Clean Hydrogen Mission



Launched June 2021

- The Challenge: Clean hydrogen has the potential to decarbonise hard to abate sectors, such as industry and heat, which are responsible for two thirds of global emissions and help unlock the full potential of renewable energy. However, today it is up to three times more expensive than hydrogen produced directly from fossil fuels.
- The Goal: To increase the cost-competitiveness of clean hydrogen by reducing end-to-end costs to USD 2 per kilogram by 2030.
- The Mission: We will catalyse cost reductions by increasing research and development in hydrogen technologies and industrial processes and delivering at least 100 hydrogen valleys covering production, storage and end-use worldwide by 2030, to unleash a global clean hydrogen economy.

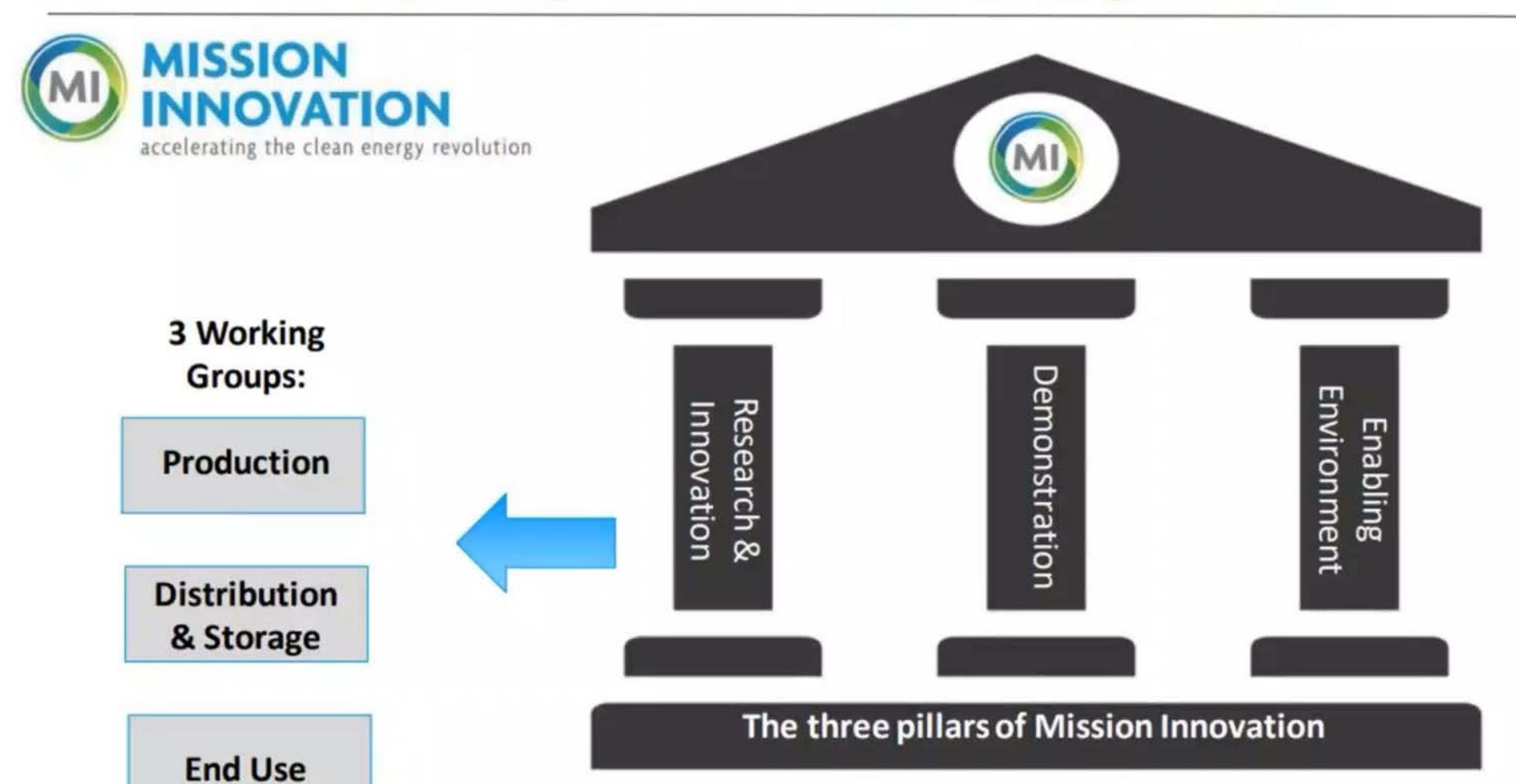
CLEAN HYDROGEN MISSION

More than 17 Member countries

Leads: UK, EC, Australia, Chile, Saudi Arabia, US



MI Clean Hydrogen Mission Background





CLEAN HYDROGEN
MISSION



Discussion Paper Clean Hydrogen Mission – present status

A Replicable, Five-step Approach that Can Be Tailored to Each Mission



Review &

Momentum



Set a global goal

- ▶ Identify tipping point
- Analyse what will shift topic from RD&D to deployment
- ▶ Convene high-ambition coalition with commitments
- Identify key governments critical to achieve mission
- · Identify key partners (e.g. private sector, IEA, etc)
- · Mission Pact: Agree commitments to demonstrate ambition and 'skin in the game'
- ▶ Put in place Mission Team

