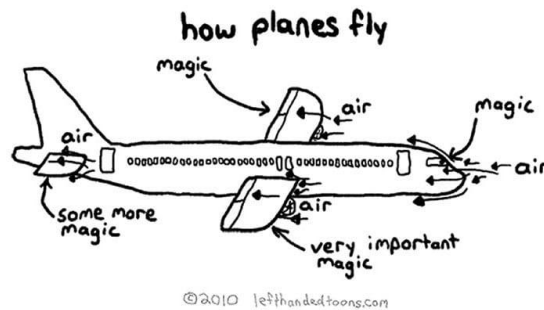


# HZwo – Hydrogen Technology Cluster

Connecting good energies

Working group: Sustainable Aviation & Drone Technologies | Kickoff 08.09.2026



©2010 left-handed-toons.com

# Agenda

1. General outlines – HZwo Working groups
2. Personal introductions & expectations
3. Status quo – ongoing and planned WG activities
4. Homework

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# Our offers: targeted project development in working groups

A **HZwo Working Group** is established when several member companies express interest in a **specific topic**. It is initiated by HZwo and technically led by experts from research and/or industry.

## **Strategic Objectives & Benefits**

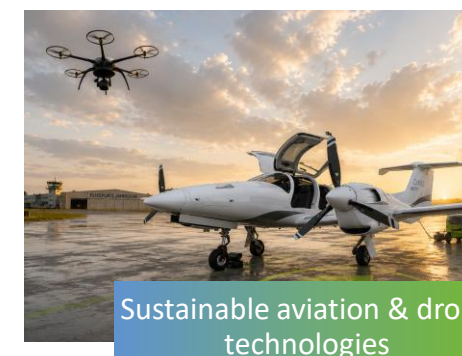
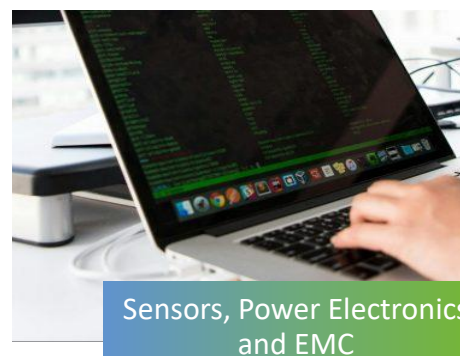
- External visibility as a direct contact person and expert for the specific topic
- Open and uncomplicated consortium project preparation
- Efficient preparation of collaborative (R&D) projects

## **Joint activities**

- preparing joint scientific and industry publications for interested partners,
- initiating collaborative R&D projects,
- developing joint venture activities
- industry-related trips for interested participants, such as trade fairs or business missions
- rotating meetings & workshops organised at the premises of working group members

# Our offers: targeted project development in working groups

## Existing working groups





Sustainable aviation & drone technologies

# Website information

The working group brings together the existing expertise and activities of HZwo members in the field of sustainable aviation and drone technologies, and aims to make this field more accessible to those new to the sector, as well as to facilitate technology transfer from other industries.

