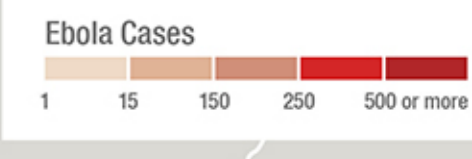
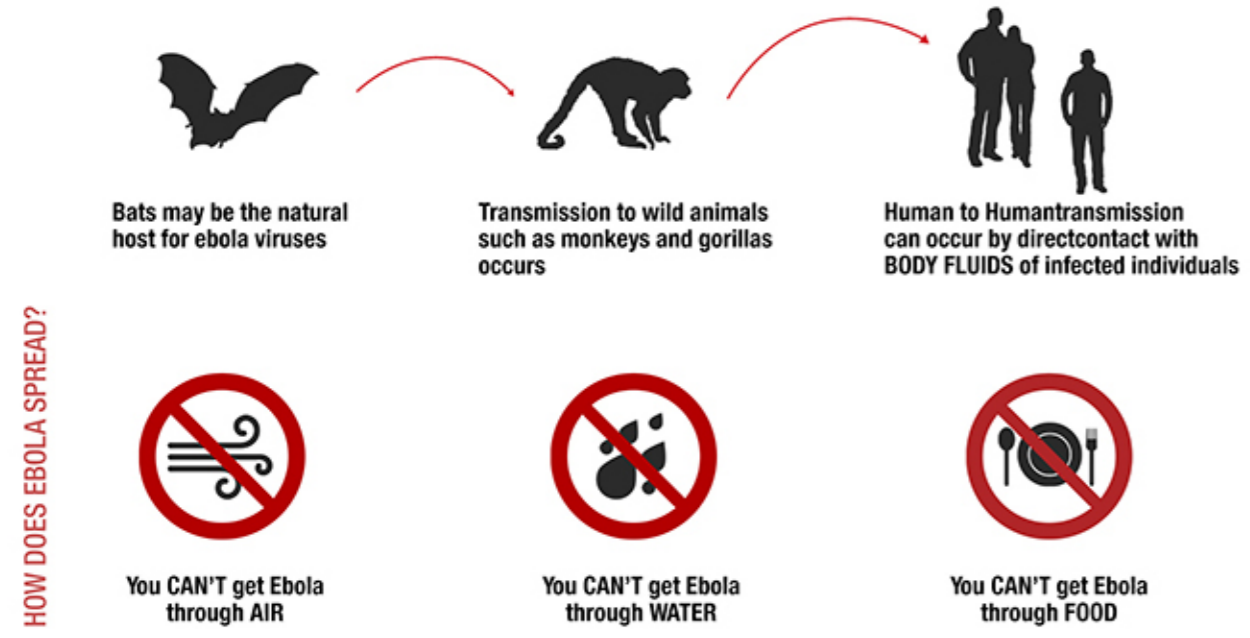


A MARINE HETEROTOPIA | ATALANTI'S EBOLA TREATMENT CENTER

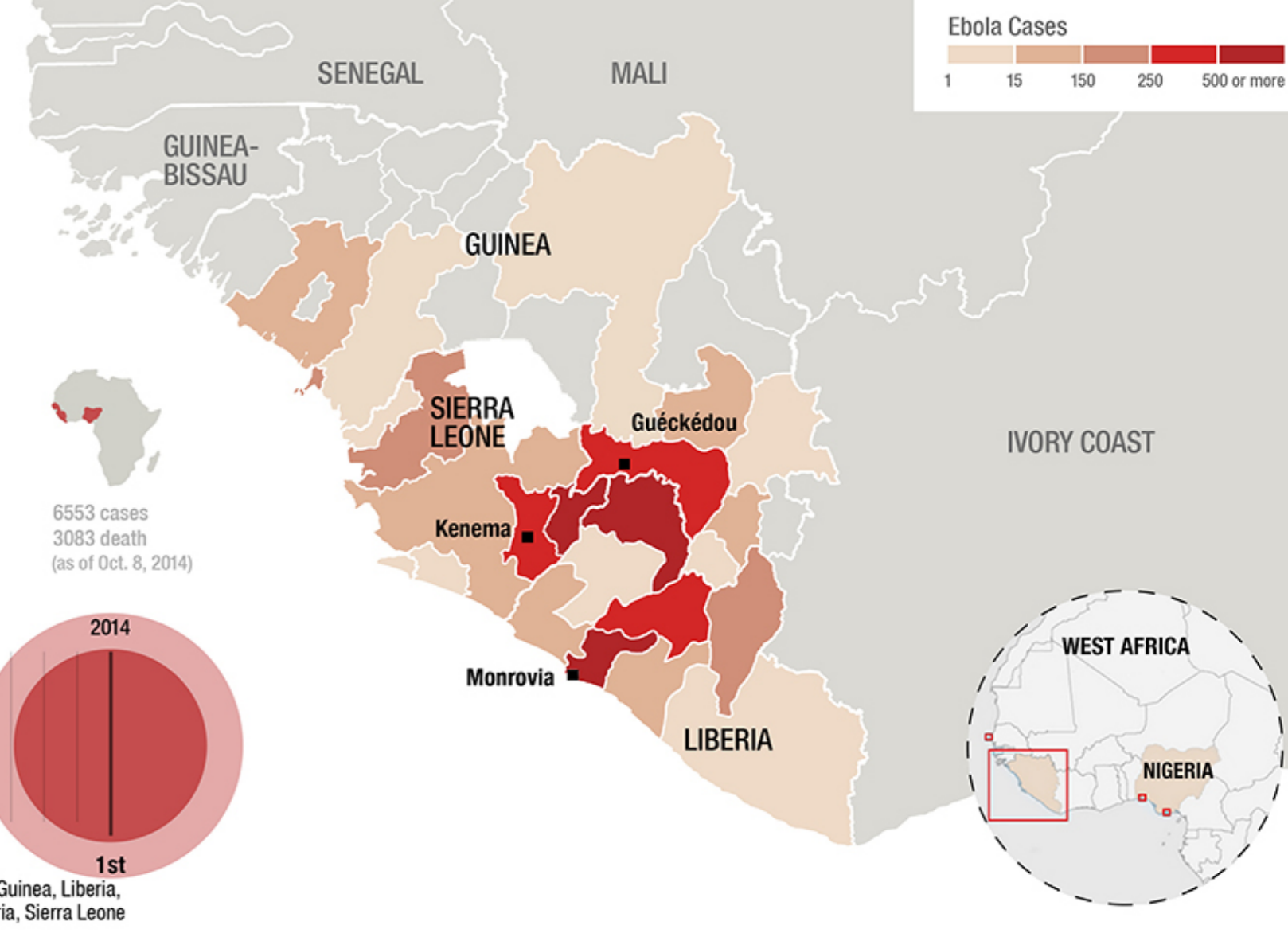
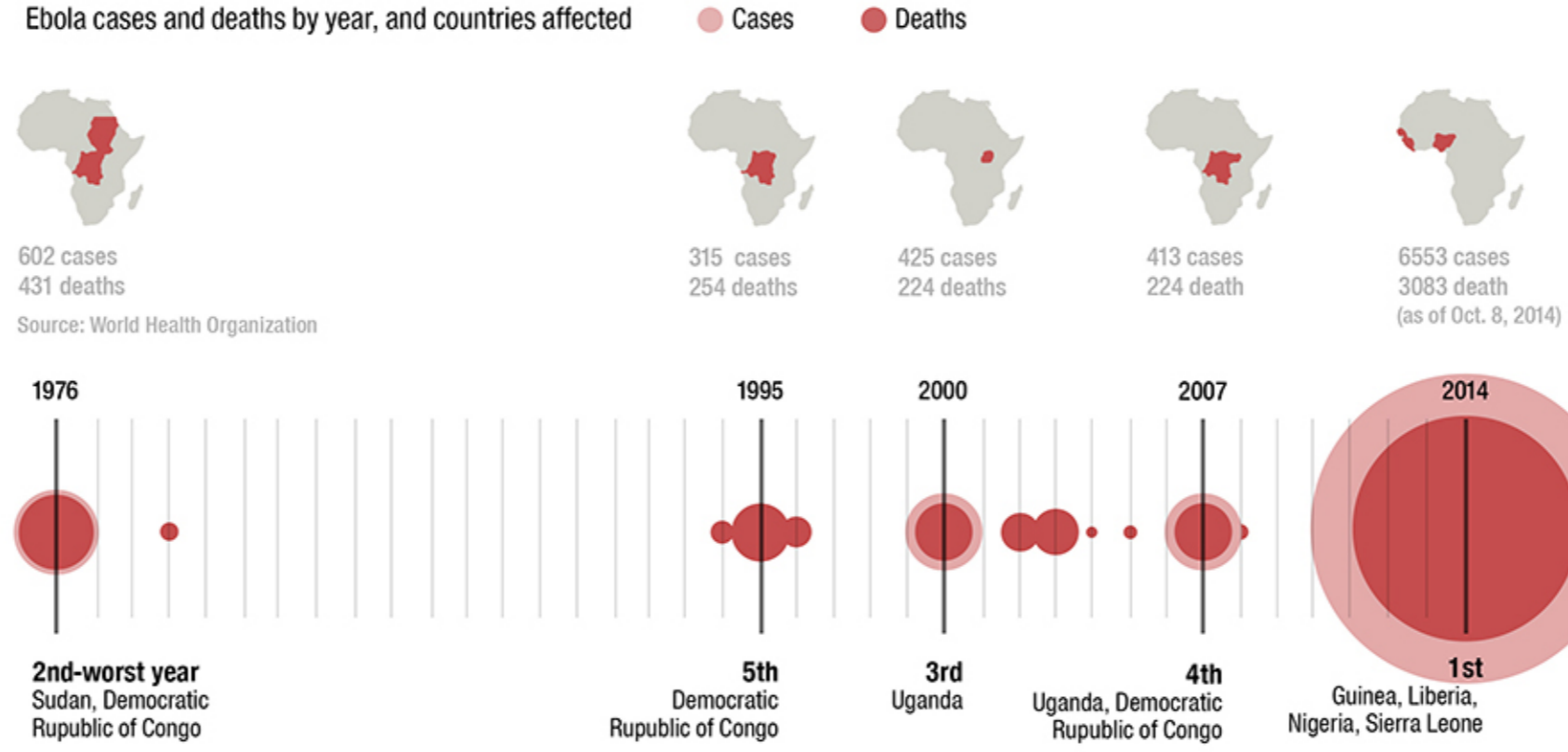


