



**Hydrogen Europe
Research**

Fuel Cells & Hydrogen Research in Europe

Hydrogen as an enabler for a low-carbon society

National Info Day, Italy – 7th of February 2024

Luigi Crema, President



**Hydrogen Europe
Research**

Mission, structure & activities

Our vision and mission

Hydrogen Europe Research aims to contribute to the achievement of carbon neutrality by strengthening the European hydrogen industry and ensuring high-level research in Europe. We actively support Research Institutes and Universities involved in the development of a new industrial ecosystem based on hydrogen.

Our mission is based on **4 pillars**:

RESEARCH

Supporting the excellence of European research on hydrogen and fuel cells – low Technology Readiness Level (TRL) research is still needed to develop the next generations of materials, components and products.

INFRASTRUCTURES

Enabling Research & Technology Infrastructures to scale up and speed up innovation – development of RIs and TIs is essential to bringing new technologies into the market.

SUSTAINABLE DEVELOPMENT

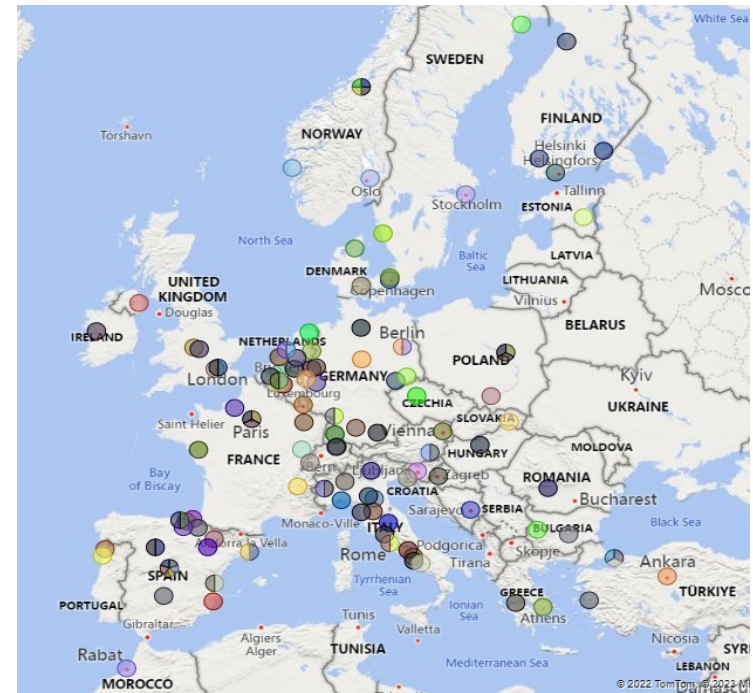
Ensuring sustainable development standards for a clean hydrogen ecosystem – evaluation of the carbon and environmental footprint related to the production, distribution, and usage of hydrogen is fundamental.

EDUCATION

Developing education and trainings to provide a skilled workforce for the European hydrogen economy – an educational framework should be a priority of European and national policies.

Hydrogen Europe Research at a glance

We represent the European Hydrogen Scientific Community with **150 members** in **29 countries**.

