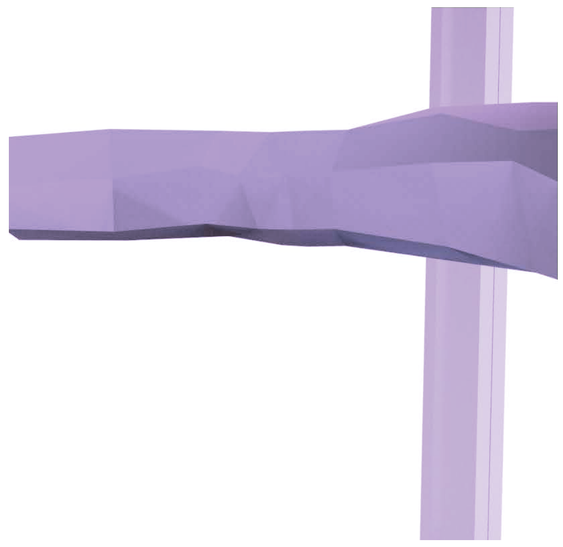
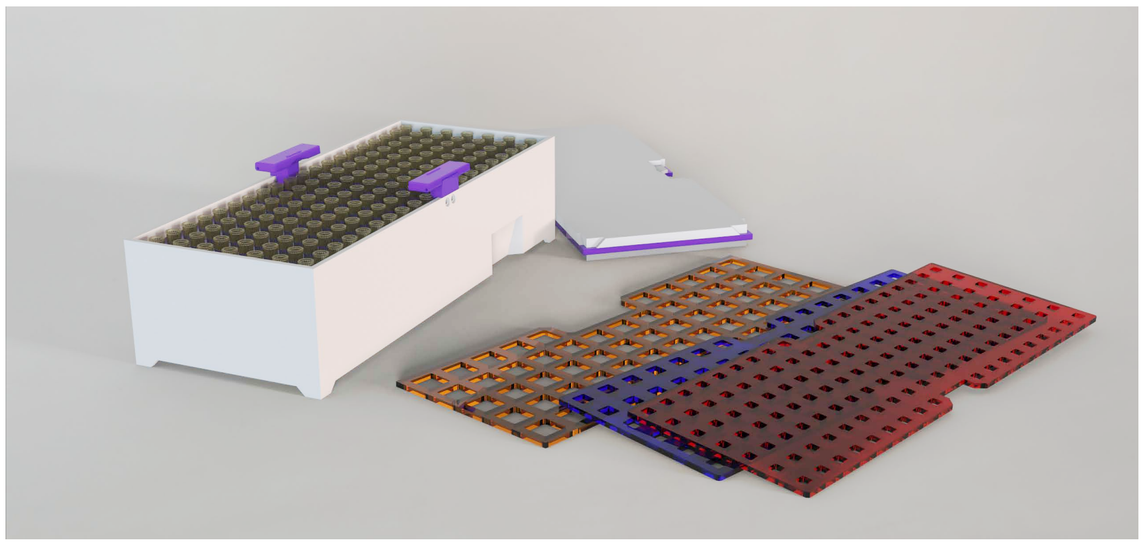
# THE LABCYCLE SYSTEM

A plastic equipment cleaner for laboratories



After some research to better understand how lab users interact with their equipment and what the big issues are in laboratories, it became clear sustainability in laboratories was a growing and challenging problem.

Labcycle aims to address the excessive amount of plastic produced in laboratories around the world form single use plastic items that are the most disposed of, pipette tips and plastic tubes.  These two items make up the largest part of the approximately 5.5 million tons of plastic waste produced by research laboratories (Exeter, 2014).



The labcycle cleaning system was built with pipette tips in mind, with 8 draws that run loads of 80 pipette tips independently  reaching a capacity of up to 360 tips washing at one point in time, though system was designed to change trays to allow for other equipment such as centrifuge tubes and Eppendorf tubes. The user-centred design approach taken through this design directed it towards using a modular system with removable tubs that lab users can take out of the system and use at desks, workstations or even field work as a sterilised sealed box.

**In small laboratories, labcycle can save $13,140 per annum by reducing waste by 87,600 tips.**

Other features that users may find thoughtful and with positive impact on use are the turn locking system for the handles, in which the handles click into one of two places, not getting stuck, the handles for remov-ing the tub from the drawer, the cut-outs in the modules for stacking the boxes on one-another and  the external water supply that makes changing water simple and easy buy either refilling the intake jug with demineralised water or replacing it and emptying the waste water. The water supply comes with friction fitting silicon plugs and airline tubing, long enough to store water under a desk or out of the way of use.

*All content designed and developed by Nick Sabulis, 2020.*