Virus Definition

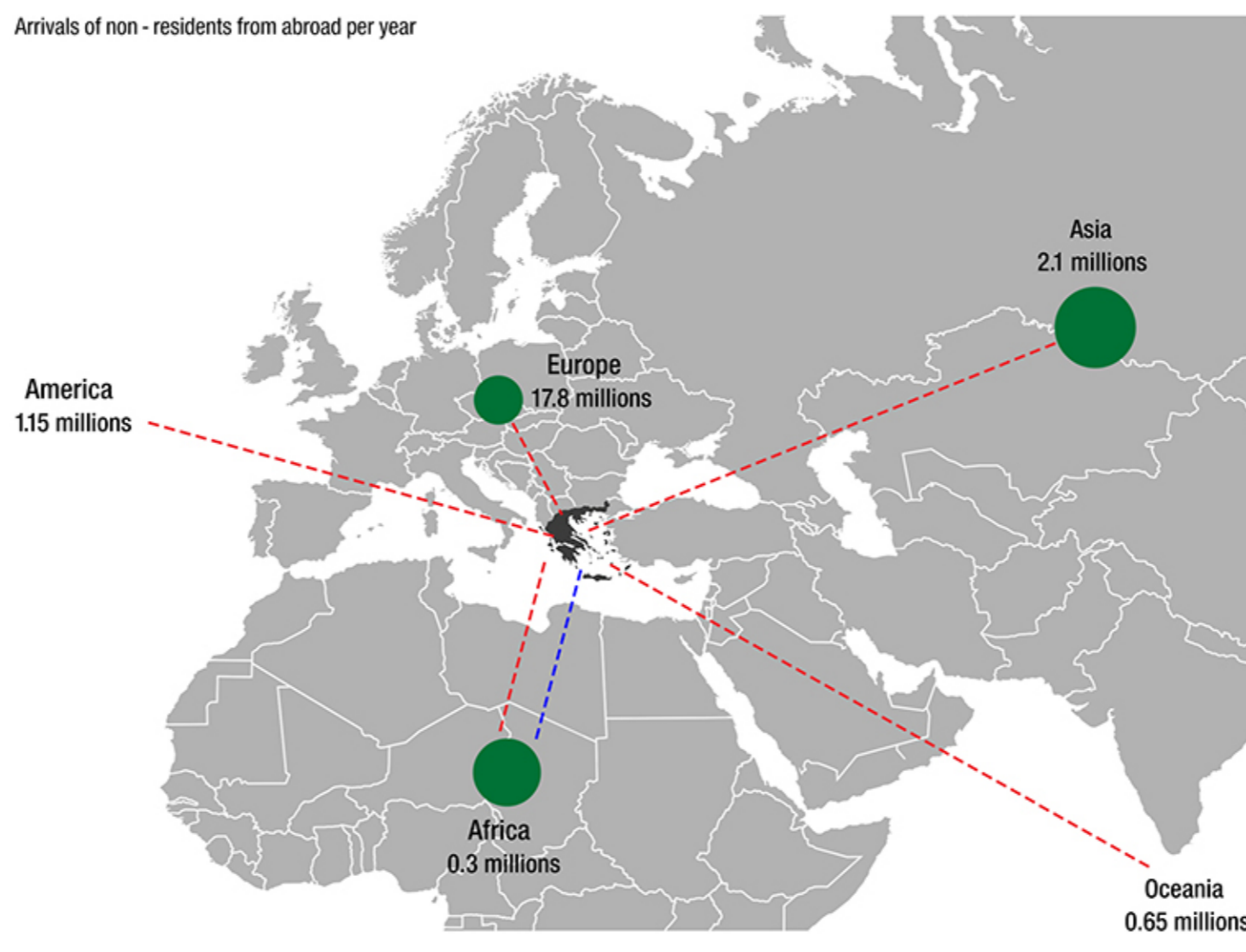
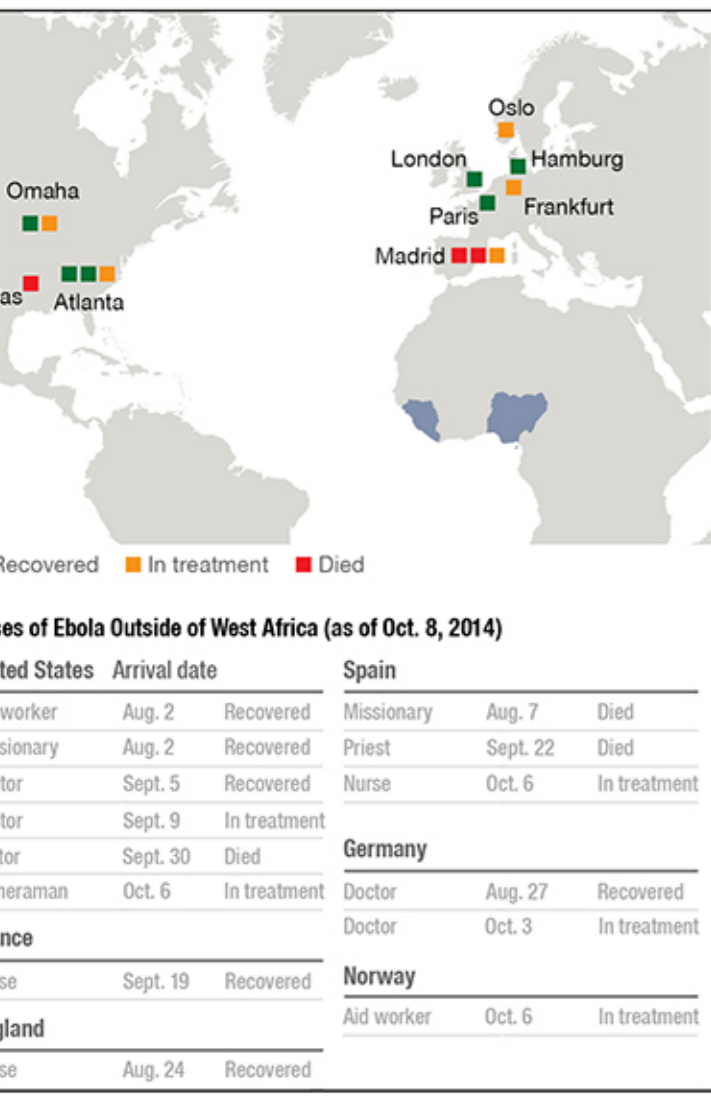
Ebola is a deadly virus that has killed hundreds of individuals in West Africa so far in 2015. This is the worst recorded outbreak of the virus. The fatality rate of Ebola can be as high as 90%. No vaccine is available, nor is there any specific treatment. Originating in Guinea, Sierra Leone and Liberia, cases have now been confirmed in Nigeria, some countries in Europe, and the US.



