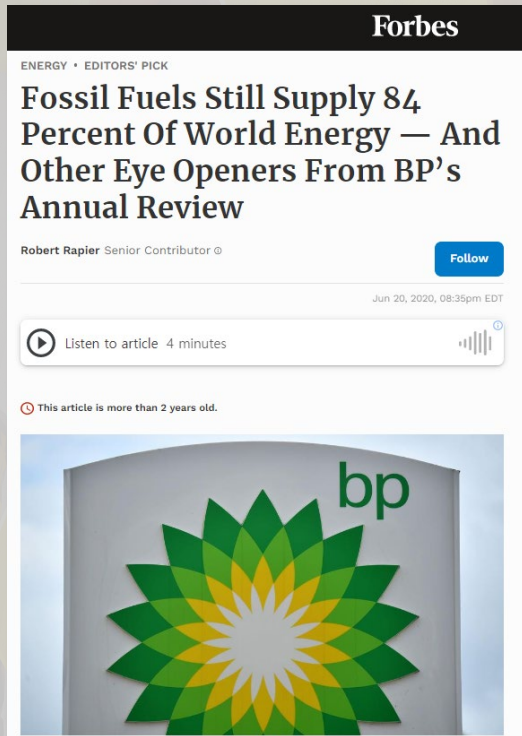




Harvest unused energy and convert into electrical energy

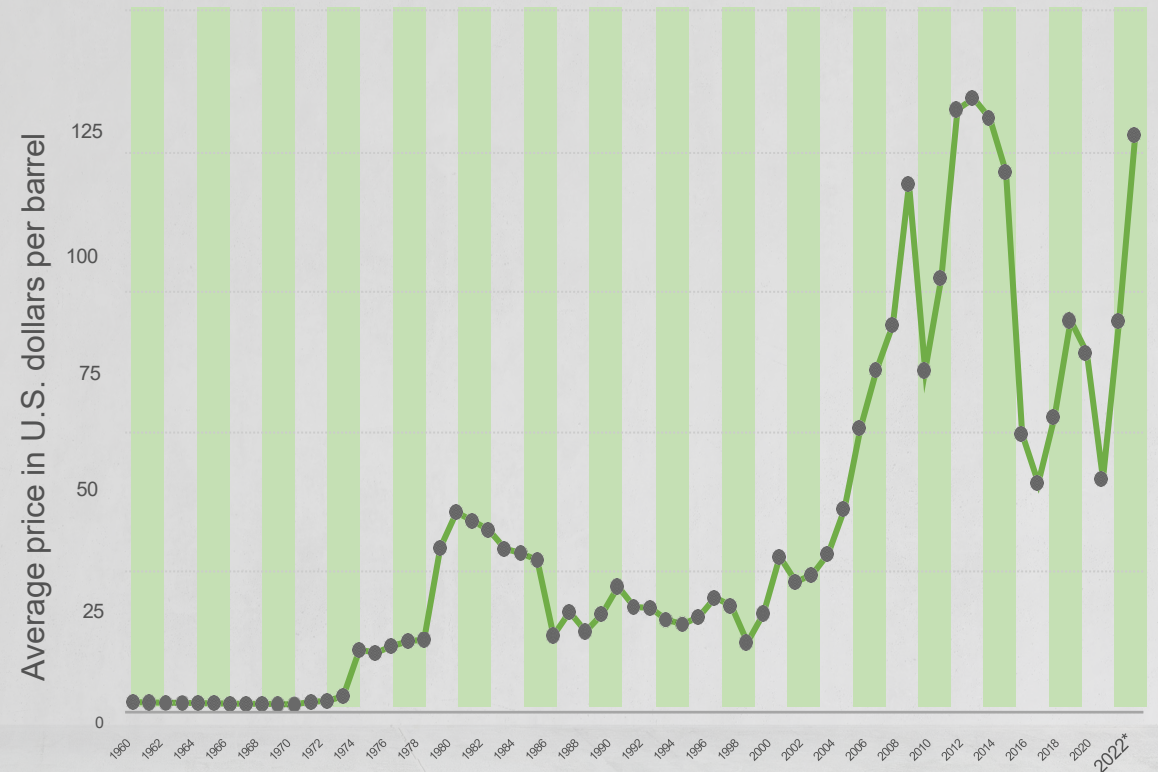
“ **84% of the World's Energy** is dependent on fossil fuels ”
Fluctuations in oil prices are a massive global energy issue

