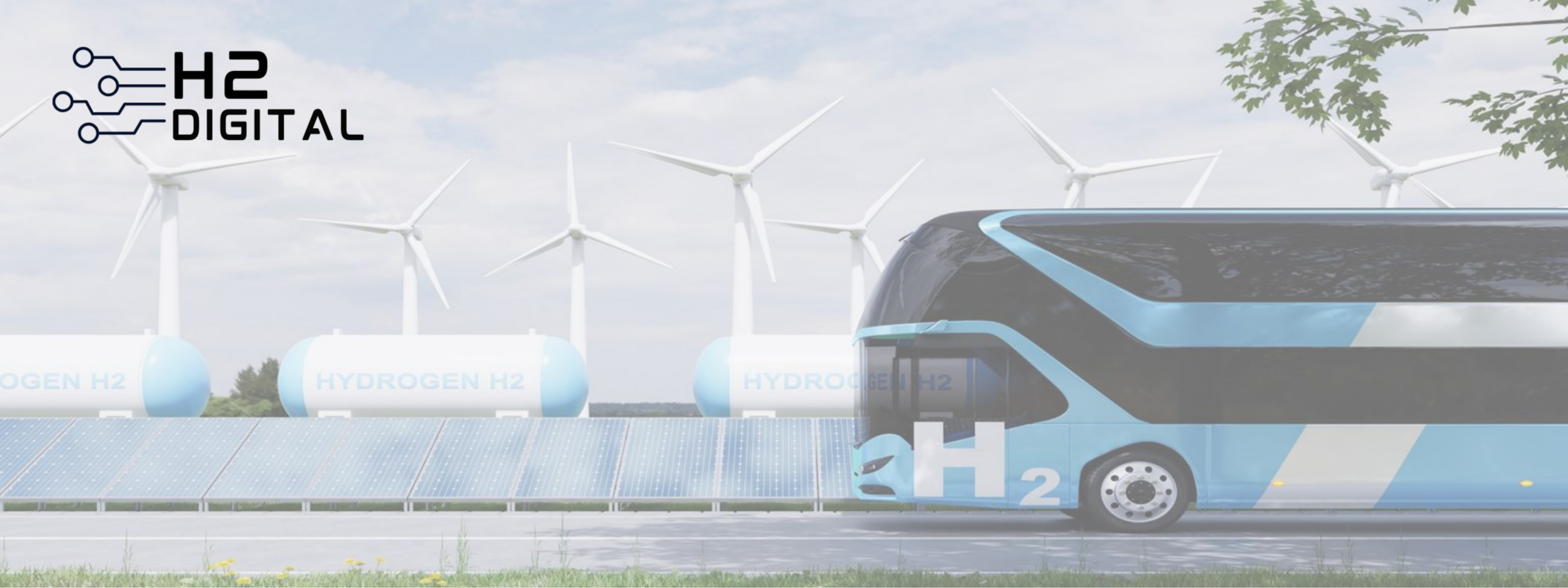




**H2
DIGITAL**



H2 Digital

The digital backbone for the hydrogen economy

Challenges in the H2 market

The ramp-up of the hydrogen market requires
Transparency and Commitment



Lack of transparency about H2 supply and demand

Energy suppliers & DSOs need a clear planning basis for hydrogen

- Reliability and timeline to connect to the **TSOs' H2 backbone**
- **Hydrogen needs of industrial customers** (production and/or consumption)
- Inputs from other queries, such as municipal energy planning, can be used for this purpose



Industrial customers must **actively** participate in the transformation to H2



Traders would also benefit from greater transparency for the development of a liquid H2 **market**

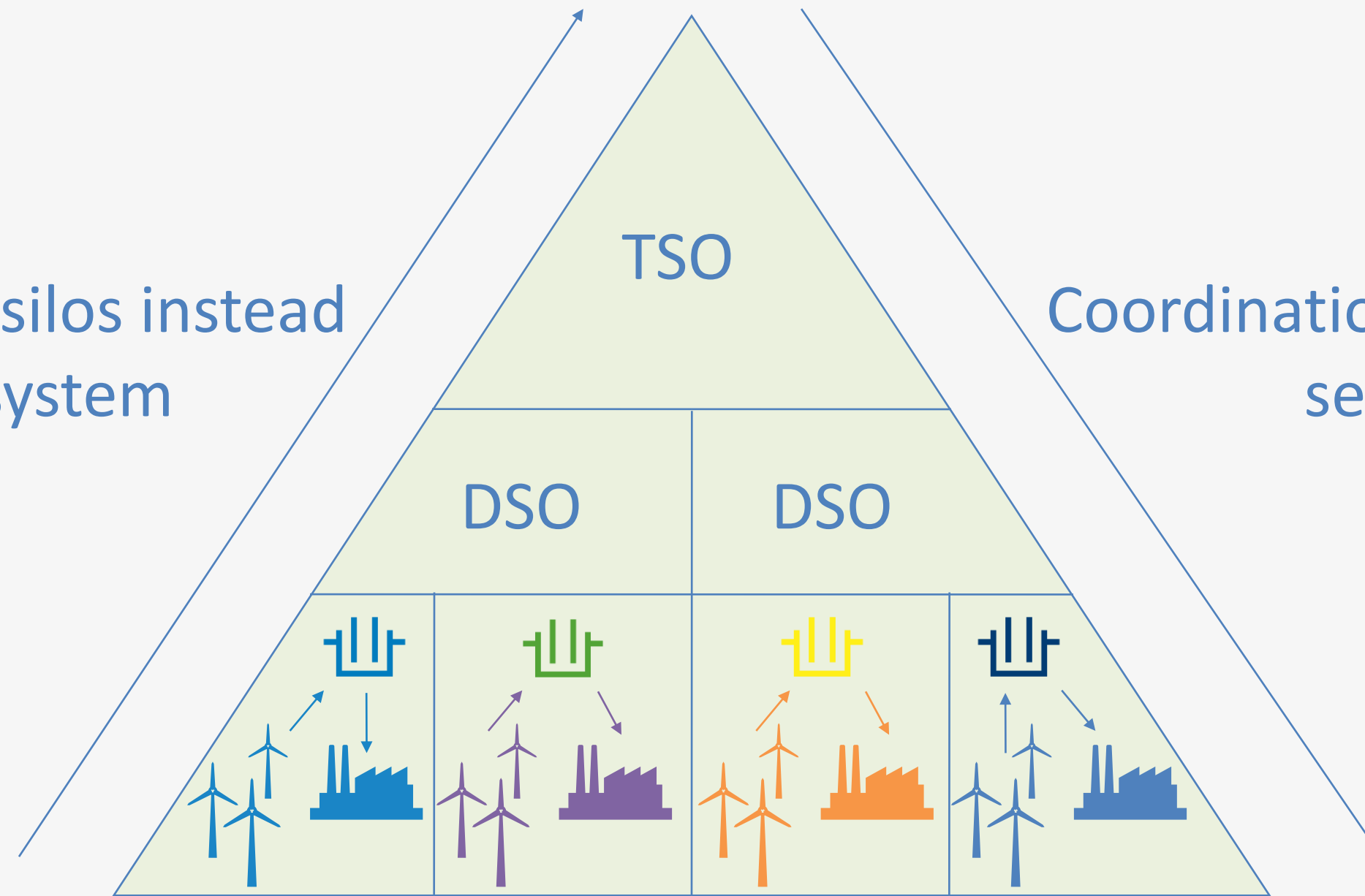
Green hydrogen capacity in EU announced as of 2023



