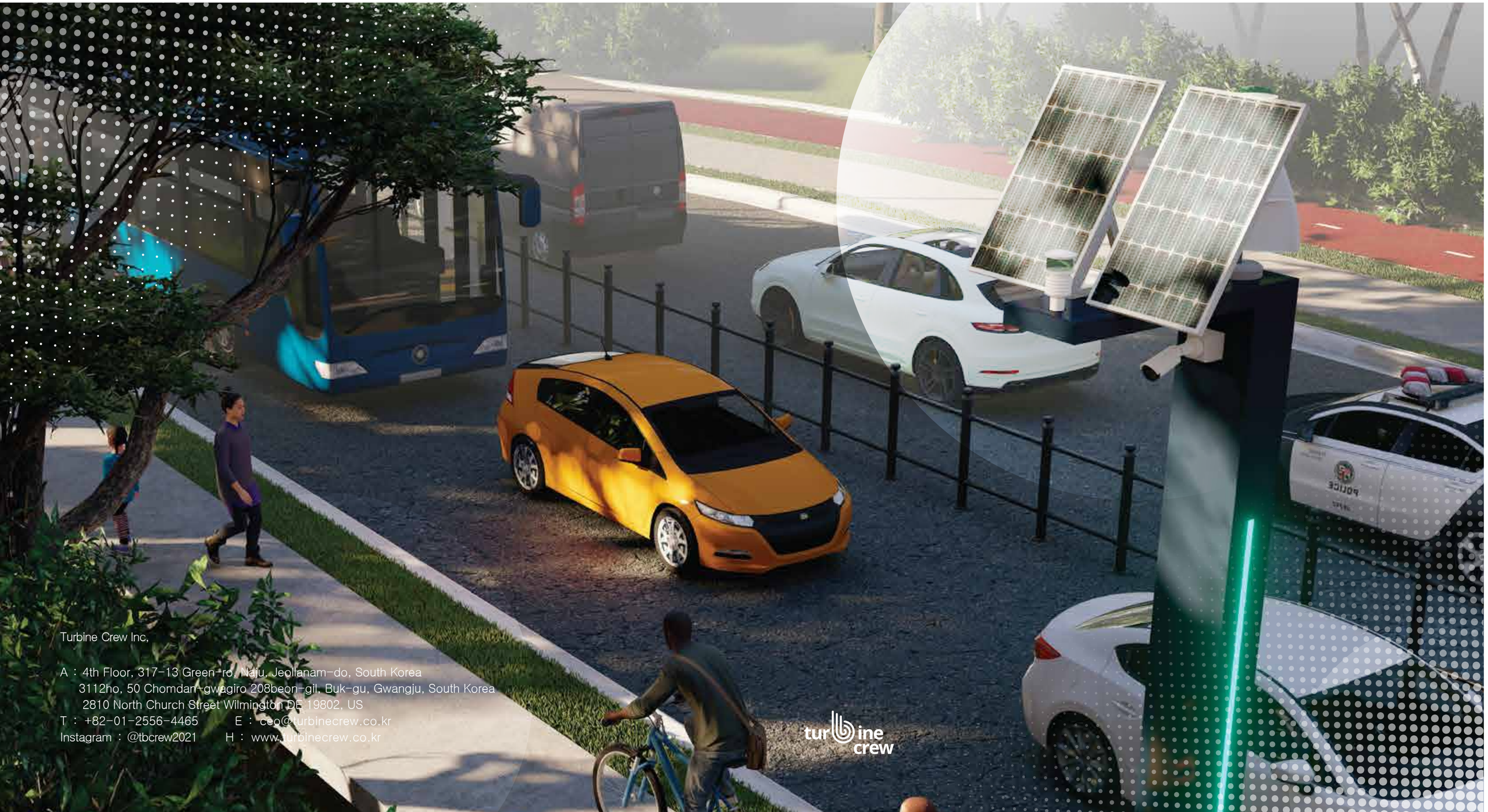
TURBINECREW CORPORATION INTRODUCTION



Turbine Crew Inc,

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Smart pole

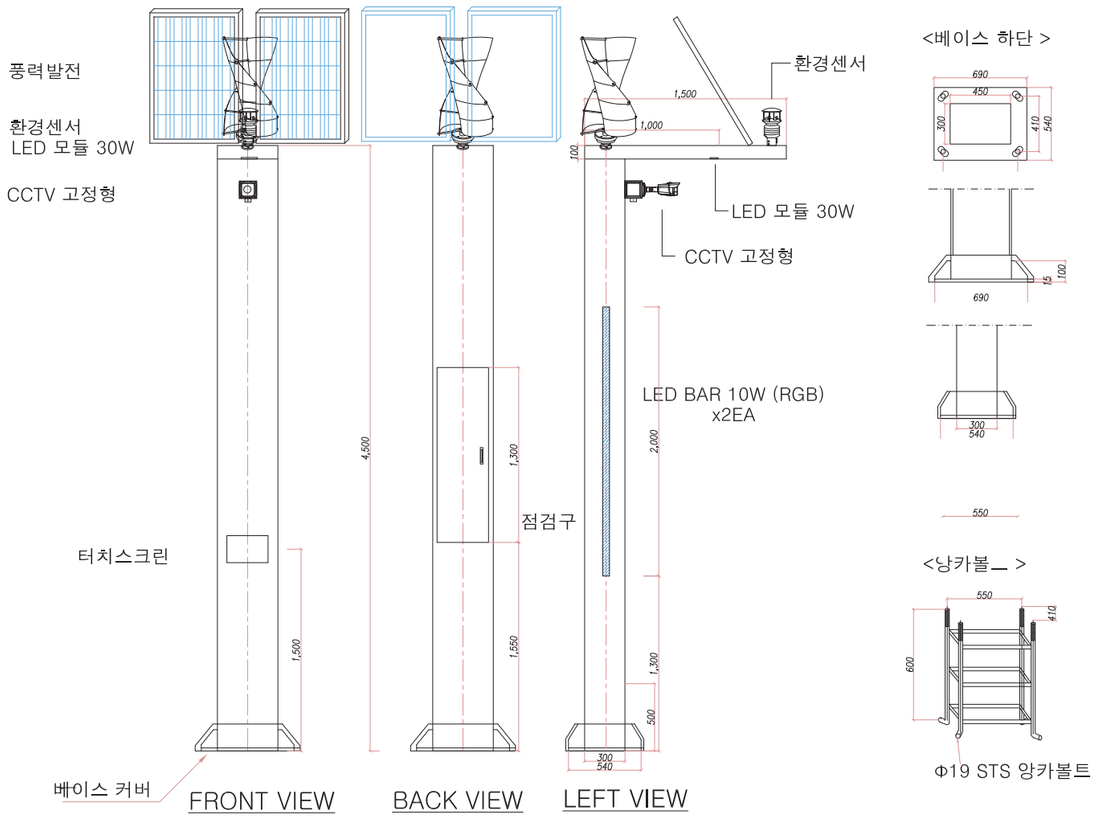
Target Market Size and Market Outloo

The global intelligent VPP (Virtual Power Plant) market is continuously growing, but small power producers are being marginalized in transactions. By connecting power plants to smart poles through the Smart Pole Star

Product Service Introduction

AI SaaS-based VVP, ultra-short-term prediction with CGAN-LSTM capable VPP, user-friendly for small-scale power producers, and power mobility network using V2X technology

Turbine Crew Smart Pole



Installation Type

AI System UI

AI Data Analysis

Business Sectors SERVICE

We are engaged in product development, software development, data processing, AI education, and research and development, covering key business areas

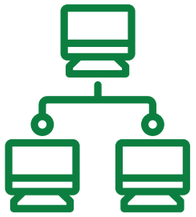
Turbine Crew is a comprehensive technology service company that provides innovative solutions for businesses. We excel in various fields, including software development, data processing, AI education, research and development, and design. We deliver customized solutions tailored to meet our clients' needs. Join us on a journey of innovation with Turbine Crew

01

Product

By implementing sustainable design, we practice environmental protection and social responsibility. We enhance design completeness through rapid prototyping and thorough testing. We ensure project success through close collaboration and smooth communication with clients, actively incorporating their feedback to

02



Software

Utilizing the latest technologies and expertise, we develop user-customized software. We create high-performance applications using various programming languages such as Python, Java, JavaScript, and C#, and modern frameworks like Django, React, and Spring. Additionally, we ensure efficient data management through relational

03

Data Processing

We collect and analyze data to process it into valuable information. We offer advanced data processing services to maximize the utilization of data assets. By integrating various data sources, we create consistent data sets and refine the data using the latest algorithms to ensure accuracy and consistency. Our real-time data processing capabilities

04

AI Education

Our AI education services help learners effectively understand and utilize artificial intelligence technologies, supporting their growth into future AI experts. We drive innovation in AI technology through better educational programs, and we work together to build your successful future.