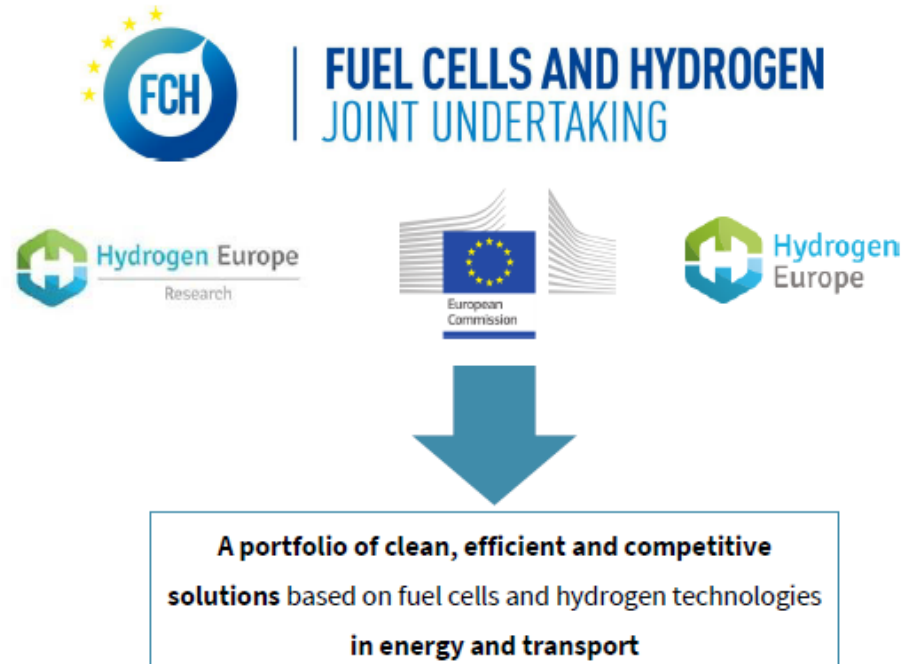


900+ scientists
involved in defining priorities
for the FCH sector

75 Higher education establishments
75 Research organisations

Our history

From 2008 to 2013, and then from 2014 to 2020, HER respectively participated in FCH JU and FCH 2 JU:



& continues to participate in the **Clean Hydrogen Partnership** during the 2021-2027 financial period



Our structure

GENERAL ASSEMBLY



EXECUTIVE BOARD



SECRETARIAT

General Assembly



All members are invited to participate in the General Assembly.



Meetings usually take place twice a year, once in Brussels and once hosted by one of our members.

The next General Assembly will take place in June in Budapest in hybrid format – You are welcome to join us in person!

More information regarding the next GA will be sent to you in early 2024.



The following topics are discussed during the meeting:

- Updates on the association's activities
- Determination of the general policy of the Association
- Network with other members



Two relevant reference documents for our members are the Statutes and the Internal rules.

Our Statutes were modified and approved by members on 6 April 2022.

For more detailed information on the General Assembly's powers, please check our Statutes.

Executive Board

The Executive Board oversees the **business of the Association** and **supervises the Secretariat**.

The Board is composed of 10 members elected for 2 years:

- a President;
- a Treasurer and Vice President;
- a Chair for External Affairs;
- 7 Technical Committee leaders.

The next Board election will take place in June in Budapest during the General Assembly.

Board meetings are held every month to discuss the activities of the association.

For more detailed information on the Board's powers, please check our Statutes.

Our partners



Hydrogen Europe is the European association representing the interest of the hydrogen **industry** and its stakeholders and promoting hydrogen as an enabler of a zero-emission society.

Hydrogen Europe is different organisation from us, with their own membership and their own structure, but we share an office space and work together on several topics.



We are one of the three members (alongside the European Commission and Hydrogen Europe) of the Clean Hydrogen Joint Undertaking (JU), an Institutionalised European Partnership which aims to accelerate the development and deployment of a European value chain for clean hydrogen technologies.

The underlying aim of the Clean Hydrogen JU is to contribute to the achievement of the European Union's objectives for a climate-neutral Europe by 2050.

Our activities



Participation in the Clean Hydrogen
Partnership



Intelligence for our
members



Policy recommendations and
position papers



Communication and networking
for our members



Education and training via the
Skills Working Group



Participation in Horizon Europe projects
*Fuel Cells and Hydrogen Observatory &
GreenSkills4H2*

Policy Working Group

A Policy Working Group is held monthly in Hydrogen Europe Research.

Activities organised:

Discussion and identification of potential issues for HER's research community stemming from existing or upcoming European policies



Defending the view of RTOs and universities by **drafting position papers and taking action to voice our opinion.**



Skills activities

HER has set up **together with Hydrogen Europe a joint [Working Group on Skills](#)** to reflect on the topic of skills, trainings, and education in the field of hydrogen and fuel cells.

The main topics to be dealt with as a starting point will be (non-exhaustive list):

- Understanding the trends and needs for hydrogen skills
- Presentation of projects and best practices on skills, trainings and education
- Identification of relevant funding opportunities
- Matchmaking to build consortia / find new contributors for projects
- Monitoring of EU policies on employment and skills in relation with hydrogen and green skills

HER is involved in projects related to skills and trainings such as the [FCH Observatory](#) and the recently awarded project [GreenSkills4H2](#).

