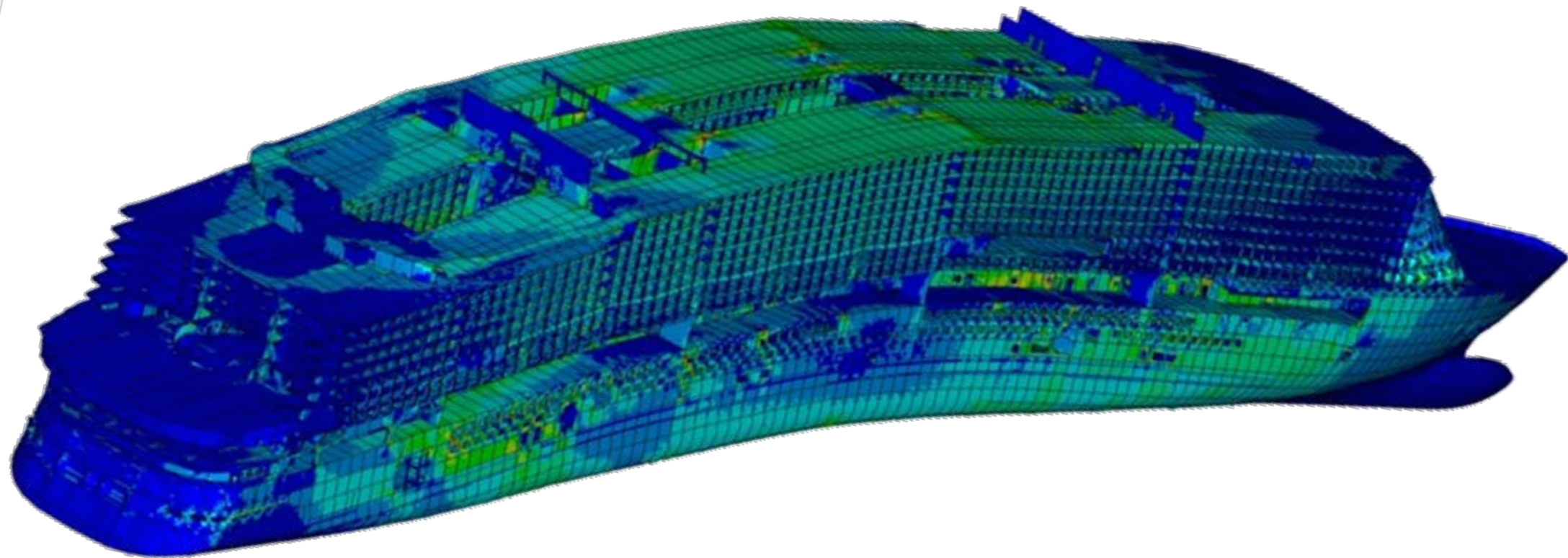


EMShip Week 2018





MV Werften

Yard, Projects, Scope

MV WERFTEN



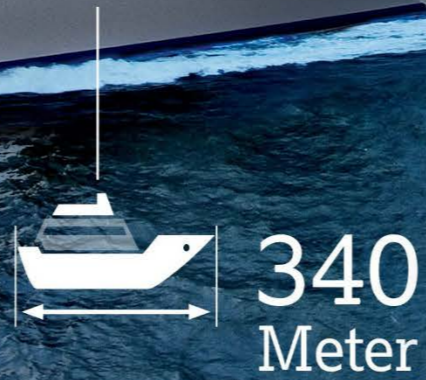
Current Projects



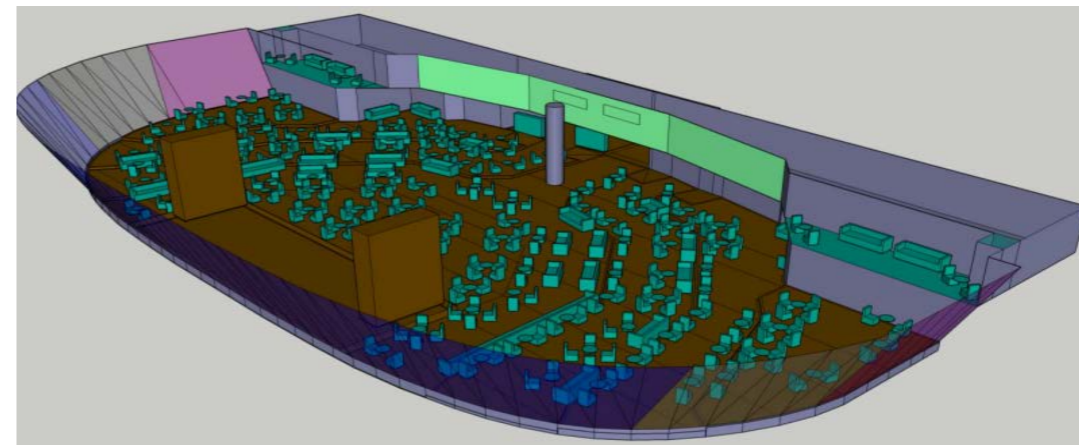
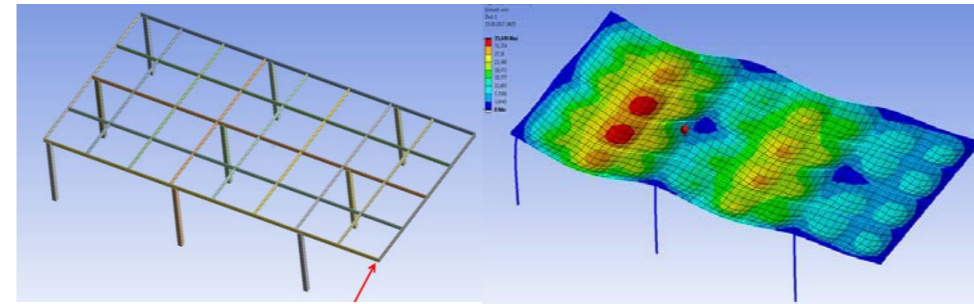
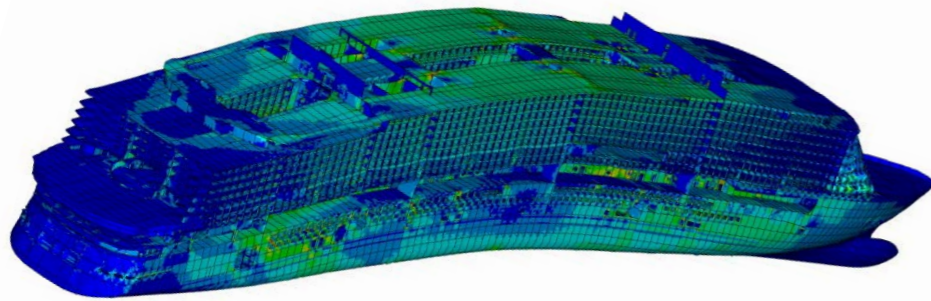