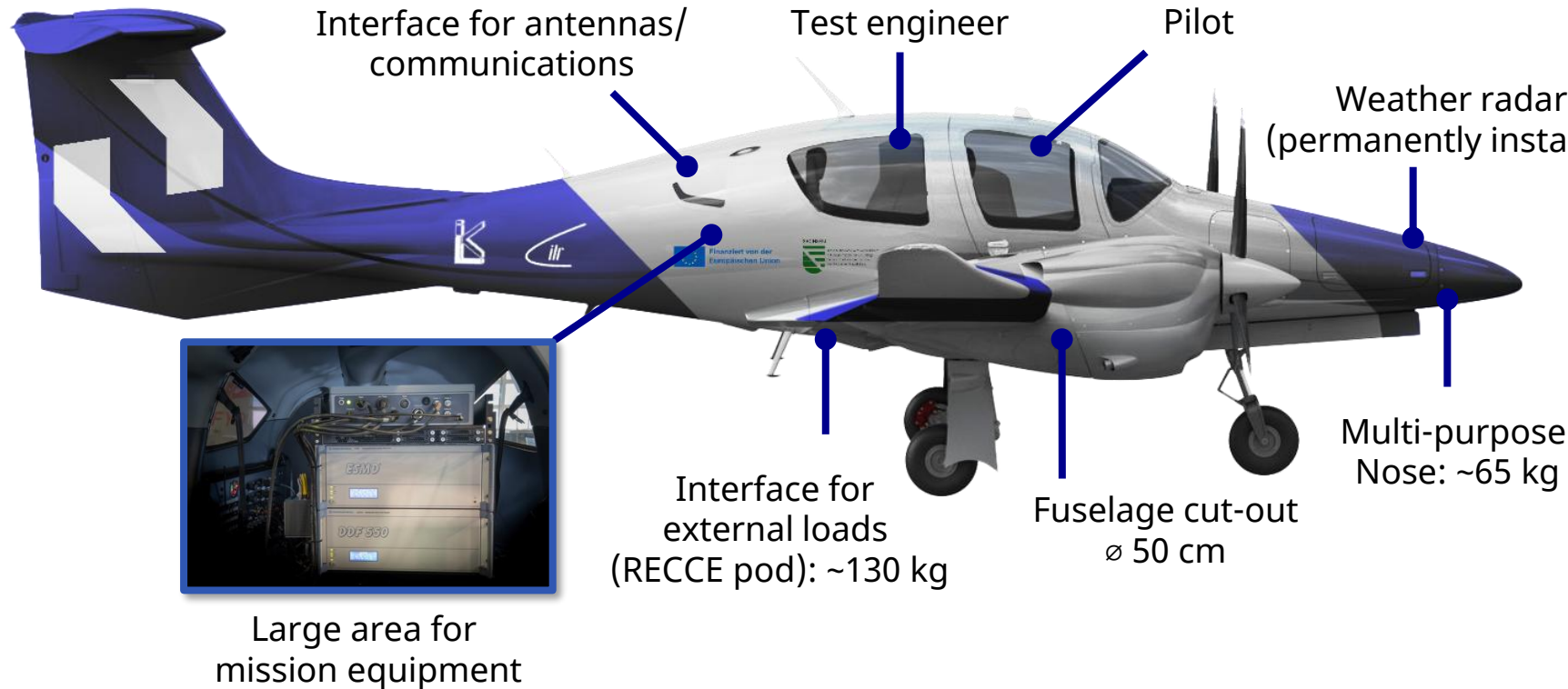
## Main topics

- **Hydrogen & Fuel Cell Propulsion Systems**  
Development and integration of hydrogen-based propulsion systems for aircraft and drones
- **Hybrid & Electric Aviation Technologies**  
Combination and comparison of fuel cell, battery-electric and conventional propulsion concepts
- **Hydrogen Storage & On-board Energy Systems**  
Lightweight storage, energy management and integration of hydrogen systems into airborne platforms
- **Fuel Cell Technologies for UAVs & Drones**  
Lightweight and air-cooled PEM fuel cell systems, particularly for cargo and long-endurance drones
- **Surface technologies**  
Surfacecoating processes for EMV, Lightweight, functional plating on plastics & propeller-edges
- **Aircraft & Drone Test Platforms**  
Modular demonstrators and flying testbeds for testing propulsion, energy and subsystem technologies
- **System Integration, Sensors & Power Electronics**  
Integration of sensors, communication systems, power electronics and energy systems into aircraft and UAV architectures
- **Technology Transfer into Aviation**  
Transfer of hydrogen, fuel cell, automotive and industrial technologies into aviation and drone applications
- **Testing, Validation & Demonstration**  
Ground and flight testing of components and complete systems, including joint demonstrator projects

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# From the idea to a flying real-world laboratory



## Diamond DA62 MPP:

- >1.5 t payload
- 2 hours' flight time
- Modular installation of H<sub>2</sub> systems
- Parallel integration of combustion, fuel cell and electric propulsion systems
- Platform for data, energy and system integration
- Research services for topography, ground and terrain reconnaissance

Investment via SAB / JTF InfraProNet

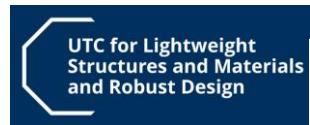
# A driving force for structural change and sustainable mobility