High dependence on fossil fuels in the global



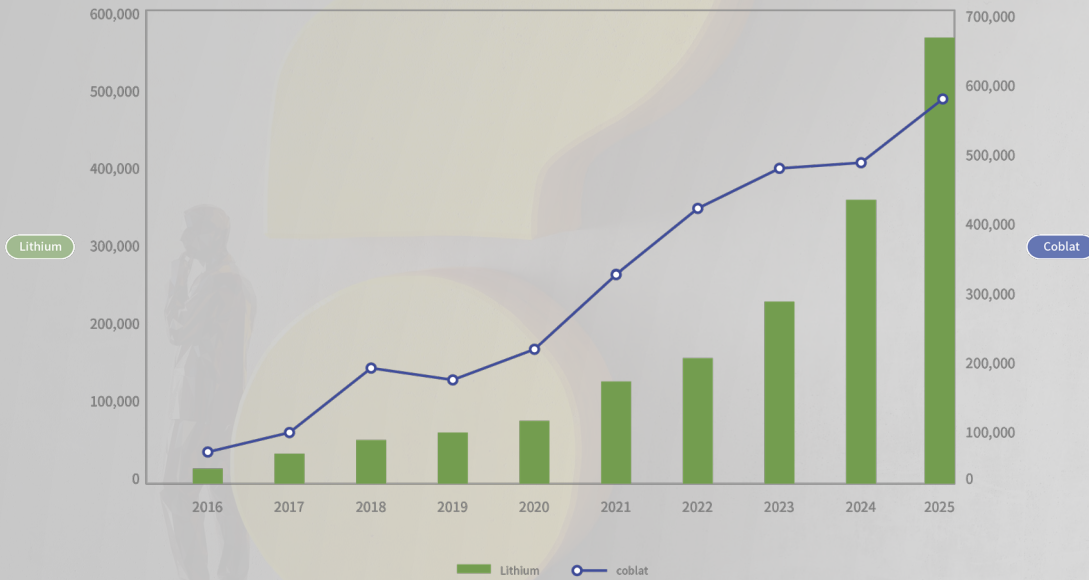
*Forbes

Growing trend in oil prices fluctuation

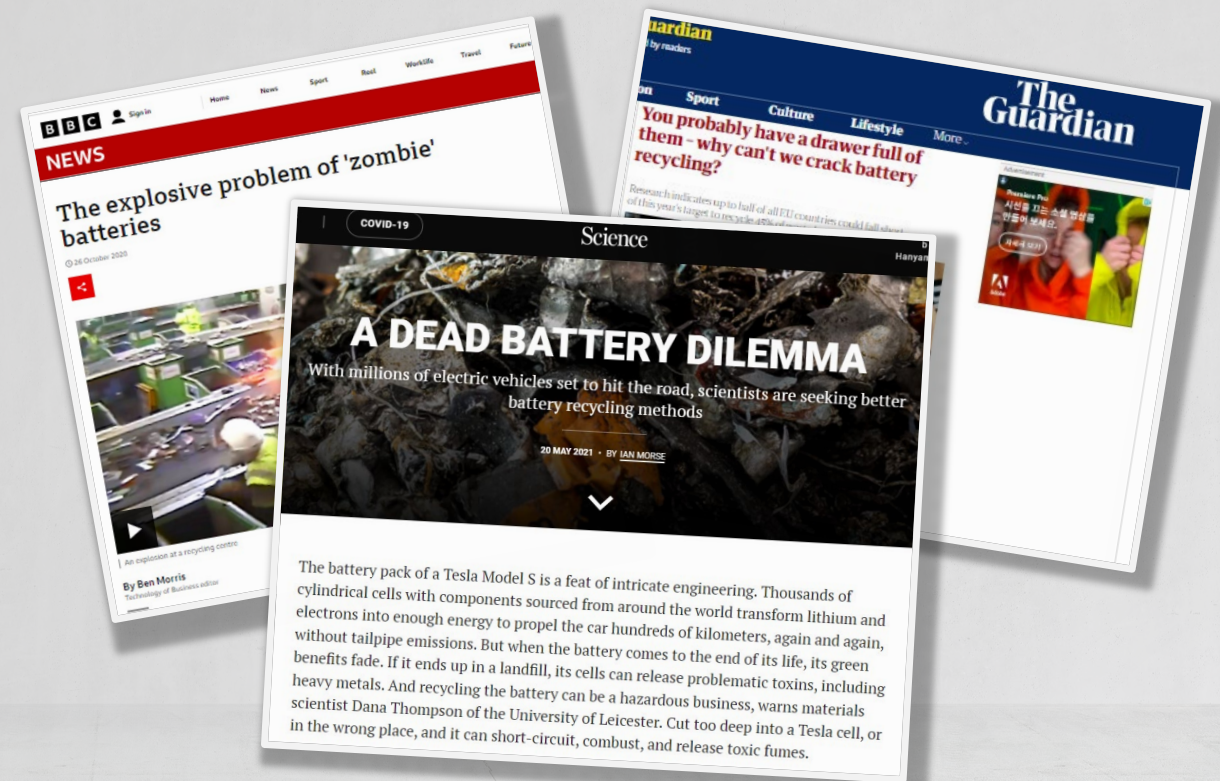


Waste battery emissions are expected to increase dramatically
'Hazardous/toxic substances' in battery production and disposal

