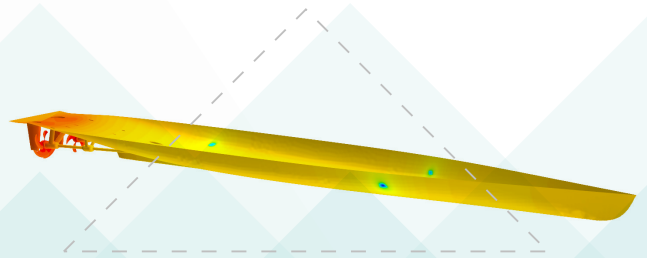
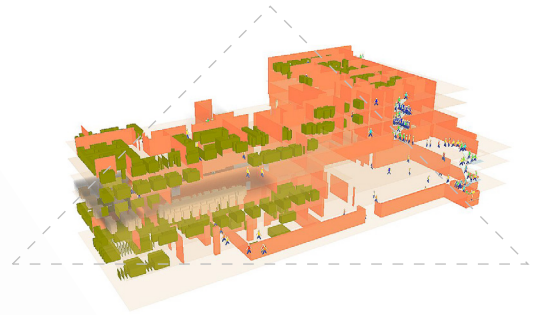


MULTIPHYSICS STUDIES

Optimizing ship design requires various multi-physics studies such as fluid structure interaction (FSI), noise assessment, fire and evacuation simulations, magnetic signature, etc.

Ship habitability studies require assessment of comfort for crew and passengers through noise assessment. Similarly for commercial ships safety of the passengers needs to be ascertained through analyses such as advanced evacuation analysis, fire and smoke simulations, etc. For defence ships stealth is one of the most important aspects. It is governed by various ship signatures such as URN, magnetic signature, RCS, Infrared signature, etc. These advanced analysis and prediction of ship signatures require multi-disciplinary engineering analysis such as CFD, electromagnetic studies, etc. involving multiple physical fields.

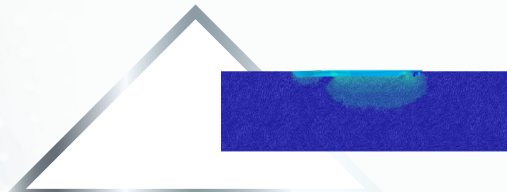
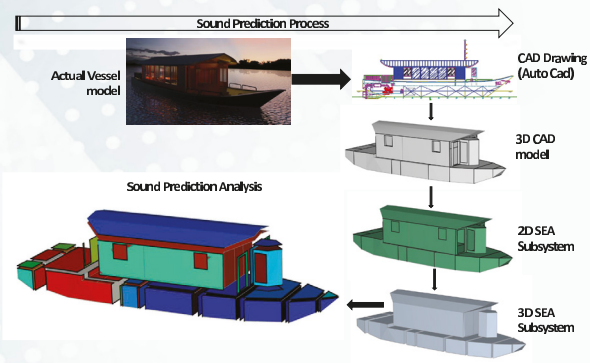




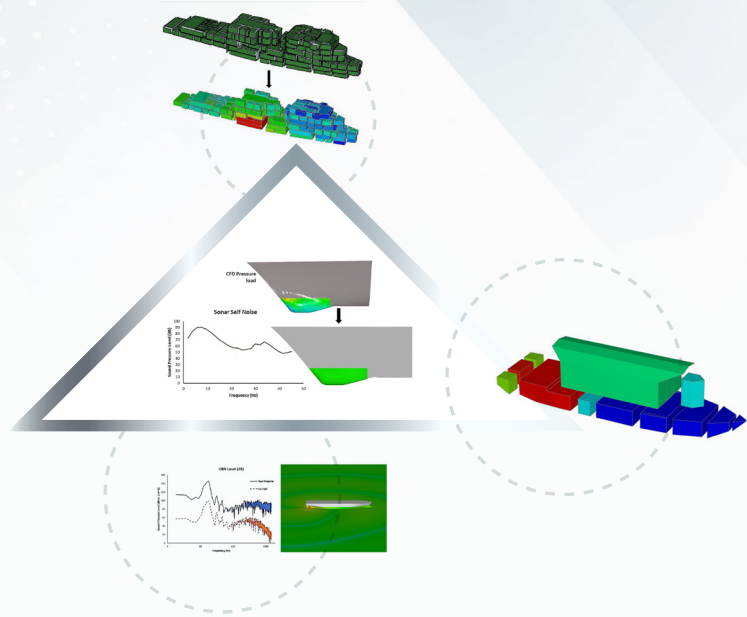
IRClass provides various services involving multi-physics such as

Noise prediction

- On-board noise
- Underwater Radiated Noise (URN)
- Sonar self-noise (SSN)

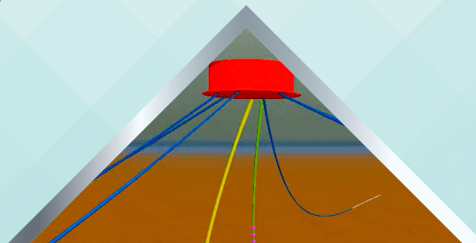
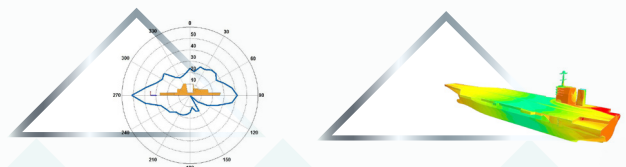


- **Radar cross section (RCS) predictions of vessel**
- **Infrared signature of vessel**
- **Evacuation studies**
- **Fire and smoke simulation studies**
- **Fluid Structure Interaction (FSI)**
 - Whipping assessment for container vessels
 - Underwater explosion studies
- **Mooring analysis**
 - Spread mooring
 - Single point mooring
 - CALM



Magnetic signature of vessel

- Static structural signature
- Corrosion Related Magnetic (CRM) field
- Impressed Current Cathodic Protection (ICCP)



Head Office