05

R&D

Our R&D business researches the latest technologies, including artificial intelligence, machine learning, big data, and the Internet of Things (IoT), to provide innovative solutions for our clients' businesses. We deliver tangible results through R&D services tailored to our clients' specific needs and goals.

Product

Join us on our journey towards the future.
We will elevate your business to the next level with innovative technology and sustainable energy solutions.

Smart Pole,Drone Battery Recycling, AI Turbine

Smart Pole

Smart Pole Solar is a system that integrates smart technology with poles equipped with solar panels. It tracks the position of the sun and adjusts the panels to the optimal angle to maximize solar energy production. This enhances energy efficiency, allows remote monitoring, and optimizes energy production.

Drone Battery Recycling

The method of recycling drone batteries primarily involves disassembling the used batteries and recycling reusable components, or applying regeneration technology to restore usable capacity. This helps conserve resources and contributes to environmental protection

AI Turbine

AI Turbine is an innovative technology system that optimizes the operation and maintenance of turbines used in power plants. This system utilizes various sensors and data collection devices to monitor the operational status and surrounding environment of the turbines in real-time. By analyzing this data, it derives optimal

Software

We assist new business success with cutting-edge technology.
Together, we will open the future through sustainable solutions.

AI Prediction System, Drone Optimal Route System

AI Prediction System

AI Road Prediction System is an innovative technology designed considering the complexity of modern road and traffic infrastructure. This system utilizes the latest machine learning and deep learning technologies to analyze various data sources and predict road and traffic conditions. Firstly, the AI Road Prediction System collects data from various sources in real-time. This data can include CCTV footage, traffic cameras, vehicle sensor data, GPS information, and weather information. These diverse data sources play a crucial role in comprehensively understanding road and traffic conditions

Drone Optimal Route System

The Drone Optimal Route System integrates sensors, cameras, GPS, and artificial intelligence to enable drones to perceive their environment in real-time, plan and navigate the optimal route to their destination.
This technology encompasses four main functions: environment perception, route planning, route following, and reaching the destination. Drones use sensors such as cameras, radar, and lidar to understand the surrounding environment, and based on the collected data, they plan and set the optimal route.
The drones then follow the planned route and, if necessary, move to the next destination or return to the base

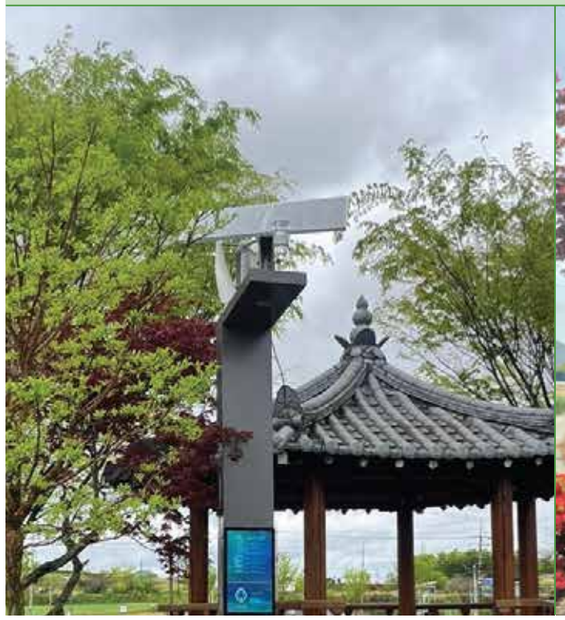
스마트폴Smart pole

Smartpole Process

Installation of Jangseong Army Sangmu Unit

Installation of Smart Farm in Goheung

Installation in Daesil Village, Naju



APPLICATION

TORNADO LARGE

TORNADO LARGE

The design was inspired by the columns of the Temple of Athena.
It is easy to assemble and designed to be slim, improving portability,
making it suitable for use in various environments

