

H2READINESS

Database for assessing the
hydrogen suitability of the
gas infrastructure



Agenda

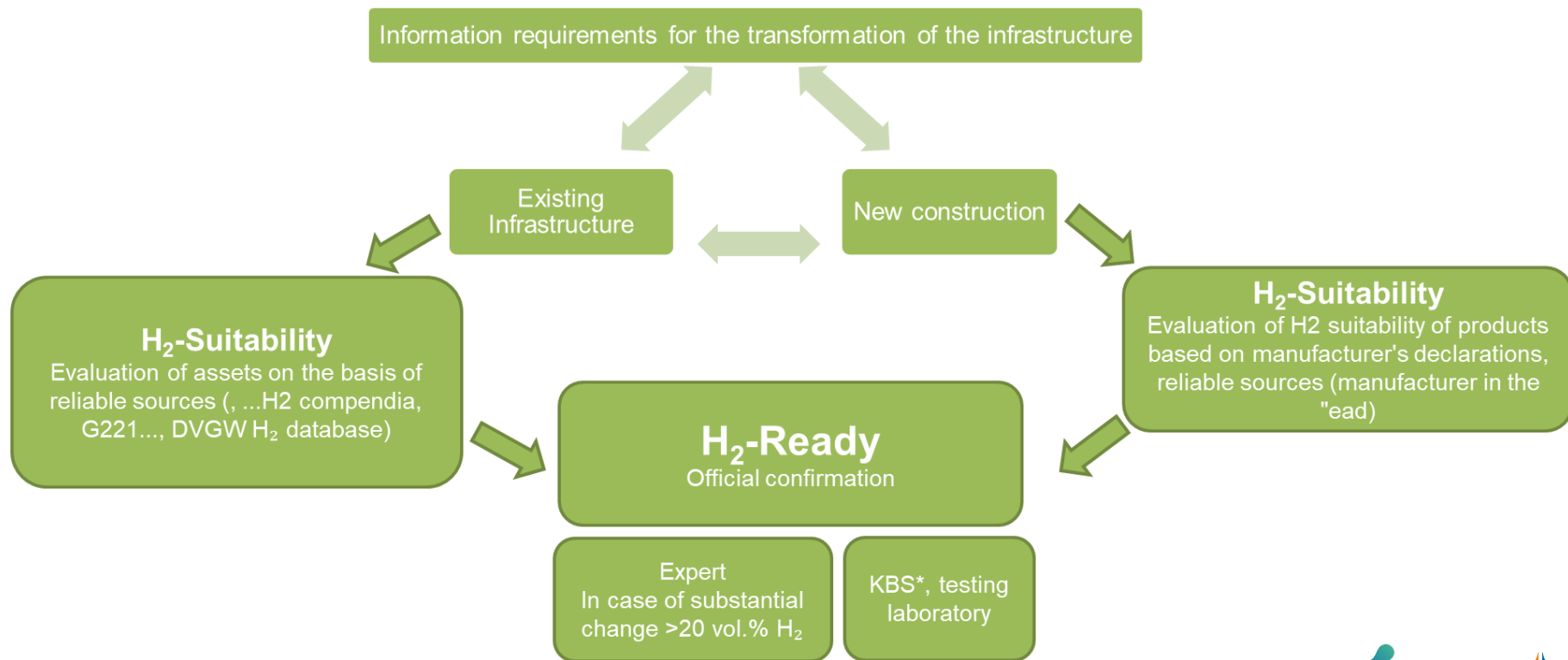
- Motivation
- Basic structure of the database
- Information base
- Next steps and timeline

Motivation

- Hydrogen is considered as important element in the future energy system across Europe
- This is underlined by the European and national hydrogen strategies
- Grid operator across Europe support this development and prepare the infrastructure transformation
- The current situation will most probably increase the speed of transformation
- **The transformation needs to be based on a H2-suitability assessment on component and product level**
- **This assessment is challenging as we see a huge variety of products and asset volumes are large therefore professional tools and services are helpful**
- **DVGW in cooperation with DBI is building a database on component and product level which will be available in English as well**

Motivation

Expected methodology responsibilities H₂-suitability



*KBS-Konformitätsbewertungsstelle (testing, inspection, certification)

Evaluate the H2 suitability of your assets

The H2Readiness database is the central platform for fast and convenient verification of the hydrogen suitability of products, components and materials.

