Entry into the High-Performance Battery Business for Domestic UAS
Policy on Concluding a Joint Venture Agreement and Establishing a Joint Venture Company
Supplementary Materials



Liberaware Co., Ltd.

Securities Code: 218A

November 17, 2026

IBIS

Policies and Markets for Domestic UAS Development / Mass Production / Stable Supply Are Changing Significantly

As the use of UAS expands from disaster prevention and critical infrastructure to defense and security, reliance on overseas sources for airframes and critical components has become an issue. From the perspective of economic security, the government is promoting the establishment of a system for the development, mass production, and stable supply of domestic UAS.

Designated as a Critical Material for Economic Security



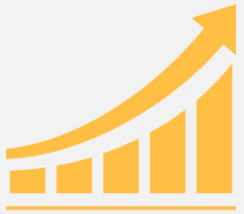
In December 2025, unmanned aircraft were added as specified critical materials under the Economic Security Promotion Act.

Lack of Domestic Production and Supply Base



Approximately 90% of the domestic market is comprised of overseas products. Domestic airframe production remains at approximately 1,000 units per year, and critical components such as batteries are also dependent on overseas sources (*1).

Promoting the Establishment of a Mass Production System for Domestic UAS



In July 2026, unmanned aircraft were positioned as a priority field in Japan's growth strategy, supporting the establishment of a domestic mass production system for airframes and critical components (*2).

Expansion of UAS Utilization in the Defense Sector



In November 2026, the expansion of the use of unmanned assets was considered for the revision of the three defense documents during fiscal year 2026 (*3).

From a focus on "Research and Development" to "Building a Domestic Mass Production and Stable Supply System for Airframes and Critical Components"

Source: *1: Ministry of Economy, Trade and Industry, "Policy for Ensuring Stable Supply of Unmanned Aircraft" (March 13, 2026)
*2: Cabinet Secretariat, "Public-Private Investment Roadmap for 'Key Products and Technologies' in 17 Strategic Fields" (July 21, 2026)
*3: Ministry of Defense, Status of Consideration for Revision of the Three Security Documents, "Future Direction of Strengthening Defense Capabilities," P10 Fields of Priority Defense Capability Strengthening (November 12, 2026)

Challenges in Domestic Battery Supply Infrastructure for Expanding Mass Production of Domestic UAS

- Batteries for UAS require special performance characteristics such as being lightweight, high-capacity, and high-output, making them difficult to replace with general-purpose products. Domestic mass production and supply infrastructure are not sufficiently developed, and building a stable supply system to meet the growing demand for domestic UAS is a key challenge.

(1) Performance requirements specific to UAS	(2) Lack of domestic mass production and supply infrastructure
Need to achieve lightweight, high-capacity, and high-output performance Difficult to repurpose general-purpose batteries	Stable domestic mass production system is not yet establishedDependence on supply from specific countries and risk of supply disruption

Stable supply of batteries is essential to support the mass production and maintenance of domestic UAS

Our Group's Initiatives: Building a domestic supply infrastructure utilizing NBM technology

Critical Components Influencing the Performance, Mass Production, and Supply Capacity of the Japan Sovereign UAS Platform - Battery

- Batteries are critical components that, in addition to flight time, payload capacity, and safety, determine stable supply during mass production. We position batteries as a key strategic area for the Japan Sovereign UAS Platform to achieve both optimized aircraft performance and stable procurement.

UAS Competitiveness

Achieving both aircraft performance and stable supply leads to the sustainable competitiveness of the Japan Sovereign UAS Platform.

=

Airframe Design
- Control
- Aerodynamics

×

Battery Performance
- Output
- Lifespan

×

Supply Capacity
- Mass Production
- Procurement

Influencing flight time, payload capacity, safety, and procurement stability

Background of Battery Business Consideration

1. Relying on external battery procurement limits improvements in aircraft performance.
2. Procurement constraints create bottlenecks in mass production and maintenance.

Market Size (SAM)

12.8 billion yen

*Calculated primarily for UAV

(2030 Market Size Forecast)
Calculated by the Company based on units × price
(1) Number of overseas batteries is cited from UAV battery research reports.
(2) Number of units for domestic non-defense is calculated from Ministry of Economy, Trade and Industry, Manufacturing Industries Bureau data.
(3) Domestic defense is calculated from the number of units in (2) × global ratio (defense / non-defense).
(Replacement demand also considered)
Prices are calculated based on competitor pricing.

