

# News Release

## 2023.4.27

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New Energy and Industrial Technology Development Organization (NEDO)  
NEC Corporation  
NTT DATA Corporation  
Hitachi, Ltd.

### *New International Standard for Drone Traffic Management Systems – Aiming for the safe and efficient operation of drones –*

Japan's New Energy and Industrial Technology Development Organization (NEDO), NEC Corporation (NEC), NTT DATA Corporation (NTT DATA) and Hitachi, Ltd. (Hitachi) are promoters of the standardization of the functional structure of unmanned aircraft system traffic management (UTM) in association with NEDO's "Drones and Robots for Ecologically Sustainable Societies project (DRESS project)." On April 26, 2023, the International Organization for Standardization (ISO) officially published the international standard; "ISO 23629-5 UAS traffic management (UTM) – Part 5: UTM Functional Structure."

In 2017, NEC, NTT DATA and Hitachi, were commissioned to undertake this NEDO project, and a standardization proposal from Japan was adopted in 2020 after undergoing international coordination and other efforts.

The newly adopted international standard will enable stakeholders involved in drones around the world to discuss them using the same terms, which will accelerate global technology sharing and the safe implementation of drones.

## 1. Overview

UTM is currently being developed worldwide for the safe implementation of drones. In Japan, the enforcement of the revised Aeronautical Law from December 5, 2022 has resulted in a lifting of the ban on "Level4" flight (Flying unmanned aircraft remotely in an inhabited area with no visual line of sight on the ground), which has led to environmental improvements surrounding the use of drones and the research and development of drones is becoming more active. However, different definitions and functional structures related to UTM in each country have made it difficult to communicate based on a global common understanding.

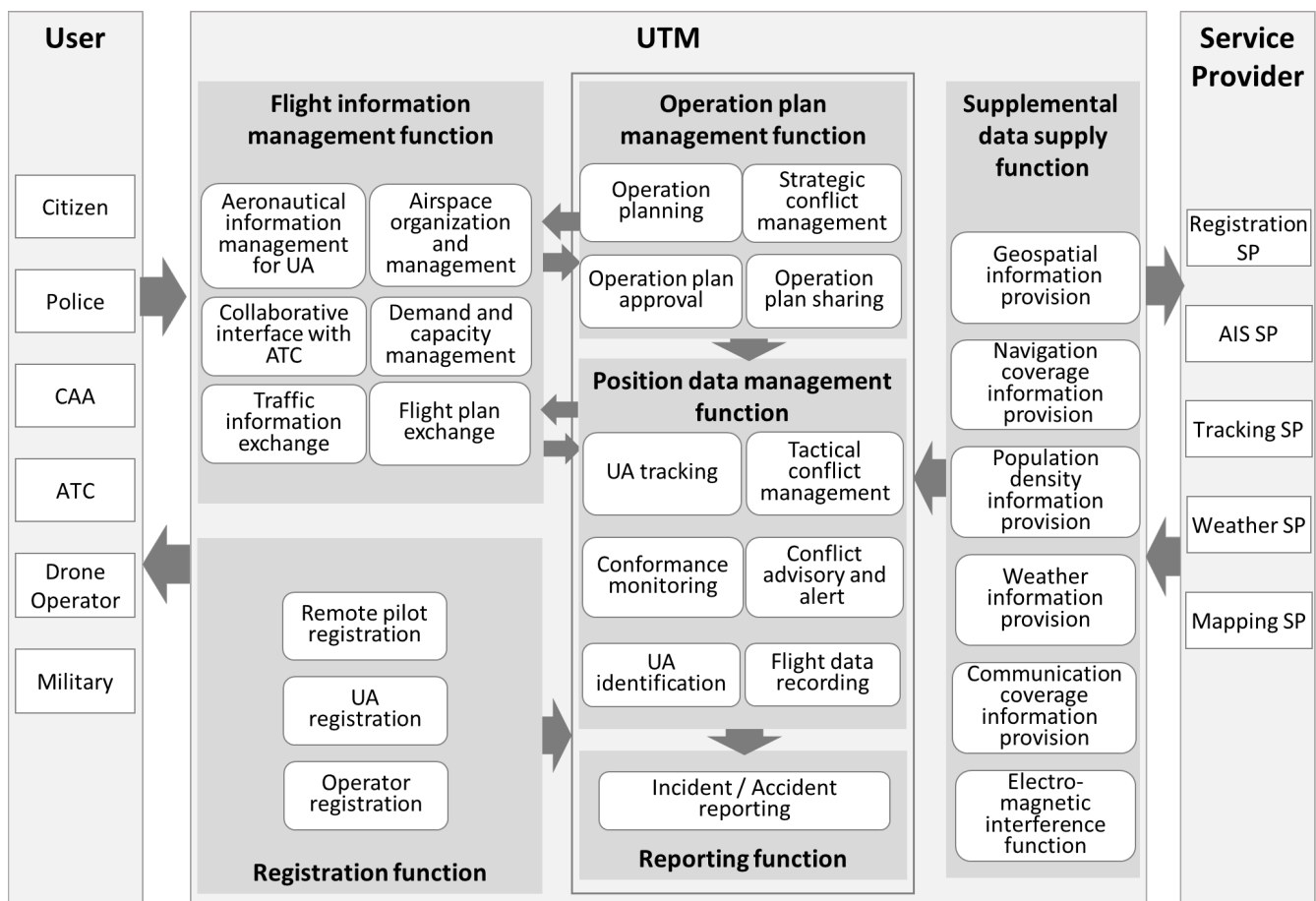
As part of NEDO's "Drones and Robots for Ecologically Sustainable Societies project (DRESS project),"\*<sup>1</sup> NEC, NTT DATA and Hitachi have been working on standardizing of the functional structure of UTM since 2017. The standard originally proposed by Japan\*<sup>2</sup> has now been formally adopted and issued by the ISO\*<sup>3</sup> as the international standard "ISO 23629-5 UAS traffic management (UTM) – Part 5: UTM Functional Structure."