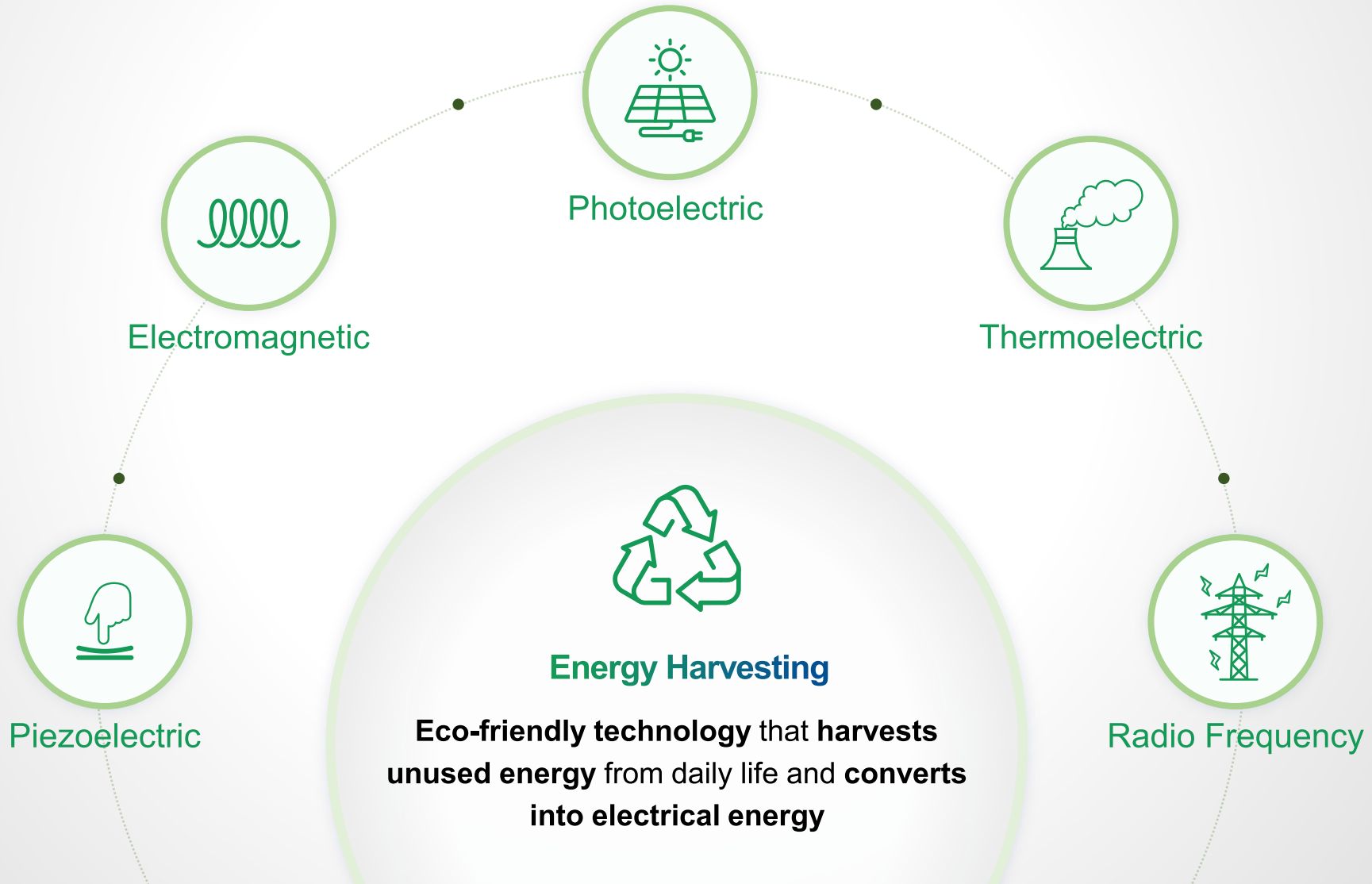
Global Used Batteries Forecast



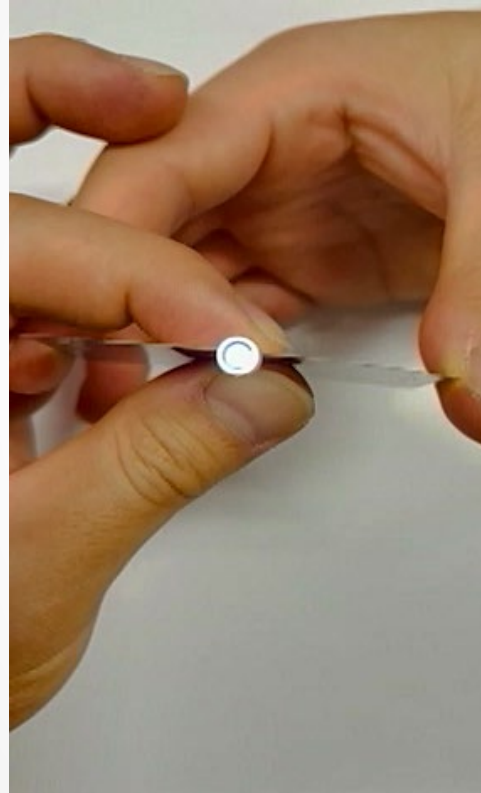
Battery Environmental Pollution Problem



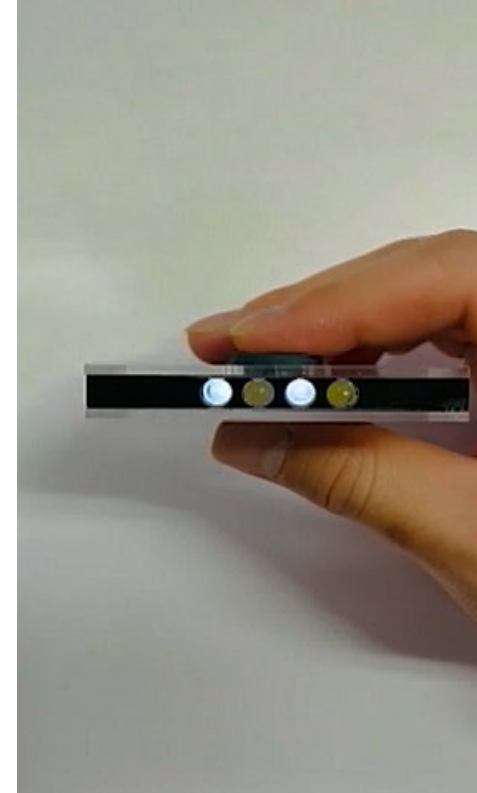
“Utilize **Energy Harvesting Technology** to solve energy and environmental issues”



“ Energy Harvesting Technology allows to generate electricity **with a small force**”



Power can be generated by bending the piezoelectric by 1 mm



Able to generate power with 1mm movement onto the piezoelectric

“ Energy Harvesting Technology allows to generate electricity **with a small movement** ”



