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TASK FOCUS DESIGN APPROACHES

Safety in automation and remote operations

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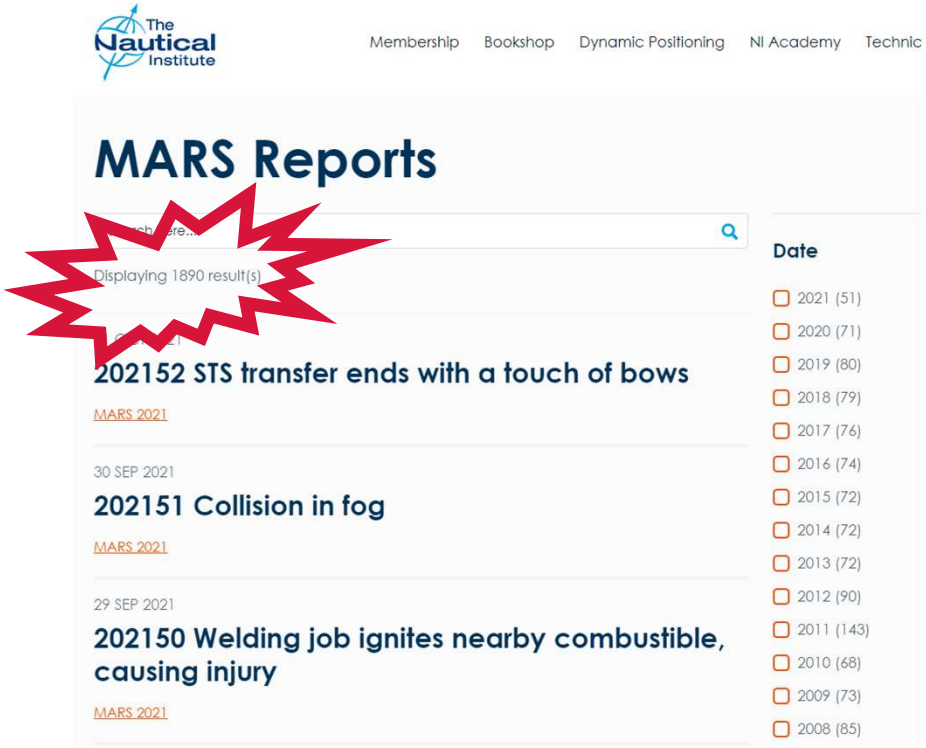
Evolution of maritime safety

MARS



https://www.nautinst.org/resource-library/mars/mars-reports.html

Maritime Accident Investigation and Temporal Determinants of Maritime Accidents:
A Case Study