By internationally standardizing the functional structure of UTM, stakeholders involved in drones worldwide will be able to discuss the functions required for operation control in commonly defined words. Stakeholders involved in drones around the world will now be able to effectively share information on the development and operation of drones without discrepancy, in various aspects including details on system architecture, the functions implemented among stakeholders and the procurement of systems.

## 2. About the standard

UTM requires multiple systems and services to work together. ISO 23629-5 specifies a structural arrangement of the functions that UTM should provide and the relationships between the various functions so that drones can be operated safely and efficiently.

According to ISO 23629-5, UTM are organized into six functional categories, the Registration function, Flight information management function, Operation plan management function, Position data management function, Reporting function, and Supplemental data supply function.



UTM functional structure

### **3. Role of each company**

NEC: Establishment of standards for the Operation plan management and Supplemental data supply functions

NTT DATA: Establishment of standards for the Registration and Flight information management functions

Hitachi: Establishment of standards for the Position data management and Reporting functions

### **4. Future Plans**

Going forward, it is expected that stakeholders involved in drones around the world will proceed with the development of UTM based on this international standard. NEC, NTT DATA and Hitachi will continue to support secure, safe and efficient drone operations and to utilize the functions provided by UTM throughout a variety of drone-assisted industries, such as logistics, inspection, and surveying. Moreover, the three companies aim to contribute to building a convenient and safe air infrastructure while playing a part in solving social issues.

[Reference]

Download page of the International Standard ISO 23629-5 (ISO website)

<URL : <https://www.iso.org/standard/78961.html>>

[Annotation]

\*1 Drones and Robots for Ecologically Sustainable Societies project (DRESS project)

This project is aimed at realizing an energy-saving society through four projects that NEDO has been promoting since 2017:

(1) Development of performance evaluation methods for robots and drone devices; (2) Development of UAV Traffic Management System and collision avoidance technologies; (3) Promotion of international standards related to robots and drones; (4) Research on Advanced Air Mobility.

\*2 The standard originally proposed by Japan

Proposals were issued through Japan's Domestic Committee for International Standardization of Unmanned Aircraft.

\*3 ISO

The ISO is a Swiss-based non-governmental organization that aims to provide global mutual support for international standards.

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Information contained in this news release is current as of the date of the press announcement, but may be subject to change without prior notice.

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