



# OGS

Laura Bassi, report on the latest  
Antarctic expedition

.... the new installations on board

Riccardo Codiglia

26<sup>th</sup> ERVO Annual Meeting



# Just a step back.... 2023 – the year of the record

SCIENZA  
Re  
ma  
**Italian  
Reachi**

La nav  
Progra



Nave Lau

**staff @M\_Fedriga**  
@staff\_M\_Fedriga · Follow

Mai nessuna nave prima d'ora c'era riuscita. Grande giornata per la Laura Bassi, la nave rompighiaccio dell'@OGS\_IT, che nel corso della 38ª spedizione @ItaliAntartide - #PNRA, ha toccato la il punto più a sud mai raggiunto da una nave.



4:25 PM · Jan 31, 2023

[Read the full conversation on Twitter](#)

20 Reply Share

**Record  
South**



**78° 44.280' S,  
Bay of Whales**

Laura Bassi traveled to the further point south in the Ross Sea in Antarctica (OGS photo)

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# .... but still there was criticalities already identified 2 years before (and unfortunately some of these are still there!!!)

- *The scientific activities needed several improvements*



- BALTIC ROOM for water sampling
- A-FRAME for bottom sampling operation

- *We still was not compliant with Polar Code to operate at -20 MDLT*



- New davit and lifeboats
- New integrated bridge system

- *Satellite data communications was disastrous*

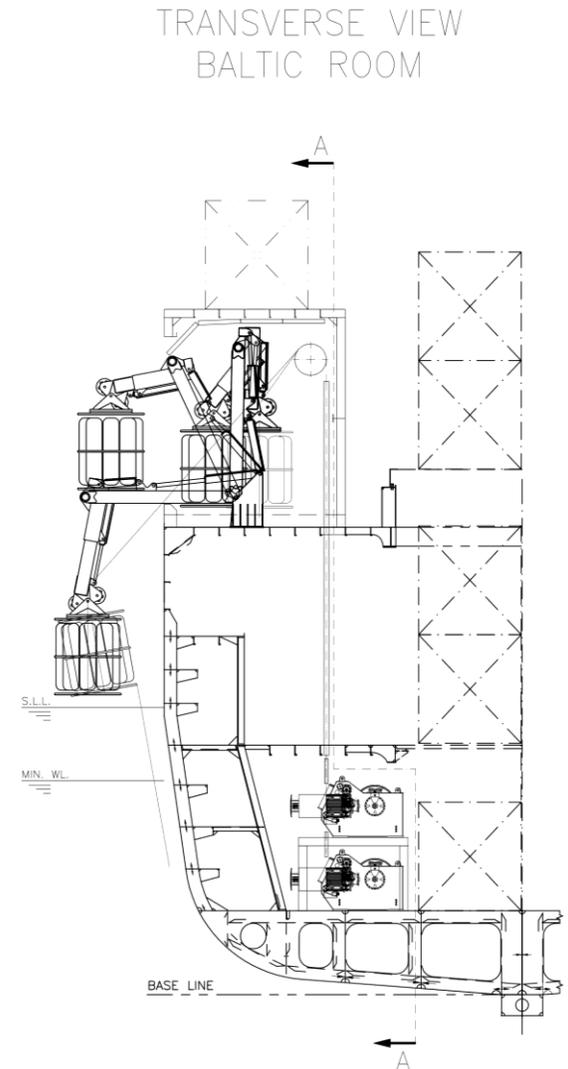
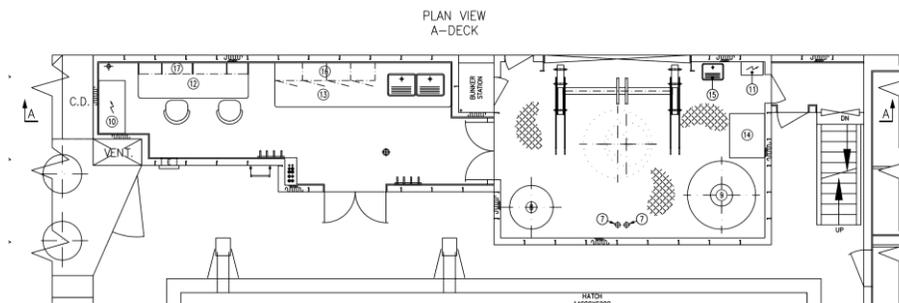
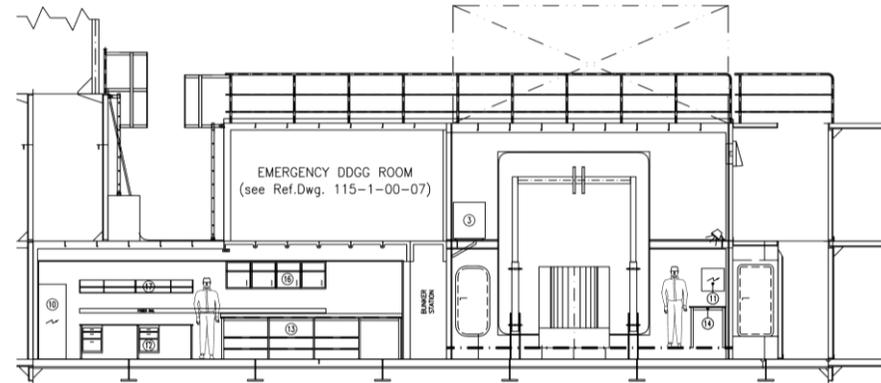
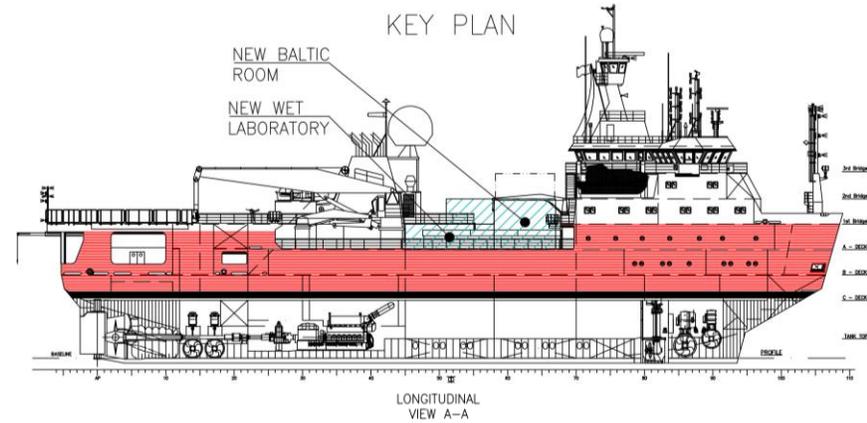