One platform is needed to map the H2 market

Today: individual silos instead of an integrated system

Coordination is needed for security of supply



H2 Producers, Consumers, Storage

Vision: One H2 platform for all



 TSOs:
Network planning/construction


 DSOs & Utilities:
Market/Network Dev


 Industry:
H2 Sources & Sinks

 Traders:
Supply & Demand Matching



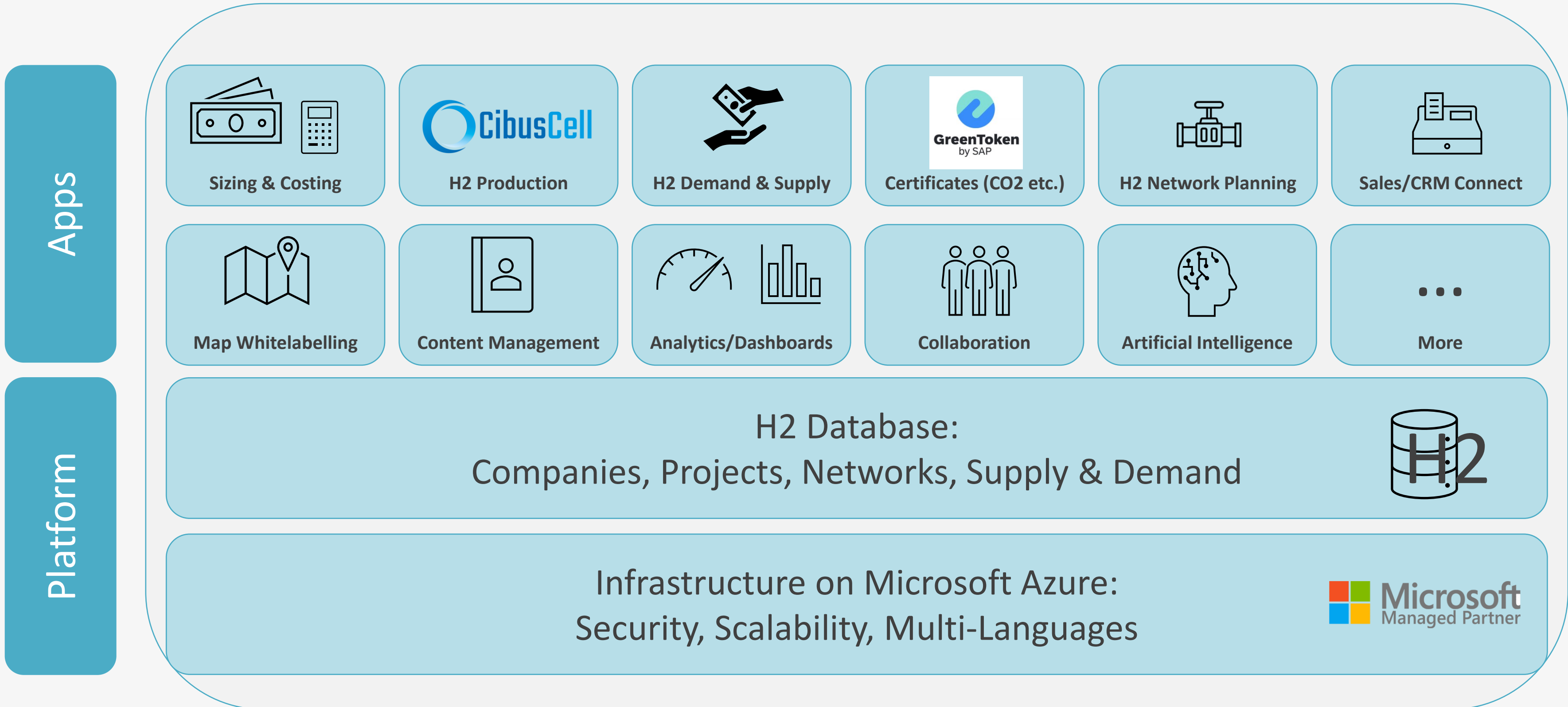
Large Energy Producers:
dynamic RE/H2 Production 

Certifiers:
Tracking of H2 Streams 

Hardware Providers:
Visibility & Sales 

Politics & Associations:
Strategies & Cooperation 

One "App Store" for Hydrogen



Die H2-Plattform für Deutschland und Europa

Die entstehende Wasserstoffwirtschaft besteht aus einer großen Anzahl von Marktteilnehmern: Erzeuger, Verbraucher und Verteiler von grünem Wasserstoff. H2 Digital digitalisiert und steuert H2 Erzeuger und Verbraucher in Deutschland und Europa. Wasserstoff braucht Teamwork. H2 Digital schafft Werte durch Sektor Kopplung und betriebswirtschaftliche Optimierung mit größter Datensicherheit

