

# LIQORNE

Liquid hydrogen  
for airborne applications

LIQORNE

A stylized outline of an airplane in flight, rendered in blue and brown lines, positioned behind the 'LIQORNE' text on the right side of the slide.

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Graz

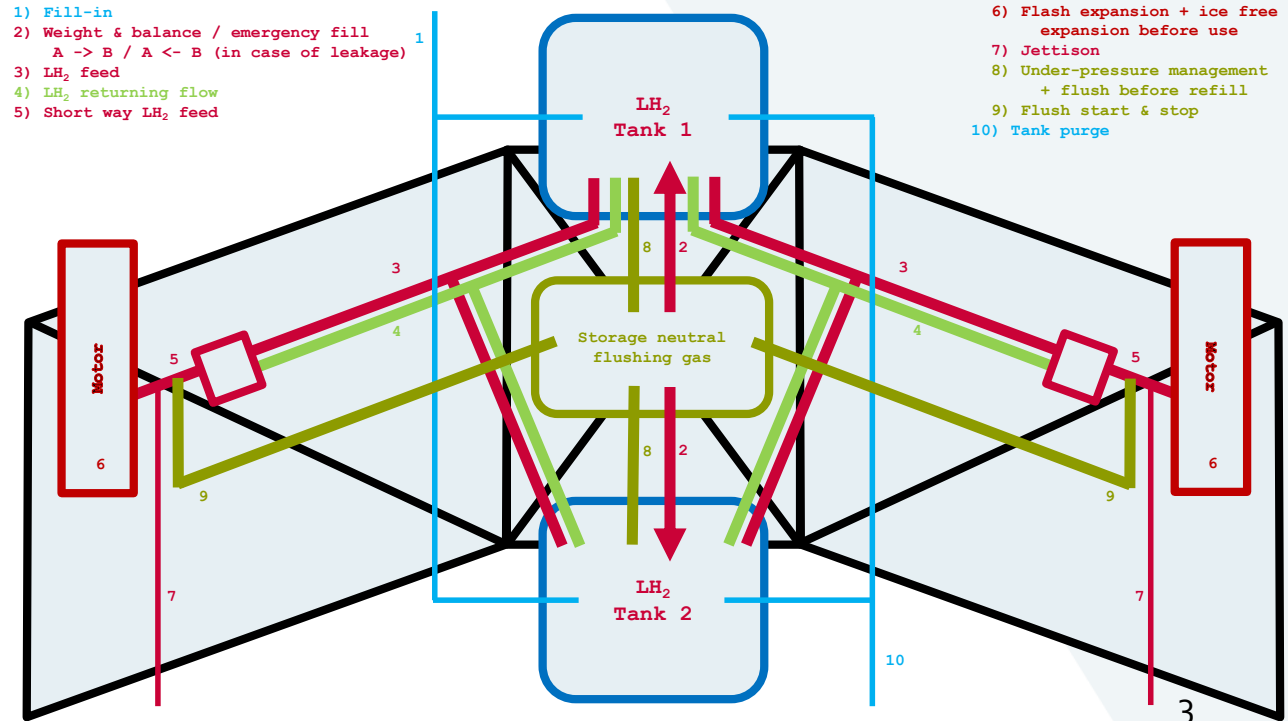
## Brief description of the consortium partners

LIQORNE is a technology programme proposed by CBOne

- LIQORNE 2023-2024 was a pilot project, involving:
  - **Combustion Bay One e.U., project leader**
  - **FH Joanneum / Aviation, academic partner**
  - **Test-Fuchs, industrial partner**
- IRON LIQORNE 2024-2026 is the demonstration project, lead by FHJ, with CBOne

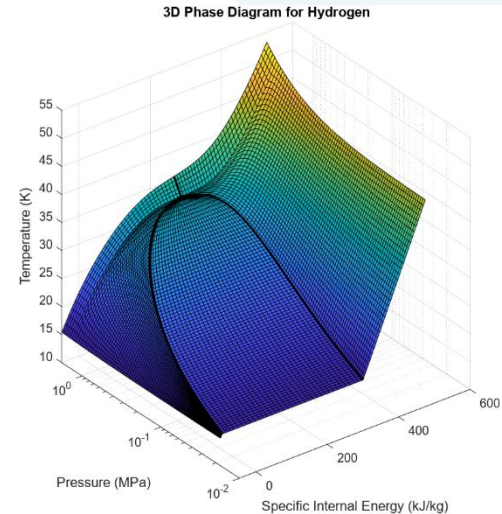
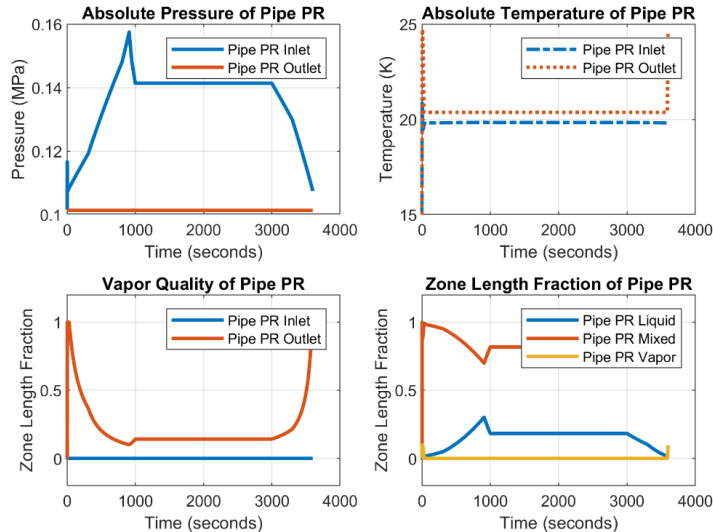
## Aim of the project / Background of the project

