

Activities of Japan Hydrogen Association (JH2A)



JAPAN
HYDROGEN
ASSOCIATION

July 2024

1. Background of Establishment



Mission

To accelerate the building of a hydrogen society

1 Create Hydrogen Demand

Implement projects, obtain policy supports and solve regulatory issues related to safety

2 Cost Reduction through Technical Innovation

Collect information on technology development trends and encourage business matching

3 Financing for Business

Create financing option and enlighten way forward

These 3 missions are the aim of establishment for cross-sectoral organizations.

2. About JH2A

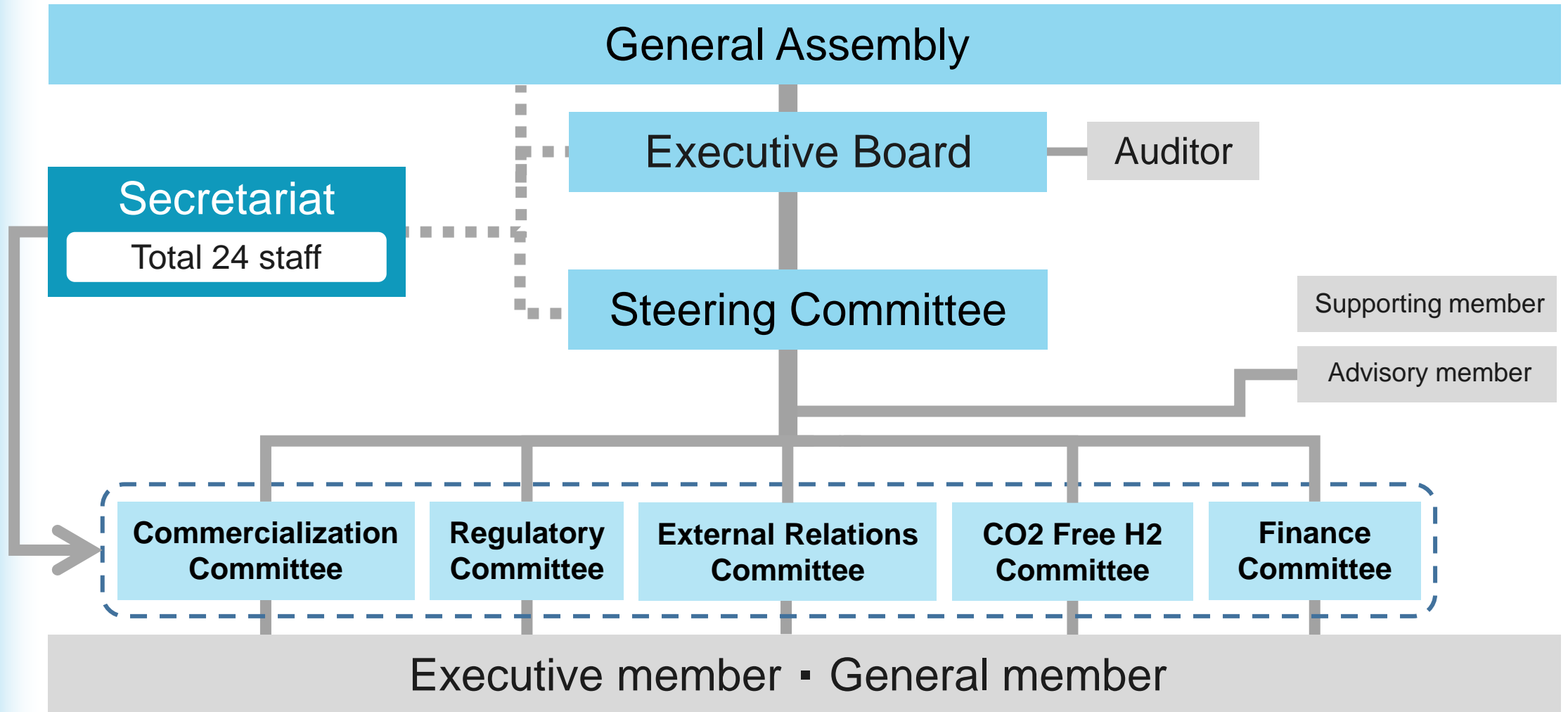
Overview



Purpose	As a cross-sectional and open organization that overlooks the entire supply chain, we build a hydrogen society at an early stage through the realization of social implementation projects.
Name	Japan Hydrogen Association (JH2A)
Co-chairman	Takeshi Uchiyamada, Executive Fellow, Toyota Motor Corp. Takeshi Kunibe, Chairman of the Board, Sumitomo Mitsui Financial Group Akiji Makino, Chairman and CEO, Iwatani Corporation
Establishment	April 2022 (established as the general incorporated association)
Executive Board Members	<div style="display: flex; align-items: center;"> <div style="background-color: #cccccc; padding: 10px; margin-right: 20px;">25 companies</div> </div>
Members	431 Companies/Organizations (as of April 2024)

2. About JH2A

Organization



2. About JH2A

Purpose



Creating a Rich Earth with Hydrogen

~ Delivering the ever-changing and nature-friendly power of hydrogen to the world ~

Activity

Building Networks

Building friends to work solving problems for hydrogen spread

Research and Dissemination

Correctly disseminate the value of hydrogen and the challenges of hydrogen spread



