



Easy and convenient recycling

Anyone Anywhere Anytime

Delaying environment devastation through a quick and convenient recycling machine

A Low Recycling Rate of Disposable Cups

Why can't they be recycled?



Contaminated from
leftover contents



Mixed with other trash

Difficulty in washing cups and separate disposing

Disposable Cup Annual Usage & Recycling Rate



paper cup

23 billion in Korea

250 billion in the
worldwide

Recycling rate of **1%**



plastic cup

5.3 billion in Korea

500 billion in the
worldwide

Recycling rate **16.4%**

Recycling rate of **1%**

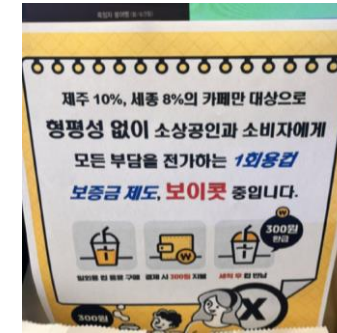
South Korea Government's Policy's Insufficient Effectiveness

January 2018 Ban disposable cups in-store



- I. Usage increased, but recycling rate remains
- II. Financial burden of cafes

December 2022 Introduction of Disposable Cup Deposit System



\$18 million injected

40% Boycott

Abolished 2023. 09

- I. Fail to increase recycling rate
- II. Equity issues caused by non-applied stores
- III. Backlashes from small business owners and consumers

Low recycling rate

A Low Recycling Rate – Practical Approach

Company



- I. Washbasins and toilets clogging problem
- II. Increased repair costs

Institution



- I. Trash management issue
- II. Additional human resource
- III. Odor issues
- IV. Spatial inefficiency

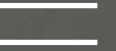
Cafes, Individuals



- I. Inconvenience of recycling
- II. Requires a recycling machine

- 1. Inconvenient process
- 2. Additional costs for facilities and personnel
- 3. Difficulty in separating dispose

