



## Presentation of the project « Ferrybird »

Université  
de Liège



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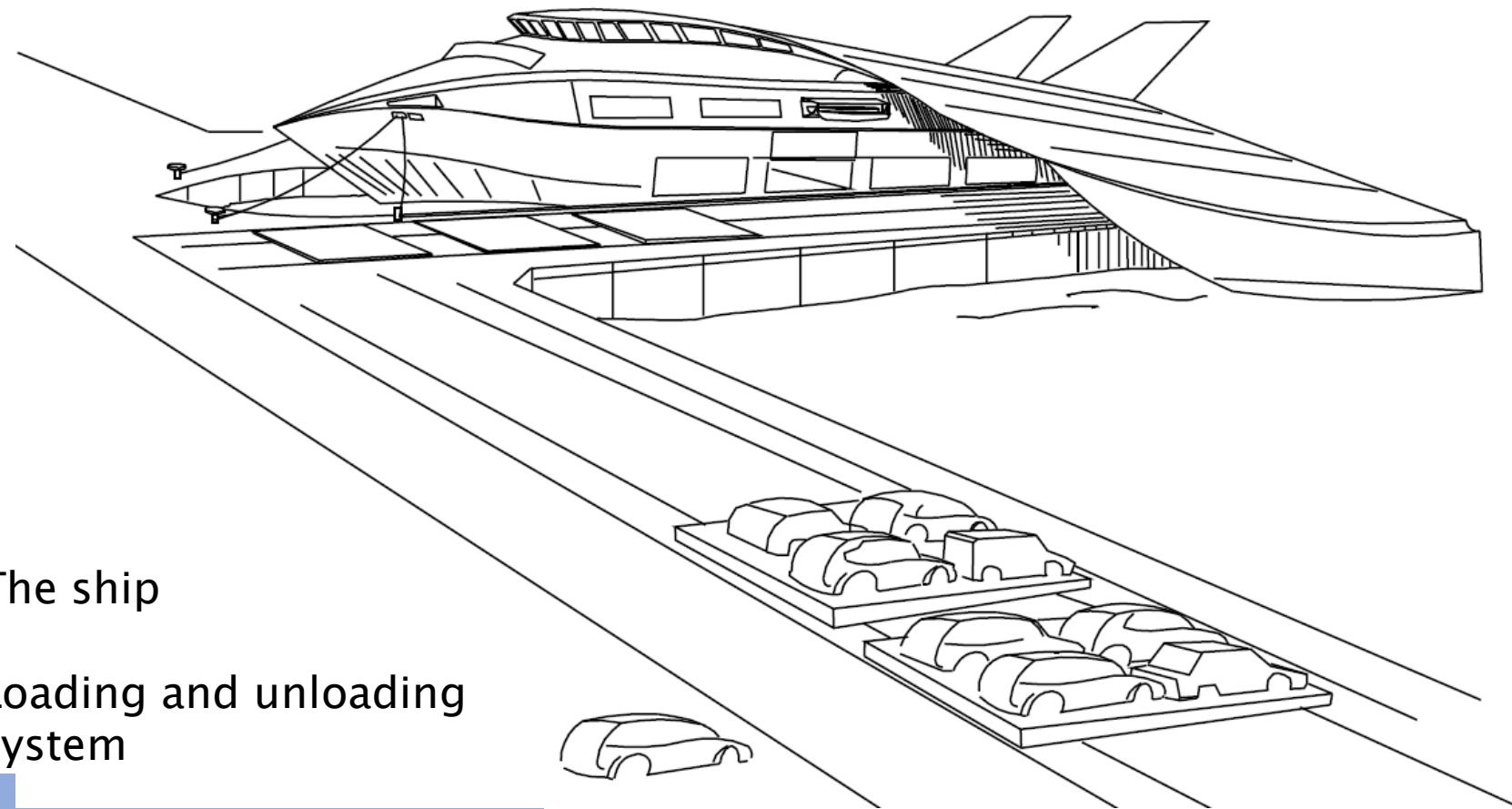
Ecole  
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Architecture  
Nantes

1. Introduction
2. The concept
3. Detailed description
  1. Dimensions & main characteristics
  2. Power & Propulsion
  3. General arrangements
  4. Loading/unloading operations
4. Potentiel technological gaps
  1. Logistics & shipyards
  2. Harbour infrastructure
  3. Evacuation
  4. Hull girder strength

- ▶ Target : ferries in inland navigation and shortsea shipping



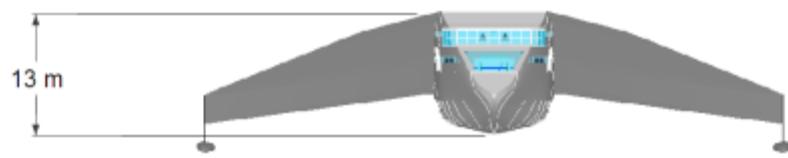
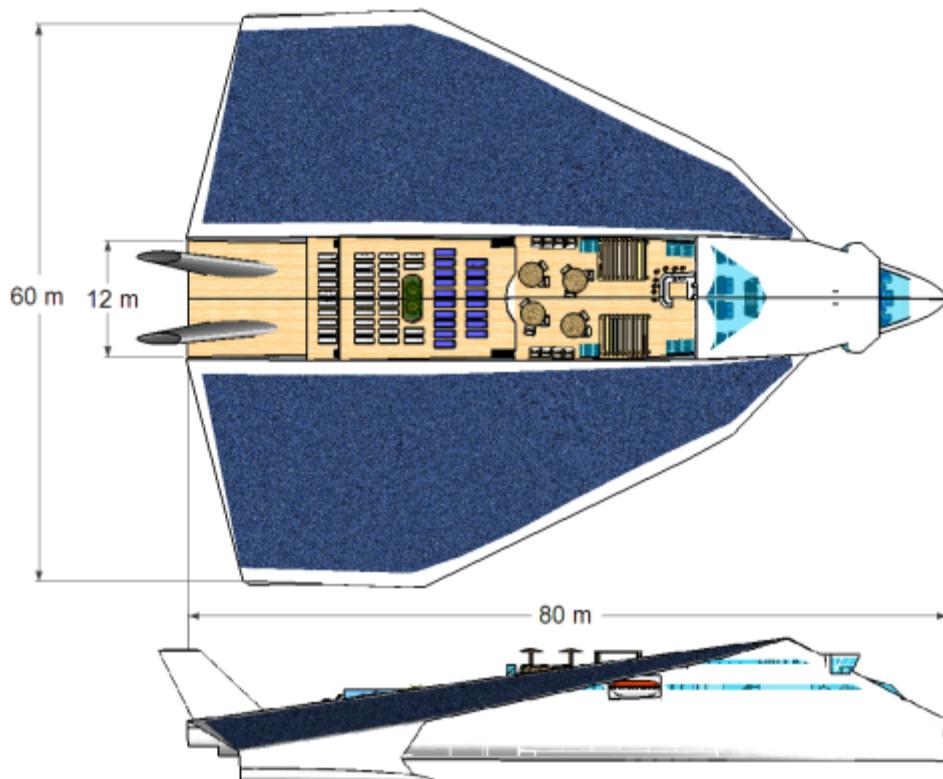
- ▶ 2 main goals:
  - Reduce travel time
  - Reduce time of harbor operations