Recognizing the energy transition as each issue



Platform Function

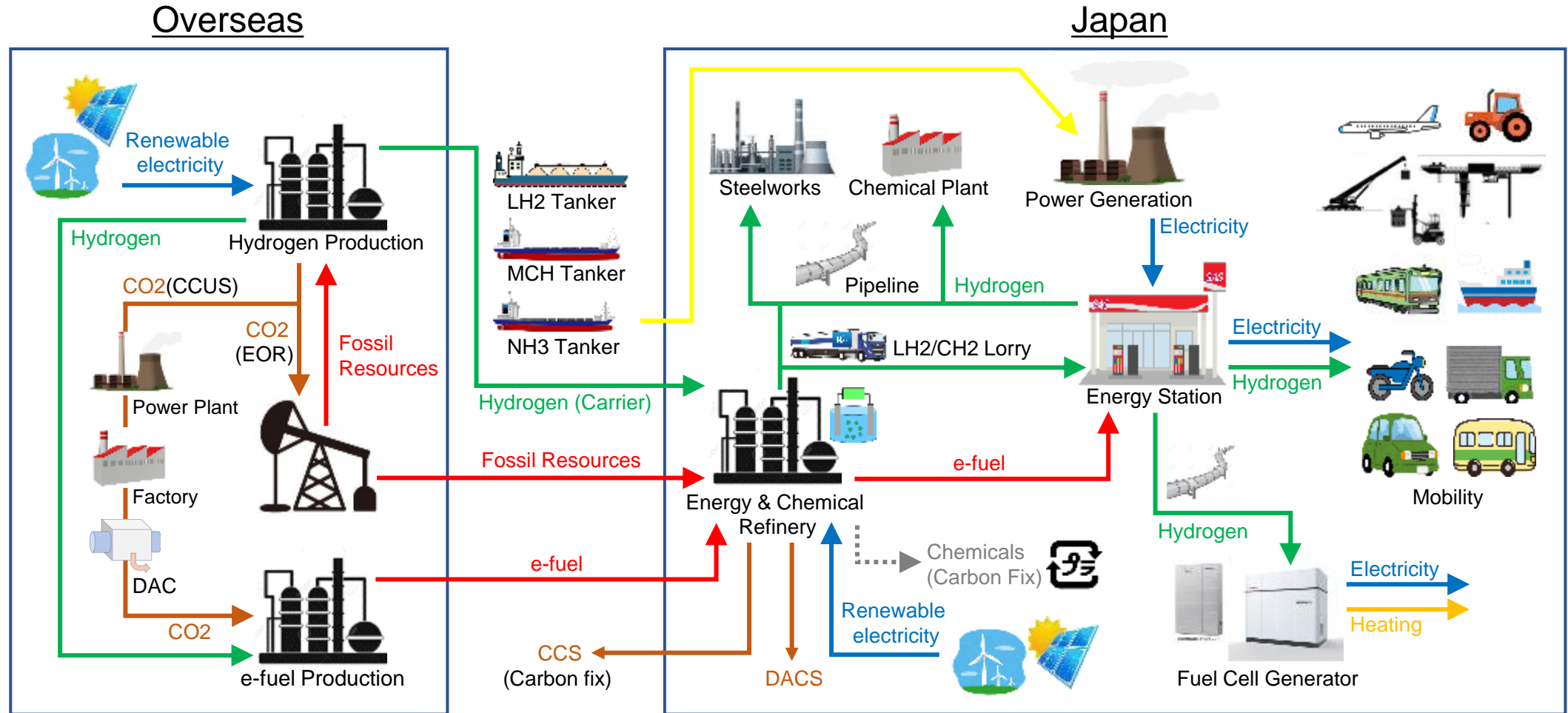
Connecting government, company, local government, educational and research institution