New technologies as LEO



# The Baltic Room started in 2022...

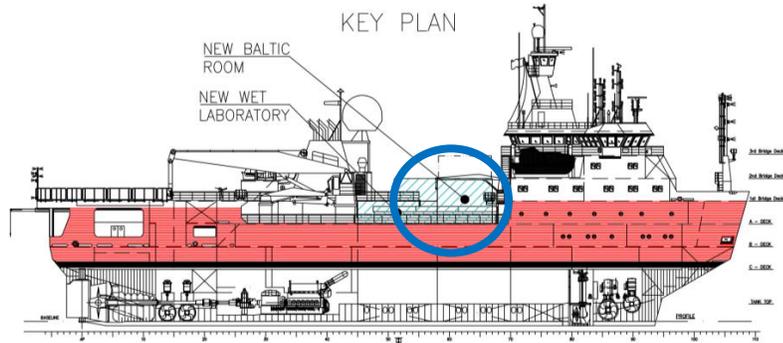
- Goals:
  - Reduce motions
  - Increase distance from propellers
  - Straightforward deployment in air conditioned room
- Constraints:
  - Keep load capacity
  - Add a clean rosette





# *The Baltic Room*

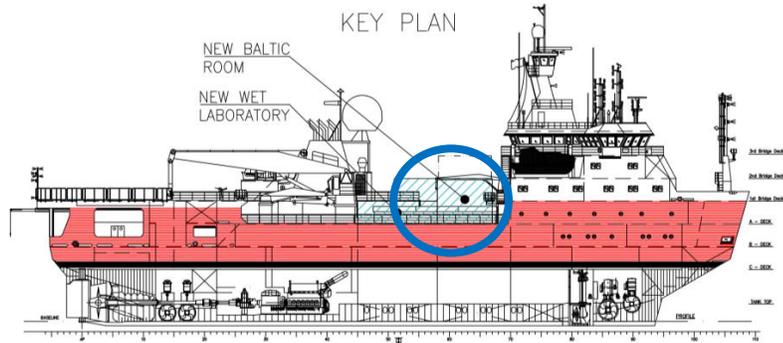
Phase I, started in 2022





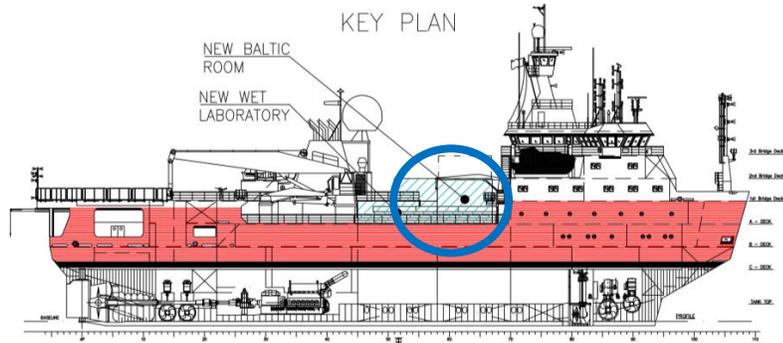
# The Baltic Room

Phase II, 2023





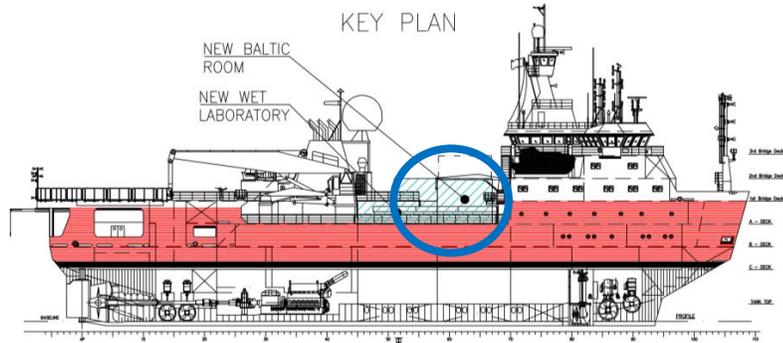
# The Baltic Room



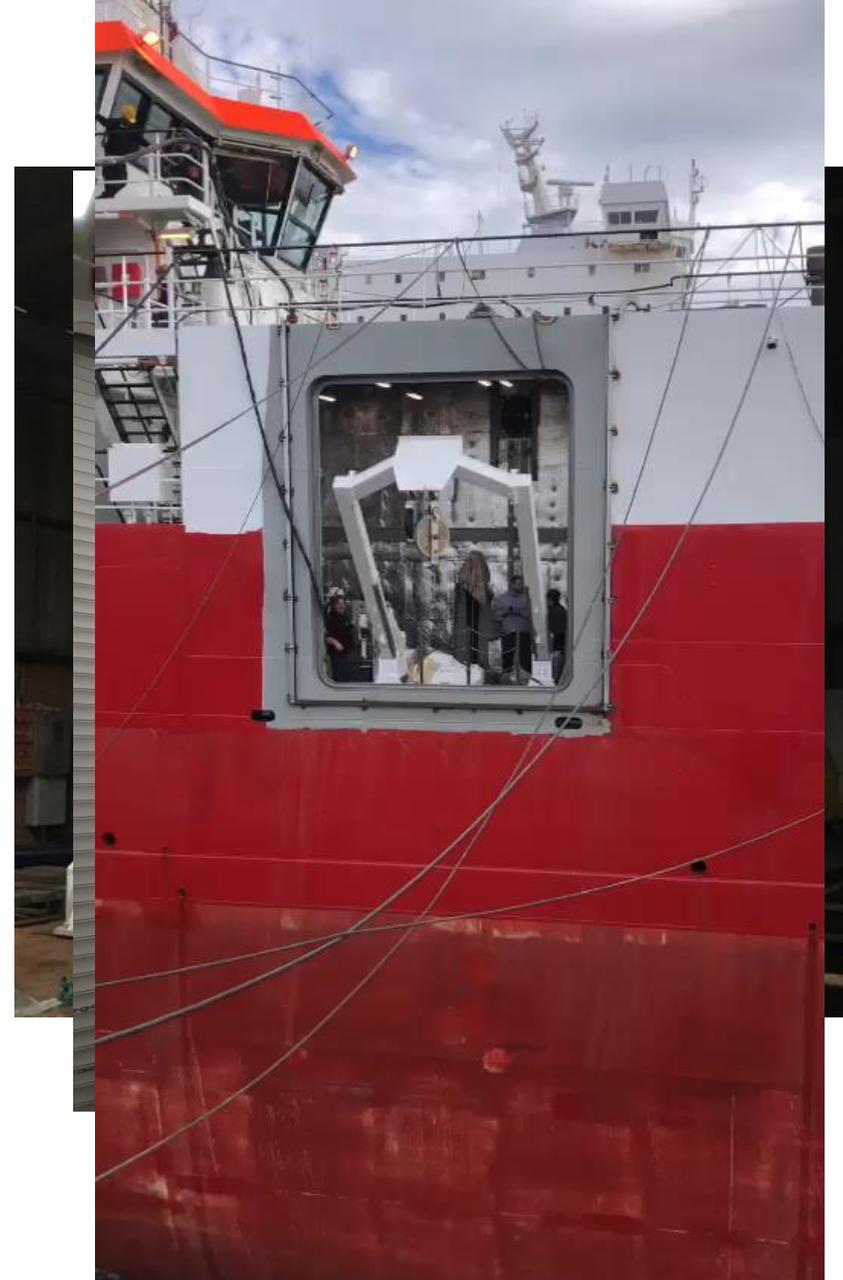
## What was missing....



