



Navtech

Presented by



# MASS: From the Holy Grail to the River mud banks

NAVTECH  
Seattle 2022

Capt. Alain Arseneault, MM, MBA  
Executive Director

An aerial view of the deck of an oil tanker ship. The deck is painted a bright orange color and is filled with a complex network of orange pipes, valves, and structural elements. The ship is moving through a large body of water, with a distant shoreline visible under a cloudy sky. The text is overlaid in white, bold font across the center of the image.

**The National Centre of Expertise on Maritime Pilotage is the technical body of the Canadian Marine Pilots, bringing together the extensive technical expertise and professional know-how of Canada's licensed pilots, from Newfoundland to Vancouver Island.**

# FUTURE ?



## Maritime Autonomous Surface Ships

MONDAY, 01 APRIL 2019

### Rolls-Royce completes sale of Commercial Marine business

Rolls-Royce confirms that completion of the sale of our Commercial Marine business to **KONGSBERG** of Kongsberg, Norway, took place on 1 April. The completion of the transaction, which was announced on 6 July 2018, follows recent clearance from the relevant regulatory authorities. As announced on 17 January 2018, the naval marine gas turbine and USA based propeller operations of our former Marine business unit have already been consolidated within our Defence business.

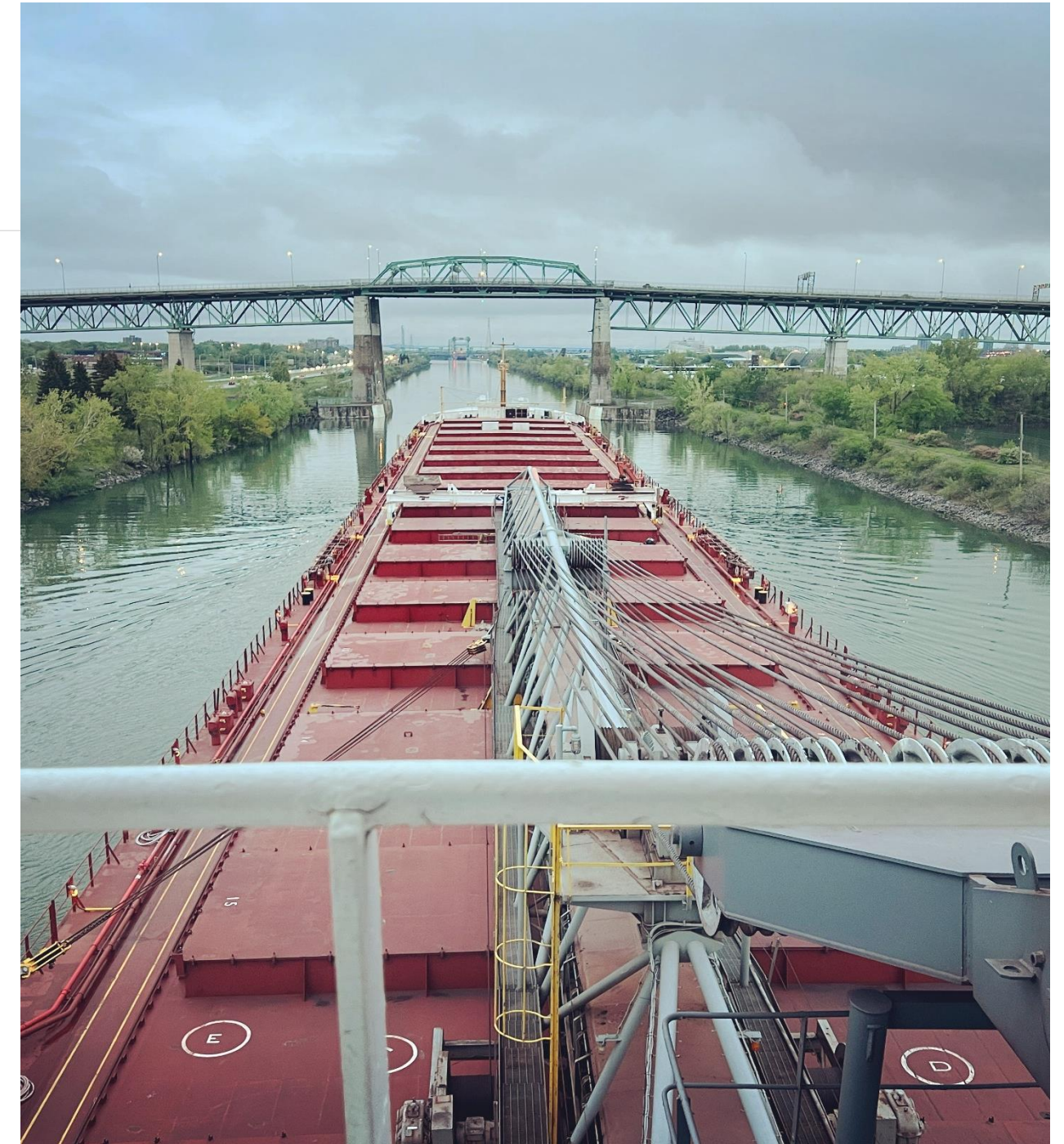
Net proceeds after transaction costs and other adjustments are estimated to be around £350m to £400m. In 2018, Commercial Marine reported underlying revenue of £726m and an underlying loss of £35m.