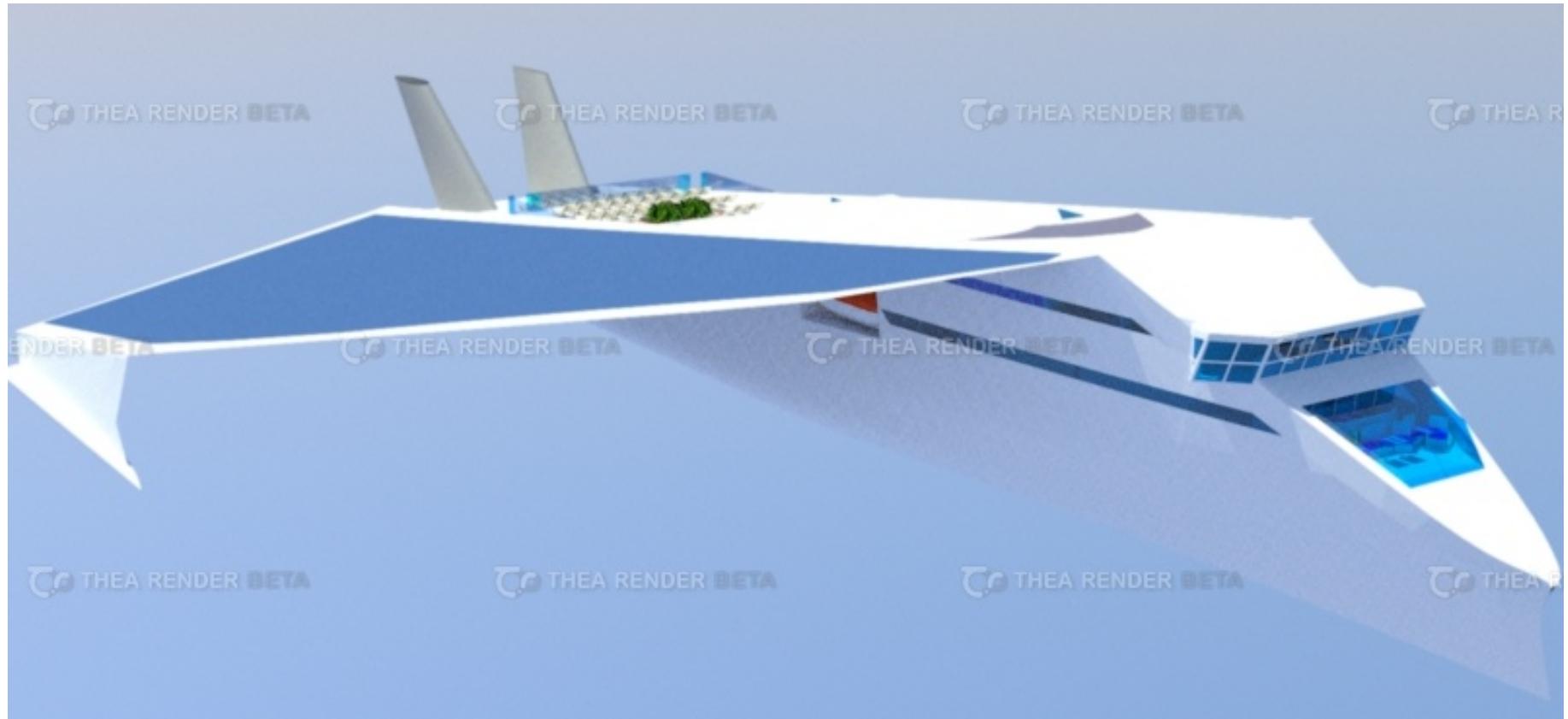
The ship

Loading and unloading  
system

## ► 3.1. Dimensions and main characteristics

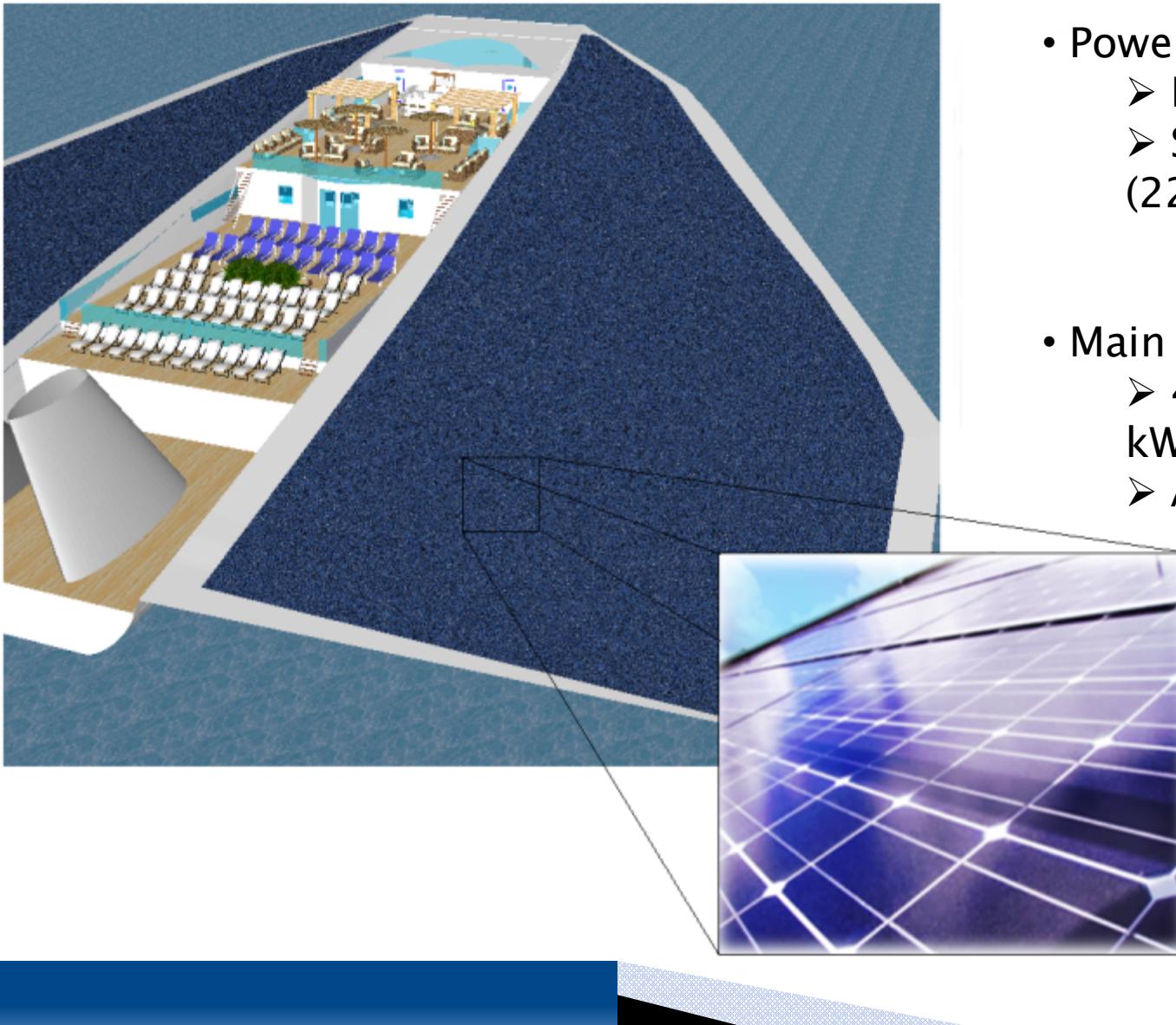


- Estimation of lightweight: 1350 tons
- Draft: 2,8 m
- 50 cars
- 250 passengers
- Cruise speed: 35 kn