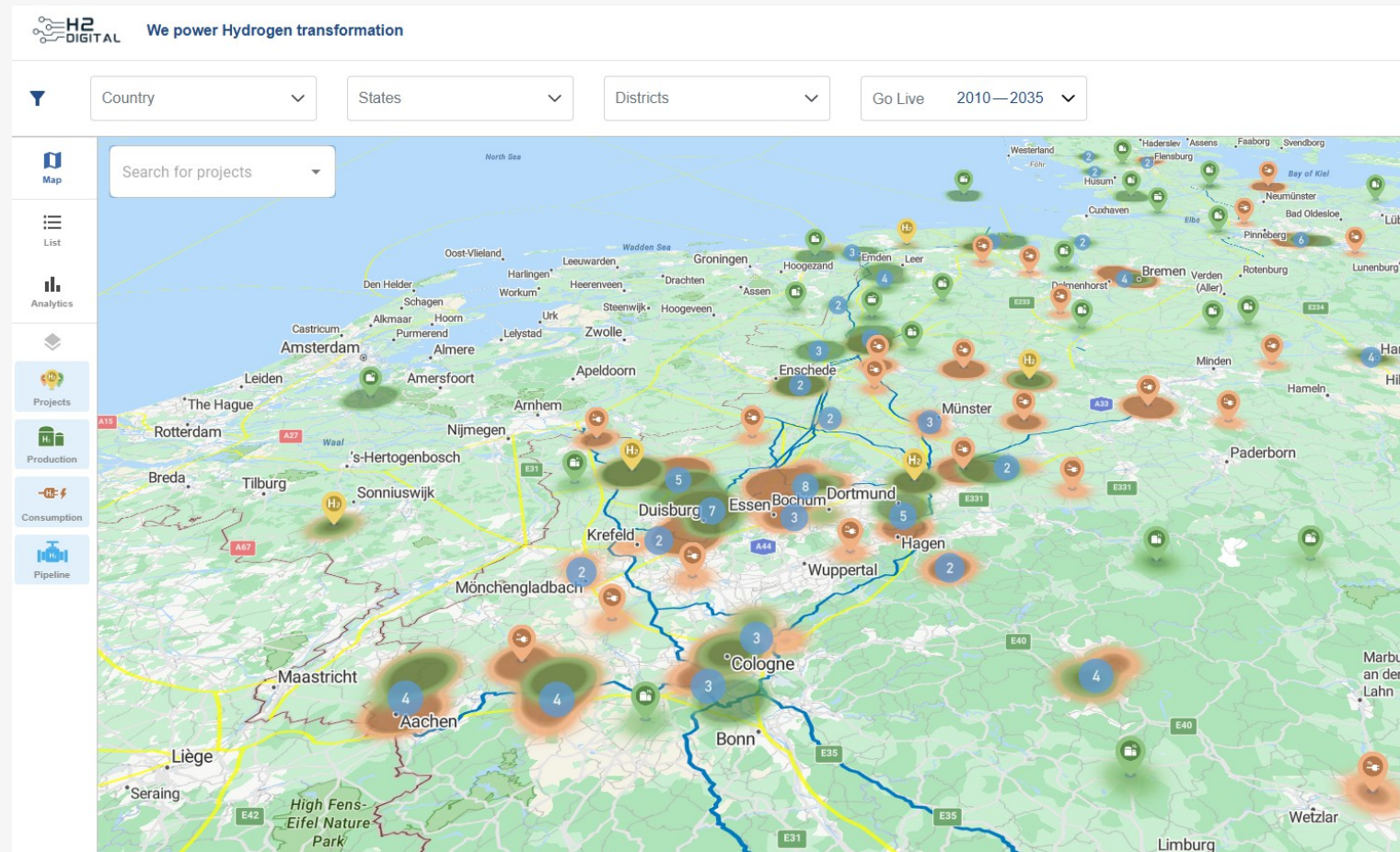
Entdecke
H2 DIGITAL

Demo H2 Digital

Existing solutions & added values of the platform

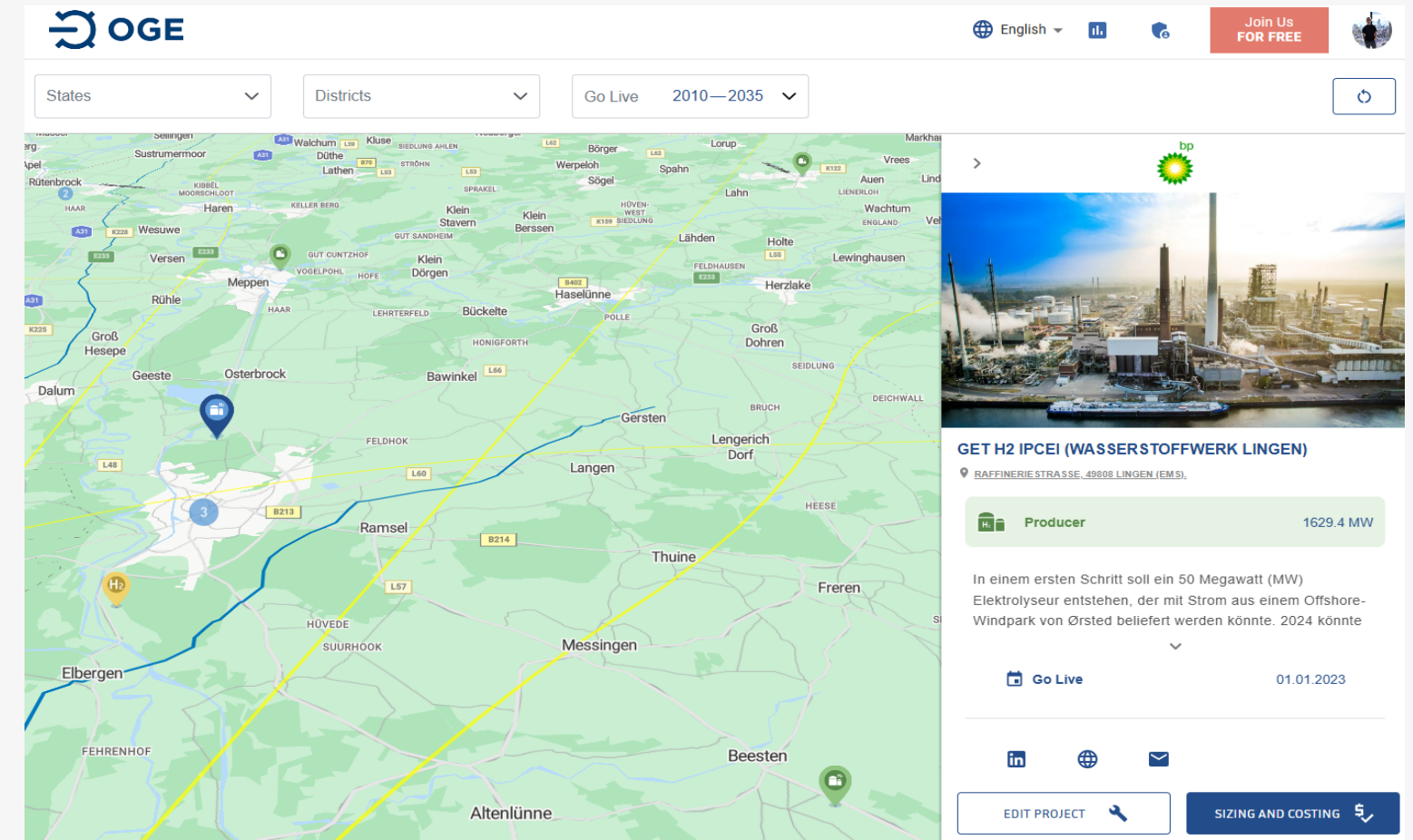
Platform Values

Public & Private on a single platform



Public

- Graphical overview of publicly registered H2 projects and pipelines over time
- Analytical evaluations of data on H2 production and consumption
- Filters and dynamic views of projects



