



Natural Resources
Canada

Ressources naturelles
Canada



Canadian Hydrogen Codes and Standards Roadmap



Canada

Background and Purpose

2020



- Released the Hydrogen Strategy for Canada
- Identified codes and standards pillar as critical enabler in hydrogen deployment

2021



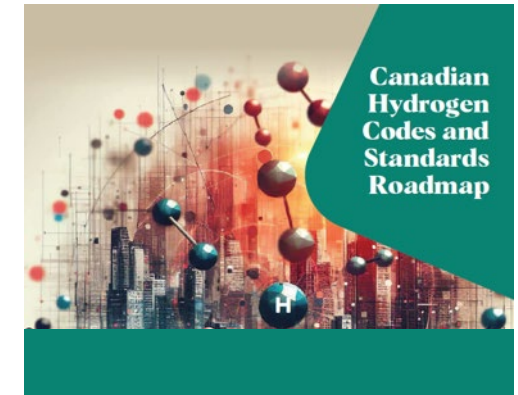
- Established the Codes and Standards Working Group (CSWG)

2022



- Formed 3 task forces (production, delivery & storage, end-use)
- Conducted gap analysis
- Engaged members in prioritization

2025



- Published the Canadian Hydrogen Codes and Standards Roadmap

Report Overview

- All accredited standards development organizations were invited to participate
- Highlights:
 - **Sections 1 and 2:** Information on why and how this Roadmap was developed
 - **Section 3:** Detailed and technical information including descriptions of standards gaps for hydrogen technologies and processes
 - **Section 4:** Summary of key results
 - **Section 5:** Call to action for decision-makers and stakeholders
- Published in January 2025



Hydrogen Value Chain

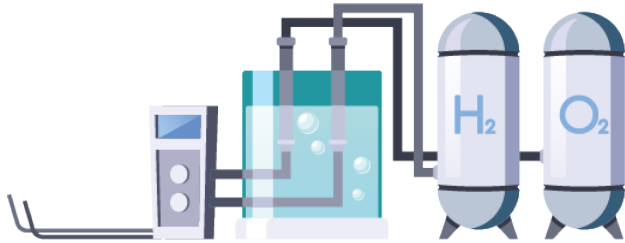
Production



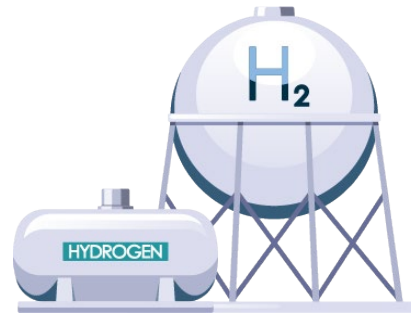
Delivery & Storage



End-Use



- Carbon Intensity
- Electrolysis
- Reforming
- Other Emerging Technologies



- H₂ Carriers, Storage, Liquefaction at Production Site
- H₂ Gas/Liquid Delivery
- H₂ Storage, Conversion, Vapourization at End-Use Site