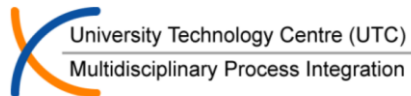
Dresden University  
of Technology  
Smart Mobility Lab

Flugplatz Kamenz EDCM

Home base of the research aircraft



PROFESSUR FÜR HOCHSPANNUNGS-  
UND HOCHSTROMTECHNIK



Pirna



Wissenschafts- und  
Wirtschaftsplattform



# Take a flight into the future of aviation

## Opportunities for collaboration:

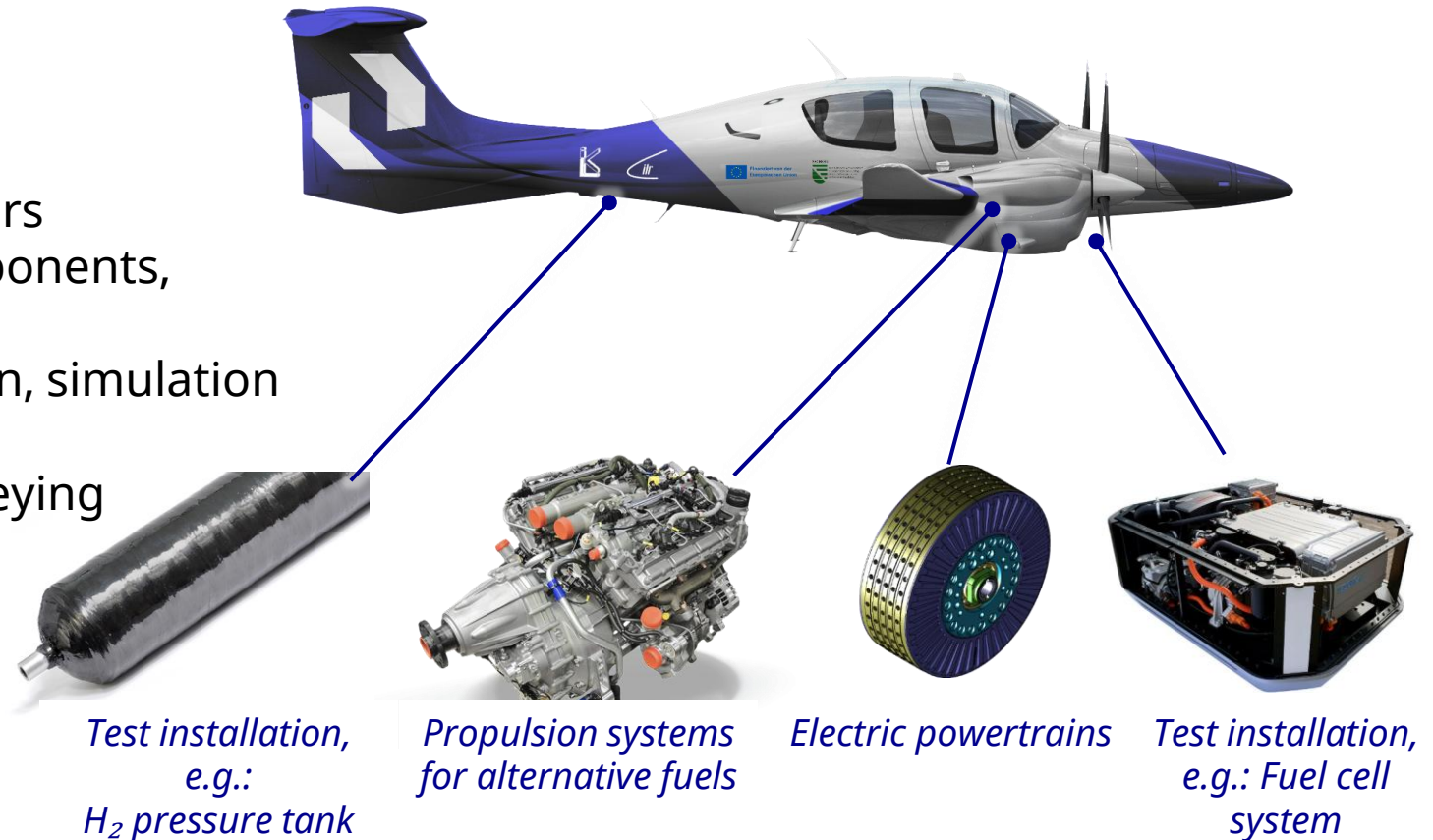
- Technology testing, certification, data exchange, spin-offs
- Joint European research projects

