

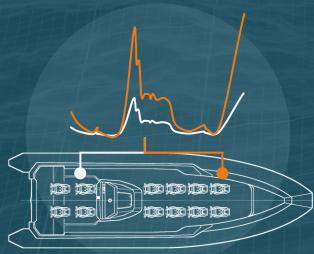
### **HighSpeed**Boat Operations**Forum**

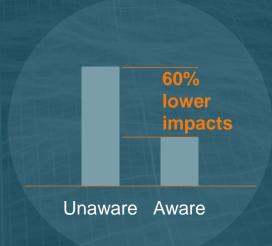
INTELLIGENT DECISION SUPPORT FOR PROFESSIONAL BOAT OPERATIONS

**9<sup>TH</sup> JUNE 2023** 











"Heard her spine break on a boat trip"



6-9x greater g-force in Bow than in Stern

Lower impacts from behaviour change

Hefring Marine founded in Dec 2018





### Intelligent Marine Assistance System (IMAS™)

- On-board Al-powered digital captain assistant
- Provides guidance to optimize safety and efficiency
- Collects and processes all vessel data
- Continuously improves and evolves with the fleet
- Easy to install, maintain and use





Up to

25% lower fuel use and CO2 emissions

**70%** lower recorded g-force impacts

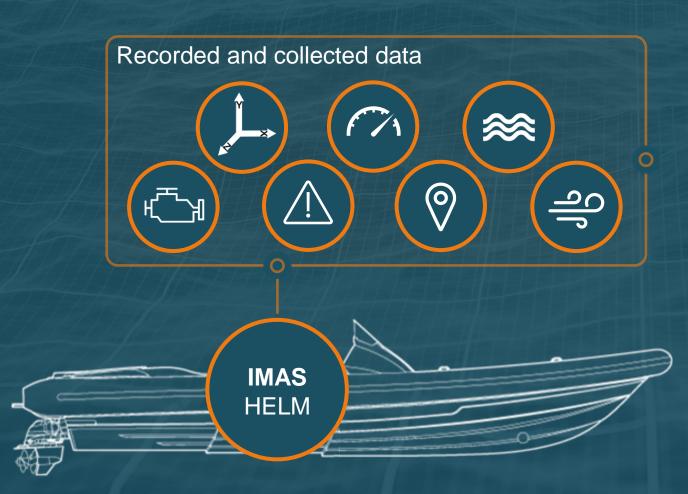
20% savings on insurance premiums



















Safety prediction



Fuel prediction



Route planning





- Speed optimization
- Time vs fuel savings
- Impacts & vibrations
- Route & heading

Guidance





Safety prediction



Fuel prediction



Route planning

IMAS HELM





IMAS Cloud

IMAS HELM

Guidance (

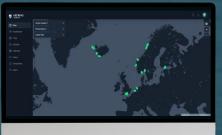




Analytics



Reporting







**IMAS** Console



IMAS Cloud

IMAS HELM







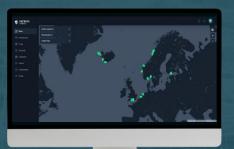
Analytics



Reporting



#### **IMAS** Console



- Live location & route
- Status & statistics
- Rules & alerts



IMAS Cloud









Analytics



Reporting



#### **IMAS** Console



- Visuals & insights
- Dashboards & trends
- Trips, vessels & captains



IMAS Cloud







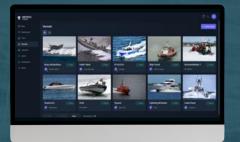
Monitoring 🔷

Analytics



Reporting





- Data reports
- Captain logs
- Data storage



IMAS Cloud

IMAS HELM











Reporting



## **IMAS** Console













Safety prediction

**IMAS** Helm



Fuel prediction Guidance



Route planning

Compatible with

Raymarine GARMIN.









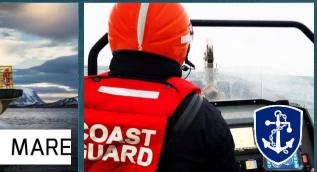






























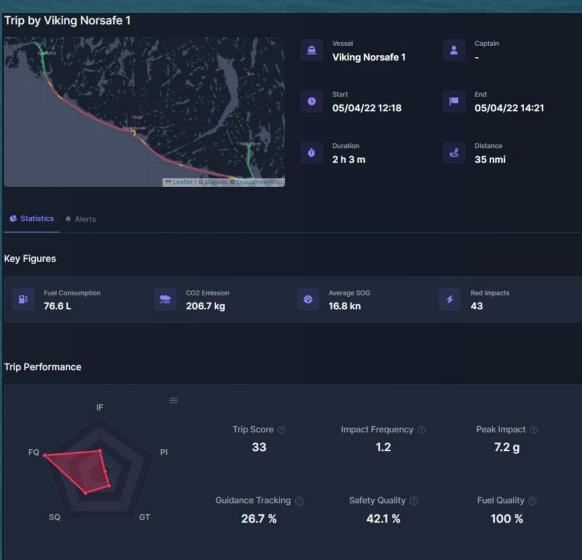


#### **Viking Norsafe Intelliboat Project**

- Monitoring and visualization of impacts
- Centralized data collection and processing
- Dangers faced by high-speed boat operators











# Case 1: Impact exposure and safe navigation





#### Other examples

Evaluating behaviour of ROG



Using visualization of impacts

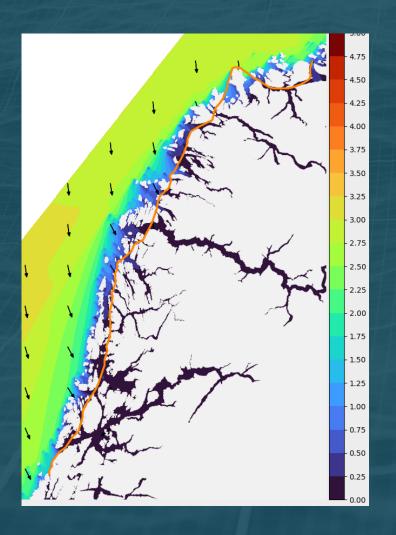
Tow A Boat U.S.

