Confederation of European Security Services

The Use of UA in Private Security

March 2017

This paper presents the ***currently envisaged uses of UA in the European Private Security Industry***.

As indicated in CoESS' previous publications[1], UA represent an interesting and useful addition to the range of technological means and equipment in use in private security services. The use of UA and are other unmanned vehicle are also consistent with the new paradigm in private security, the so-called "New Security Company"[2], whereby security agents and technology are combined into "security solutions", with a view to optimizing the service to clients and provide enhanced security.

The Private Security Industry provides an increasing range of services to both private and public clients, including in protecting critical infrastructure. CoESS therefore argues that private security, whilst being a commercial activity, serves a key purpose in protecting people and assets, and should therefore be treated differently from other types of commercial services.

The Private Security Industry sees opportunities in **three types of activities** with unmanned aircraft:

- **Supporting guards in their missions**, making them less dangerous and more efficient, using fully automated drones to carry out security missions;
- **Tracking, tracing, monitoring and responding to alerts related to drones**, in the same way as the industry already tracks land vehicles, in coordination and cooperation with air control agencies;
- **Detecting and preventing the ill use of UA's**, whether unintentional, intentional or malicious – subject to rules and regulations creating a legal basis for this type of response and the ensuing liability as a result of the latter.

[1] *Position Paper on the EASA's Technical Opinion and Position Paper on EASA's Prototype Rule - www.coess.eu Newsroom Section - Position Papers*
[2] *White Paper "The New Security Company" - www.coess.eu - Newsroom section - White Papers*

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This document aims to facilitate the EU and national decision-makers' and stakeholders' understanding about the needs of private security companies that wish to operate drones.

Annex I is a non-exhaustive list of types of operations, which could be performed with drones as soon as the legal framework allows it. This is an attempt to produce so-called **"standard scenarios"** for the authorization of operations.

These operations are described according to a number of criteria (activity, location, height range, weight, duration and explanation).

The following points are worth highlighting:

- Most of the operations described cover recognition, observation, inspection, monitoring, identification and surveillance, as well as search and rescue activities;
- A number of operations will require that they are performed in an **automatic** way, i.e. without pilot;
- When a pilot is involved, it is most likely that the flight will have to be done **beyond visual like of sight (BVLOS)**;
- **Payloads** will most of the time include a camera (digital or thermal), and/or sensors for the detection of hazards, including chemicals, smoke or other hazardous substances;
- Operations with drones are particularly suitable in **Critical Infrastructure**:
    - Several CoESS Members are exploring possibilities to use drones in **port operations**, as well as in **sensitive logistic infrastructures**. A port's operation, with its often multiple supply chains (rail, road, sea) and stakeholders, is particularly suitable for the use of UA's, as safety and security aspects are part of business processes.
- With regard to the use of UA's in a **Maritime environment**, one issue deserves particular attention, which is the application of **legislation** according to different maritime zones (national, economic, international waters). For example in the North Sea, there are 3 different areas within short distance, where different legislation applies in each area. How UA flights are governed across those different zones will need to be clear for operators.

CoESS and its UA Project Team would highly **welcome joining standing and stakeholders committees**, as appropriate, on a permanent or ad hoc basis, in order to contribute to the discussion on the integration of UA operations in the EU.

Catherine PIANA

Director General

CoESS acts as the voice of the private security industry, covering 23 countries in Europe, of which 19 in the EU, representing around 2 million licensed guards, over 42,000 companies and generating a turnover of €42M+.

The private security services provide a wide range of services, both for private and public clients, ranging from Ministry/EU Institutions buildings to nuclear plants, airports, critical infrastructure facilities, inter-modal transport hubs, public transport stations and areas, national governmental agencies and institutions (such as asylum seekers centres, public hospitals, universities, etc.).

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ANNEX I - Non-exhaustive list of type of operations

Sector	**Security - Private Security**		
Activity	**Recognition, inspection, monitoring, identification & surveillance**		
Operator	☐ Private	☒ Commercial	☐ Public
Location	☐ Indoor	☒ Outdoor	
Type	☒ Non-tethered	☐ Tethered	
	☒ < 5 kg	☐ > 5 kg (camera &/or sensors included)	
Flight	☒ Automatic	☐ With pilot	
	☐ Within VLOS	☒ Beyond VLOS	
Height	☒ below 200 ft	☐ 200 - 400 ft	☐ above 400 ft
Duration	☒ up-to 30'	☐ 30 - 60'	☐ above 1 hour
Explanations	Sites with a fenced perimeter. In case of a perimeter alarm, the UAV is automatically launched and flies to the place of the alarm following a secure path (i.e. not over working places, footpaths, car park, etc.) to send HD images to a control room. After the identification / surveillance the UAV flies back to the base, for recharging of batteries.		