Private

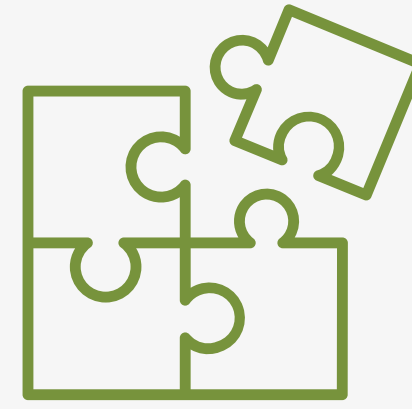
- Secure access via Microsoft User Management
- Access to your own database and services used: demand queries, analytics, network planning, content management, sales connectivity
- Optional: whitelabelling of the platform with embedding on your own website

Platform Values



Integrated

- Resources and cost savings through joint development
- Uniform data storage and data quality
- Everything for hydrogen in one system – no isolated solutions
- Integrated into existing IT system landscape



Modular

- Use the services you need to develop your market
- Provision of new services possible immediately with little training effort
- A central basis for managing and analyzing data
- Dynamic access for registered users and customers with Microsoft User Management



Future-proof

- Scalable architecture on Microsoft cloud infrastructure
- Further development of the H2 Digital platform by existing development team
- Partnership cooperation for lasting further development

Use of the platform to query DSOs and their customers

Willkommen bei H2 Digital!

Um Ihr Projekt hinzuzufügen, geben Sie bitte die folgenden Details ein.

Vorname* Nachname*

E-mail*

Firmenname*

Telefon Nummer*

Nachricht

OGE H2 Marktabfrage und Netzplanung

627 OGE-Kunden insgesamt | 101 Aktive Kunden Netzplanung | 3 Neue Projekte diesen Monat | 8 Projekte in Planung

Neueste 3 Projekten NEW

- Project Speyer
- Wasserstoff Mannheim
- Windwasserstoff Heidelberg

Neueste 3 Projekte in Planung NEW

- Praise test
- Praise test
- Praise test

Monatliche Kennzahlen rund um H2 im Versorgungsgebiet - Letztes Update : 21.09.2023 10:23:49

Month	H2 Produced (Mio. t)	H2 Consumed (Mio. t)	CO2 Reduced (Mio. t)
Jan	34	12	4
Feb	30	11	4
March	34	12	4
April	32	12	4
May	34	12	4
June	32	12	4
July	34	12	4
Aug	34	12	4
Sept	34	12	4
Oct	43	14	5
Nov	43	14	5
Dec	43	15	5

3,85 Mio. Produzierte Menge H2(t) ▼ -1.38%

11,76 Mio. Verbrauchte Menge H2(t) ▼ -1.75%

4,00 Elektrolyse- Leistung(MW) ▲

33,05 Mio. CO2- Reduktion (t) ▼ -1.38%

- Digital workflow for querying transport customers in hydrogen
- Replace existing separate queries and bundle them into one platform
- Central data management by a neutral service provider
- Control over the input and updating of the queried data by TSOs and DSOs

H2 Digital

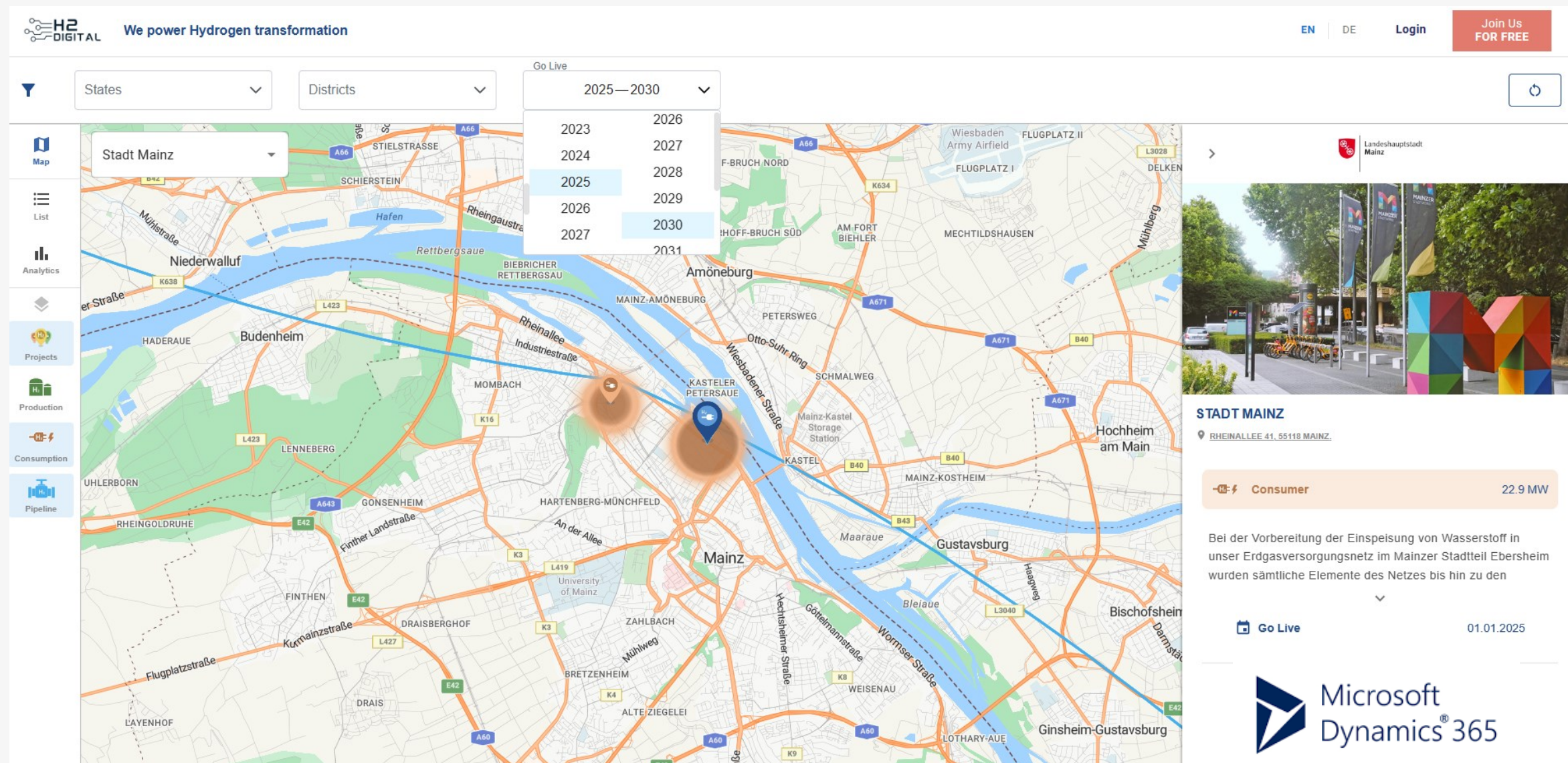


Targeted use of data for business development

- Support for transport customers in the transformation to hydrogen
- Advice on grid connection planning
- Synchronization of grid connections for hydrogen with core network planning
- Interface to your own CRM for seamless sales support

