skeydrone

Enabling safe drone operations

Drone Detection as a Service

The C-UAV Day - May 2023

Drones are becoming ever more popular

- The use of drones becomes more prevalent in our society
- The need for drone detection has become increasingly important
- Drone detection refers to the ability to detect and identify drones in the airspace
- It’s the foundation of C-UAV
- But use of Direct Remote ID will only become mandatory for newly sold UAS as from January 2024
- Until then non-cooperative Drone Detection technology will be key

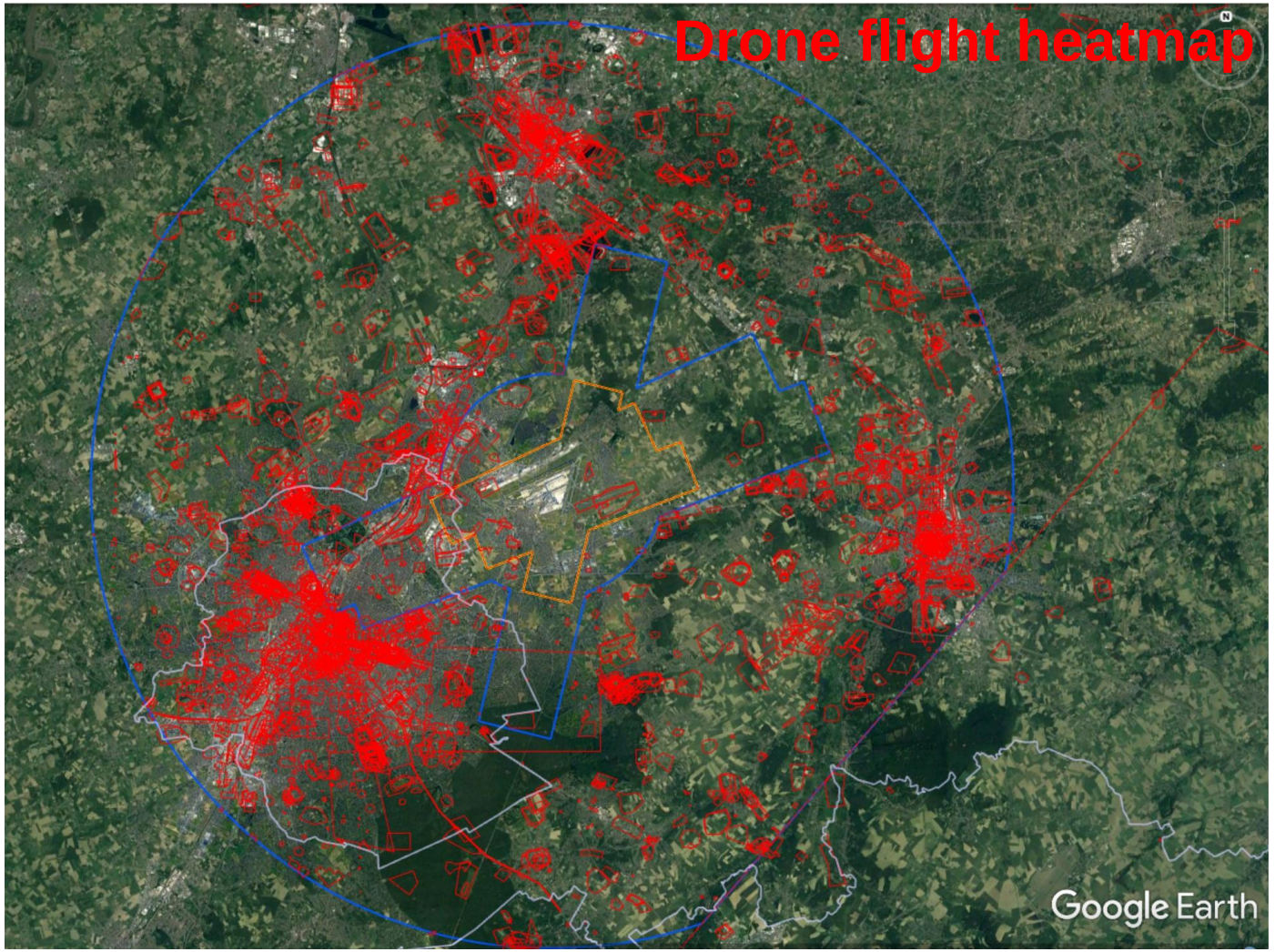
Drone Detection Technologies (non-coop)

There are several technologies for non-cooperative drone detection, the most common ones include:

