

WINNEW PROJECT

# ECOMONDO BLUE ECONOMY - EMFF RIMINI - 27 OCTOBER 2021



Co-funded by the EMFF programme of the European Union under grant agreement N° 101038351.



### SHIPPING AS THE MOST EFFICIENT FREIGHT INDUSTRY, YET POLLUTING



**90%** of world trade is carried by the international shipping industry



**2050** World trade to **double** 



Shipping's CO2 emission to **increase** to

# 17% (from 11%)

of the world transportation CO2 emission by **2050** 

### REGULATIONS WILL BE ENFORCED BY IMO



IMO's shipping CO2 emission regulation adopted by the European Union in Sept-2020

\* Requirement per unit compared to 2008 level

## WIND PROPULSION NECESSARY PART OF THE ANSWER & EXPECTED MARKET VALUE





### **KEY FIGURES OF THE WIND ASSISTED SHIP PROPULSION MARKET**

- $\approx$  100 000 total worldwide ships in 2020
- $\approx$  50 000 merchant vessels

### $\approx$ 40 000 WASP accessible ships



Source: CE Delft, Statista, Blueprint Partners



# <section-header><section-header>THE MOST VERSATILE WINGSAILImage: Strain of the strain of the

### **OPERATING WINDOW**

- Applicable Apparent Wind Angle from 5° to downwind
- Usable from 0 up to 80 knots of Apparent Wind Speed
- Fully lowerable with negligible windage
- Designed to endure wind speeds of up to 140+ knots



### MAIN PARTICULARS



# **AYRO's management team and staffing evolution**



# A management team with highly complementary skills





Marc VAN PETEGHEM Designer and chairman

Ludovic GÉRARD CEO



Giorgio PROVINCIALI CTO







Karim EIDO F

Romain GRANDSART CBO





- October 2021 : 25 employees
- December 2022 : 60 employees
- Targeting 150 direct jobs by 2024 + around 100 to 150 indirect one's





 Wingsail designed for BMW Oracle Racing, Winner of the 33rd America's Cup in 2010

- Development in collaboration with Ademe
  Extensive testing in 2017
- Extensive testing in 2017
- 2 Oceanwings of 32m<sup>2</sup> equip Energy Observer, a Zero CO2 emission ship, sailing successfully for more than 30 months across the seas
- **Canopee**, the 1st modern wind powered ship dedicated to Ariane 6.
- 121m long ship equipped with 4 Oceanwings of 363m<sup>2</sup>

# **CANOPEE VESSEL – WINNEW Project**





### MAIN ROADS OF THE VESSEL



### • MAIN CHARACTERISTICS

- RoRo 121 meters length
- To be delivered by the end of 2022
- Designed for 16,5 knots
- Fuel savings ranging from 20% to 35%

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Neptune













- Main phases of the Project
  - Technical development
  - Technical validation
  - Pre industrialization
  - At Sea testing & monitoring
  - Dissemination & communication activities
- 27 months program From Sept 2021 to November 2023
- A Grant of 2,36 Million €
- Objectives :
  - Deliver a first industrial project consisting in 4 Oceanwings 363 m<sup>2</sup> for Canopee vessel
  - Demonstrate viability of the hybrid wind assistance propulsion at a large scale
  - Boost the marketing & commercial development plan





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# THANK YOU FOR YOUR ATTENTION

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**ECOMONDO** 

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