- Towards a safe, lightweight and fast-responding hydrogen fuel system for aviation
- **Keywords:** Low pressure, last-minute gasification & heat-up, recuperative



## Project results

- A number of tools that simulate the thermodynamics of LH<sub>2</sub>/GH<sub>2</sub> at different stations
- A vision on dimensions, and needed technology bricks

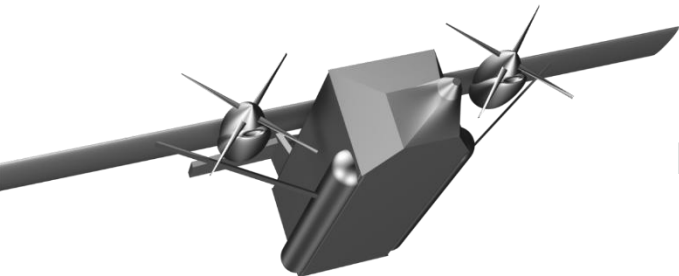


## Utilization of the project

- Learn to use cryo-fuels
- Aim at the fuel system of a small airplane



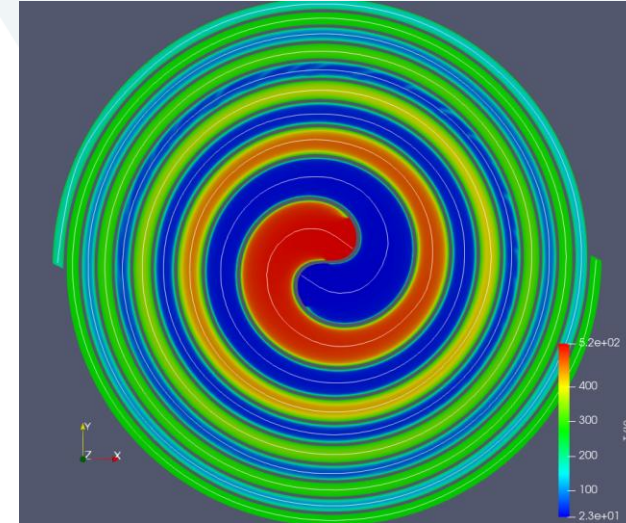
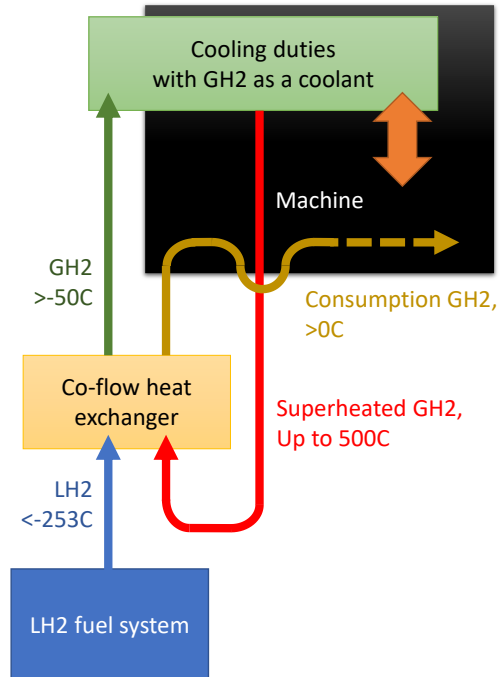
Pic: PhD Fynn Thilker



A/C Properties	Value	Unit
Nr. Engines	2	—
Power	750	kW
Tank Area	0.9326	$m^2$
Tank Size	3.3	$m^3$
Fuel Mass	216	Kg
Flight Duration	1	hour
Max. Fuel Flow p.E	0.03	$\frac{kg}{s}$

## Further steps/(potential) follow-up projects

- Project IRON  
LIQORNE
- Towards a cryogenic  
Iron-Bird
- Development of  
technology bricks  
such as the last  
minute LH<sub>2</sub>>GH<sub>2</sub>  
gasifier / expander



**Thank you for your attention!**

Visit our [www.CBOne.at](http://www.CBOne.at) homepage  
and read our article  
about 10 years FFG-CBOne projects!