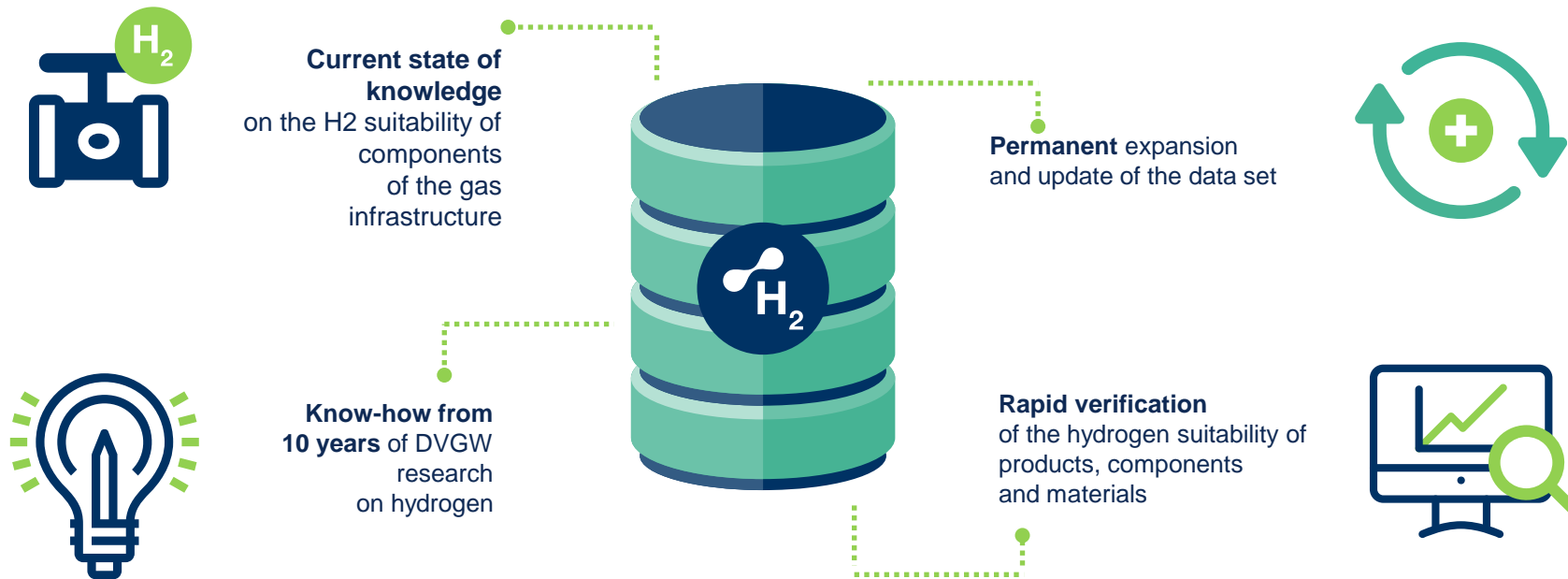


Gas network/infrastructure operators are supported in planning and converting the infrastructure to hydrogen. The database is an essential component for reliable and future-oriented network planning taking into account the transformation task.