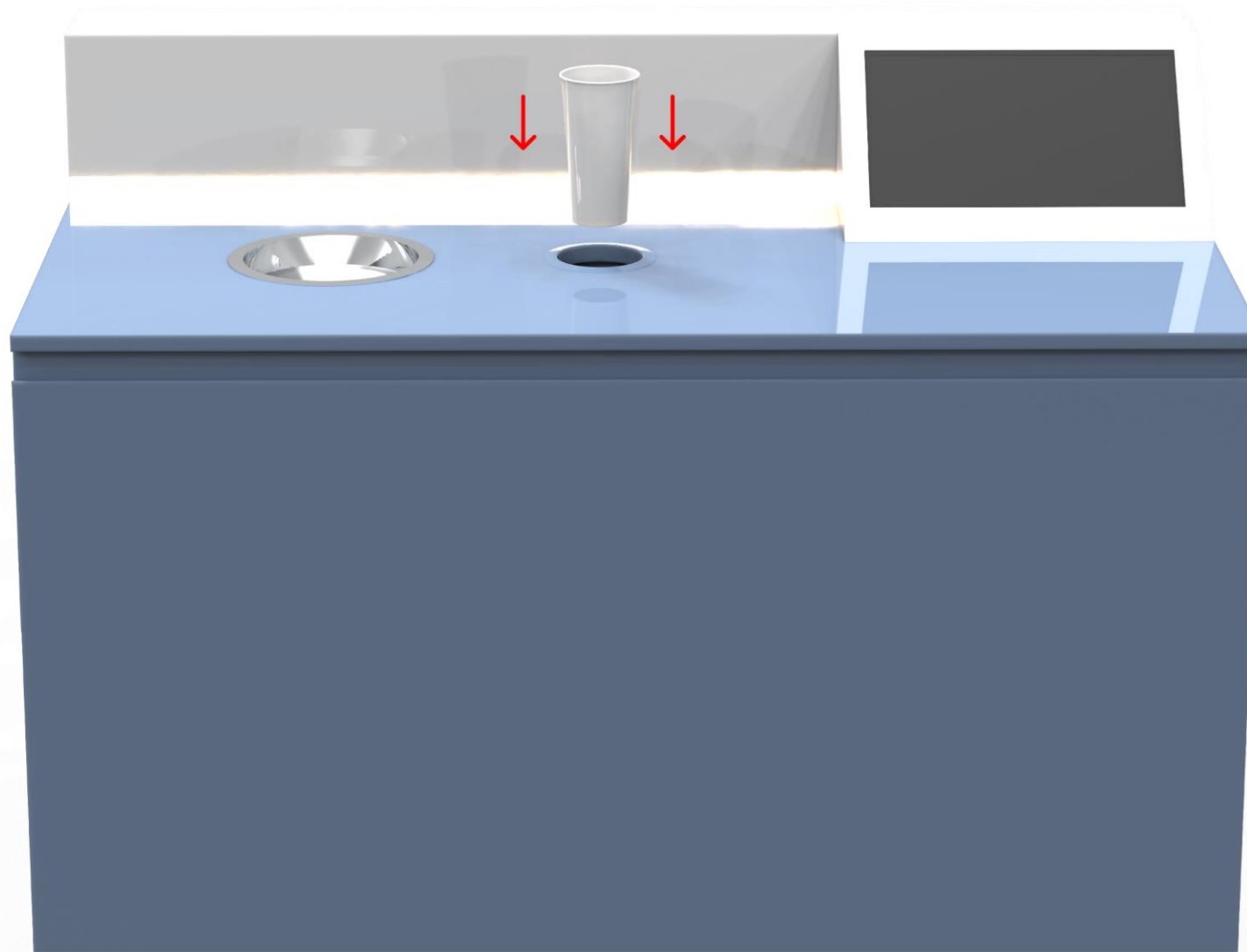
NAWA



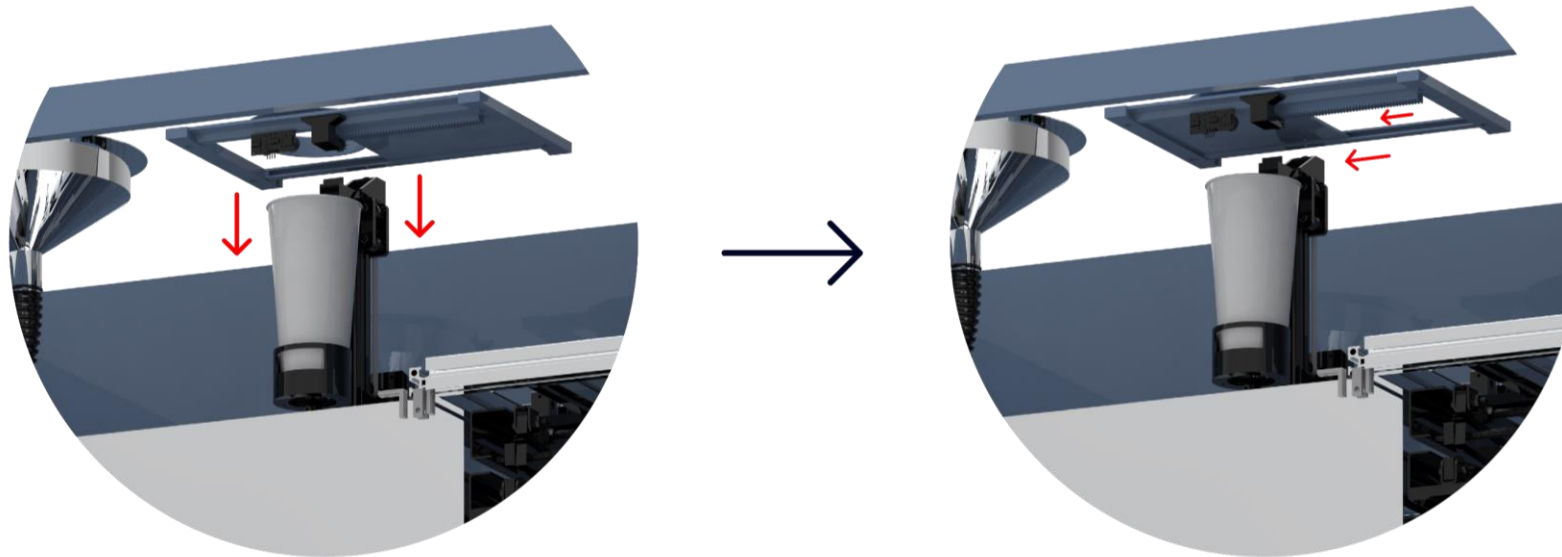
**The more gathered,
the more resources**