How does this compare to past outbreaks?



Why Ebola?

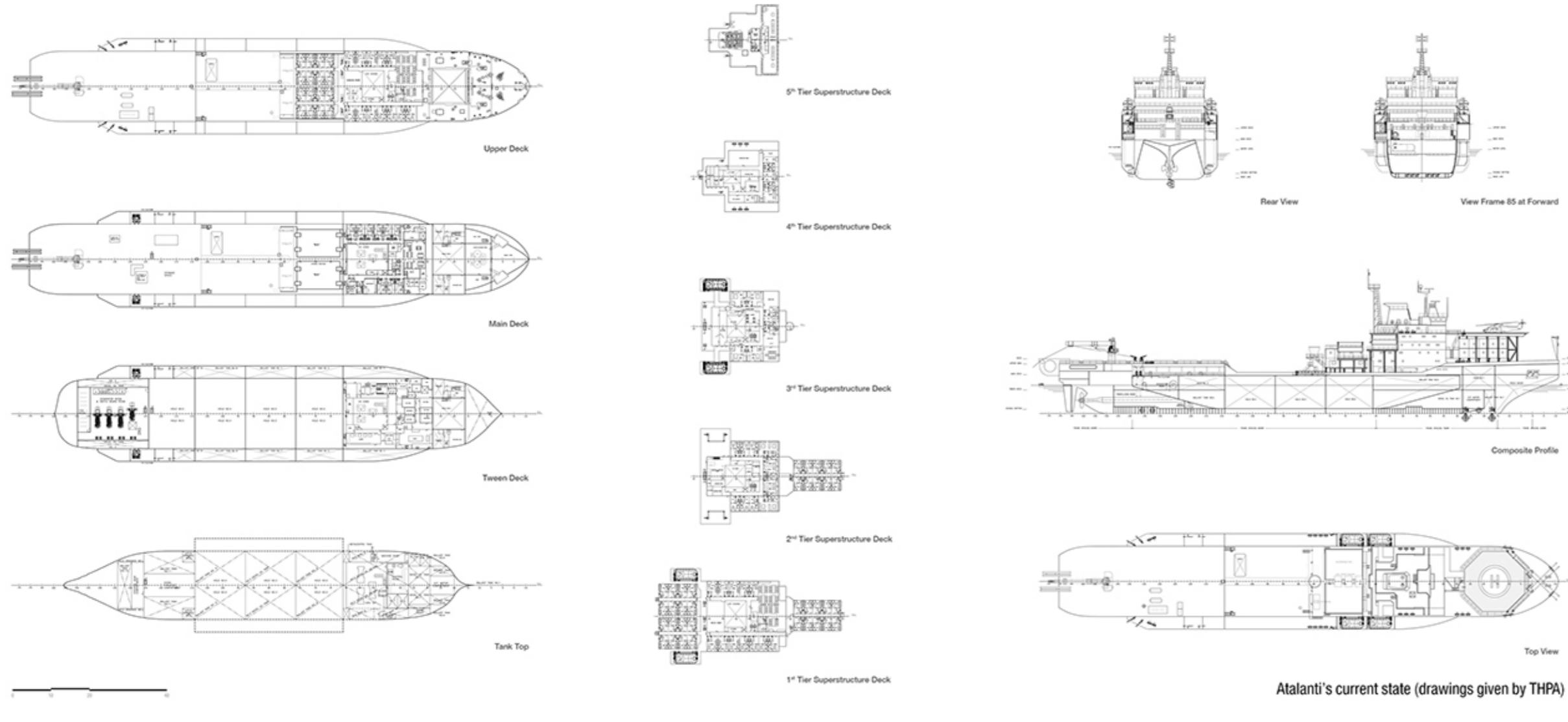


Greece is surrounded by the Aegean Sea on the east, the Ionian Sea on the west and the Libyan on the south. It has over 2500 islands and there is no point of the mainland that stands more than 124 km away from the sea.

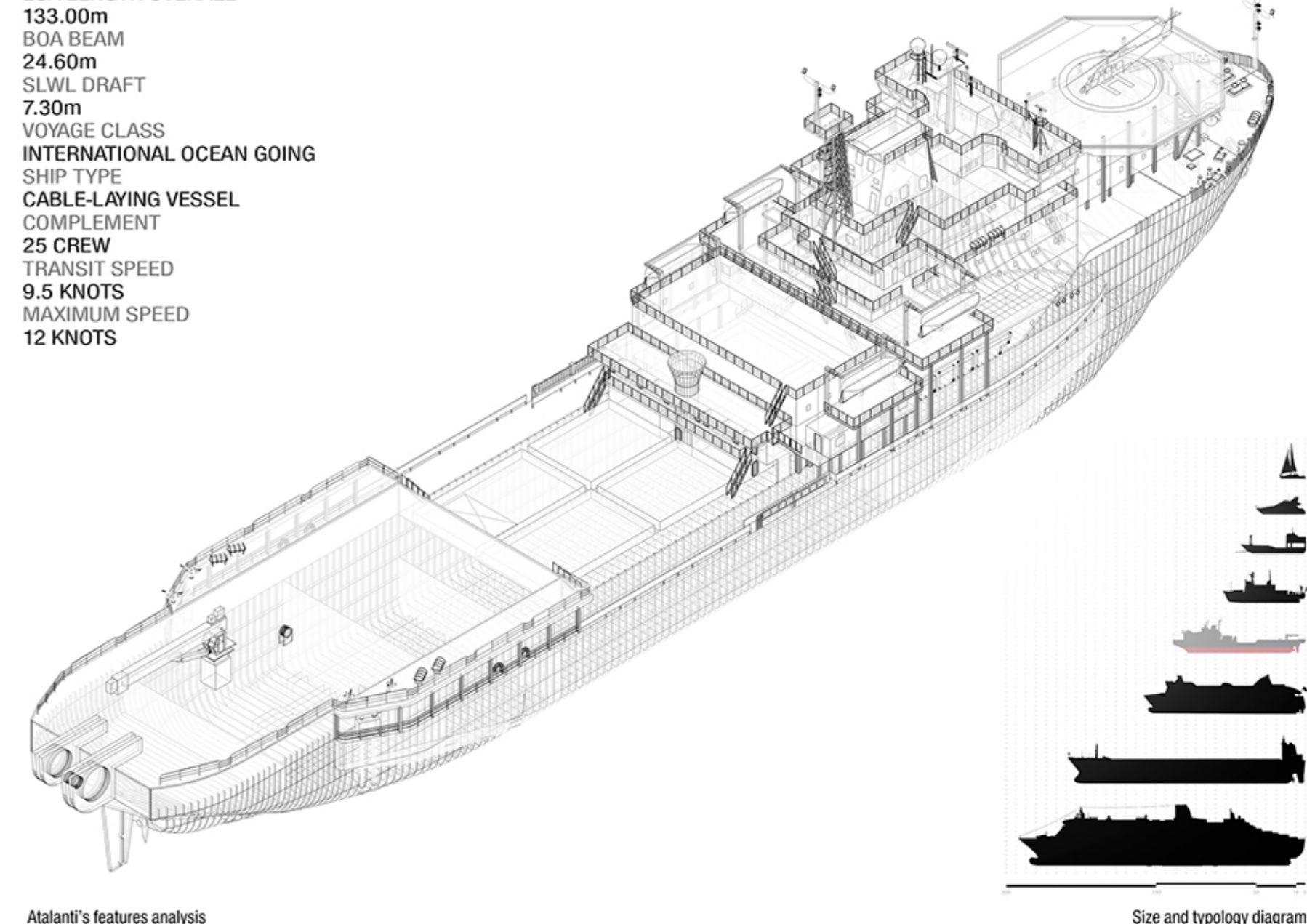
Furthermore, as mentioned, Ebola is not an airborne or waterborne virus. Therefore, seawater can be considered as a LIMIT that ensures the isolation of hospitalized patients and prevents further spreading.