Industry, government and academia working together to realize a hydrogen society

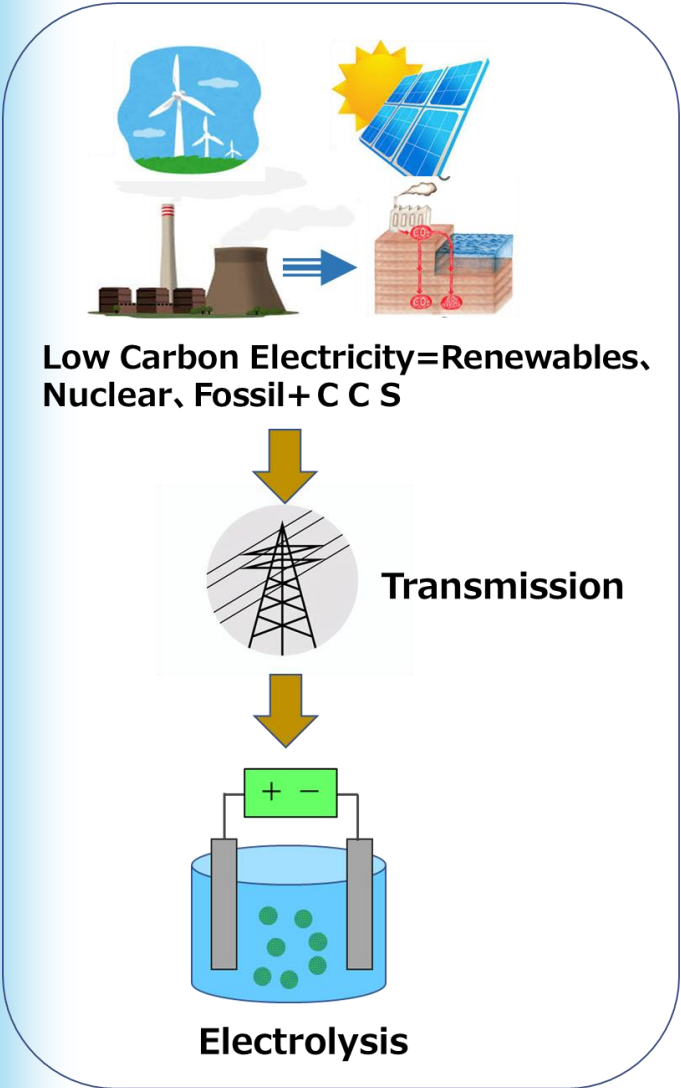
2. About JH2A

Image of Hydrogen Supply Chain

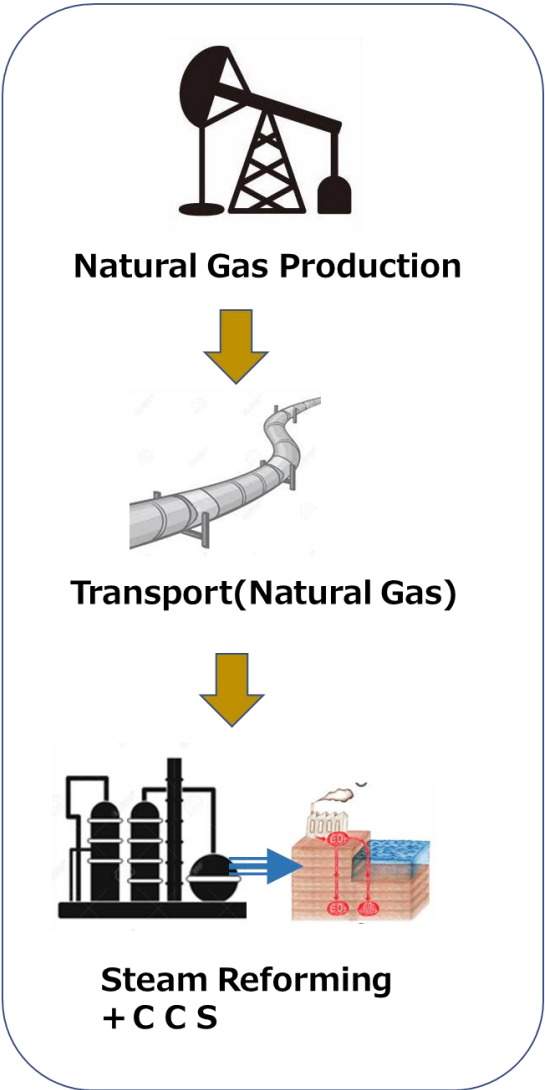


Low-carbon Hydrogen Production

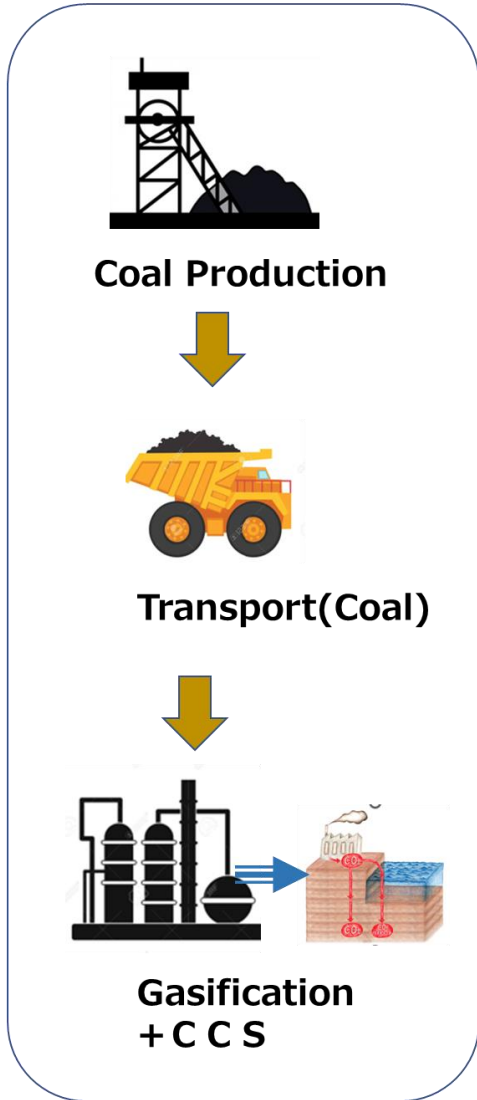
Electrolysis



Natural Gas Reforming



Coal Gasification