**Power can be generated
with small movement**

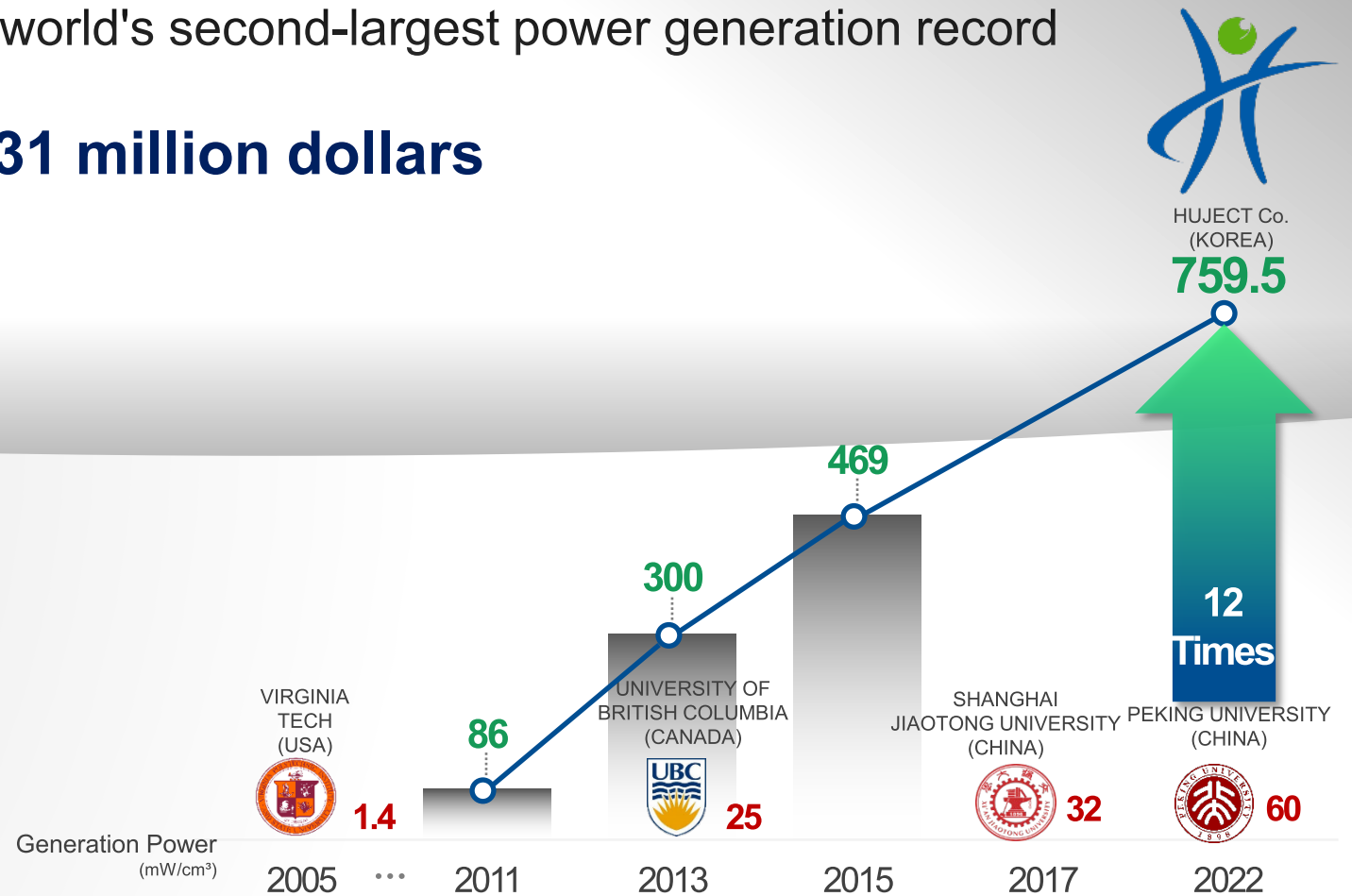


**Power can be stored with
small movement**

World's Highest Power Generation Record since 2011

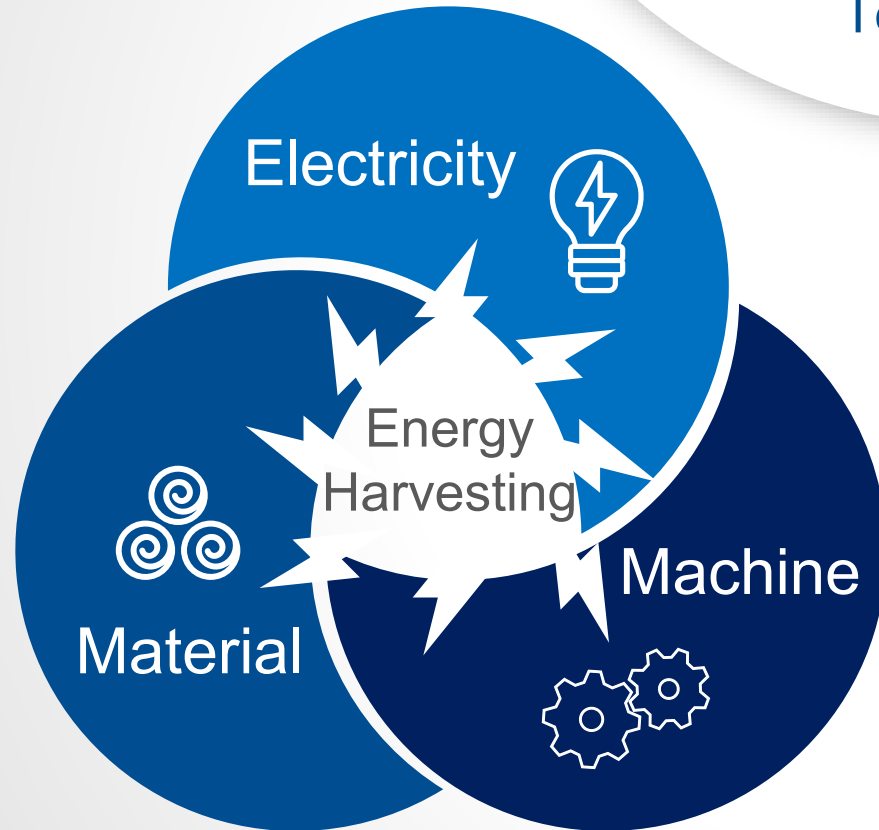
12 times more power than the world's second-largest power generation record

Total accumulated research budget **31 million dollars**

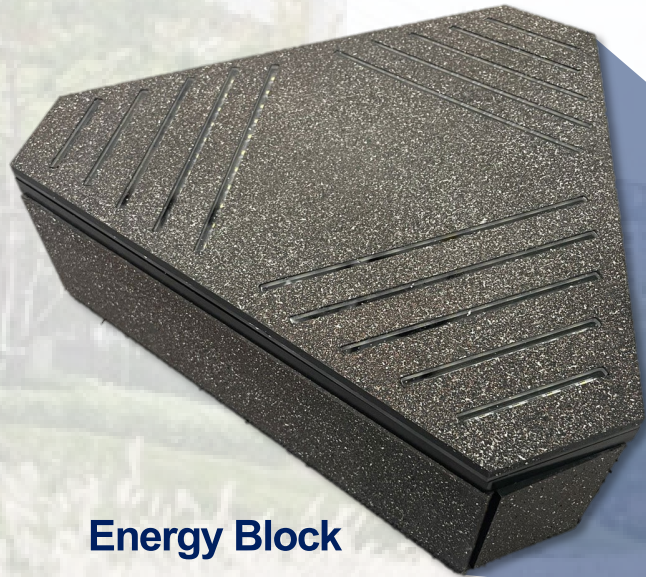


The Superiority

of the Original
Technology



- Energy harvesting technology requires optimized technologies in the fields of electrical, material and machinery
- Taehyun Sung CTO has more than 10 years of experience in each field of electricity, material, and machinery