In this context, the ship is thought to be the most appropriate vehicle to turn into a mobile unit that can facilitate the diagnosis, isolation and treatment of patients with Ebola. In addition, it could be sent to assist countries in Africa that have suffered the hardest hit, as they are also surrounded by sea.

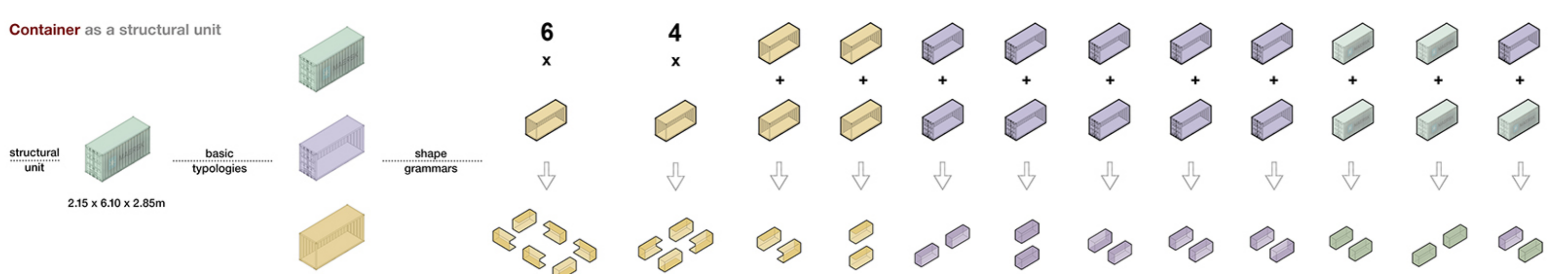
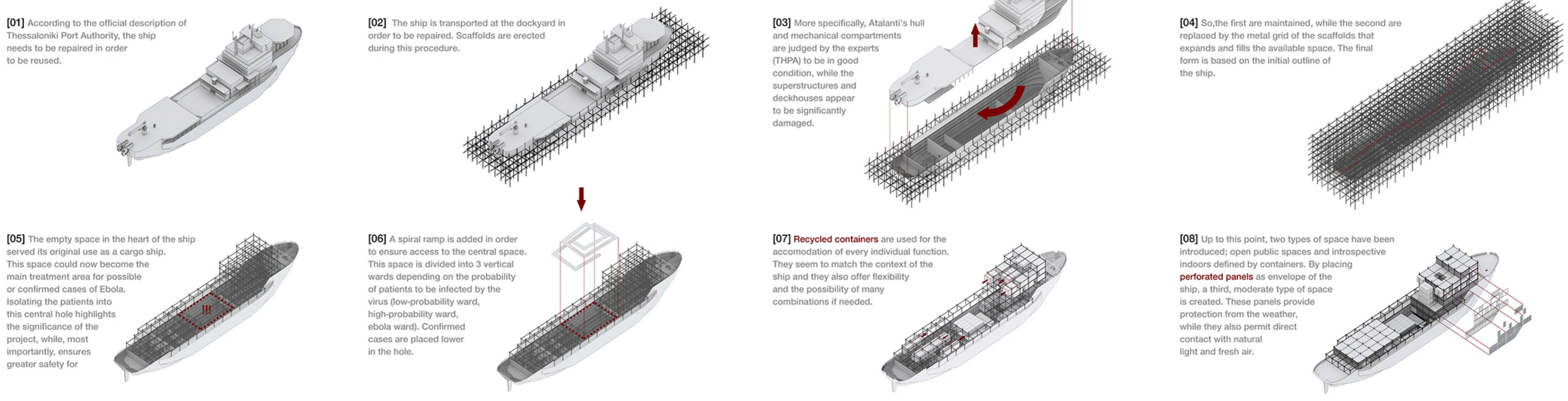
The Vehicle



LOA LENGTH OVERALL: 133.00m
 BOA BEAM: 24.60m
 SLWL DRAFT: 7.30m
 VOYAGE CLASS: INTERNATIONAL OCEAN GOING
 SHIP TYPE: CABLE-LAYING VESSEL
 COMPLEMENT: 25 CREW
 TRANSIT SPEED: 9.5 KNOTS
 MAXIMUM SPEED: 12 KNOTS