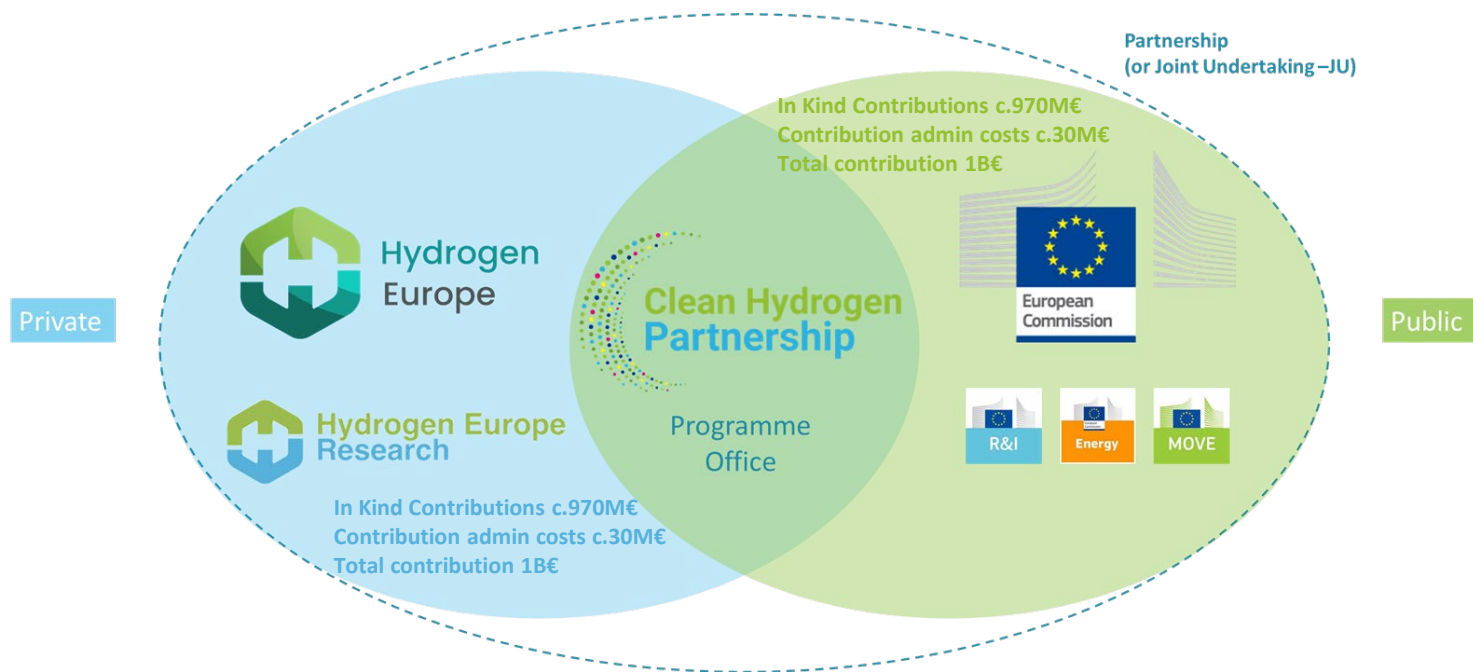


Hydrogen Europe
Research

Clean Hydrogen Partnership

Clean Hydrogen Partnership

In collaboration with the public and private members of the Clean Hydrogen Partnership, Hydrogen Europe & Hydrogen Europe Research participate in the **identification of annual and multi-annual research & innovation priorities** and the **elaboration of research topics** included in yearly Annual Work Plans.



- **Budget: 1B€ + 200M€** (extra funding from REPowerEU for Hydrogen Valleys)
- The **Strategic Research and Innovation Agenda (SRIA)** outlines the Research and Innovation activities that will be covered during the course of the Partnership

Clean Hydrogen Partnership – Financial Obligations

Legal foundation

- Single Basic Act (SBA) Regulation
- Clean Hydrogen JU Financial Rules
- Association Statutes (HE & HER)

Types of financial contributions

- In Kind contribution to Operational activities: calculated directly from Clean Hydrogen JU projects with a funding rate <100%.
- In Kind contribution to Additional Activities: projects on hydrogen funded outside the Clean Hydrogen JU reported by HE-HER members.
- Contribution to administrative costs for the Clean Hydrogen JU: ~30M€ from 2021 to 2030.