Projects

Global Class vs. AIDA aura

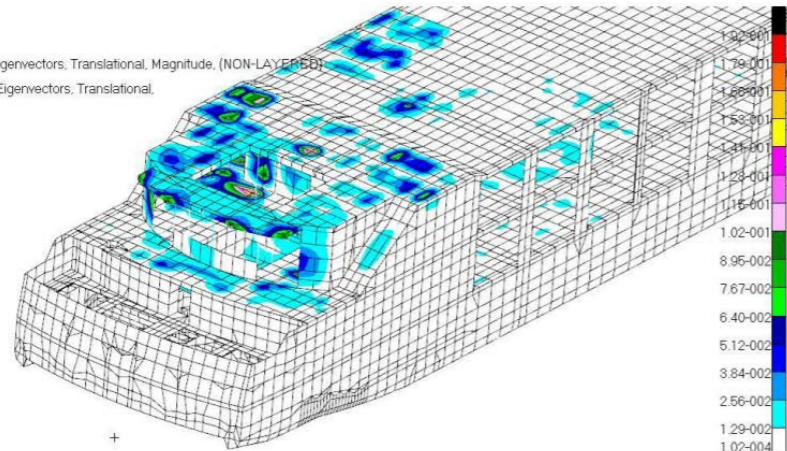
205.450 GT vs. 42.000 GT



Department Scope



Fringe: NAT, Mode 3803.Freq =27.618, Eigenvectors, Translational, Magnitude, (NON-LAYERED)
Deform: NAT, Mode 3803.Freq =27.618, Eigenvectors, Translational.



