

## Harnessing the most wind

How remote wind monitoring helps optimize wind-assisted vessels

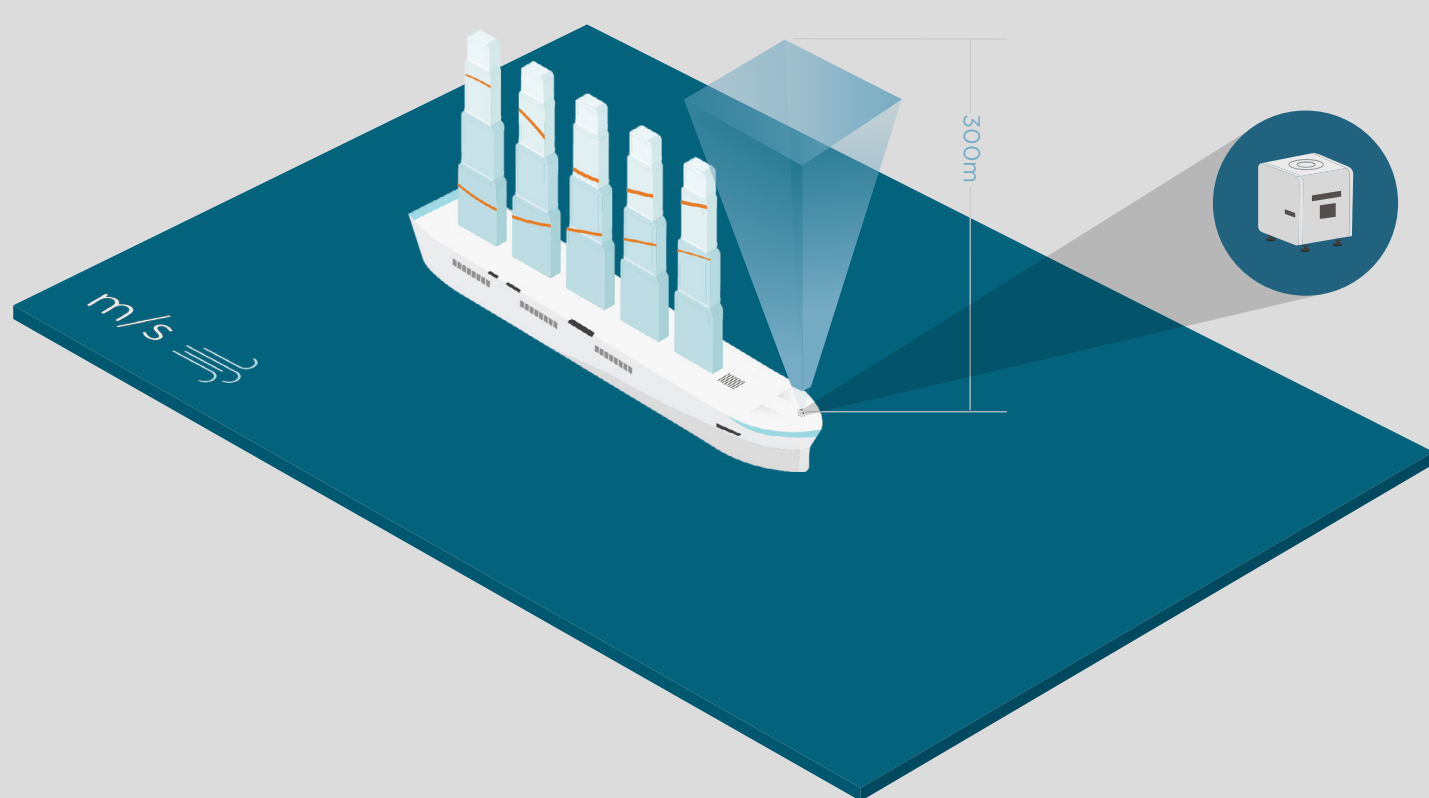


Climate change and air quality are driving big changes in the shipping industry, and wind-assisted propulsion is a key technology for decarbonizing the future of maritime shipping.

Vaisala's WindCube® remote wind lidars are the iconic and trusted gold standard with over 5,000 deployments around the globe. Lidar provides a comprehensive wind profile for conditions over a wide area — actionable information that supports a variety of maritime applications.

Here's how these marine-proof devices can help support development and optimization for wind-assisted propulsion.