Administrative costs contribution approach

- 3.5% project contribution from HE-HER members.

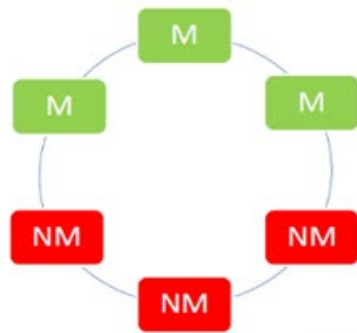
Key principles

- Only members of HE-HER contribute to project contribution.
- Participation to the project contribution is enshrined in the Statutes of the associations.
- SBA encourages membership of HE-HER to contribute to the success of the Partnership and the hydrogen ecosystem as a whole.
- Non-members can join Hydrogen Europe as full members or project members.

Type of action	Research/Non-profit	Industry
RIA	100%	100%
IA	100%	70% (or capping)
CSA	100%	100%
Flagship	Capping	Capping

Clean Hydrogen Partnership – Consortium administrative costs

Example 2: Consortium with 3 members of HE/HER and 3 non members
→ 3 options + combination



M Member of HE/HER
PM Project member of HE
NM Non-member



The three non-members become **full members of HE/HER**
-
They all pay a 3,5% project contribution

The three non-members become **project members of HE**
-
They all pay a 3,5% project contribution

The three non-members remain **non-members**
-
They do not pay the contribution
-
The three members then pay

Combination of the 3 options

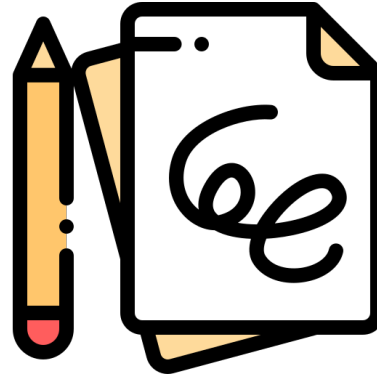
➤ NB: this is an illustration

Clean Hydrogen Partnership – Stakeholder Involvement

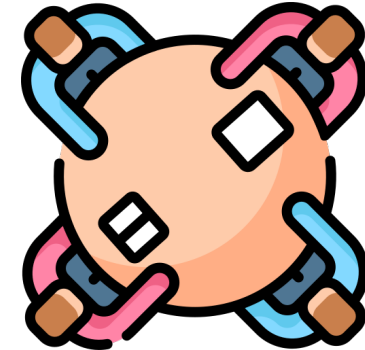
Hydrogen Europe Research , Hydrogen Europe and the European Commission are active in:



**Identification of Annual
(Annual Work Plans) and Multi-
Annual (SRIA) priorities at
Roadmap-level**



**Drafting of Research and
Innovation topics included in
the Annual Work Plans**



**Participation in Technical
Workshops organised by the
Commission & JRC**

Set of 20 Roadmaps to address our objectives

Technical Committee 5 – Cross-Cutting Research Activities

S10 Cross-Cutting
RM18.1 - LCA, Sustainability & Recycling, RM18.2 RCS & Safety, RM18.3: Education & Awareness

Comms
Knowledge
Safety
Int'l coop.

