

Costa Concordia

Today's Agenda

- **The Salvage plan**
 - What has been achieved
 - What are the next stages
- **The Costs**
- **The Future Post Costa Concordia**

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THE SALVAGE PLAN

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The Salvage Plan – The Parbuckling Operation

- During August it was announced the Parbuckling Operation would not be attempted until the spring of 2014
- The intention being to winterise the Hull and shut down the process
- The salvage master later decided it would be too risky as the hull would most likely be too fragile to last the winter even with specific measures taken
- The decision was taken to perform the parbuckling as soon as possible in what was described as a one and only chance to complete successfully due to the vulnerable state of the wreck.



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The Salvage Plan – The Parbuckling Operation

- Rotation of the hull began on 16th September 2013



- The painstakingly slow operation took 19 hours to complete

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The Salvage Plan – The Parbuckling Operation

- Hull now upright and supported by underwater platforms
- Has survived the winter in good state with little or no movement



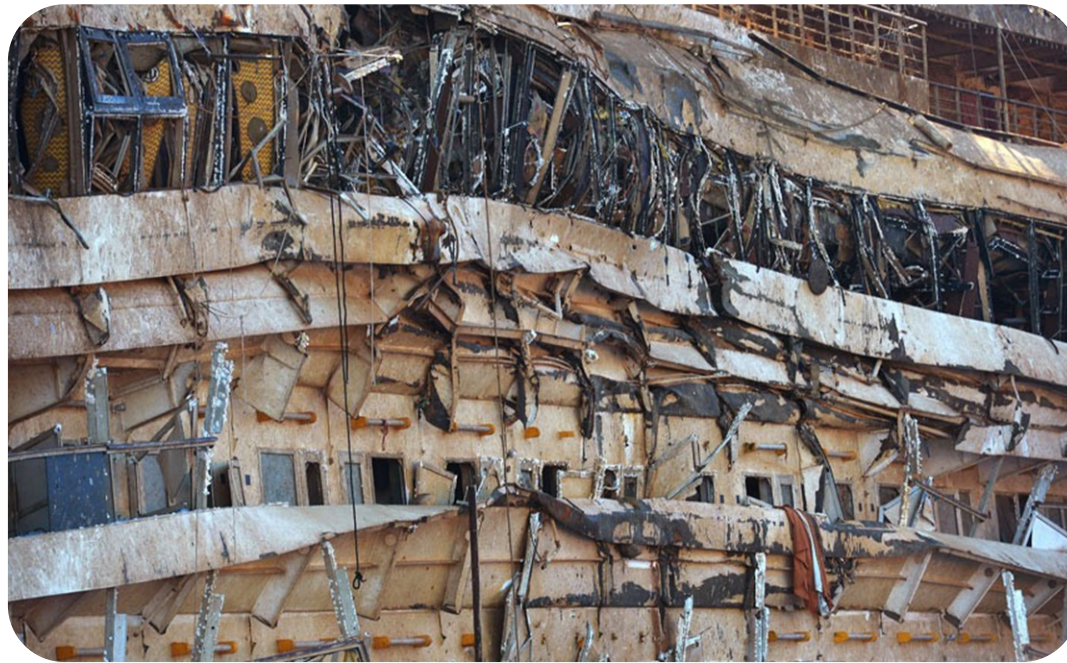
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The Salvage Plan

What Next?