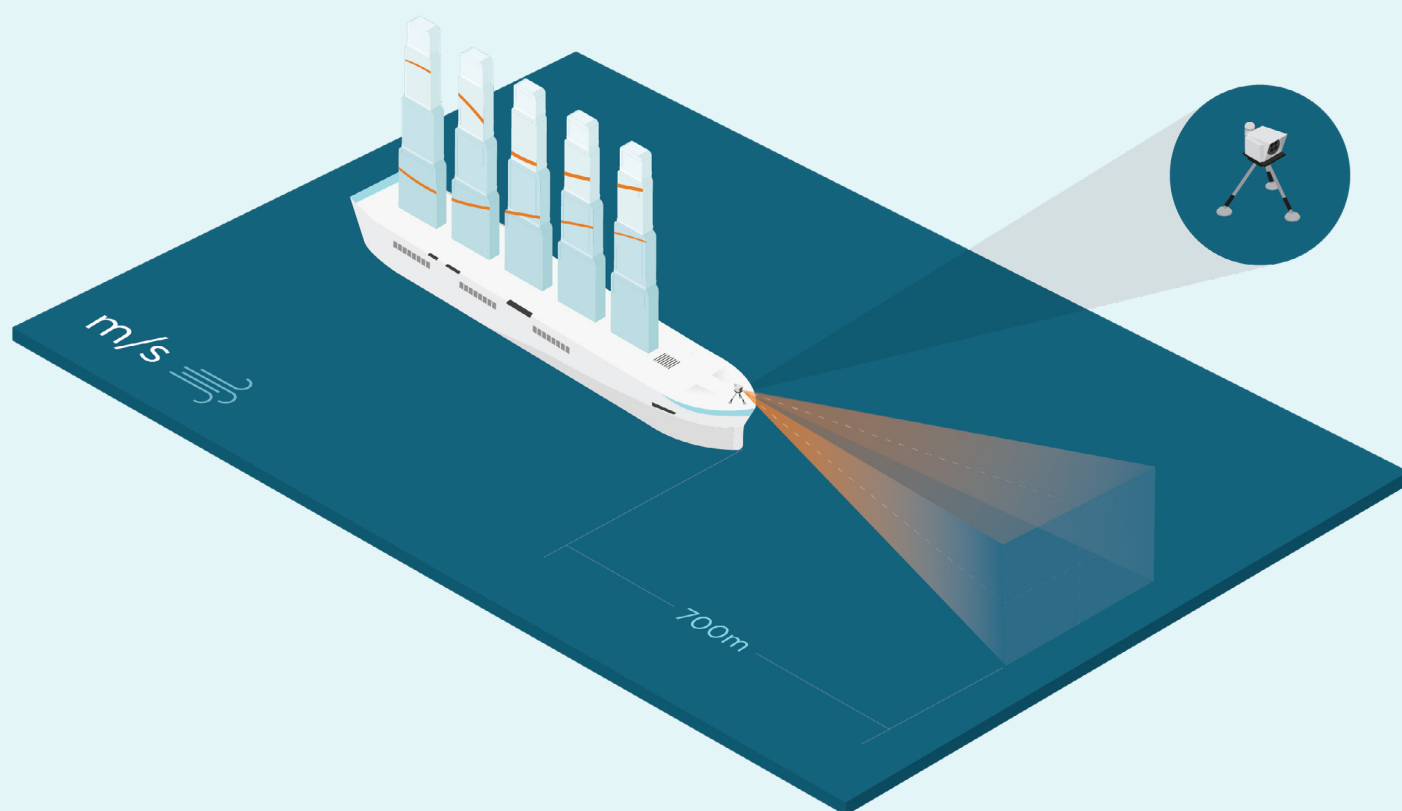
### Research and development



WindCube Offshore vertical profiling lidar collects highly accurate real-time and historical wind data, which can help wind assisted system propulsion (WASP) manufacturers refine system development and evaluate effectiveness.

- Accurate measurements up to 300m over 20 simultaneous heights
- Includes WindCube Insights — Fleet for remote control and data storage
- Low power consumption, easily deployed in Floating Lidar Systems and small spaces

### Performance testing

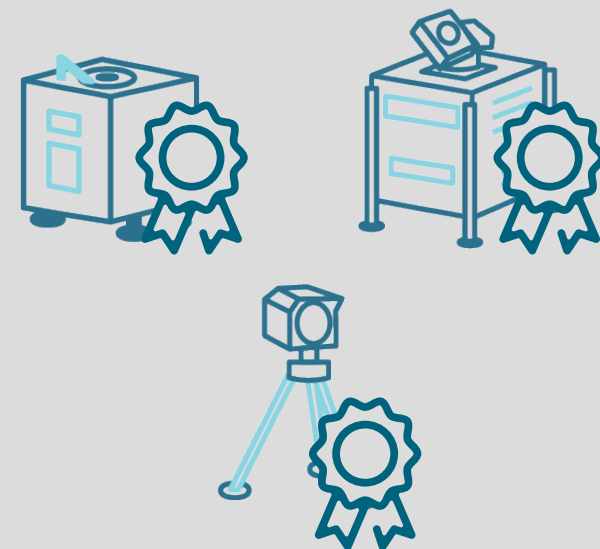


One key to wind-assisted propulsion system optimization is using WindCube Nacelle lidar to proactively respond to changing wind conditions. Better prediction of upcoming winds can help optimize the WASP in use, apply accurate safety alerts and emergency shut-downs, and more.

- Accurate, verified data up to 700m at 20 simultaneous measurement distances
- Easy deployment, flexible mounting options and simple structure
- Rapid data completion through continuous wind direction alignment

### Classification

WindCube lidars have been developed and validated in accordance with industry-specific IEC regulations, and Vaisala stands ready to support emerging wind-assisted system classifications such as International Maritime Organization (IMO), DNV and Bureau Veritas.



From sensors to systems and digital services, our globally trusted maritime weather solutions enable remarkable efficiency gains, digital transformation, the protection of people and investments while supporting clean and responsible operations.

**Master the weather, master the sea.**