



Federal Ministry
for Economic Affairs
and Energy

The German national hydrogen strategy

June 2020



Background

- Gaseous and liquid **energy carriers** are integral to German energy system and an important **feedstock** for industry
- **Ambitious climate targets** require climate friendly alternatives
 - ➔ Hydrogen and products derived from it will be a **key element** in Germany's energy transition
 - ➔ Hydrogen offers opportunities for **new value chains**

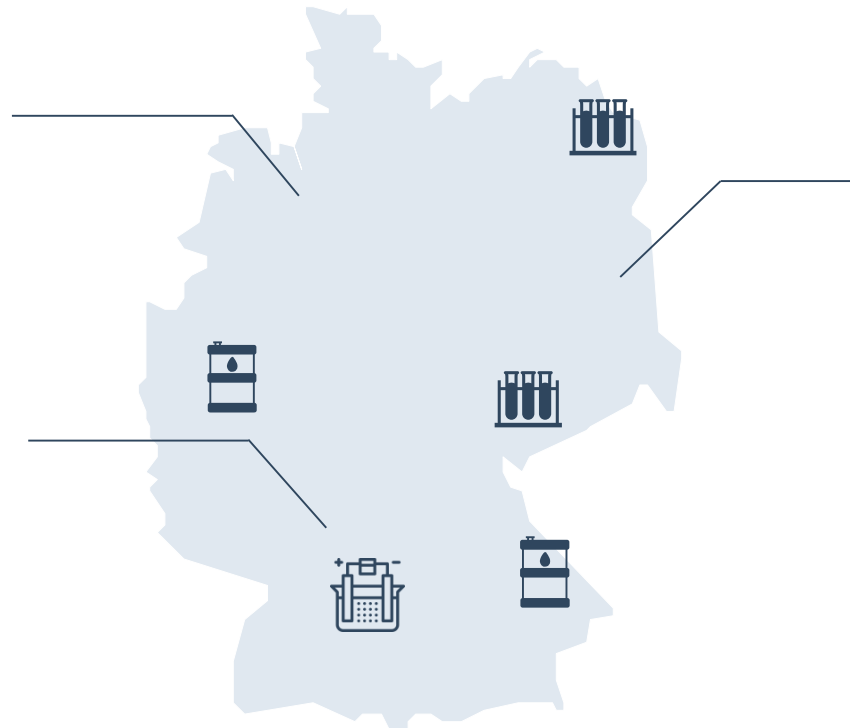


Status quo of hydrogen in Germany

Total yearly production:
55 TWh mainly „grey
hydrogen“

mainly used for material
production processes,
i.e. the production of
ammonia, methanol etc.

3,85 TWh of hydrogen
are produced by
electrolysis





Future of hydrogen in Germany

Expectations:

Total hydrogen demand
in 2030 90 to 110 TWh

Growth in hydrogen
demand at first mainly in
industry and transport

Aim:

Production capacity of
up to 5 GW added until
2030 and 5 GW more at
least in 2040