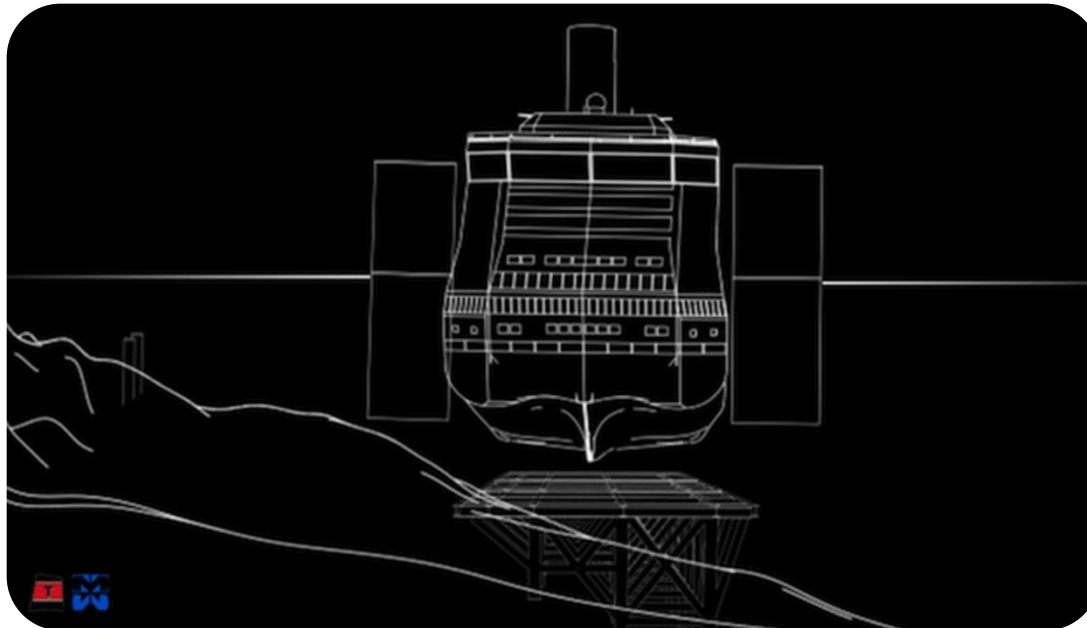
Costa Concordia The Salvage Plan

- The process of attaching 15 huge caissons/ flotation tanks to the starboard side has begun
- There will be considerable fabrication required as there are few suitable flat surfaces to attach the tanks



Costa Concordia The Salvage Plan

- The port side flotation tanks remain full of sea water as the hull rests on the undersea platform
- Once the starboard side tanks attachment is complete the water in port side caissons will be pumped out
- This will refloat the hull and lift it from the platform



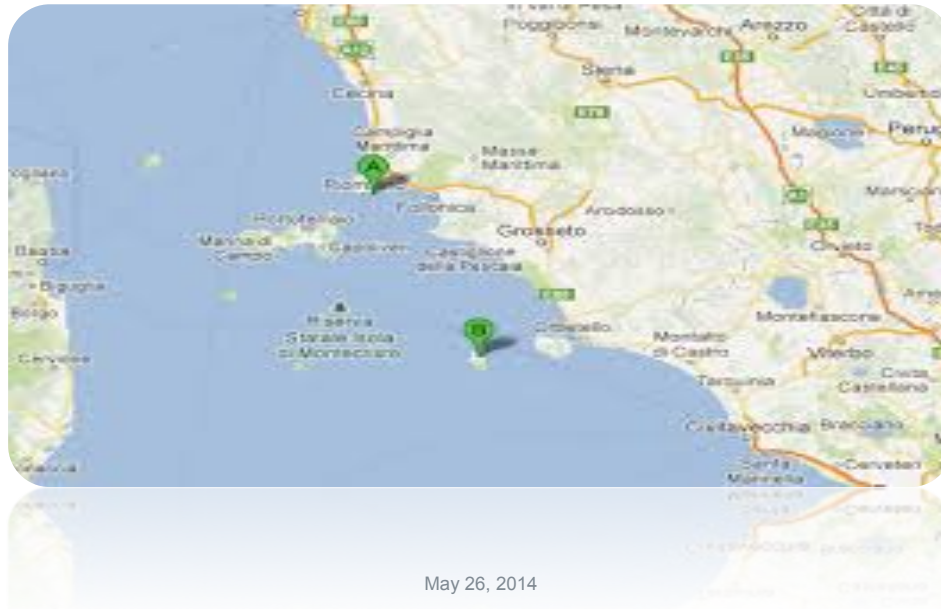
Costa Concordia The Salvage Plan

- The next stage will be to transport the hull to a suitable yard for the final disposal of the hull
- This stage has been awarded to the company Dockwise to load and transport the wreck on board their new Type-O heavy lift semi-submersible ship, Dockwise Vanguard.



Costa Concordia The Salvage Plan

- The target date for this is June 2014
- The intended yard is at Piombino in Tuscany
- It is the closest yard and has been a staging post for the salvage operation as well as the base for the production of the caissons for the re-floating procedure
- However the tow may have to be delayed as the shipyard will require modifications before it is able to handle the dismantling of the hull



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The Salvage Plan – Huge Disposal Problem

- Since the vessel capsized, the water in the hull has been contaminated by a lot of perishables, food, furnishings and fittings
- The freezers that remain intact contain the decaying remnants of what were once 1,268 kilograms of chicken breasts, 8,200 kilograms of beef, 2,460 kilograms of cheese and 6,850 litres of ice cream.
- Risk from dangerous noxious fumes such as Hydrogen Sulphide have to be contended with
- This water cannot just be pumped out into the ocean
- Barges will be used to off load the contaminated water which will then be filtered and disposed



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The Salvage Plan – Damage sustained to the Marine Environment

- The damage to the marine environment will remain an issue for the foreseeable future
- The Pelagos Marine Mammal Sanctuary is close to the site of the wreck
- There are worries about organisms that line the seabed, known as the benthos community. In this region, this includes coral, molluscs and the clam *Pinna Nobilis*, plus precious seabed meadows.
- It was a requirement of the salvage tender that the marine habitat should be returned to its original state
 - How and who will determine whether this has been achieved is still to be resolved

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The Cost

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The Cost – Initial Estimates for Loss Cost