The image displays the H2 Digital platform interface, which is used for hydrogen transformation projects. The top section features a map of Germany with various project locations marked by colored dots and labels. The map includes a search bar for projects and filters for States and Districts. Below the map, there is a list of projects with details such as location, capacity, and status. The bottom right corner shows a Dynamics 365 CRM interface, which is integrated with the H2 Digital platform. The CRM interface displays a lead profile for Alex Baker, including contact information, a lead score of 96, and a list of activities. A large blue arrow points from the H2 Digital map to the Dynamics 365 CRM interface, indicating the integration between the two systems.

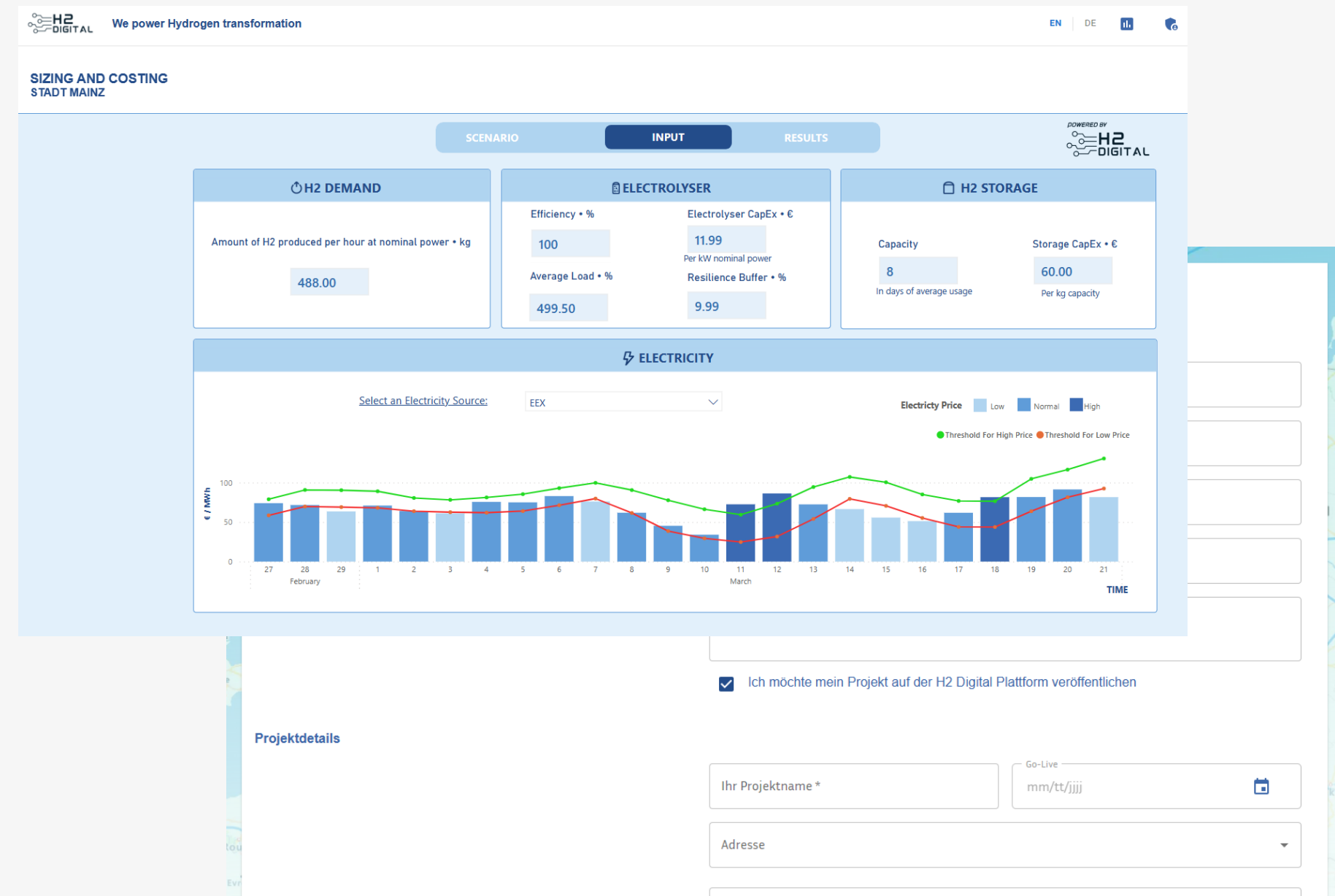
H2 Network Development and Planning



- Overview of your own network development over time
- Targeted sales planning of grid connections for efficient business development
- Different views of network planning for stakeholders
- Comparison with hydrogen core network planning
- Planning of transfer points to DSOs with aggregated transport requirements over time