Smart Cup Solution

CUPGGIRI

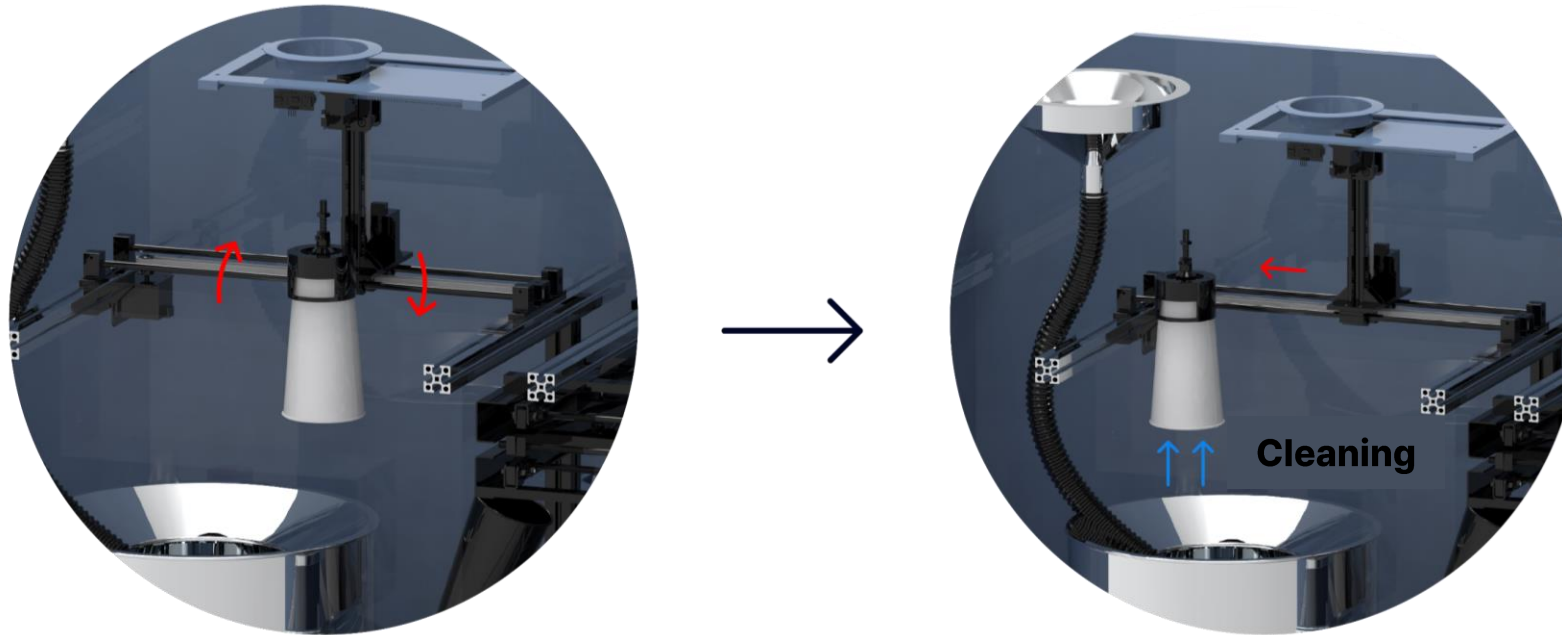
CUPGGIRI – Convenience by Automation

Insert a disposable cup right side up
(No issue with having fluid inside)



**Gripper grasps the paper cup,
and lowers it into the product**

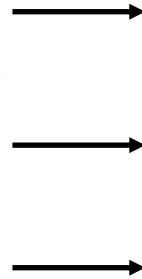
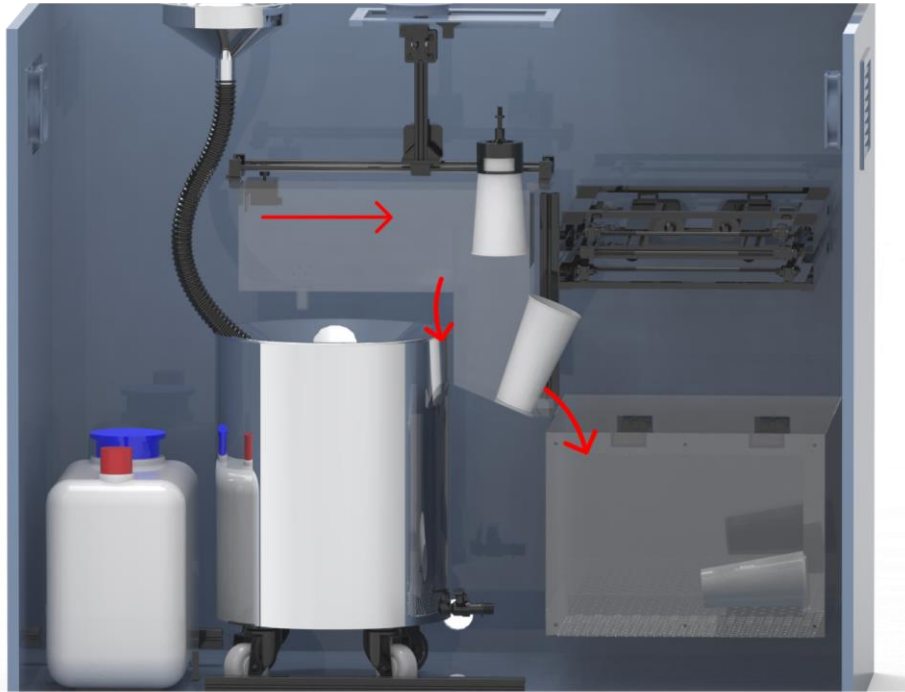
CUPGGIRI – Convenience by Automation



Machine arm turns 180 degrees to remove contents

Move to the left and clean the inside

CUPGGIRI – Convenience by Automation



The cup is moved to the right then dropped into bin, dried and compressed

AI tech will be applied



- 1. Measuring of contamination**
- 2. Adjusting cleaning time based on contamination level**
- 3. Can be classify cup types (Paper cups, plastic cups, etc.)**