PILLAR H2 PRODUCTION

SO1 Produce Clean H2
RM01 - Electrolysis
RM02 - Other modes of production

SO2 Integrate renewables
RM03 - Role of electrolysis in the energy system

SO7 Decarbonise Industry
RM17 - H2 in industry

Technical Committee 1 – Hydrogen Production

PILLAR H2 DISTRIBUTION

SO3 Deliver Clean H2 at low cost
RM04 - Large scale storage
RM05 - Pipeline transport (grid)
RM06 - Liquid carriers
RM07 - Non-pipeline transport
RM08 - Key technos for distribution

SO4 Develop H2 infrastructure
RM09 - HRS for multiple applications

Technical Committee 2 – Hydrogen storage, transport & distribution

PILLAR H2 END USES
Technical Committee 3 - Transport

SO5 Competitive H2 vehicles
RM10 - Building blocks
RM11 - Road Heavy-Duty
RM12 - Maritime (inc. ports)
RM13 - Aviation (inc. airports)
RM14 - Rail

SO6 H2 for Heat & Power
RM15 - Stationery H2 fuel cells
RM16 - H2 Turbines & burners

SO7 Decarbonise Industry
RM17 - H2 in industry

Technical Committee 4 – Heat & Power

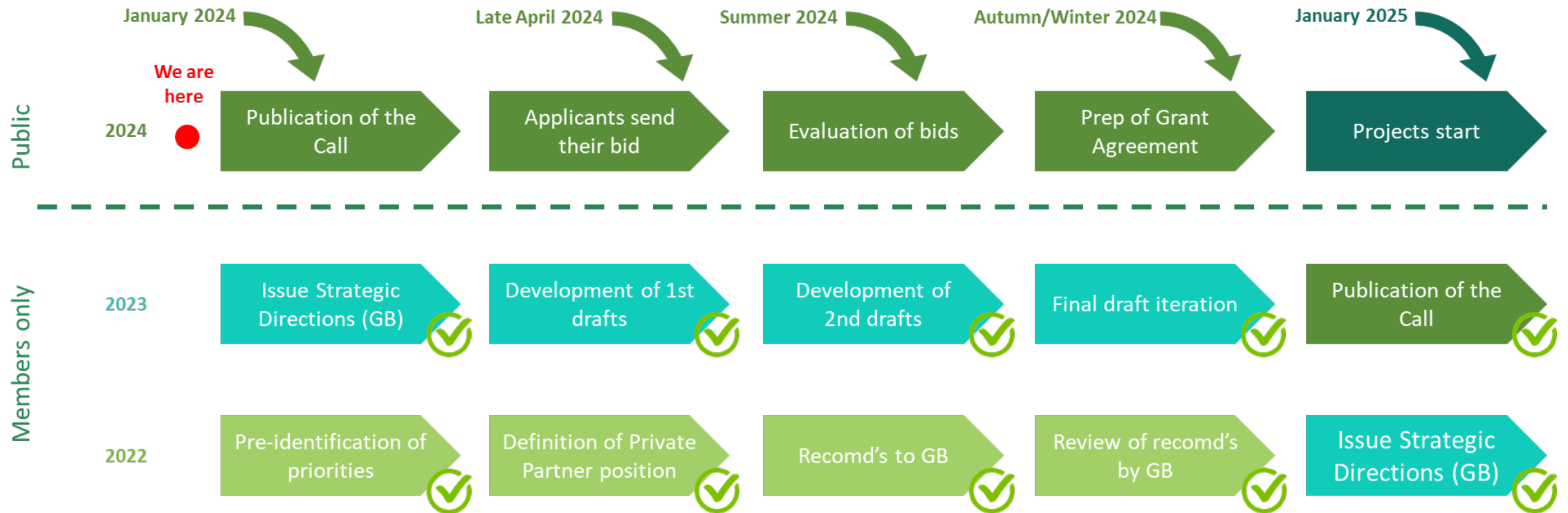
SO9 Supply Chain
Manufacturing & scale-up

Technical Committee 6
Supply Chain

S08 Hydrogen Valleys
Integrated H2 ecosystems combining multiple applications (ports, airports, industrial hubs, cities, etc.)

Technical Committee 7 – Hydrogen Valleys

Clean Hydrogen Partnership – Process



➤ Interactive process between Hydrogen Europe, Hydrogen Europe Research and the European Commission.