Through the Bergen Engines operation of our Power Systems business and under the Rolls-Royce brand name, Rolls-Royce remains an important developer and manufacturer of diesel and gas medium-speed engines for a variety of markets including commercial marine and power generation. KONGSBERG will, through a trading arrangement, continue to have access to Bergen Engines product.

## MASS: Oversell / Underdeliver

# NOW

- X/S band radars
- 2 ECDIS
- 2 Gyros (3 repeaters)
- Pilot plug
- 1 AIS
- 2 GNSS
- VDR (Data, voice and video)
- RAI
- ROTI (tankers & Pax)



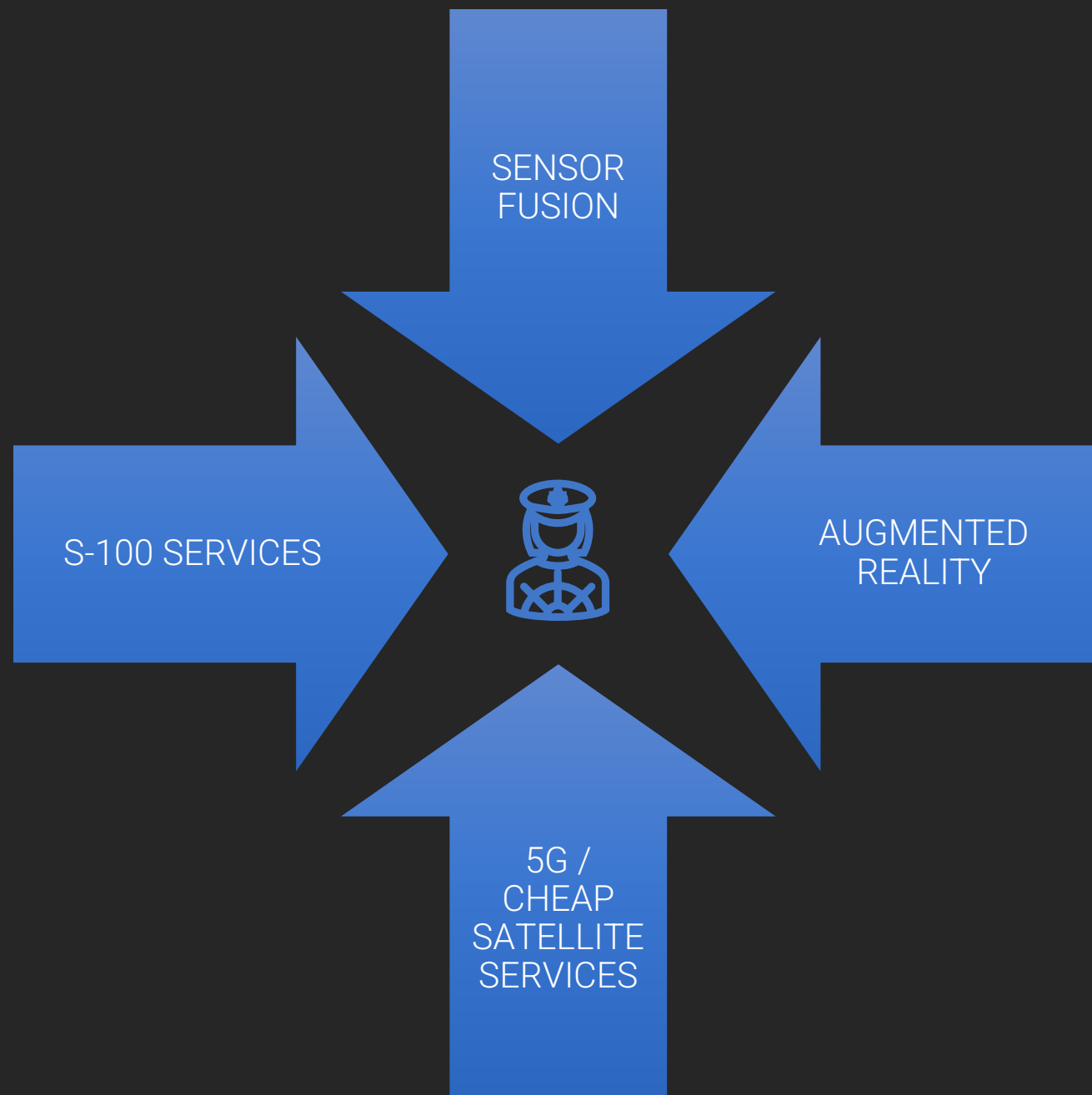
**Shipowners: Build to MINIMUM SOLAS requirements to MAXIMIZE profits**