I. Friendly apperance

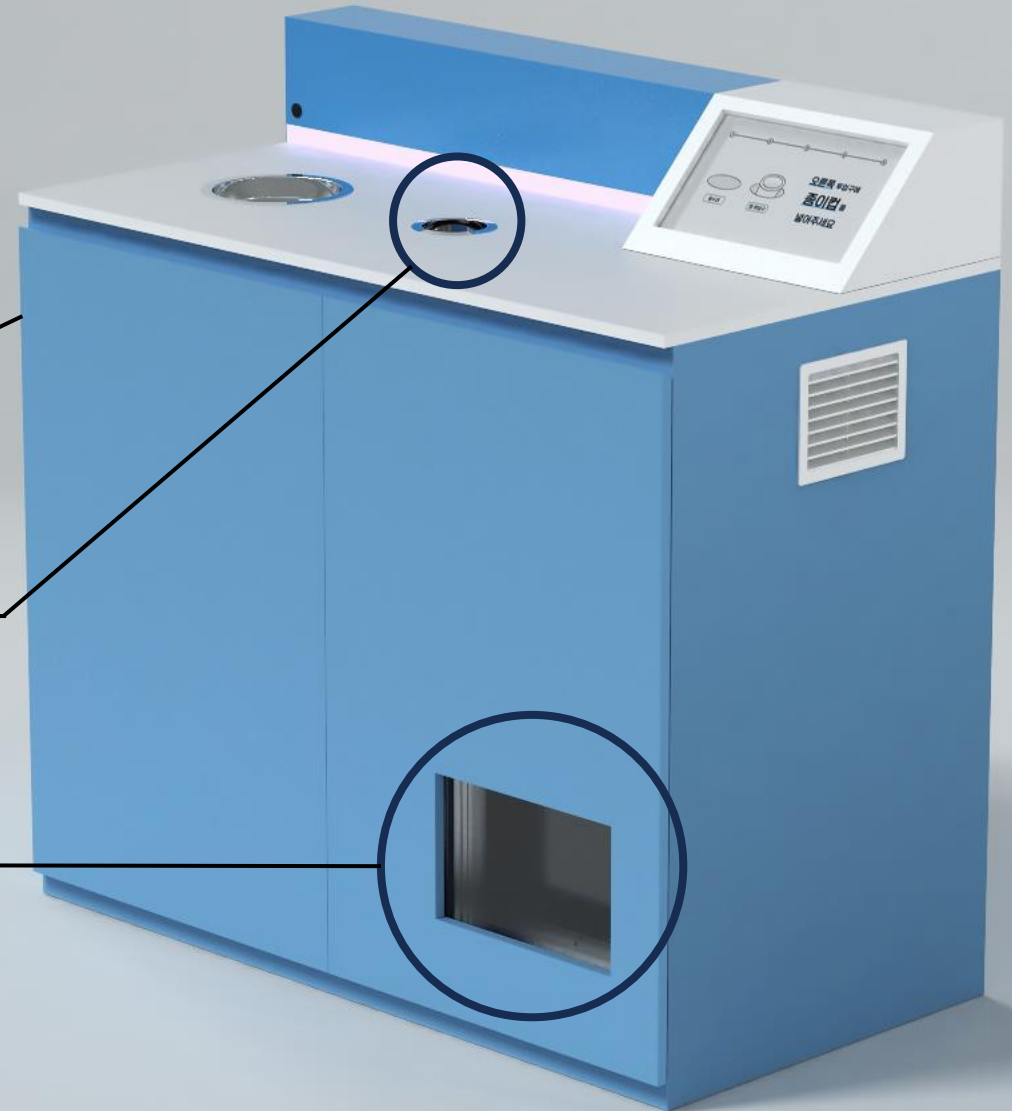
→ **Blends well with surrounding**

II. Compatible with 98% of cups in market

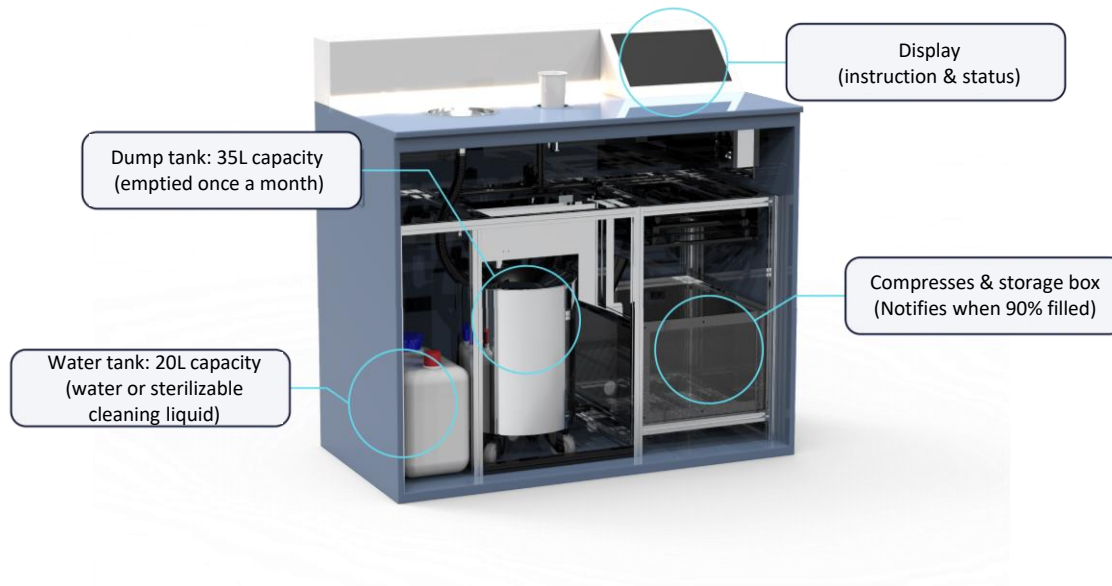
→ **convenience**

III. Transparent storage box

→ **Fun & interesting**



CUPGGIRI – Paying Customer's Values

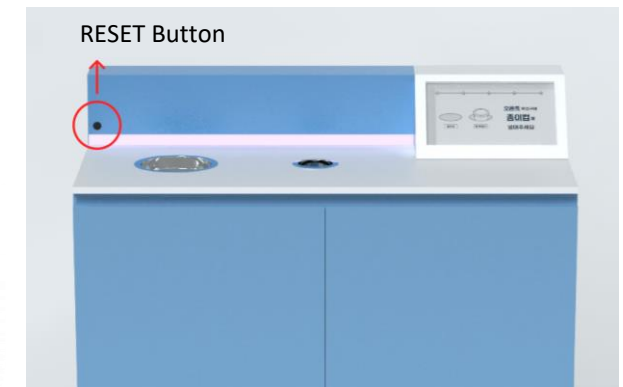
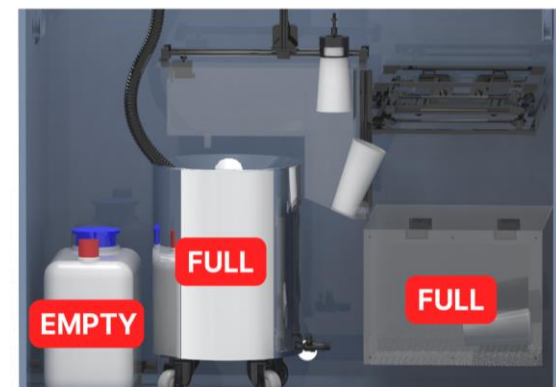