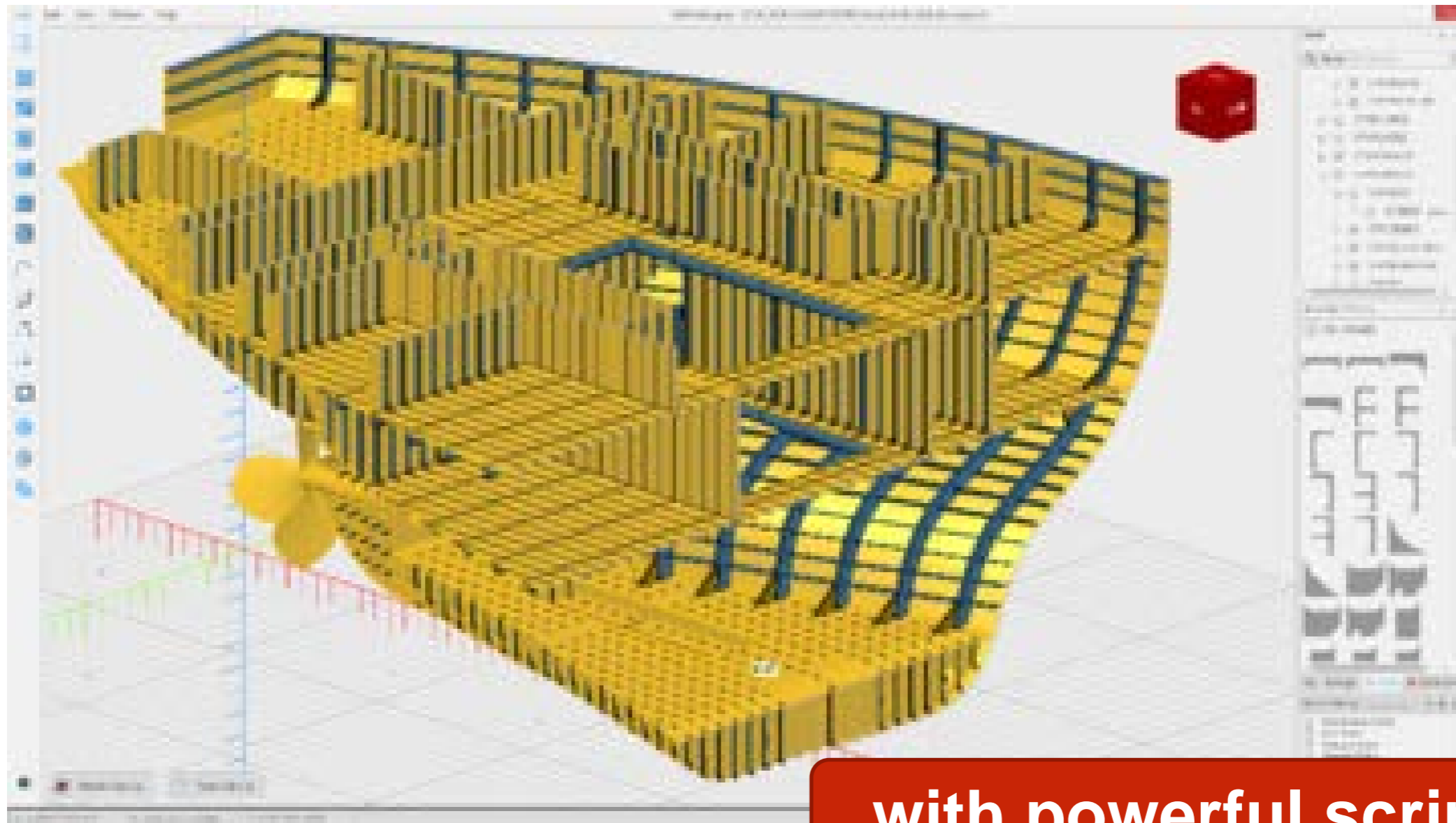
default_Fringe :
Max 1.92-001 @Nd 523123
Min 1.02-004 @Nd 254447
default_Deformation :