- Soon after the event Carnival Line were anticipating recoveries from insurers in the region of \$ 851,000,000
- Hull Value \$ 395,000,000
- P&I \$ 496,000,000
- Initial estimate of salvage operation \$300,000,000
- Advices from the International Group of P&I clubs for the loss to date
 - 23/04/12 – USD 521m FGU
 - 25/09/12 – USD 652,250m FGU
 - 12/12/12 – USD 743,807,138 FGU
 - 28/06/13 – USD 1,169,256,985 FGU



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The Salvage Plan – The Cost

- The operator Costa Crociere, which agreed in April to pay a 1 million-euro fine for violations of the Italian administrative responsibility law, has settled claims with more than 80 percent of passengers as of May 14th, 2013
- Carnival have stated that “substantially all” of the ship removal costs and any future claims will be covered by its insurance.
- Insurance costs to the market are currently estimated to be;
 - Hull USD 500,000
 - P&I USD 1,169,256,985



May 26, 2014

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The Future Post Costa Concordia

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- A loss of this size is unlikely to be a one-off in the marine sector
- Future losses could be higher due to changes in both shipping and the response of authorities.
- Environmental considerations are higher than ever before
- Vessels are getting bigger, with cruise liners and container ships among those going supersize
- The largest cruise liners – Royal Caribbean International’s Allure of the Seas and Oasis of the Seas – can both carry a maximum of 6296 passengers
- These are set to be the little sisters of the cruise line’s Oasis-Class ship, which is currently under construction and will carry up to 6500 passengers when it sets sail in 2016

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The Future Post Costa Concordia

- Container ships are also growing in size
- The Maersk E series of container ships, which were built between 2006 and 2008, were the largest with a capacity for 14,770 containers
- The new Maersk Triple E class can carry more than 18,000 and is over quarter of a mile long



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The Future Post Costa Concordia

- There is an increased number of passengers and cargo at sea
- The salvor's technology is adapting to contend with the size of vessels
- The new generation of container vessels will require salvor's to adopt an alternative approach as traditional means will be insufficient due to the scale
- Designing and constructing the heavy lift salvage tool for the job will require large investments
- The financing opportunities for such an undertaking may not become available until insurance companies need to solicit companies to handle a 16,000 TEU shipwreck.

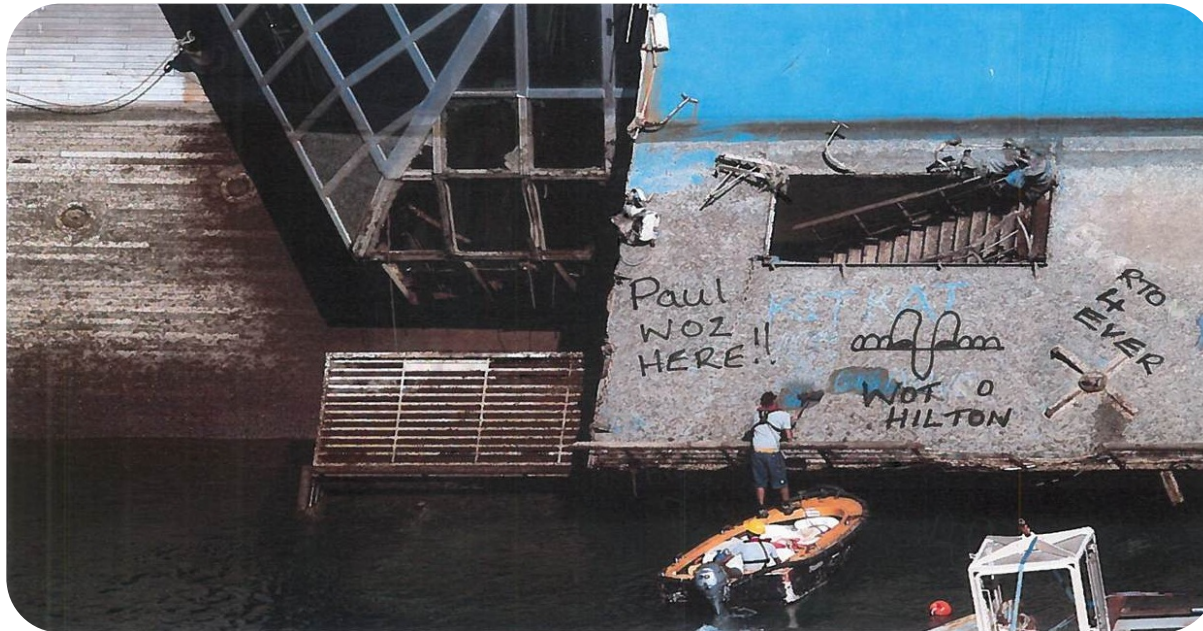
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Finally....

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Vandalism of the hull

- Unfortunately a significant proportion of the hull has become a target for vandals
 - The Authorities have been forced to increase security on the stricken hull resulting in additional cost for the removal of the graffiti







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