Ease of Use

- I. Low Maintenance Costs** 1.5 dollars a month for electricity
- II. Quick response and management convenience**
Display status
- III. Directly manageable** Simple structure

Function

- I. 1000 cups are washable** 20ml water per cup
- II. Reducing odor** 3 fans (inlet, outlet, drying fan) operating at all times
- III. Spacial Efficiency** compress cups
- IV. convenience** emptying once a month



CUPGGIRI – Additional Revenue

I. Material sales



Pulp to a tissue or paper bag



Pellets to cosmetic containers, cloth

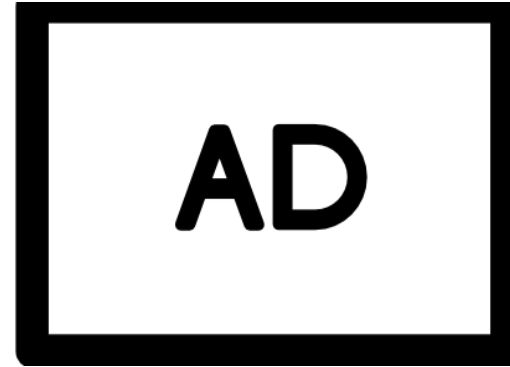
1. Selling a collected paper cups for \$510

Sold 15KG of paper cups collected to the Pukyong National University Industry-Academic Cooperation Group

2. Developing a Distribution Market for Pellets

Developing new markets through tech transfer

II. AD channel







1. video playback pilot operation

more than eight hours a day

2. Recruiting advertisers

It is currently running as a free advertisement, but it will generate revenue from next year

03 Competitors

	Cupggiri	Bigbelly(SmaGo)	Renew	Garbage bins with facial recognition cameras
				
Nation	Korea(Seoul)	U.S.A(NY), Japan	U.K(London)	China (Beijing)
Recycle	O	X	X	O
Notice when full	O	O	X	X
Solar Power	X (To be Used)	O	X	X
Display	O	O	O	X
Use Internet	X (To be Used)	O	O	O

Prototype



Pilot operation in three locations

Korea University Sejong Campus Bus Stop
Seokwon Landscape Corridor Passage of Sejong Campus of Korea University
CH. Unmanned Cafe Lounge



Current Product



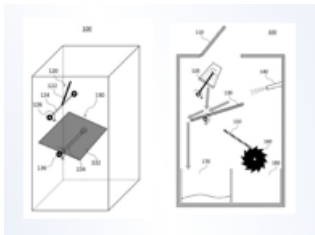
pilot operation of four locations

Seoul National University of Science and Technology Student Center 1F
Jeju National University Student Center 2nd floor
Hongik University Sejong Campus Seumgwan 1F
Rest Room of Seokwon Gyeongsang, Sejong Campus, Korea University

Complemented Prototype

- 1. Change to plug type** Troubleshooting battery replacement burden
- 2. Notifications on the display** Identification of filth and cup storage
- 3. Increased recyclability** cleaning and drying enhanced