The Concept



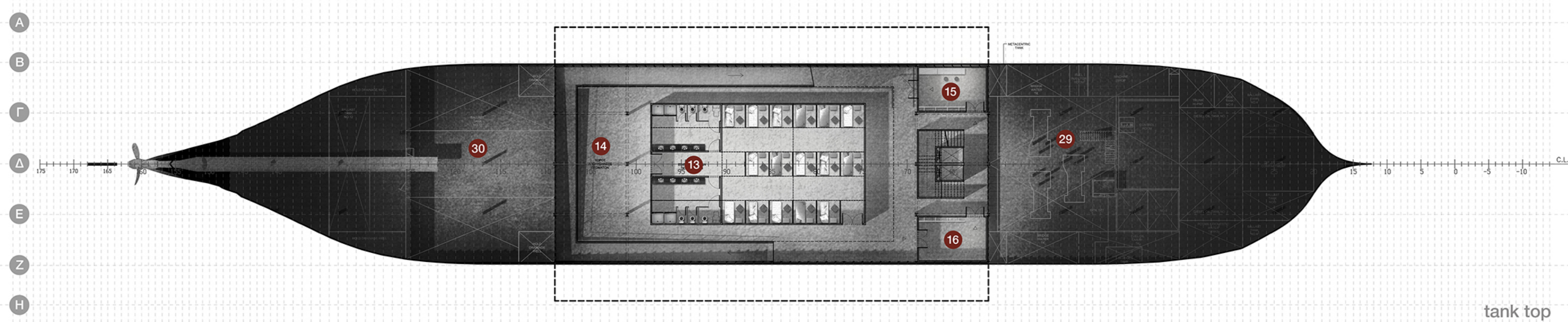
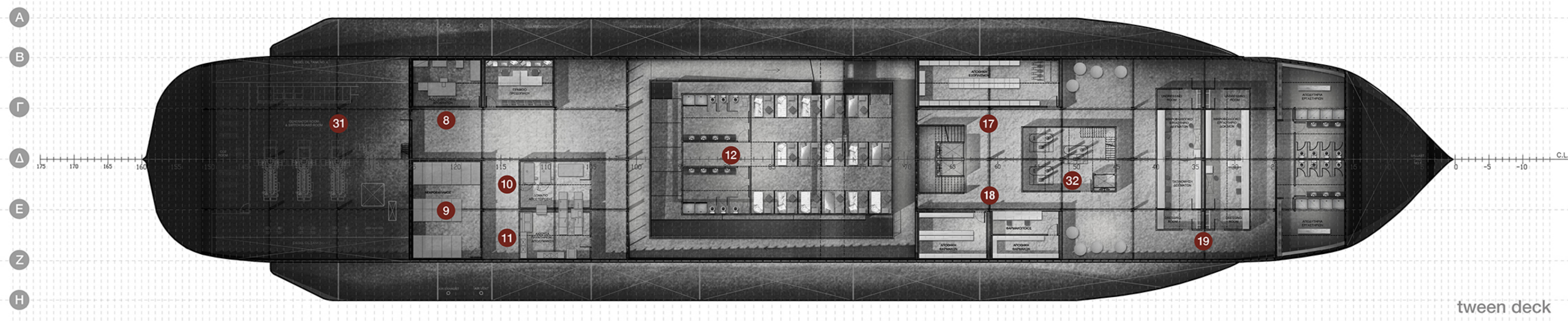
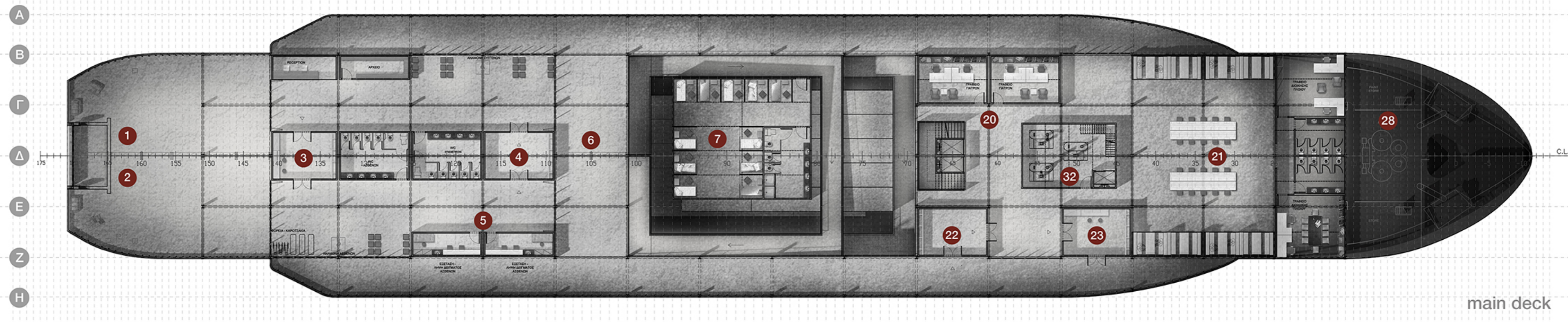
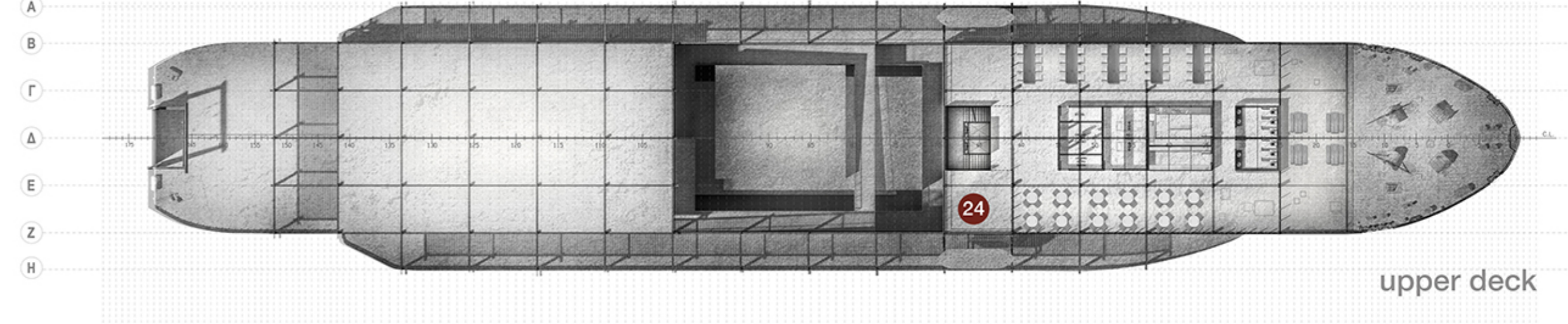
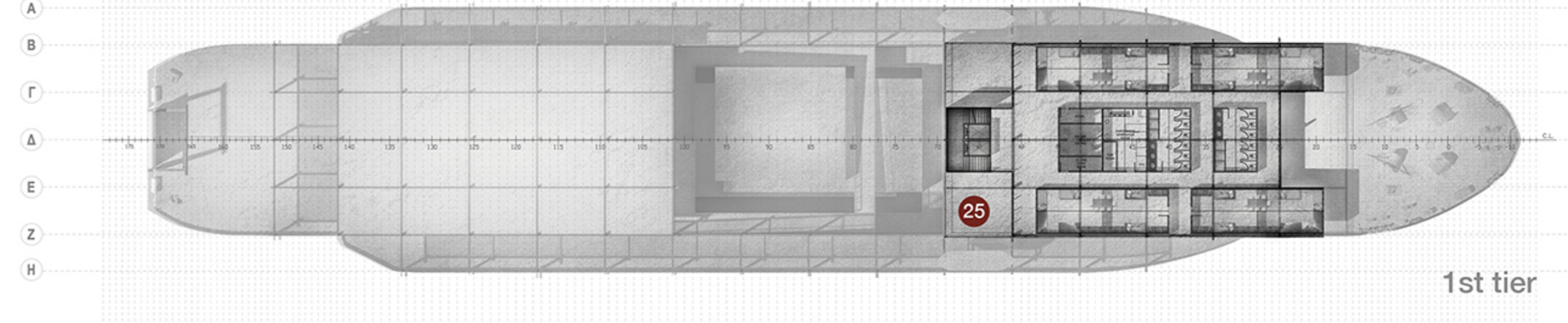
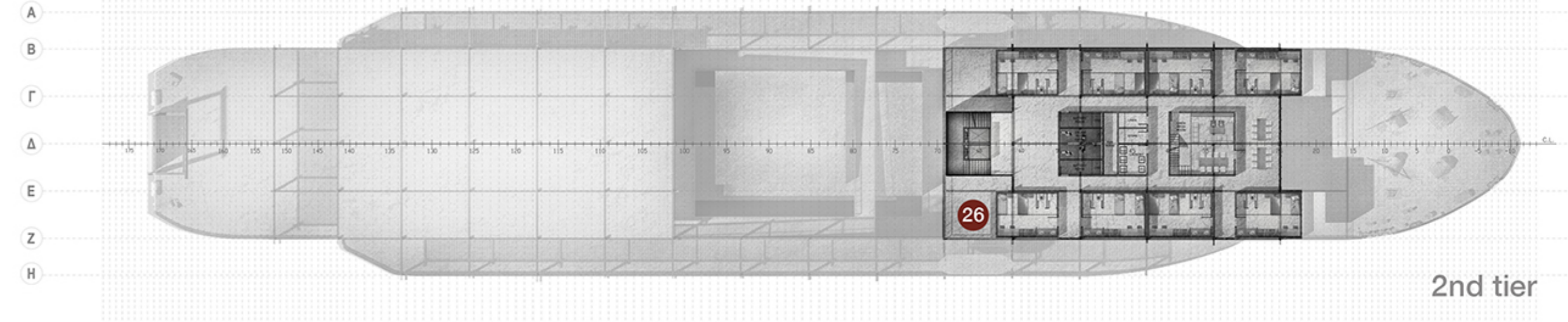
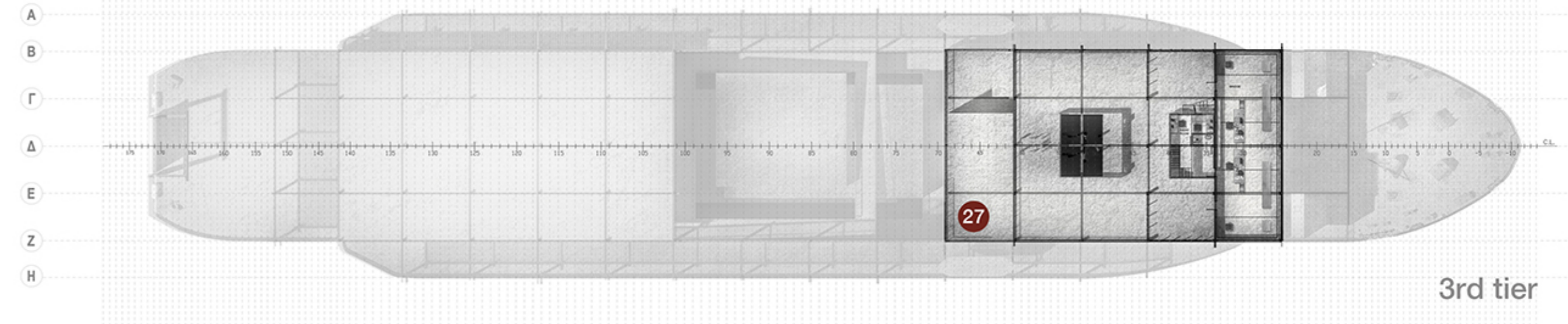
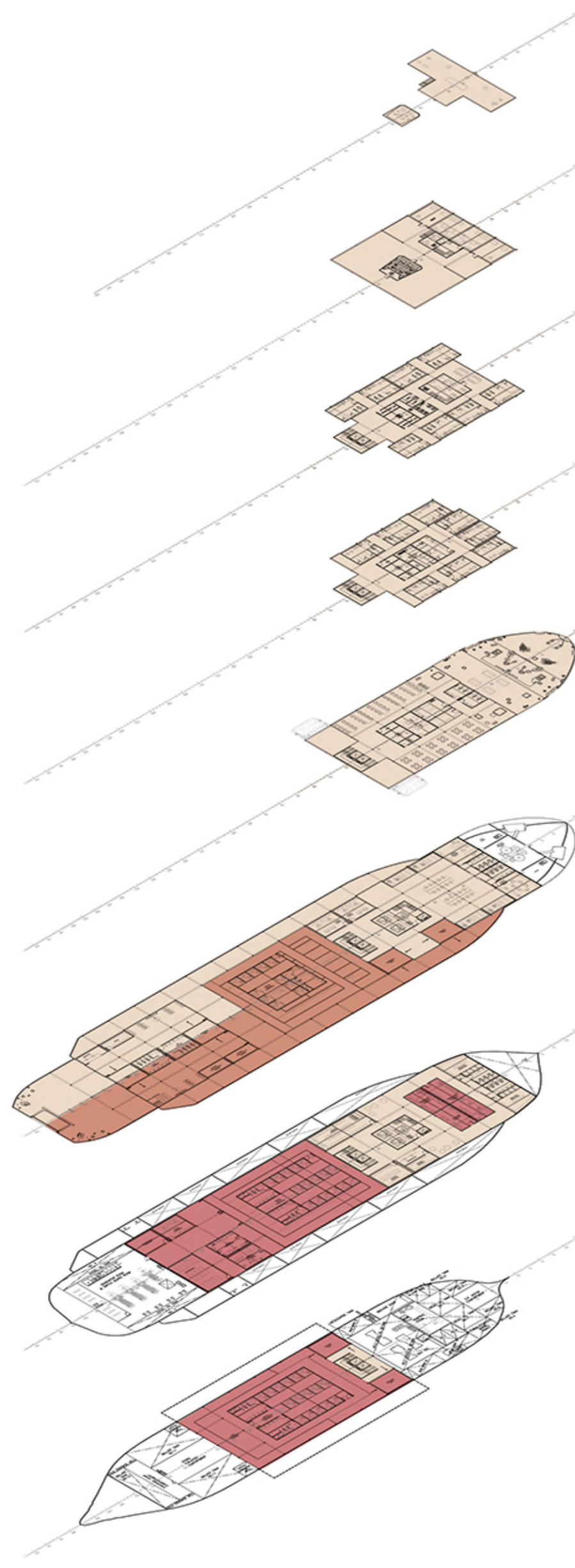
Superstructure and Hull plans

