

PLANNING FOR A REFIT OF THE RV SIMON STEVIN



DRE CATTRIJSE



RV Simon Stevin

- In operation since May 2012
- 36m LOA – 9,4m width – 3,6m draught
- ICES 209 – DPO
- Designed for coastal operations
- 170 days at sea – 220 planned
- Daytrips and multiple day campaigns
- Endurance of 5 days – 10 scientists, 9 crew
- Multibeam – ADCP
- Vibrocoring – ROV operations – Subbottom Profiler – USBL
- ICOS station
- Diving operations



RV Simon Stevin

- Lack of space
- Improving scientific operations
- Improving vessel availability
- Greening operations

Dry lab 15m² : underway measurements
2 separate systems :
TSG, Fluorimeter, pCO₂, Turbidity & O₂
Plankton Imager, Particles/DOM/spectral
characteristics

Pantry

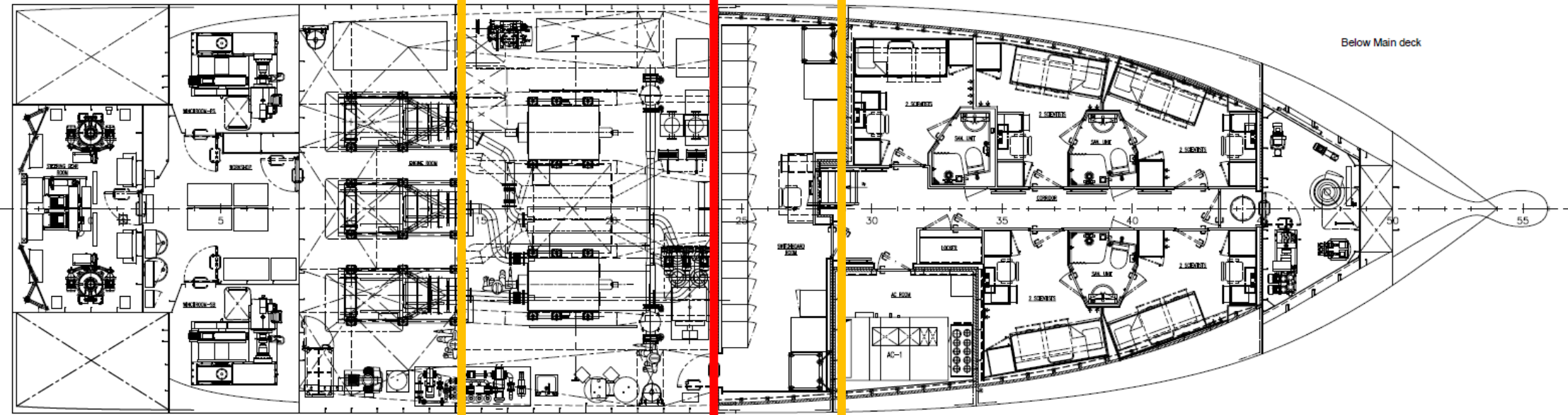
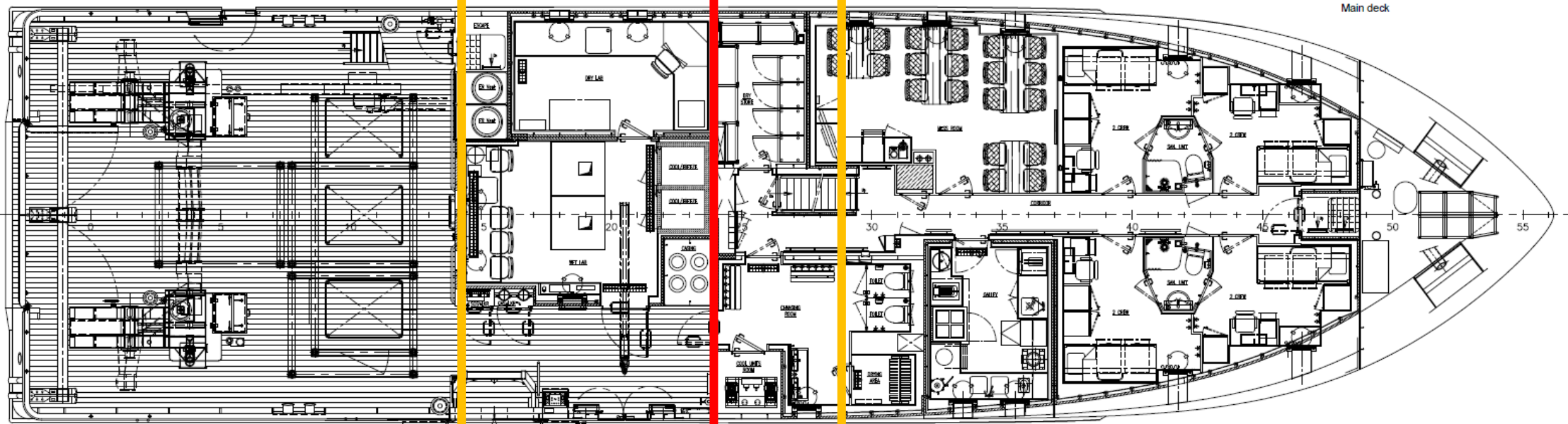
Mess