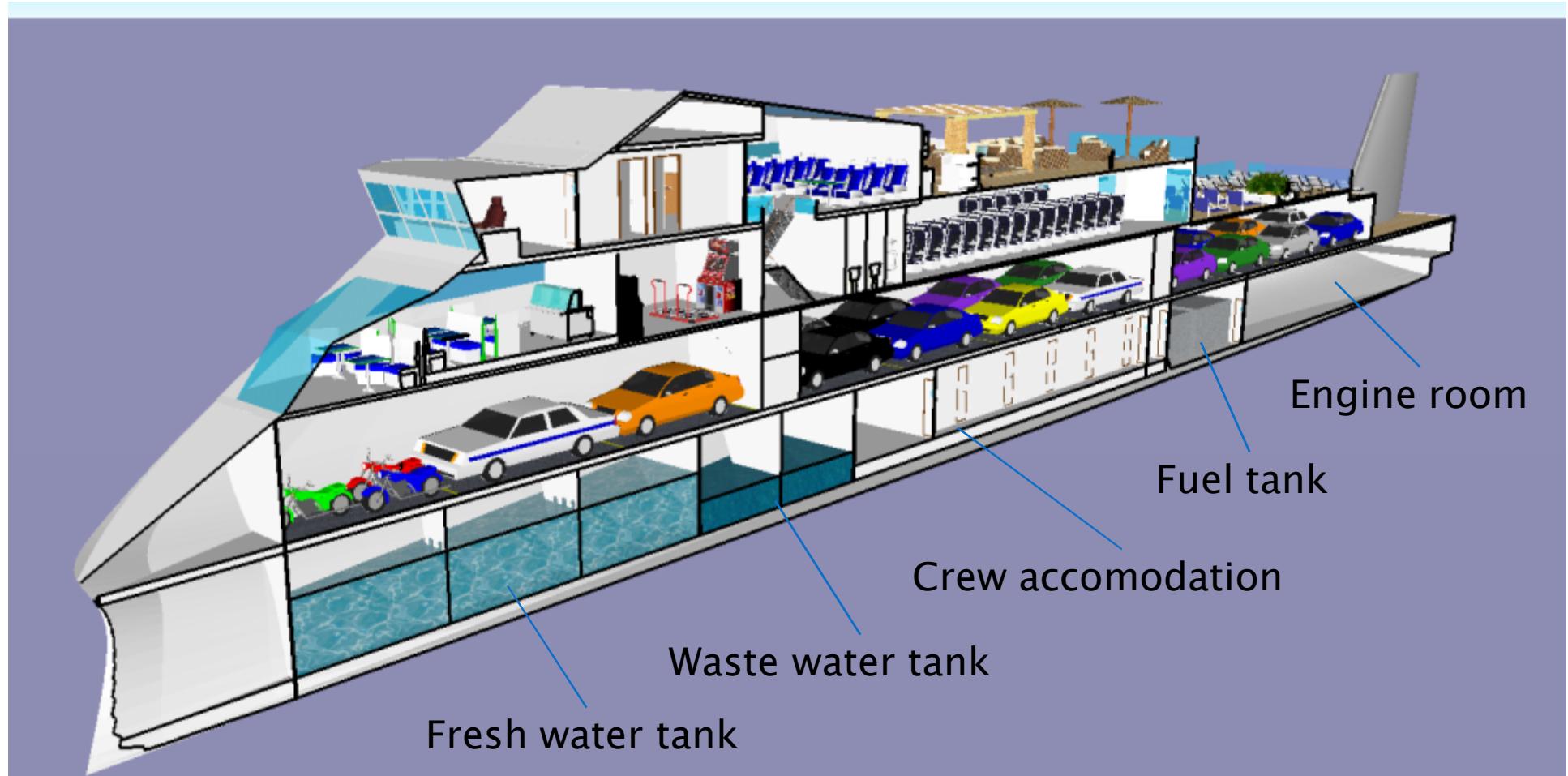
3D view of the Ferrybird

## ► 3.2. Power and propulsion

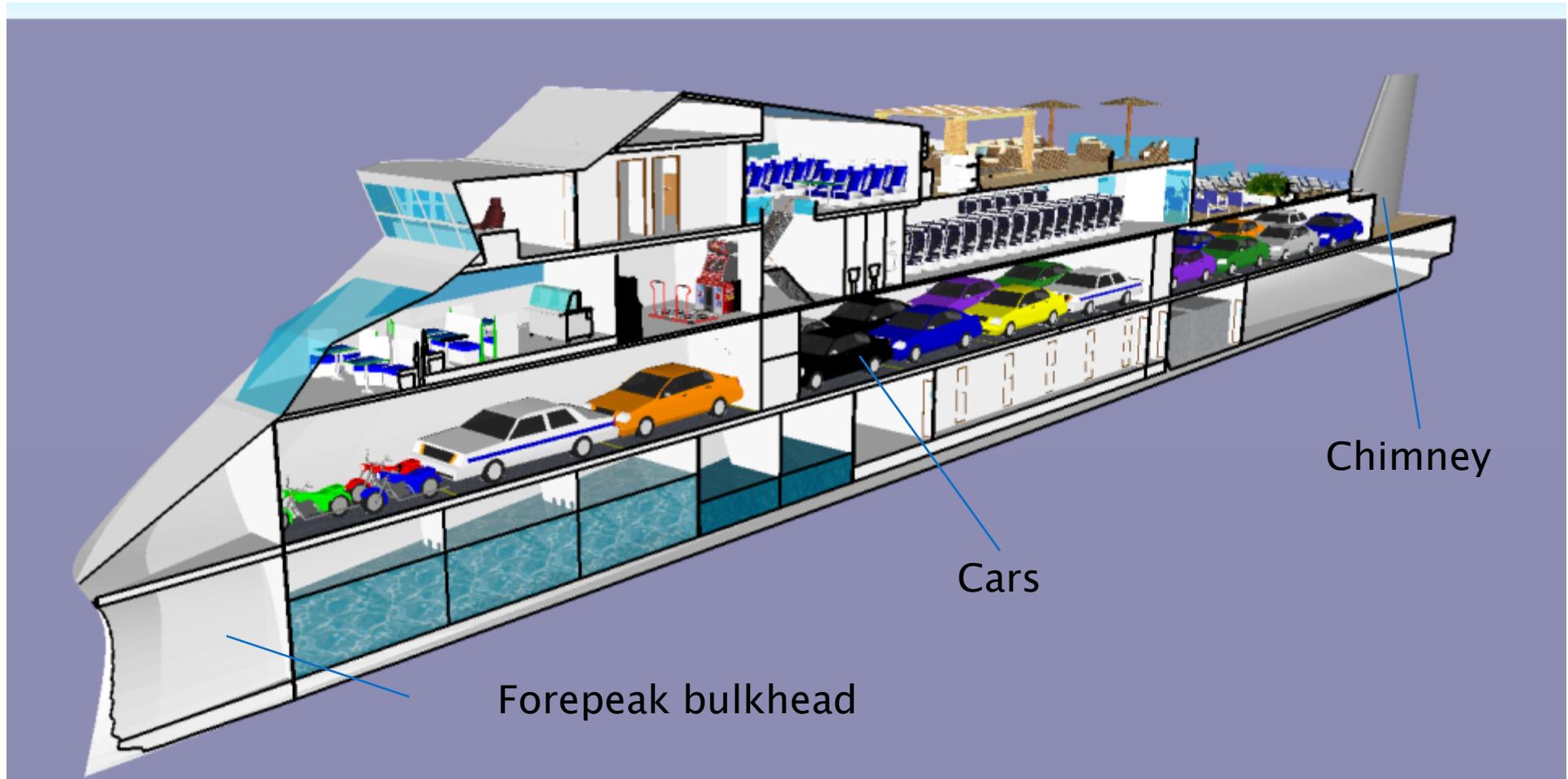


- Power supply
  - Diesel generator
  - Solar panels (2200m<sup>2</sup>)
- Main propulsion
  - 4 Hydrojets 4000 kW
  - Auxiliaries