Grid connection enquiry portal for transport customers

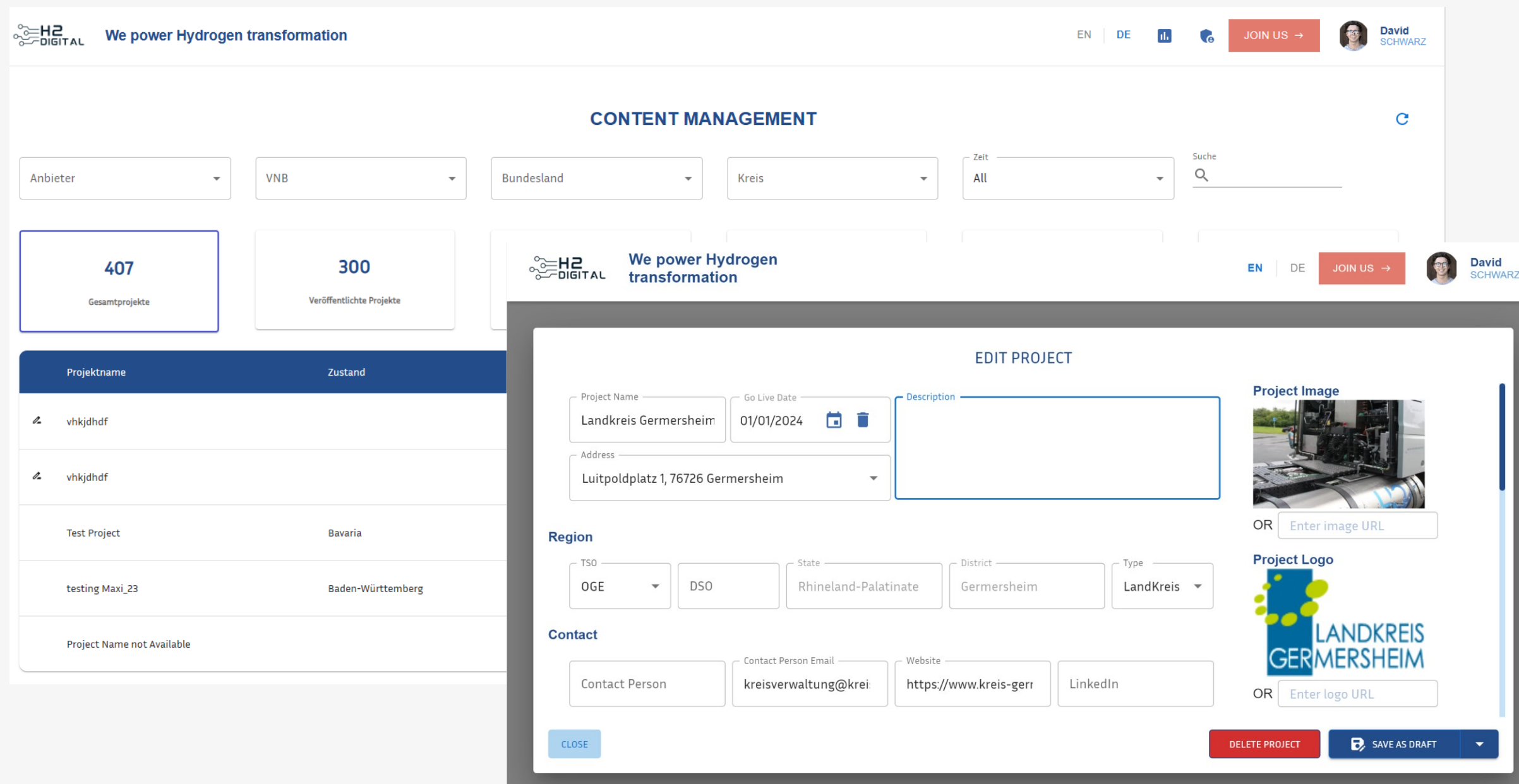
- Support in planning the transition to H2
- Site investigation for suitability for H2 supply
- Cost planning of connections based on real consumption and generation data
- Consideration of existing framework conditions (e.g. PPAs, consumption profiles,...)
- Integration of an enquiry portal for grid connection for hydrogen



State-of-the-art content management for all users

Easy user guidance to collect and modify data – without training effort

- No more separate isolated solutions necessary for business development in H2
- One central platform instead of many individual systems
- Setting up user groups to edit selected data



The screenshot displays the H2 Digital content management interface. At the top, the navigation bar includes the H2 Digital logo, the slogan "We power Hydrogen transformation", and user options for language (EN, DE), social media, and a "JOIN US" button. The main header is "CONTENT MANAGEMENT". Below this, there are several filter dropdowns: "Anbieter", "VNB", "Bundesland", "Kreis", and "Zeit" (set to "All"). A search bar is also present. Two summary cards show "407 Gesamtprojekte" and "300 Veröffentlichte Projekte". A table lists projects with columns for "Projektname" and "Zustand".

The "EDIT PROJECT" form is overlaid on the table. It contains the following fields:

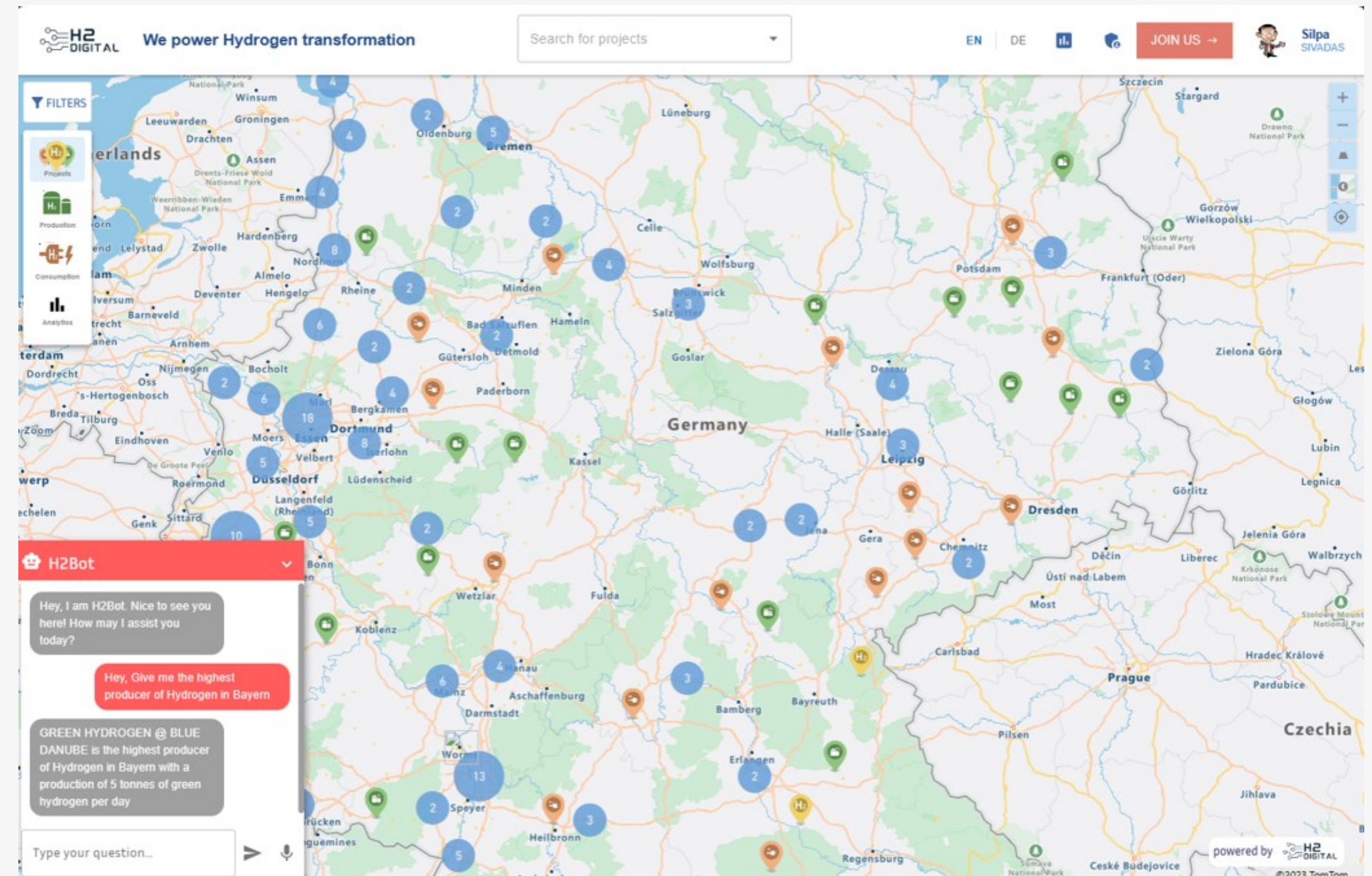
- Project Name:** Landkreis Gernersheim
- Go Live Date:** 01/01/2024
- Description:** (empty text area)
- Address:** Luitpoldplatz 1, 76726 Gernersheim
- Region:** TSO: OGE, DSO: (empty), State: Rhineland-Palatinate, District: Gernersheim, Type: LandKreis
- Contact:** Contact Person: (empty), Contact Person Email: kreisverwaltung@krei, Website: https://www.kreis-gerr, LinkedIn: (empty)
- Project Image:** (Image of a hydrogen station) OR Enter image URL
- Project Logo:** (Logo for Landkreis Gernersheim) OR Enter logo URL