Energy Block



3D Image



No Power
Supply Required



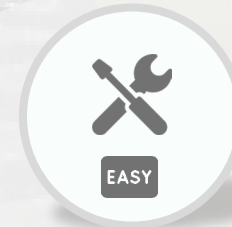
No Battery
Required



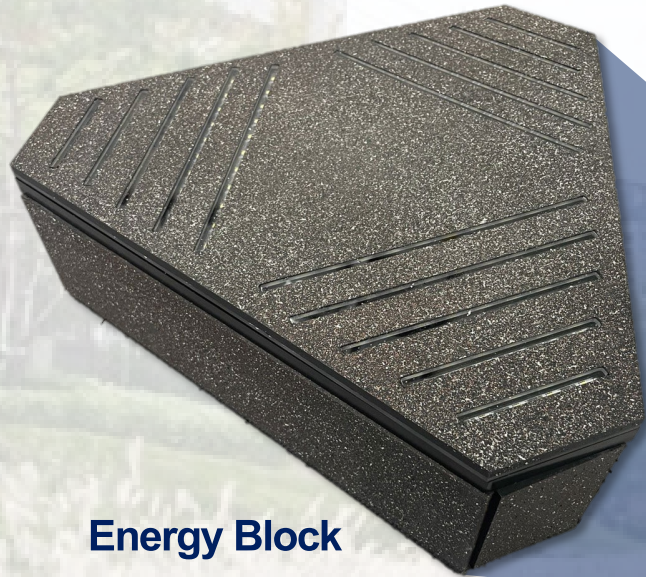
Perfect Sealing
Water Proof



Light up LED with
Human Step



Simple
Installation



Energy Block



3D Image



No Power
Supply Required



No Battery
Required



Perfect Sealing
Water Proof



Light up LED with
Human Step



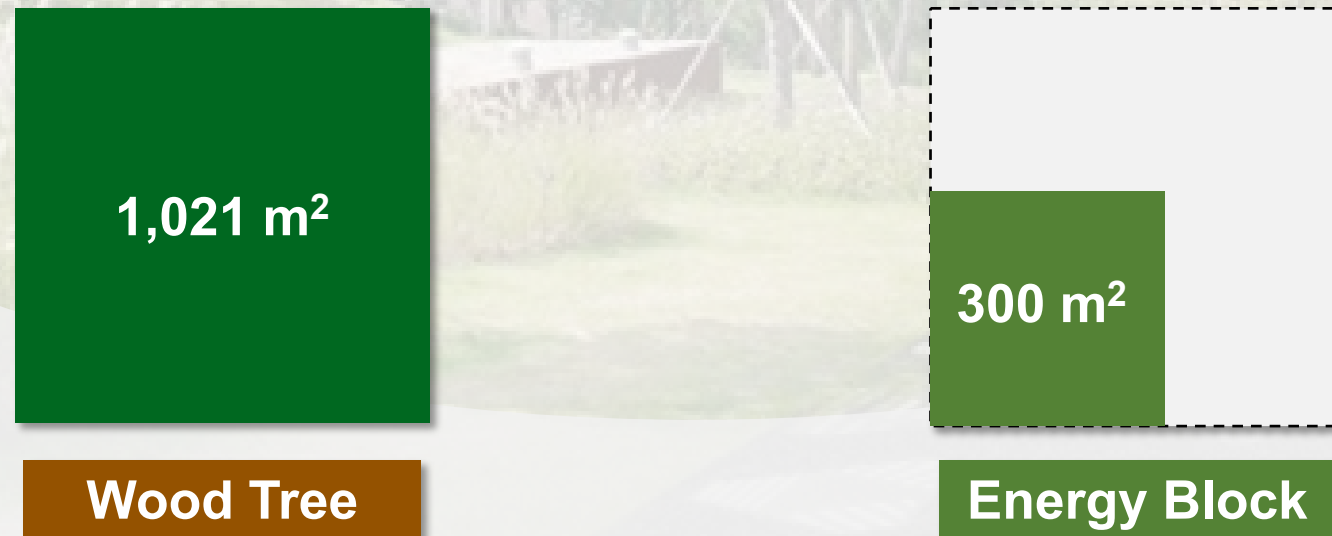
Simple
Installation

- Contributing to **Carbon Neutrality through Forests**

- In the case of forests, they contribute carbon neutrality through carbon absorption
- Creating forests is **challenging where populations are concentrated and desert area**

- **Energy Blocks are suitable for urban areas** to contribute to Carbon Neutrality

- Wood Tree needs **1,021 m² of area** to absorb 1 ton of CO₂ in a year
- Energy block requires an **area of 300 m²** efficiently



< Comparison of the area required to absorb/reduce 1 ton of CO₂ per year >



Installing an Energy Block is planting a tree
Create a forest by installing Energy Block territory

Energy Block

TAM
\$50.45 billion

- $694,021,855 \text{ m}^2 \times 10\% \times \700
- 10% of pedestrian roads in Korea \times supply price
- Assuming 1 unit is installed per square meter (m^2)

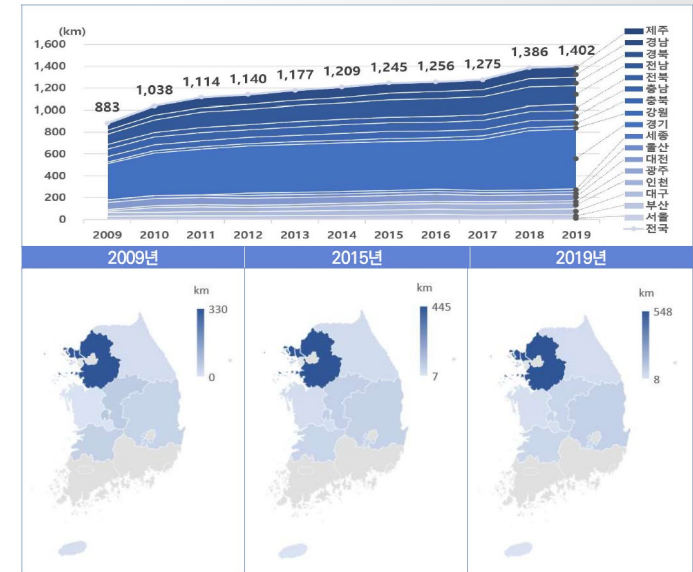
SAM
\$8.75 billion

- $120,482,671 \text{ m}^2 \times 10\% \times \700
- 10% of pedestrian roads in 6 metropolitan cities in Korea \times supply price
- Assuming 1 unit is installed per square meter (m^2)

SOM
\$479.79 million

- $6,668,450 \text{ m}^2 \times 10\% \times \700
- 10% of pedestrian roads in Seoul \times supply price
- Assuming 1 unit is installed per square meter (m^2)

The trend of the pedestrian road extension



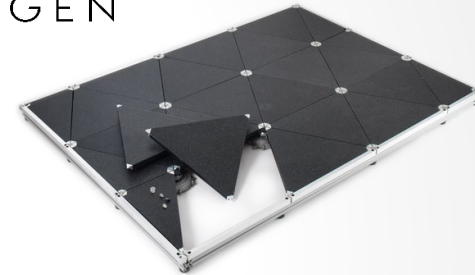
*Excluding roadside sidewalks and shared bicycle-pedestrian paths

- Installation of pedestrian roads increases every year in Korea

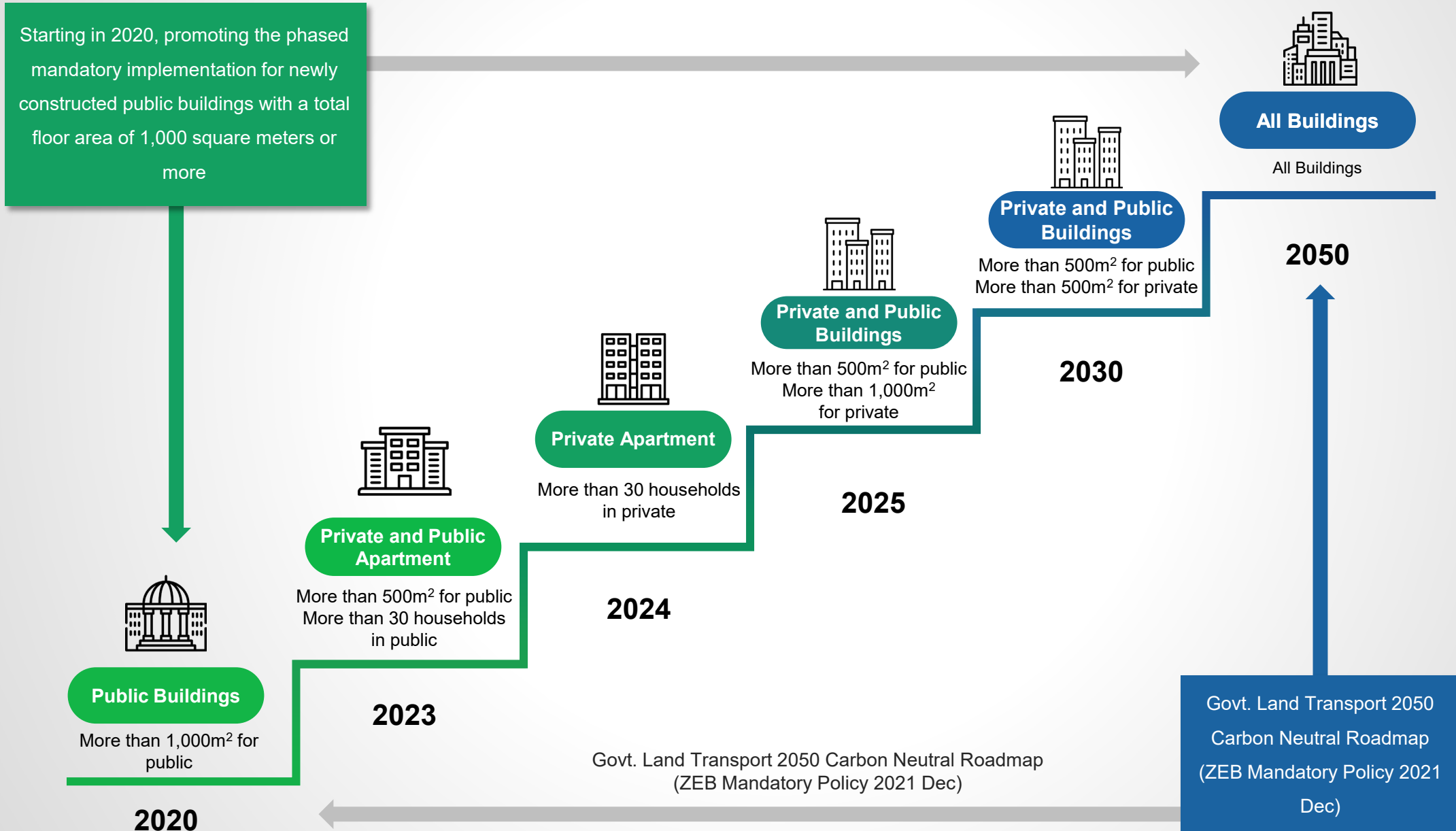
“ Technological **advantage over our competitors**, based on R&D ”

