



CibusCell

Digitally empowering a thriving green
hydrogen economy

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Co-Founder

Deloitte* ...

It's 2030.

**H2 economy: US\$642 billion in annual
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It's 2050.

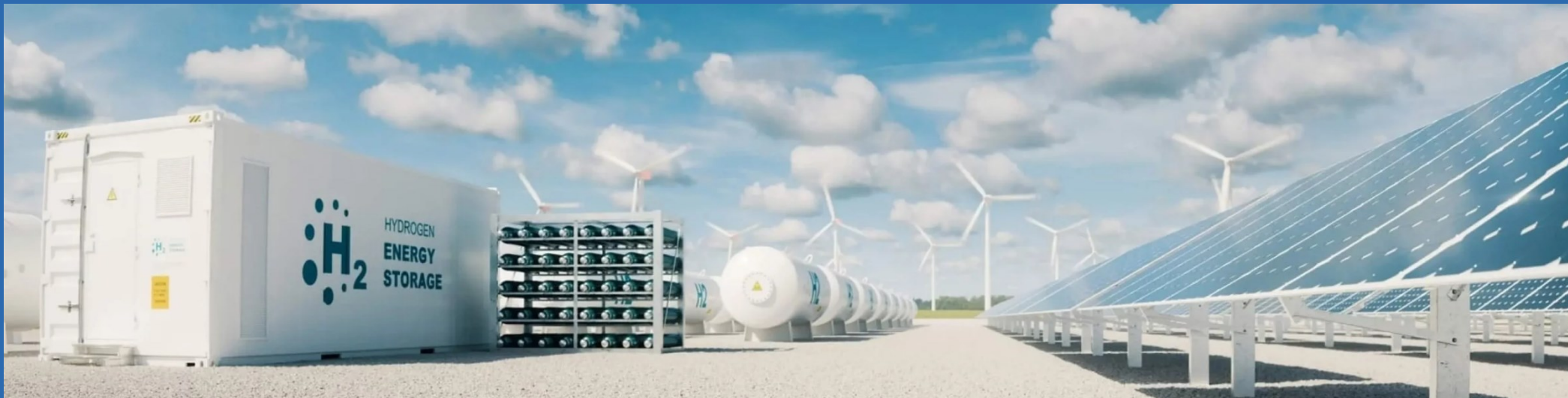
**H2 economy: US\$1.4 trillion per year in
2050**

The background of the slide is an aerial photograph of a dense, lush green forest. The trees are packed closely together, creating a textured canopy of various shades of green. In the top-left and bottom-right corners, there are close-up images of large, vibrant green leaves with prominent veins, partially overlapping the forest background.

**The climate-neutrality
target is within reach!**

... WISHFUL
THINKING?
WE CAN ACTUALLY
MAKE IT HAPPEN.

And we are doing our bit.
We deliver **innovative technology** to accelerate
the hydrogen economy's market rollout.