Main deck

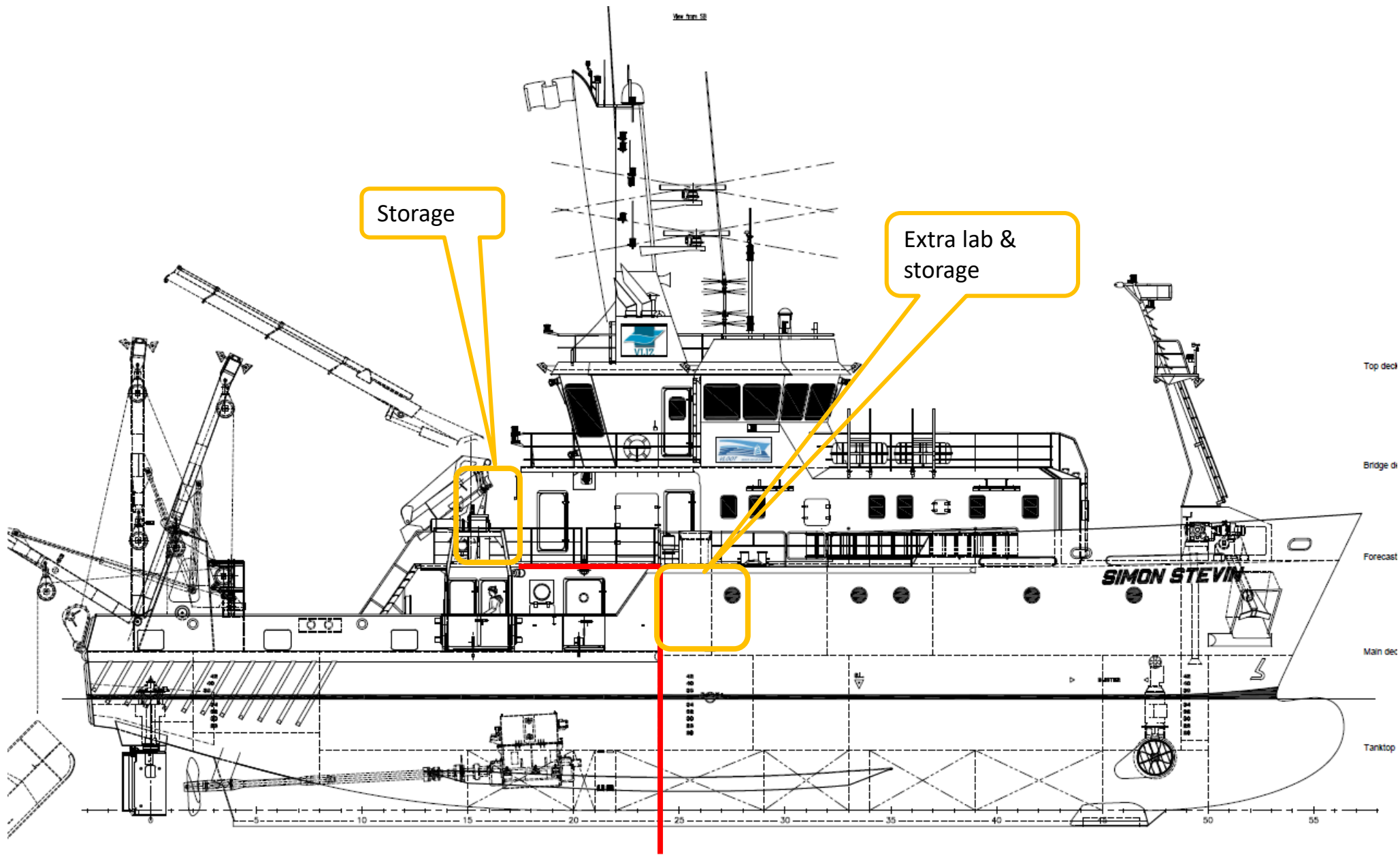
Wet lab 25m²
CTD Workstation
Fridge & Freezer too big