- Compared to competitors, our product are **safer**,
- **higher power** generation,
- **more scalable** energy block

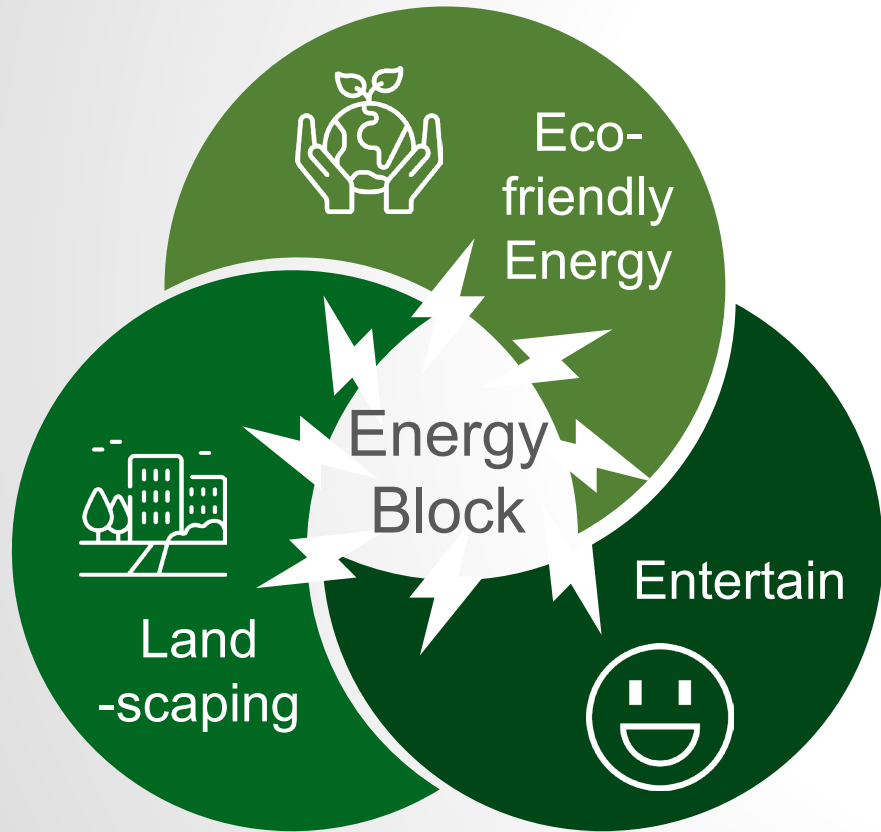
PAVEGEN



	Huject Current Status	Pavegen(Competitor)
Top Plate Fluctuation (Prevent Accident)	3 mm Top Plate Fluctuation	10 mm Top Plate Fluctuation
Power Generation	3.6 W/harvester(peak value)	1.7 W/harvester(peak value)
Installation	No Expert Required	Need Expert



Customer Needs-Based Sales



Discussion with Hoban Construction for Headquarters Installation
Needs: Zero Energy Building Policy

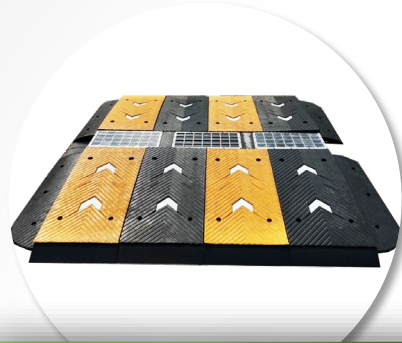


\$2.18 million
Supply Contract
Needs: Vertical Garden
Landscaping



Gwangmyeong Cave Installation
Needs: Customer
Enjoyment





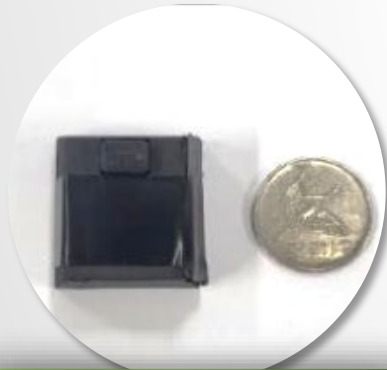
1. Energy Bumper

Bumper that activates the floor traffic light by converting the vehicle's movement and sunlight into electrical energy



1. EH Safety Clothes

Converts movement to electrical energy to provide power to LED lights on clothing/shoes



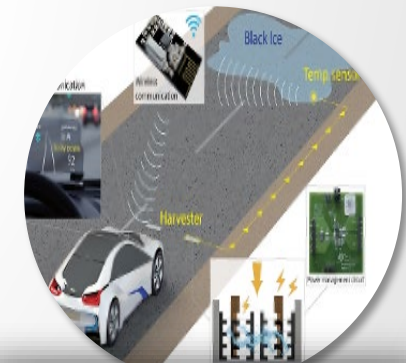
3. Batteryless Switch

Wireless switch that converts button pressure into electrical energy and operates without a battery



