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Smart and cost-effective green solution to safeguard our environment



NUS Engineering students Lim Zeming (second from left) and Tan Yan Han (first from right) received a Special Mention prize in recognition of their ingenuity at the Climate Innovation Challenge. With them are Mr David Tan, Assistant CEO of JTC (second from right) and Mr Tan Wan Chi from NTU Aerospace Engineering (second from left).

A pair of Year 4 Engineering Science Programme (ESP) students, Messrs Lim Zeming and Tan Yan Han, participated in the inaugural Climate Innovation Challenge from 12 to 14 August 2016. Jointly organised by the Building and Construction Authority (BCA), JTC and National Climate Change Secretariat (NCCS), Strategy Group, the three-day hackathon - which is opened to the public - saw some 32 teams brainstormed and proposed new ideas that would help enhance innovation and sustainability in non-residential buildings and outdoor spaces.

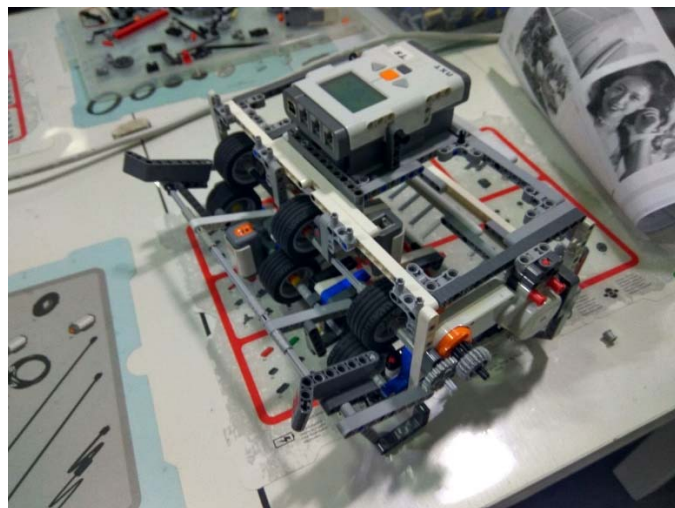
The NUS Engineering team decided that it would be unique to address the reuse of one-sided paper, an often neglected field in the realms of climate challenges. The problem, identified by the team, is one which is common in most modern offices – a huge stack of used paper, consisting of both one-sided and two-sided used papers being discarded into the recycling bin.

Although recycling is a good initiative, the team is confident that an even larger number of trees can be saved by reusing some of the used papers. Hence, Zeming and Yan Han came up with an innovative solution. They created a scanner-like machine that could take in a stack of used papers, and sort them into one-sided use paper (for reusing) and two-sided used papers. They built a fully functioning prototype using LEGO NXT in sixteen hours, and pitched their idea to the panel of judges.



Mr Tan Yan Han demonstrating how the scanner-like machine works.

A close-up of the fully functioning prototype built with LEGO NXT. The prototype was built within sixteen hours.



With their promising green invention, Zeming and Yan Han made it to the Final Judging. They were awarded a Special Mention prize of two thousand dollars in recognition of their ingenuity in addressing a problem in a simple and elegant manner. Their prototype is selected to be displayed at two upcoming exhibitions organised by BCA.