# The Holy Grail

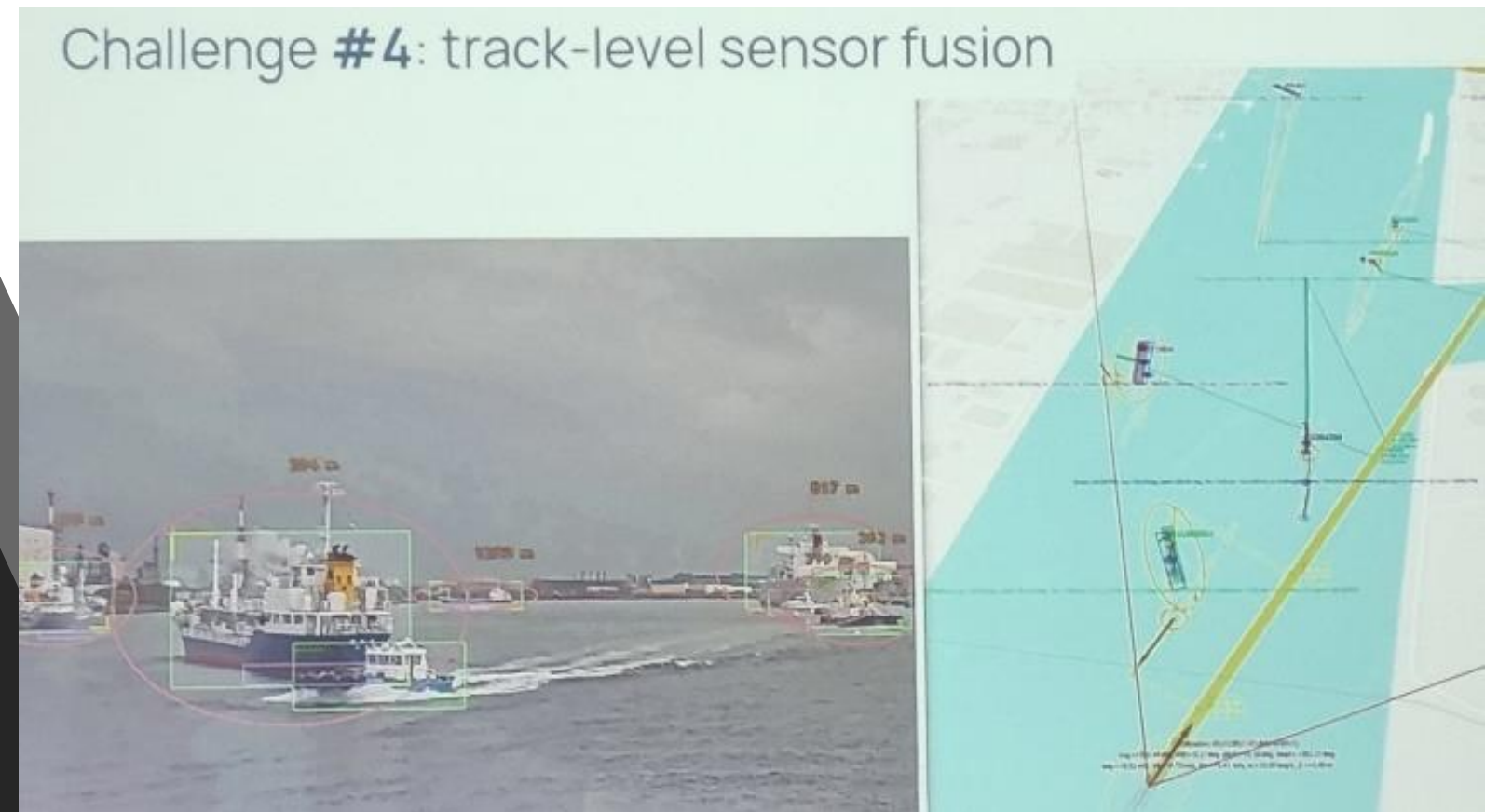
The pursuit of a dogmatic concept will prevent progressive safety and efficiency enhancements.