Others

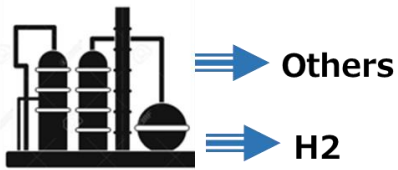
Biogas Reforming



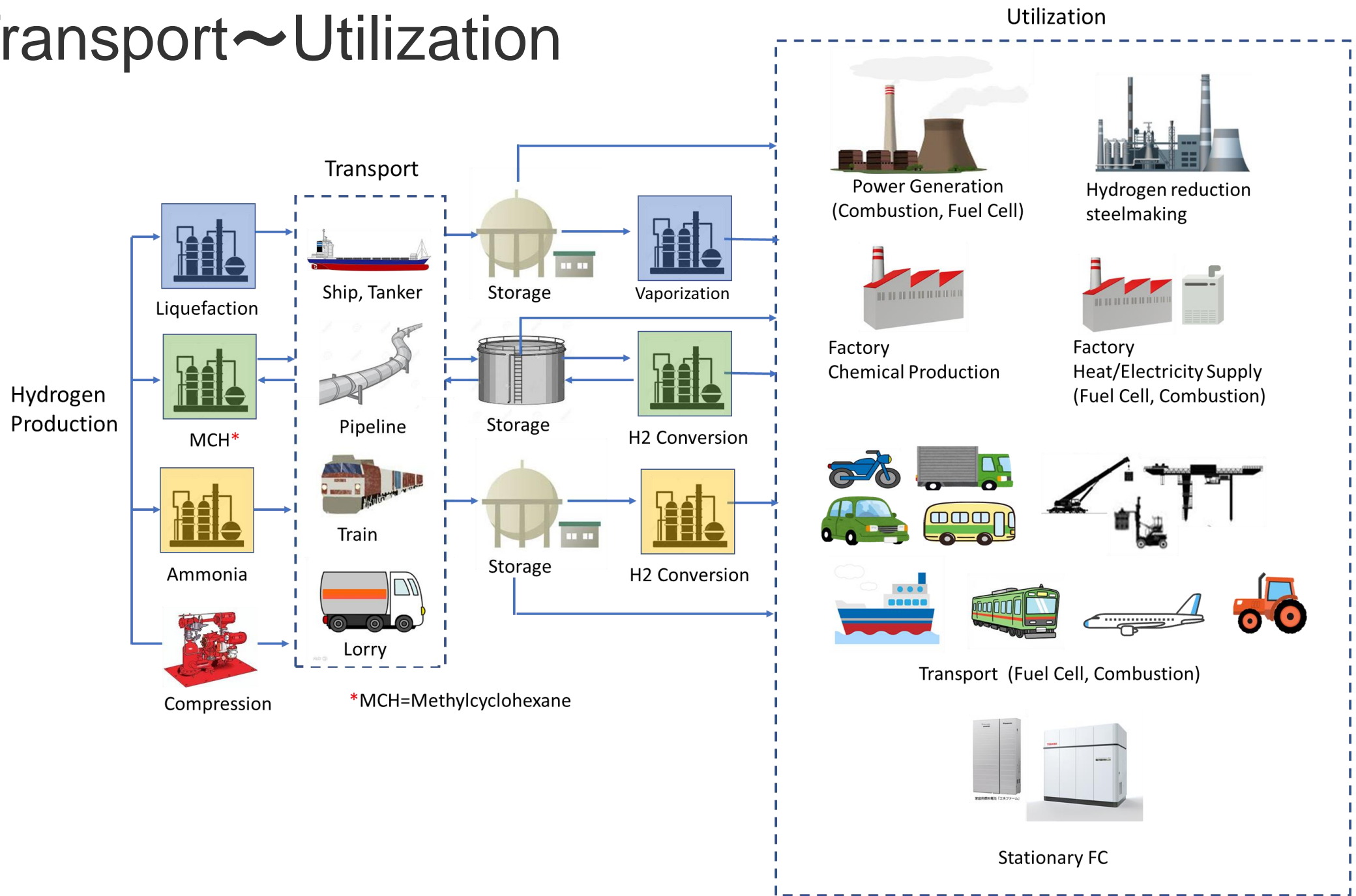
Waste Plastic Cracking



Co-Production

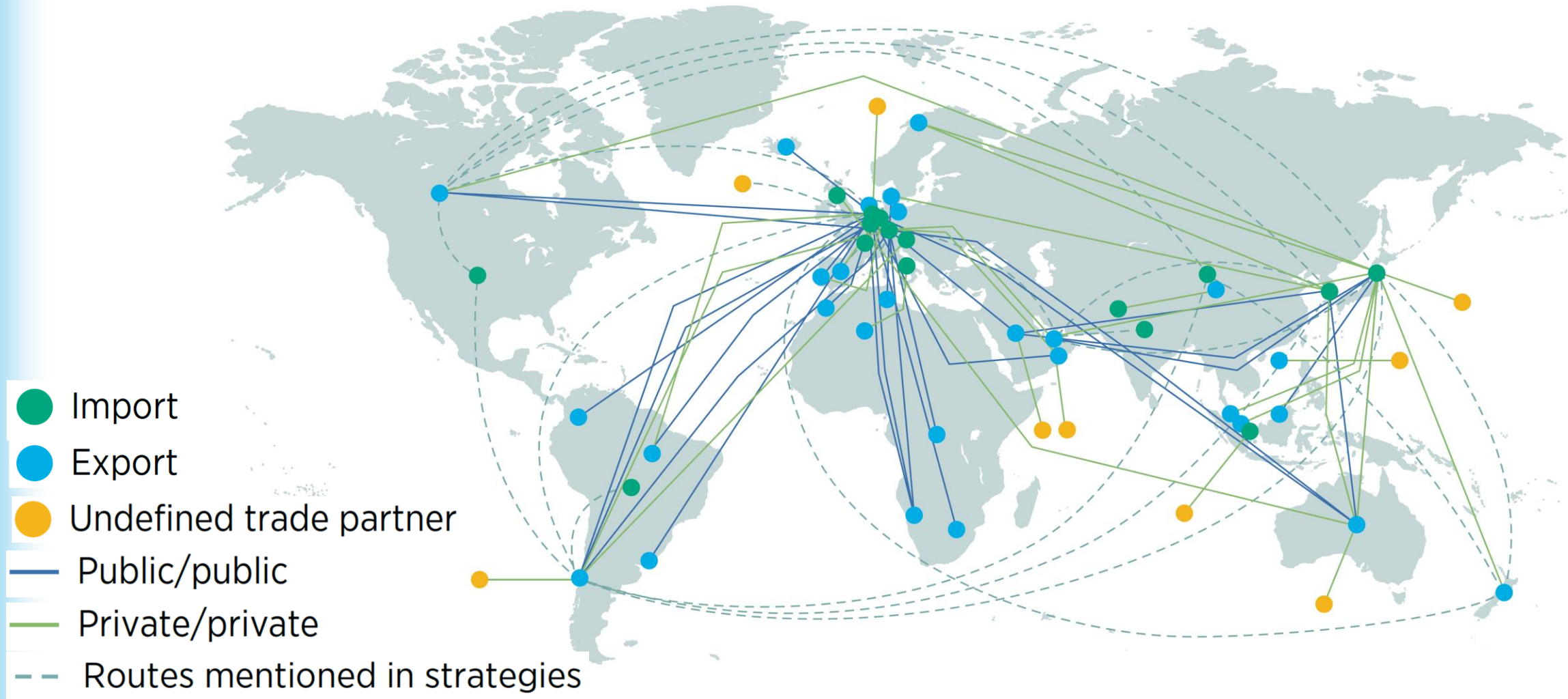


Transport ~ Utilization



Current assumptions of hydrogen imports and exports

(Source: IRENA GLOBAL HYDROGEN TRADE TO MEET THE 1.5°C CLIMATE GOAL)