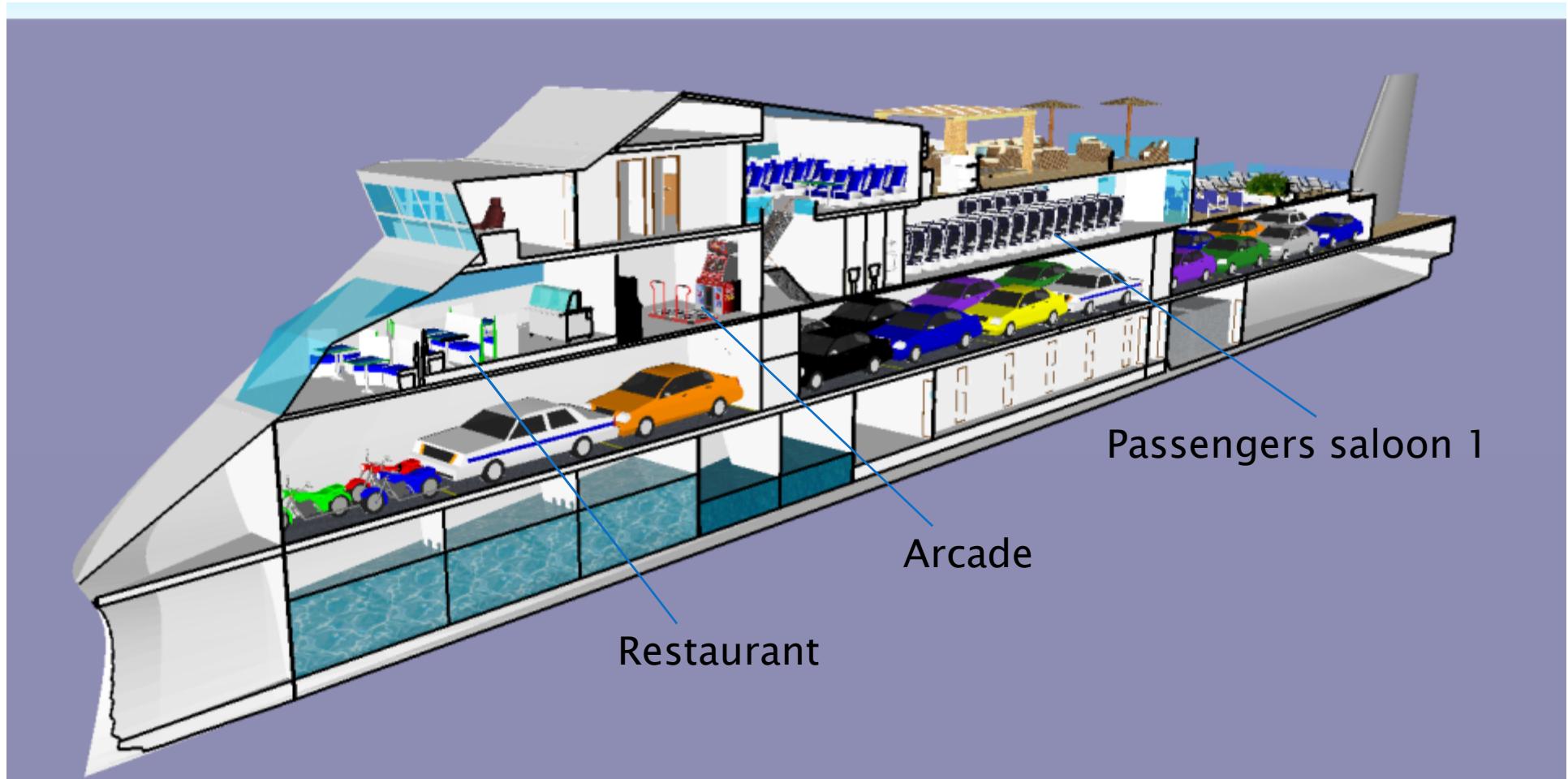
### ► 3.3. General arrangements



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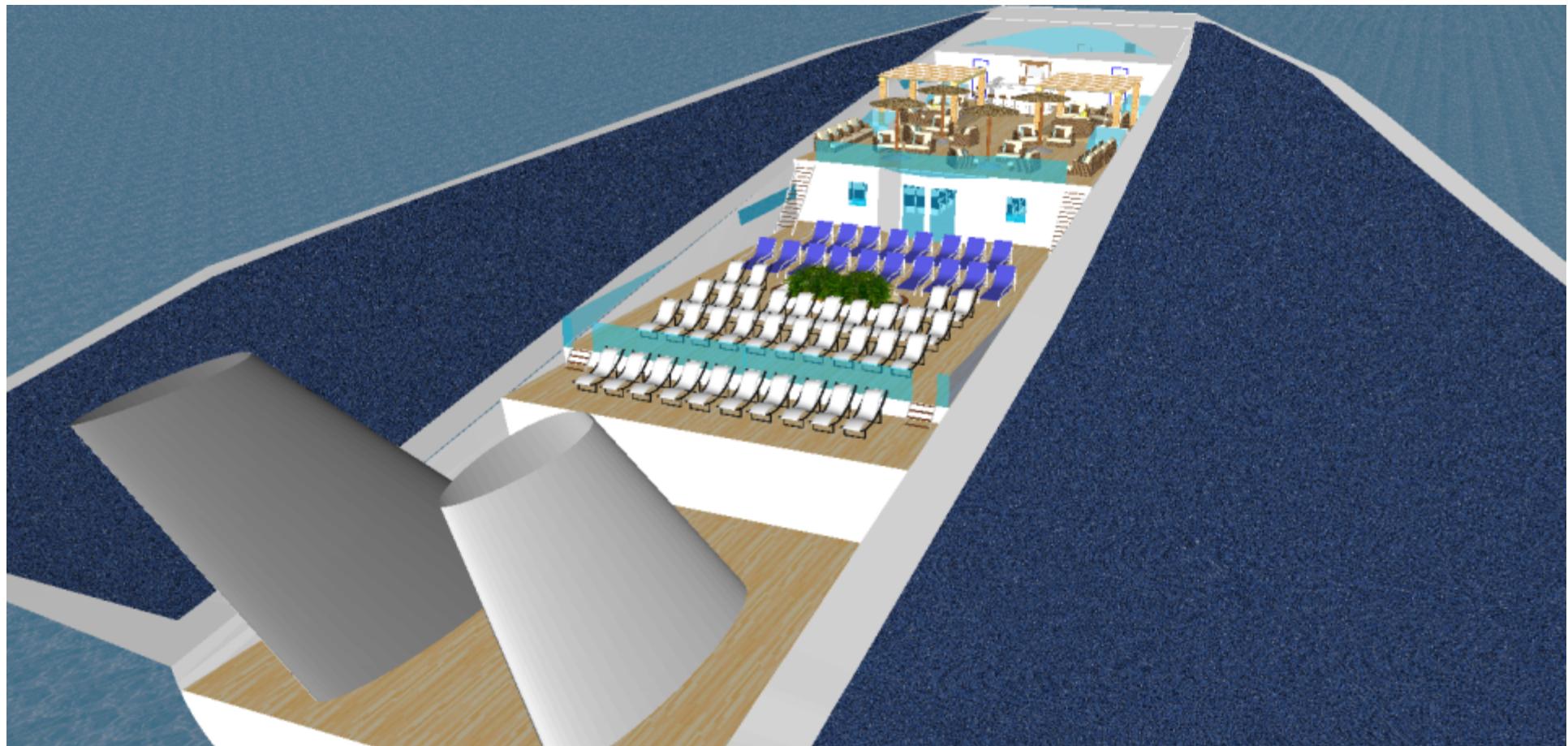