The main body, rotating shaft, and blades that can be attached
and detached from the sides of the rotating shaft.
The upper cover contains an artificial intelligence control unit
that controls the blades based on weather predictions

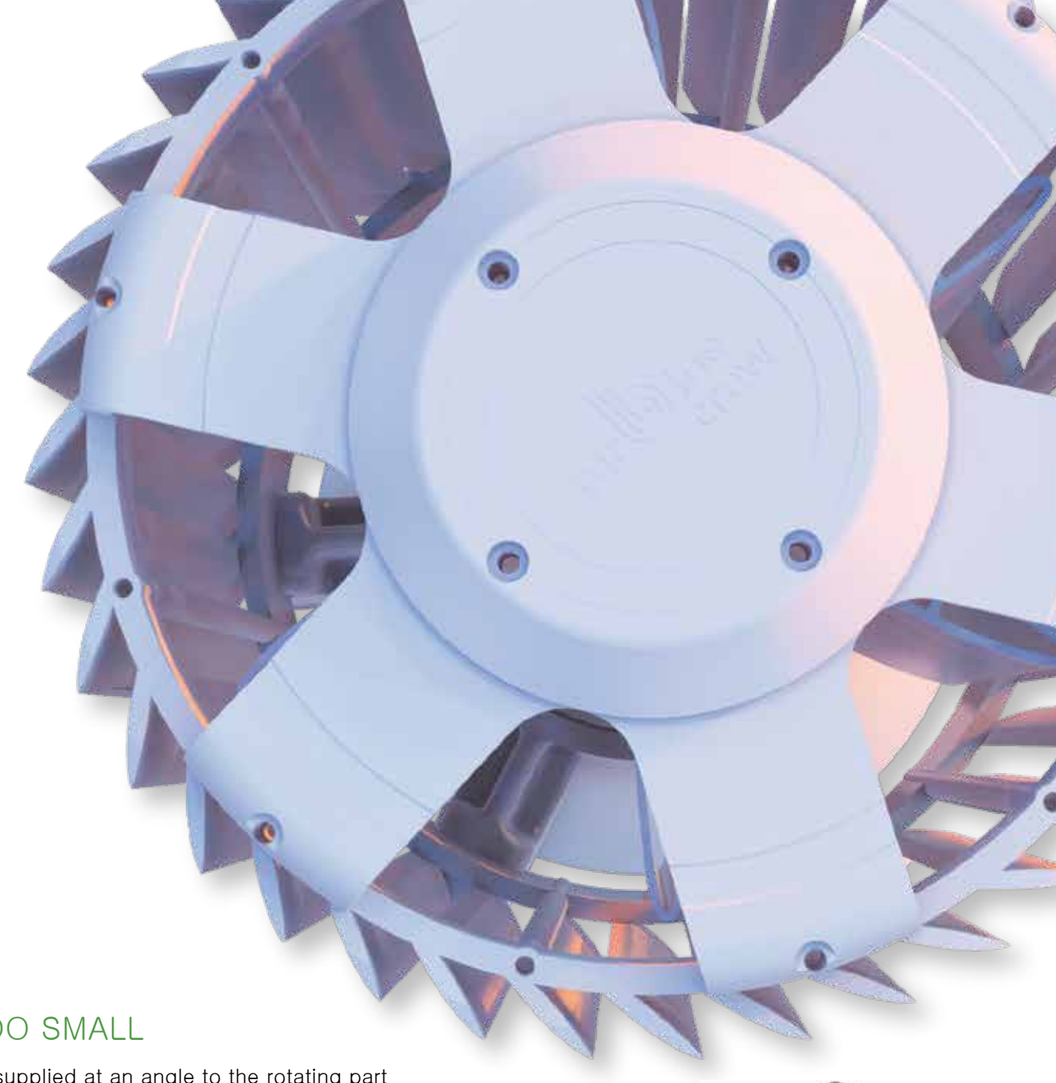
This is a new concept of wind power t
hat utilizes the Venturi effect based on Bernoulli's principle,
where the air entering from the bottom is amplified
as the internal pipe narrows.