3. Committee

Commercialization



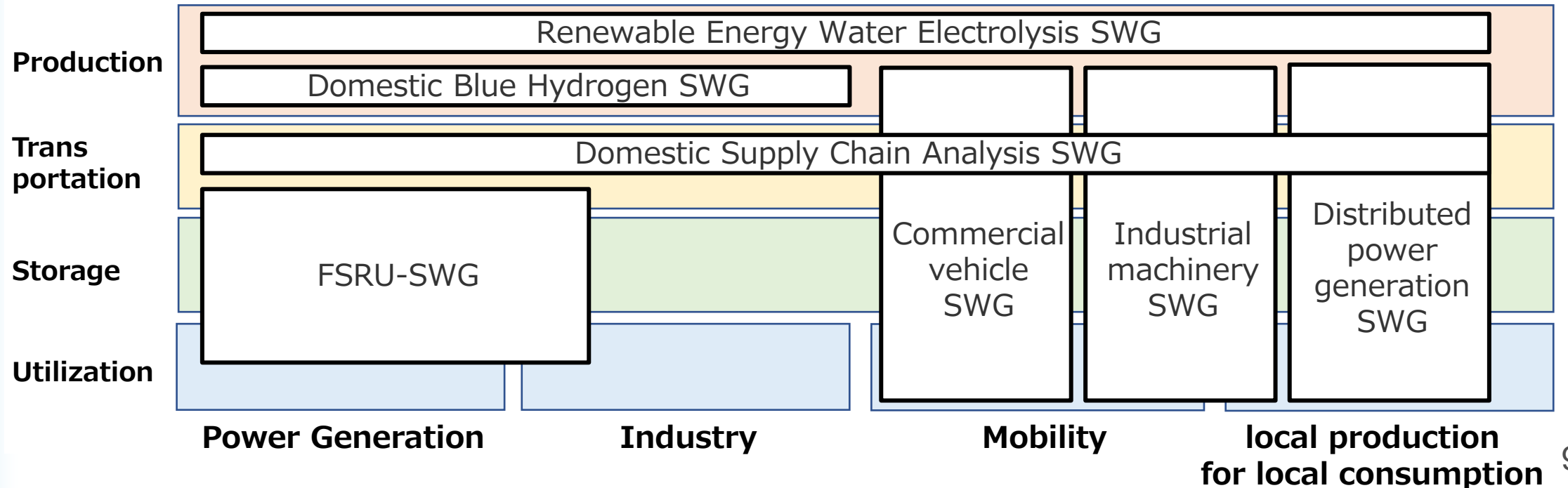
Purpose

Creation of social implementation projects and policy support.

Activity

- Implementation of policy recommendations based on issues and priorities in commercialization
- Pre-FS/FS efforts across SWGs and in individual regions
- Quantitative evaluation of business potential by building a comprehensive simulation tool

[Seven "SWGs" promote in-depth industry-standard commercialization scenarios]

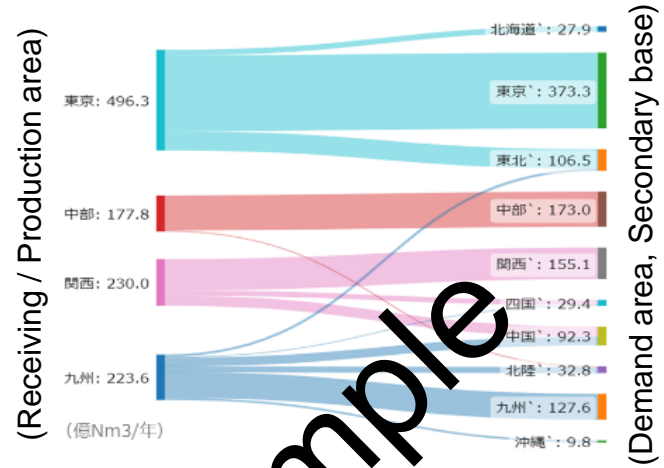


3. Committee

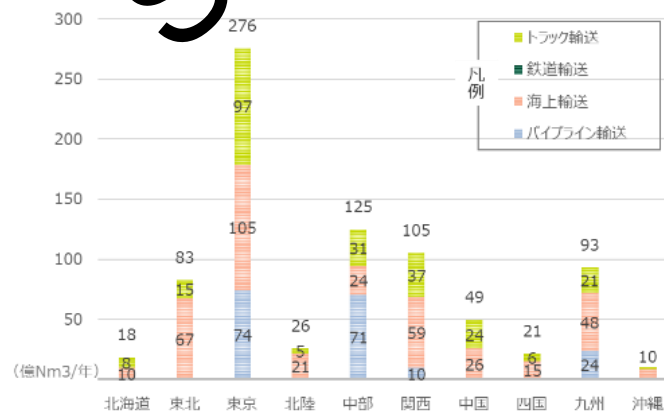
Commercialization

Supply Chain Simulation and FS

Hydrogen energy flow diagram (in 2040)



Total transportation amount (in 2040)

