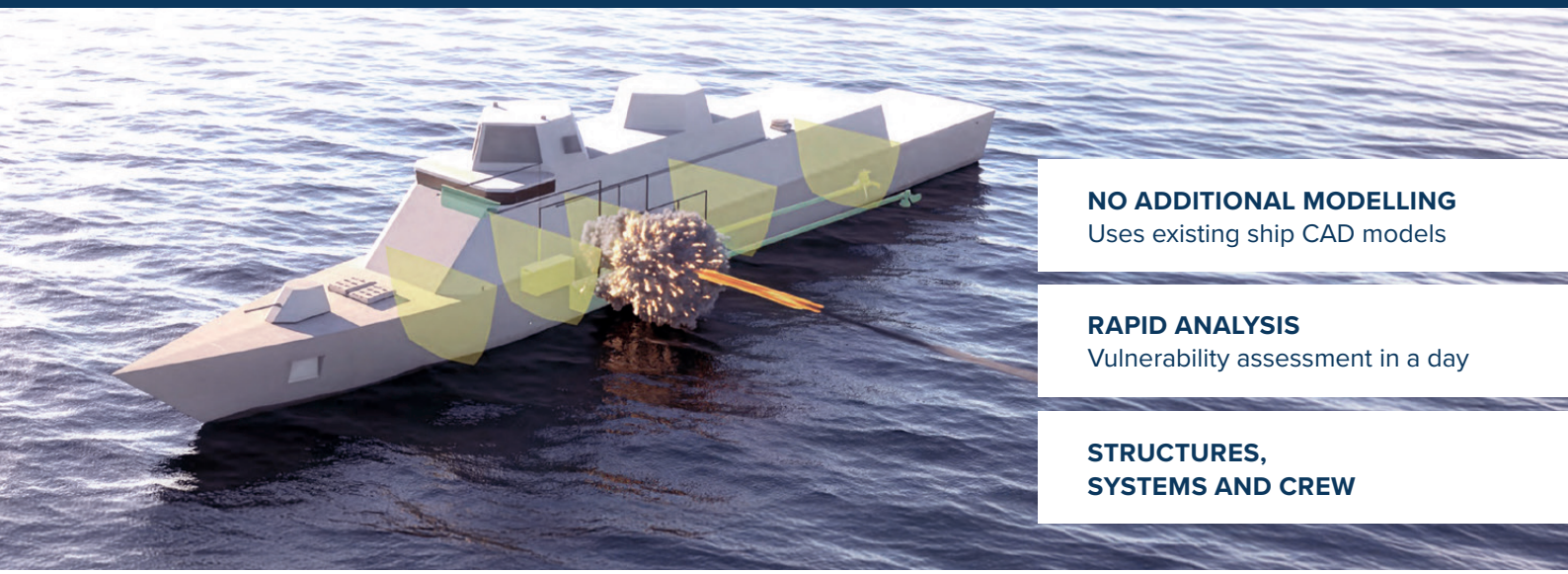
DEFENCE & AEROSPACE

# SURMA

## Validated explosion vulnerability and survivability management

**For Defensive Analysis**

SURMA provides advanced, well-validated tools to optimize vessel survivability. The software allows users to analyze severe air and underwater explosion threats. Navies and shipyards have utilized SURMA internationally in five continents. SURMA provides the comprehensive design tool to protect the important assets – the safety of the crew and fleet. In addition to combat scenarios, the analyses support peacetime accident survivability, protecting the vessel and crew.



**NO ADDITIONAL MODELLING**
Uses existing ship CAD models

**RAPID ANALYSIS**
Vulnerability assessment in a day

**STRUCTURES, SYSTEMS AND CREW**

## Surma Approach to Physics

SURMA analysis tools use well-validated and practically streamlined physical models to make the assessments fast and accurate. The software makes it possible to integrate the survivability analysis into the iterative design process and allow designers to constantly improve and validate the design without added costs induced by late design changes.

## Software Capabilities

- Import and use the ship's existing design model
- Create and edit ballistic protections
- Create and import routes, equipment, systems and structures
- Create and edit threat scenarios
- Run analysis with SURMA analysis modules

## Key Benefits

- No unnecessary modelling
- Built-in parameter libraries – all data stays with the user
- Custom parameters to define any scenario
- Based on real physics
- Seamless integration with common tools and workflows

## Total Vulnerability Analysis Framework

Rapid, automated and validated explosion vulnerability assessment tools

## Offensive and Defensive Analysis

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|---|---|
| **SURMA UNDEX** | Underwater Explosion Analysis |
| **SURMA AIREX** | Air Explosion Analysis |
| **SURMA MG** | Magnetic Modelling |
| **SURMA REPORT** | Intuitive and Interactive Reporting Framework |

For more information

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