**INSPIRATION**

This innovation is inspired by the SEABIN design, a floating water cleaning system which features a DC motor, controller and propeller for mobility, a solar-powered pump for collecting surface waste and a filtering system for effective waste removal.

**WHAT MAKES IT DIFFERENT?**

Based on our initial tests and observations, if we were to build a sustainable and practical floating water cleaning device four restrictions must be overcome. These are (1) the **energy system** since electricity is difficult to utilize in water bodies and distant places, (2)the **ability of the device to reach deeper,** underwater levels since without reaching them the device can only do so much, (3) **the terrain and environment** itself can hinder the effectiveness of the device as most of them can become quite extreme and unpredictable, and lastly (4) similar projects are either **costly** or **mostly unfeasible** in application since on top of being difficult to maintain, they are just not practical and sustainable. With all these in mind, we propose Hydro Vacuum Bin (or HYVIN), a device built specifically to overcome these challenges.