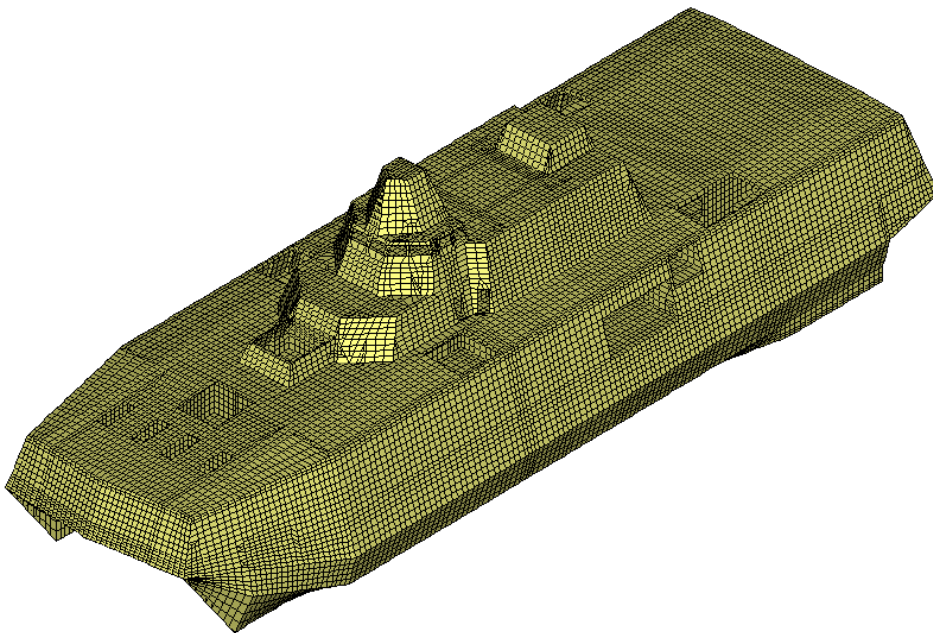


LCS program

Littoral Combat Ship

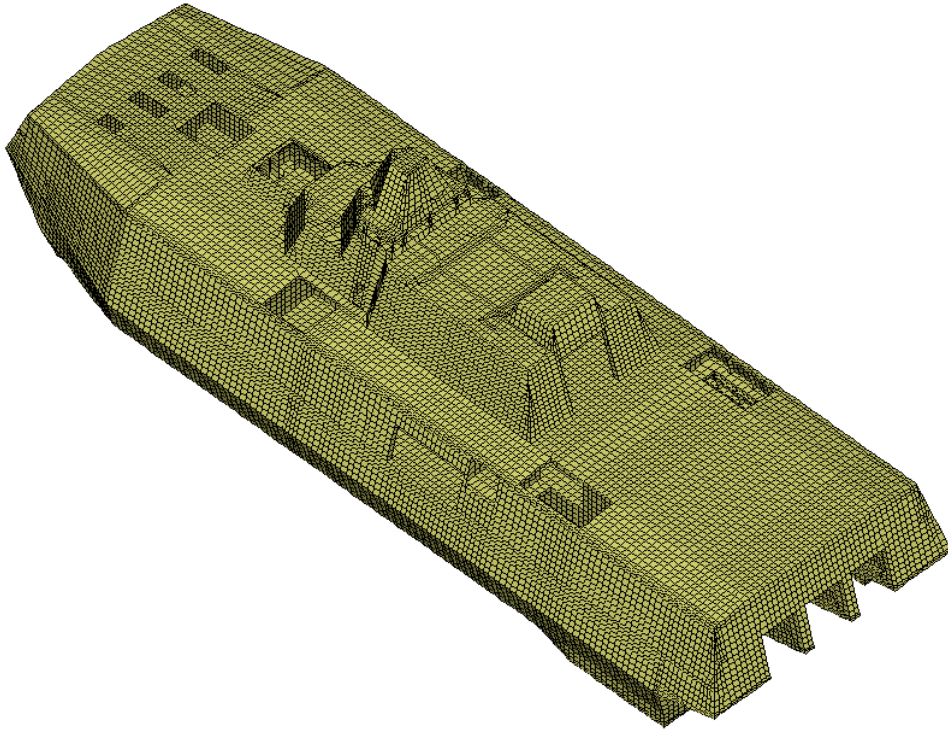
Client: Umoe Mandal AS

- Establishment of design loads
- Structural lay-out and supporting structure according to GA
- Built detailed FEM model with 82.000 elements and 860.000 degrees of freedom
- Structural design of composite hull following principles for local, semi-global and global analysis of composite hull and the structural elements
- Verified structural strength, stiffness and weight for concept evaluation
- Local strength, Global strength, local stiffness as well as natural frequencies of hull structure analysed
- Established Material test program for determination of design data
- Fire protection philosophy and strategy for reaching required performance established
- Weapon platforms integrated in composite structure
- Helicopter landing platform, hangar solution analysed
- Boat hangar including landing devices and hatches/openings incorporated in model
- Large cargo hatches/openings including handling and internal transport systems evaluated and analysed

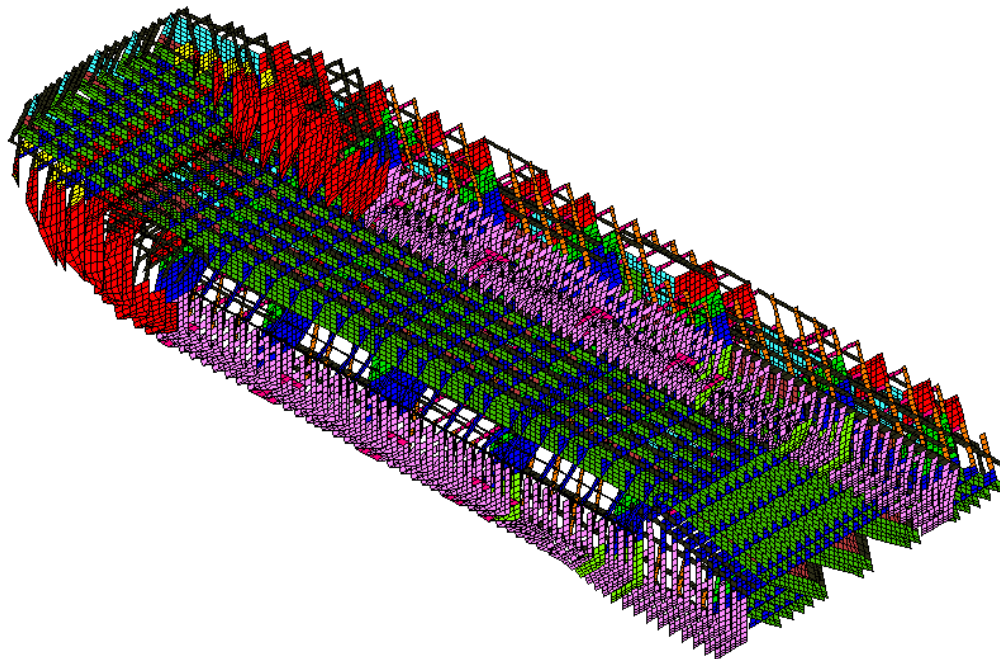


LCS Study – Global FEM model front view

Marine Naval



LCS Study – Global FEM model aft view



Internal bulkhead and stiffener arrangement in FEM model