Stowage scientific &
ship equipment

Lack of Space



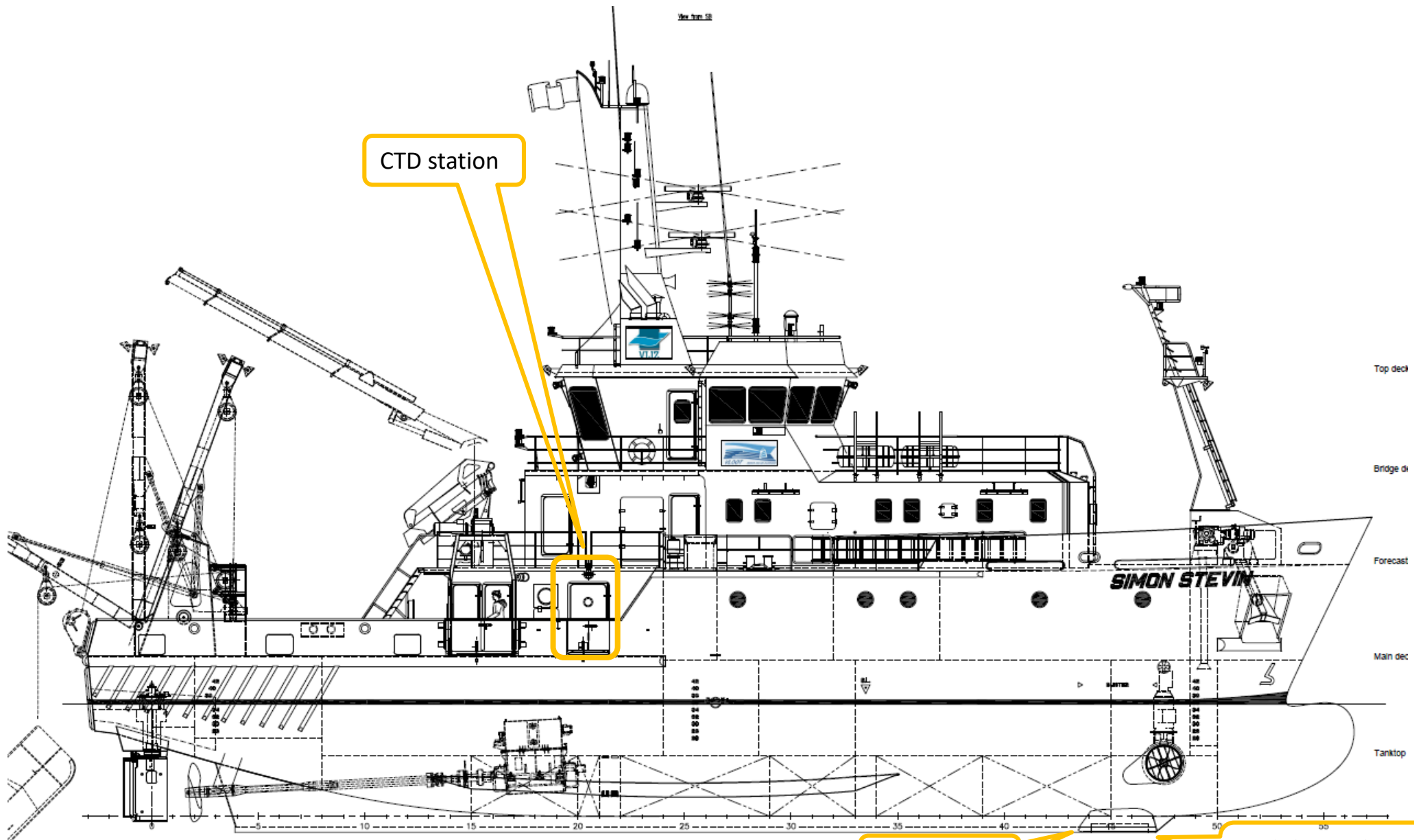
Lack of Space



Lack of Space

Extending RV Simon Stevin

- 458 GRT >> 550 – 600 GRT
- Thickness of hull plates limiting
- Expected length extensions to be 1,5 - 2m max
- Positive effect on seakeeping behaviour
- Increase in operational costs
- Cost effective?