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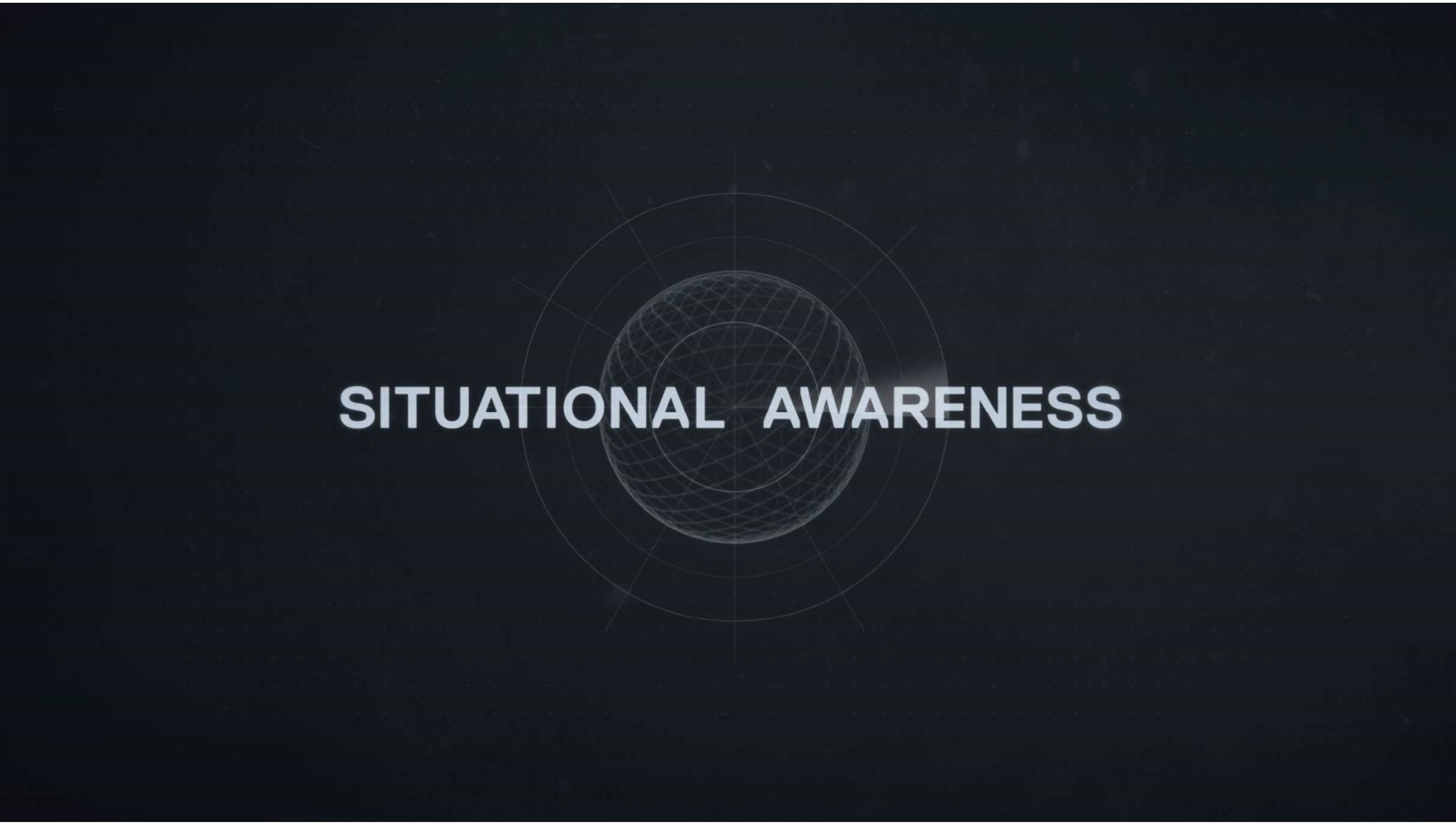
Abstract
This paper presents the results of an investigation into temporal determinants of maritime accidents based on a data-set obtained from the proceedings of formal inquiries in the former German Democratic Republic (GDR). The results show that there is no statistically significant outcome between the probability for an accident and the time of watch. Thus the results do not confirm previous studies, which reported significant time of day effects.