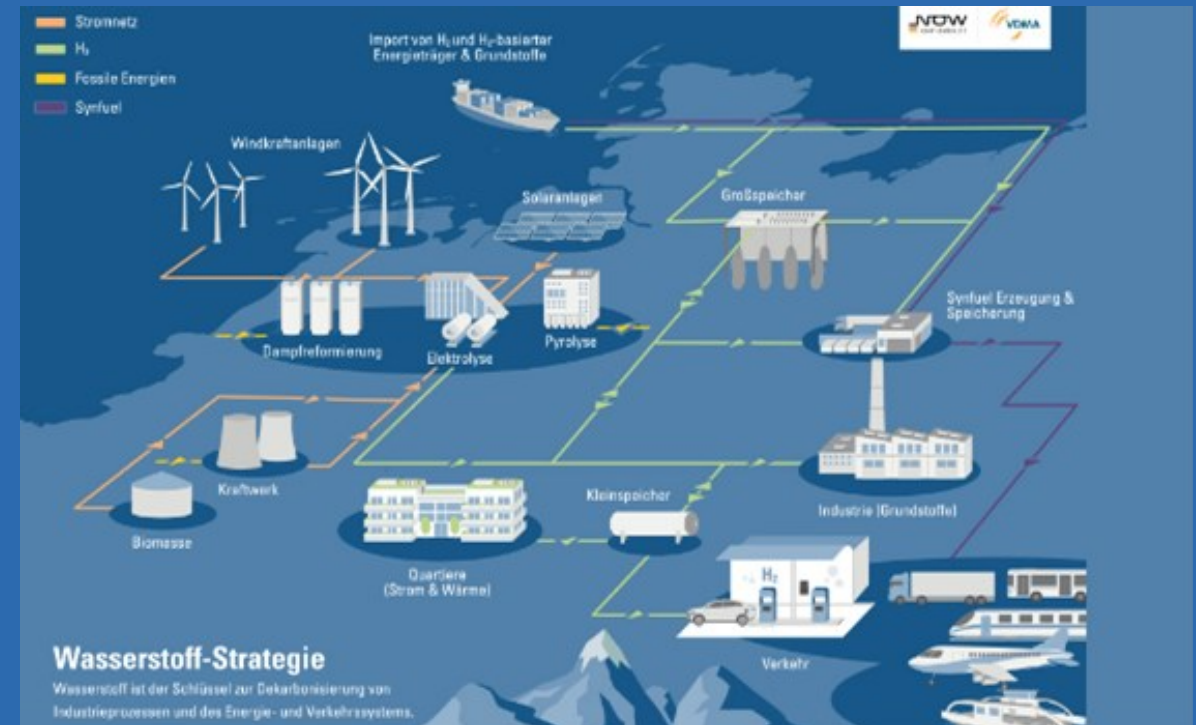
Challenge:
Developing new value chains

Hydrogen value chains, being digitally interconnected, can help to minimize risks and optimize costs right from the start.

An efficient green hydrogen economy, digital interconnectedness and data analyses create required synergies.

Weather – a significant parameter of a green hydrogen economy – is volatile. All players can benefit from cross-sector interconnectedness enabling process control in real time:

- Manufacturers
- Network operators / logistics providers
- Storage providers
- Distributors
- Industrial consumers
- Industrial producers



The CibusCell **Cloud solution** enables cross-sectoral alignment, paving the way for an **efficient green hydrogen economy.**