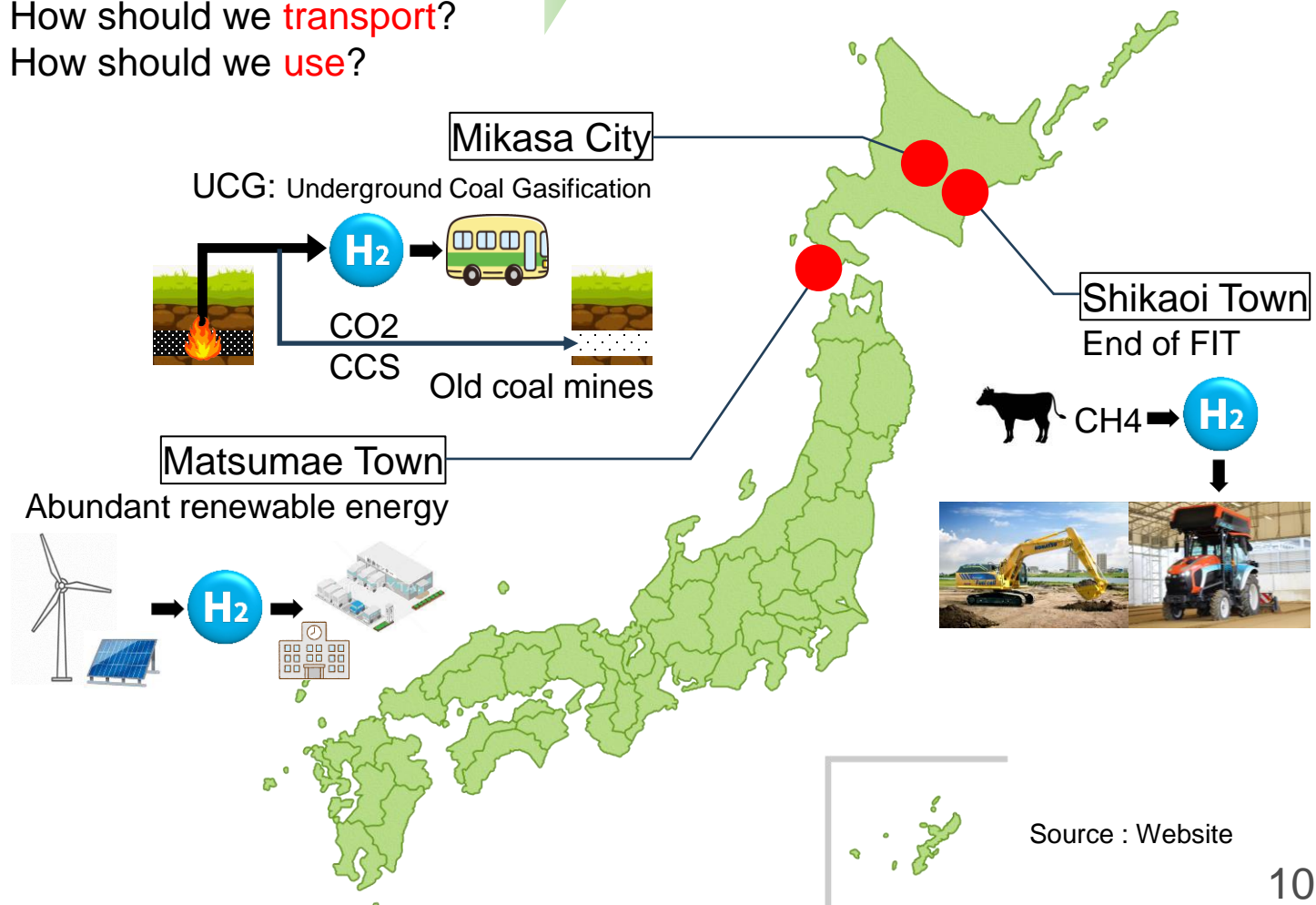


Sample

And even more

<Find the optimal solution>
Where should we **receive**?
How should we **transport**?
How should we **use**?

Verification and Survey



Source : Website

3. Committee

Regulatory



Purpose

- Examine the systems necessary to promote social implementation of the hydrogen value chain, identify regulatory issues that may be impediments, and encourage the government to propose or review these systems.
- Acting as the industry's one-stop shop for regulatory systems and working closely with related domestic and international organizations to address regulatory and institutional issues.

Activity

< Regulatory >

(1) Classification and extraction of existing and new issues (e.g., issues in promoting various types of demonstrations)

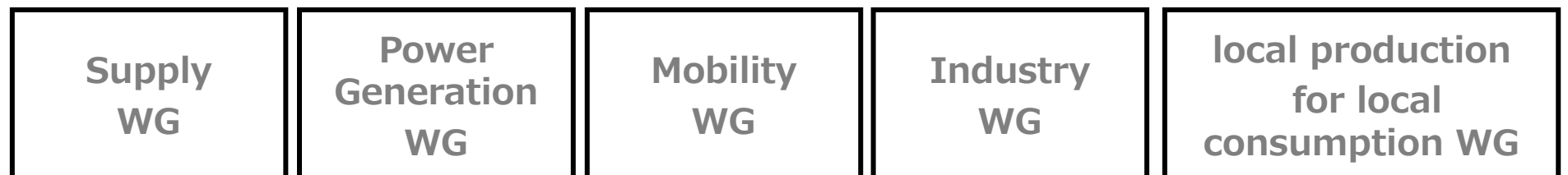
(2) Establishment of response strategy and roadmap

<support system >

(1) Benchmarking of national systems (e.g., European, U.S., etc.)

(2) Drafting of support measures that gather and reflect industry opinions

[WG structure]



3. Committee

CO2 Free Hydrogen



Purpose

- As an industry association for the hydrogen value chain, the organization will serve as a forum for domestic operators to share their opinions on international standardization and to create a vision for the year 2030.
- Advance the design of GHG calculation methods, standards, and systems, and conduct related international negotiations, research and issue organization, and policy proposals.
- Through a series of activities, we will define CO2-free hydrogen, develop a distribution infrastructure for clean hydrogen, and accelerate the social implementation of hydrogen.

Activity

Item	Background, Challenge	Activity	FY23 Projected Result
ISO/GHG Standards creation	Need international standard for international distribution of clean hydrogen	<ul style="list-style-type: none">• Opinion in the national committee• Discussions at international conferences	Technical specifications for TS19870 completed
Establishment of certification system	Need certification system for government support and international distribution	<ul style="list-style-type: none">• Certification system survey project• Participation in mutual recognition system discussions	Completion of survey and drafting of certification structure
Continued participation in IPHE discussion	Need de facto standard for GHG calculation criteria	<ul style="list-style-type: none">• Continue dispatching expert committee members to IPHE to reflect ISO standards	Improve Japan's presence and reflect Japan's superior technology in the GHG Protocol