EmShip Topics

“New” Napa Steel



with powerful scripting

Source: Napa OI

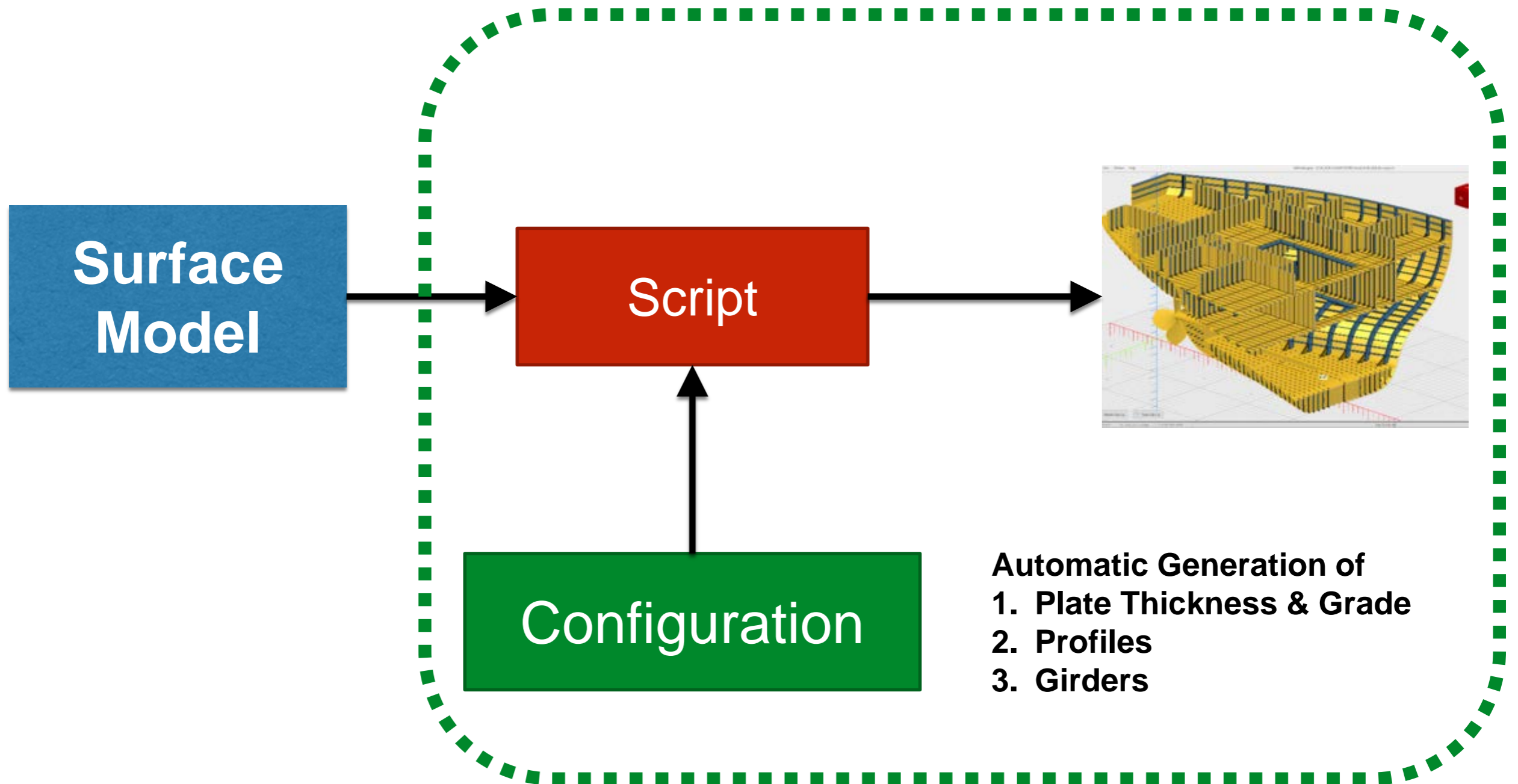
Napa Steel for Template-driven Modelling