### ► 3.3. General arrangements



### ► 3.3. General arrangements





## ► 3.4. Loading and unloading operations

Current system:

- longitudinal loading/unloading of vehicles
- Uncoupled operations



1 CYCLE

Ship in navigation (travel 1)

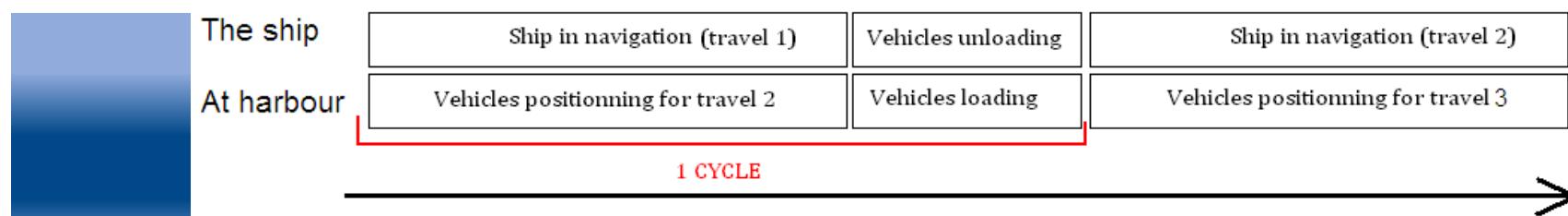
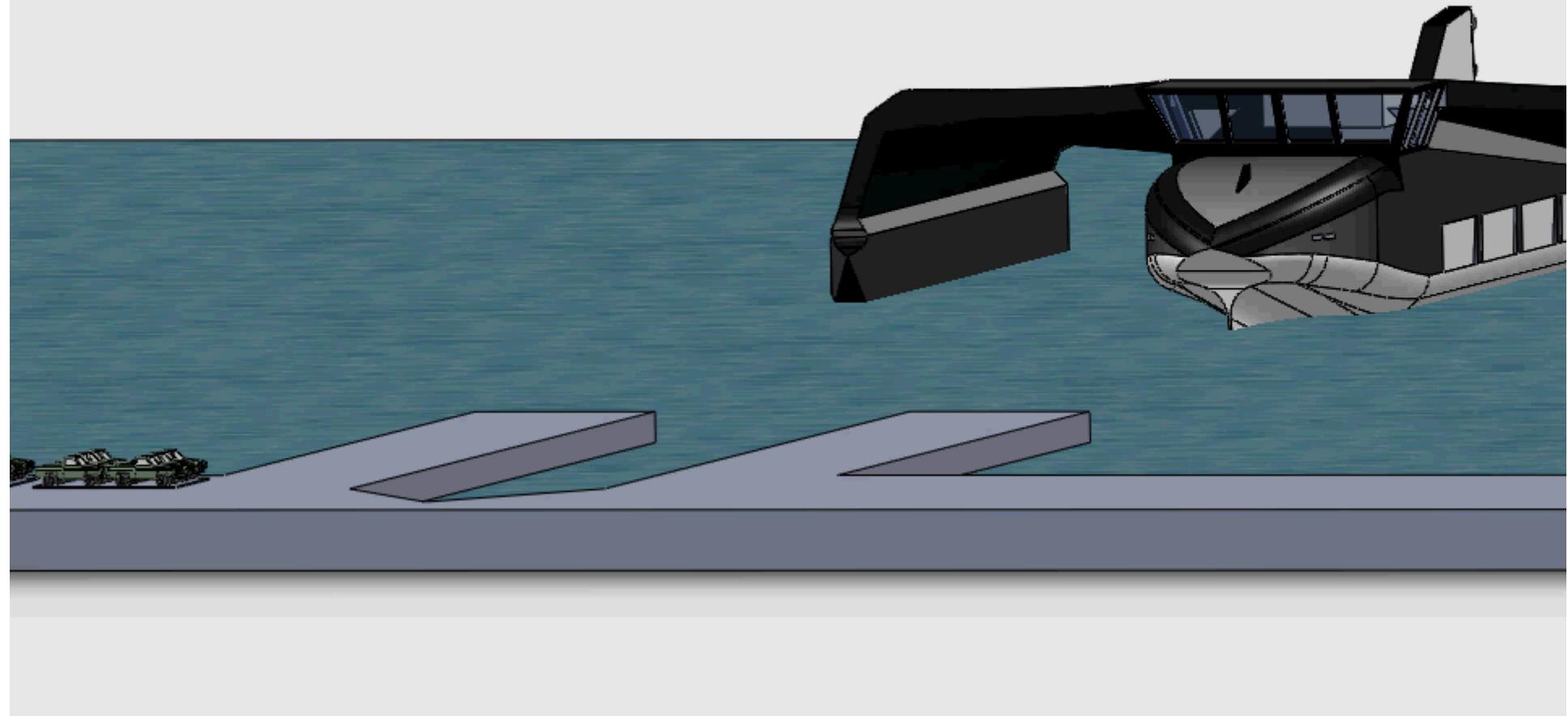
Vehicles unloading