**IMO STILL STRUGGELING WITH THE DEFINITION OF MASS**

# Useful for Mariners Now

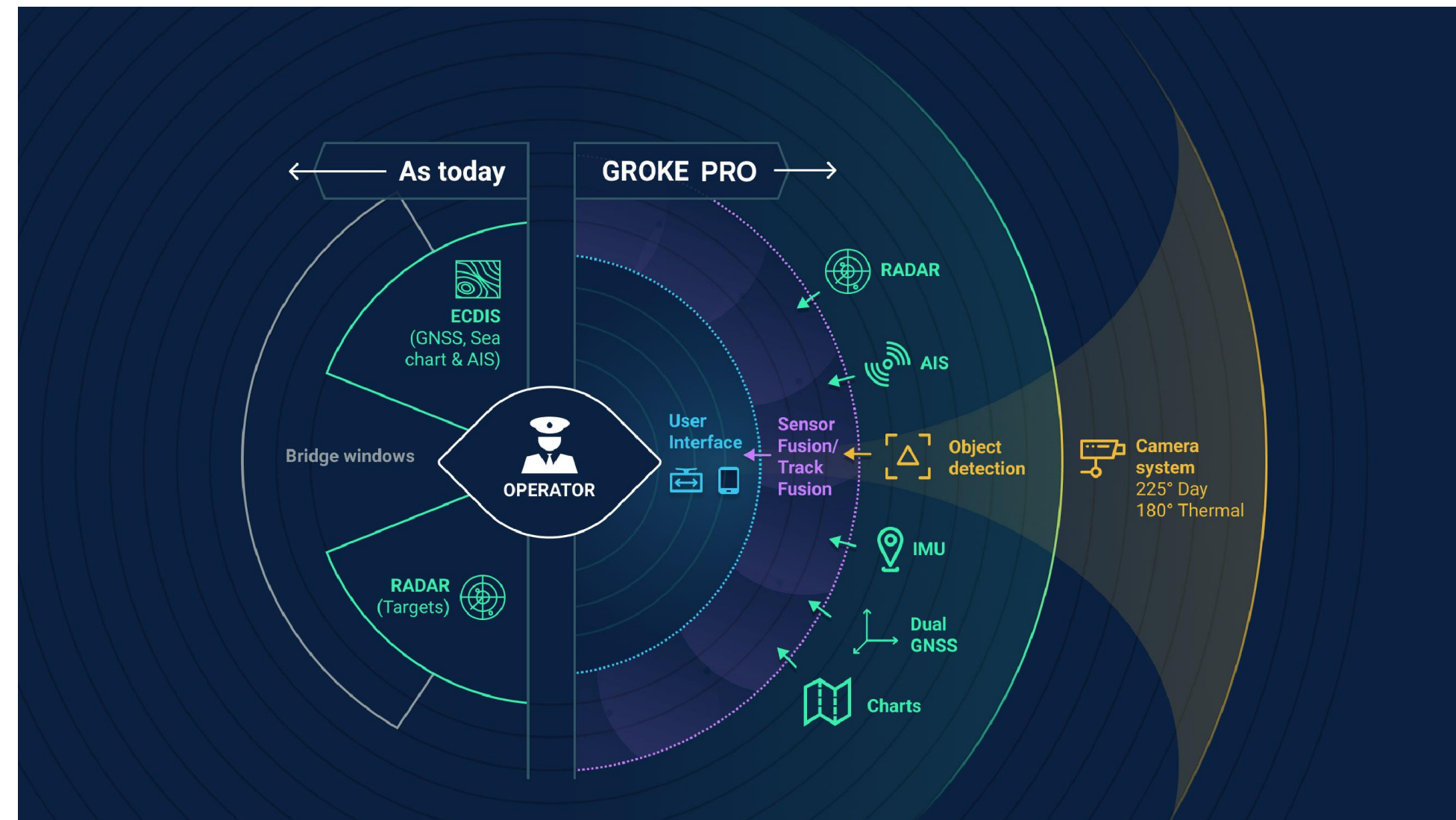


## NATIONAL CENTRE OF EXPERTISE ON MARITIME PILOTAGE



Extract from Groke presentation at Autonomous Ship Expo 2022, Amsterdam.

# Sensor Fusion



Credit: Groke Technologies

Sensor fusion could help mariners improve their situational awareness in particular conditions