Strategic objectives of the hydrogen strategy

Establish **Hydrogen** as
an alternative energy
carrier

Make Hydrogen
competitive

Develop a “home
market” ready for
imports

Further develop
transport and
distribution
infrastructure

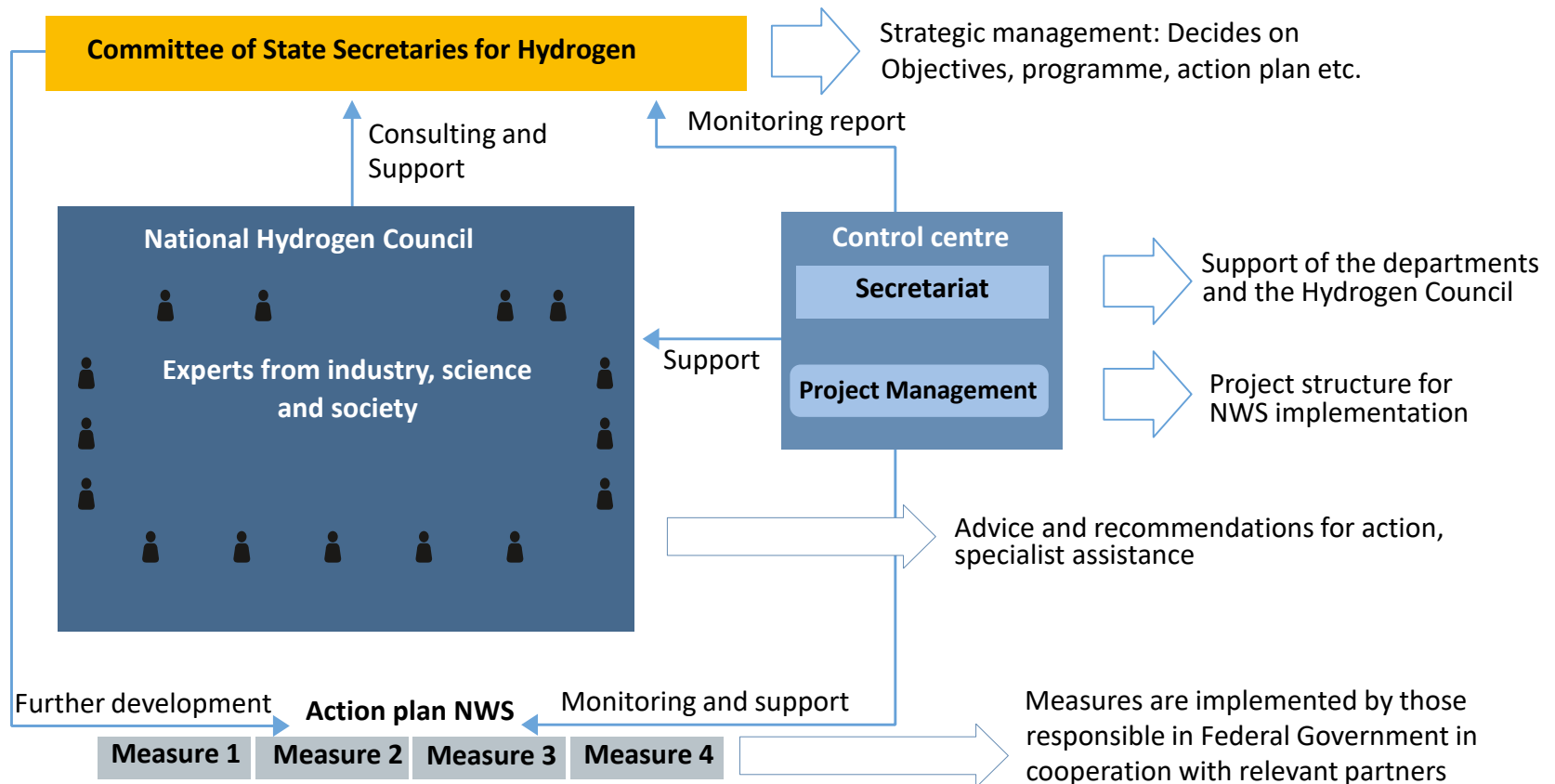
Make Hydrogen
sustainable as a **basic
material** for industry

Promoting **science** and
training specialists

Establishing
international markets
and cooperation for
hydrogen



Governance of the hydrogen strategy





Action Plan: Necessary steps for the success

Generation

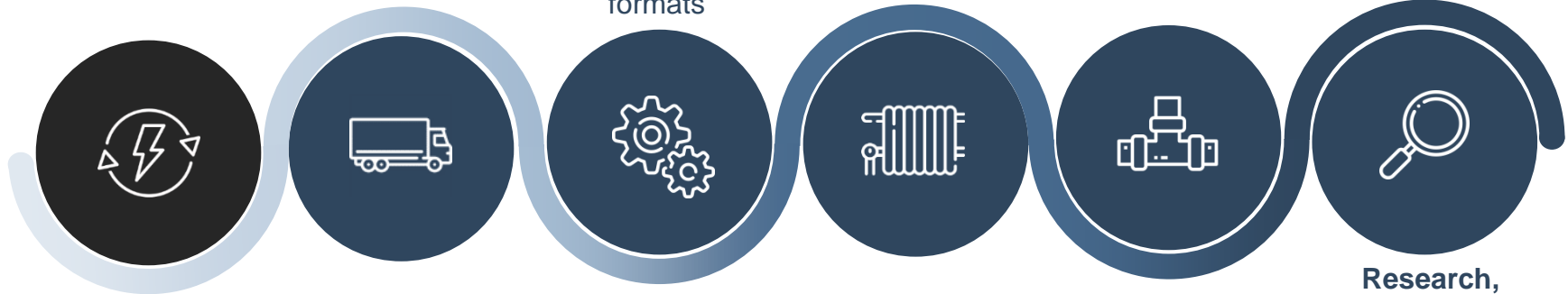
- Improve framework conditions
- Fair design of state induced price components

Industry

- new pilot programme for Carbon Contracts for Difference (CfD) in steel and chemical
- sector-specific dialogue formats

Infrastructure and supply

- initiate the possibilities for using existing structures
- promote the integration of electricity, heat and gas infrastructures



Traffic

- implementation of the EU Renewable Energies Directive (RED II)

Heat

- ensuring 'hydrogen-readiness' CHP plants

Research, education and innovation

- new interdepartmental research offensive named 'Hydrogen Technologies 2030'



Action Plan: EU and international cooperation

- Facilitate the development of **European standards** for hydrogen
- Establishment of a **European hydrogen society** to develop joint international production capacities
- Integration of hydrogen in **existing energy partnerships**
- Preparation of **potential atlases** for the production of green hydrogen that will help to identify future supplier countries
- **Pilot projects in partner countries** to show whether and how green hydrogen can be produced and marketed sustainably and competitively