



Raising awareness
on wind propulsion

Wind Energy Propulsion

- *Offshore wind power has the capacity to meet all of the world's electricity demand, and is set to be a “game-changer” for energy systems, according to the International Energy Agency.*
- **One decade to achieve a Zero Carbon Emission vessel for the shipping industry**



Wind propulsion stakeholders

Technology providers

Shipyards

Shipowners

Classification societies

Other major industry players



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**CHANTIERS
DE L'ATLANTIQUE**

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LouisDreyfus
ARMATEURS



MAERSK
TANKERS

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Lloyd's
Register



BUREAU
VERITAS

ClassNK



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GROUPE RENAULT



MANITOU
GROUP

AIRBUS



FROM AIRBUS TO AIRSEAS.

AIRBUS brings its core know-how to the maritime sector via AIRSEAS

Airseas is a spinoff of Airbus
A trusted, experienced and
revolutionary partner



| Revenues (b\$) | R&D (b\$) |
|----------------|-----------|
| 64.0 | 3.2 |

AIRBUS

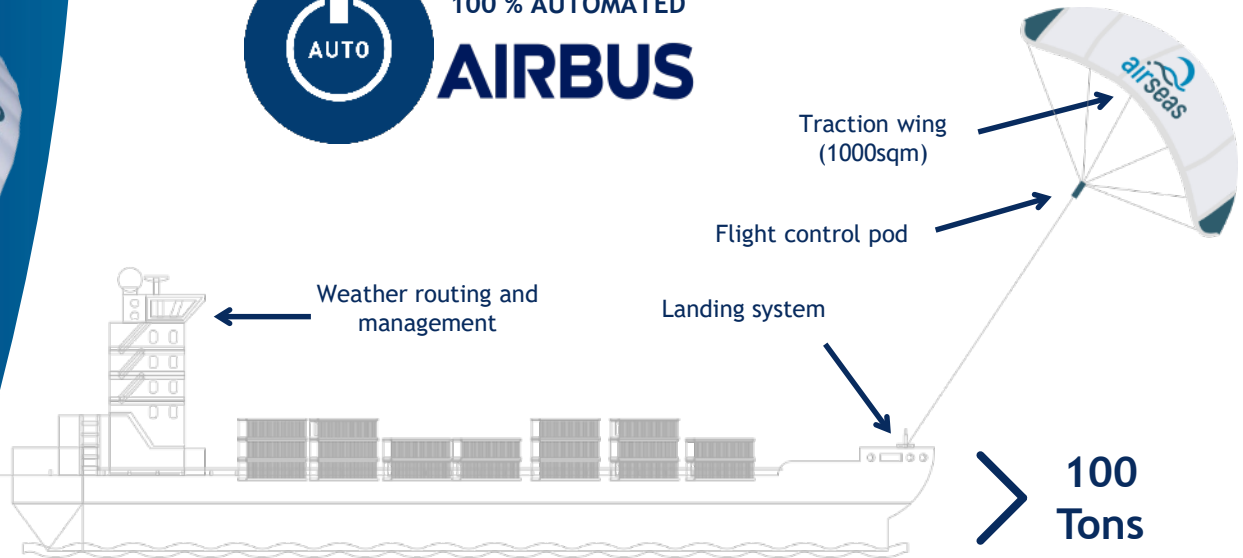


Our goal is to transfer Airbus' unique Modelling & Flight Controls technology to the shipping sector

Leveraging Airbus own operated ships for testing



SEAWING: the automated flying wing to power ships



First deliveries in 2020/2021 and strong ramp-up to meet market demand.



Wind propulsion solutions

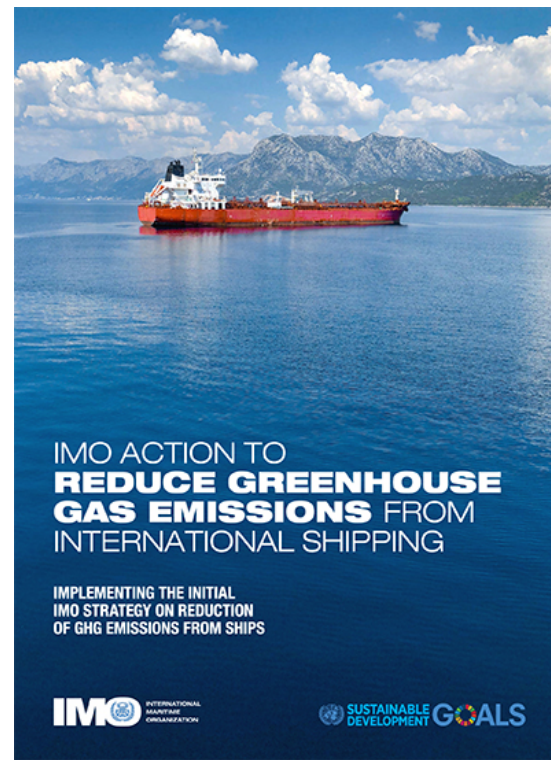
- Deep sea solutions
- Adapted to retrofitting and new building
- Enablers to complement other solutions & address the issue of autonomy
- Allow to shift away from fossil fuels



Make sure that wind propulsion is part of the agenda in order to achieve the IMO targets

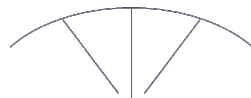
IMO Timeline - Keep the momentum

- Key momentum and room for national and domestic initiatives
- Speed reduction not adopted by IMO
- Innovation and green innovative technologies are sole solutions





TUSSEN TAKK THANK YOU



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