

LAUNCH SYSTEM

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To answer the needs of the team, we were tasked with designing a trolley providing a simple way to launch the boats in the water.



Light boat on the trolley

Requirements specification

- Allroad trolley (sand, gravel)
- Easy moving on land and water
- Must keep the boat out of the water until the right depth is reached
- Must protect the appendices
- Must fit in the container
- Must be stable on land and water to avoid that the boat tips over
- Water resistant

Results

The trolley features 4 pairs of allroad pneumatics as well as a swivel wheel with adjustable height allowing the setting of the trolley's tilt therefore helping with maneuverability. Thanks to the 4 solidly attached buoys, the trolley is stable in water and floats from a depth of 50 cm.

To lift the boats, it is equipped with a winch and pulleys. Vertical reinforced bars are intended to help move the trolley around.

The trolley's dimensions are optimized in order to fit in the container while maintaining a good margin between the boat and the ground.



Heavy boat in the cradle

Since it is impossible to hang the heavy boat from the hull because of the 200 kg placed in the torpedo, it is necessary to use a cradle in order to lift the boat from the bottom. The cradle closely fits the torpedo to offer an optimal hold and the parts in contact have a shockproof covering in order to preserve the boat at best.



<http://www.item24.ch>

The trolley and the base of the cradle are made using Item's modular construction system. This system allows a fast assembly, a sturdy structure and a good durability in water environments thanks to the aluminum profiles.