제품 스펙

- Size 50×110(cm)
- Rated Power: 6000W
- Voltage 12V/24V
- Rated Wind Speed: 11.5 m/s
- Safe Wind Speed 55 m/s

TORNADO SMALL

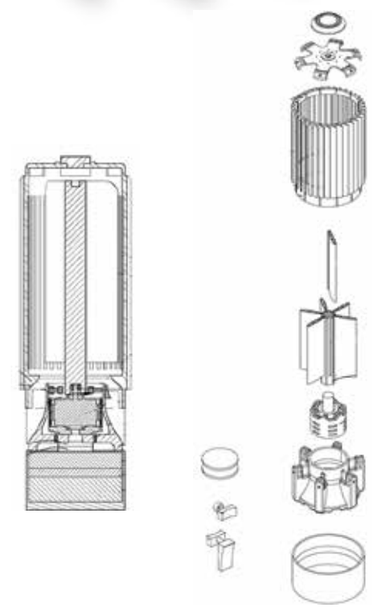
토네이도형(소형)



TORNADO SMALL

The wind is supplied at an angle to the rotating part
to increase power generation efficiency.
As the rotation of the rotating part accelerates,
a real-time braking system is applied to the rotating part.
Additionally, an artificial intelligence-based braking system is
provided, offering preemptive braking capabilities based on
weather conditions. This results in a wind power generation
device equipped with advanced braking functions.

Compared to large tornado models, it is smaller and lighter,
making it portable



SPEC

- SIZE 31×60(cm)
- Rated Power100W
- Voltage 12V/24V

VIBRATION TYPE

VIBRATION TYPE

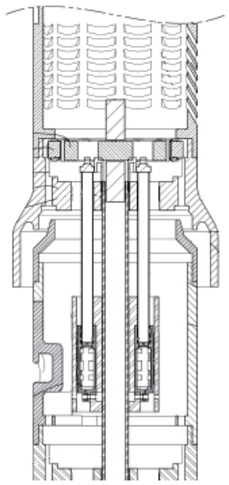
A typical wind power generation device is a device that converts wind energy into electrical energy. It generates electricity by rotating the blades of the wind power device with natural wind.
However, conventional wind power devices have large blades, which makes it difficult to install them in various environments due to spatial constraints. To address this, structures that are easy to use in urban areas by reducing the volume of the wind power devices are being developed.
While existing wind power devices using vibration amplify vibrations by utilizing the vortex phenomenon of wind, they have structural complexities that make manufacturing difficult and are challenging to install or move to desired locations where strong winds are prevalent.

Additionally, the vibration-type wind power generation device can include a control unit that incorporates a first actuator.
This actuator is coupled to the elastic part at the lower end of the vibrating part, and an internal rod extends upwards to connect with the stator.
The control unit can move the coil part to be spaced apart from or adjacent to the rod according to the up-and-down movement of the rod.

The vibration-type wind power generation device has the advantage of being applicable in various environments, as the length of the vibrating part can be increased or shortened to the desired length by adding or removing vibrating tubes in the vibrating part, which is composed of single or multiple vibrating tubes.

SPEC

- SIZWHE 18×135(cm)
- Rated Power 100W
- 전압 12V/24V

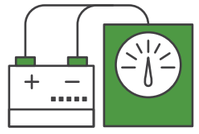


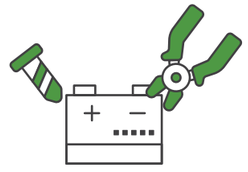
Drone Battery Recycling

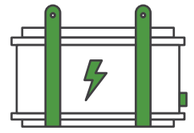
We possess three key capabilities for enhancing drone battery recycling

After recycling the current batteries, the ultimate goal is to balance the fluctuating supply
and demand of electricity and stabilize the inconsistent output by using ESS (Energy Storage System)
to complement renewable energy and maintain and stabilize electricity quality.
ESS uses an eco-friendly method of charging power and discharging energy when needed.
Battery recycling technology is gradually being developed, but there is no ESS device
for drone-specific battery recycling using small wind power, which is its distinguishing feature.
When the Energy Management System (EMS) gives a charging command to the ESS,
the Power Conversion System (PCS) receives the command to convert all AC to DC for charging.
At this time, the PCS communicates with the Battery Management System (BMS) to command the battery
to be charged, and the PCS converts the current supplied from the power plant to DC to supply
to the battery. Conversely, if the stored electricity is to be discharged to the consumer,
the discharge command process is performed in the order of EMS, PCS, and BMS

