

# Early alertness monitoring for the bridge

On-board assistance that reduces  
fatigue- and distraction-related risk

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Patent pending – EP 25205451.5

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# The problem

**BNWAS verifies presence.  
Alertness goes unchecked.**

Bridge work has become seated and screen-centric; micro-sleeps and distraction slip past traditional alarm.

Industry sources link **~25% of marine incidents** to fatigue.

*Source: ITF; Allianz Safety & Shipping Review*



# BNWAS (what it is / what it isn't)

- **Purpose:** mandatory **Bridge Navigational Watch Alarm System** to ensure the watchkeeper is present and responsive.
- **How:** timed acknowledgements (e.g., 3–12 min) → **staged alarms** (bridge → Master → crew).
- **Limit:** verifies **presence**, not **alertness** (fatigue & distraction can slip through).
- **Fit:** **Aware Mate complements BNWAS** with early alertness monitoring on board.



BNWAS



# What **Aware Mate**<sup>®</sup> is



**On-board, human-in-the-loop vigilance layer.**

Monitors **eyelids, gaze, head position and body posture** to detect early signs of **drowsiness** and distraction and nudges early before escalation.

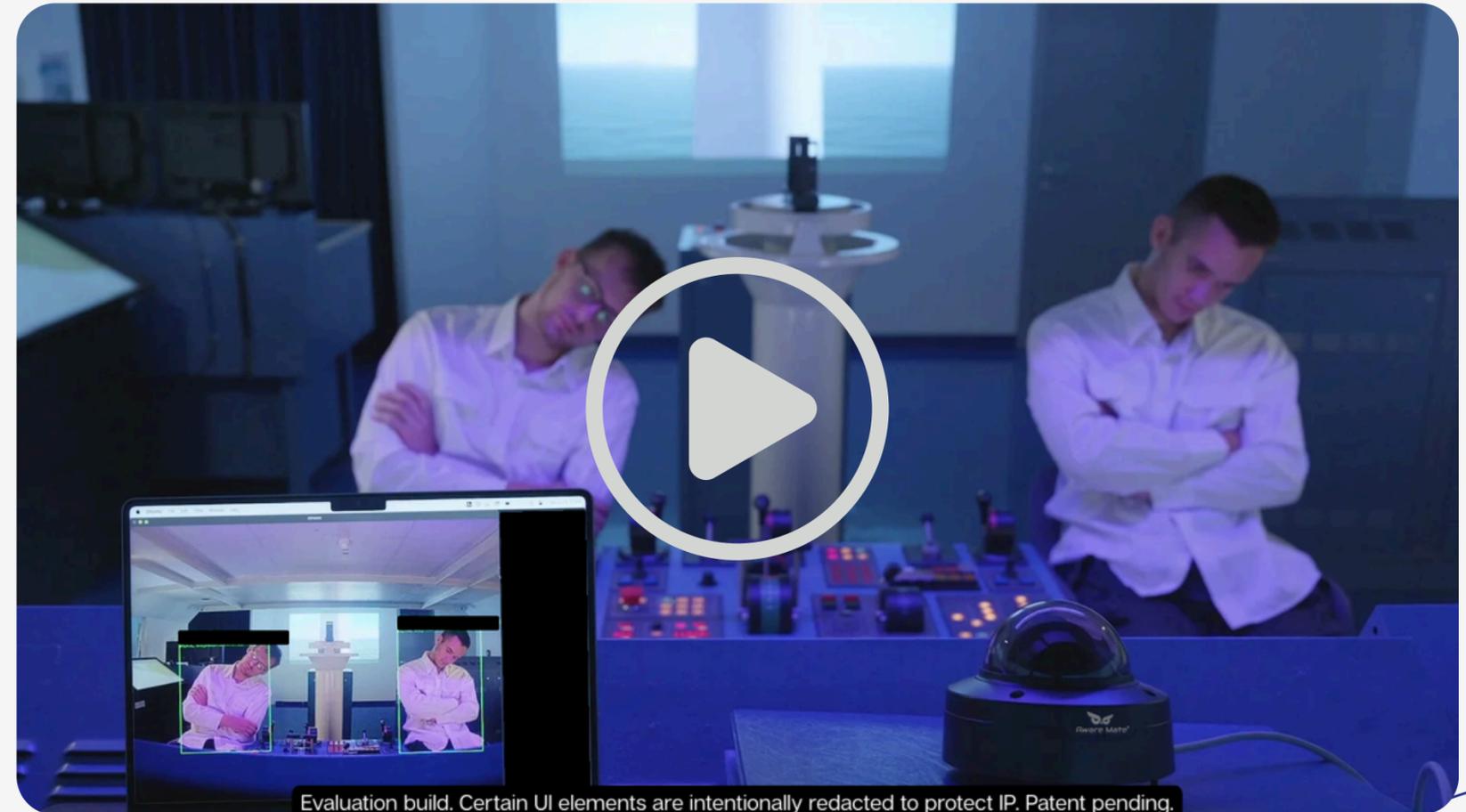
**Alongside BNWAS:** Aware Mate adds early alertness monitoring.