# Augmented Reality



Credit: Fraunhofer CML



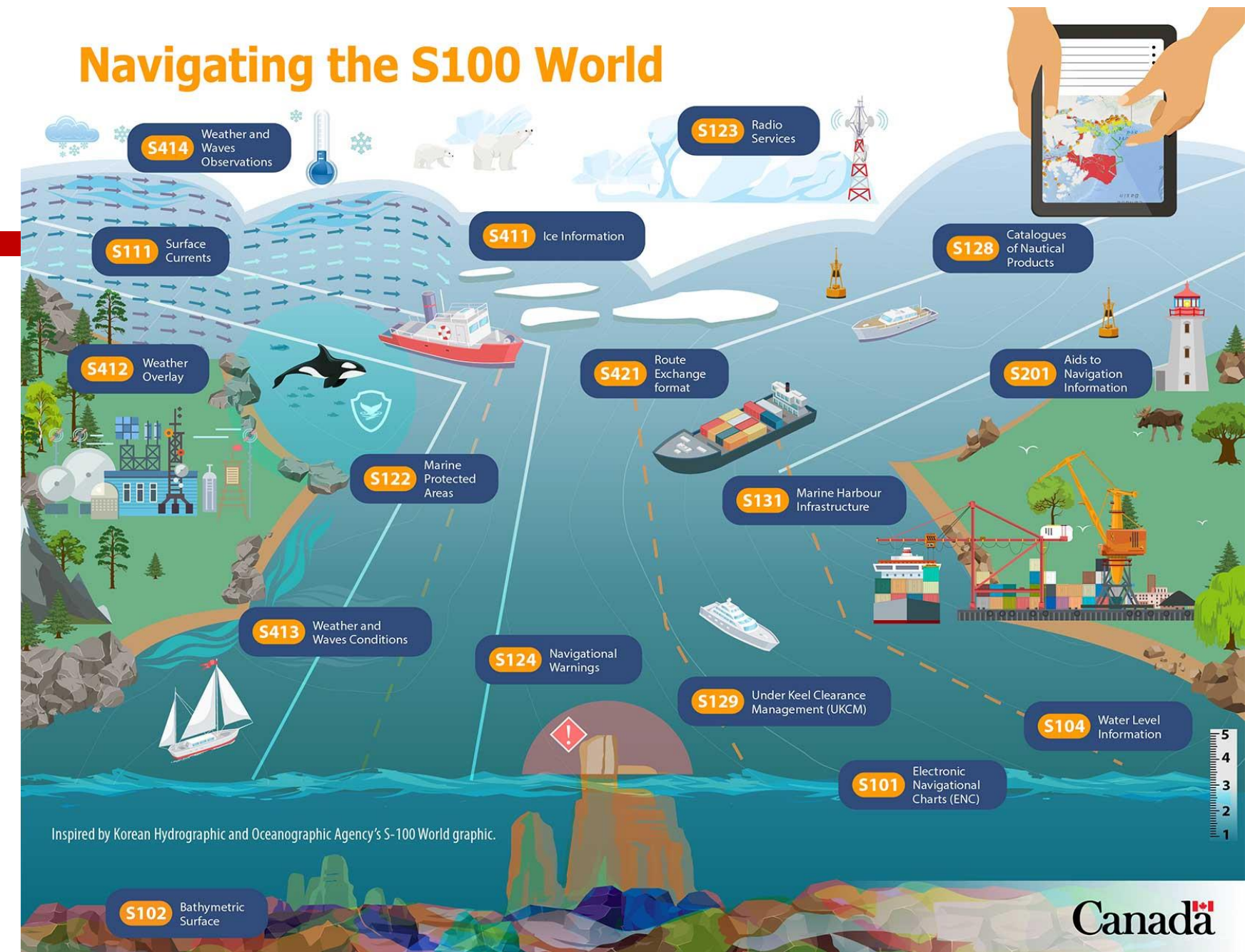
AR can help mitigate low visibility and/or high traffic density situations