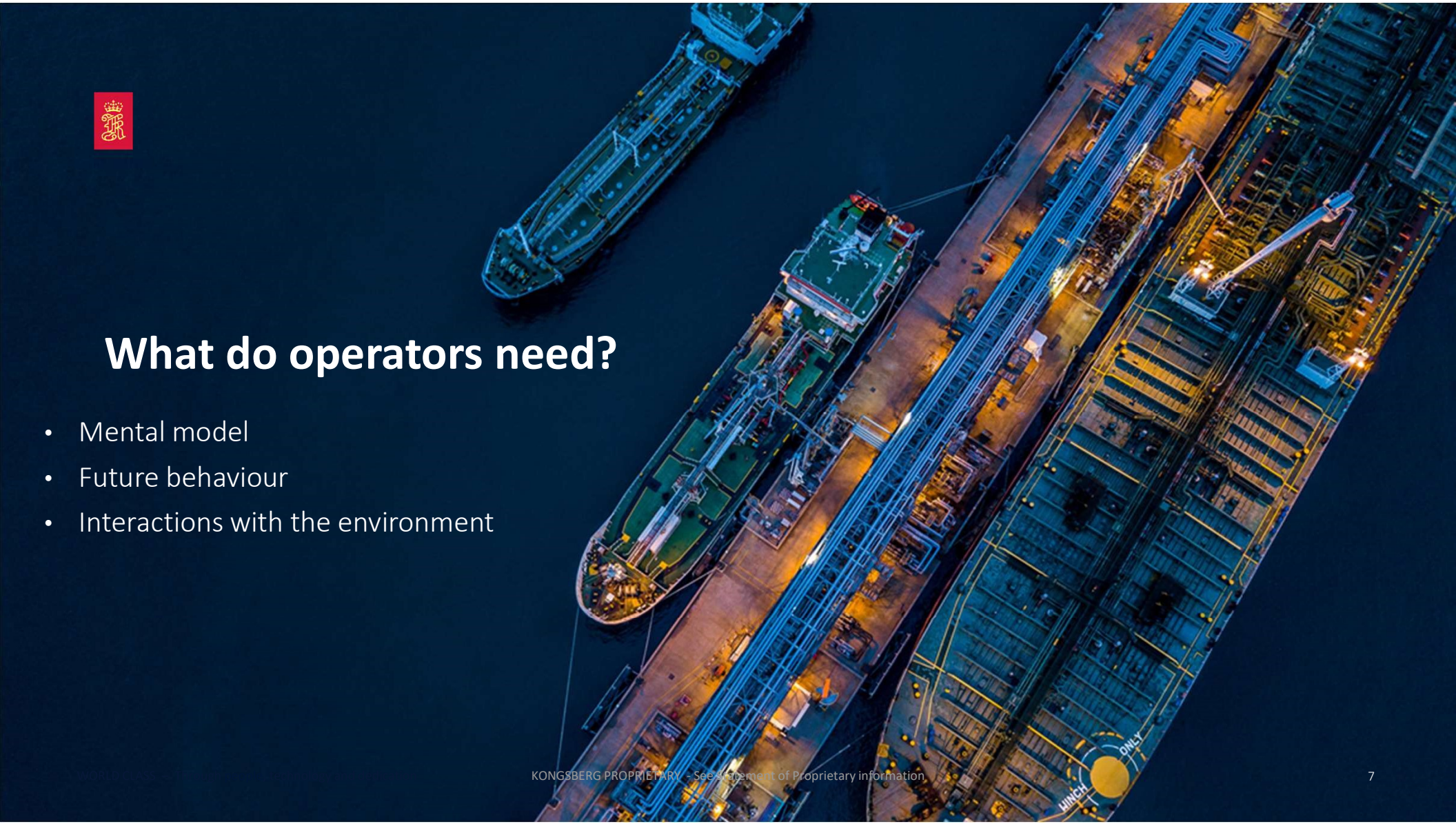
The outcome of this study indicates that marine inquiries can provide useful data for an analysis of underlying causes of maritime accidents. It is suggested that accident inquiries should be extended into the area of watch systems employed and should record the hours of work and of rest of the officers on the watch involved in a maritime accident.

1 Introduction

Shipping accidents, in particular groundings and collisions can have catastrophic consequences for the environment. Recent examples of such events are the groundings of EXXON VALDEZ, BRAER and SEA EMPRESS as well as the collision involving the tanker HAVEN. It is then often speculated that 80% of such accidents are caused by unspecified "human error".

