

# Developing an electric seaplane sea + land + air

Eric Lithun  
CEO  
Elfly Group  
2024.05.07 Gothenburg



# The Noemi

The World's First Electric Amphibious Seaplane for Commercial Use

# WHO WE ARE



**Eric Lithun**  
CEO



**Tomas Brødreskift**  
CTO



**Eirik Sandal**  
CFO



**Total of 20 employees - 12 nationalities**



+ ~10 freelance



+ 2 post docs NTNU



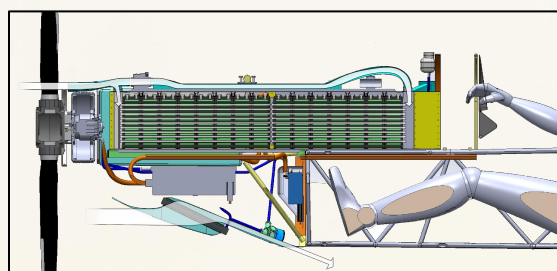
60 + years combined electric aviation experience

PROTOTYPE

 EQUATOR



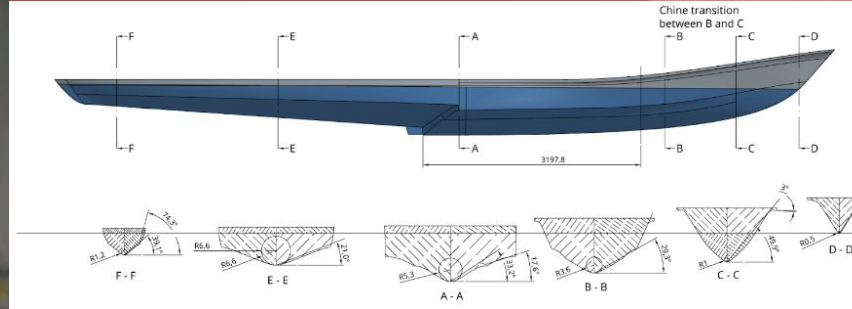
# AIR RACE E



≡ NORDIC ≡  
AIR RACING TEAM



# Low spray and drag



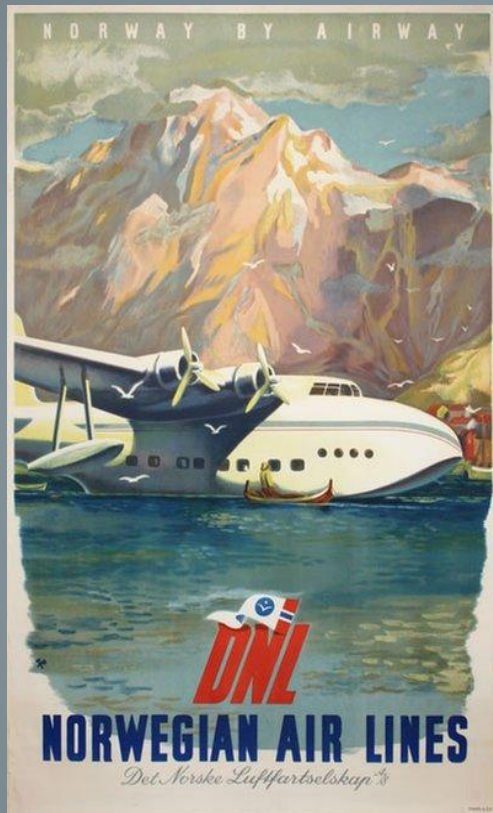
14  
km/h



# Noemi - No Emission



THE ROMANTIC PAST



1930



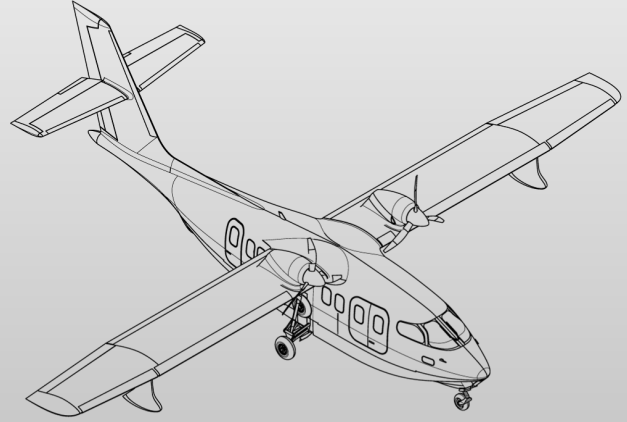
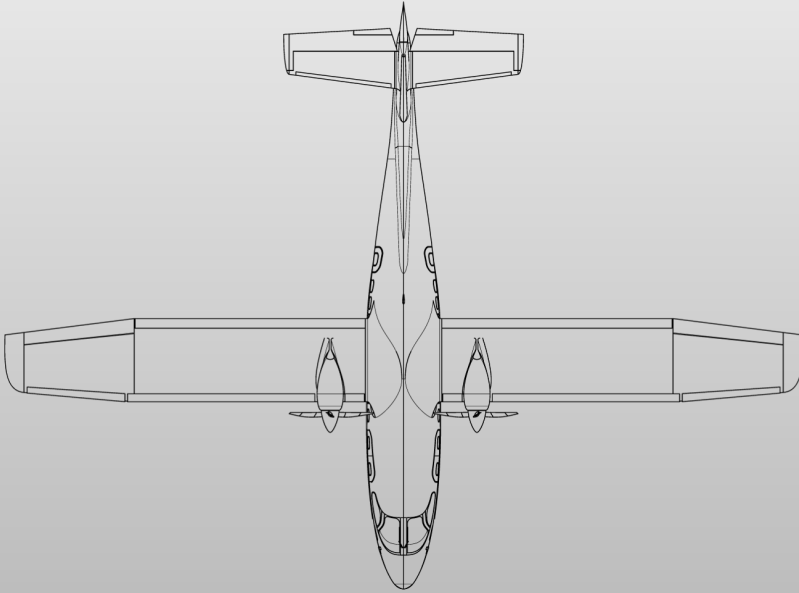
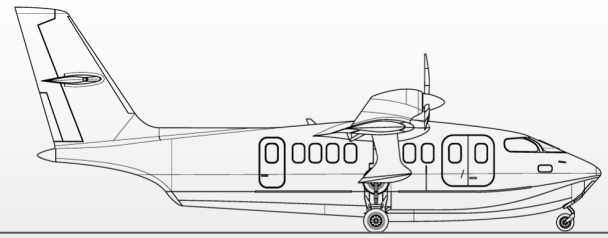
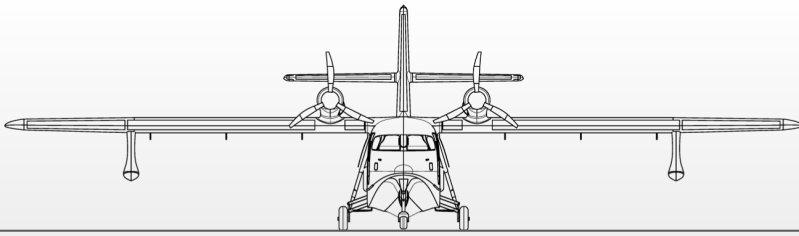
2030



# Why did they disappear?

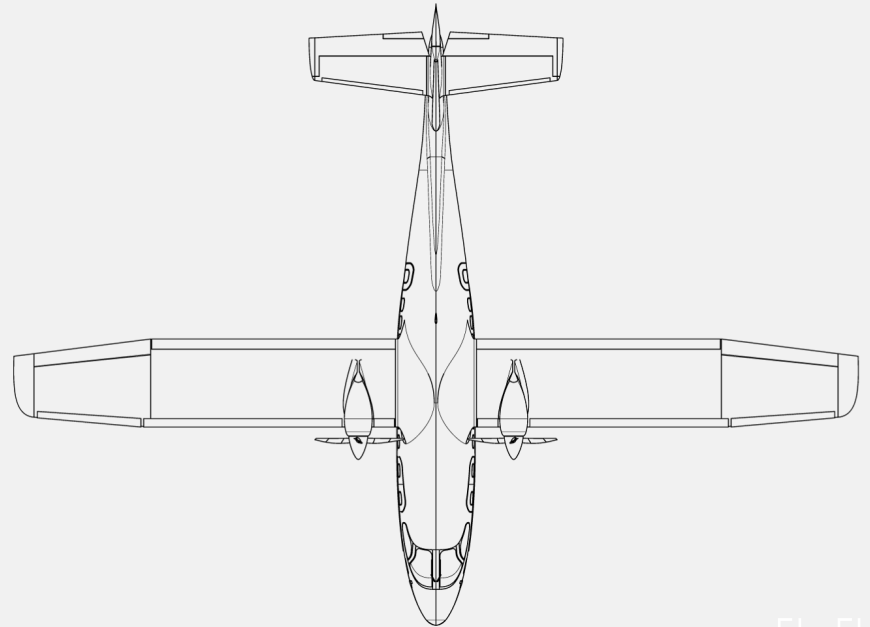
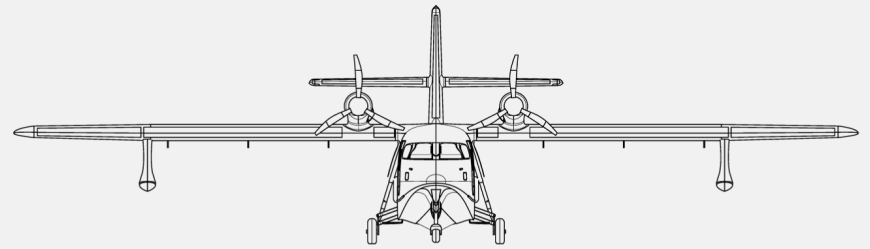