- Radio Frequency (RF) Detection – 97% effective and cheap
- Acoustic Detection – only in quiet surroundings
- Radar Detection – expensive and hard to calibrate
- Optical Detection – only with clear line of sight

We have chosen Senhive's SEN-ID+

2022 Flight Authorisation stats (mayor intl. Airport)



- +/- **4.500 flight authorisations**/Yr of which +/- **450 close to the airport**
- High-density of drone flights in city centre & closeby industrial zones

Drone brands used around this public airport

95,3 %

DJI

47,5 %

MINI

AIR

MAVIC

M30

2,7 %

Privately built

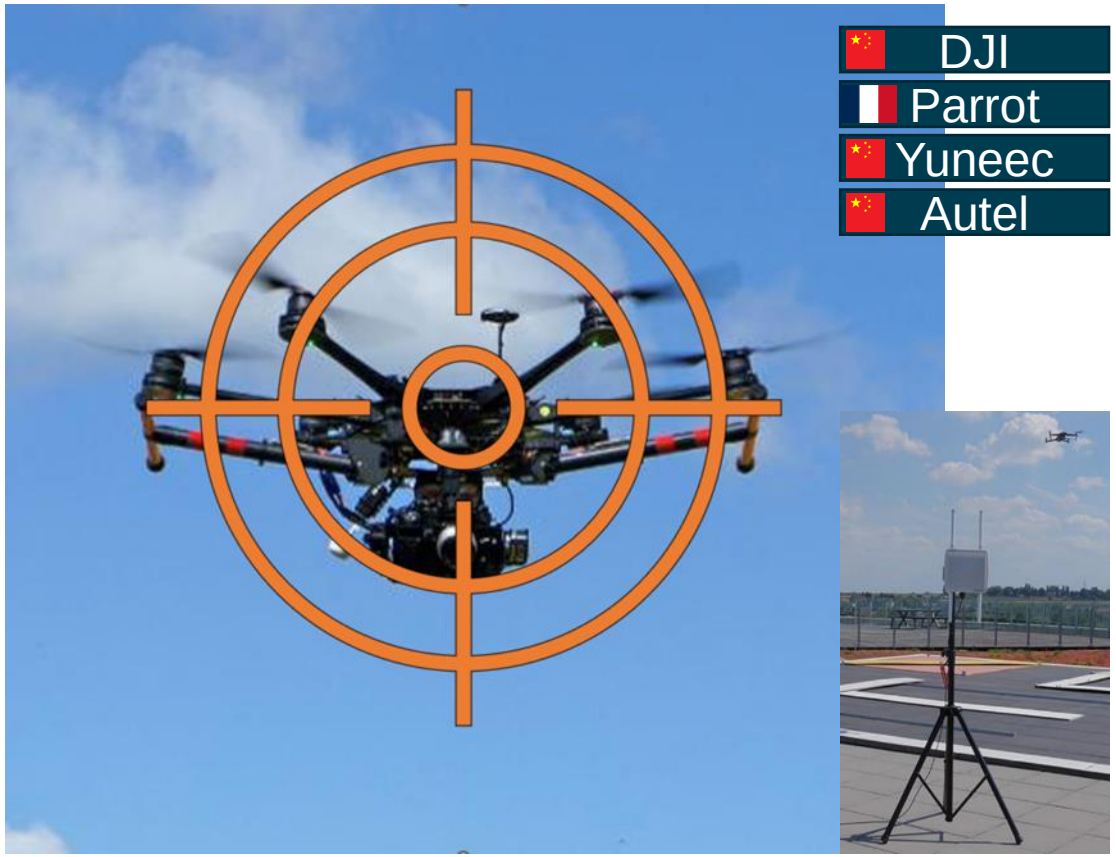
1,5 %

Parrot

0,5 %

Yuneec

Drone Detection as a Service (DDaaS)



Hardware: SEN-ID+
- Detects a wide range of drone brands (multibrand)
- Detects both RID & C2 signals
- Detection range up to 20 KM

SENHIVE

Software: Drone Radar Pro
- Configuration of alarms (eg intrusion zones)
- Integration with SkeyDrone (manned & unmanned) Traffic Information
- Barometric altitude corrections

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UTM integration
- Authorized vs non-authorized drones
- Conformance to submitted flight plan