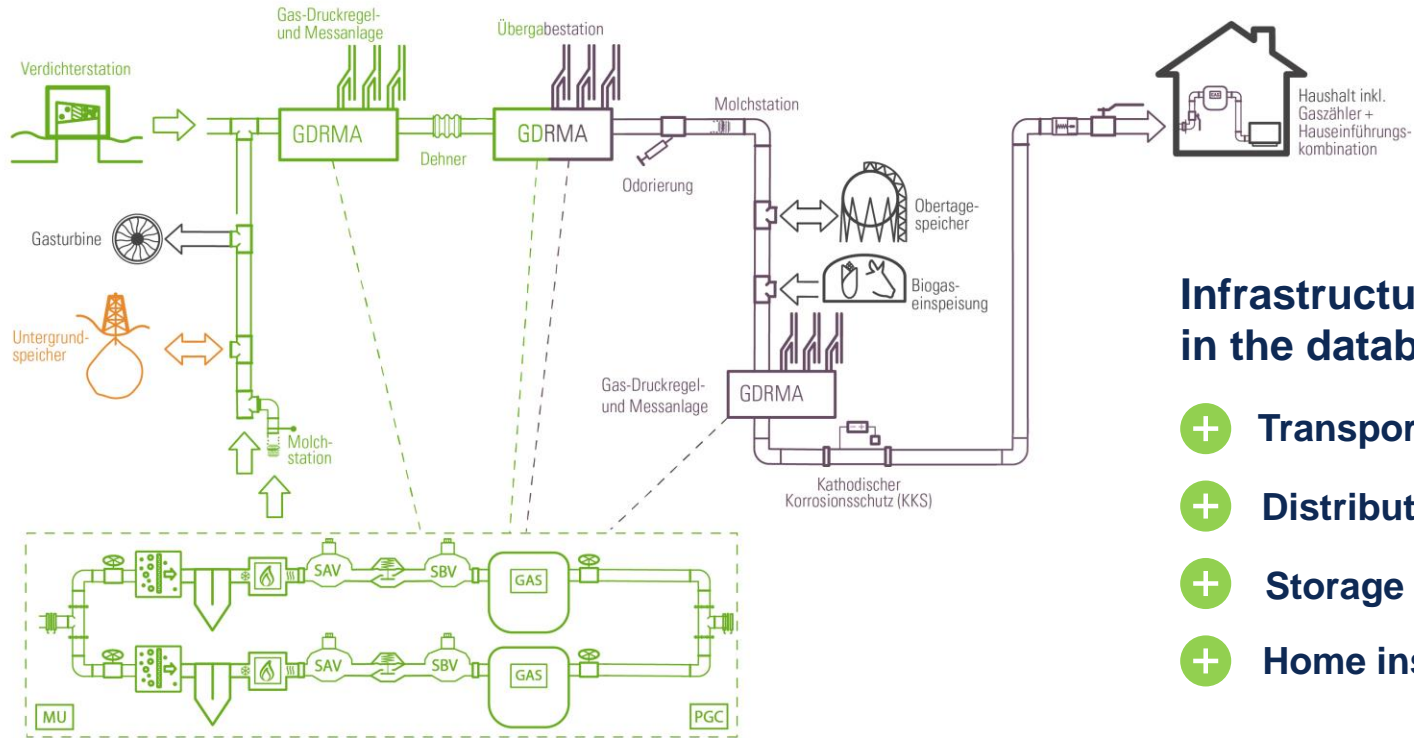


Manufacturers may provide verified information about the hydrogen suitability of their products to their customers.

Bundled know-how around hydrogen



Extensive range of data sets with gradual expansion



Infrastructure areas in the database

- + Transport
- + Distribution
- + Storage
- + Home installation

What does the database offer?

User stories - user perspectives

- More than 20 user stories are shown:
 - From the managing director to speakers to technical staff
 - from the storage operator via gas network operators to the manufacturer
 - Presentation and coordination of content & functional requirements, user stories, maintenance as well as quality gate among others with:



What does the database offer?

Content grows continuously

DVGW H₂ technology offensive ensures scientific and product-oriented informational build-up in the database

DSO 	TSO 	UGS 	Gas usage 
✓ Components	✓ Components	○ Components	○ Technologies
✓ Products	○ Products	– Products	– Products (Manufacturers)

- ✓ Completed
- ongoing
- In preparation/image via manufacturer

What does the database offer?

User specific functionality

Gas infrastructure operators:

- have the possibility to propose changes to all contents
- can suggest information/profiles for products where the manufacturer no longer exists
- can use batch processing to compare several components / products / materials at once and obtain statements on their H₂ suitability

What does the database offer?

Interface

- A template in CSV format is provided for the automated evaluation of components and materials
- This is expected to include the columns:

Component	Manufacturer	Designation	Article No.	Material	Nominal Width	Year of Man.	Design pressure	Quantity/Lenght

Field name	Description	Duty
Component	Use of a master data list	Y
Manufacturer	Use of a master data list	N
Designation	Product name (only necessary for product)	N
Article No.	if available, number of the manufacturer, only for products	N
Material	Designation of the material, from material number, short name, old designation, US equivalent	Y
Nominal Width	Nominal size of the component / product, e.g. DN 100, DN 80, d 63	Y
Year of Man	4 digits, >1900; the year of commissioning expected	N
Design pressure	DP, design pressure	Y
Quantity/Lenght	Number of products installed in the network or length of the installed pipeline	N

What does the database offer?