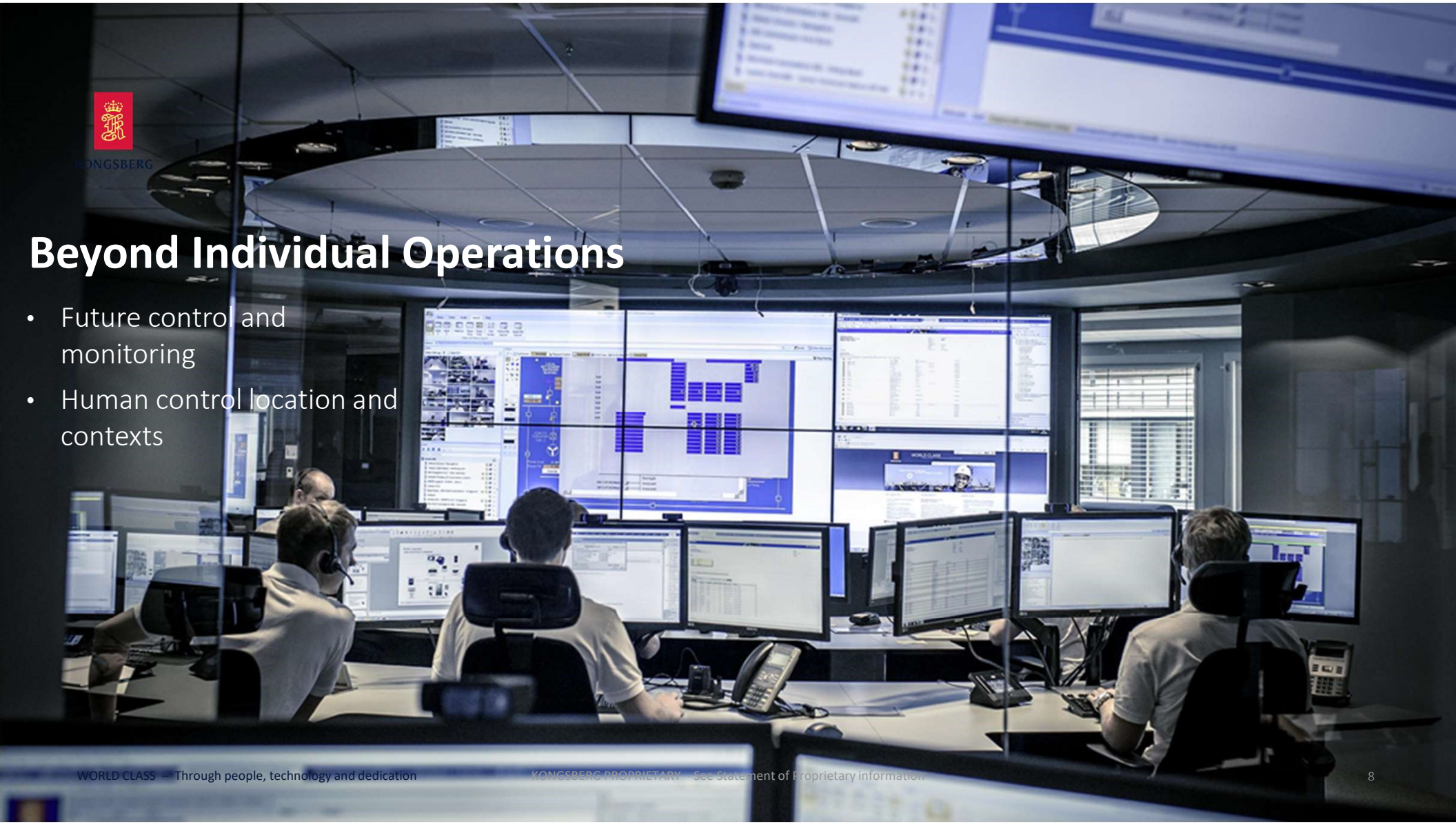

VESSEL NAME


SITUATIONAL AWARENESS



What do operators need?

- Mental model
- Future behaviour
- Interactions with the environment



Beyond Individual Operations

- Future control and monitoring
- Human control location and contexts

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Thank you

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