4. Smart Cane

Cane for the visually impaired to help detect obstacles in advance



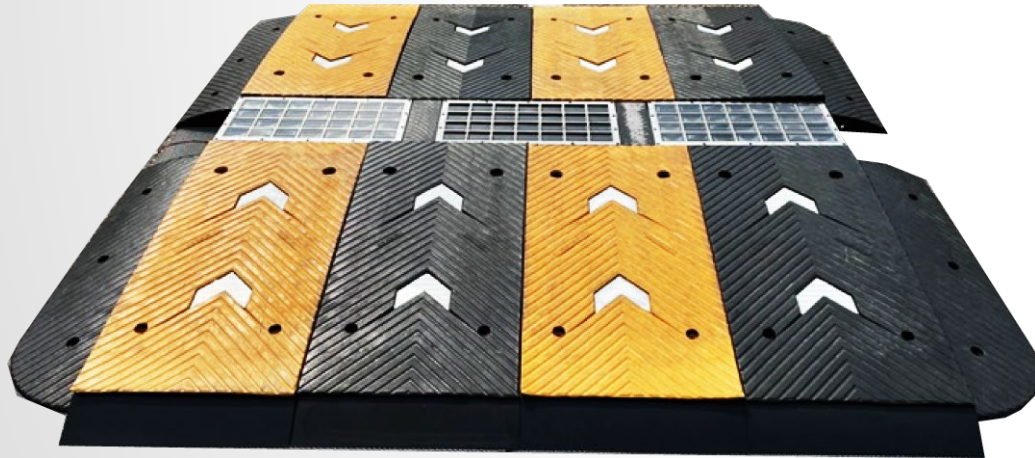
6. Piezoelectric Road

Road that converts the car movement into electricity and operates devices installed on the road

1. Energy Bumper

Energy Bump

Bumper that activates the floor traffic light by converting the vehicle's movement and sunlight into electrical energy



Energy Bumper



Crosswalk floor Traffic Light
(Daytime)



Crosswalk floor Traffic Light
(Night)

2. EH Safety Clothes

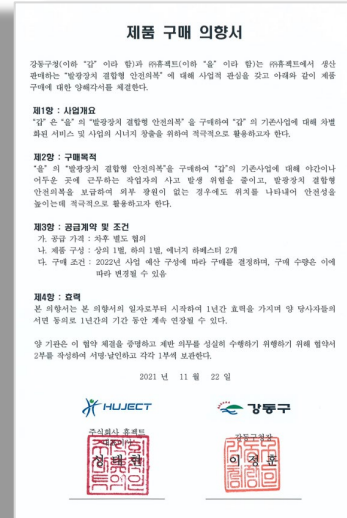
Converts movement to electrical energy
to provide power to LED lights on clothing/shoes



Product Photo



Minister of Science and ICT Award



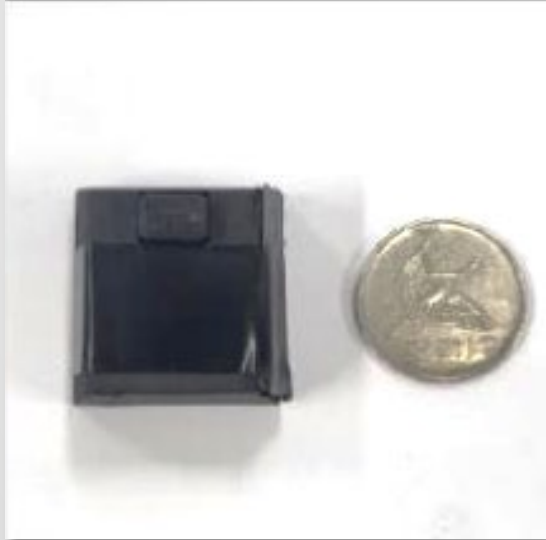
Intention to Purchase from Gangdong District Office



Product Image

3. Batteryless Switch

Wireless switch that converts button pressure into electrical energy and operates without a battery



Small Size Product



Batteryless Switch demonstrating 100m distance operation



Product Image

4. Smart Cane

Cane for the visually impaired to help detect obstacles in advance

The diagram illustrates the features of the Smart Cane. It features a central illustration of the cane with a red tip and a black handle. Surrounding this are eight feature icons with corresponding Korean text:

- 진동 네비게이션 (Vibration Navigation)
- 장애물 감지 센서 (Obstacle Detection Sensor)
- 네비게이션 어플리케이션 연동 (Navigation Application Integration)
- 안전사고 예방을 위한 LED (LED for Accident Prevention)
- 에너지 하베스팅 시스템 (Energy Harvesting System)
- 음향 신호 리모컨 기능 (Acoustic Signal Remote Control Function)
- 음성 인식을 통한 지팡이 찾기 (Cane Finding via Voice Recognition)
- 보행보조 기능 (Walking Assistance Function)

Smart Cane Design Description



Lee Jung-min and Choi Kwang-geun won the bronze medal in the Tokyo Paralympics



5. Piezoelectric Road

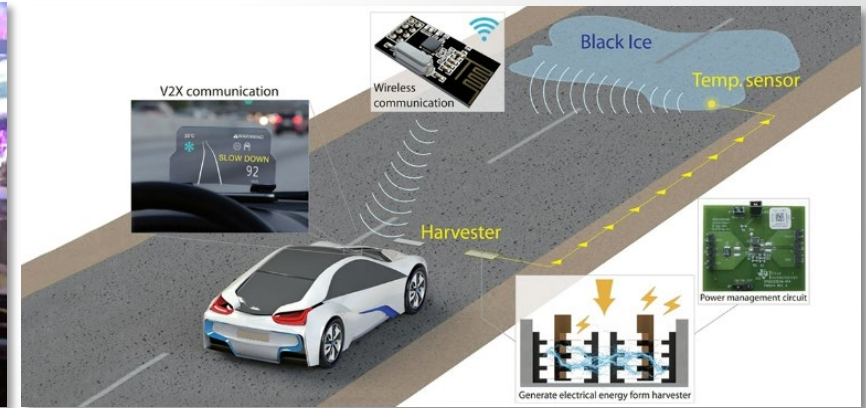
Road that converts the car movement into electricity and operates devices installed on the road



