Practical BVLOS Drones-as-a-service use cases for Helsinki
From planning to execution
BVLOS Operation in Urban Environment
Customisable Smart Drone with Collision Avoidance and Mobile Data Communication Capability
2D and 3D Synthesis of Layered Data for Automatic Mission Generation
BVLOS Operator Software Platform with:
- Automated Mission Generation
- UxV Fleet and Vehicle Overview
- Direct Remote Control
- Sensor Feed Distribution

UxV

OPERATOR PLATFORM

4G/5G
Operator with Hands-on Capability and Regulator Approval
5 Practical Case Examples with 5 Minute Response Time from Example Operator Location
1. Recurring Missions with Different Sensors to Create Deep Learning Source Data

Deep Learning Based Traffic Calculation

Plant Growth / Distribution / Health Detection

2. High Definition Photogrammetry to Amend Current Helsinki 3D Photogrammetry Data Sets

Photogrammetry has been done from airplane: cannot cope well with trees, shadows, interchanges, tunnels

Rule based approach can fix some of the problems but not all cases

Combination of low level drone photogrammetry missions combined with rule based data cleaning would yield best results.

Source: Sky Vantage
3. Coastal Rescue using IR Camera and Rescue Buoy

Drone reaches the location in 2 - 5 minutes from the alarm. Remote operator surveys the situation and drops the buoy at the person in distress.

If applicable, the false rescue alarm notified to service request channel.

Source: DRONExpert DJI Matrice 100 thermal marine rescue setup
4. Airborne Surveillance Camera

When security alarm goes off, it can take 20 - 30 minutes for security company to have someone to check the location.

Remote operator surveys situation and, if required designates drone to follow a vehicle or person.

Drone reaches location in 2 - 5 minutes from alarm.
5. Replace Roof Inspector

Safer snow inspection with drone

Bonus: Building Heat Loss Inspection by Address

Source: Home cannabis factory found
Any questions?