Sector	**Security - Private Security**		
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Height Duration	☒ up-to 30’ ☐ 30 - 60’ ☐ above 1 hour
Explanations	Sites with a fenced perimeter. [Same as above, but operated by security officer / pilot] In case of a perimeter alarm, the UAV is launched by the pilot and flies to the place of the alarm following a secure path (i.e. not over working places, footpaths, car parks …) to send HD images to a control room. After the identification / surveillance the UAV is recovered. Flight path could include circling building, container stacks in ports, … hence BVLOS requirement.

Sector	**Security - Private Security**
Activity	**Inspection, monitoring & surveillance**
Operator	☐ Private ☒ Commercial ☐ Public
Location	☐ Indoor ☒ Outdoor
Type	☒ Non-tethered ☐ Tethered ☒ < 5 kg ☐ > 5 kg (camera &/or sensors included)
Flight	☐ Automatic ☒ With pilot ☒ Within VLOS ☒ Beyond VLOS
Height	☒ below 200 ft ☐ 200 - 400 ft ☐ above 400 ft
Duration	☒ up-to 30’ ☒ 30 - 60’ ☐ above 1 hour
Explanations	Large Sites (with or without perimeter). The UAV can be flown either covertly or overtly depending on the requirement, and can be launched either on a routine or non-routine pattern, to detect and observe the facility and surroundings. After the surveillance the UAV is recovered.

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Height	☒ below 200 ft	☐ 200 - 400 ft	☐ above 400 ft
Duration	☐ up-to 30'	☒ 30 - 60'	☒ above 1 hour
Explanations	Protection of pipelines for drinking water, combustibles … The aircraft follows at regular intervals a safe path to inspect the pipeline and the surroundings for any suspicious / dangerous activities (digging, construction ...) or for leakages. After the inspection the UAV is recovered.		

Sector	**Security - Private Security**		
Activity	**Recognition, inspection, monitoring, identification & surveillance**		
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Explanations	Protection / survey of convoys The aircraft is used to follow a moving vehicle and monitor its surroundings Example: surveillance of cash in transit vans within defined “high risk” areas.

Sector	**Security - Private Security**		
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	☒ < 5 kg	☒ > 5 kg (camera &/or sensors included)	
Flight	☐ Automatic	☐ With pilot	
	☒ Within VLOS	☐ Beyond VLOS	
Height	☒ below 200 ft	☐ 200 - 400 ft	☐ above 400 ft
Duration	☐ up-to 30’	☐ 30 - 60’	☒ above 1 hour
Explanations	Surveillance of events and sites from a higher altitude, providing support to security (public & private).		

Sector	**Security - Private Security**		
Activity	**Inspection, monitoring, patrolling, detection & surveillance**		
Operator	☐ Private	☒ Commercial	☐ Public
Location	☐ Indoor	☒ Outdoor	
Type	☒ Non-tethered	☐ Tethered	
	☒ < 5 kg	☐ > 5 kg (camera &/or sensors included)	
Flight	☐ Automatic	☒ With pilot	
	☒ Within VLOS	☒ Beyond VLOS	
Height	☐ below 200 ft	☐ 200 - 400 ft	☒ above 400 ft
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Duration	
Explanations	On-shore and off-shore visual inspections of structures and their immediate vicinity. Flight height is in function of height of object + clearance to fly over the top. Offshore wind turbines reach already over 600 ft height

Sector	**Security - Private Security**		
Activity	**Observation, recognition, inspection, monitoring, patrolling, detection, identification & surveillance**		
Operator	☐ Private	☒ Commercial	☐ Public
Location	☒ Indoor	☒ Outdoor	
Type	☒ Non-tethered	☒ Tethered	
	☒ < 5 kg	☒ > 5 kg (camera &/or sensors included)	
Flight	☒ Automatic	☒ With pilot	
	☒ Within VLOS	☒ Beyond VLOS	
Height	☒ below 200 ft	☒ 200 - 400 ft	☐ above 400 ft
Duration	☒ up-to 30'	☒ 30 - 60'	☒ above 1 hour
Explanations	All other security and safety applications with UAVs		