# The Baltic Room

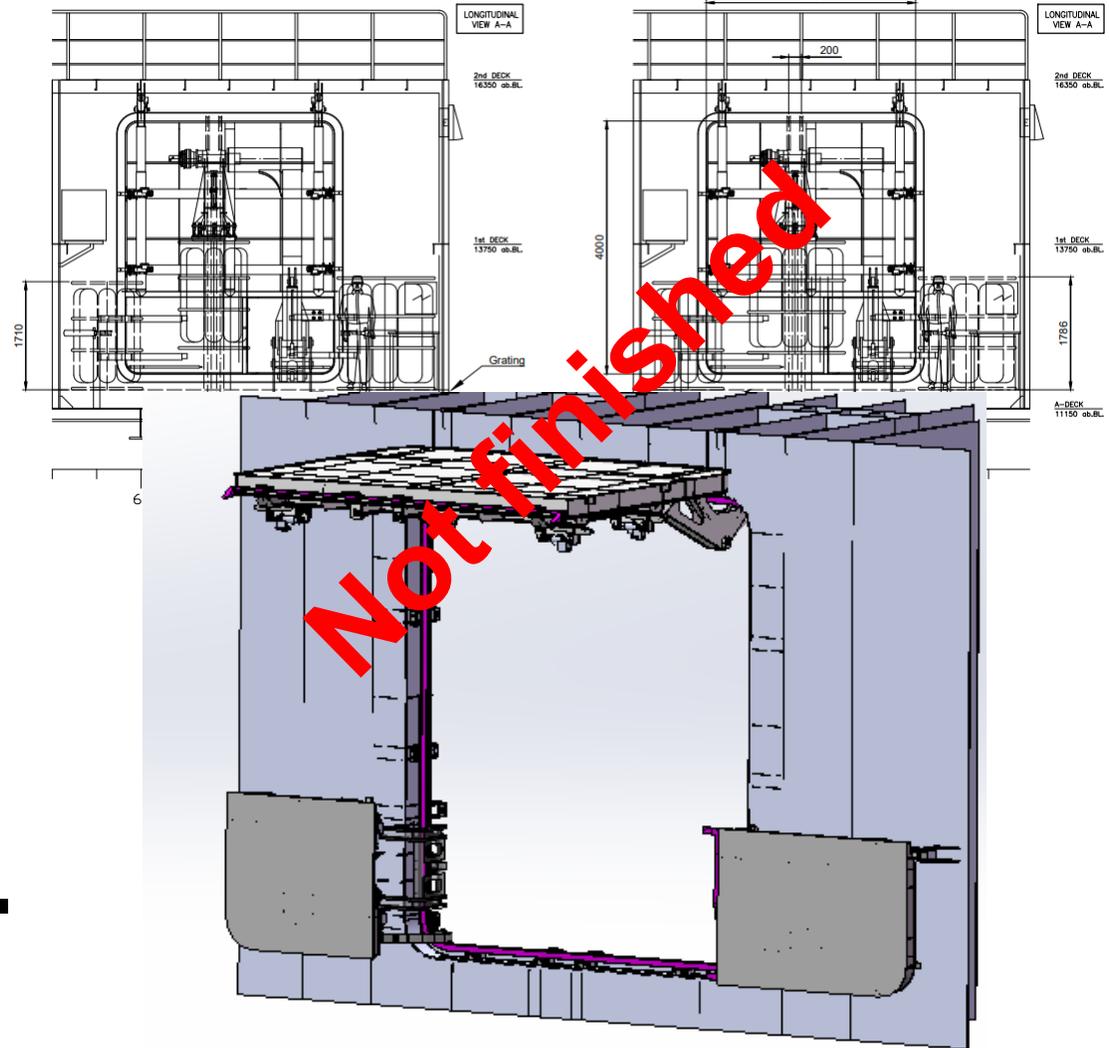
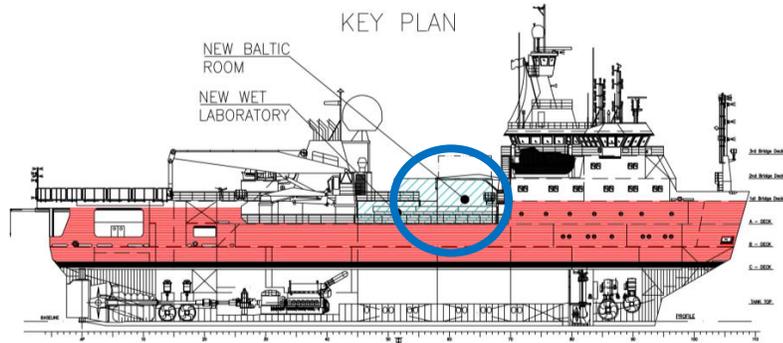


