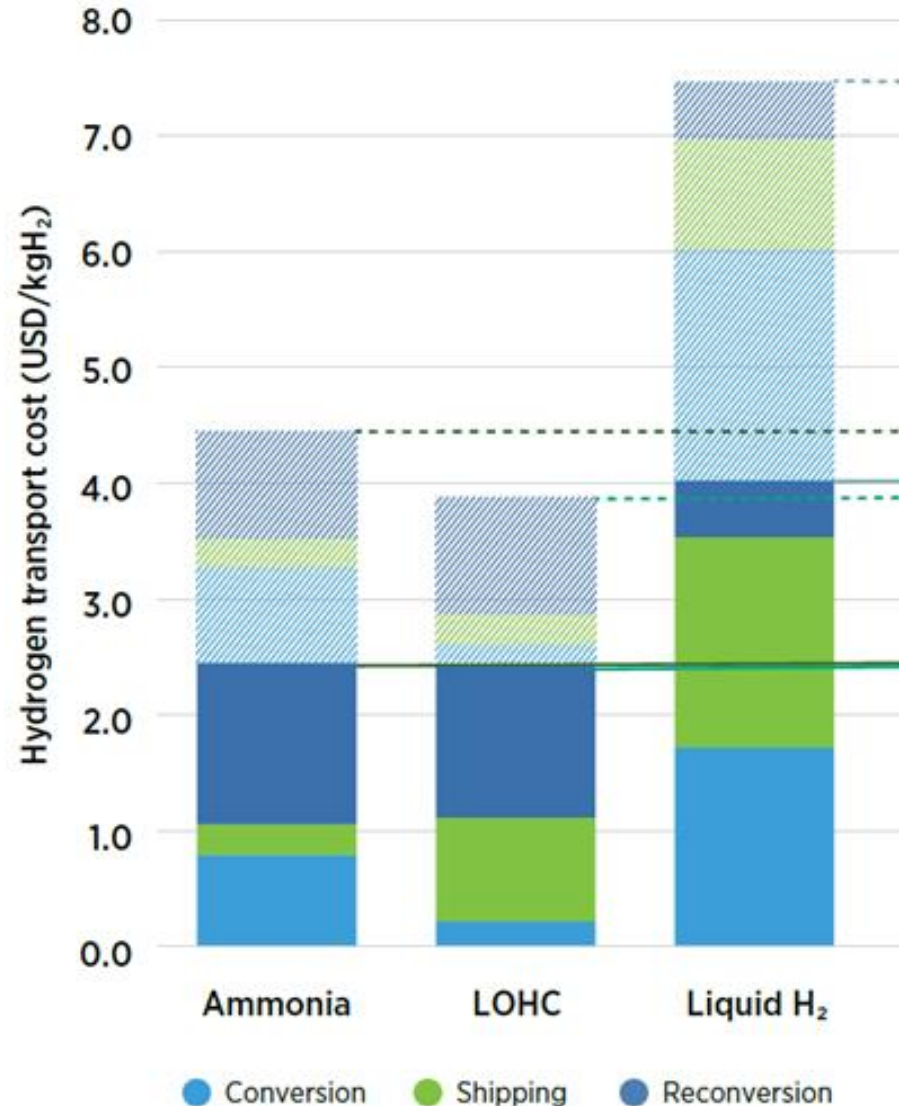
A quarter of the global hydrogen demand would be internationally traded