Optimization option 1: Site digitalization

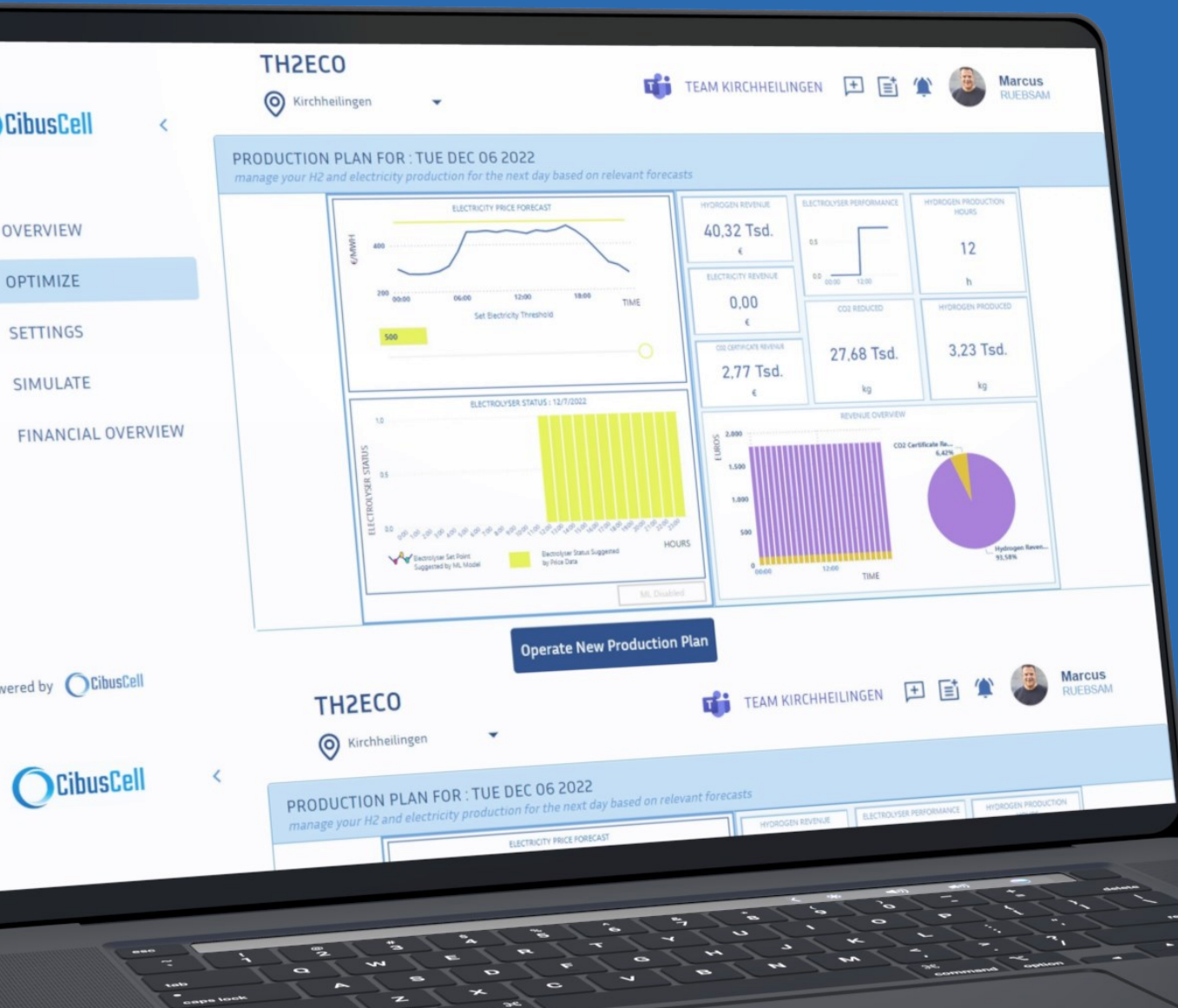
Digitally mapping mutual dependencies, making them controllable

CibusCell consolidates data **across sites** and correlates them with relevant market data, enabling **efficient operational control**.



Optimization option 2: Potential analysis

Seeing what's possible and realistic



Based on a wide range of data, **CibusCell** calculates achievable outcomes under given operating conditions.

A mesh of **complex interdependencies** automatically feeds into the calculation.