# CONFIGURATION

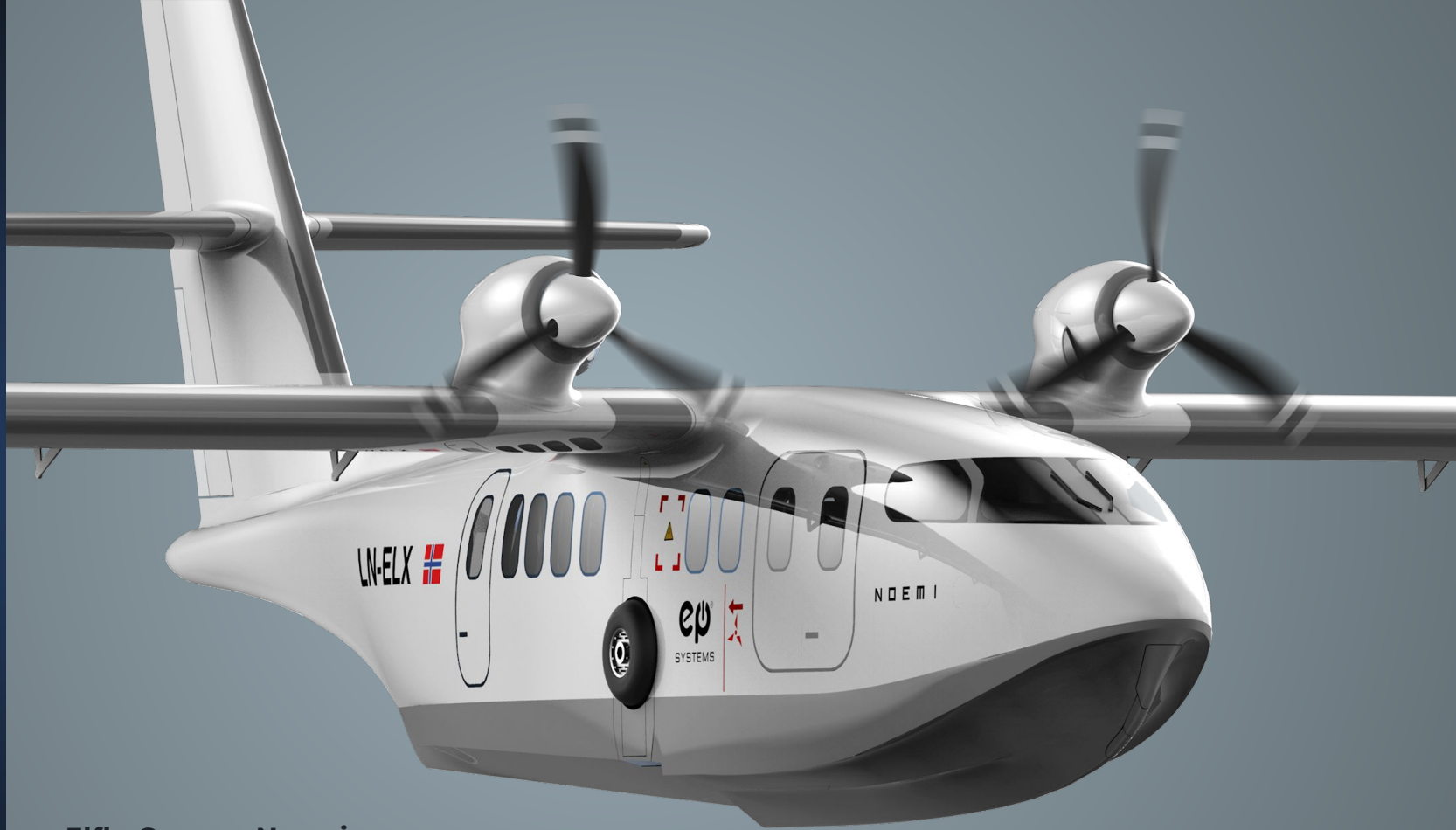


# Specification

<b>MTOW</b> 5.670 kg	<b>MAX Power</b> 950 kW
<b>T/O Distance WATER (35ft)</b> > 1000 m	<b>LNDG Roll &gt;50ft</b> 850 m
<b>Cruising Speed</b> 108 kts	<b>Stall speed</b> 61 kts
<a href="#"><u>Datasheet</u></a>	



# CONFIGURATION



## Elfly Group - Noemi

100% Battery Electric (30 min Charge) // 170km (ex IFR reserve 45min) // 5.670kg  