....and the backup plan





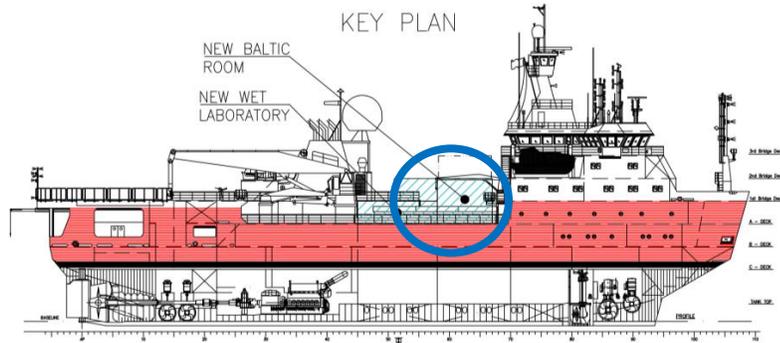
# The Baltic Room



## What was missing....



# The Baltic Room

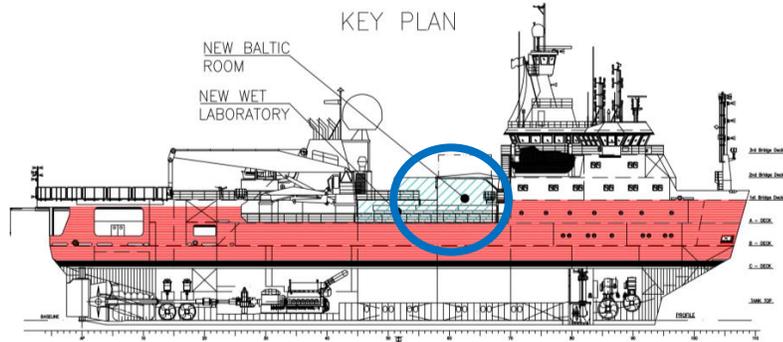


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# The Baltic Room

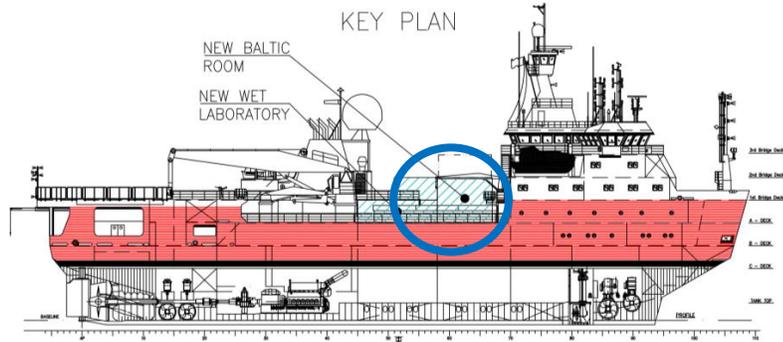


Not received

## What was missing....



# The Baltic Room



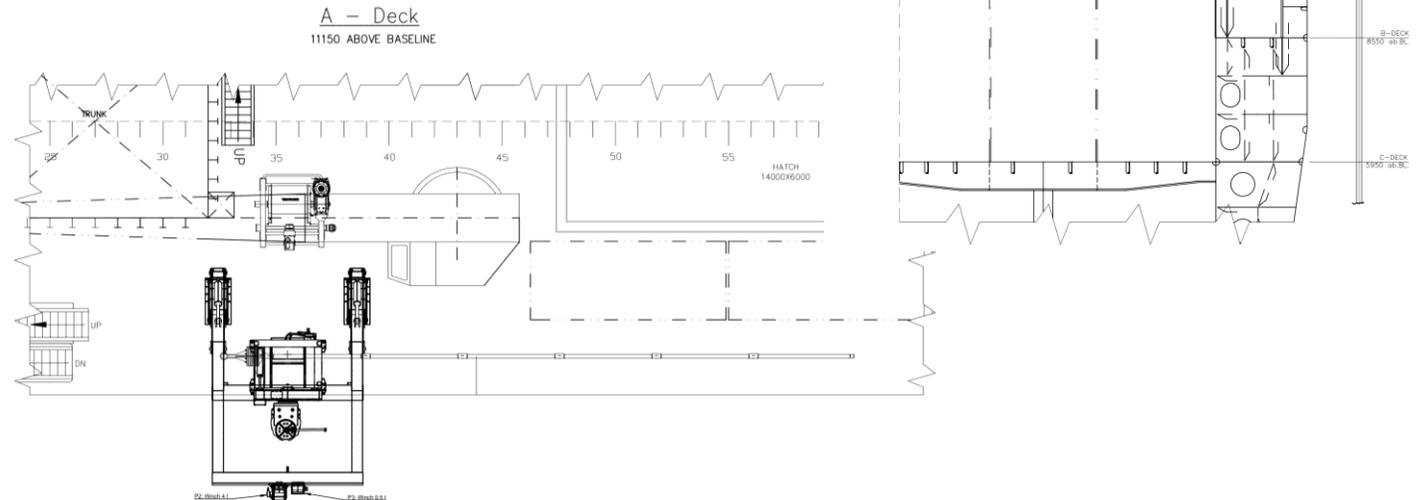
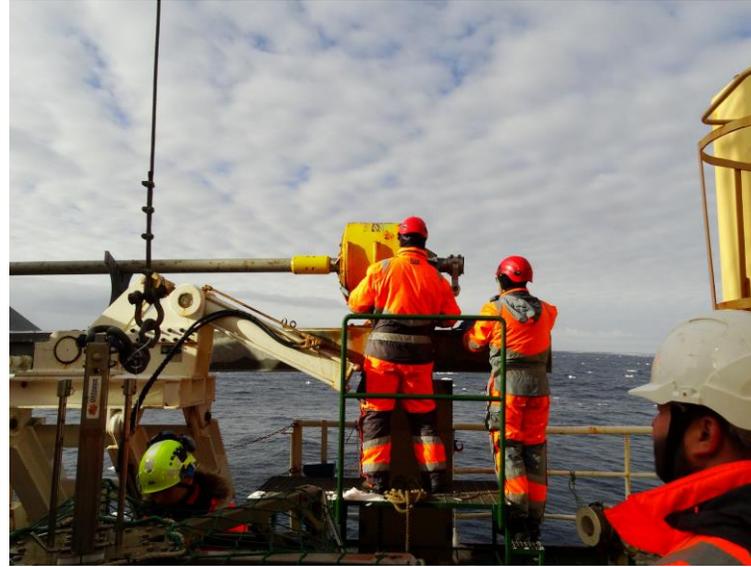
....and the backup plan





