



Sustainabot

Overview



Meet Sustainabot: a small robot printer that deposits everyday materials - foodstuffs, powders and so on - on flat surfaces to create patterns and shapes directly from a mobile device.

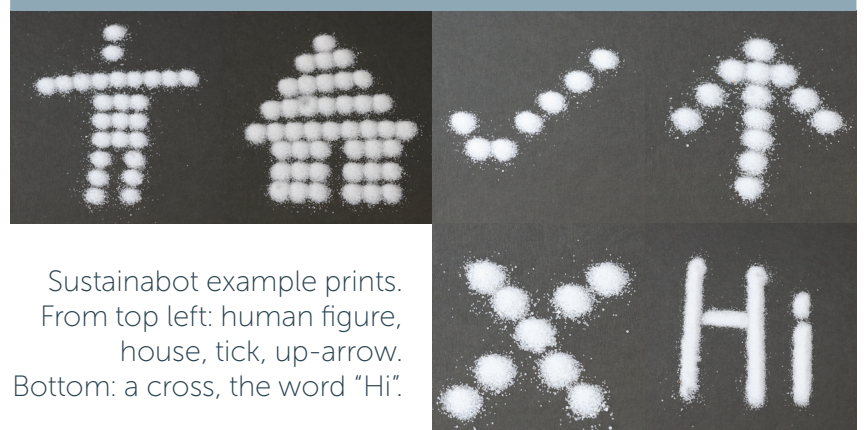
Scenario



Hina takes a photo on her mobile phone, then slides her Sustainabot out of the corner of the device. She pours in some salt and places the robot on a nearby table. The Sustainabot prints a material-based representation of the photo, using dots and lines of salt to build up the image. By manipulating the newly created physical display with her fingers, the Sustainabot is also able to capture Hina's changes, signalling them to control apps or services connected to her mobile. Afterwards, she sweeps up the salt to be used again, leaving no trace of its presence.

Mainstream digital interactions are spread over a wide range of devices and form-factors, from mobiles to laptops; printouts to large screens. For emergent users, however, such abundance of choice is rarely accessible or affordable. In particular, viewing mobile content on a larger screen, or printing out copies, is often not available. Sustainabot is a small robot printer that uses everyday materials to print shapes and patterns from mobile phones. The design was proposed and developed by and with emergent users through a series of co-creation workshops in India and South Africa, and provides a range of potential benefits. Using a large external screen requires significant power and physical space, which are less available to emergent users. Further, the output printed by the robot will persist without the need for a continuous power supply - a resource that is not guaranteed in many of the regions we have worked within. While conventional ink printers are an alternative, they require consumables which can be expensive and environmentally damaging.

Possibilities



Sustainabot example prints.
From top left: human figure,
house, tick, up-arrow.
Bottom: a cross, the word "Hi".

This tool is part of the Digital Inclusion and Participation Toolkit. For more information see:
digitalinclusiontoolkit.org



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