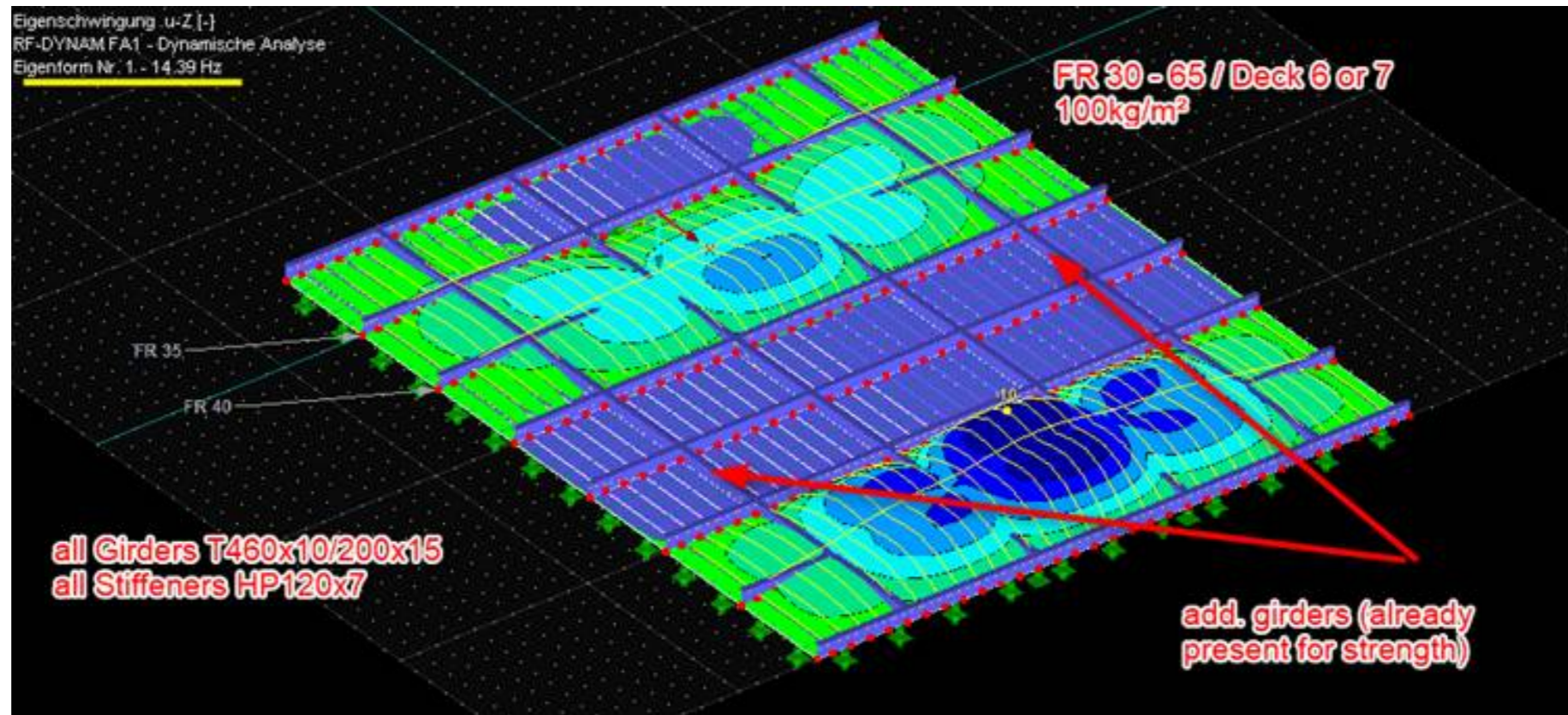
Objective

- One common model in early design
- Faster and more accurate modelling of steel
- **Automated modeling**