Drone Service Application

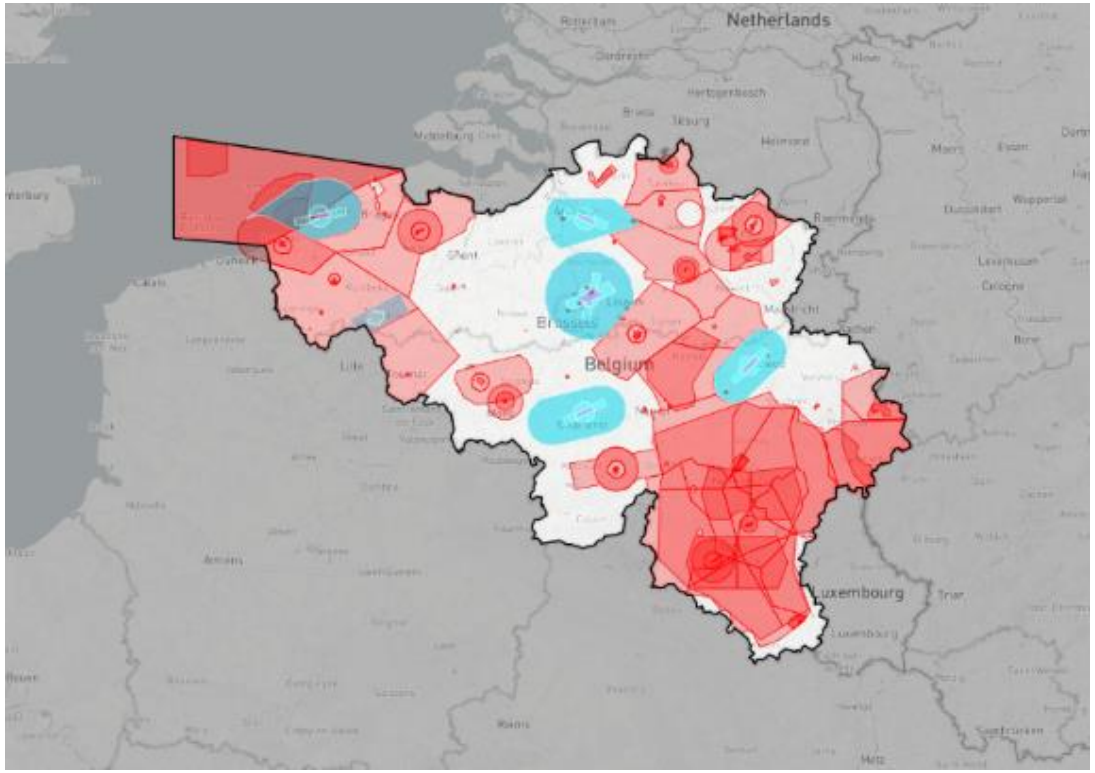
UNIFLY

SkeyDrone's drone detection allows to focus on what matters

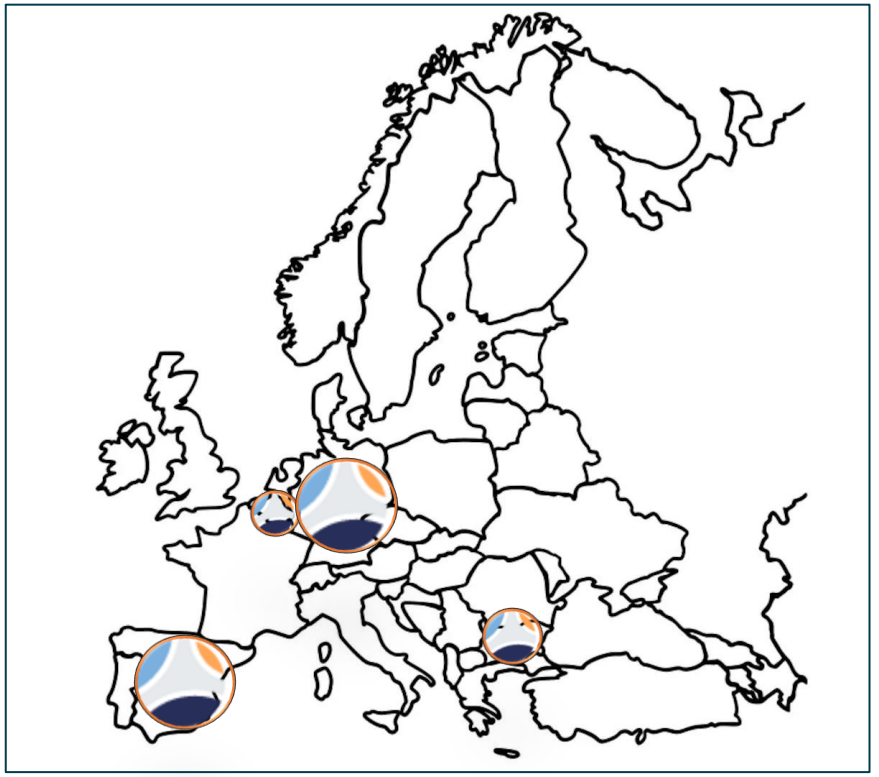
	Cooperative (RID)	Non-cooperative (C2 link)
Authorised		 **Monitor**
Non-authorised	 Auto-reporting function	 Business process integration