Leveraging Strengths Cultivated Through UAS Development and Operation for the Battery Business

- Promoting development and optimization from the component level, including joint development with component manufacturers, to achieve miniaturization, power saving, and low latency for UAS. Our strength lies in our technical capability to design aircraft and components as a single unit, and our ability to reflect requirements obtained from actual operation in product development.

(1) Development and Optimization Capabilities from the Component Level

Technical expertise and knowledge gained from optimizing aircraft, control systems, and components as a single unit, including joint development with component manufacturers, to achieve miniaturization, power saving, and low latency.

Expansion into the development of key components such as batteries

(2) Actual Operation in Special Environments

Operational experience in indoor, confined, dark, and non-GPS environments, and understanding of requirements for flight time, power output, and safety.

Reflecting field requirements in product specifications

(3) Commercialization and Customer Touchpoints

Demonstration and implementation experience in infrastructure and disaster response, and a foundation for joint development and social implementation with domestic companies.

Promoting everything from evaluation of actual equipment to supply

Leveraging Our Three Strengths in the Battery Business

Field and Customer Requirements
Knowledge of operation and implementation

→

Battery Specifications
Cell and pack requirements

→

Implementation on Aircraft
Onboard evaluation and improvement

→

Mass Production and Supply
Quality and stable supply

Reflecting requirements obtained from actual UAS operation in battery specifications to achieve continuousperformance improvement andstable supply.

Development and supply of high-performance batteries through partnership with NEO Battery Materials

- Integrating the technology and knowledge we have cultivated through development from the component level aimed at achieving small size, power savings, and low latency with NBM's cell development and manufacturing technology. We aim to develop high-performance batteries optimized for UAS applications and build a domestic supply base.

Advancing UAS battery performance requires optimization from the cell design stage

Materials/Electrodes
Higher energy density
Output improvement

→ **Cell design/manufacturing**
Customization by aircraft
Safety/lifespan management

→ **Pack/BMS**
Mounting design

→ **Implementation**
Flight time
Payload capacity

Starting point for energy density, output, safety, lifespan, and aircraft-specific optimization

NEO Battery Materials

- Pursuing higher capacity and higher output through next-generation Li-ion technology
- Consistent support from material selection to cell design and manufacturing
- Room for expansion into small, high-performance applications

Differentiation through "design from the cell"

Technology × Implementation

Liberaware / HINOTATE

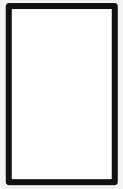
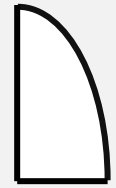
- Know-how in the development and practical operation of UAS for special environments
- Cycle of mounting, evaluation, and improvement for domestically produced UAS
- Domestic supply base expanding into defense and infrastructure sectors

Implementation capability to translate actual aircraft requirements into mass-production specifications

Key Perspectives

1. Pack design based on commercially available cells alone has limitations in optimizing capacity, output, safety, and lifespan.
2. Optimal design from the cell level, including cylindrical and pouch types, is important depending on the aircraft application.

How to view pouch and cylindrical types

Pouch type	Cylindrical type
	
Lightweight High energy density Effective for rotary-wing UAVs	Mass-producibility Stable supply Effective depending on application

Rather than choosing one or the other, it is important to use both properly according to the aircraft application

Significance of the partnership: Elevating batteries from "purchased parts" to a "common foundation for creating UAS performance"

Establishment of a Joint Venture with NBM with a View to Domestic Cell Manufacturing

- We aim to build a domestic supply foundation that supports the mass production of domestically produced UAS by combining our group's UAS development and market contact points with NBM's battery technology.

Liberaware / HINOTATE

UAS development, practical operation, and contact point for domestic demand



NEO Battery Materials

Cell development, design, and manufacturing technology

Domestic Joint Venture (JV)

Core Area Aimed For: Domestic Cell Manufacturing

Building a foundation for domestic mass production and stable supply of critical components that meet the performance requirements unique to UAS

Build a domestic supply foundation for critical components to support the mass production of domestically produced UAS

Growth of the Battery Business Driven by Mass Production Demand for Domestic UAS

- Aiming to Expand Supply Destinations to Physical AI, Robots, and More, Centered on a Supply Base for Domestic UAS

Liberaware CO.,LTD.
HINOTATE

Airframe Development, Operation, and Customer Interface

NEO BATTERY MATERIALS LTD.