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Classification of risk zones

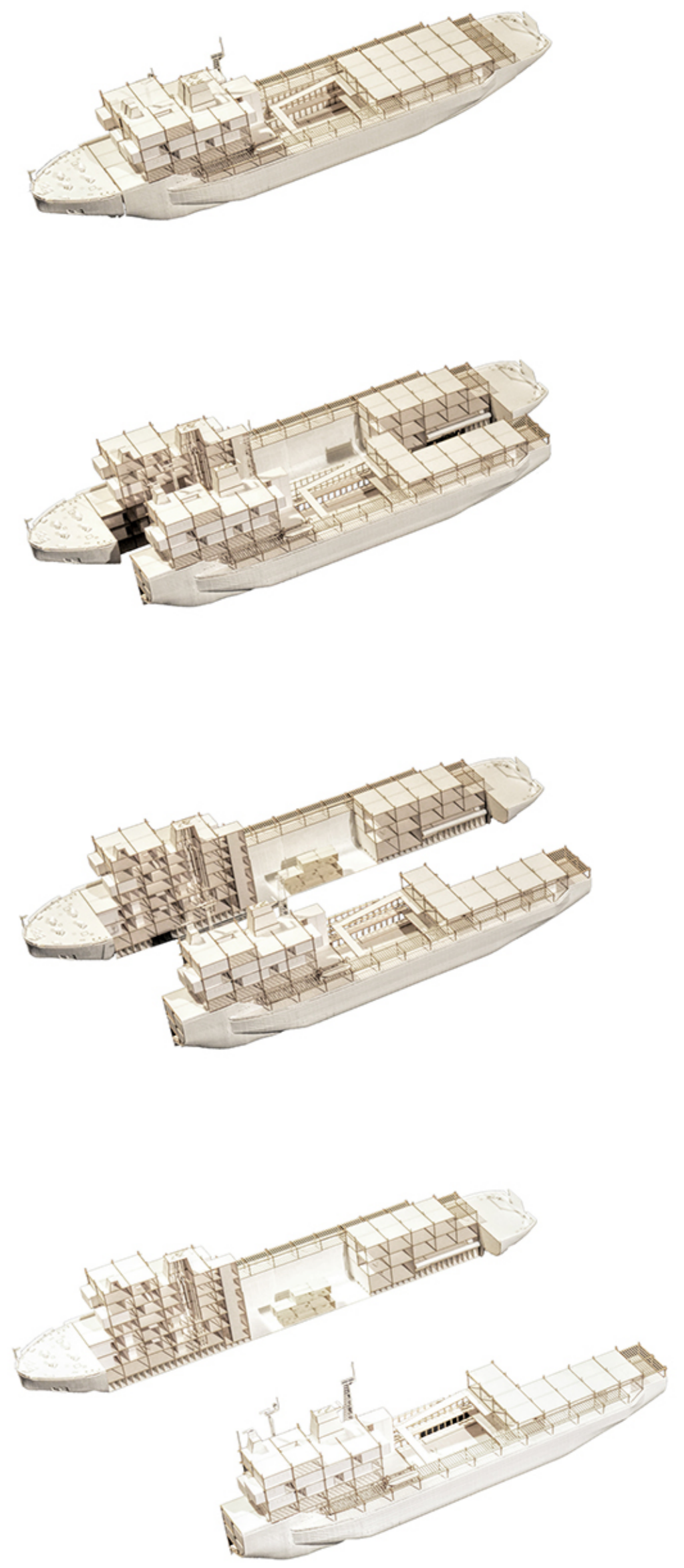
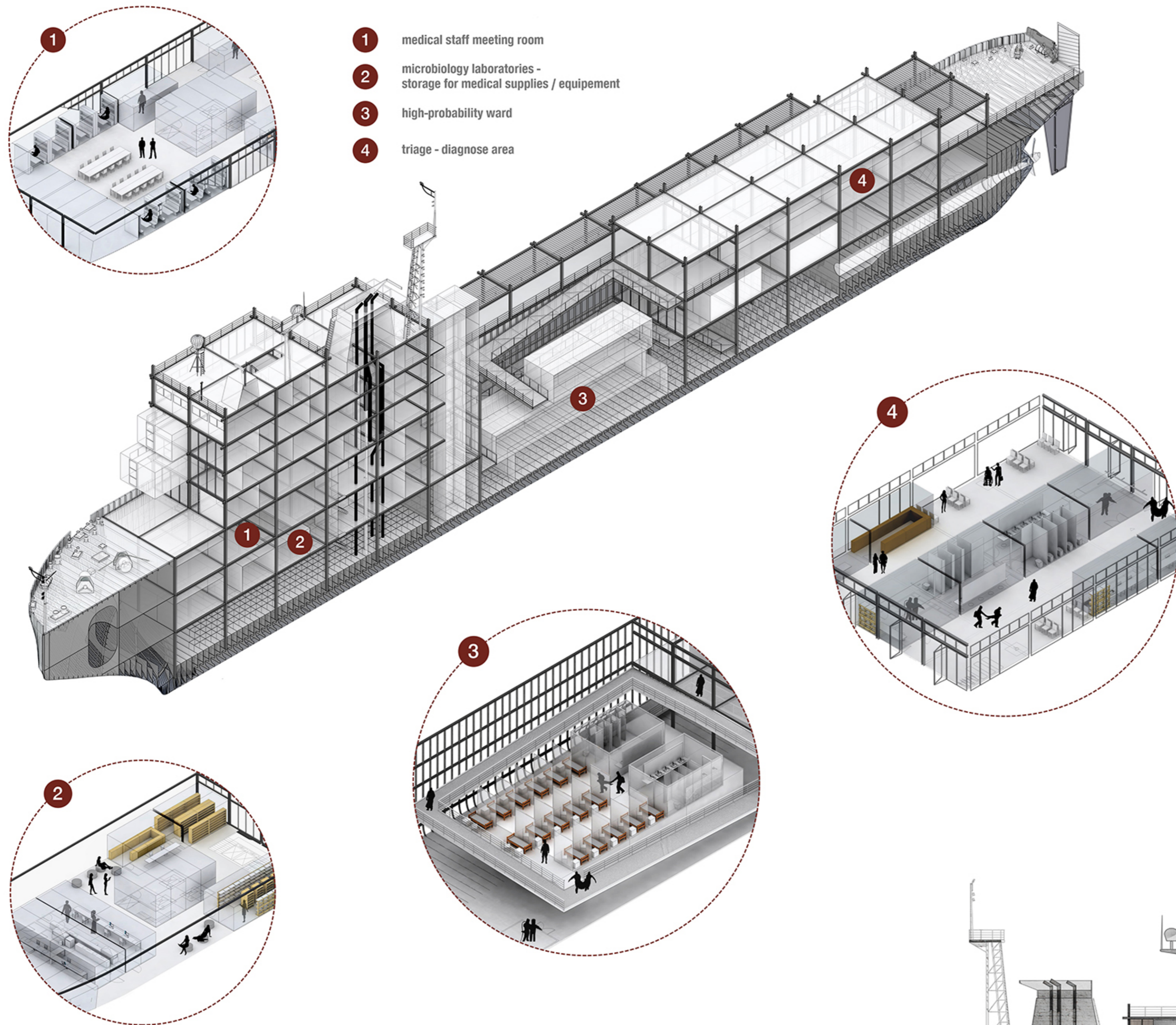
● low ● moderate ● high