Vehicles loading + positionning

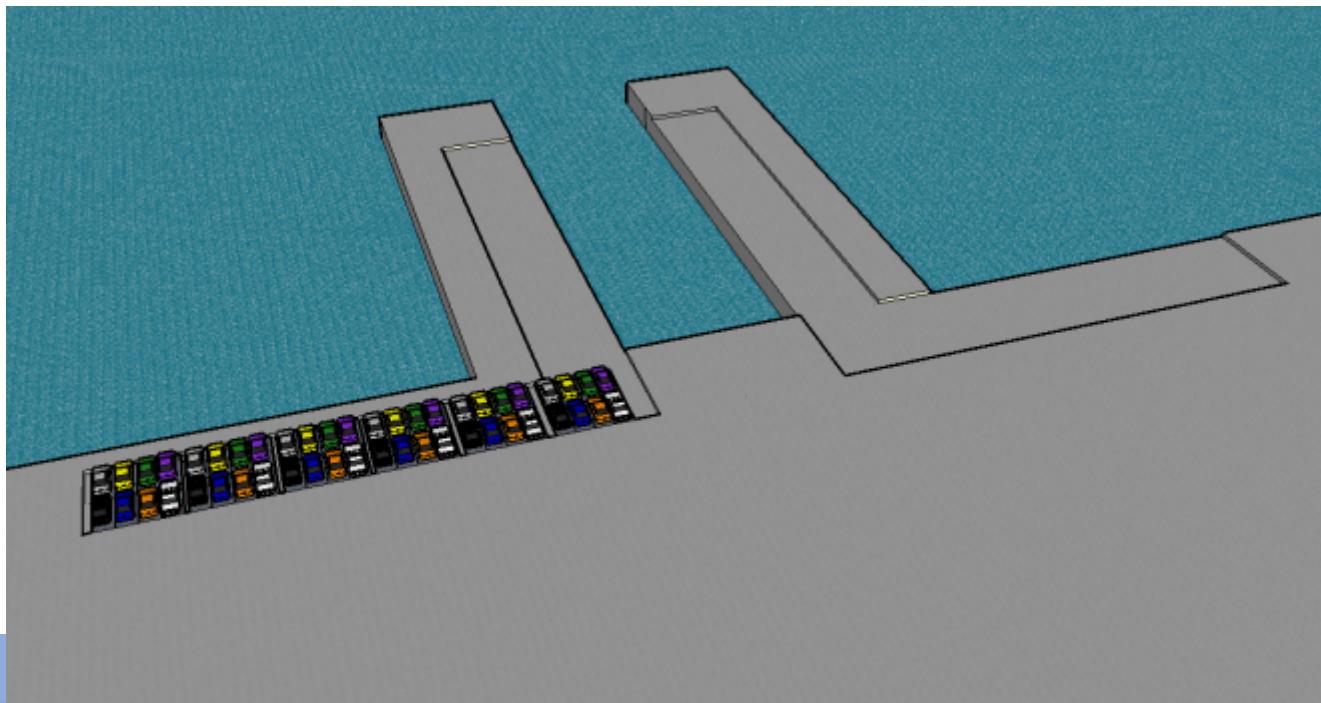
Ship in navigation (travel 2)

## Ferrybird system:

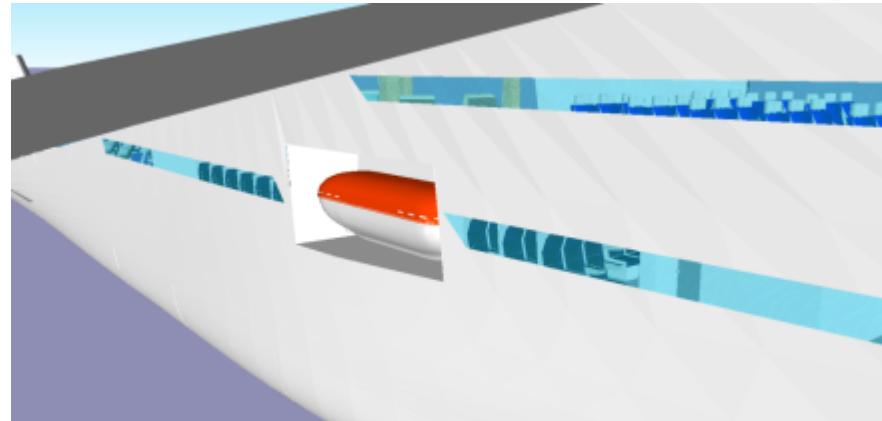
- Transversal loading/unloading of vehicles
- Coupled operations



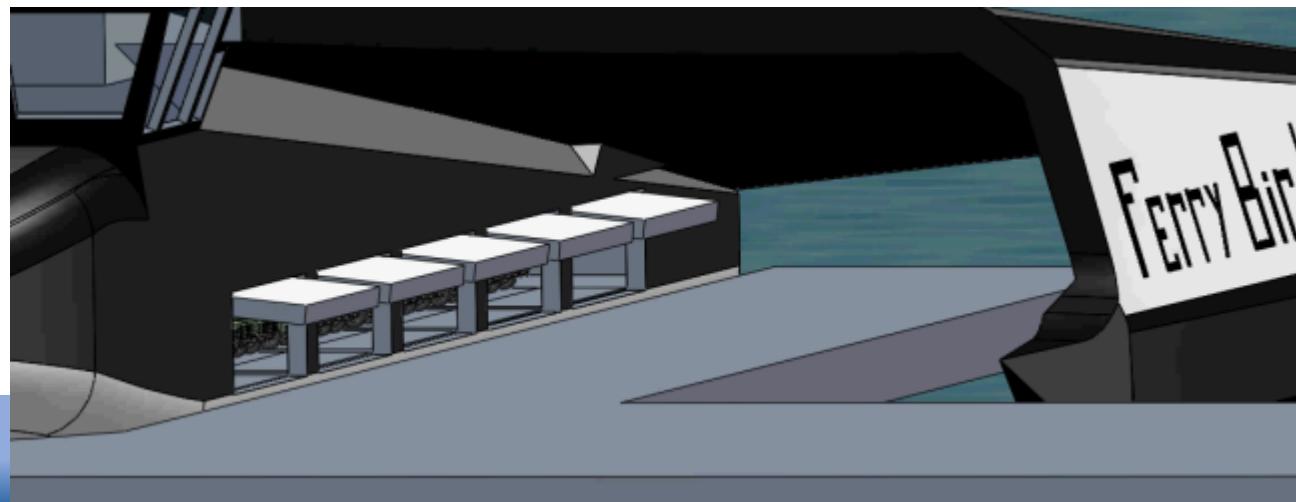
- ▶ 1. Logistics and shipyards
- ▶ 2. Harbour infrastructures