At the bottom of the form are buttons for "CLOSE", "DELETE PROJECT", and "SAVE AS DRAFT".

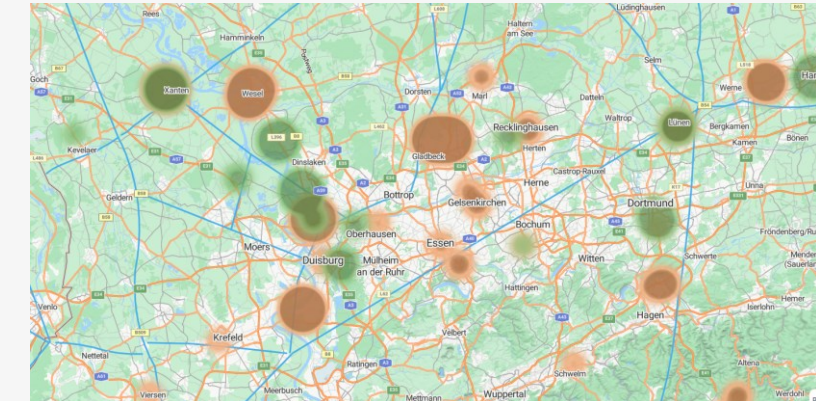
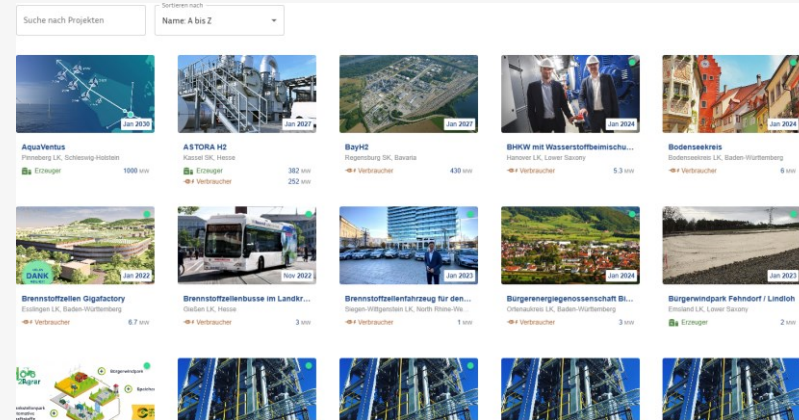
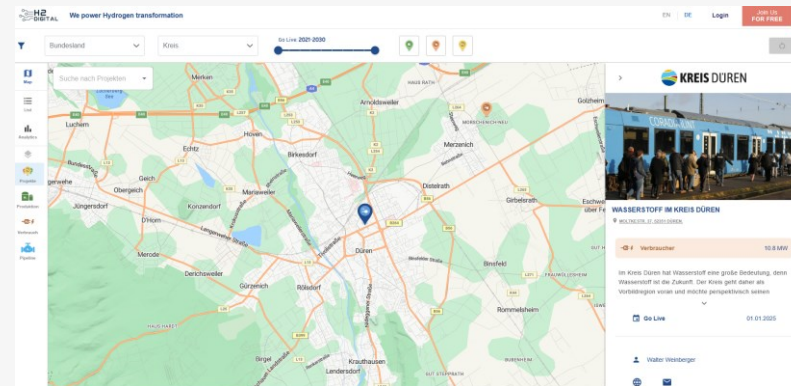
AI meets H2 Digital

Integrated AI solution for optimal usability

- Exemplary integration of AI: **ChatGPT H2Bot**
- Ability to process natural language in a wide range of applications
- Ability to respond quickly to natural language queries
- High precision in answering questions
- High scalability to communicate with a large number of users at the same time



Roadmap H2 Digital



Market Rollout

- Expansion in Europe: Projects and pipelines in the European H2 network
- Extension to CO2 Management (CCUS)
- Networking of H2 production and consumption with all forms of renewable energy