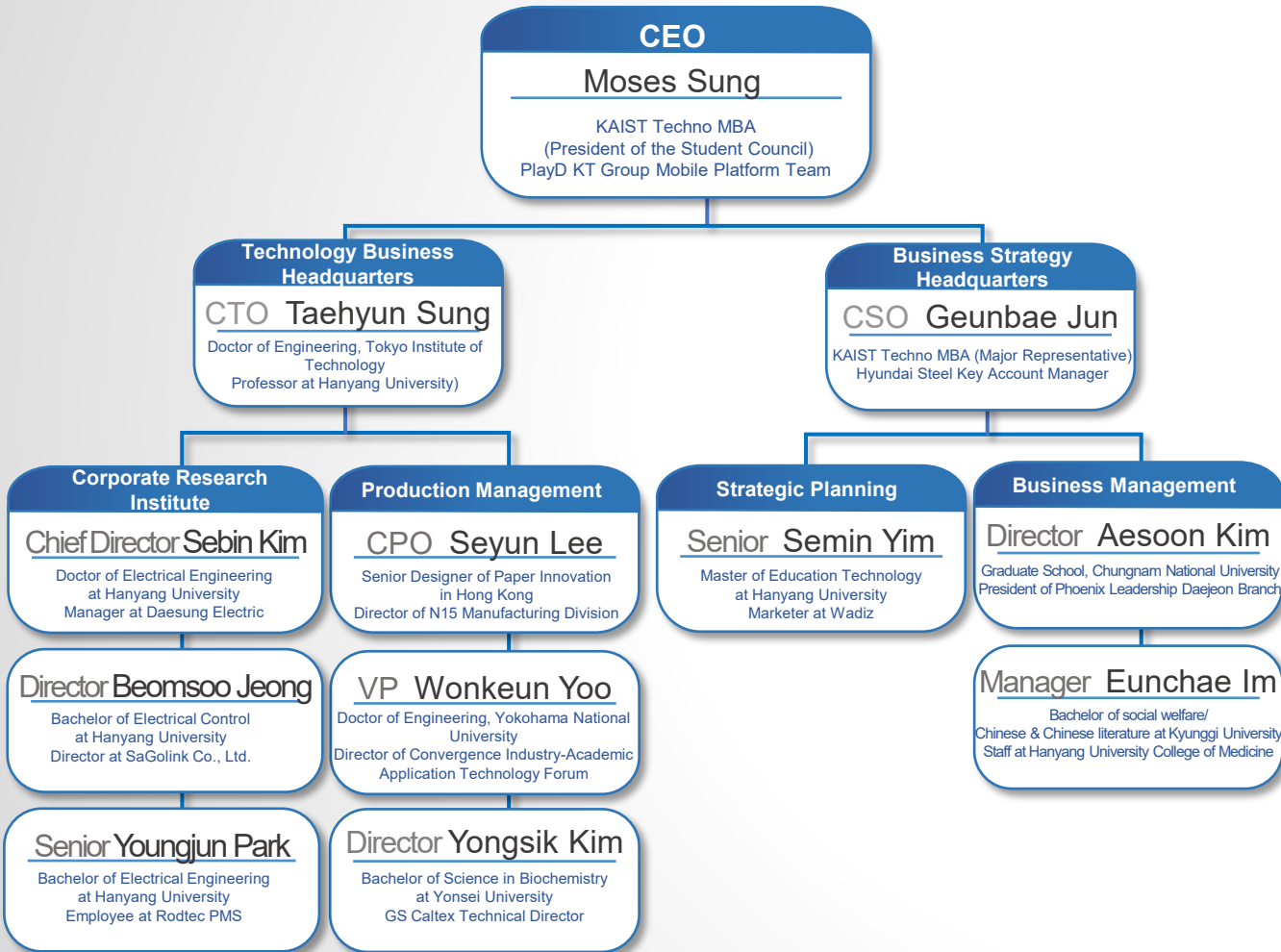
Piezoelectric power generation road



Energy Harvesting Road Installation at Manghyang Rest Area on Gyeongbu Main Highway



Vehicle Accident Prevention System Construction Diagram



HUJECT CEO

Education

- Graduated from the [University of Illinois](#) at Urbana-Champaign ([Graduated with Honors](#))
- Graduated from [KAIST MBA](#) program ([President of Student Council](#))

Career

- Wohrk Reco Starts Up in the U.S
- TYKL Partners, United States (AUSTIN, TEXAS)
 - Marketing Team
- KT Group Company PlayD – Mobile Platform Team
- Chinese conglomerate Focus Media Korea
 - New Business Department
- Eco-friendly Mongolian Housing Project
 - Representative
- Huject Co., Ltd. – Representative Director



Domestic and International Awards History

Korean Awards



Hoban Innovation Technology Contest



Daegu Center for Creative Economy & Innovation Minister's Award from the Ministry of SMEs and Startups



Presidential Council on Intellectual Property Minister's Award from the Ministry of SMEs and Startups

Global Awards



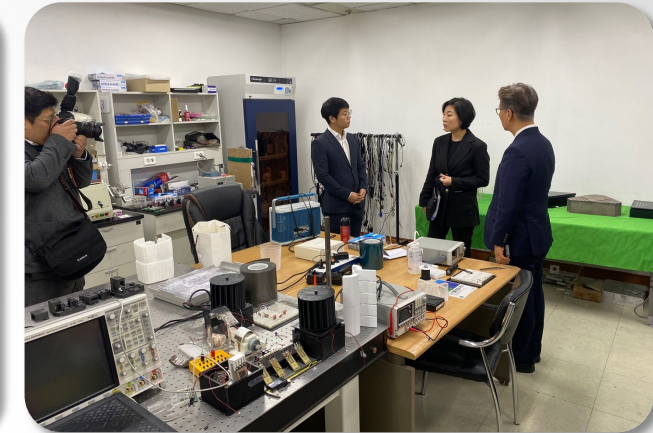
CES 2020 / Red dot 2020, 2024 / IDEA 2020, 2024 / IF 2020, 2023

Category	Date	Award Name	Award Level	Awarding Institution / Remarks
Technology	'20.01	CES	Innovation Award	Consumer Technology Association
	'23.09	6 th Intellectual Property Day	Minister Award from the Ministry of SMEs and Startups	Presidential Council on Intellectual Property
Design	'20.06	Red Dot Design Award	Main Award Red Dot Award	Design Zentrum Nordrhein Westfalen
	'20.09	IDEA	Main Award	IDSA
	'23.04	iF Design Award	Main Award iF Design Award	iF International Forum Design GmbH
	'22.11	Pinup Design Award	Main Award	Korea Association of Industrial Designers
	'24.04	iF Design Award	Main Award iF Design Award	iF International Forum Design GmbH
	'24.06	Red Dot Design Award	Main Award Red Dot Award	Design Zentrum Nordrhein Westfalen
	'24.09	IDEA	Main Award	IDSA
Business	'22.11	Hoban Innovation Tech Challenge	Grand Prize	Hoban Group
	'23.08	Global Innovator Festa	Grand Prize Minister Award from the Ministry of SMEs and Startups	Daegu Metropolitan City
	'23.12	Public-Private Partnership Open Innovation Support Program	Director of Entrepreneurship Promotion Agency Award	Korea Institute of Startup and Entrepreneurship Development
	'24.01	Startup University Support Program	Excellence Award Director of Entrepreneurship Promotion Agency Award	Korea Institute of Startup and Entrepreneurship Development

Visit by the Minister of Small and Medium-sized Enterprises and Startups



On February 1, 2024, Minister Oh Young-joo from the Ministry of SMEs and Startups visits the HUJECT office.



Healthy Earth, Happy Us!



Become The First Climate Tech
Unicorn Company in Korea, HUJECT



Thank You

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Phone : +82-10-9930-2886