MTOW // 1000kg payload // 9+1 (13+2) // Certification CS-23 Level 3 (Level 4)

AMPHIBIOUS



## Elfly Group - Noemi

100% Battery Electric (30 min Charge) // 170km (ex IFR reserve 45min) //  
5.670kg MTOW // 1000kg payload // 9+1 (13+2) // Certification CS-23 Level 4



## Cargo Door Flexibility

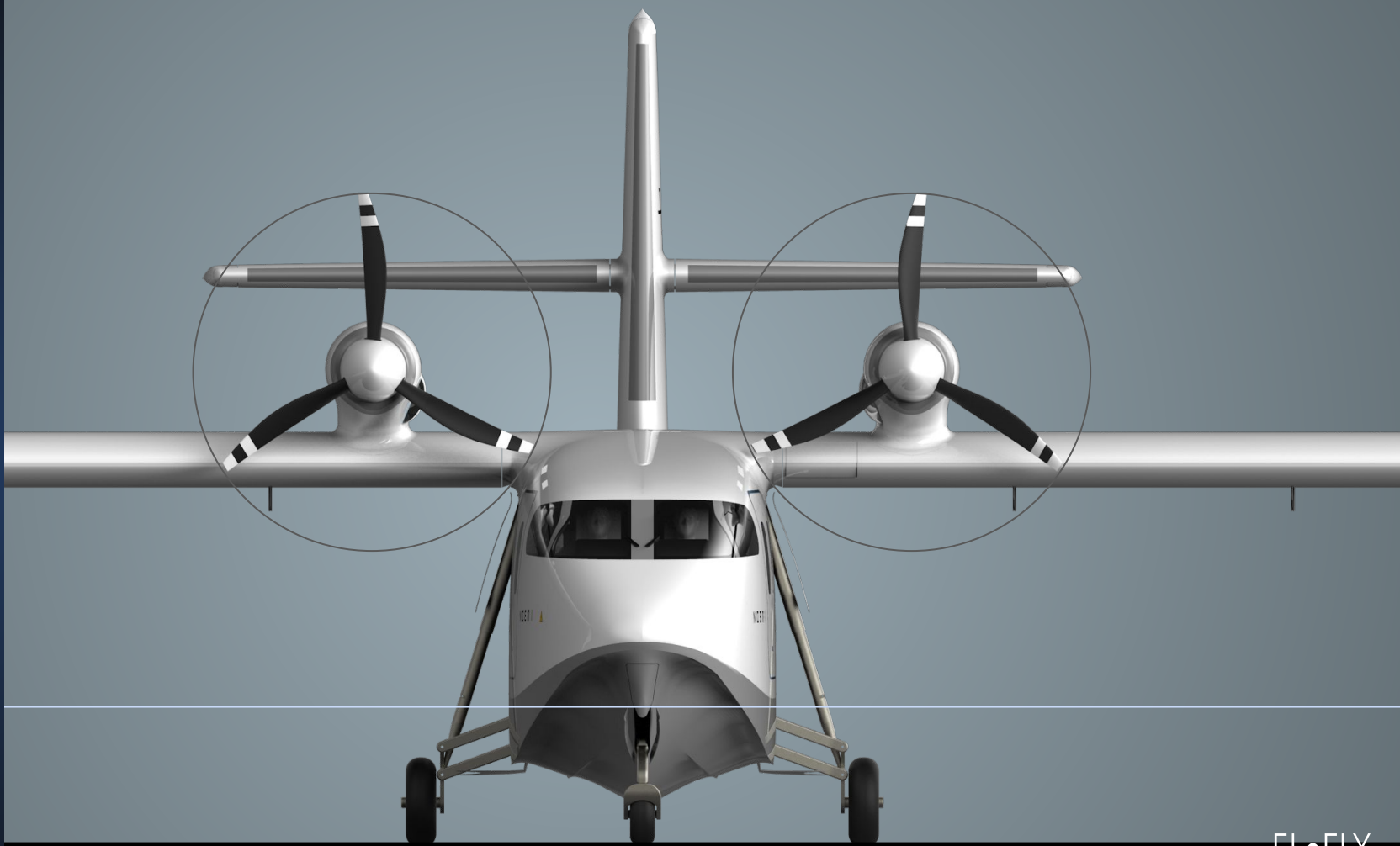
We design cargo door functionality to accommodate a wide range of market applications