- 1 entry for medical staff and crew members
- 2 patient entry
- 3 dressing room
- 4 undressing room
- 5 triage - diagnose area
- 6 fence for visitors' protection
- 7 low-probability ward
- 8 incinerator room
- 9 morgue
- 10 sterilization room
- 11 decontamination room
- 12 high-probability ward
- 13 ebola ward
- 14 disinfection of dead bodies
- 15 dressing room
- 16 undressing room
- 17 storage for equipment
- 18 storage for medical supplies
- 19 microbiology laboratories (decontamination rooms included)
- 20 doctors' offices
- 21 doctors' meeting room
- 22 dressing room
- 23 undressing room
- 24 restaurant - cafe
- 25 rooms for medical staff
- 26 rooms for crew members
- 27 ship bridge
- 28 machinery room
- 29 motor compartment
- 30 propulsion room
- 31 generator room
- 32 casing

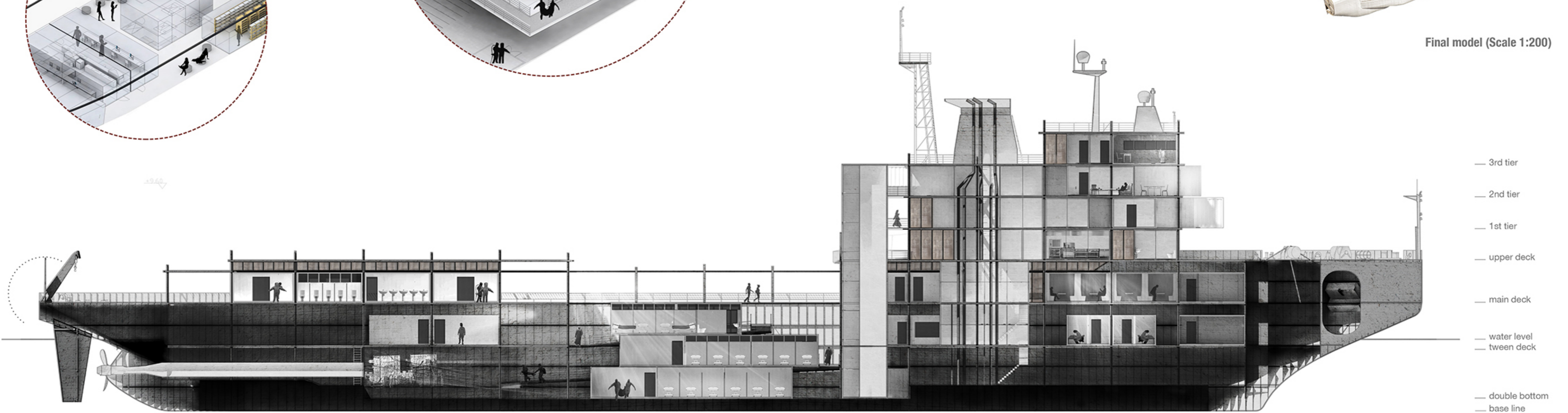


0 10 20 40m

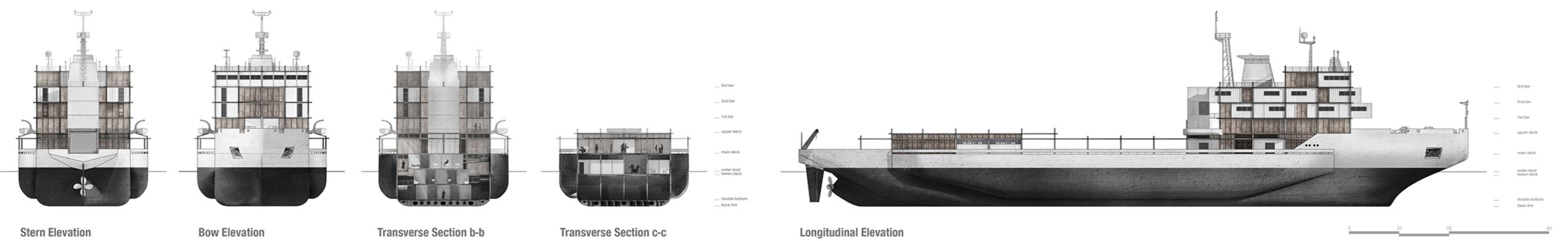
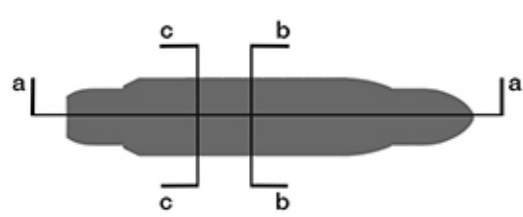
Models - Sections - Elevations



Final model (Scale 1:200)