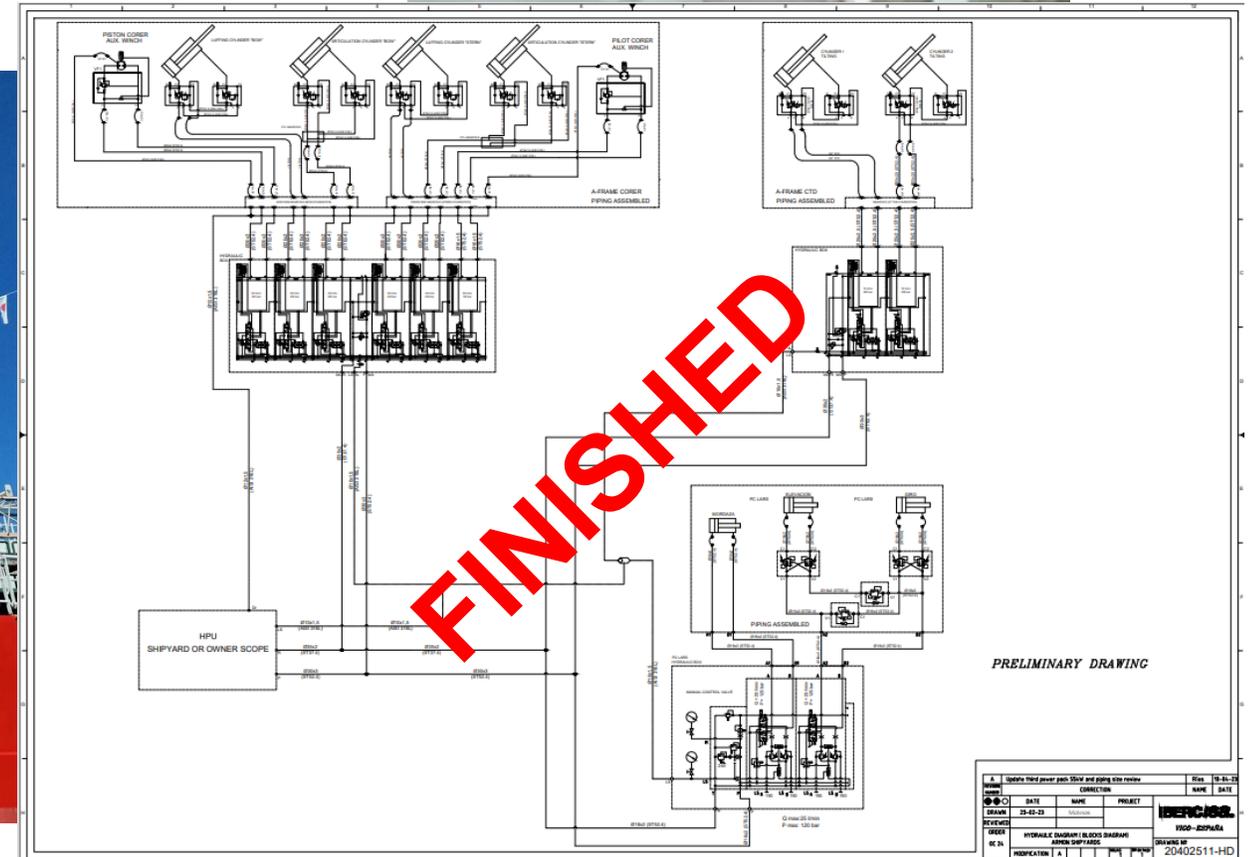
# ***Coring and bottom sampling***

- Goals:
  - Lower resting position
  - Improve deployment
  
- Constrains:
  - Try to keep the crane
  - Allow for deployment of box-corer and multi-corer