## Partners sought:

- Energy and hydrogen system providers
- Manufacturers and suppliers of components, sensor technology and fuel cells
- Institutions specialising in certification, simulation and training
- For topography, soil and terrain surveying

## Contact:

- Dr Sebastian Spitzer, Eng.
- TU Dresden, ILK
- [sebastian.spitzer@tu-dresden.de](mailto:sebastian.spitzer@tu-dresden.de)
- [tu-dresden.de/ilk](https://tu-dresden.de/ilk)

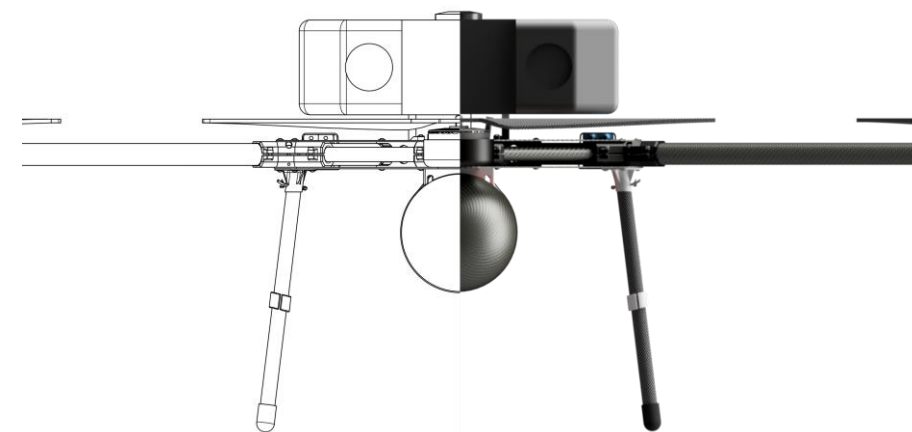


# New working group: aviation & drone technologies

- Project idea by TUC: Development of an air-cooled PEM stack for cargo drones up to 25 kg
- Battery powered drone available at IWU that can be easily adapted for different propulsion systems
- Wanted:
  - Drone manufacturers
  - aviation expertise
  - suitable funding



*Hexacopter without batteries*



*Rendered image of the fuel cell-powered drone*

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# HZwo booth @ Hydrogen Technology Expo Hamburg

20.-22.10.26

**AMBARTEC**  
HyCS-TECHNOLOGIE

**aumann**

**BEICHLER  
GRÜNENWALD &**  
THE NEXT STEP IN PTFE

**cb** Christian Bauer  
Precision Solutions

**ETAPART**

**Fraunhofer**  
IFAM

**HIC**  
HYDROGEN  
INNOVATION CENTER

**IDT**

**MARQUARDT**

**MURR**  
ELEKTRONIK  
stay connected

**XENON**

- Visit us from 20.-22.10.26 at booth 6M40
- All information [here](#)
- Free ticket [here](#)
- Booth reception 21.10.26 16:00





CVŘ

Research  
Centre Řež

[www.hzwo.eu](http://www.hzwo.eu)



# Working group meeting in person

01.-03.12.2026: [Hydrogen: Power, Production, and Materials 2026 Plzeň](#)



## Hydrogen - Power, Production, and Materials 2026

1<sup>st</sup> Announcement



**2<sup>nd</sup> conference on H<sub>2</sub>**      **December 1-3, 2026**  
**Plzeň, Czech**

For more information, please follow the links below:  
Web: [events.vzuplzen.cz/en](http://events.vzuplzen.cz/en)  
E-mail: [events@vzuplzen.cz](mailto:events@vzuplzen.cz)

### Save the Date – H2PPM 2026

Hydrogen is rapidly becoming a cornerstone of the future sustainable energy system. As a versatile energy carrier and a crucial element in the decarbonization of multiple sectors, hydrogen holds significant potential to transform global energy strategies. At the same time, its efficient production, storage, and utilization present both challenges and opportunities that call for innovative research and strong interdisciplinary collaboration.