Market Development

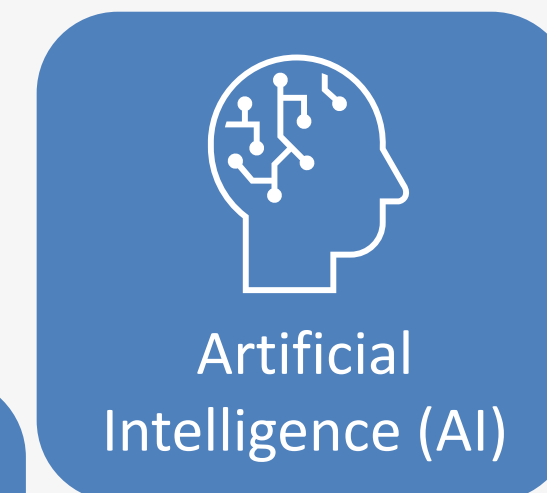
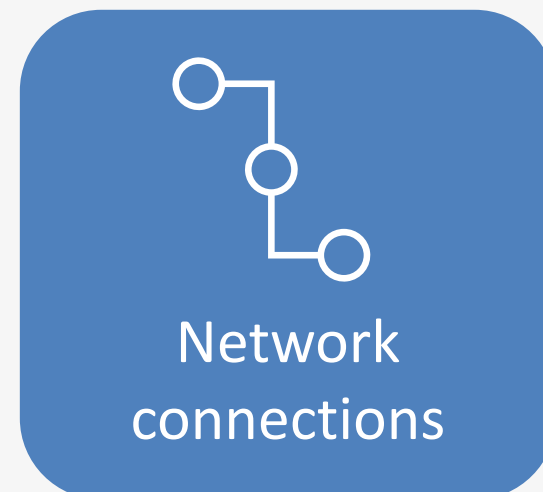
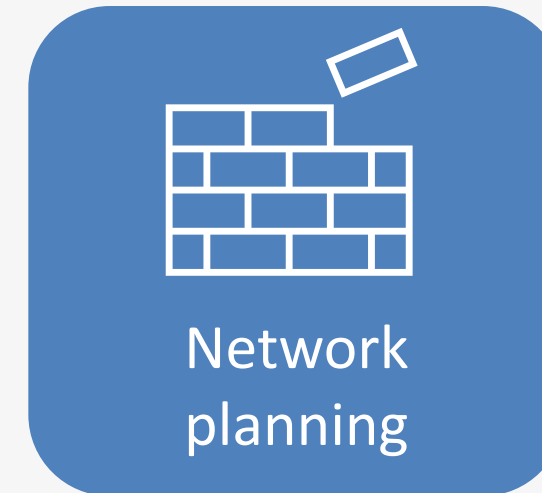
- H2 Demand & Supply Matching for Network Planning
- Digital site development for H2 projects
- Worldwide use of the H2 Digital platform – launch of the USA and other Lighthouse projects worldwide

Marketplace

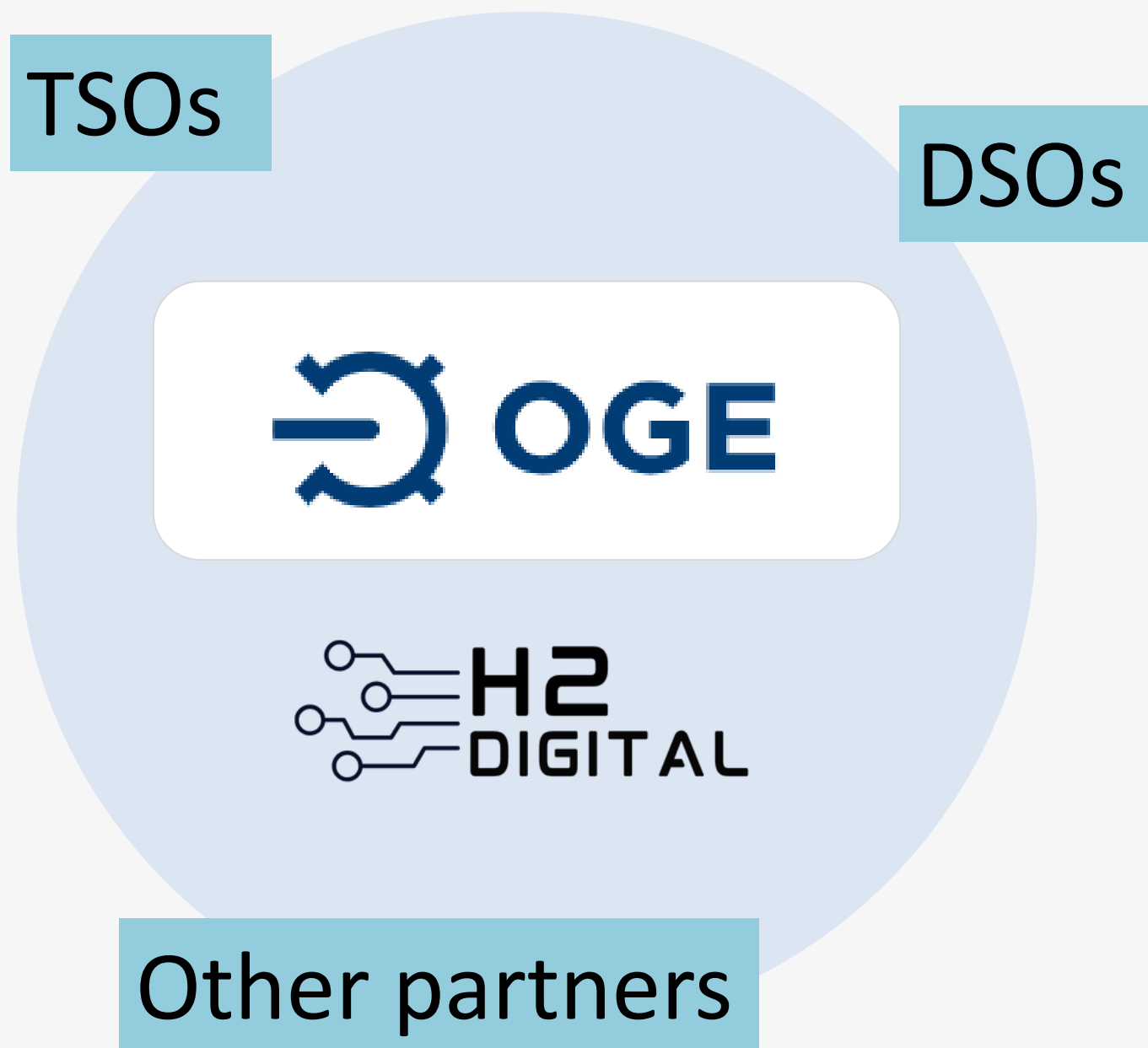
- Establishing H2 Digital as a marketplace based on demand and supply matching
- Certificate trading (H2 and CO2)
- Connection to network control in real-time
- Certificate processing according to renewable energy standards

H2 Digital as central platform for the networking of sustainable forms of energy

Modular structure & agile development



Hydrogen is teamwork



- We have know-how and market knowledge for the development of the physical infrastructure for the transformation into hydrogen
- This complements experience and know-how in the development of scalable and reliable software infrastructure
- H2 Digital builds on an active network of partners for the joint development of the platform

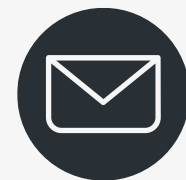
Contact Us

H2 Digital GmbH

David Schwarz

Jakob-Funke-Platz 2

45172 Essen



david.schwarz@h2-digital.com



+49 157 357 68980

