TURBINE CREW

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TURBINE CREW CORPORATION

To Improve Agricultural
Productivity and Optimize Energy Use

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TURBINE CREW

What we do is not simply build AI software, nor is it merely to build energy hardware. We are a team that places the two engines of intelligence and energy on a single platform and turns them into systems that are more efficient, safer, and more sustainable in the real world.

Over the past year, Turbine Crew has built a series of visible achievements. The speed with which we define problems, the precision with which we design execution, and the persistence with which we finish with results that truly work in the field—these are becoming Turbine Crew's standard. I am proud of that

Going forward, we will make our principles even clearer: products that do not end as demos, completeness that includes operations and safety, and execution that moves fast without lowering the bar. The faster we grow, the more the standards we keep will protect us.

Company information

TECHNOLOGY OVERVIEW

Turbine Crew integrates AI software and energy hardware to raise both performance and reliability in real-world operations. We define problems with data rather than intuition, prove them through execution, and convert them into results. We are a team that turns working technology into products, considering operations, safety, and maintainability—not just demonstrations.

Company information

DESIGN OVERVIEW

Turbine Crew's design capability is not about making functions look attractive on the surface. It is about translating trust, safety, and usability into the language of the product.

Through intuitive UX that can be understood and used immediately in the field, together with solid industrial design, we will build a consistent brand experience. Trademarks and identity are not one-off logos, but long-term assets that systematically embody and expand Turbine Crew's standards.

Company Information

TURBINE CREW HISTORY

Company founded

- Corporate conversion completed
- MakerStar 2022 Encouragement Award
- Prize at the Mokpo Robot/AI Convergence Center
- Selected as a leading company in Gwangju-Jeonnam Innopolis
- Certified as a women-owned business

- Achievements in AI/Data (competition awards)
- Established a U.S. branch in Delaware and began exports
- IR / venture certification / institutional commendations
- Installed Clebine units 1 and 2
- AWS technical verification and awards from government/public institutions

AWS 기술검증 및 해외/기관 수상

2024

- Capital increase
- Established a corporate R&D center
- Hackathon award
- Installed Clebine unit 3
- Registered investment MOU, design-specialized company, and software business
- Overseas exhibitions and MOUs in Germany and Vietnam
- Collaboration on a U.S. testbed
- Received the Gwangju Regional SMEs Commissioner's Award

2025

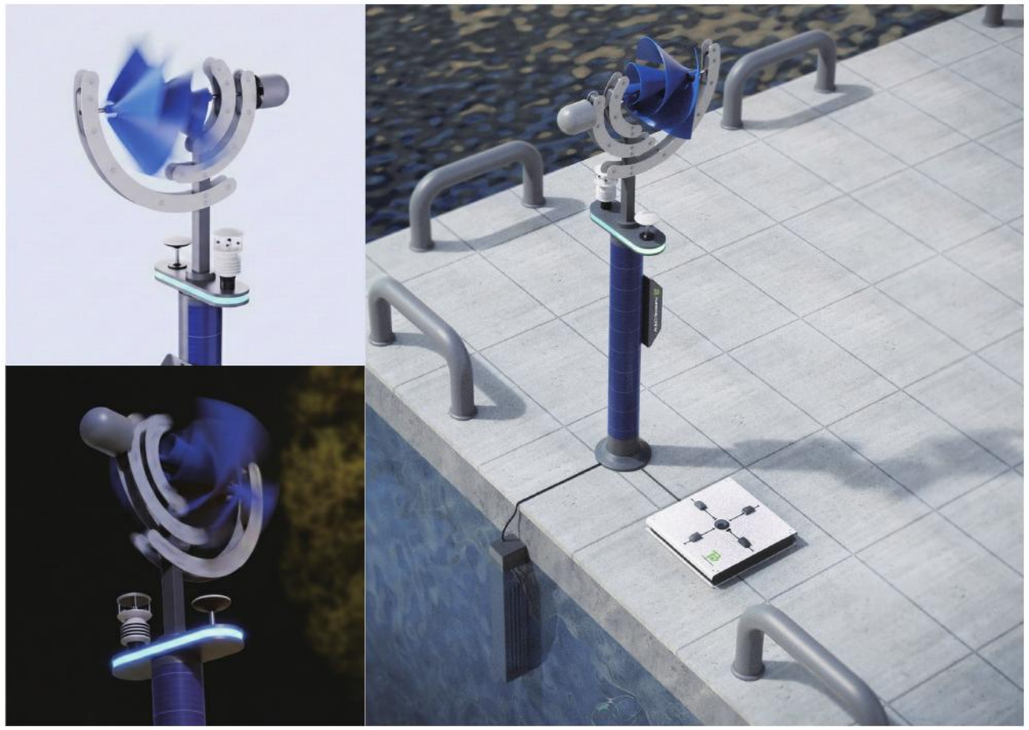
- Participated in CES
- Agreement for software supply and wind-power demonstration in Vietnam
- Reached the semifinal of the Dubai 2025 Supernova Challenge
- Won CES 2026 Innovation and City Awards