We are pleased to announce that the **H2PPM 2026** conference will take place on **December 1-3 2026**.

The event will offer a comprehensive platform to explore the latest advances in hydrogen technologies and applications. Over three days, participants will engage in technical sessions, and panel discussions featuring leading experts, researchers, and industry professionals from across the hydrogen value chain.

Please save the date — more details will follow.

Join us for "Hydrogen - Power, Production, and Materials 2026" and be a part of shaping the future of hydrogen in energy!

Language: English

**Total Conference fee: 400 €**

**Registration open from 1<sup>st</sup> March 2026**

- Offer to organise a WG meeting in person in a separee during the conference
- Live demonstration of VZUs drone inspection capabilities
- 15 % discount for WG members with HZwo-WG SAD in comments section
- Submit your proposal for a presentation [here](#)

# AERO Friedrichshafen

14.-17.04.2027

## Joint booth at AERO 14.-17.04.2027

Presentations at AERO Hydrogen & Battery Summit

### Scouting visit in 2026:

Panel Discussion: Fuel cells with their many pitfalls. And why are battery-powered aircraft on the market first?

#### Panel Teilnehmer\*in

|                                                                                                                                                                                      |                                                                                                                                                                                                               |                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>Ralph Müller<br/>CEO<br/>H2FLY GmbH<br/><a href="#">Mehr erfahren</a></p>                       |  <p>Martin Seng<br/>Geschäftsführer<br/>SEngineers GmbH<br/><a href="#">Mehr erfahren</a></p>                                |  <p>Dr. Mattia Padulo<br/>Chief Technical Officer<br/>Aura Aero<br/><a href="#">Mehr erfahren</a></p> |
|  <p>Rolf Stuber<br/>CEO and Head of Design<br/>Smartflyer AG<br/><a href="#">Mehr erfahren</a></p> |  <p>Frederik Wewetzer<br/>Head of HIC Research and Transfer<br/>Center<br/>HZwo e. V.<br/><a href="#">Mehr erfahren</a></p> |                                                                                                                                                                                        |

### Offer:

- Pavilion space: €50 per m<sup>2</sup>
- AUMA fee: €0.60 per m<sup>2</sup>
- Waste disposal fee: €2.50 per m<sup>2</sup> (maximum €290.00)
- Media flat rate: €270.00
- Energy flat rate: €73.00
- Co-exhibitor fee: €500.00
- Electricity connection tbd
- Stand cleaning tbd
- Stand construction tbd

### Potential co-exhibitors

- LOGdrone
- Fraunhofer IWU
- TU Dresden
- TU Chemnitz
- FES
- Flughafen Jahnisdorf / Stadt Chemnitz
- VZU Plzen
- Skyfall Defence

Contact [frederik.wewetzer@hzwo.eu](mailto:frederik.wewetzer@hzwo.eu)

# Hydrogen Learning expedition to Occitanie region

- Invitation to Toulouse and Montpellier is on the table
- Agenda and French participants can be organized according to our wishes
  - HYCCO
  - H2Pulse
  - RHyO
  - Francazal Hydrogen Technocampus
  - Hyd'Occ
  - Hydromer
- Express your interest and suggest side visits!

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# Homework until 18.09.2026

Bookmark the sharepointlink provided by Frederik

Send to [frederik.wewetzer@hzwo.eu](mailto:frederik.wewetzer@hzwo.eu)

1. Your institutions logo, your photo and contact details for the website
2. Slides you wish to:
  - a. Be added to the general WG SAD slide deck
  - b. Be added as part of the working group documentation on the website
3. Your interest in joining
  - a. HTE Hamburg
  - b. H2PPM Plzen – visitor or do you want to apply as a speaker
  - c. AERO Friedrichshafen – visitor or co-exhibitor
  - d. Occitanie trip
4. Are you specifically interested in funded R&D projects? If so, are there any topics you'd like to see covered?



Contact



Frederik Wewetzer  
[frederik.wewetzer@hzwo.eu](mailto:frederik.wewetzer@hzwo.eu)