Optimization option 3: Production data

Poor data quality often hampers efficient operation

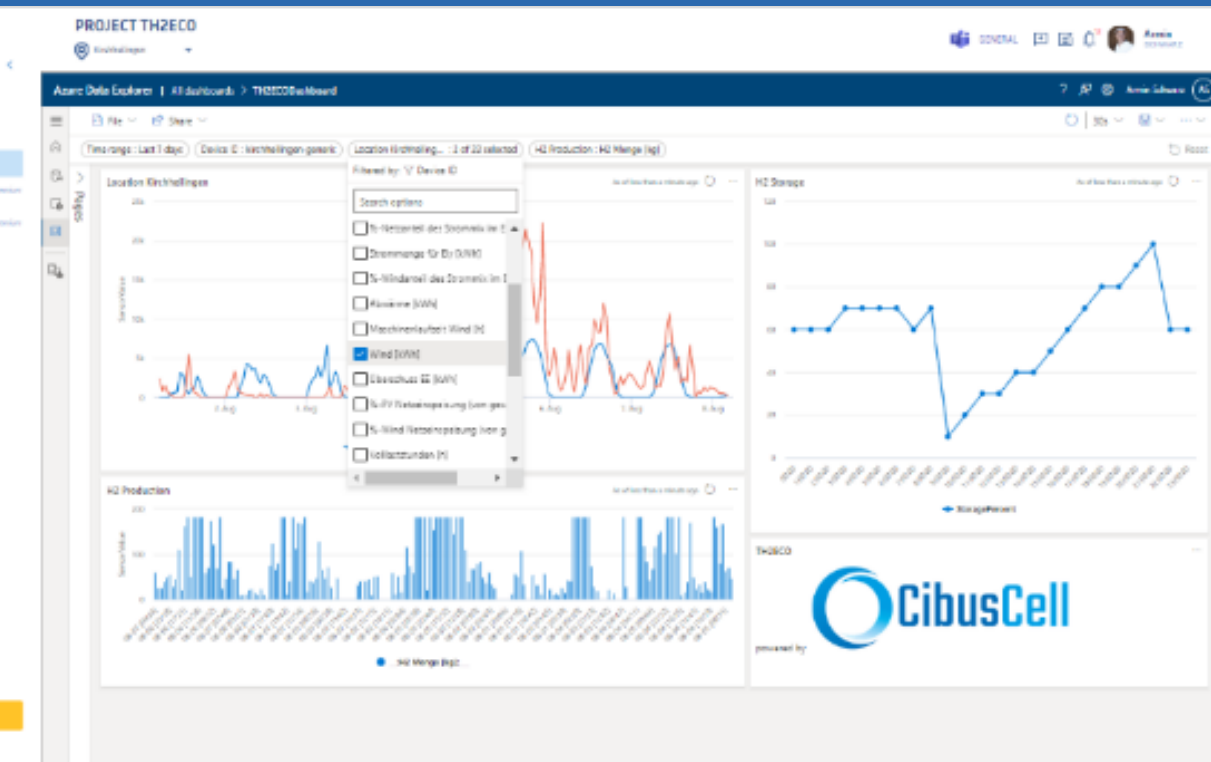


CibusCell offers customizable dashboards displaying all relevant production parameters.

Leveraging artificial intelligence, data are meaningfully correlated with electricity consumption, output and energy prices. For faster and smarter decisions.

Optimization option 4: Real-time availability

For efficient controlling, time is of the essence



CibusCell leverages its cloud solution to **display and analyze** relevant data in **real time**.
A sound basis for vital business decisions.

**CibusCell is essential for the market rollout of
green hydrogen**

Why CibusCell

Tangible benefits.

- 1 Production-efficiency increase by up to 30%**
as a result of sector coupling
- 2 ROI within 4 to 7 years**
Faster scaling of green hydrogen for commercial use
- 3 Reduction of CAPEX and OPEX by 15 to 20%**
leveraging AI & IoT Data

Case study OGE

A network operator goes digital

Feasibility-study results and roadmap

OGE needs production and consumption data across all nodes and links in real time to run its business and guarantee supply security as a regulator.

At any given time, OGE requires real-time information about the quantities producers and importers feed into hydrogen pipelines. Therefore, OGE has to deliver – and monetarize – a software platform to its customers.



OGE is part of a European energy network, cooperating with neighboring countries as well as importers of green energy sources from other countries.

In order to streamline operations, information as to when and how much hydrogen was taken from the grid and/or produced at each node is also vital. OGE must be able to plan ahead following a data-based approach.