User specific functionality

Manufacturers:

- can upload manufacturer's declarations/proofs of conformity (templates are provided in the database, see right)
- can upload new H₂ suitability information using an input mask
- can suggest changes for existing, own product specifications

Unternehmen-Logo
einfügen oder Text
fügen

Konformitätsbewertung
Conformity assessment

Betreffend den Betrieb von Erdgas-Produkten mit wasserstoffhaltigen Gasen und reinem Wasserstoff unter Gewährleistung der chemischen Beständigkeit, Funktionalität und Sicherheit nach aktuellem Stand der Technik.
Concerning the operation of Natural Gas (NG) products with NG H₂ mixtures and pure hydrogen while safeguarding chemical resistance, functionality and safety according to the current state of the art

Name des Ausstellers:
Issuer's name: Klicken Sie hier, um Text einzugeben.

Anschrift des Ausstellers:
Issuer's address: Klicken Sie hier, um Text einzugeben.

Gegenstand der Erklärung:
Object of the declaration: Klicken Sie hier, um Text einzugeben.

Typenbezeichnung:
Type designation: Klicken Sie hier, um Text einzugeben.

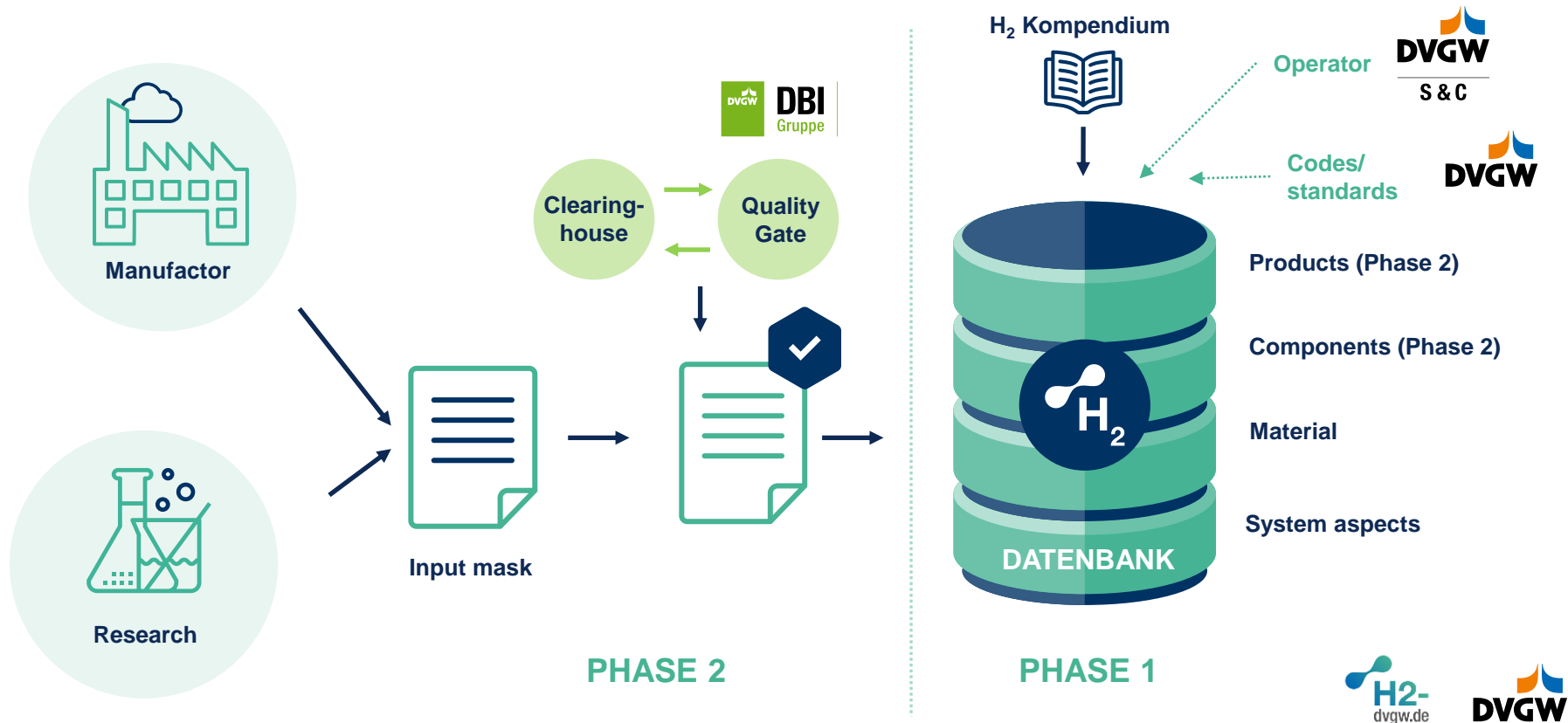
Die oben genannten Produkte erfüllen die folgenden Anforderungen unter Berücksichtigung der vorliegenden Referenzen (siehe Seite 2).
The products specified above comply to the following requirements considering the available references (see page 2):