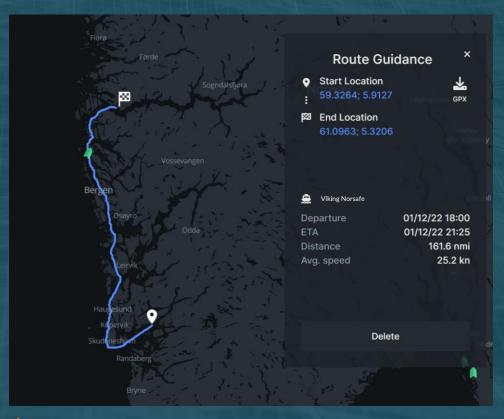




## Case 1: Impact exposure and safe navigation







- Safe navigation with AI generated route
  - Depth, scalability and adaptive COG decisions



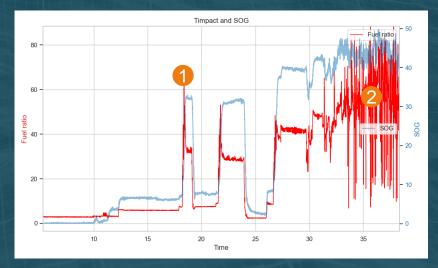


#### **RS** Ambulance vessel monitoring

- Impacts for analysis of safety and crew comfort
- Dual-sensor setup for different purposes
- Customizing rules and alerts for monitoring
- Analysing fuel consumption













#### **RS** Ambulance vessel monitoring

- Al-powered solution for eco-speed (FOG)
  - Savings of up to 25% at speed and idle
- Over time, can determine:
  - Engine maintenance needs
  - Propellers and hull fouling



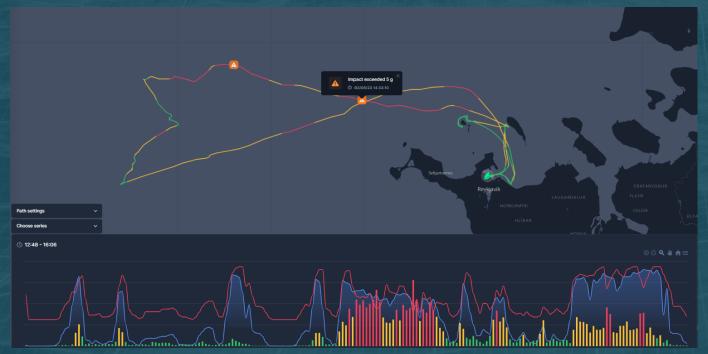












#### Whale Safari Rib Boat tours

- Collaboration with operator and insurance company
- Tackling rising insurance premiums and operating risks
- 20% premium discounts granted for 2022 season
  - Discount to continue with insights and metrics

## **Case 3: Monitoring for premium discounts**







Period	Number of trips	Number of trips longer than 30 mins	Distance	Operating hours
14.07-04.11 '22	330	201	4.891 miles	528 hrs.
Peak Impact / Avg. peak > planing speed	Safety Quality (SQ)	Fuel consumption	CO2 emissions	Alerts (engines)
7.2 / 0.5 g	86%	17,515 L	36.1 tons	82
Boats	Duration (hrs) Tr	rips Peak impact (g	) Fuel cons. (ι)	Alerts Safety Quality
RIB Boat 1	296	181 6.9	9.729	67 86%
RIB Boat 2  Total/Avg.		149 7.0 330 7.0		15 87% 82 87%
8 7 8 5 7 8 5 4 3 2 1 0	72 7, 6.9			ghest recorded peak 35 pacts per trip longer than 30 mins 25 20 15 10 5
Performance ranking,	Impact Frequency 0.3	<b>80</b> 7	<b>୪</b> <b>ଓ</b> 54	O T V
77% Quidance	1, 8g		)- 10- 20- 3.0- 4.	31 14 8 1 1 0 - 5.0 - 8.0 - 7.0 - 8.0 6.0 7.0 8.0
Tracking	surely Co	Lany	G-impacts (	groups)
100   for all trips to   100	ty (SQ) grouped onger than 30 mins  58  17  17  18 80 - 70% 70 - 80% 80 afety Quality % (groups	90 - 90%		4-25 knots for 2% savings in seastate 3
High peak and average wave impacts but SQ generally high. Suggests overall avg. safety is high but vessel type is crew safety-speed training prone to high peaks. Crew should receive additional safety training, particularly regarding how best to use the safety optimized speed to reduce risk of high impacts.  Proposed targets for period Crew safety-speed training Avg. Peak impacts <2.0g coptains for SQ over 90% optimized speed to reduce risk of high impacts.				





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Scan QR code to book a demo