진출

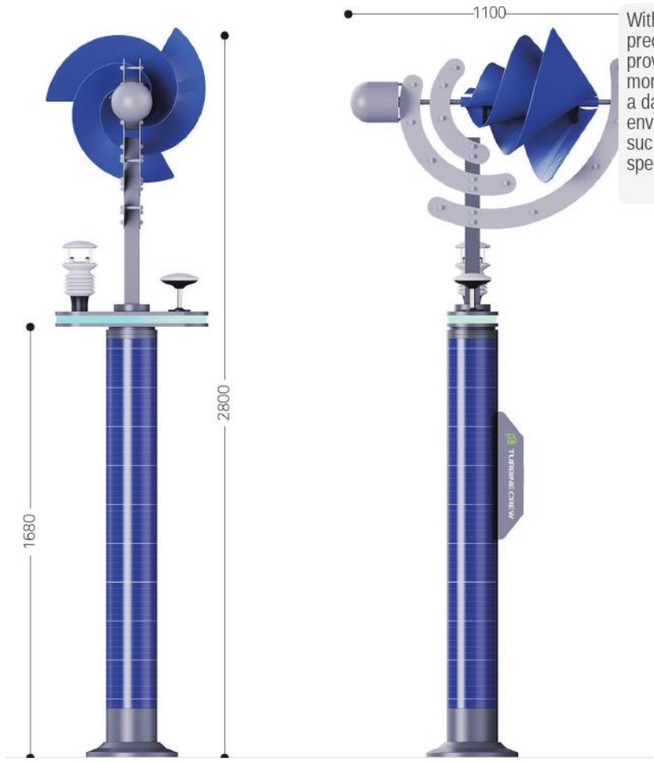
Product Portfolio

ECO-CLEBINE

Eco-Clebine is a nature-friendly smart streetlight that combines three multi-source power-generation methods: wind, solar, and seawater-ion energy. It generates electricity on site to operate lighting and other equipment and can function as an energy-independent infrastructure asset. By combining the strengths of multiple natural energy sources, it aims for stable generation even when environmental conditions change.



The purpose of Eco-Clebine is to produce electricity from renewable energy obtained from nature and supply it stably to the drone station. The power supplied is used for wireless charging of drones at the drone station, creating a drone infrastructure that can operate continuously in the field. In other words, it reduces dependence on external power and installation constraints, enabling a sustainable drone-operations base almost anywhere. Eco-Clebine is a self-sustaining energy-and-mobility link connecting generation → storage/supply → wireless charging → operation.



With RTK-based communication and precision-positioning functions, it provides infrastructure linked to field monitoring and control. It also serves as a data node that collects and relays environmental and weather-sensor data such as temperature, humidity, and wind speed in real time.

Product Portfolio

DRONE STATION

Turbine Crew's Drone Station is an unmanned operational base that automatically keeps drones on standby, stores them, and enables field operations.

When a drone automatically returns and lands at the station after a mission, sensors immediately detect the landing. Based on that signal, four stepper motors operate to precisely align the drone to the center of the charging pad.

Once alignment is complete, wireless charging starts automatically and the charging process continues smoothly, reducing the inconvenience of manual charging and improving continuity in drone operations.

It can also be connected to renewable power sources such as Eco-Clebine to supply electricity generated on site in a stable manner.

As a result, it reduces installation constraints and operating burdens while allowing drones to be redeployed whenever needed.

The Drone Station is the core infrastructure that turns drones from mere equipment into a continuously operable system.

The ability to verify whether wireless charging has actually started is a key factor in improving the reliability of the entire operating system. The drone station connects an INA228 current/voltage/power sensor to the input side of the wireless-charging coil and monitors power consumption in real time. In standby mode, power consumption stays low, but once a drone is properly aligned and charging begins, coil input power rises sharply.

TF-mini is a distance sensor based on the ToF principle and can reliably detect objects within a certain range.

When no drone is on the landing pad, it returns the maximum measurable distance or a similar value; once a drone lands, the distance between the sensor and the drone body drops sharply.