Technology Protection Through Patents

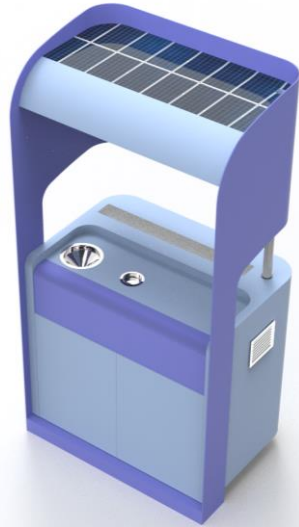


4 patent applications
1 PCT patent application
7 Trademark Patent Applications



Outdoor

Pay Back function and consideration for the Blind



Renewable energy

Climate customization



Mobility

Suitable model for the disabled



Reusable cups

Products tailored to places that don't use disposable cups

Prepare to manufacture products



PET RVM



CAN RVM



Reusable cup RVM



indoor air purification system

CUPGGIRI Advancement strategy through tech transfer

Companies & Institutions



I. Reduce of 100 plastic bags for three months

Seoul National University of Science and Technology Pilot Operation Results

II. Save \$20,000 per year

Reduce manpower and processing costs

III. Reduce dispose of landfill waste

smell, aesthetics, etc

IV. Achieving ESG indicators

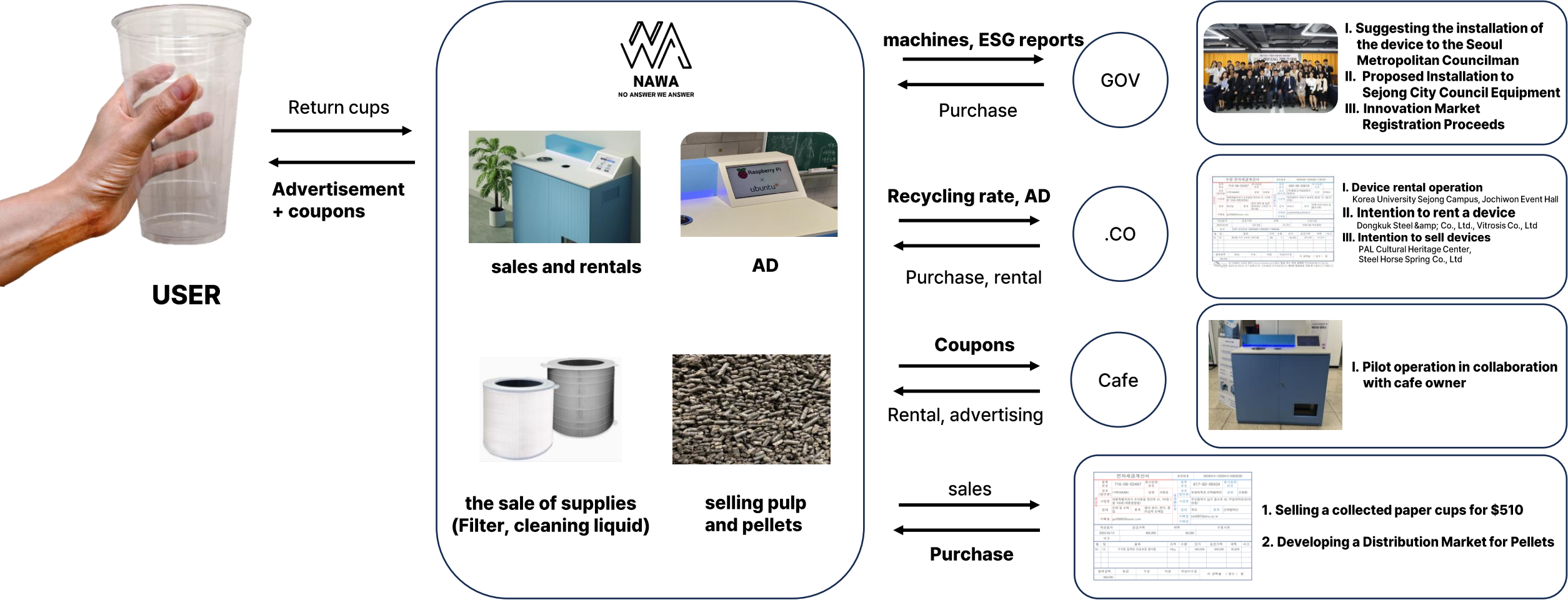
Government



I. 7,000 tons of carbon reduction per year

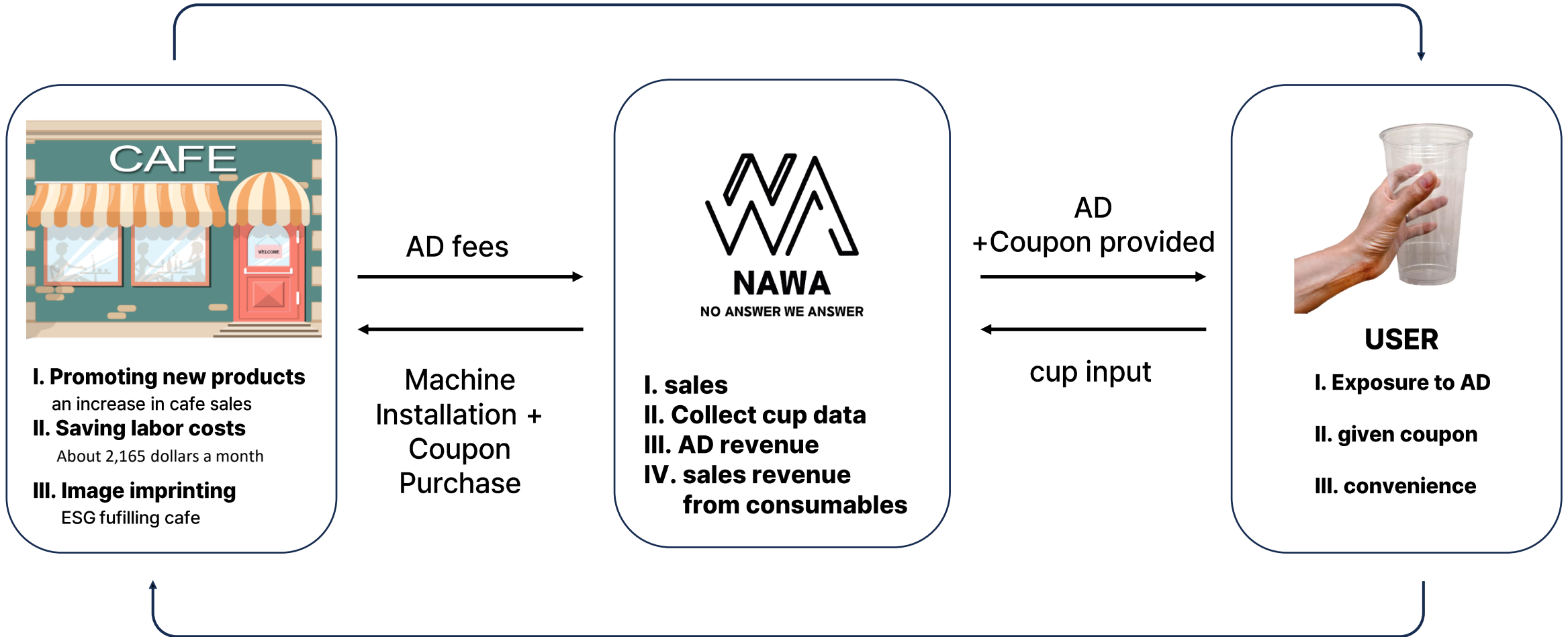
II. Annual recycling rate rises on 11.5%p

EX) When the government purchased the CUPGGIRI device at the cost of using the disposable cup deposit system (= Buy 1559 CUPGGIRI)



Data is collected and processed to be profitable

Offer drinks



Using coupons

Market size and Goals

Target Market

TAM

Japan sells B2G cups in European markets
(Installation inside large marts and around banks)

SAM

National public institutions, cafes, non-cafeteria beverage businesses, (Elementary/middle/high/university) schools and dental cups are sold among them

