



## Drone detection and incident handling

Police, Border Guards, Defence Forces

Full air/ground situational awareness

Automated incident handling and optimised workflows

Multi-location and multi-operator coordination

# Drones pose a threat to safety and security

The growing use and availability of drones has created new technical and organisational challenges for law enforcement and military units. In particular the unlawful use of drones threatening events or infrastructure, smuggling goods across borders, or spying on governmental authorities is posing a new threat. Recent incidents have spotlighted this security gap and highlighted the urgent need for a comprehensive solution that deals with drone detection and incident handling.

## Customer needs

### Perimeter protection

In the protection of camps, airfields and critical infrastructure, drones create a new threat to operations. Integrating drone detection with existing air defence systems protects existing investments while creating comprehensive situational awareness for drone incidents.

### Border security

Drones present a significant threat to border guards who are responsible for the security of large geographic areas. Immediate detection of drones and their operators, agile counter-measures, and efficient incident handling procedures are critical.

### Event protection

At events, authorities face the threat of direct or collateral damage by drone accidents or drone attacks. The response by law enforcement units needs to be coordinated across all supporting agencies integrating mobile units, decision makers and multiple sensor and effector systems.

## Operational and technical requirements

The large variety of drones in terms of size, technology and capability create a challenge for drone detection. In large geographical areas, and in increasingly congested airspace, traditional sensors alone cannot reliably detect drones.

Therefore, a robust drone detection solution must fuse data from a wide variety of sources to create an accurate picture including:

- Primary sensor systems for drone detection
- Visual observations of ground staff
- Link to unmanned traffic management (UTM) systems to differentiate non-cooperative and cooperative drone traffic
- Overall air traffic and detection of conflicts
- Blue force tracking of law enforcement units for automated dispatching

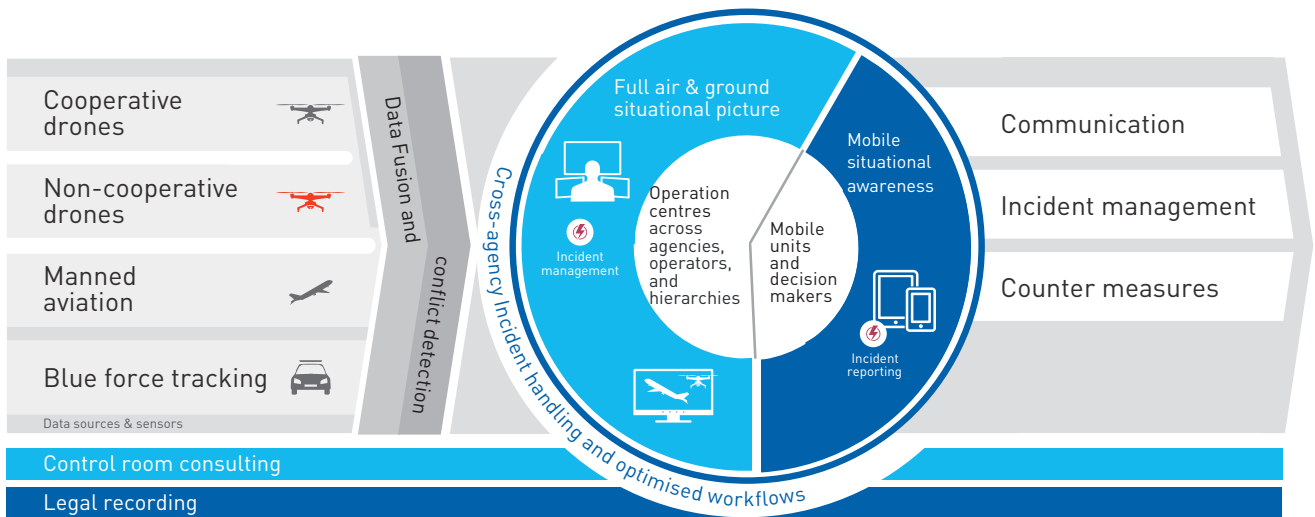
Due to the speed and flexibility of drones, reaction and resolution times are short. For that reason all involved agencies at all levels (e.g. mobile staff, operation centres and decision makers across multiple locations) need to be connected through a shared cross-agency incident management system with integrated communications.

Solutions must take into consideration best practice from air defence and air policing including:

- Trusted air situation and IFF
- Integrated communications and data exchange
- Cross-agency incident management
- Resource management of staff and effectors
- Legal recording for investigation and documentation

# Reliable detection and minimised resolution time

Frequentis' goal is to ensure an efficient management of drone incidents. The solution delivers a comprehensive situational picture by fusing all available data feeds: cooperative drones, non-cooperative drones (including visual observations), air traffic and blue forces. The cross-agency incident management system shares the situational picture with all stakeholders and manages communications and incidents across hierarchies, operators and locations.



## Full air & ground situation

A comprehensive data fusion creates a complete situational picture, which correlates primary sensor detection, visual observations, air/ground traffic, cooperative drones by UTM systems, and blue force tracking for direct interaction with security forces.

## Fast resolution

The incident management system connects all stakeholders across all hierarchies in multiple locations. Mobile devices allow coordination of law enforcement units and reporting of observations. Communication across all platforms is fully integrated.

## Optimised workflows

Frequentis' control room consulting ensures thorough understanding of customer needs, workflows and HMI requirements across all organizations. A tailored fit for purpose solution maximises efficiency in training and operations.

## Best use of sensors / effectors

A large selection of sensor and effector systems are available with varying capabilities. Frequentis' independent experts will ensure customers receive the most suitable systems depending on operational, technical and commercial requirements.

## Control and tasking of drones

By creating a direct link to Frequentis UTM solutions, customers can, simultaneously use their own drones to generate additional sensor information for situational awareness or to implement countermeasures against potential threats.

## Seamless extendibility

The system is fully integrated with UTM and is able to share sensor data to coordinate responses. It is built to respond to multi threat scenarios and supports full incident and crisis management by delivering a fully integrated common operational picture.

# Mature solution components used across industries

Frequentis drone detection and incident handling is based on mature solutions used operationally. The integrated solution is tested and verified in trials with customers and research programs.



**FREQUENTIS AG**  
Innovationsstraße 1  
1100 Vienna, Austria  
Tel: +43-1-811 50-0  
www.frequentis.com

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