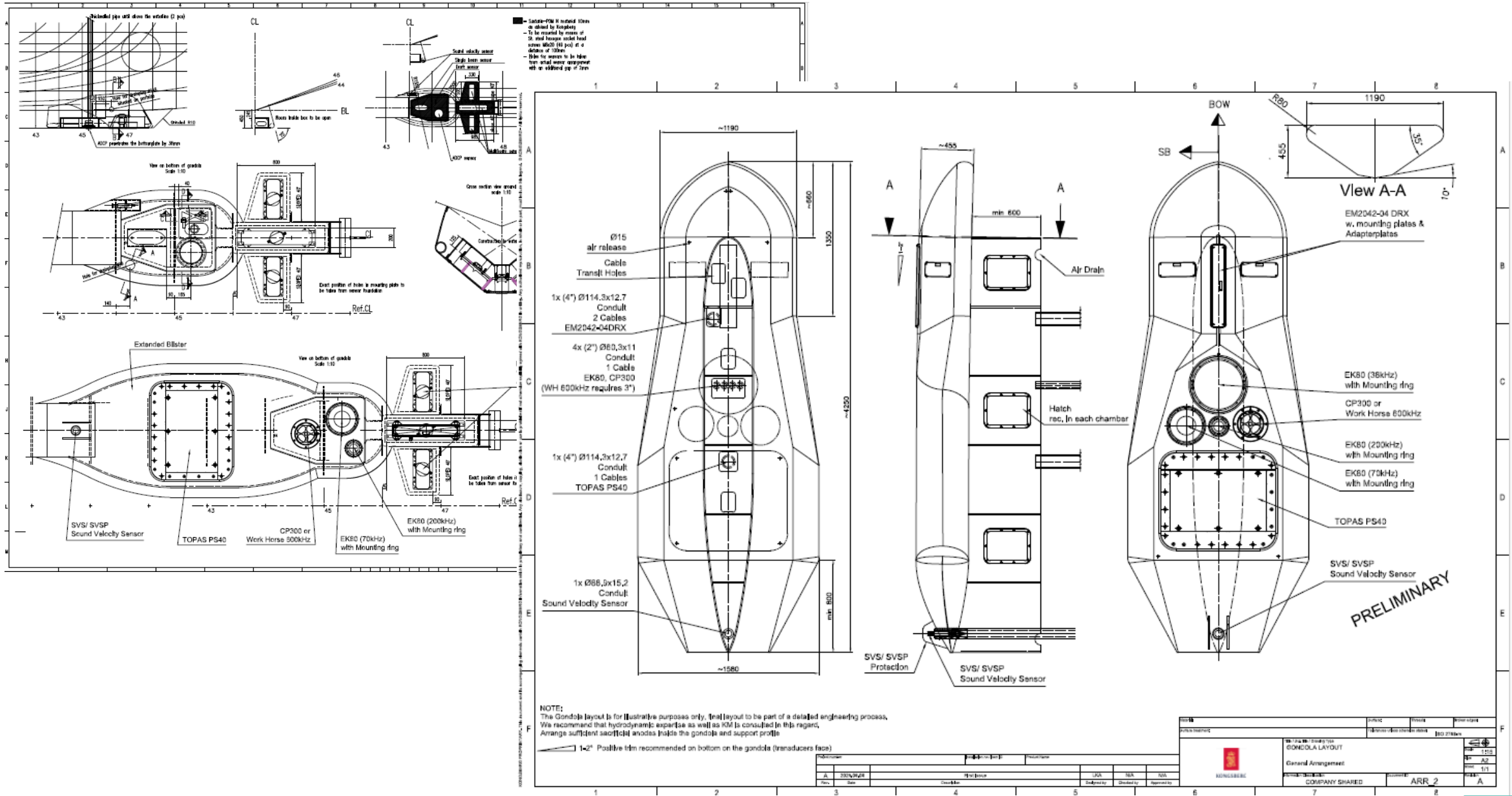


CTD station

SBP & SB

Multibeam & ADCP replacement

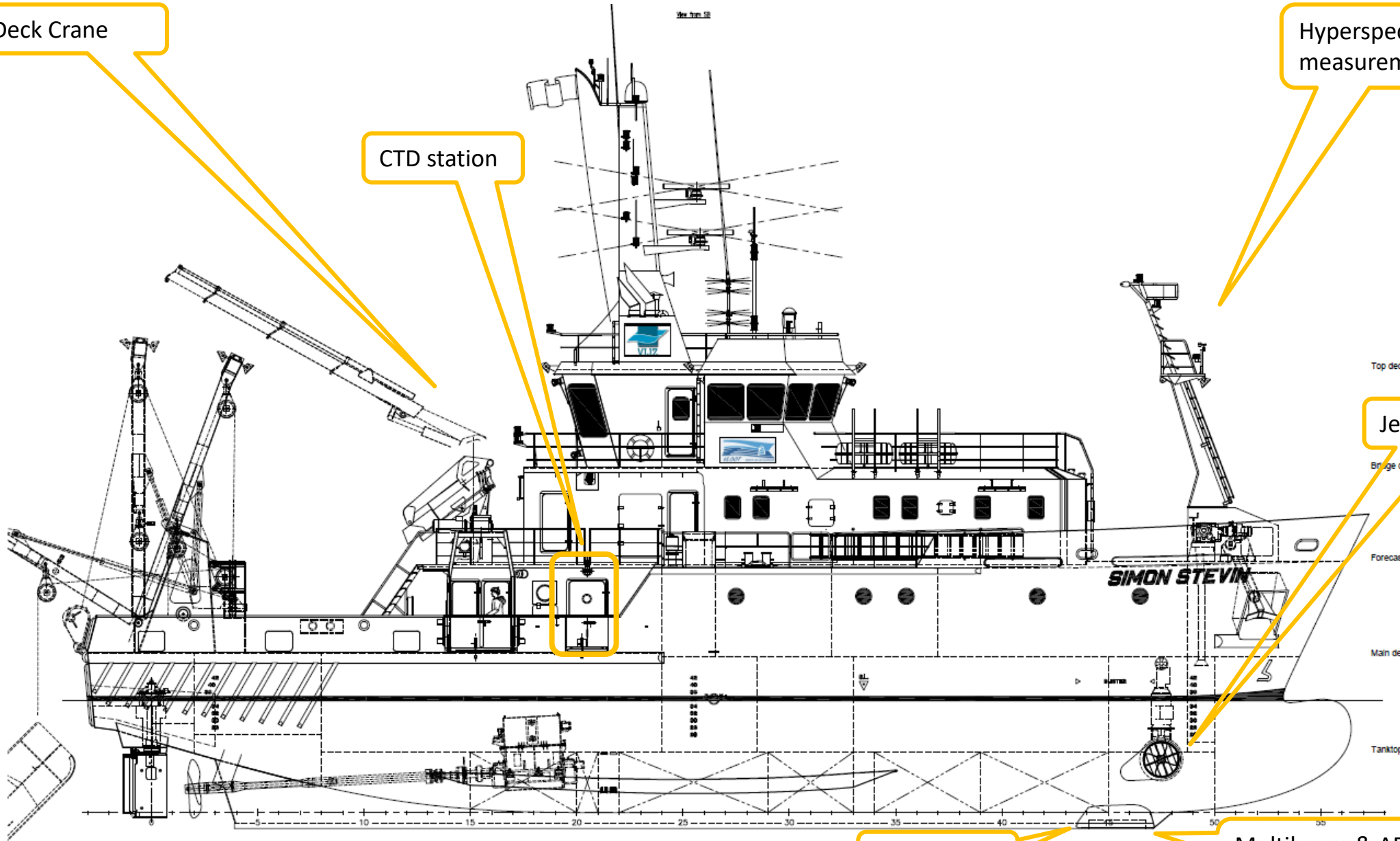
Improve scientific operations



Deck Crane

CTD station

Hyperspectral measurements



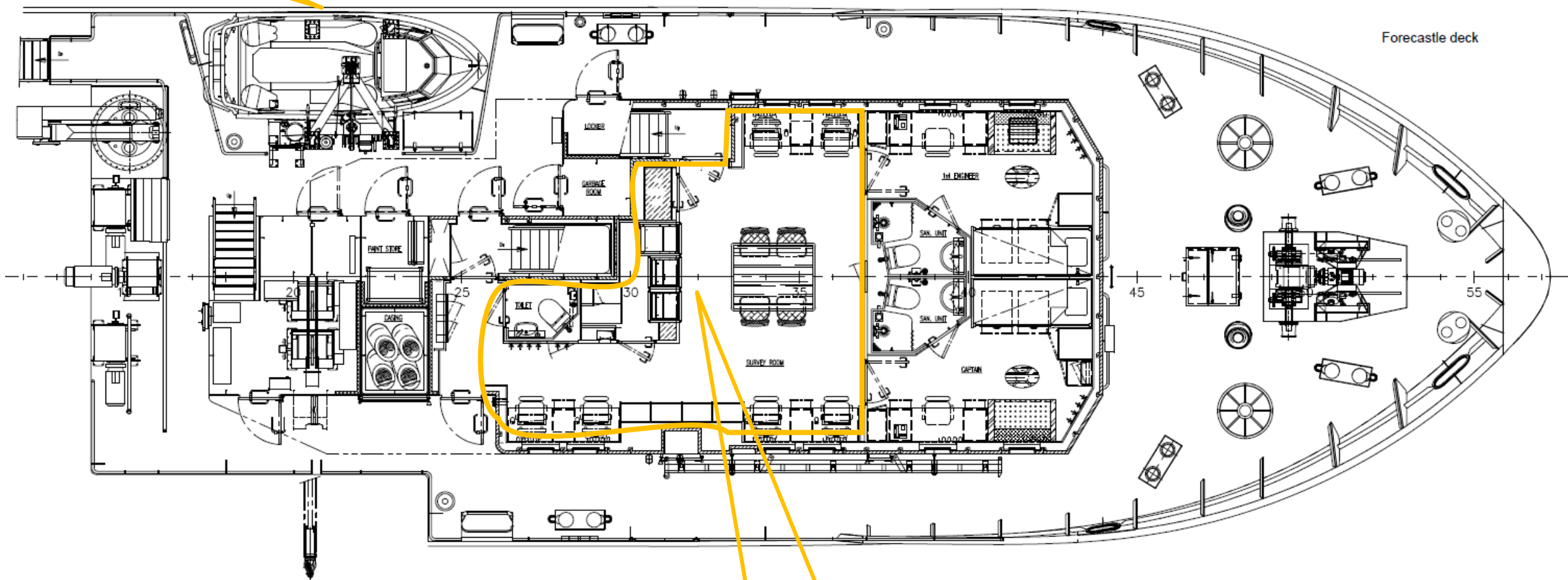
Jet propulsion

SBP & SB

Multibeam & ADCP replacement

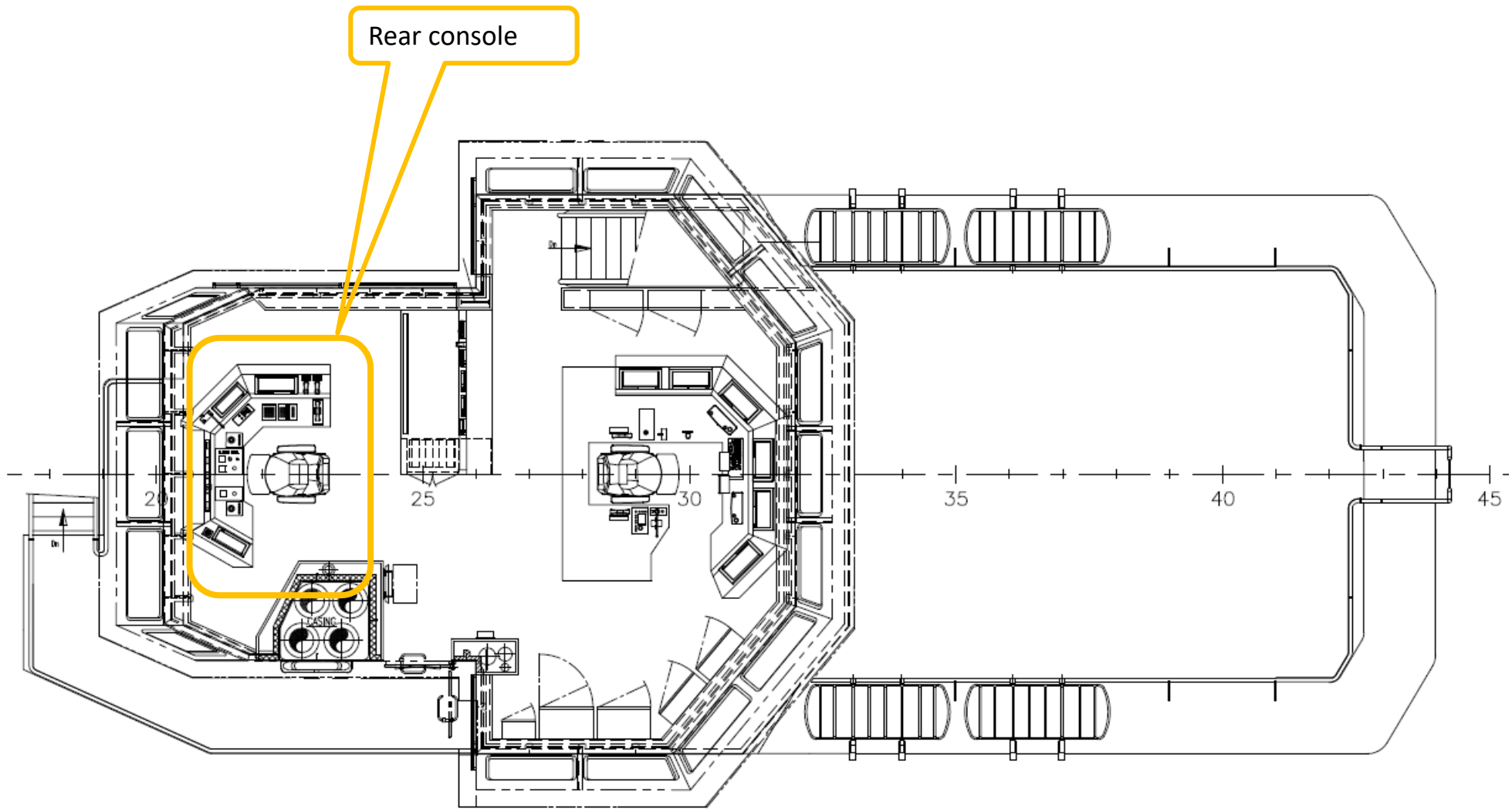
Improve scientific operations

Work Boat



Reorganize Survey room
Enlarge server racks

Lack of Space



Improve scientific operations

RV Simon Stevin

- Designed to operate daytrips & less frequent multiple day campaigns