Napa Steel for Template-driven Modelling



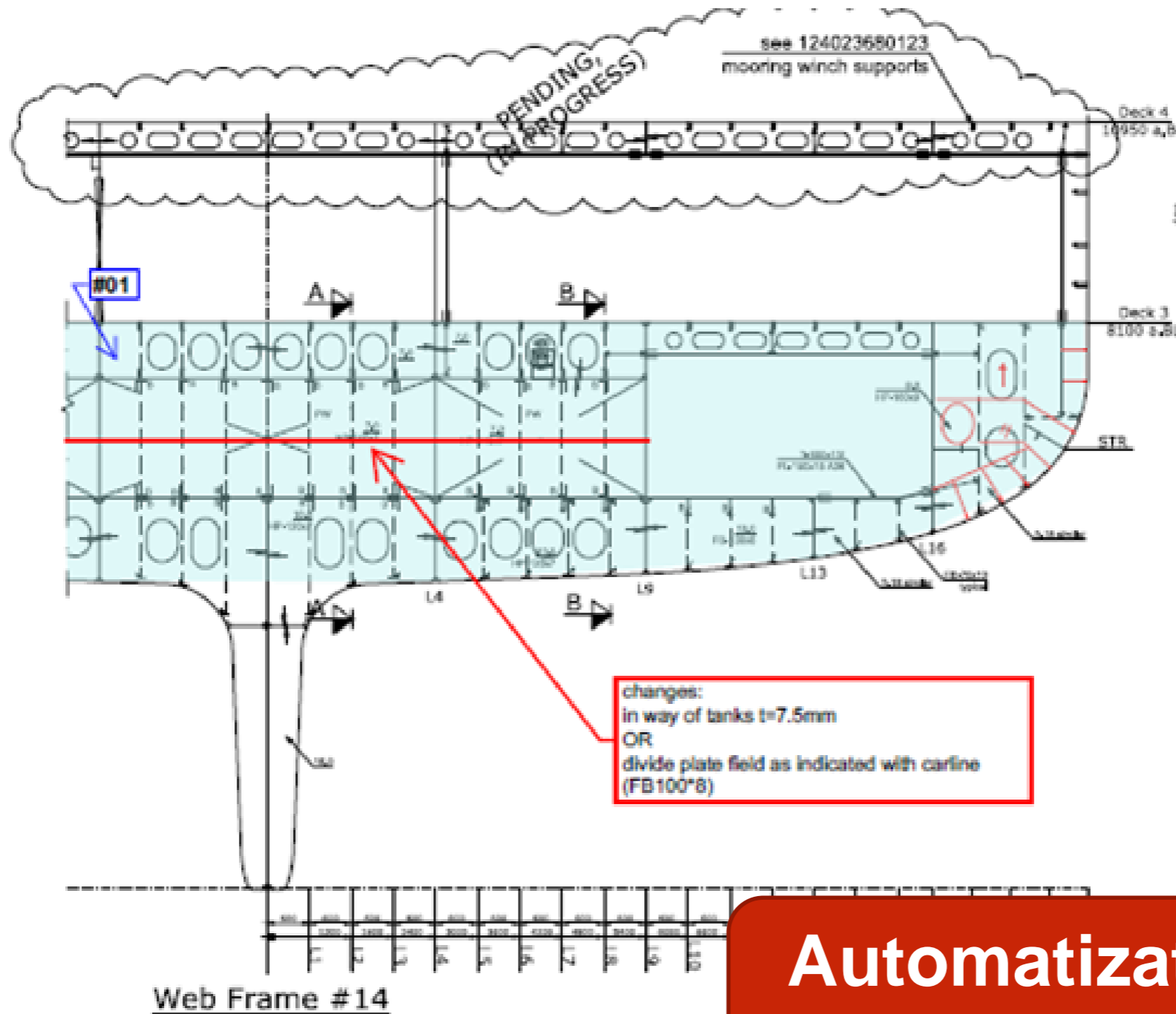
Local Vibration Analysis in Napa Steel



	Load	RPM	1 st Order Shaft	2 nd Order Shaft	1 st Order Blade	2 nd Order Blade	3 rd Order Blade	4 th Order Blade	
Propeller 5 Blades	100%	148.0	2.5	4.9	12.3	24.7	37.0	49.3	
	85%	140.2	2.3	4.7	11.7	23.4	35.0	49.3	
	70%	131.4	2.2	4.4	11.0	22.0	33.0	48.0	
	50%	117.5	2.0	3.9	10.0	20.0	30.0	45.0	

Avoid Resonance!