Anforderung / Requirement		
Maximale zulässige Wasserstoffanteil im Erdgas <i>Maximum admissible hydrogen content in Natural Gas</i>	[Vol.-%]	Wert Value
Maximal zulässige Schwankungsbreite des Wasserstoffanteils im Erdgas <i>Maximum admissible band width of hydrogen content in Natural Gas</i>	[Vol.-%]	Von ... bis ... From ... to ...
Maximale zeitliche Änderungsrate des Wasserstoffanteils im Erdgas <i>Maximum rate of change in hydrogen content in Natural Gas</i>	[Vol.-%/h]	Wert Value
Zulässigkeit für den Betrieb mit reinem Wasserstoff <i>Admissibility for operation with pure hydrogen</i>	[]	Ja / Nein Yes / No

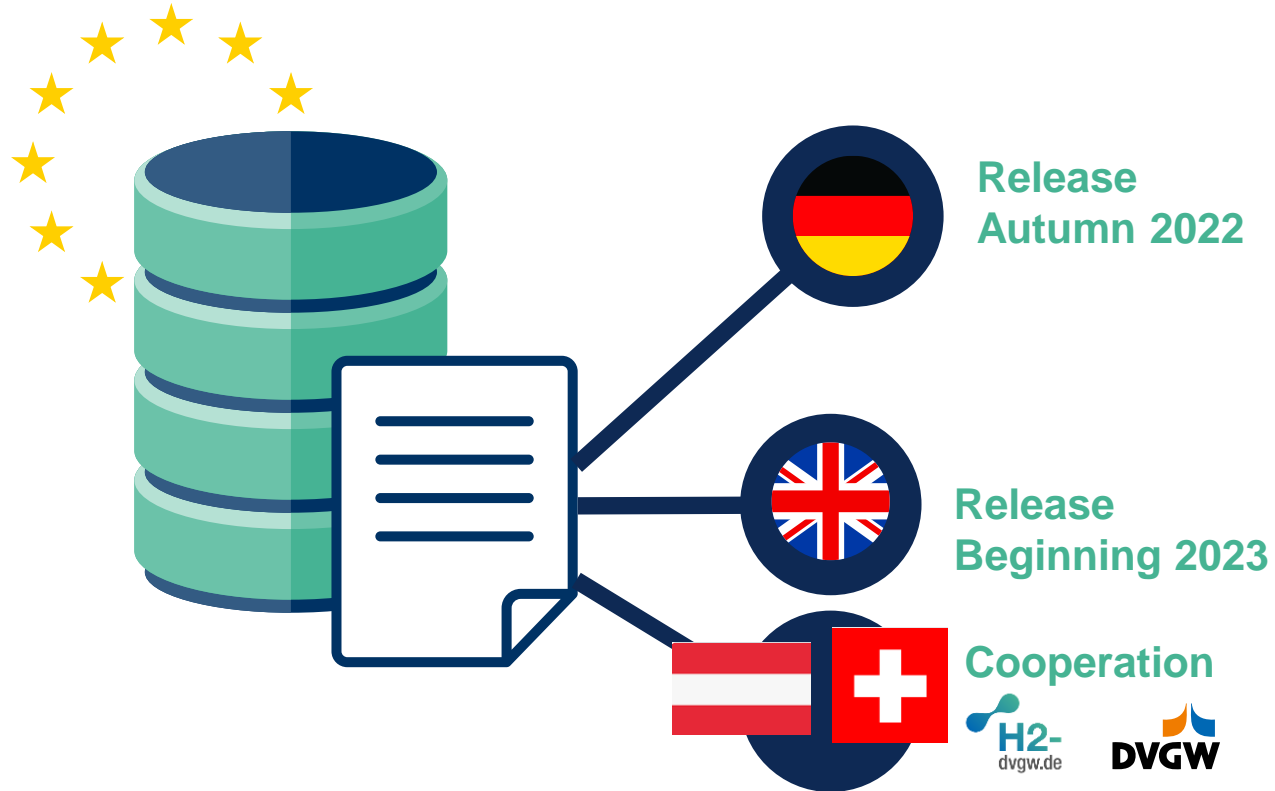
Seite 1 von 2

Building the database in two phases

Quality gate and clearing house ensure correct entries



Subscription model with a minimum commitment of three years.



Your Contact



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