Product Portfolio

TLATFARM

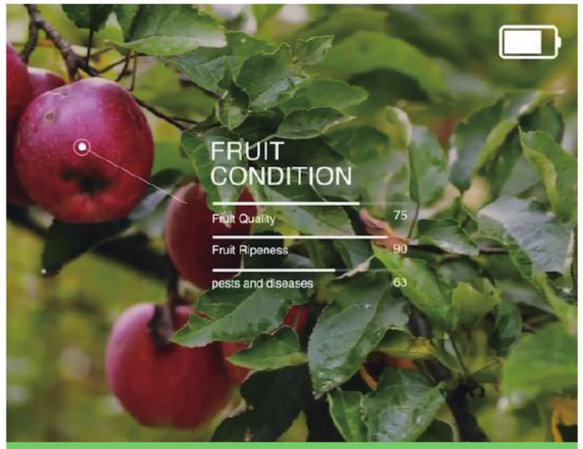
By combining drone route optimization with AI-based crop-growth analysis into a single architecture, TlatFarm presents a vision of improving agricultural management efficiency and response speed through real-time data collection and analysis. The system also strengthens field usability by improving the UI/UX and incorporating user feedback. From the prototype stage, it is being developed with commercialization in mind, including early entry into public procurement and B2B markets. At the same time, continuous accumulation of drone, crop-growth, and pest/disease data enhances AI performance and supports region-specific localized solutions. Through this approach, the platform supports operations optimized for diverse agricultural environments while pursuing global expansion and localization strategies to strengthen international competitiveness.

TlatFarm

TB drew's smart farm platform

드론을 이용한 원격 작물 체크

Remote crop inspection using drones

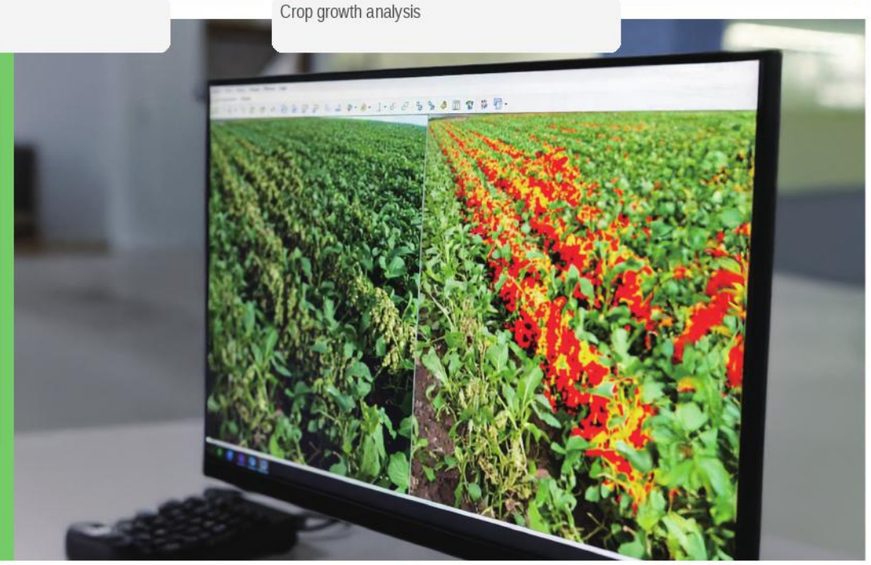


작물의 생장량 분석

Crop growth analysis

Using drones or cameras, crops can be photographed in RGB (visible light) so visual signs such as leaf-color changes, spots and discoloration, or uneven growth can be identified quickly.

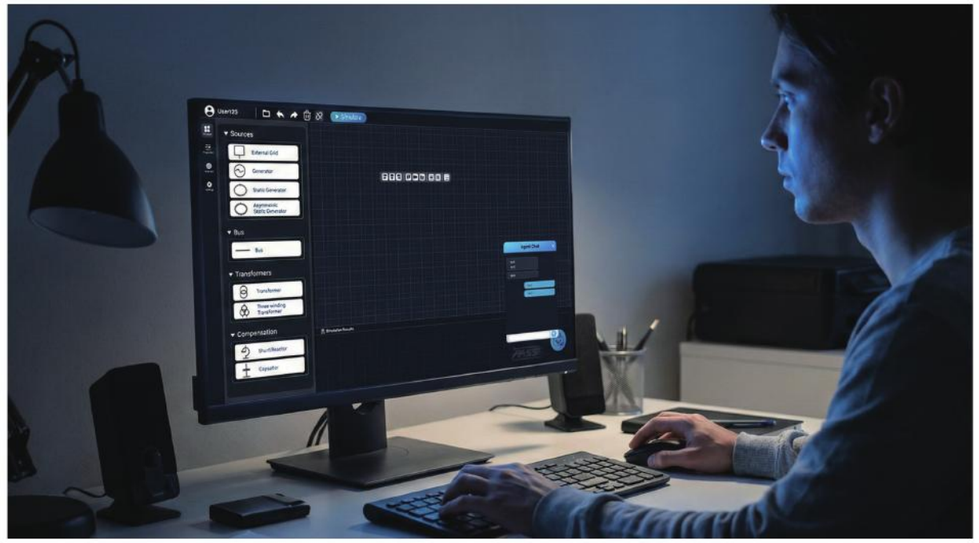
By analyzing the captured images, conditions can be compared by area and suspicious zones can be screened early for possible pests and diseases, nutrient deficiency, or water stress.