Ensure Director and sufficient support in place

- Strong narrative & comms
- First 'sprint'

Launch Mission

Publish report -



Discussion Paper



- Develop roadmap to meet the mission goal
- Map existing initiatives and national activities (e.g. pilot, demo projects)
- Assess and prioritize critical innovation gaps
- Identify what enhanced domestic and/or international effort is required
- Identify policy, finance & demand prerequisites to support goal

← COP-26→

Mission Action Plan

- Agree milestones and sprints to deliver mission.
 - · Agree what additional efforts the mission will deliver:
 - Early-stage RD&D
- Prizes / challenges
- Demonstration projects
- Further analysis and set theory of change
- · Investment levels needed

Demand-pull actions required (to be delivered in partnership with others): Procurement, Policies

- Agree on relevant KPIs
- · Identify key metrics to track progress towards the mission goal

← Post-COP-26→ Roundtable to agree Action Plan & announce specific commitments to develop activities



► Build partnerships to deliver actions

- Collaborative R&D
- Blueprint for zero-carbon value chain demos
- · Roundtables, working groups to develop proposals
- · Deliver through existing frameworks e.g. IEA **TCPs**
- Knowledge sharing
- · Partnership with demand-pull initiative

Monitor progress against KPIs

- Monitor commitments
- · Monitor global progress towards goal
- Integrate metrics into existing reporting

➤ Maintain momentum

- Events
- New commitments
- New participants
- New projects

Ongoing work programme

Annual Ministerial Roundtables to review progress and agree new actions and activities



Examples of Recent Accomplishments

- Released Discussion Paper at COP 26
- CSIRO released Report
- Carbon Trust published report on innovation
- Stakeholder engagement on partnerships
- End Use Working Group workshop on mining/offroad vehicles







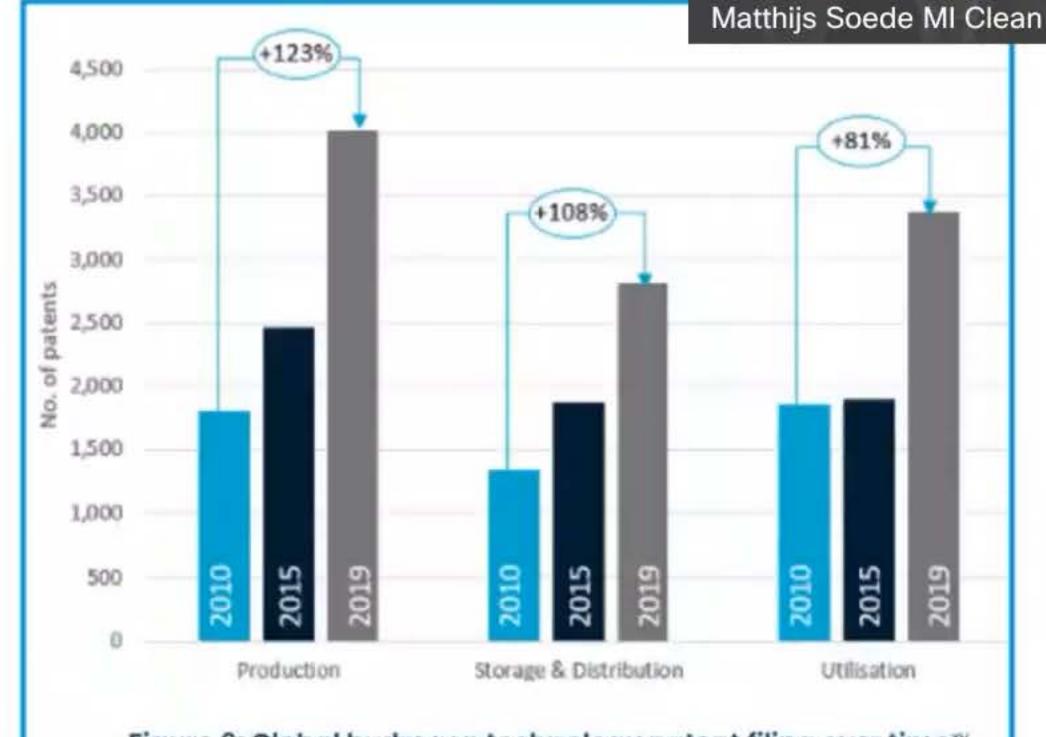


Figure 6: Global hydrogen technology patent filing over time™

Study of patents and publications under Mission Innovation Clean Hydrogen Mission shows increase in innovation and R&D on hydrogen







INNOVATION PLATFORM OUR MEMBERS



CLEAN HYDROGEN MISSION

Missions | Clean Hydrogen Mission



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The Mission

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NEWS

 [November 9, 2021] Just Released: The Clean Hydrogen Mission presents a Discussion Paper for public consultation (open till 9 December 2021) along with three annexes (1, 2 and 3). Comments by MI members, the broader stakeholder community, and wider outcomes of COP26 will feed into the final version of the paper and the following Clean Hydrogen Mission Action Plan.

> Please send your comments to MI-CLEAN-HYDROGEN-MISSION@ec.europa.eu before 9 December 2021 6