PROCESS

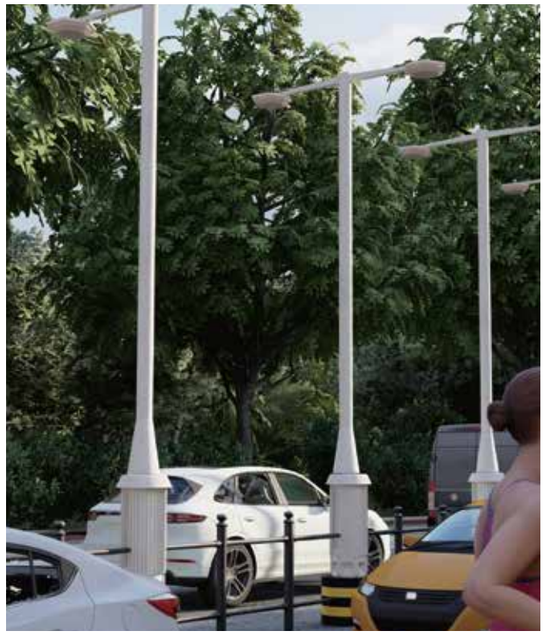


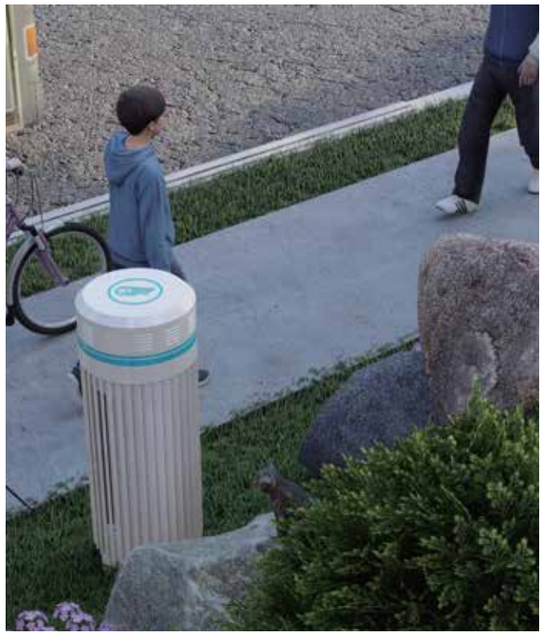




Measurement of Used Batteries	Assembly of Reusable Used Batteries	Prototype Production
● Residual Value Measurement Technology : Automatic Supply from Battery ● SoH(수명) 검사 SoC(충전 상태) 시행	● Charging Command of the Energy Management System (EMS) : Automatic Supply from the Battery PCS(AC->DC) Mutual Management in the Battery Management System (BMS) ● Measure data from the attached temperature and humidity sensors and prevent overcharging : Automatic Supply from the Battery Safe Battery Charging	● Modularization of Battery Cells Battery Pack Production ● Modular Manufacturing Proces : Removing Foreign Substances from Battery Surface, Applying Adhesive through Cell-to-Cell Process Securing Module Case Connecting Cells using Wiring Harness or Busbar Completing the Module