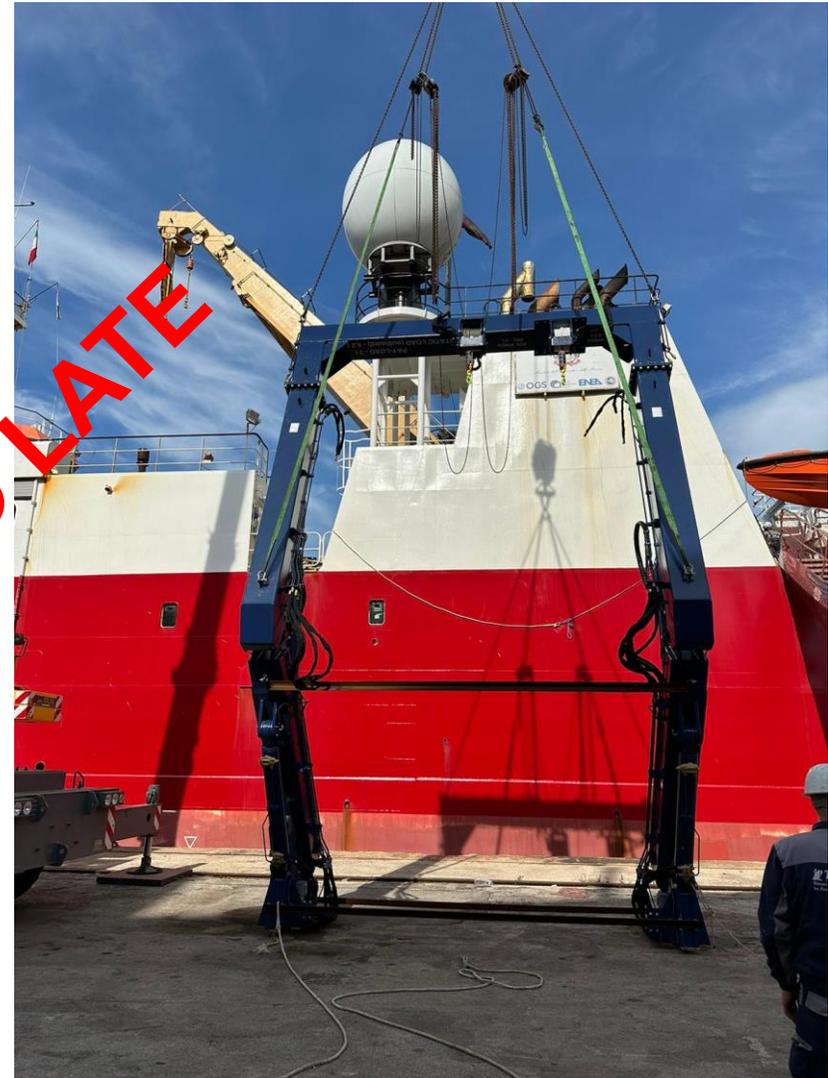
# Coring and bottom sampling before the departure





# ***Coring and bottom sampling***

## ***what was missing***





# ***Coring and bottom sampling***

***what was missing***



**....and no backup plan!**



# RESULTS of the expeditions...





# .... but still there was criticalities already identified 2 years before (and unfortunately some of these are still there!!!)

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- New davit and lifeboats
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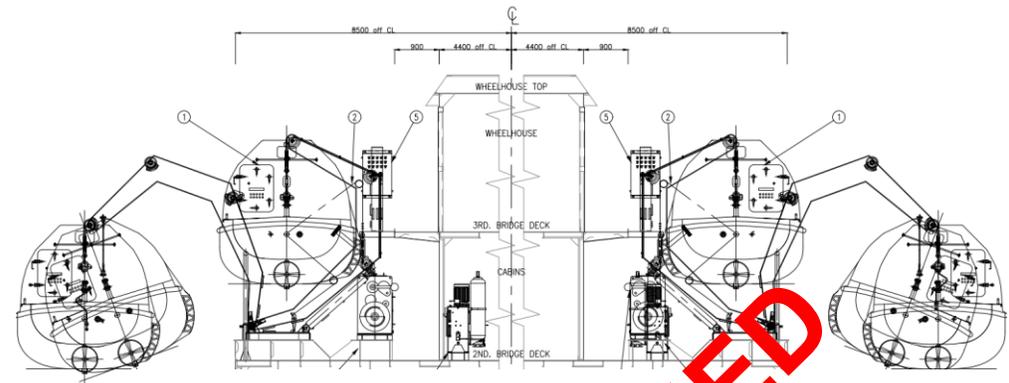
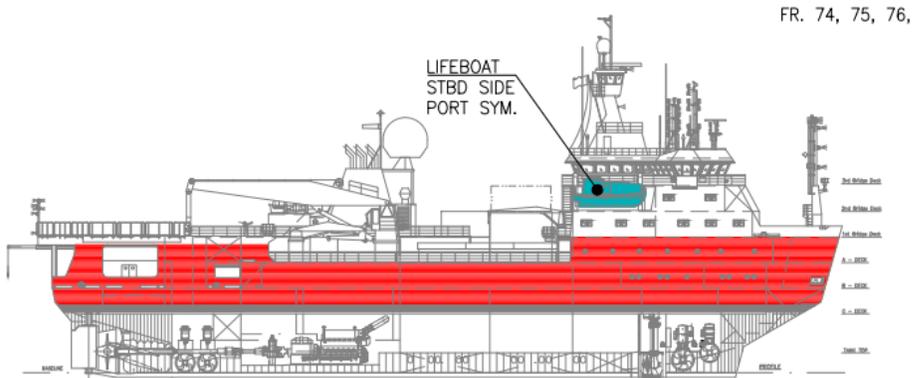
- *Satellite data communications was disastrous*



