

YEHCHAI Project – an AI waste sorter

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Abstract

Exchanging used beverage containers for a small reward itself is not a new idea, but the demand for a machine that serves such purpose is only starting to grow in Vietnam. The machine plays a part in raising the recycling rate, as well as in marketing strategies of corporations.

This project introduces the YEHCHAI machine – a low-cost, smart, user-friendly waste collector and sorter. The use of AI technology gives the machine the ability to classify deformed or non-labeled containers, unlike current sorting machines on the market which use barcode scanning technology. Force and metal sensors are also integrated to make sure the containers users put in are empty and made of the correct materials. When a container is accepted, it is classified and sorted by an inbuilt sorting mechanism. Then, the user will receive a randomized reward which can vary from cash, coins to vouchers, e-vouchers and discount codes.

The first YEHCHAI machine prototype was tested in VNU-HCMUT campus and 30 users were surveyed. The project saw positive results when 73.3% of users absolutely preferred the YEHCHAI machine over conventional sorting trash bins. Upon the machine's convenience and user-friendliness, 60% of users chose 'excellent', 40% chose 'good', and 0% chose 'poor'. Introducing not only a good technological product but also a practical and highly applicable solution to the trash problem, YEHCHAI Project won the second prize in Bach Khoa Innovation Contest 2020 and third prize in Maker to Entrepreneur Program 2020.

You can learn more about YEHCHAI Project below 



YEHCHAI PROJECT

A machine that can **sort wastes** and **make your day**





THE PROBLEM



Poor sorting methods



Severe pollution
Recyclables become useless

1.3 MILLION TONS of plastic can be recycled annually in Vietnam if there is a better way to sort trash!





OUR SOLUTION



YEHCHAI MACHINE

An automatic waste sorter



AI TECHNOLOGY

helps YEHCHAI learn and get smarter over time



USER-FRIENDLY

90% of users said so when they tested the machine. YEHCHAI is kid-friendly, too!



ENCOURAGE BEHAVIOUR CHANGE

by rewarding recyclers with vouchers from eco-friendly brands





BENEFICIARY



COMMUNITY

Raise awareness and educate
Create civilized & modern society
Improve environment



Profit from selling waste

WASTE COLLECTOR



Needn't classify waste
Save time & money

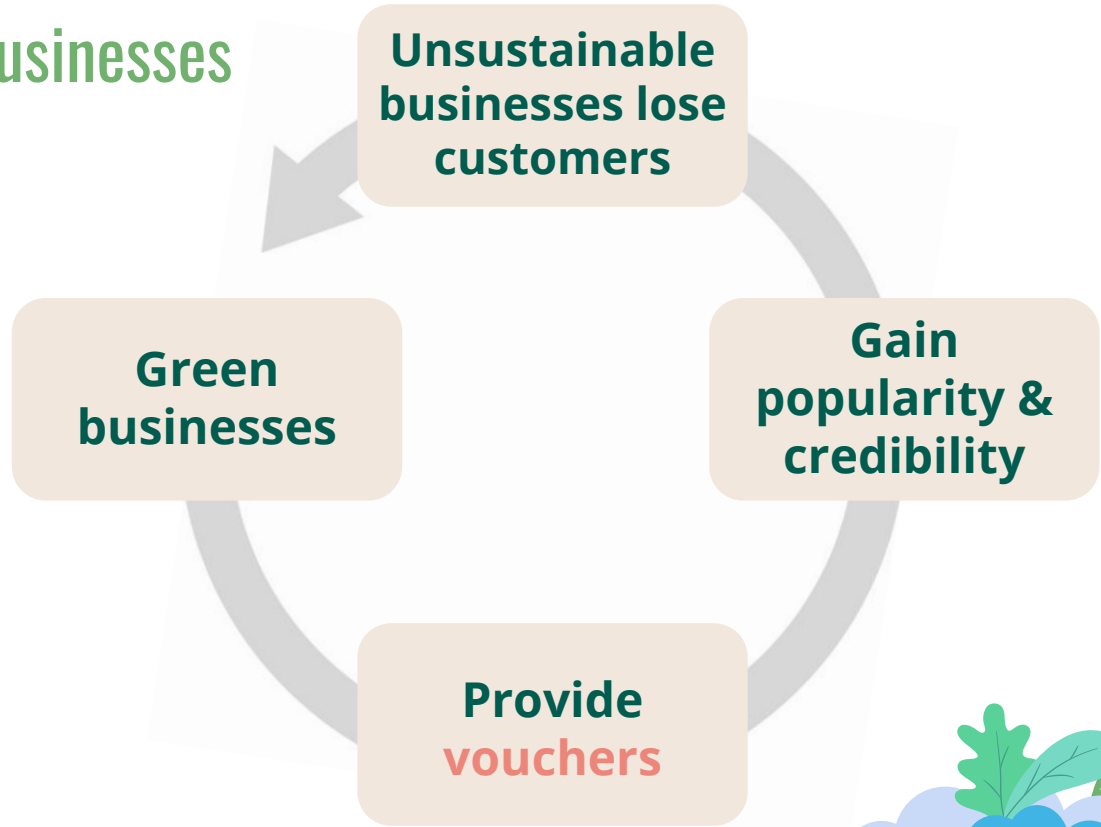
WASTE BUYER





BENEFICIARY

Voucher partners - Green businesses





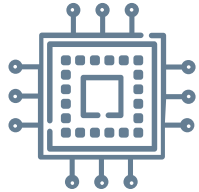
APPLICATION SCALABILITY



School & dormitory



**System of
convenience stores**



**Technology
transfer**



Nation



✓ SCALE 1



Demo day - 13/6/2020
Science conference at B11 HCMUT



Maker to Entrepreneur - 22/6/2020
American Center



Bach Khoa Innovation - 27/6/2020
HCMUT





We need your help!

FUNDINGS

To fully develop the machine with advanced feature

PROMOTION

We are still anonymous to most big businesses, we need your help to contact them for partnership



TEAM WOW

QUOC THINH



KIEU QUYEN



MINH KHOA



THANH TAM



ANH THY