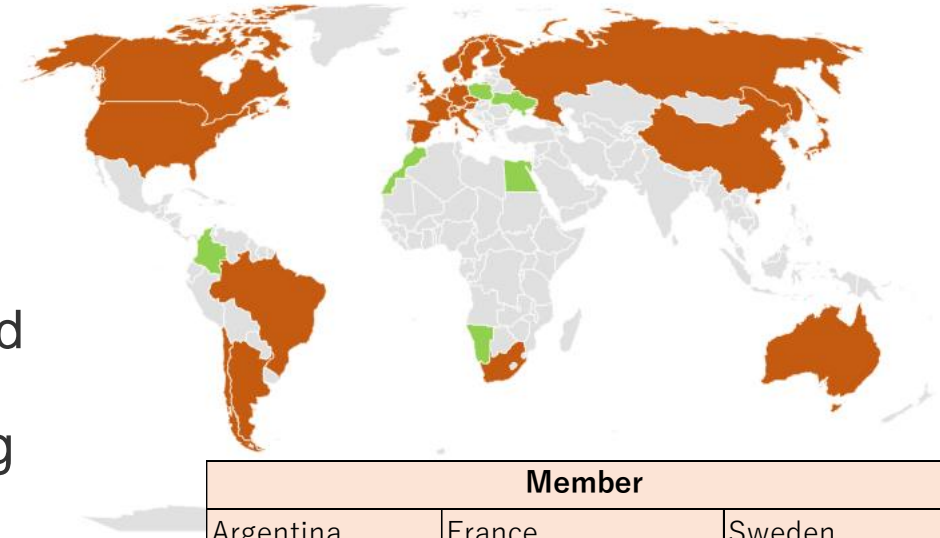
3. Committee

CO2 Free Hydrogen

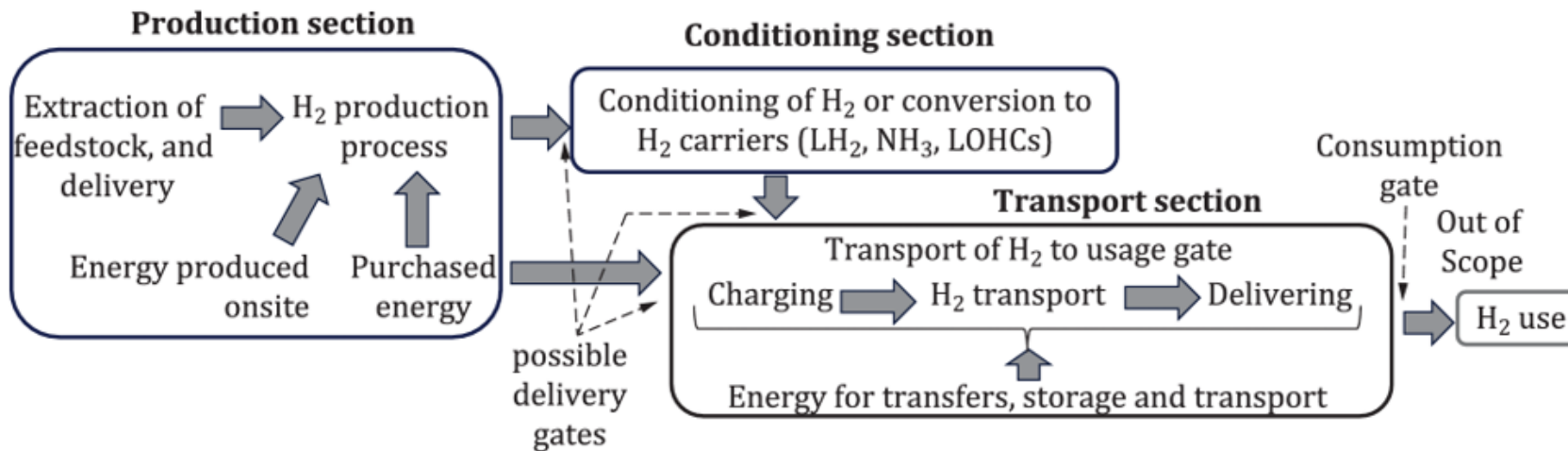


ISO TC197 SC1 Activity “Hydrogen at scale and horizontal energy systems”

ISO TC197 SC1 Members



WG1: Methodology for Determining the Greenhouse Gas Emissions Associated with the Production, Conditioning and Transport of Hydrogen to Consumption Gate
 ⇒ TS19870 has been published. CD 19870-1 is developing



Member		
Argentina	France	Sweden
Australia	Germany	Switzerland
Austria	Italy	United Kingdom
Belgium	Japan	United States
Brazil	Korea, Republic of	Observer
Canada	Netherlands	Colombia
Chile	Norway	Egypt
China	Russian Federation	Morocco
Czech Republic	Singapore	Namibia
Denmark	South Africa	Poland
Finland	Spain	Ukraine

3. Committee

Finance



Purpose

Present financing options and prospects to the operating companies for the realization of hydrogen projects

Activity

Item	Background, Challenge	Activity	FY23 Projected Result
Fund establishment	<ul style="list-style-type: none">• Presentation of financing options for hydrogen projects that are taking shape	<ul style="list-style-type: none">• Detailed study of structures, etc. for establishment of the fund	<ul style="list-style-type: none">• Establishment of fund and start of operations
Policy coordination	<ul style="list-style-type: none">• Public-private partnerships for funding from development and demonstration to commercialization	<ul style="list-style-type: none">• Organize policy requests• Collaboration with government financial institutions	<ul style="list-style-type: none">• Realization of policy support for the Fund• Recommendations for GX Promotion Agency's Support Menu
Communicate with operating company	<ul style="list-style-type: none">• Gathering information on projects for hydrogen fund investment• Setting investment criteria that contribute to building a value chain• Understand trends in standards related to finance	<ul style="list-style-type: none">• Identification of investment opportunities• Investigation of financing cases for hydrogen PJ, CO2 emission standards, blended finance, impact assessment, etc.• Information dissemination	<ul style="list-style-type: none">• Identification of projects for investment in multiple funds• Gathering and disseminating information through advocacy and events

Other

- Positioning of Hydrogen in Sustainable Finance
 - Also working with the CO2 Free Hydrogen Committee
 - Survey of global discussion trends and finance cases as base information

3. Committee

External Relations



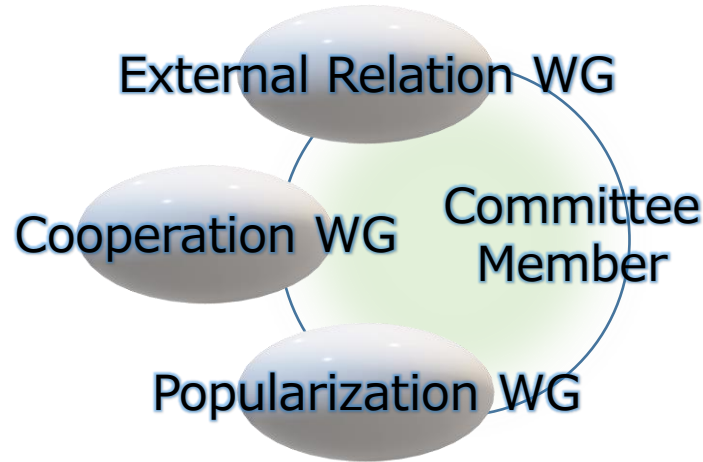
Purpose

【External Relation】 Support for various institutional design, deregulation, and budget acquisition in order to obtain cooperation and support from the government and public sectors for the implementation of a hydrogen society.

【Cooperation】 Strengthening cooperation with related organizations in Japan and abroad

【Popularization】 Understanding and recognition of the generation that bears the future of hydrogen society and a wide range of people, and expansion of hydrogen fans