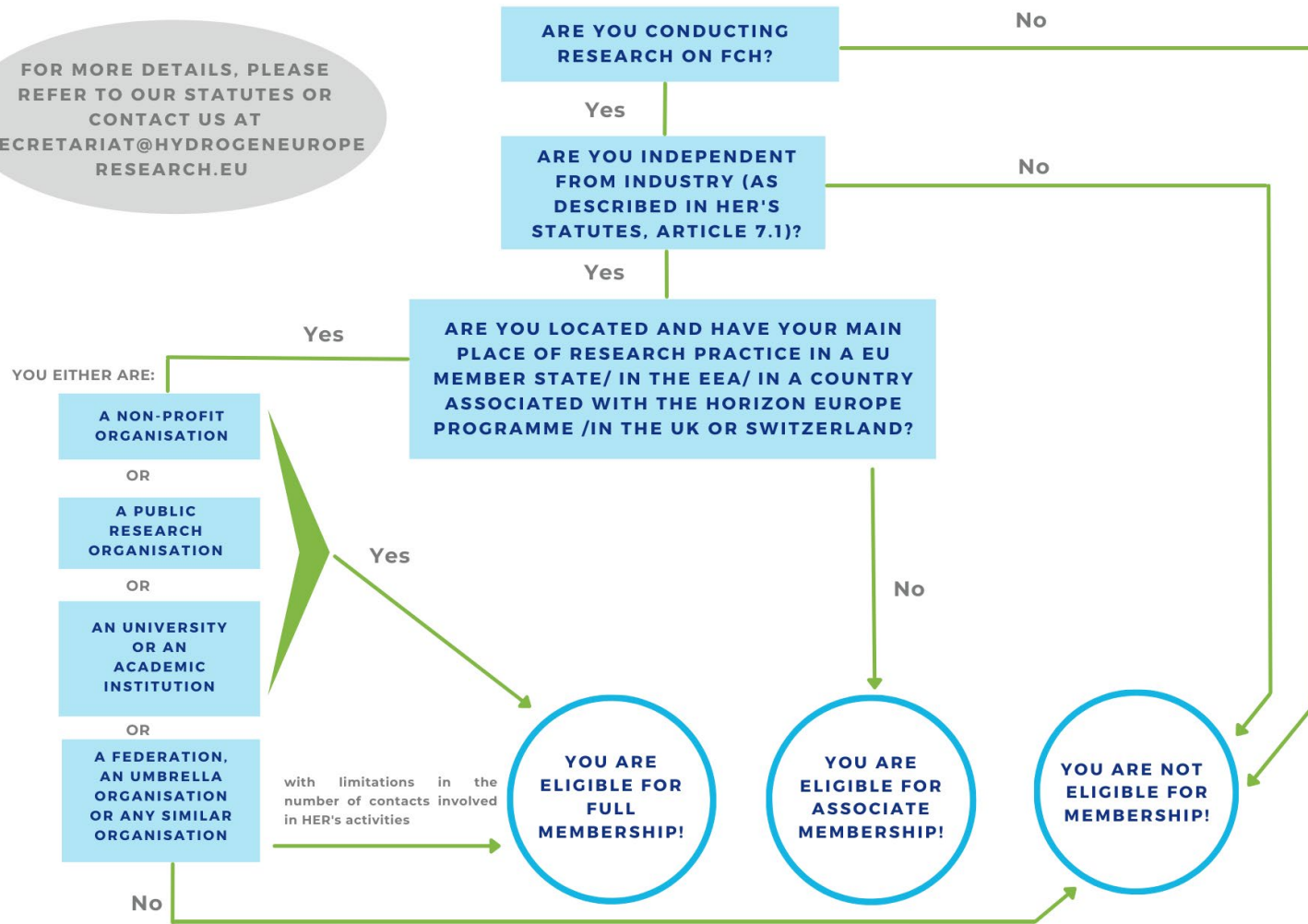


**Hydrogen Europe
Research**

Join us!

Become a Hydrogen Europe Research member!

FOR MORE DETAILS, PLEASE REFER TO OUR STATUTES OR CONTACT US AT SECRETARIAT@HYDROGENEUROPE RESEARCH.EU



Full member: 3,500€/year

Associate member: 1,000€/year

Secretariat – contact details



Innovation Manager – Louis Mazurkiewicz

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Communications and Membership Manager – Simona Vitali

- ▶ Main contact point for Communication and Secretariat-related issues
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Hydrogen Europe
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Thank you
for your
support!