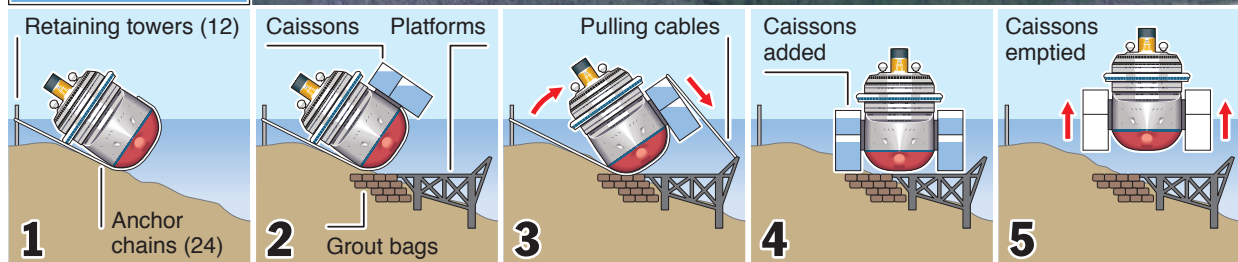
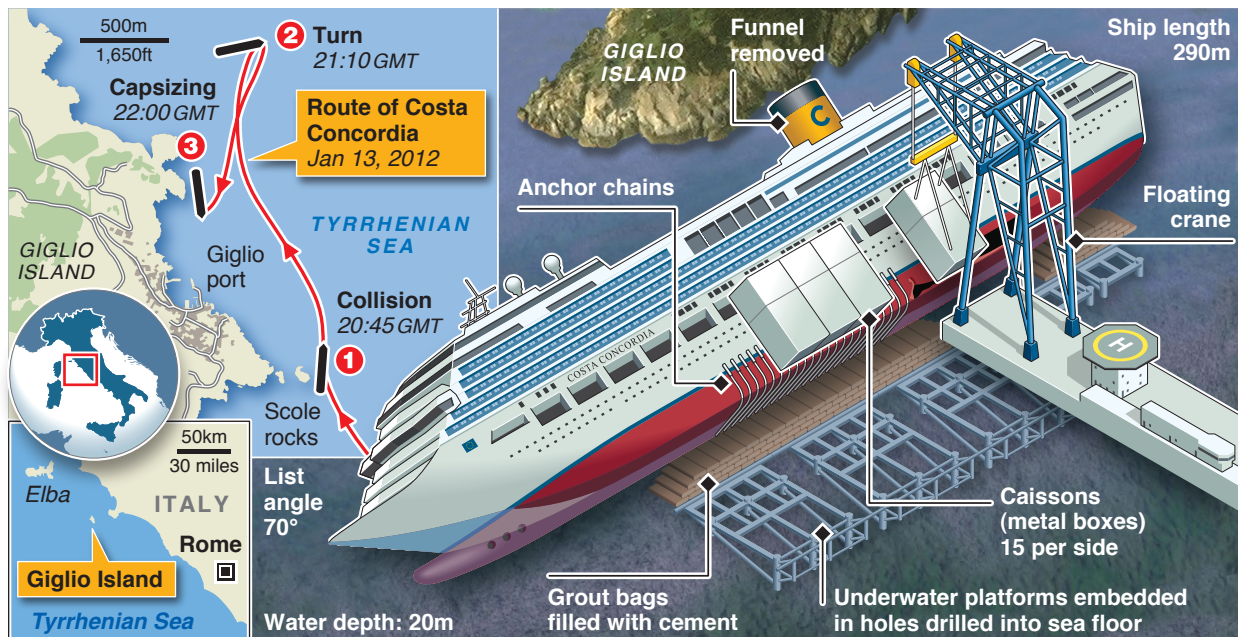


Plan to salvage Costa Concordia cruise ship

An international team of engineers is making an ambitious bid to set upright the wreck of the Costa Concordia cruise liner, which ran aground near an Italian island in 2012, killing 32 people. If the attempt succeeds, the 114,000-tonne ship will eventually be towed away for dismantling



Stabilization

Anchor chains fixed to port side of ship. Chains pass underneath hull and attach to retaining towers installed on shore side

Underwater support and port caissons

Grout bags and steel platforms positioned to create stable base. Caissons welded to port side of hull and filled with water

Parbuckling

Cables installed, running from top of caissons to underwater platforms. Hydraulic jacks slowly pull ship into upright position

Starboard caissons

Hull now rests on stable base. More caissons welded to starboard side to provide extra assistance in re-floating wreck

Re-floating

Water gradually pumped out of caissons. Air inside caissons gives ship sufficient buoyancy to float and be towed away