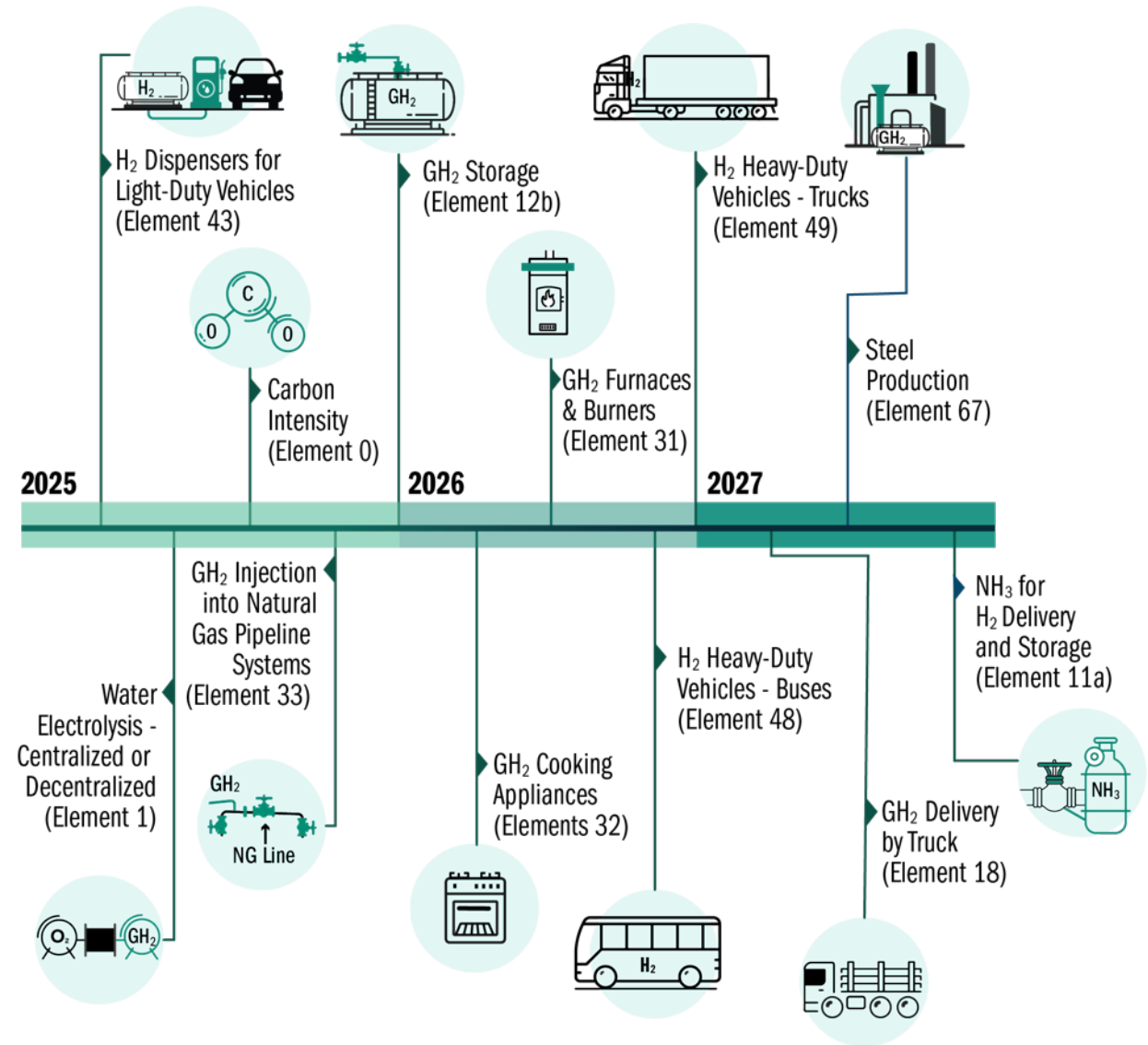


- Power Production
- H₂ Gas-Burning Appliances
- Natural Gas-Hydrogen (NG-H₂) Blending, Burning Appliances, Power Production, and Export
- Vehicles Fueled by H₂, NG-H₂ Blends, or Diesel-H₂ Blends
- H₂ Dispensing
- Mining Operations and Industrial Use
- Items Common to All Applications and Common Installation Items
- Oil and Gas