APPLICATION





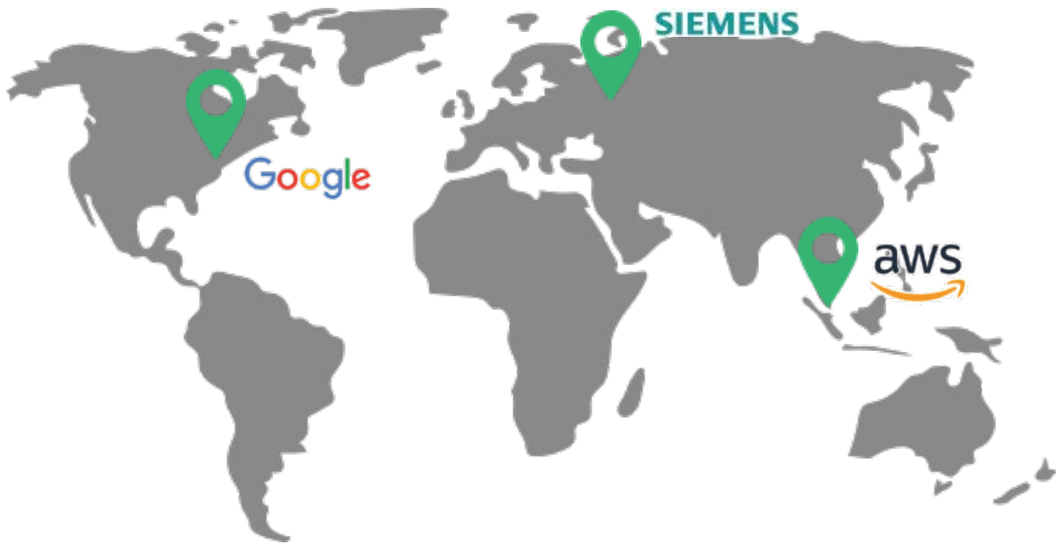
APPLICATION

Building a Global Network

We are uploading our results to the AWS Technology Sharing Store and developing collaborative projects with global companies. Furthermore, we are working on a small VPP (Virtual Power Plant) collaboration with Siemens

Turbine Crew's Key Partners and Institutions

Turbine Crew Global Network



Information

	2023
Sales	847,249,451
Operating Profit	200,509,931
Corporate Tax Adjusted Profit	207,647,126
Corporate Tax Expense	18,331,690
Net Profit for the Period	252,315,436
Total Assets	641,881,446
Current Liabilities	152,493,318
Non-current Liabilities	0
Capital	200,000,000
Total Capital	489,388,128

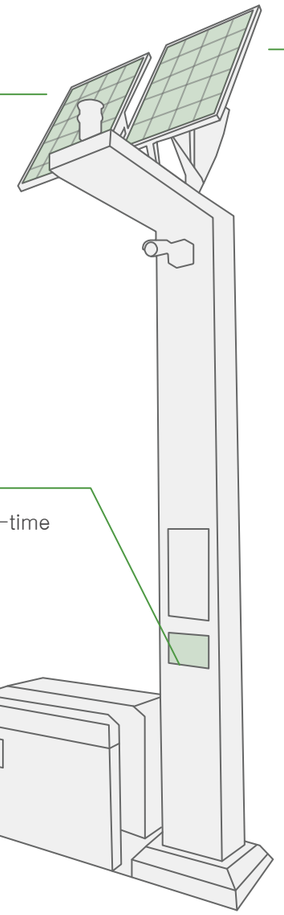
	2022
Sales	118,000,000
Operating Profit	29,266,554
Corporate Tax Adjusted Profit	40,142,852
Corporate Tax Expense	3,070,160
Net Profit for the Period	37,072,692
Total Assets	117,380,391
Current Liabilities	30,307,699
Non-current Liabilities	0
Capital	50,000,000
Total Capital	87,072,692

스마트폴Smart pole

Energy is stored in a recycled battery ESS through the smart pole for energy storage

Drone Surveying
Control Tower
(Communication)

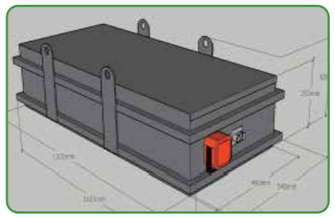
Expand the radius and collect data



Improve stability by predicting
energy using meteorological data through sensors

ESS

ESS using recycled batteries

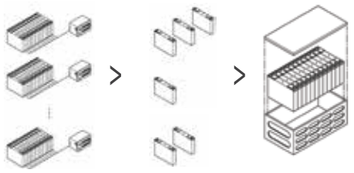


Predictive Monitor

Share collected data on the screen in real-time

The process of recycling used batteries

① Performance Evaluation ② Battery Cell Selection
③ Battery Reassembly



Product-related certificates

- Test Report
- Detailed Test Specifications

Turbine Crew Product Design

Clebin is the AI-driven small wind turbine brand of Turbine Crew, committed to sustainable renewable energy

Product Introduction

- This AI-driven small wind turbine can prevent damage caused by strong winds.
  If the wind speed exceeds the set threshold, it autonomously controls the rotational speed of the rotor to reduce it.

Product Introduction

- The universal blade design for home and other uses makes it easily accessible to anyone.
  By visualizing the essence of the product's function—wind and airflow—using curves, it is designed to become a landmark sculpture on your rooftop