Testing CibusCell

Profitable right from the start

Digitalized simulation to accelerate the transformation

Phase 1
Preparation & Analysis

Phase 2
Implementation

Phase 3
Go-live

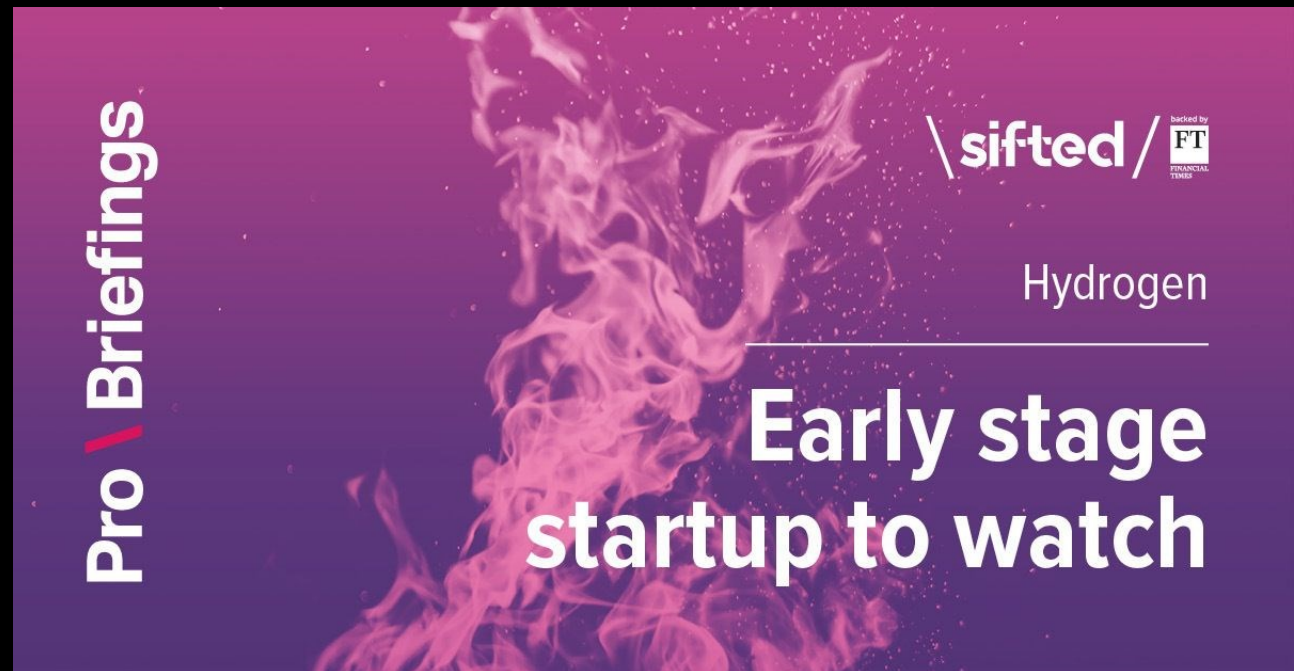
After each phase, a decision is taken on how to move forward!

- Assessing the status quo (workshop)
- Sizing & Planning the sites
- Defining regions and plants (wind farm and solar park, electrolyzer, etc.)
- Linking data from existing plants
- Clarifying the data base (existing data or simulation)
- Vulnerability report

- Implementing digitalization
- Optimizing existing plants
- Simulating the value chain where there have not been any plants as yet
- Integrating existing data (wind farm, for example)

- Sustainably increasing profitability of existing and future plants
- Key-user training

Named “**Rising Star**” of the hydrogen industry by **Sifted** (Financial Times) in 2022 & Top Ten of Hydrogen Startups in Europe in 2023



The founders of CibusCell

Experienced team with broad expertise



David Schwarz

Graduate engineer from RWTH Aachen University, versatile consulting experience and expert for AI in hydrogen cells. Master's thesis in artificial intelligence and green hydrogen.



Marcus Rübsam

15 years of entrepreneurship and 15 years of senior management at SAP. Management of product strategy and large go-to-market organizations.



Armin Schwarz

More than 30 years of experience in software development and in-depth management knowledge. Former member of the SAP leadership team.

Our partners



THANK YOU FOR
YOUR ATTENTION



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