



The Wind Revealed – A New Sixth Sense for Safer and More Efficient Airports

Making the Invisible, Visible



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The Invisible Nature of Wind

Traditional Methods for Measuring Wind

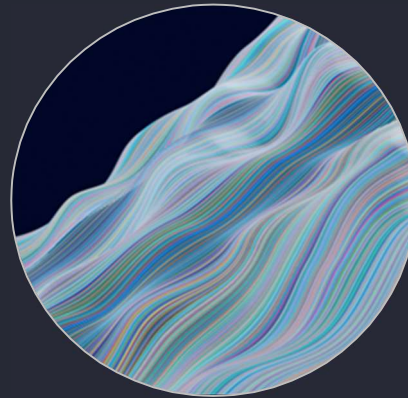


INVISIBILITY OF WIND

Wind has always been invisible to humans, so we never perceive it directly

IMPACT ON PERCEPTION

Forces humans to *guess* and *forecast* its presence based on indirect signs like moving objects



POINT-MEASUREMENT TECHNIQUES

Measurement relies on point sensors capturing localised wind speed and direction data

MATHEMATICAL WIND MODELS

Simulate wind behaviour based on collected data but lack real-time visibility of airflow

VISUALIZING THE WIND

Imagining new methods to visualize wind enhances understanding beyond traditional methods

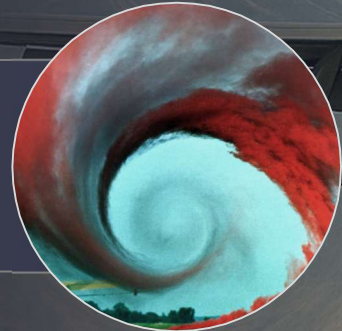
What if we could see the wind?



ENHANCED WEATHER AWARENESS



IMPROVED FLIGHT SAFETY



OPERATIONAL EFFICIENCY





Visualising Wind at the America's Cup

America's Cup and the Wind's Role

AMERICA'S CUP

World's most prestigious sailing competition showcasing advanced yacht racing techniques and technology.

IMPORTANCE OF WIND

Wind plays a crucial role in yacht performance, yet it remains invisible to fans during races.

LIMITED WIND MEASUREMENTS

Only a few point-measurements of wind are available - challenging to understand wind during races.





37TH
AMERICA'S CUP
BARCELONA





WindsightIQ™ Solution for Wind Visualisation

World First Multi-LiDAR Integration for Wind Field Fusion



ADVANCED DOPPLER LIDAR TECHNOLOGY

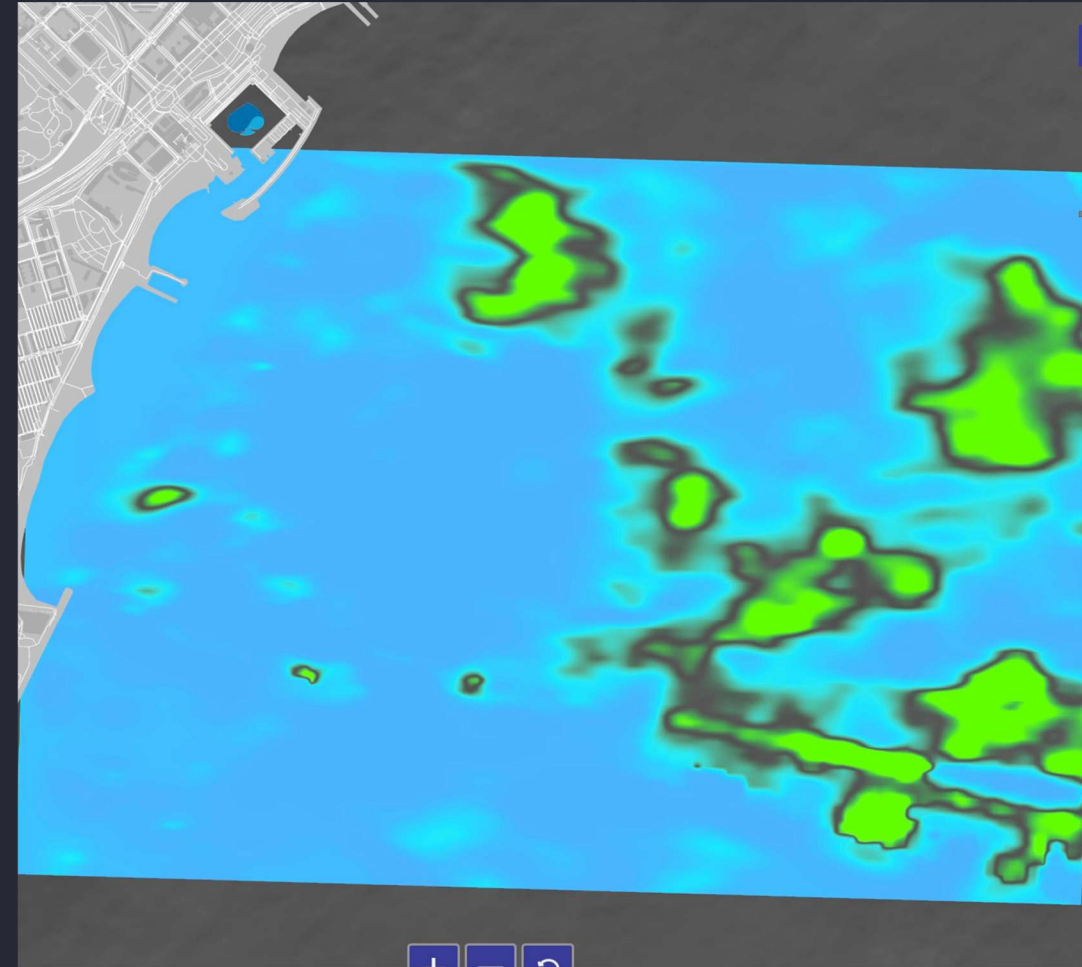
Fusion of multiple Doppler LiDARs to calculate wind speed and direction.

MULTI-LIDAR DATA FUSION

Patented approach and algorithms create a comprehensive windfield of 300,000 real-time virtual sensors

R&D TO ROLL-OUT IN 7 MONTHS

Unprecedented capability to achieve this end-to-end transformation from academic hypothesis to robust, live system.





Potential Airport Applications & Benefits

Theoretical Operational, Safety, Environmental, and Passenger Benefits



INCREASED AIRPORT CAPACITY

Reducing ground wait times

ENHANCED AIRCRAFT SAFETY

Safety improvements benefit smaller aircraft

ENVIRONMENTAL BENEFITS

Reduced CO2 emissions from less ground idling

PASSENGER & COMMUNITY

E-VTOLs and noise reduction = happier passengers and community

Current departure
(assumed wind)

Future Departure
(wind visible)



Summary



INNOVATIVE WIND VISUALISATION

A groundbreaking
innovation with broad
technological applications



INDUSTRIAL AND SAFETY BENEFITS

Improves industrial
processes and enhances
safety in various
environments



OPERATIONAL AND FINANCIAL IMPACT

Unlocks new operational
efficiencies and financial
opportunities

Trials starting at a UK airport soon

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