Cost efficiency of transport options when considering volume and distance

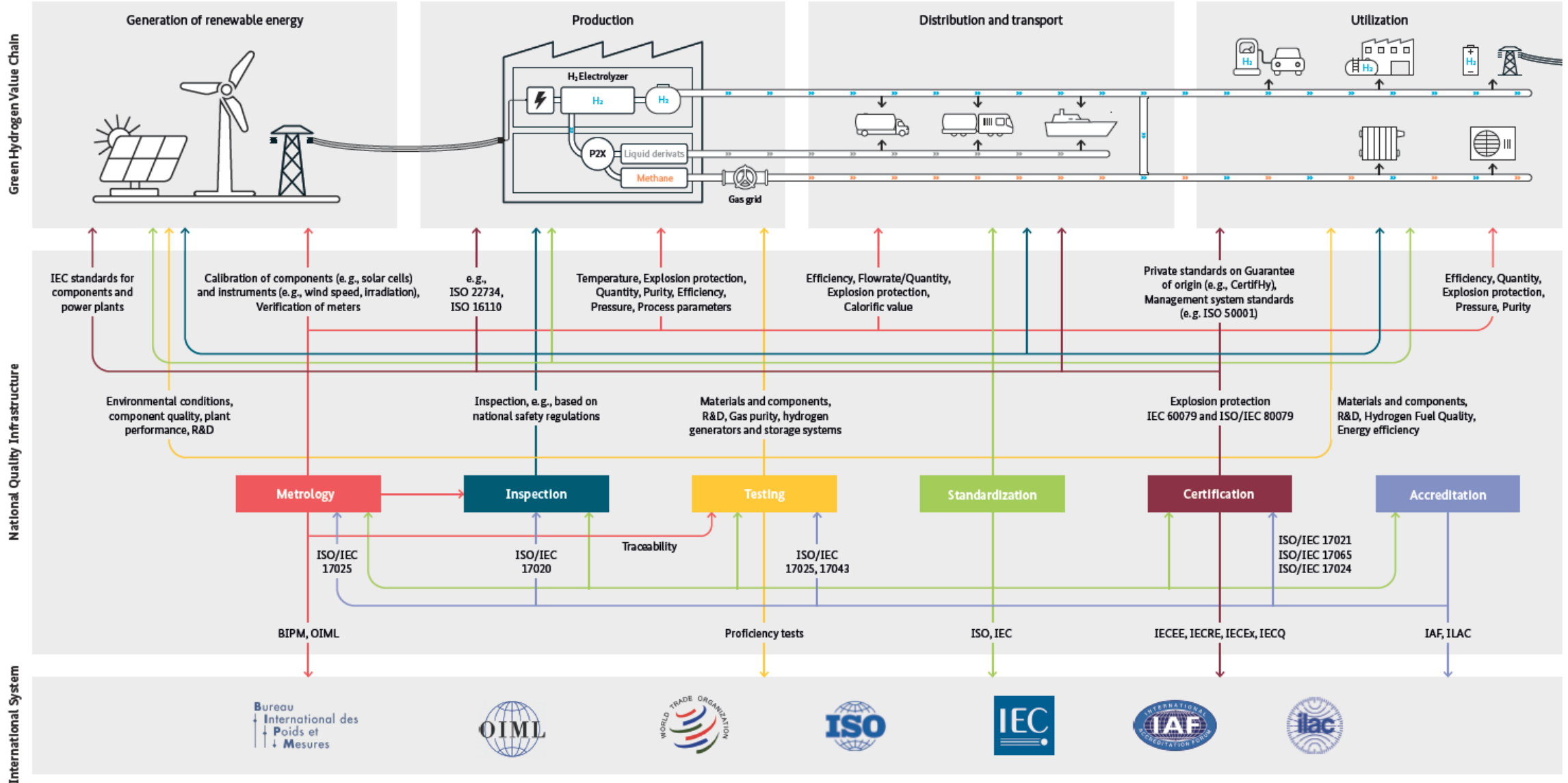


Global hydrogen trade: Comparison of transport pathways

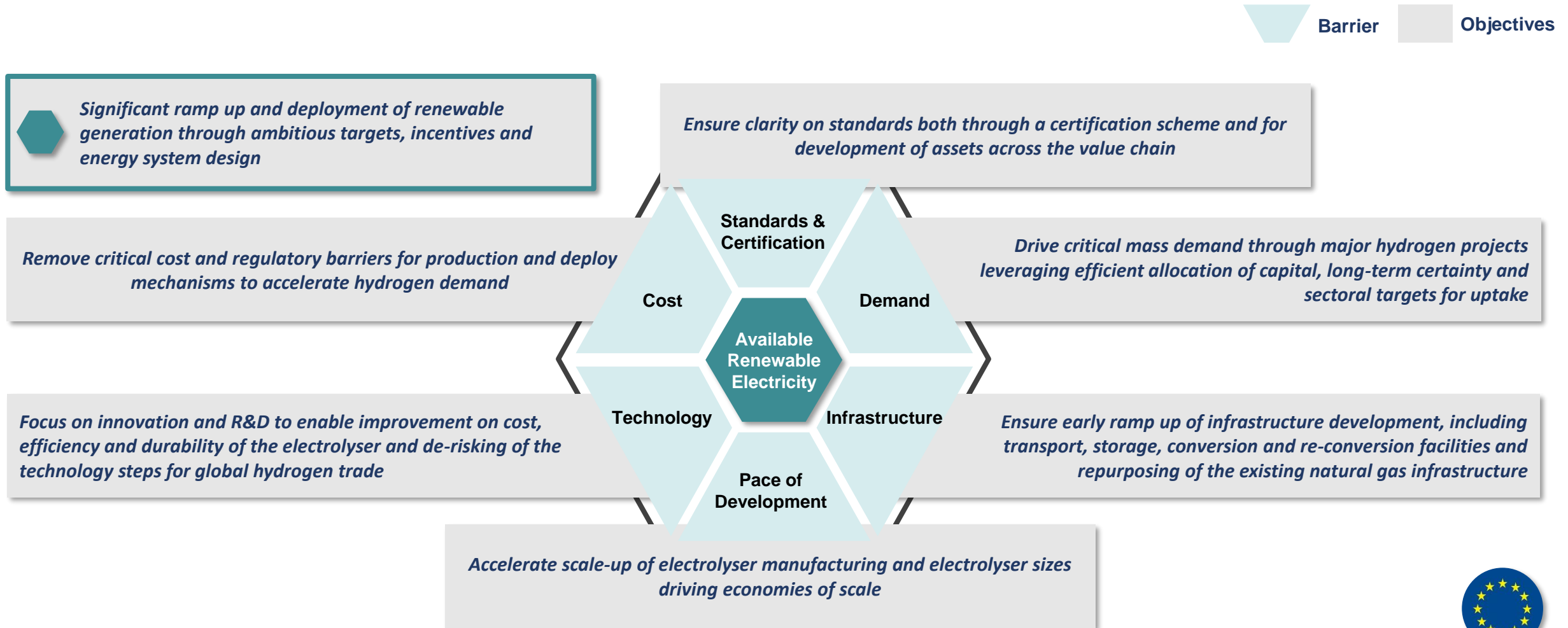


- In overseas trading different carriers including Ammonia, LOHC and Liquid Hydrogen could become viable
- Ammonia is already produced, stored and traded on a large scale
- Over 120 ports have existing ammonia infrastructure
- Ammonia can be used as an industrial feedstock and maritime fuel, and for power generation
- The costs for transporting hydrogen via LOHC are comparatively low and existing infrastructure can possibly be repurposed.

Quality infrastructure is vital across the full value chain. We are working on a global roadmap



Enabling measures to overcome barriers to hydrogen market development



Available renewable electricity is the fundamental enabler to the Green Hydrogen market



THANK YOU