CARGO DOOR



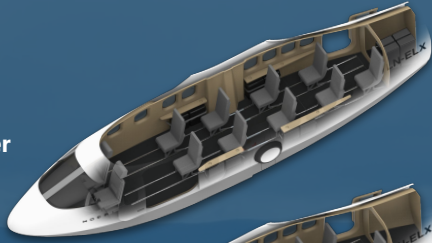
AMPHIBIOUS



# Dressed for the occasion

Flexible configurations for the world's many needs

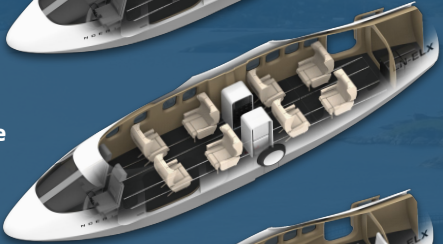
Commuter



Tourist



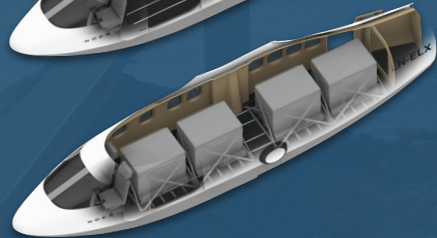
Executive



Special  
Mission



Cargo



## Commuter

Nine-passenger loadout for comfortable, quiet rides, maximizing operating and commercial efficiency.

## Tourist

Thirteen-passenger loadout for sightseeing tours.

## Executive

An elegant, efficient option for businesses across the coast.

## Special Mission

For medevac and special missions that connect far-flung locales with critical infrastructure.