New technologies as LEO



# New lifeboat and davits installation



## Before the departure



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New technologies as LEO



# *The VSAT Ku band twins antennas*





# *Some number and result....*

- ✓ 1 Hydrographic project of MM (Italian Navy)
- ✓ 5 Research projects funded by PNRA
  1. TENORE (physical and chemical oceanography)
  2. SIGNATURE (physical and chemical oceanography)
  3. MORSEA (permanent ocean observatories)
  4. ISOBATA (underway data acquisition)
  5. BOOST (morphobatimetry)
- ✓ 1 NZ reasearch project by NIWA (oceanography, marine biology, fischery)
- ✓ 1 reserach project OTAGO (geology, marine geophisics)



***Some number and result....***

***Two legs***

***60 days non stop on sea***

***65 people onboard***

***More than 40% women***

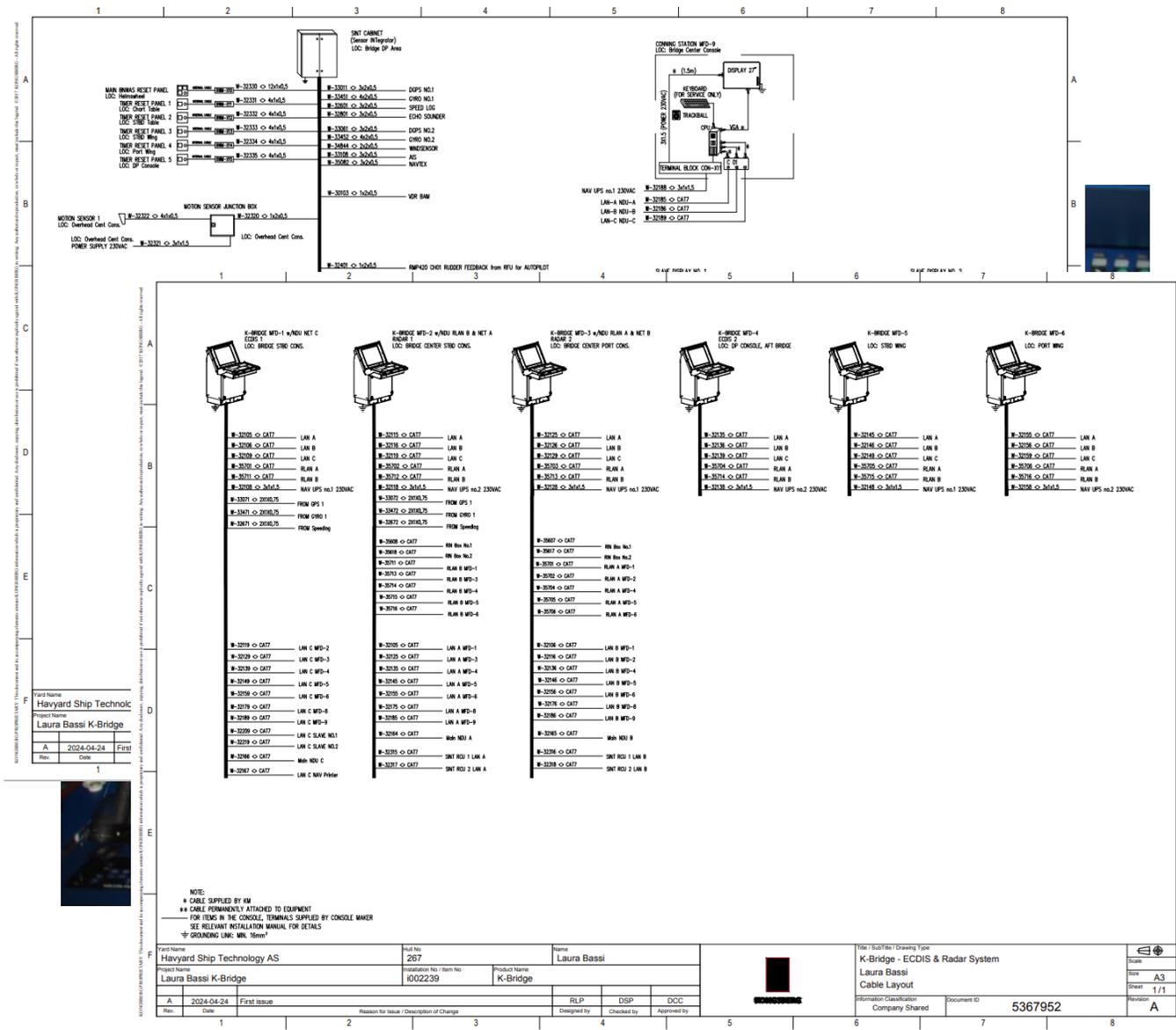




# Next year.....

New Integrated bridge system by KONGSBERG

Update DP II system by KONGSBERG





# Next year.....

**A- frame and LARS for coring operations are ready for the commissioning**





# Next year.....

**CTD LARS for water sampling operations is ready for the commissioning**

**HVAC ..... To be tested!!!!**



- 
- Thank you!