Cell Development and Manufacturing Technology

Building a Supply Base with an Eye Toward Domestic Cell Manufacturing

Strengthening Mass Production, Quality, and Stable Supply

Domestic UAS Demand

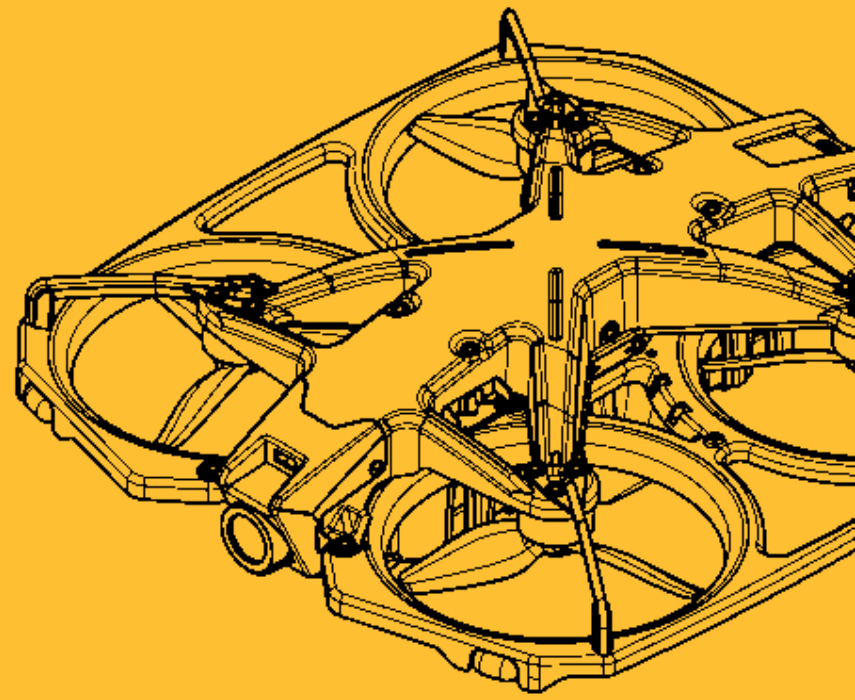
Defense, Security, and Infrastructure

Physical AI and Robots

Expanding Applications to Autonomous Mobile Robots and More

Expanding the Business to Both Domestic UAS and New Growth Markets, Starting with the Stable Supply of Critical Components

Appendix



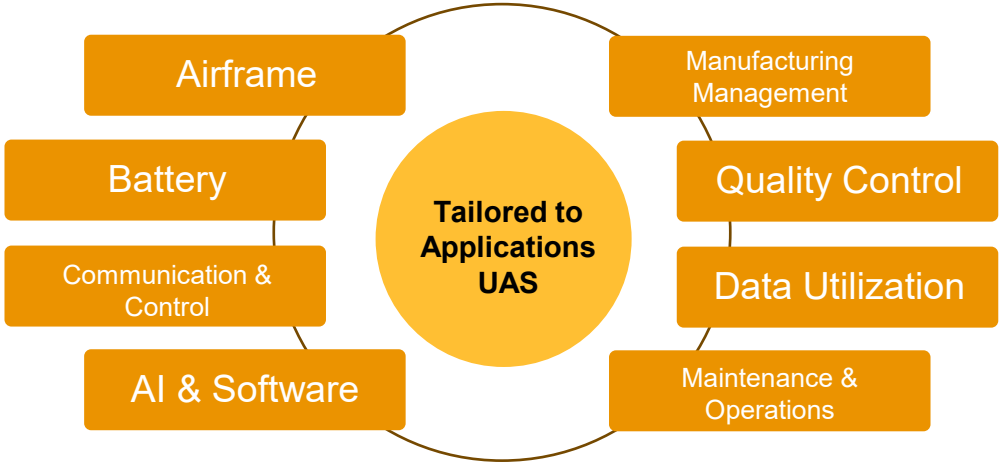
Leveraging expertise cultivated through UAS development and field operations for the Japan Sovereign UAS Platform

Rather than developing a single airframe, we have built a business foundation that continuously develops and supplies UAS tailored to specific applications by combining airframes, critical components, software, manufacturing, and operations.

