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T-DROMES – Telespazio Drone Remote Operation Management & Exploitation Solution

T-DROMES is a digital platform developed by Telespazio, a joint venture between Leonardo (67%) and Thales (33%), to provide drone-based services. Through this solution, Telespazio can manage drone fleets belonging to several operators, allowing the end user to access to drones advantages solving the issue to manage the overall complex safety and regulatory workflow aspects that are fully managed by Telespazio solution. Thanks to T-DROMES, BVLOS and complex mission scenarios will be allowed to guarantee suitable level of safety, as well as the interface of the regulatory authority and relevant UTM systems.

With T-DROMES, Telespazio has implemented a “Drone as a Service” (DaaS) business model that covers, through a an integrated approach, design, planning, management and execution activities of Unmanned Aircraft Systems (UAS) missions for dedicated operations and specific application needs.

Drone missions can be managed automatically by T-DROMES throughout all the operations phases:

- Drone status monitoring in the pre-operational phase, during the mission and at the end of the mission;
- Mission planning covering all the mission design functionalities, including the interface with the Regulation Authority Systems and necessary risk assessments;
- Mission execution, for automatic remote management of the UAS mission through tracking and command and control functions: configuration of planned route, mission launch, receiving real time telemetry sending remote commands to drones;
- Mission monitor and analysis, both during the mission execution and for post-analysis purposes, including telemetry of the payload;
- Data Exploitation and Management, up to the most suitable user experience for the specific mission (drone delivery, infrastructure management, smart farming, law enforcement, emergency management), including AI applications for actionable information extraction and generation (from video and any type of imaging sensor).

T- DROMES provides high levels of mission safety, being able to manage a hybrid connectivity system (satellite and terrestrial 4G/LTE, and 5G in the future) that ensures the availability and resilience of the communication channel globally through COM-BOX devices, which can be installed onboard drones.

The benefits guaranteed by the use of the T-DROMES platform span a wide range of vertical sectors, such as drone delivery, infrastructure management, smart farming, law enforcement, and emergency management.