Sector	**Security - Private Security**		
Activity	**Search and Rescue**		
Operator	☐ Private	☒ Commercial	☐ Public
Location	☐ Indoor	☒ Outdoor	
Type	☒ Non-tethered	☐ Tethered	
	☒ < 5 kg	☐ > 5 kg (camera &/or sensors included)	
Flight	☒ Automatic	☒ With pilot	
	☐ Within VLOS	☒ Beyond VLOS	
	☐ below 200 ft	☒ 200 - 400 ft	☐ above 400 ft

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Height	☐ up-to 30’	☒ 30 - 60’	☐ above 1 hour
Duration			
Explanations	**Search and rescue operations where large pieces of land will be searched using a drone and pilot. Pre-defined automatic flight path.**		

Sector	**Security - Private Security**		
Activity	**Recognition, inspection, monitoring, identification & surveillance**		
Operator	☐ Private	☒ Commercial	☐ Public
Location	☐ Indoor	☒ Outdoor	
Type	☒ Non-tethered	☐ Tethered	
	☒ < 5 kg	☐ > 5 kg (camera &/or sensors included)	
Flight	☒ Automatic	☒ With pilot	
	☒ Within VLOS	☐ Beyond VLOS	
Height	☒ below 200 ft	☐ 200 - 400 ft	☐ above 400 ft
Duration	☒ up-to 30’	☐ 30 - 60’	☐ above 1 hour
Explanations	**Inspection of lorries and other vehicles in a port environment - Mission is to intercept refugees prior to boarding.** **Drone can be deployed manually or automatically via a droneport.**		

Sector	**Security - Private Security**		
Activity	**Recognition, inspection, monitoring, identification & surveillance**		
Operator	☐ Private	☒ Commercial	☐ Public
Location	☐ Indoor	☒ Outdoor	
Type	☒ Non-tethered	☐ Tethered	
	☒ < 5 kg	☐ > 5 kg (camera &/or sensors included)	
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Height	☒ below 200 ft	☐ 200 - 400 ft	☐ above 400 ft
Duration	☒ up-to 30'	☐ 30 - 60'	☐ above 1 hour
Explanations	**When a guard arrives at a customer site with an alarm situation - Drone is deployed as a spearhead - to inspect but still keeping the guard at a safe distance. Drone is deployed manually**		

Sector	**Security - Private Security**		
Activity	**Incident monitoring & management support**		
Operator	☐ Private	☒ Commercial	☐ Public
Location	☐ Indoor	☒ Outdoor	
Type	☒ Non-tethered	☐ Tethered	
	☒ < 5 kg	☒ > 5 kg (camera &/or sensors included)	
Flight	☐ Automatic	☒ With pilot	
	☒ Within VLOS	☒ Beyond VLOS	
Height	☒ below 200 ft	☒ 200 - 400 ft	☐ above 400 ft
Duration	☒ up-to 30'	☒ 30 - 60'	☒ above 1 hour
Explanations	The UAV will be flown during incidents to cover the site of the incident in order to get a clear view what happened and to coordinate necessary measures for reaction and intervention. After the surveillance the UAV is recovered and recharged.		

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Sector	**Security - Private Security**		
Activity	**Intervention support**		
Operator	☐ Private	☒ Commercial	☐ Public
Location	☐ Indoor	☒ Outdoor	
Type	☒ Non-tethered	☐ Tethered	
	☐ < 5 kg	☒ > 5 kg (camera &/or sensors included)	
Flight	☒ Automatic	☐ With pilot	
	☐ Within VLOS	☒ Beyond VLOS	
Height	☒ below 200 ft	☐ 200 - 400 ft	☐ above 400 ft
Duration	☒ up-to 30'	☒ 30 - 60'	☒ above 1 hour
Explanations	The UAV will carry necessary information or materials (e.g. keys) from the Alarm Reception Centre (ARC) in case of an incident to the site of the incident to meet there with the deployed guards. During the intervention on the site the drone support aerial views for management and support to the ARC. After the mission the drone flies back to the ARC and is recharged.		

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