- Since 2015 increase in operational budget (380k€) to accommodate 60 days in continuous operation
- 3 day campaigns Tue – Thu, every fortnight, not in summer
- Currently +70days in continuous operation, 5 week campaigns & 8-day campaign
- Keep mix of one day and multiple day campaigns
- Schedule at own convenience (not ship operators')
- ISPS certification
- Increase in Operational budget



RV Simon Stevin

Alternative Fuels :

- Methanol? Hydrogen?
- HVO

Alternative propellers design : CLT design

- Less pull power, more speed
- URN signature

RV Simon Stevin

Detailed studies for :

- Operational implications of lengthening of the vessel
- New layout of labs/mess/survey room/CTD/bow thruster/blister
- Alternative fuels
- Alternative Propellers
- Budgetary estimates (min – max)
- Puzzle / prioritise with available funds
- Perform a number of improvements during regular drydocking (Foremast, new workboat)
- Plan for a minimal inavailability of the vessel in 2027 / 2028

Lobby for extra operational budget

Thank you



RV Simon Stevin

- Lack of space
 - labs
 - storage space for crew & science party
 - survey room & server rack
 - aft deck
- Improving scientific operations
- Improving vessel availability
- Greening operations

RV Simon Stevin

- Lack of space
- Improving scientific operations

optimise CTD ops : larger carousel, increase lift height, improved wave compensator, improve deck handling

new set acoustic sensors : multibeam, subbottom profiler, add extra sonar capacity (fish finding sonars)

optimise UW system : re-organise dry lab, re-arrange piping, data & power sockets

improve deckcrane capabilities

new workboat

enhance rear console bridge

prop bowthruster > jet bowthruster

~~add oceanographic cable to main winch / higher stern A-frame~~

~~dropkeel / moonpool~~

~~off-duty room & fitness room~~

- Improving vessel availability
- Greening operations

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