Longitudinal Section a-a



Renders

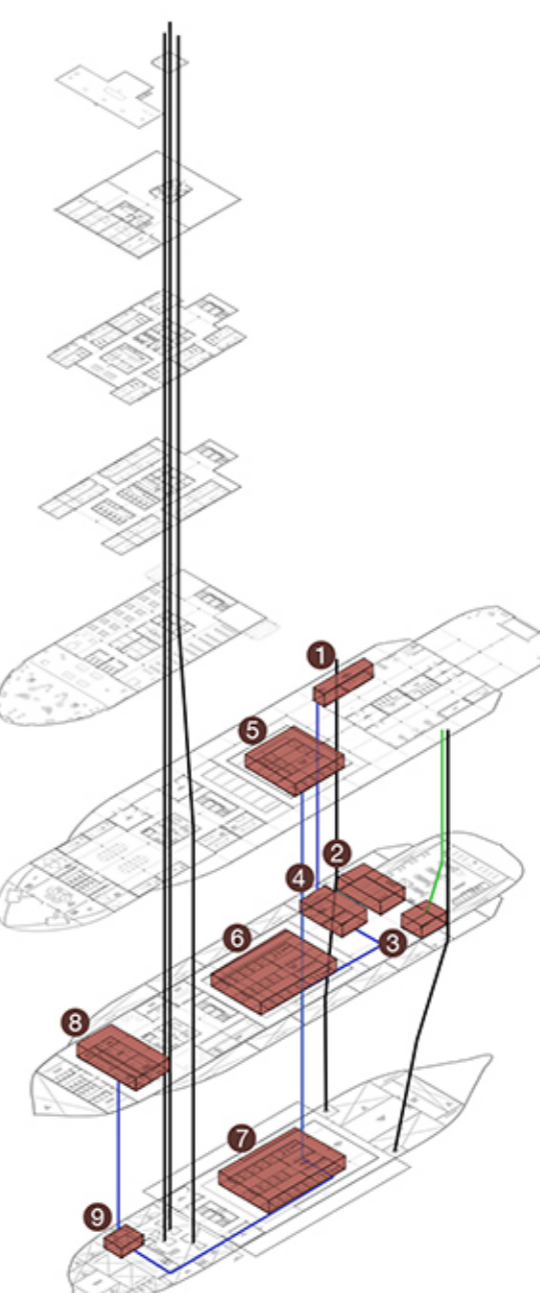
Waste management plan / air handling system



- current engine casing
- incinerator piping
- black wastewater sewage

*black wastewater is considered any amount of water that has been in contact with infected individuals

- 1 triage - diagnose area
- 2 morgue
- 3 incinerator room
- 4 sterilization / decontamination room
- 5 low-probability ward
- 6 high-probability ward
- 7 ebola ward
- 8 microbiology laboratories
- 9 black wastewater holding tank

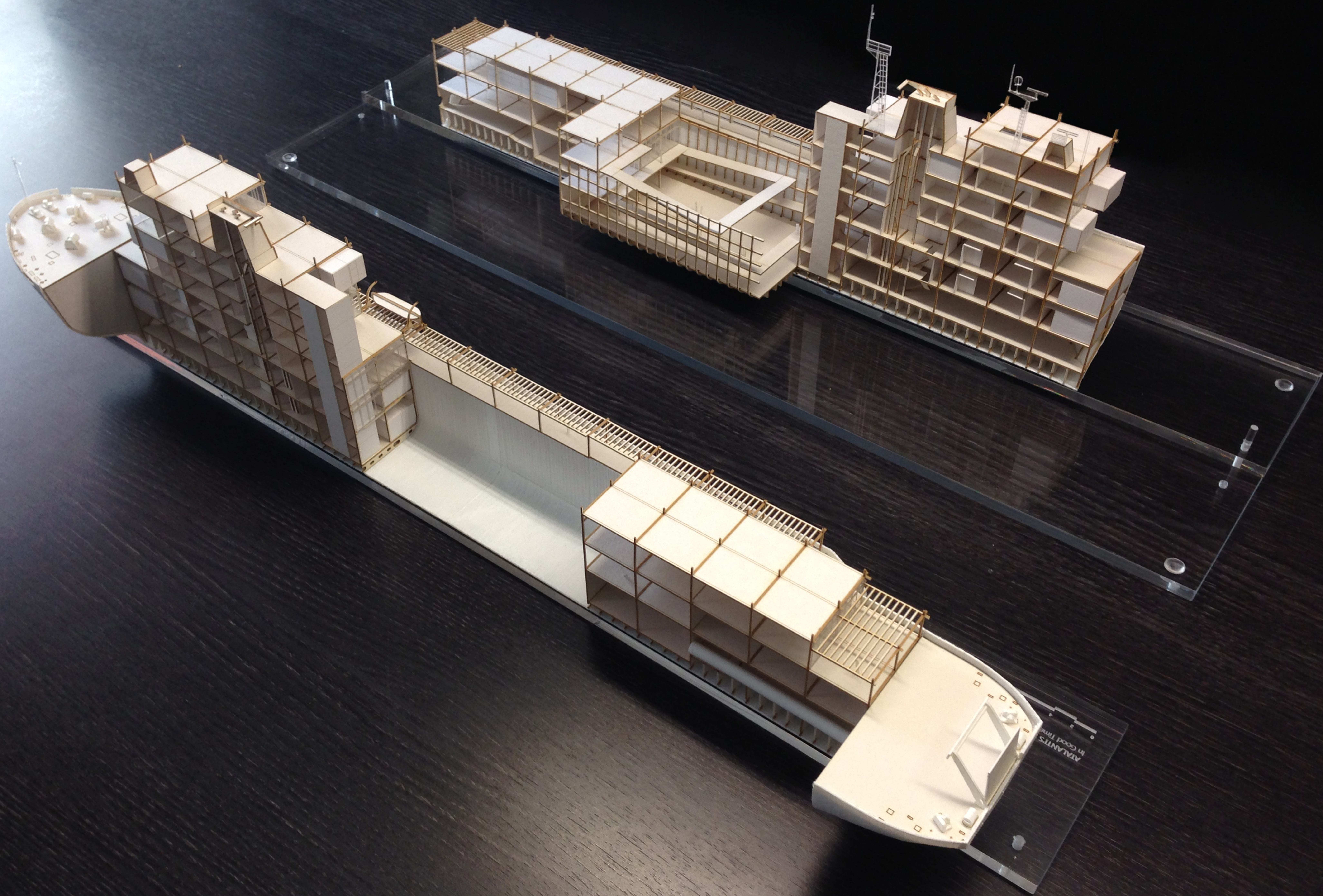


Summary of Shipboard Infectious Medical Waste

Infectious Waste Type	Package / Handling	Treatment / Storage	Disposal
Sharps	Discard into rigid, puncture resistant sharps container. Label BIOHAZARDOUS	Autoclave and store	Shoreside
Fluids (blood, blood products, and other liquid infectious waste)	Decant fluids to sanitary system. Bulk blood that cannot be emptied into the ship's marine sanitation device should be placed in leak-proof containers. Label BIOHAZARDOUS	Blood, blood products, and other liquid infectious wastes may be discharged into the ship's marine sanitation device (MSD). Otherwise autoclave and store in leak-proof containers	Ship's MSD or shoreside
Pathological Waste	Place in containers double lined with leak-proof plastic bags. Label BIOHAZARDOUS	Logistical and ethical constraints may require freezing this waste	Shoreside
Materials Saturated With Blood or Blood Products	Place in containers double lined with leak-proof plastic bags.	Autoclave and store	Shoreside
Other Infectious Wastes (isolation wastes, cultures, and associated biological)	Place in containers lined with leak-proof plastic bags. Label BIOHAZARDOUS	Incinerate and store	Incineration

* Atalanti's current mechanical ventilation system is used, as Ebola is not an airborne disease. However, all ventilators shall be fitted with 2 viral filters; a filter is to be placed between the distal end of expiratory tubing and the ventilator (to prevent contamination) while another filter is to be placed at the exhalation outlet of the ventilator (to minimise contamination to the environment).

* Source: International Convention for the Prevention of Pollution from Ships



ATLANTIS
In Good Time