# S-100



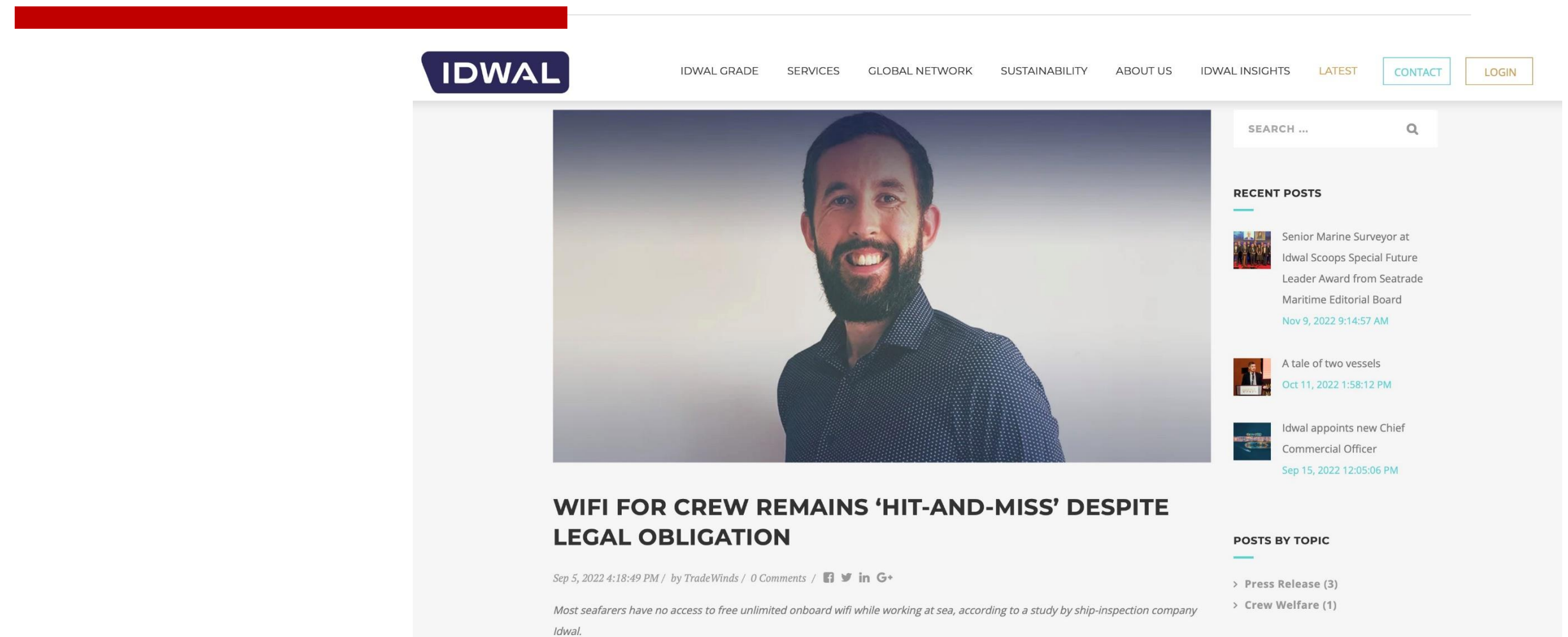
## Navigating the S100 World



Source: Kongsberg Digital.

S-100 will support digital shipping and would provide mariners with enhanced navigation tools


# 5G / CHEAP SATELLITE SERVICES



The screenshot shows the IDWAL website with a navigation bar containing links for IDWAL GRADE, SERVICES, GLOBAL NETWORK, SUSTAINABILITY, ABOUT US, IDWAL INSIGHTS, LATEST, CONTACT, and LOGIN. The main content area features a large image of a smiling man with a beard. Below the image is the article title "WIFI FOR CREW REMAINS 'HIT-AND-MISS' DESPITE LEGAL OBLIGATION" and a sub-headline "Most seafarers have no access to free unlimited onboard wifi while working at sea, according to a study by ship-inspection company Idwal." The article is dated "Sep 5, 2022 4:18:49 PM" and is by "TradeWinds". To the right of the main article is a sidebar with a search bar, "RECENT POSTS" (including "Senior Marine Surveyor at Idwal Scoops Special Future Leader Award from Seatrade Maritime Editorial Board" and "A tale of two vessels"), and "POSTS BY TOPIC" (including "Press Release (3)" and "Crew Welfare (1)").

Novel satellite and 5G communication services should benefit the seafarers

# The case for gradual use of MASS supporting systems

- **New skill sets for seafarers = **
- **Answers crew shortage issue**
- **Safer → better efficiency → More \$**
- **Foster innovative initiatives**

What if less meant more...

# What is realistic for the future of navigation?

- **Evolution rather than a revolution**
- **Green propulsion / Alternative Fuels**
- **More automation**
- **Training**

**Pilots are best positioned to help shape the future of navigation**

Q ?



Credit: Simon Pelletier

Remote navigation!!!!