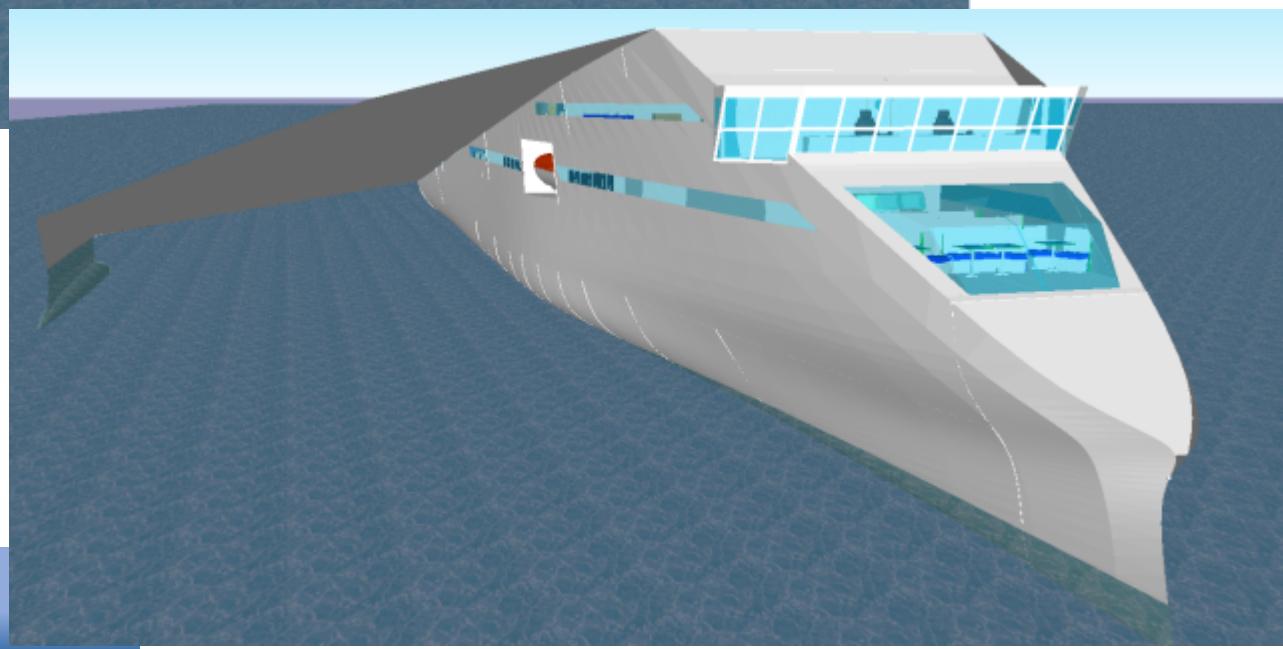
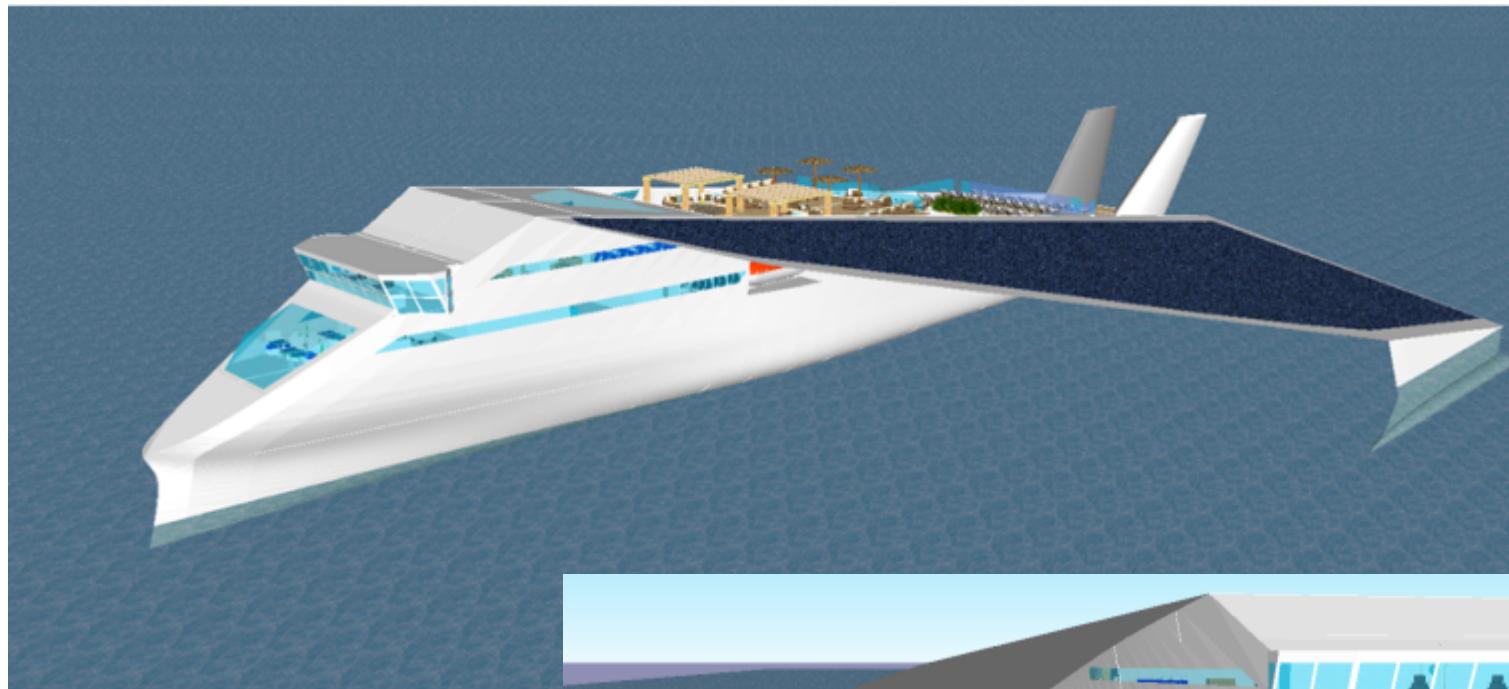


### ▶ 3. Evacuation



### ▶ 4. Hull girder strength







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