

Innovating the coordination of air operations during civil protection activities

With the growing use of UAVs during emergencies future air operations over an area of crisis **will become increasingly complex**. As UAV flights are performed rapidly and simultaneously by multiple institutions, ensuring **safety and good coordination represents a challenge**. The additional level of complexity is added by flights of human-operated aircraft.

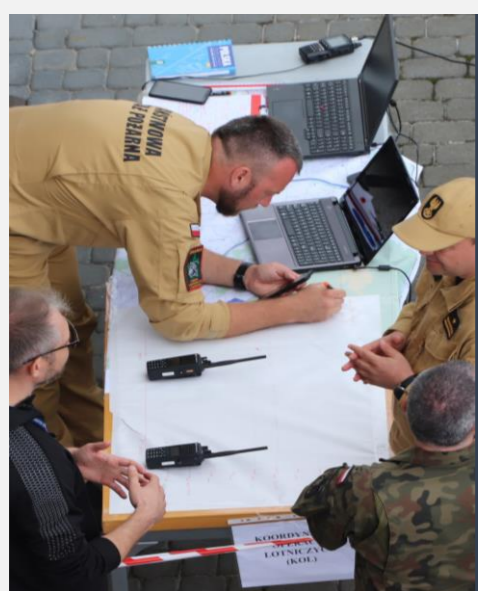


The coordination concept is an intermediate step towards use of U-space services during civil protection activities **to ensure safety and efficiency of all air operations**.

The procedural approach reflecting operational realities of emergency services represents a context in which U-space must operate.

Today **0** is the number of **used UAVs** when human-operated aircraft conduct flights.

The concept is an innovative procedural & organisational setup: establishing clearly divided roles of **Air Operations Coordinator** and **Flight Manager**



The role of **Air Operations Coordinator (AOC)** is to ensure the effective use of available UAV resources (and possibly manned aviation) to achieve the goal of the activities carried out. The role of the **Flight Manager (FM)** is separated and focused solely on ensuring aviation safety.

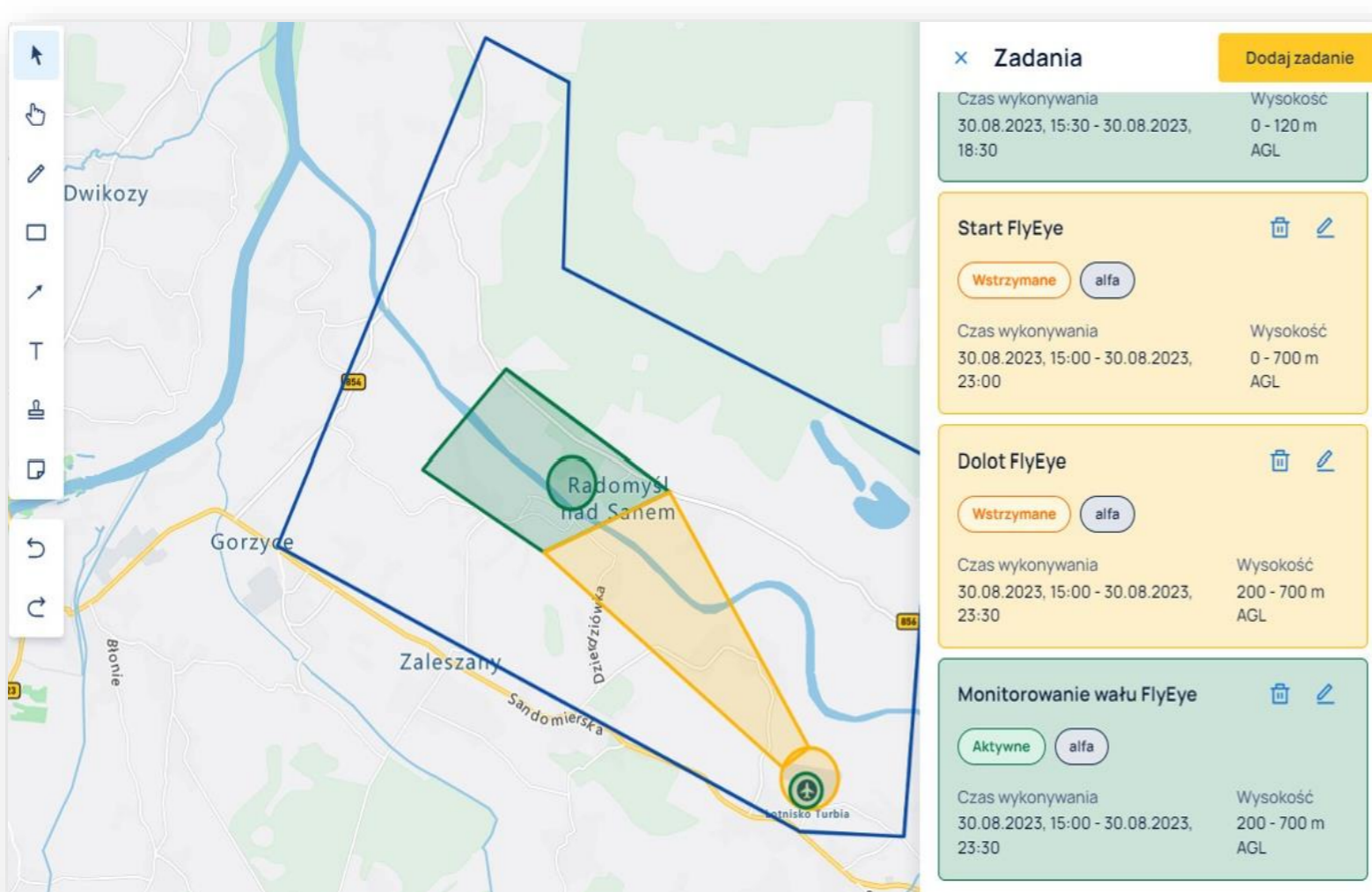


- Self-organisation
- Air Operations Coordinator
- AOC + Flight Manager



SEARCH & HELP

The tool to support flight coordination & flight management



- Situational awareness support
- Airspace segregation tools
- Resource management and tasking
- Communication tools

The concept has been operationally validated during 2 crisis management exercises in Poland:

Las 2021: forest-fire scenario – initial validation of pre-defined procedural approach, 3 „layers” of flights: tactical multirotor drones, human-operated aircraft, strategic fixed-wing drone.

Stalowa Wola HCP 2023: flood scenario – evaluation of procedures prescribing AOC and FM activities and early-beta version of the S&H system.