Liberaware to Date

UAS Development	In-house development and manufacturing of IBIS and other products
Field Implementation	Actual operations in infrastructure, disaster, and special environments
Data Utilization	Processing and analysis of acquired data using LAPIS
Component Development	Joint development with partner companies, extending to materials and components

the Japan Sovereign UAS Platform



Our strength lies in our ability to commercialize the airframe and critical components, such as batteries, as an integrated whole, backed by our expertise in understanding the entire UAS and developing and implementing it from the component level.

The Japan Sovereign UAS Platform built by Liberaware and HINOTATE

- Deploying the airframe, software, manufacturing, and operational technology base that Liberaware has cultivated in harsh indoor and outdoor environments to HINOTATE
- Building a platform that handles everything from development to mass production and supply of domestic UAS through co-creation with domestic companies

Company Name	Number of Employees/ Engineers	Drone Capabilities			
		Indoor Outdoor	Hardware Development	Software Development	Manufacturing
Liberaware	**155/77**	**Joint Support**	●	●	●
Company A	130/Undisclosed	Mainly Outsourced	▲	▲	-
Company B	60/30	Mainly Outdoor	▲	●	-
Company C	20/Undisclosed	Outdoor Only	●	●	-
Company D	60/Undisclosed	Outdoor Only	●	●	▲
Company E	80/Undisclosed	Outdoor Only	●	▲	-

Our Strengths

1. Integrated development capabilities from hardware to software

   In-house development of airframe design, control, and software, enabling rapid improvements tailored to specific applications

2. Technology and manufacturing capabilities cultivated in harsh environments

   Accumulated airframe and manufacturing expertise through actual operations in challenging environments such as indoor, confined, and non-GPS areas

3. Track record of social implementation with diverse partners

   Joint development and demonstration with infrastructure operators, local governments, and large enterprises,
   accumulating the ability to connect technology to practical applications

Our Competitive Advantage = Integrated capabilities in development, manufacturing, operation, and social implementation necessary to realize the Japan Sovereign UAS Platform

Growth Roadmap for the Japan Sovereign UAS Platform Business

- We aim to improve the overall profitability of the platform by establishing a mass production and supply base in the defense and security sector, expanding that manufacturing base to the civilian sector, and further expanding the external sale of key components.

Through the construction of a circular supply chain...

the Japan Sovereign UAS Platform to improve the overall profitability of the Japan Sovereign UAS Platform.

Liberaware CO.,LTD. × HINOTATE

Handling the development, mass production, and key components of domestic UAS to become a core platform.

Building a Circular Supply Chain

1 Establishing a track record of adoption and mass production in the defense and security sector.

- **Aiming for adoption in ISR* and other applications, we are building a system for aircraft development, mass production, quality control, and stable supply.**
- **Reducing manufacturing costs and improving parts procurement capabilities by securing production volume.**

2 Horizontal expansion of the mass production base to civilian and existing businesses.

- **Expanding the manufacturing and procurement base built in the defense sector to disaster prevention, infrastructure inspection, and other fields.**
- **Passing on cost reductions and improved procurement capabilities from increased production volume to enhance the competitiveness of existing Liberaware products.**

3 Expanding profit opportunities through the external sale of key components.

- **Utilizing key components such as batteries in our own aircraft while selling them to domestic and international UAS manufacturers.**
- **Improving the overall profitability of the platform by creating a cycle of increased production volume and cost reduction.**

Note: *Abbreviation for Intelligence, Surveillance and Reconnaissance. Refers to activities that use UAS, etc., to collect information, monitor, and conduct reconnaissance from the air.

Notes Regarding This Material

- Forward-looking statements included in this material (including, but not limited to, our business plans, market size, competitive landscape, industry-related information, and growth potential) are based on our judgments and available information as of the date of this material. They do not guarantee future performance and involve various risks and uncertainties. Please note that actual results may differ from these forecasts due to changes in the environment and other factors.

- This material contains information regarding matters other than our company, such as information concerning our competitive environment, industry trends, and changes in general social structures. Such information is cited from publicly available sources, and we have not independently verified the accuracy, rationality, or appropriateness of this information and do not guarantee any of it.

- This material is intended for informational purposes only and is not intended as an invitation or solicitation to invest in securities issued by the Company.