Local Vibration Analysis in Napa Steel



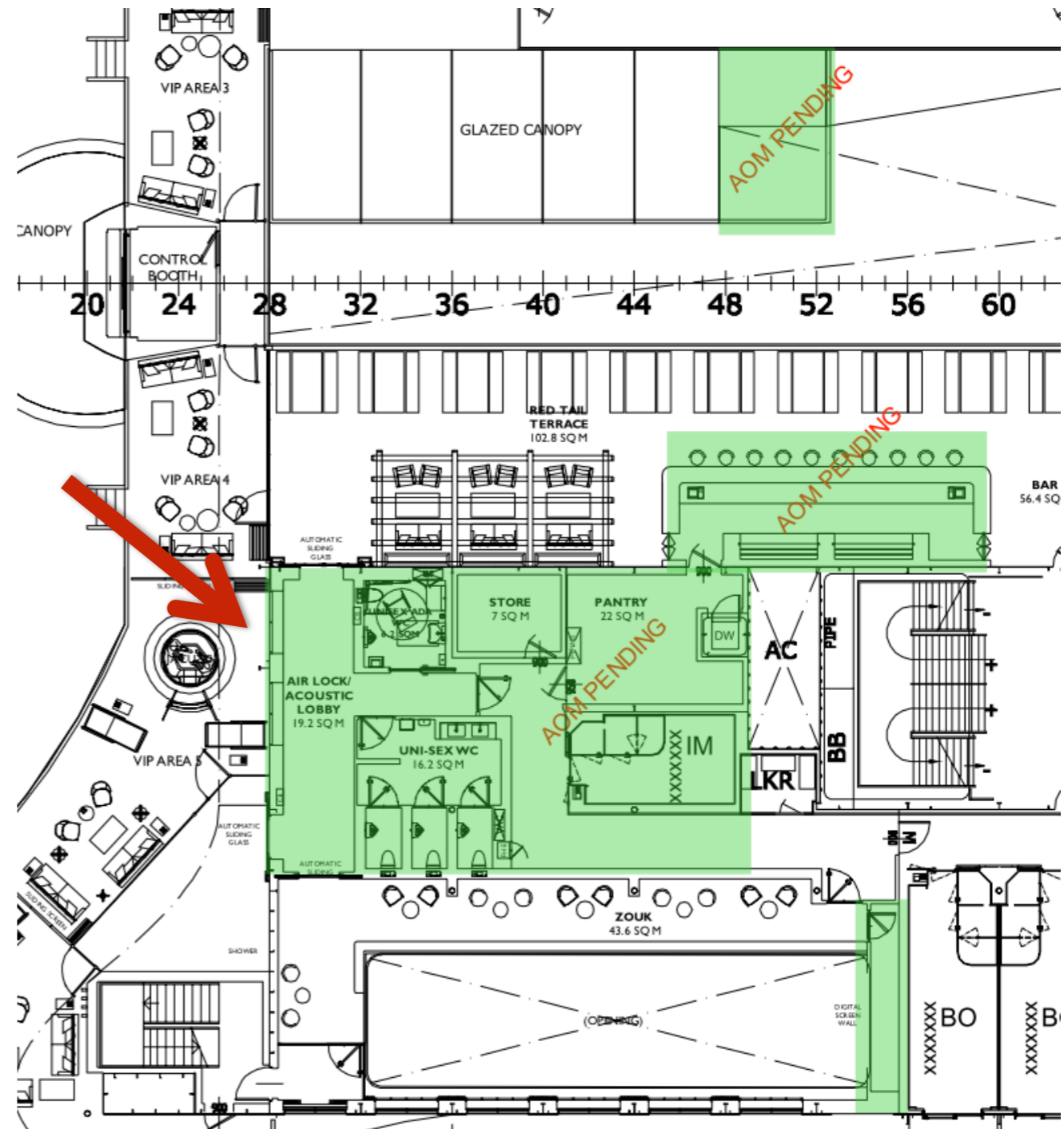
Automatization in Napa Steel!