Current availibility: skeyes DSA & Unifly Portal

SkeyDrone DSA (used by skeyes & Belgian Defence)

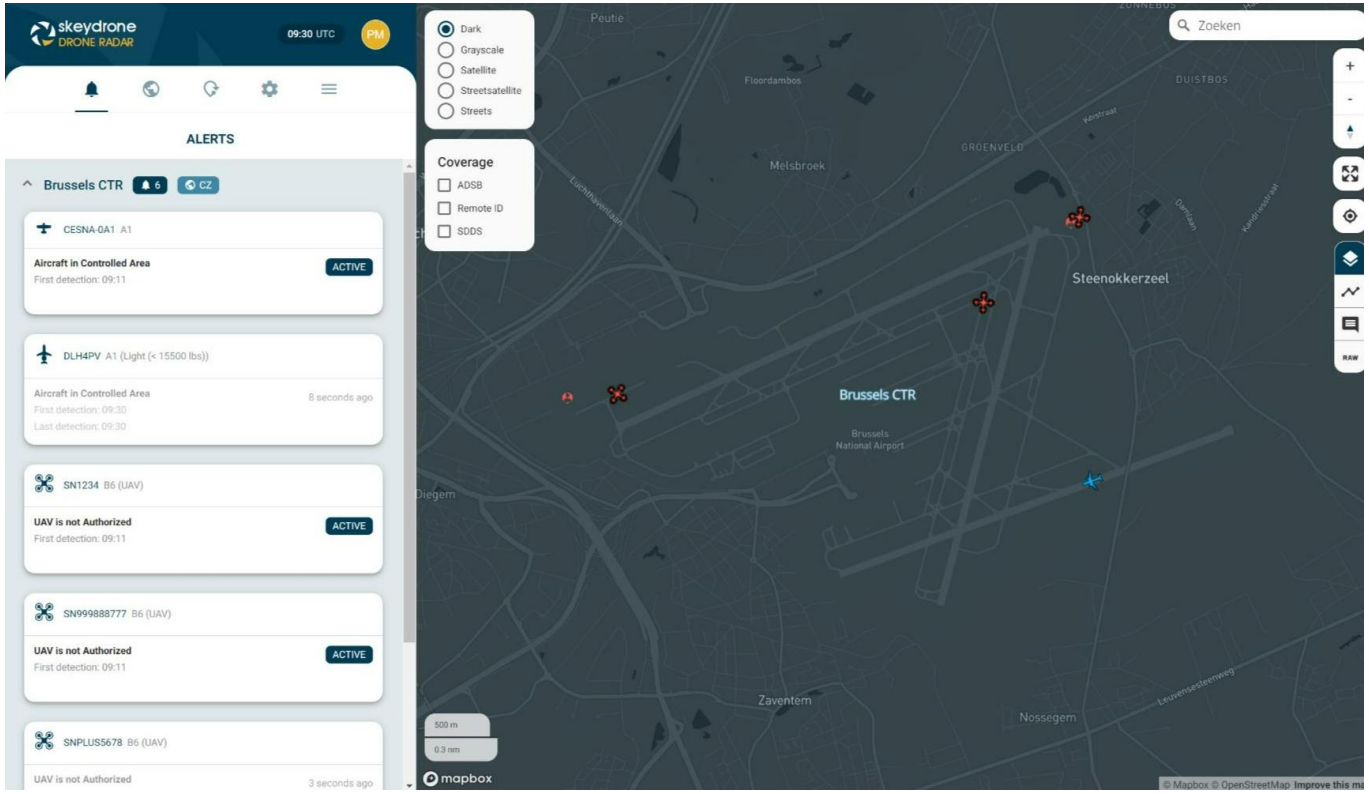


Unifly UTM

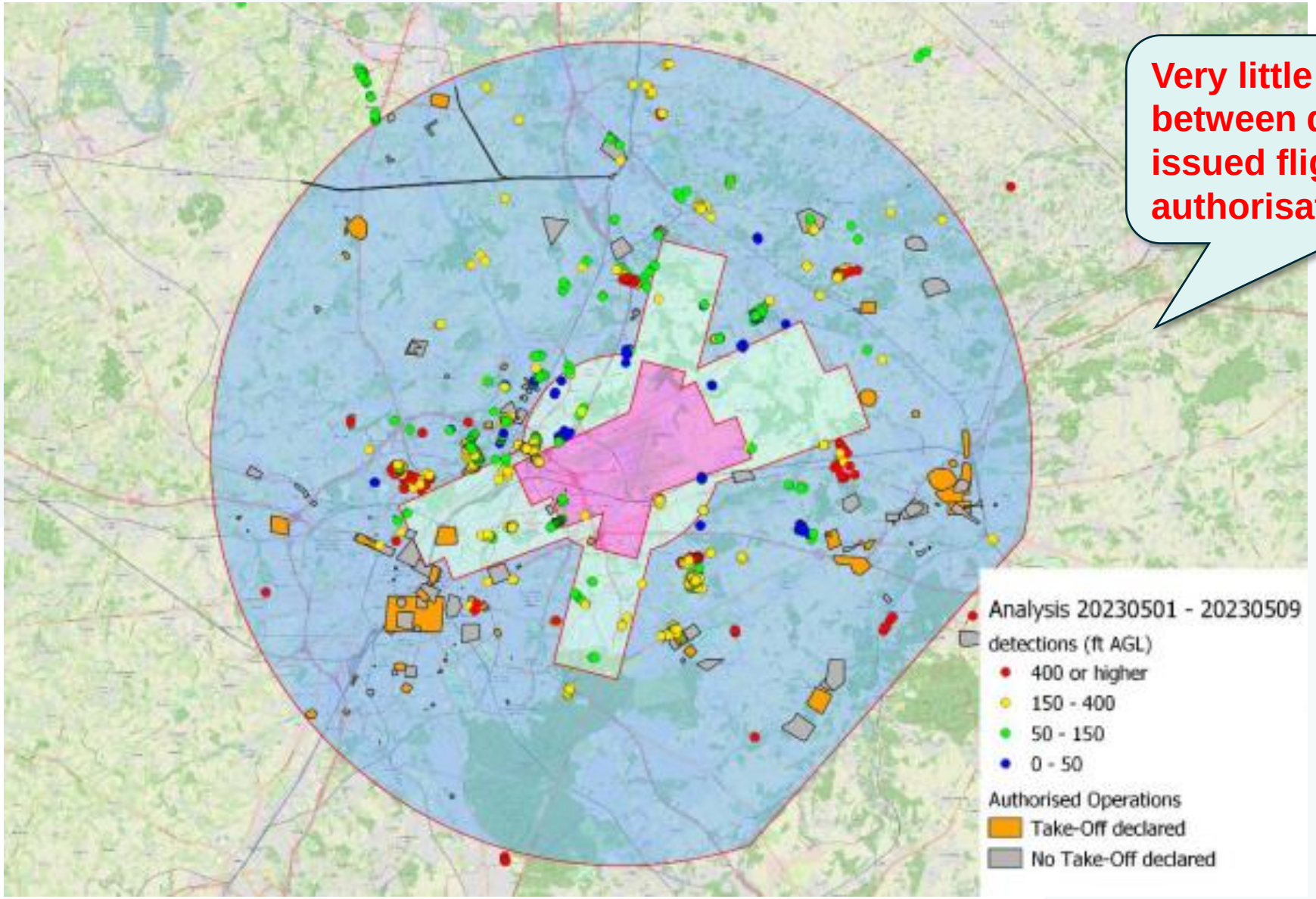


SkeyDrone DDaaS features

- Drone detections from multiple sensors are fused with SkeyDrone's **manned & unmanned Traffic** Information Service
- Visualisation of **real-time position** of drone & pilot
  - **Cooperative & non-cooperative**
  - Detection area is shown where RF protocol cannot yet be decrypted
- **Integration with UTM** to mark drones as (non-)authorised and (non-)conform to their flight plan
- Configuration of **alarms**



Drone Radar detections reporting (May ‘23)



Very little correlations between detections and issued flight authorisations!

Statistics:

8 day time period:
160 individual flights
less than **5% authorised**
(0 incidents)

Conclusion:

Most drone detections today are not uncovering an imminent threat to safety or security, but 95% of the drone operators ar either

- Clueless
- Careless

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SkeyDrone Drone Detection as a Service

- ✓ All-in-one solution
- ✓ Instant risk assessment
- ✓ Activated on demand

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Contact details: *sales@skeydrone.aero*

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