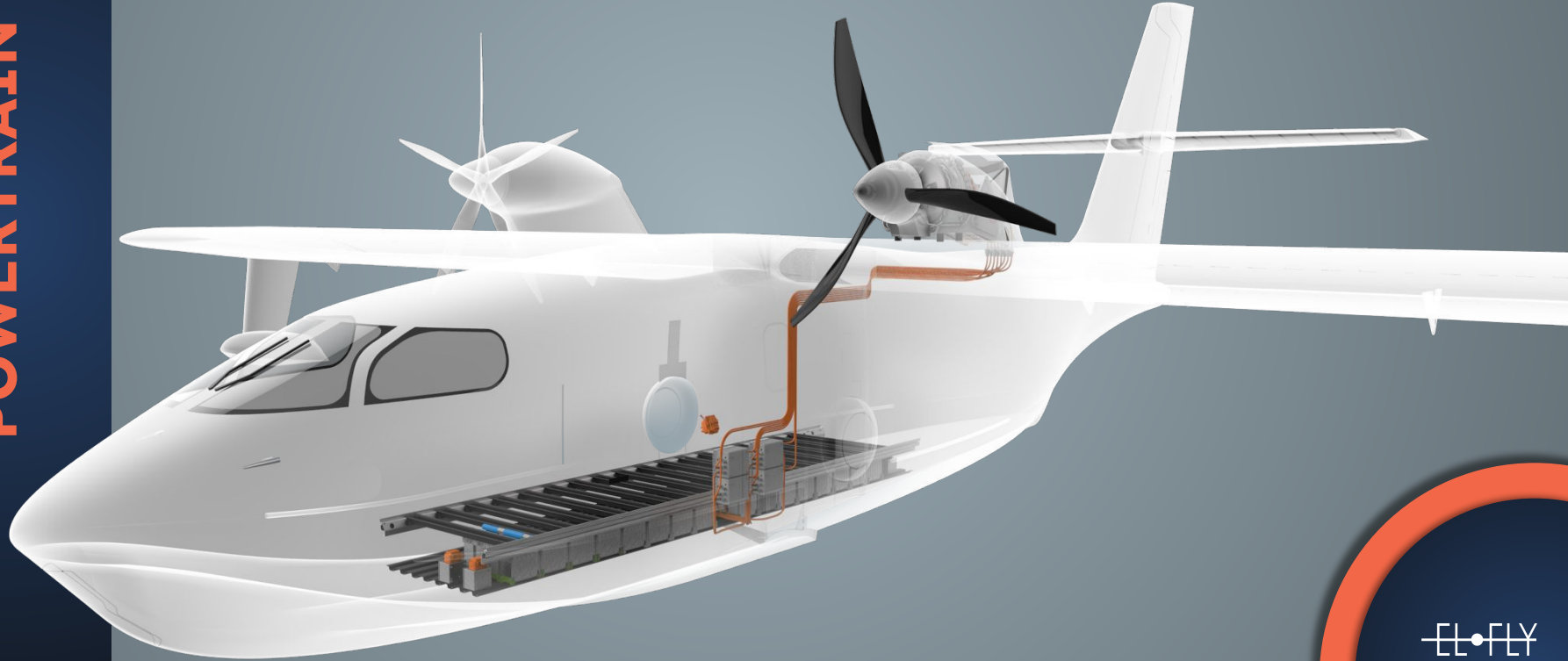
## Cargo

Four euro-pallet capacity, enabling new logistics.



## Powertrain Conceptual Layout General layout for TAC1 (only left side depicted)

- ESS mounted under floor in cabin in the hull of the aircraft.
- ESS architecture consist of 8 strings of <15 modules providing 800(+)V to each of 4 inverters
- EPU and Inverters bed mounted atop wing structure
- Routing of cables minimal distances via BPMU's mounted on the wall with easy access





Range: **170km**

*(conservative w/2023 battery tech)*

Range: **240km**

*(conservative w/2029 battery tech)*

Range: **315km**

*(conservative w/2040 battery tech)*



# Transportation System

- Dedicated easy to use Pier to Aircraft docking systems, with charging and auxiliaries
- Virtual takeoff and landing zone
- Sensor system for safe operations (wave height, currents, wind direction, obstructions in water)
- Floating and mobile airport terminal with remote tower

