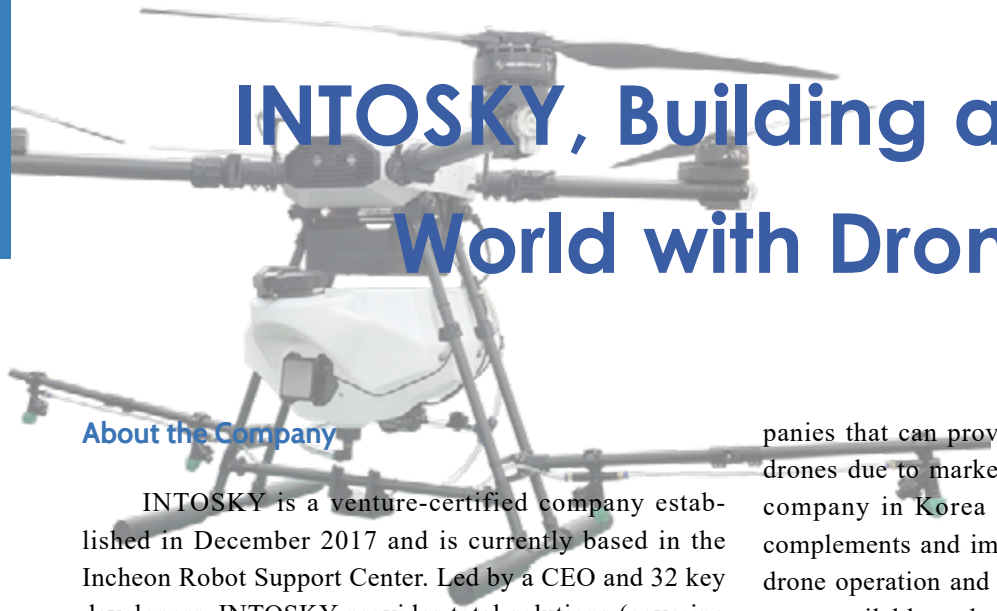

INTOSKY, Building a Better World with Drones

About the Company

INTOSKY is a venture-certified company established in December 2017 and is currently based in the Incheon Robot Support Center. Led by a CEO and 32 key developers, INTOSKY provides total solutions (covering mass production, distribution, and after-sales service) based on AS9100, a widely adopted and standardized quality management system for the aerospace industry. It is an industrial drone manufacturing startup that has ranked first in drone production volume in Korea within two years of entering the market.

INTOSKY manufactures and sells agricultural drones and provides high-quality after-sales service, commanding 15% of the Korean agricultural drone market. Based on its specialized manufacturing processes and production know-how and capacity to produce more than 2,500 drones, INTOSKY has particular strength in manufacturing medium and large-sized drones for industrial use. INTOSKY is leveraging its rapid growth to actively target global markets such as Japan, India, Southeast Asia and Africa.

Background

In line with the rapid modernization of agriculture brought on by the aging of rural population and the introduction of drone-friendly policies including the provision of subsidies, Korea's agricultural drone market is growing by more than 30% annually, and is expected to surpass KRW 200 billion by 2025. The global drone market is expected to reach USD 30 billion in 2025.

The introduction of drones to agricultural works that require hard labor is alleviating the workload and dramatically improving productivity. However, drones are often damaged as they are not handled properly in aged rural communities or operated by inexperienced operators while there are only a limited number of companies that can provide after-sales service for damaged drones due to market limitations. INTOSKY is the only company in Korea that provides a total solution that complements and improves the shortcomings of existing drone operation and piloting skills and makes the equipment available at the right time.

About the Product

To tackle difficulties in steering and operating drones, INTOSKY has developed and is commercializing 'autonomous avoidance flight technology' that automatically avoids obstacles, 'cadastral map-based automatic pest control system' for convenient one-click operation, and 'ON Base RTK technology' for stable flight.

To effectively use drones, you need highly-skilled steering technique. Any misjudgment can cause a collision or accident. The 'autonomous avoidance flight technology' analyzes data acquired from various sensors using INTOSKY's algorithm so that the drone can evade obstacles existing in the configured route. The technology reduces the burden and stress steering for inexperienced pilots and prevents collisions or accidents.

INTOSKY is also a leader in precision agriculture enabled with information and communication technology. The objective of precision agriculture is to maximize high-quality crop production while reducing environmental pollution by keeping track of crop conditions and calculating optimal fertilizers, pesticides and others through analysis.

The 'cadastral map-based automatic pest control system' is a highly convenient technology that utilizes Naver Maps to meet the realities of Korean farming communities. With just a click on a cadastral map, the technology automatically generates routes and calculates the chemical doses, and automatically handles pest control. Various options are available to increase user convenience, and INTOSKY's own control system comprehen-

sively manages various records such as flight date, time, and route, as well as task assignment and pest control status without having to install a separate program.

As a drone flies by estimating its own location, it may crash when there is interference in the magnetic field. 'ON Base RTK technology' is an innovative technology that minimizes magnetic field interference from motors, transmissions, and other surrounding environments in order to greatly reduce the likelihood of a crash. The advantage is that the technology help set a precise heading without having to calibrate the electronic compass. The ultra-precise GPS technology can be used in various location-based services to improve accuracy of real-time positioning, efficiency and usability compared to conventional GPS.

INTOSKY's 'cadastral map-based automatic pest control system' and 'ON Base RTK technology' have already been commercialized and installed in products from 2023. The 'autonomous avoidance flight technology' will be unveiled in various drone competitions and exhibitions from March 2024 for AI training.

Competitive Edge and Business Strategy

INTOSKY's biggest strength is that as of 2023, it is the only company in Korea whose repair and maintenance capability has been certified by the Korea Institute of Aviation Safety Technology (KIAST) under the Ministry of Land, Infrastructure, and Transport. The stability of most industrial drones must be tested by KIAST, but INTOSKY can perform its regular inspections for the certified area. Similar to regular inspections for cars, drones are inspected every two years, and INTOSKY can cover the time-consuming and complex certification process on its own, so consumers can use their drones at the right time without any inconvenience.

INTOSKY's business model is a total solution encompassing mass production, distribution, and after-sales service based on AS9100 (aerospace management system). With the knowhow of having produced more than 2,500 units, 80 partnerships, and four direct sales centers, including the headquarters, INTOSKY can quickly solve any problems that arise in the process of using drones. INTOSKY's total solution is based on the principle of same-day receiving and same-day shipping, except for major repairs.

Based on customer-centered development, INTOSKY always puts customer convenience first in its business. From 2022, INTOSKY focused on R&D and human resources to develop its own technology, and has recruited nine of Korea's top drone researchers, including executives with more than ten years of experience with drones, and 10 professional engineers. These efforts enabled INTOSKY to provide quick feedback to improve usability and modify drone performance. Currently, it has a mass production system of making high-quality drones and a distribution network to deliver its drones in a timely manner, as well as its after-sales service function that minimizes user inconvenience.

Future Plans

Korea

· Building/Structure Management
- PoC projects
- Reviewing the introduction to government agencies and offices
- NDA signing with a semi-public organization
- Demonstration project with a local government planned

· Fire Protection
- PoC projects
- MOU signing with Taean Fire Department
- Smart city regulatory sandbox demonstration project planned

Overseas

· Partnerships
- Seeking partnership models and building partnerships with capable companies in various countries to expand local markets
- Exported to Chile, Australia, Rwanda, and Taiwan in 2023
- Plans to export products to India, Philippines, Indonesia, and Malaysia in 2024

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** The opinions expressed in this article are the author's own and do not reflect the views of KOTRA.*