DAY 2
SMART DATA
How to Leverage Digital Ocean State Data to Improve Port Efficiency and Safety
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Miros Group
MIROS AS – providing ocean insights for 35 years
Why measure sea state?

The Viking Sky incident – A wake-up call for the Arctic cruise industry?

When the Viking Sky, with 1,373 people on board, sent out a mayday Saturday afternoon after engine trouble stranded the cruise ship in stormy waters off the western coast of Norway, rescue services were quickly activated.

SEA STATE MONITORING PROVIDES SAFETY AND DECISION MAKING SUPPORT

NORWAY CRUISE: Norway cruise ship accident - what happened to the stranded Viking Sky cruise ship?

The Viking Sky cruise ship hundreds of British tourists stranded amid stormy weather in Norway

SMART DIGITAL PORTS OF THE FUTURE
4-6 NOVEMBER 2019 NHOW ROTTERDAM
LEVERAGING CUTTING EDGE TECHNOLOGY TO PROVIDE EASY ACCESS TO DIGITAL OCEAN STATE DATA
What is this new technology?

A new way of collecting and sharing real-time and historical sea state data to every user, anytime, anywhere

Cloud applications for collection, storage, processing and presentation

Radar based IoT sensors
HOW DOES IT WORK?
What value does this new technology introduce?

Plug and Play – Standalone sensors with embedded processing and GUI; only need power and internet

Digitalization - Collect data directly to the cloud; available for all uses and users

High reliability and minimal maintenance costs

Online diagnostic, troubleshooting and SW upgrades

Third party data integration

Share data with inbound and outbound ships

Real-time data in the hands of all operational personnel

Historical data for incident analysis and statistics

Forecasts and real-time data for planning and optimization

Smart Digital Ports of the Future
4-6 November 2019 NHOW Rotterdam
What value does this new technology introduce?

- Navigation safety
- Dredging/maintenance support
- Harbour resilience/climate change
- Wave direction
- Current direction
- Oil spill detection
- Water level/air gap
- Wave period
- Current speed
- Wave height
- Port efficiency
- Safety of Operations
- Bridge clearance

SMART DIGITAL PORTS OF THE FUTURE
4-6 NOVEMBER 2019 NHOW ROTTERDAM
Empowerment through easy access to digital data...wherever you are
Spain’s national port authority ensures nationwide access to ocean data

- Operates a network of 40 stations collecting sea level and wave data
- Provides open access to metocean data from in-situ sensors and numerical models
- Data used for ports and navigation safety, research and also national tsunami warning systems
- Miros provides sea level, tide and non-directional wave monitoring with millimeter accuracy in all weather conditions
- Use of a dry-mounted, radar-based sensors from Miros
SUMMARY

Plug & Play solutions
- Simply connect to power and internet
- Online diagnostic, troubleshooting and SW upgrades
- Seamless integration in the cloud

Accurate, reliable, easily accessible data
- Accurate wave monitoring
- Data can be easily integrated into third party system such as ship monitoring services
- Integratable to any third party system
- Early detection of oil spill in ports and harbours

Analytics / data processing
- Post operation and incident analysis
- Statistics and performances