SOM

Public institutions in Sejong City, cafes, non-cafeteria beverage businesses, (elementary, middle, high school, and university) and dental cups are sold among them

\$42 million

\$12.9 million

\$3.2 million

Sales goals

2024

\$77,300 in device sales

6 indoor CUPGGIRI

2025

\$773,000 in device sales

30 indoor CUPGGIRI

10 outdoor CUPGGIRI

2026

\$2,010,000 in device sales

60 indoor CUPGGIRI

30 outdoor CUPGGIRI Mobility

5 New renewable energy CUPGGIRI

Korean marketing

B2G



I. Suggesting the installation of the device to the Seoul Metropolitan Councilman

II. Proposed Installation to Sejong City Council Equipment

III. Innovation Market Registration Proceeds

B2B



I. Device rental operation Korea
University Sejong Campus, Jochiwon Event Hall

II. Intention to rent a device
Dongkuk Steel & Co., Ltd., Vitrosis Co., Ltd

III. Intention to sell devices PAL Cultural
Heritage Center, Steel Horse Spring Co., Ltd

global marketing

JAPAN



I. Planning for fragrant trash cans

collaborate with Japanese company AROMAJOIN

II. IR pitching at ILS

Participation in overseas open innovation matching program

DENMARK



I. Development of noise-free machinery

Danish company Fibertex Nonwovens

II. Attending World Championship as a Korean representative

Start-up University World Cup semi Final

III. Overseas buyer consultation

TECH BBQ Booth Operated in Denmark

SINGAPORE



I. AI technology exchange and market verification cooperation

collaborate with Singapore
company AILYTICS

NAWA has been awarded in various competitions by upgrading and diversifying product ideas between cups.



1. 2022.05.31. Chungnam, Sejong Regional University Startup Club Demo Day Grand Prize
2. 2022.08.22. Daegu ESG Social Contribution Partners Day Korea Real Estate Agency Director Award (2nd place)
3. 2022.08.31. Jeju City Policy Idea Contest Encouragement Award
4. 2022.09.23. Excellent Award for ICT Innovation Competition in Chungcheong Province
5. 2022.10.06. Best Award for Youth Startup Policy Hackathon Competition
6. 2022.10.06. The grand prize for the Sejong Union Startup Competition
7. 2022.10.07. Idea of local university start-up club Advancement Belluup Program Grand Prize
8. 2022.10.13. ICT Innovation Square Award to Encourage National Artificial Intelligence Idea Contest
9. 2022.11.11. Best Award for Smart City Startup Idea Contest
10. 2022.11.24. DSC Regional Innovation Platform Startup Competition Grand Prize
11. 2022.11.26. Samsung Energy's 11th Energy Environment Exploration Contest was selected
12. 2022.12.07. Hana ESG Social Venture University Grand Prize
13. 2022.12.08. Hongik University Sejong Campus Manufacturing-Based Start-up Idea Competition Excellence Award
14. 2022.12.12. the best practices of the ICT innovation square diffusion project in the Chungcheong area were selected as the best practices company in Sejong City
15. 2023.01.31. Kickstartup Asia wins
16. 2023.02.09. Sejong Regional IR Competition Encouragement Award
17. 2023.02.27. IKG Idea Tone 4 Outstanding Awards
18. 2023.06.09. Korea University's 14th Startup Competition Statue
19. 2023.09.11. As the Korean national team of the University Startup World Cup, it advanced to the final round of the GREEN field (Denmark)
20. 2023.09.14. The 6th Youth Energy Dream League Youth League Best Award
21. 2023.09.22. BAT Los Angeles Award for Outstanding Business Ideas in Environmental Sector
22. 2023.10.19. KU X HSU Campus Town UP! Festival IR Demo Day Grand Prize

end of 2023

2024

2025

2026



- I. Participating in ILS International Open Innovation Matching program
- II. foreign buyers Matching
- III. Operate Danish TECH BBQ booth



- I. conversion to a corporation and seed investment
- II. Exhibit at CES 2024 KOTRA
- III. Apply Youth Start-up Academy
- IV. Launch of outdoor products