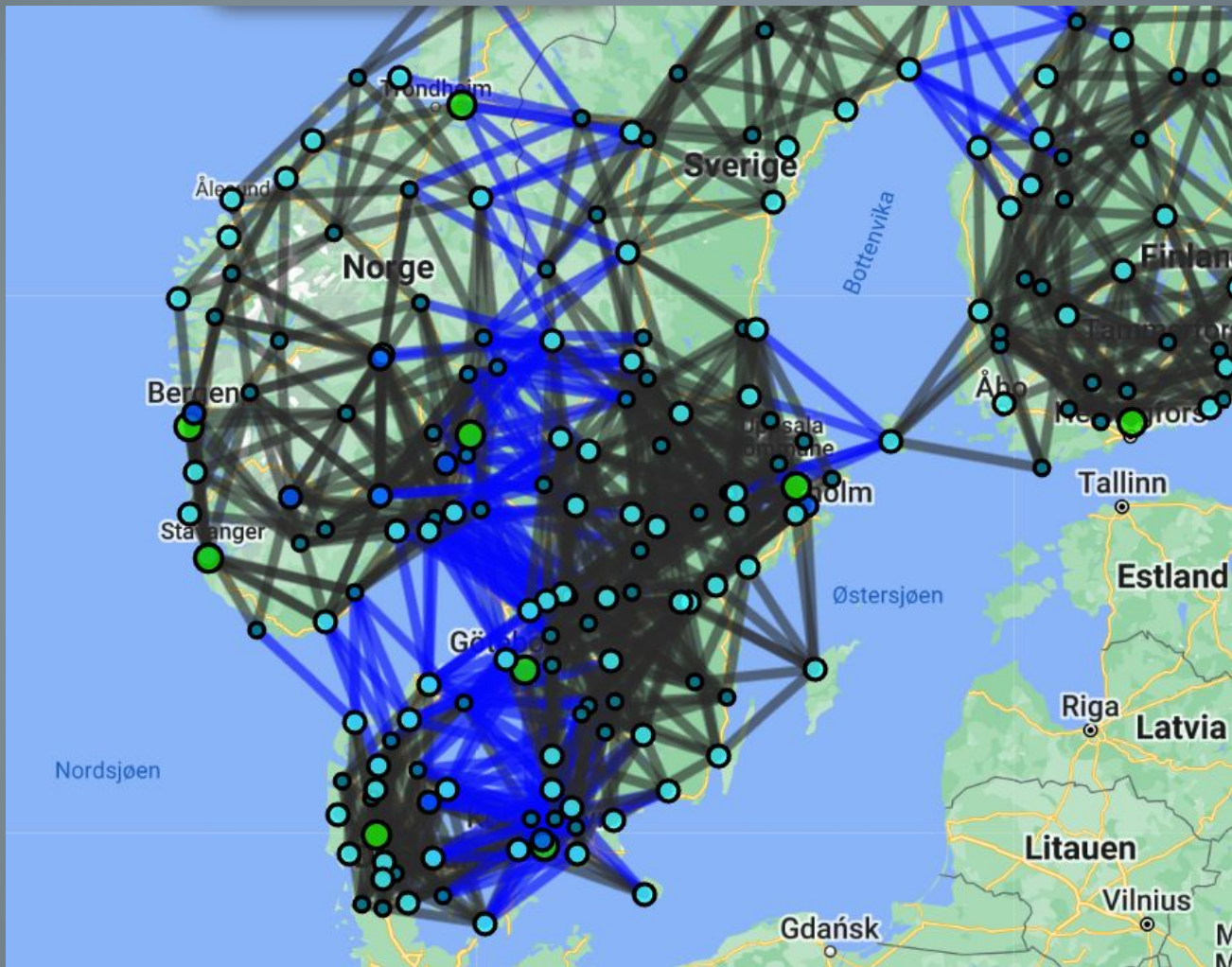
FLOATING AIRPORT

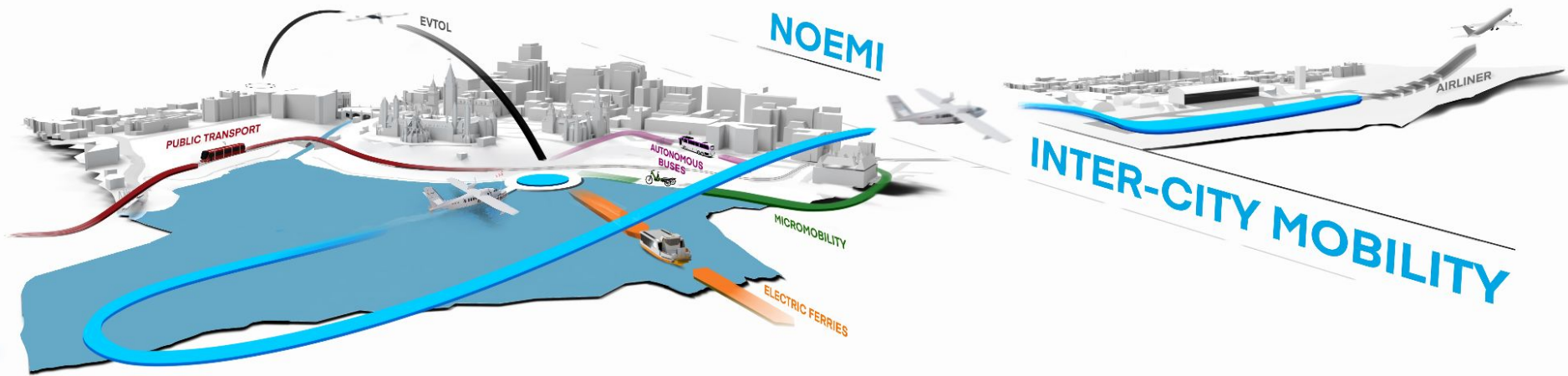
SENSOR  
BUOY

SENSOR  
BUOY

LANDING & TAKEOFF ZONE

# Noemi 200KM range





QUESTIONS?