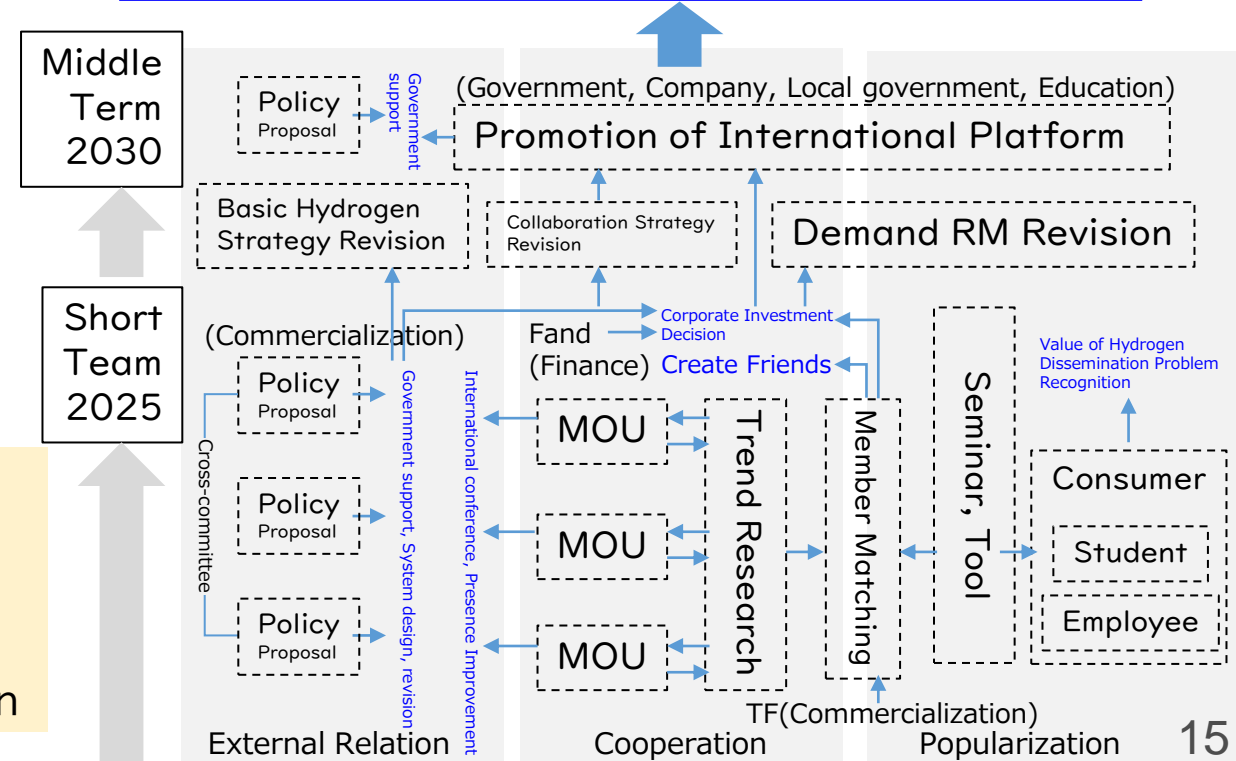
Activity



【In 2030, value created by JH2A based on strengths】 *from JH2A purpose

- (1) Making friends to solve problems
- (2) Recognition of Energy Conversion
- (3) Industry-academia-government collaboration

Organization for Analysis, original theory, dissemination, and international collaboration initiative



4. External Activity

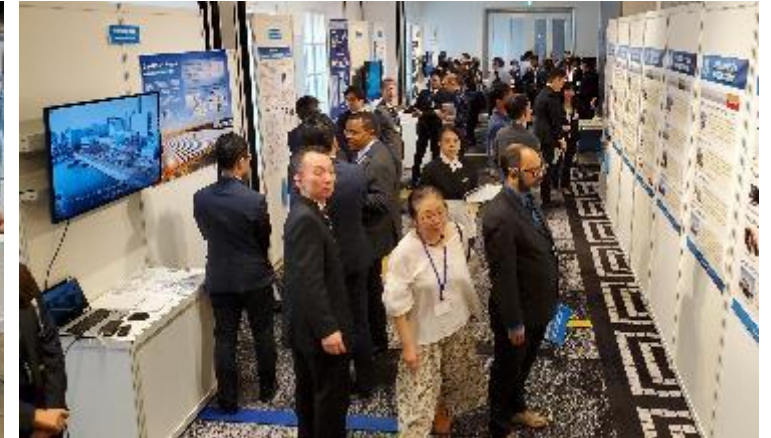
Domestic Event



2022/7/21 Hydrogen class at elementary school



2023/9/13~15 H2&FC EXPO

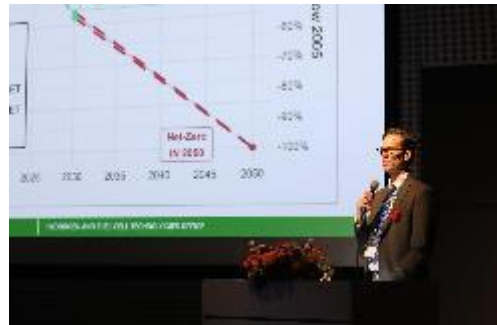


2023/9/25 Hydrogen energy ministerial meeting

1st JH2A Hydrogen Forum 2023 (3/16~17)



State of the venue



Overseas cooperation seminar



Local government hydrogen award ceremony



Member exhibition area and networking salon

4. External Activity

Lectures and Others



2022/5/31 Study meeting



2022/7/29 Gov. seminar



2022/10/7 Academic conference



2022/10/19 Interview



2022/11/2 U35 discussion



2022/12/17 Round-table



2022/12/20 Association



2023/2/23 Symposium @Thai



2023/6/8 Symposium @Kuwait



2023/6/13 Seminar



2023/6/30 University



2023/6 Journal



2023/9/14 Keynote speech



2023/11/6 @Jakarta



2023/12/4 @India



2023/12/20 @Korea

4. External Activity

International Cooperation



Signing MOU with Oversea Organization



New Zealand Hydrogen Council



ASOCIACIÓN ESPAÑOLA DEL HIDROGENO



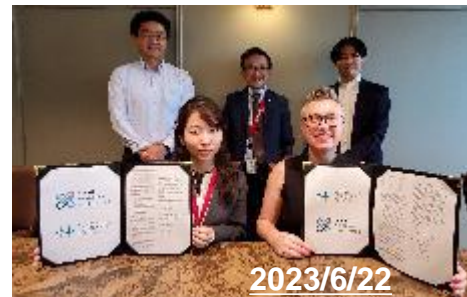
H2 Korea



Norwegian Hydrogen Forum



Canadian Hydrogen and Fuel Cell Association



Australian Hydrogen Council



Hydrogen Association of India



2024/4/1 Vietnam ASEAN Hydrogen Club



Hydrogen Europe



H2 Global Stiftung



Fuel Cell & Hydrogen Energy Association



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