Substructuring and Orthotropic Elements for Idealization in Global FEA

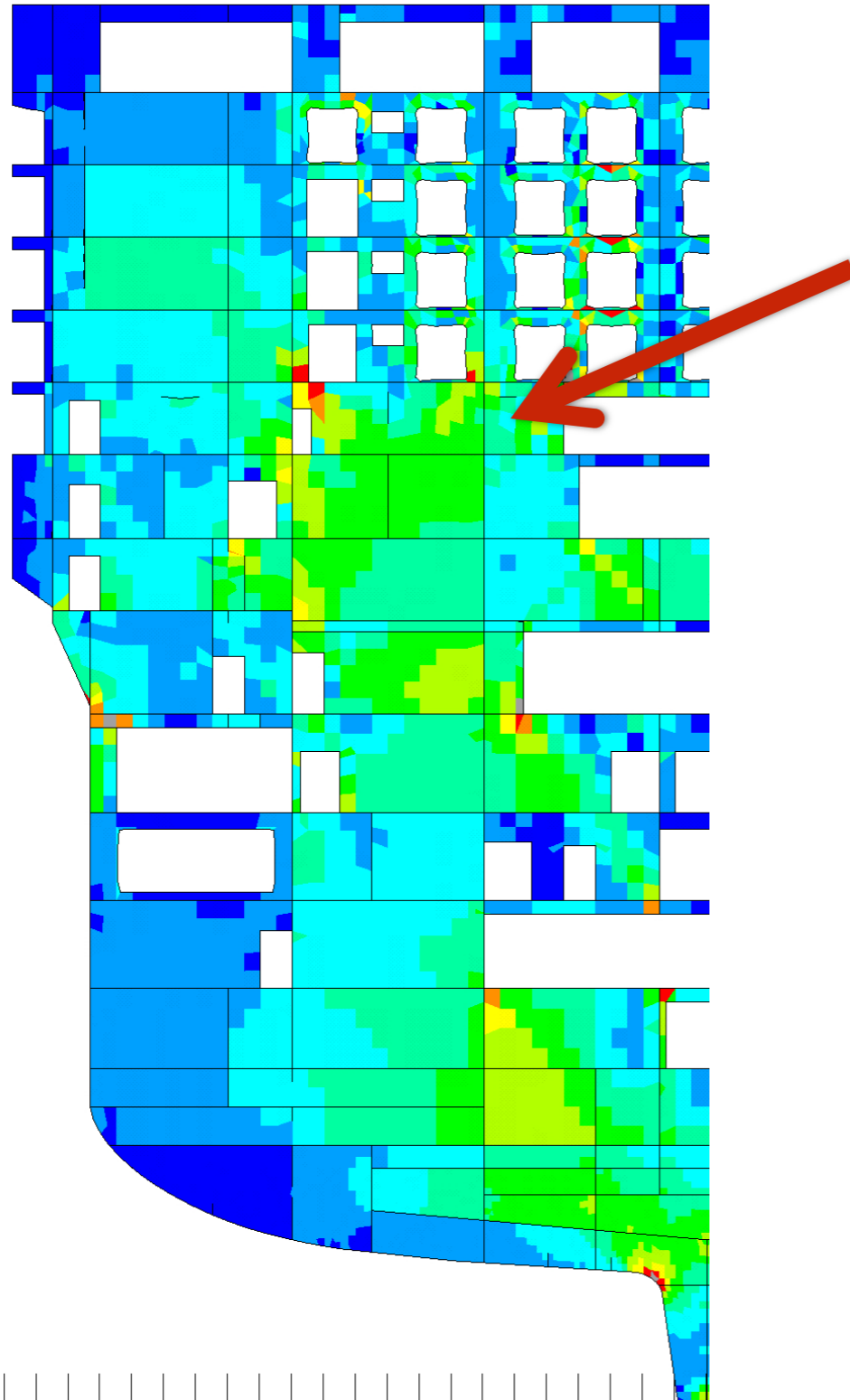


Cruise vessel design means:

- Constant changes
- Also in strength critical areas
- **Rapid assessment of feasibility needed**



Substructuring and Orthotropic Elements for Idealization in Global FEA



Investigation

- Either add window to model, remesh, ...
- Or just change to FE mesh properties

**Substructuring /
Orthotropic Elements?**



Thank You.

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Phone: +49 3841 77-2305