**No cloud video;** privacy-first by design.

*Aware Mate<sup>®</sup> is a registered trademark of ELNAV.AI d.o.o.*

# How it works (at a glance)

- **Capture** attention signals on the vessel.
  - **Estimate risk** over short windows.
  - **Graded response:** alert → notify Master if sustained.
- **Reports:** anonymised trends by watch/time-of-day;  
**no raw video stored**

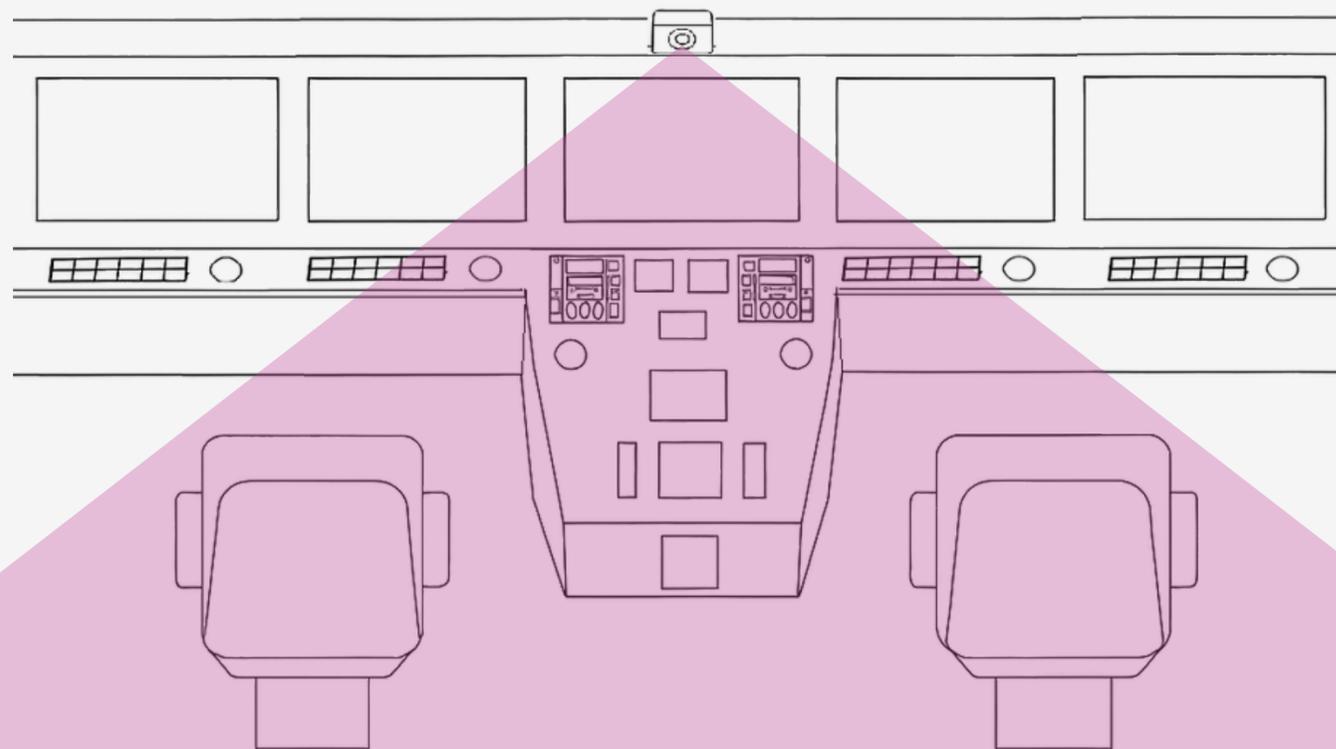


Watch 35-sec demo

# Deployability

- ✓ **Installs in hours** (retrofit kit)
- ✓ **Offline** operation; low compute footprint
- ✓ **Fleet-ready** repeatable installs and standard interfaces

**Note:** Designed for maritime; architecture adaptable to other 24/7 monitoring desks (last slide).



# Compliance & privacy

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**Built for GDPR & the EU AI Act:** processing on board, data minimisation

**Assists crew; does not automate navigational decisions**

No identity or emotion recognition; configurable retention for aggregated metrics

*European patent application pending – EP 25205451.5*

# Reporting & value to HSE

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**Anonymised attention reports** (risk trends, alert acceptance, night-watch patterns)

**Audit-friendly** evidence for SMS and fatigue-risk management

Practical goal: **fewer near-misses, fewer distractions, better night-watch performance**

# Business case & pricing

- ✓ **Complete package under €15k** (hardware included)
- ✓ **SaaS €1.2–3.5k per vessel / year**
- ✓ Clear payback from **avoided incidents/near-misses** and operational continuity



IP camera



Processing unit



Network switch

# Pilot plan & KPIs (8-12 weeks)

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**Scope:** 1–2 vessels (bridges); **Day-1** install + config + crew briefing; **BNWAS tie-in optional** (dry contact).

**KPIs:** alert acceptance rate; time-of-day risk trends; reduction in distraction events; crew feedback.

**Deliverables:** anonymised reports, ROI snapshot, recommendations; optional pre-audit with class/flag for certification path.

# Team & contact



**Hrvoje Mihovilović**

*Founder & CEO  
(Master mariner, 30+ yrs)*



**Ivan Biliškov**

*PhD in Computer  
Vision & Edge AI*



**Mislav Biondić**

*(Advisor)  
Marketing Expert*

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# Adjacent opportunities

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The architecture is portable to other 24/7 monitoring environments.

## Examples (on request / partner-led pilots):

- Offshore energy control rooms – FSRUs, FPSOs, drillships
- Pipeline control rooms – oil & gas SCADA
- Electric grid dispatch & control centers
- Air traffic control – towers, TRACON, ACC
- Rail operations & network control centers
- Industrial control – refining, chemicals, tank farms
- Healthcare central monitoring – ICU/telemetry
- Cybersecurity/IT – SOCs & NOCs
- Nuclear plant main control rooms

## Notes

- **IP:** current **EP 25205451.5** covers the navigational bridge use case. Adjacent sectors are delivered under **commercial license + trade-secret know-how**; additional filings may be pursued as scope evolves.
- **Regulatory:** we apply the same **on-board/edge, privacy-first, human-in-the-loop** principles; sector-specific compliance would be validated case-by-case.