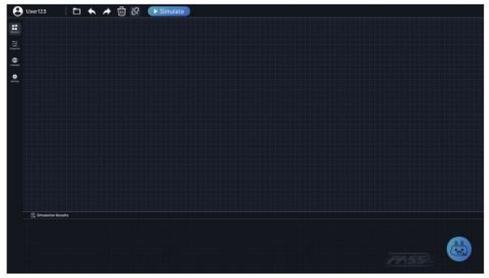


Product Portfolio

TBPASS

TBPASS is a cloud- and graphics-based power-grid design and analysis simulator developed by Turbine Crew. Users can configure networks with drag-and-drop and control them easily. By applying an AI agent, the system can assist with element placement and parameter settings according to the user's objective—network configuration, analysis, or improvement—and suggest optimization directions. Because it is cloud-based, anyone can access and use it conveniently. It supports power-flow and fault analysis to verify system conditions quantitatively, and the AI agent can summarize results and automatically recommend abnormal points and improvement candidates.





Delivered on the cloud, it is easy and convenient for anyone to access and use. It supports power-flow analysis and fault analysis (single-phase, two-phase, and three-phase). Users can configure a wide range of system elements including generators, buses, transformers (two-/three-winding), compensators, loads (Ward/Extended), energy storage systems (BESS), FACTS, and DC lines. Results can be exported and saved in various formats such as PDF and SVG.

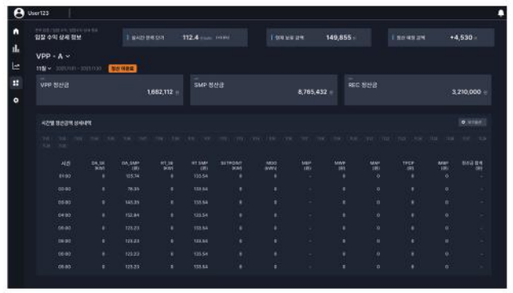
Its drag-and-drop graphical UI enables intuitive system configuration and control. Key parameters such as voltage, power, impedance, and phase angle can be flexibly set to model diverse scenarios. A modular component structure makes it easy to add functions and expand the system.

Because it can be used directly on the web without installation, adoption barriers are low. The workflow from design and analysis to sharing results is streamlined for higher efficiency, while modular composition shortens verification time and export support makes reporting and collaboration easier.

Product Portfolio

VPP

This system operates distributed energy resources such as solar, wind, ESS, EV chargers, and demand response (DR) as if they were one power plant by using ICT and AI. By forecasting and controlling both generation and consumption across multiple resources, it can deliver effects such as peak reduction, grid stabilization, and electricity-cost savings, and it can also participate in electricity markets and ancillary services when needed.



By introducing VPP, distributed resources such as solar, ESS, and loads can be integrated and operated to achieve peak reduction and grid-stabilization effects. Forecasting generation and demand and optimally controlling them can improve operating efficiency while reducing electricity costs. Participation in electricity markets and ancillary services can also create additional revenue opportunities, while absorbing renewable-energy variability and increasing the system's capacity to accommodate renewables.

Product Portfolio

COMPANY MASCOT

Mascots make it easier for audiences to recognize and remember the brand at exhibitions and on social media, while also serving as storytelling tools that lower the barrier to complex technologies such as renewable energy, drones, and power grids. They soften the first impression of a B2B brand often shaped mainly by technology and expertise, and help build familiarity. They also improve content productivity and tonal consistency across card news, video, catalogs, and merchandise. Internally, they can strengthen employee participation and belonging, and by assigning character roles to each product group, they can also function as brand-extension assets that present the portfolio at a glance.

TANGGU

POONG

HAJJU

NAJJU

Product Portfolio

ADVENTURE OF NAJJU

Adventure of Najju was planned as more than a simple game. It is an experiential learning element designed to help students understand the concept of power trading naturally, reflecting day/night transitions, power generation and consumption, and a power-purchase system. This gives it clear differentiation as an educational game. Based on the preliminary concept plan, a YouTube channel was also opened and promotional videos were uploaded, creating a foundation for gauging early market response.

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