Gap Results & Timelines for Action

Short-term

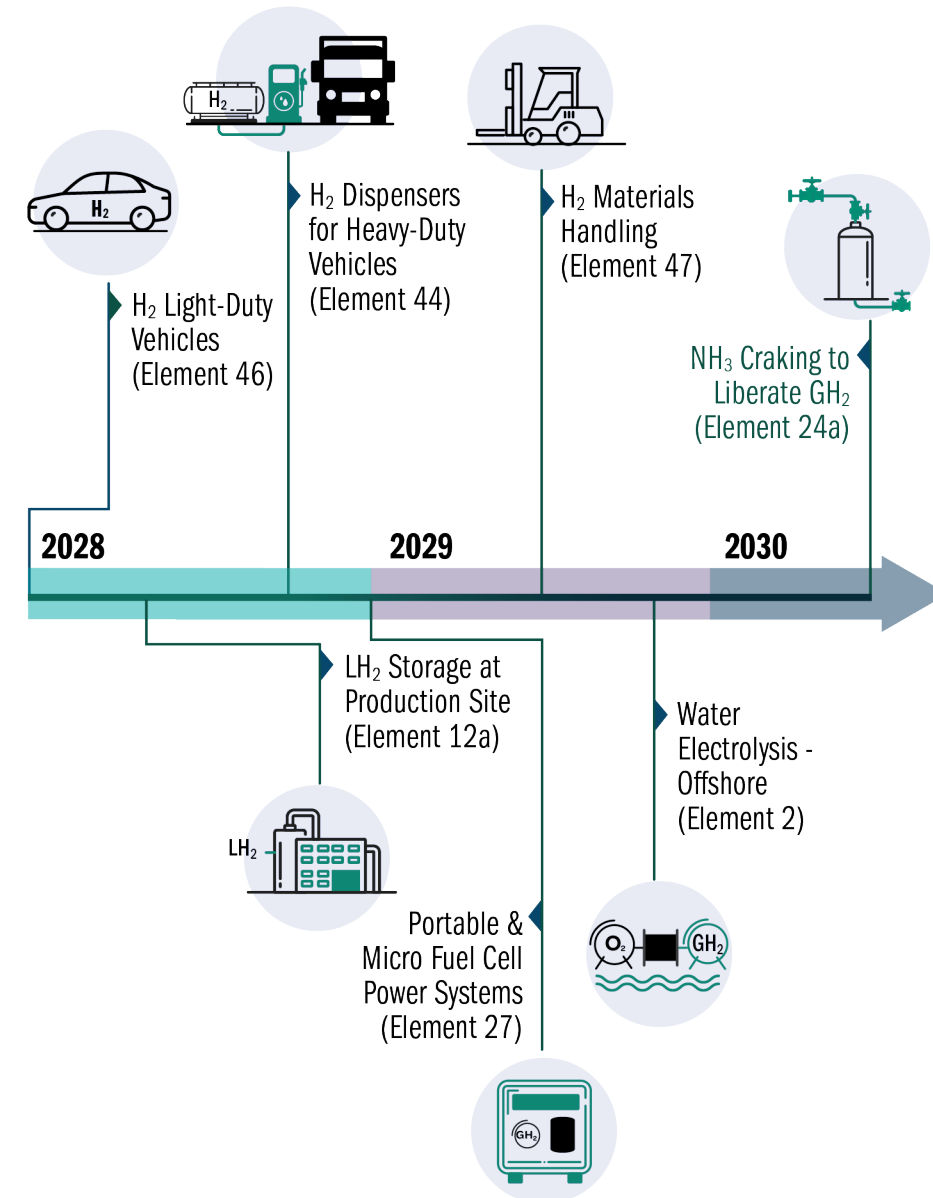
- ✓ Address within 3 years
- ✓ High priority, essential