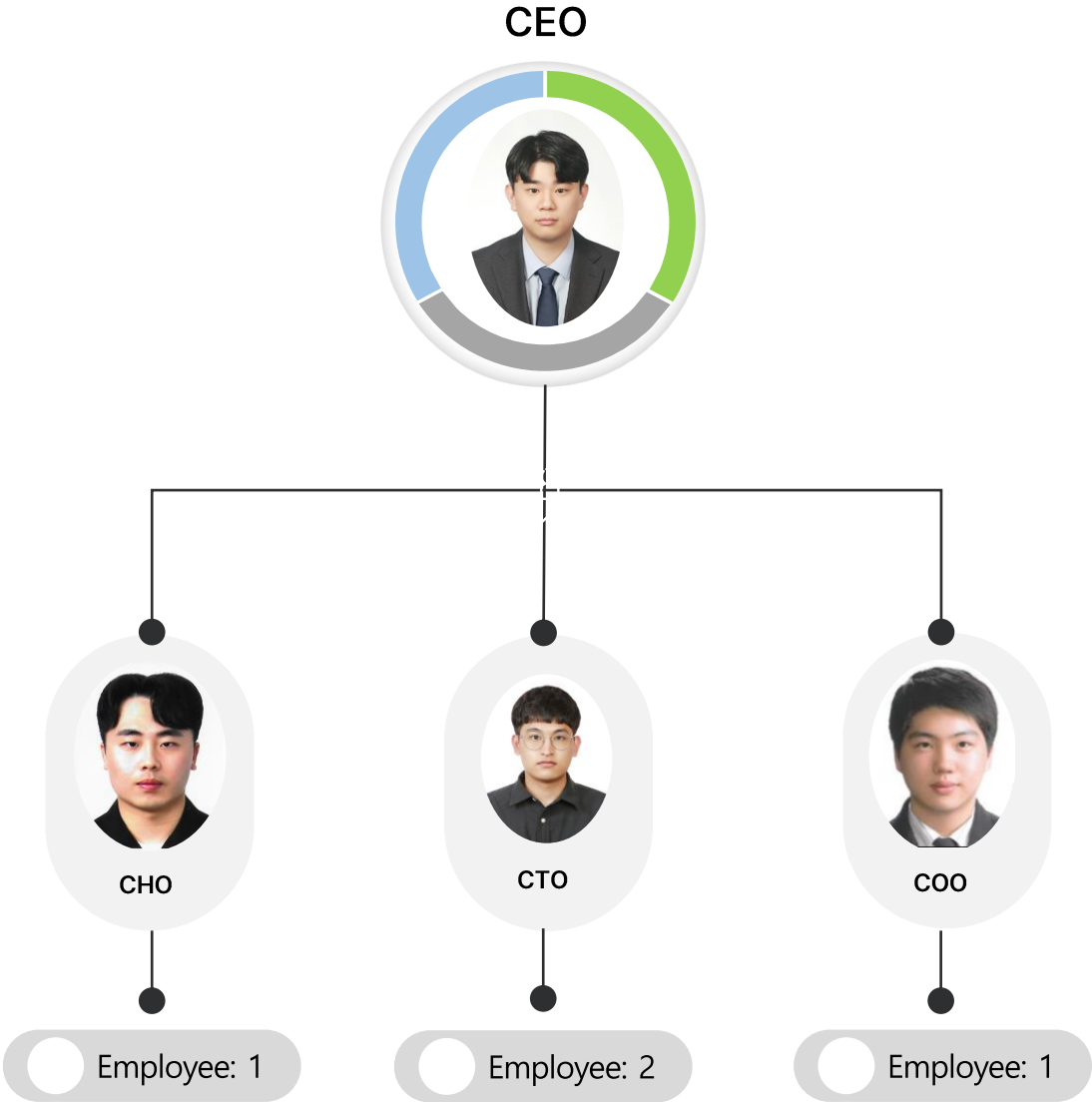


- I. Plant site and facility lease
- II. overseas sales preparation
- III. Diversification (Mobility and renewable energy made)



- I. Series A Investment
- II. export to overseas markets (Starting from Europe, Japan)
- III. Open Innovation with Major Korean Companies





Management	Representative		1
P.M	Executive		1
	Employee		1
The Engineering Department	Executive		1
	Employee	Hardware	1
		Software	1
Sales Department	Executive		1
	Employee	External cooperation	1
Sum			8

A Company Executives



Seo Yeong-Ho CEO

- Attended a Master's degree in Advanced Technology Business at Korea University
- Outstanding Graduate of Global Business Administration at Korea University
- Member of Sejong Youth Hope Factory
- For the Smart Management of Road Tunnel Development of Digital Twin and Intelligent Rail Robots



Bak Sangu COO

- Attended Korea University for Global Business Administration
- Mirae Asset Pay Partner PAYROAD Worked for 6 Months



Bae Min-Gyu CHO

- Korea University Completion of the Department of Food and Biotechnology
- Korea Food and Nutrition Science Council - Outstanding Poster Presentation Contest Awarded Best Poster Presentation Award



Yu Hyo-Min CTO

- Attended the Electromechanical Convergence Engineering Department at Korea University
- Continental Automotive Electronics Internship
- Australian Rail Communications Equipment PCB Developer Base2

Supporting Organizations & Enterprises



NAWA
NO ANSWER WE ANSWER

NAWA was able to grow quickly
with the support of institutions &
enterprises.

Institution



university



Company



° Cheongju University Industry-Academic Cooperation Group



° ChungbukPro Maker Center at Chungbuk National University



° Hongik University Sejong Campus HongikMakersland



호서대학교
HOSEO UNIVERSITY

° Hoseo University Makerspace Makers For You



° Korea University Sejong Campus Startup Education Center
° Korea University Sejong Campus Maker Land
° Korea University Sejong Campus Global Business College
° Sejong LINC Project Group, Korea University
° Korea University Seoul Campus KU3DS
° Korea University Seoul Campus X-GARAGE
° Korea University Seoul Campus Town
° Korea University Seoul Campus Crimson Startup Support Group



Memorandum of Understanding

NAWA joins investing in value towards a sustainable future.

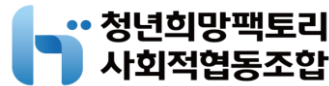


(주) PAL 문화유산센터
PAL Cultural Heritage Center, Inc



청주대학교 산학협력단
CHEONGJU UNIVERSITY Industry&Academy Cooperation Foundation

KYCU 건양사이버대학교
KONYANG CYBER UNIVERSITY



EQUAL



충북Pro메이커센터
Chungbuk Pro Maker Center



MAKE⁴U
HOSEO MAKER SPACE



stillmaspring



OSHELL

upcycleclean



실내나무재배솔루션기업
WITH TREE



건양대학교병원
KONYANG UNIV. HOSPITAL



고려대학교
글로벌비즈니스대학



고려대학교
세종 LINC+ 사업단





NAWA(No Answer We Answer)

We will give answers where there is no answer
and **move forward to a greener world**
by recycling disposable cups