Gap Results & Timelines for Action

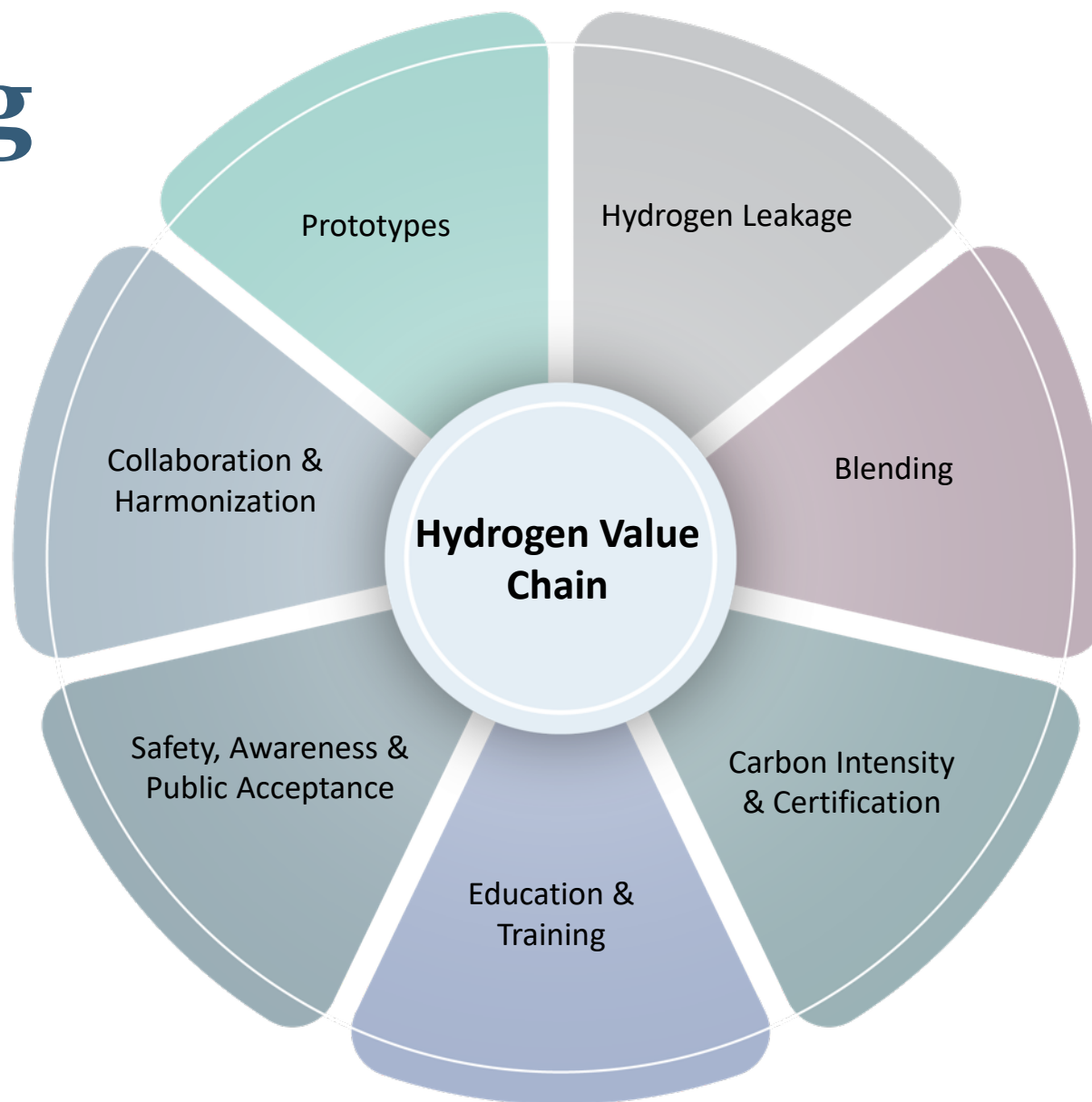
Medium-term

- ✓ Address within 3-6 years
- ✓ Critical, non-urgent



Cross-cutting Issues

Addressing these key issues is vital for the safe and scalable deployment of hydrogen



Stakeholder Call to Action

- Governance
- Policy Measures & Regulatory Action
- International Cooperation
- Innovation & Capacity Building
- Information Technology & Access
- Communication & Harmonization

