

MICRO-502_Aerial_Robotics_Notes

UAS Hardware (week9)

Drone Regulations (week9)

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Lecture notes by Yujie He

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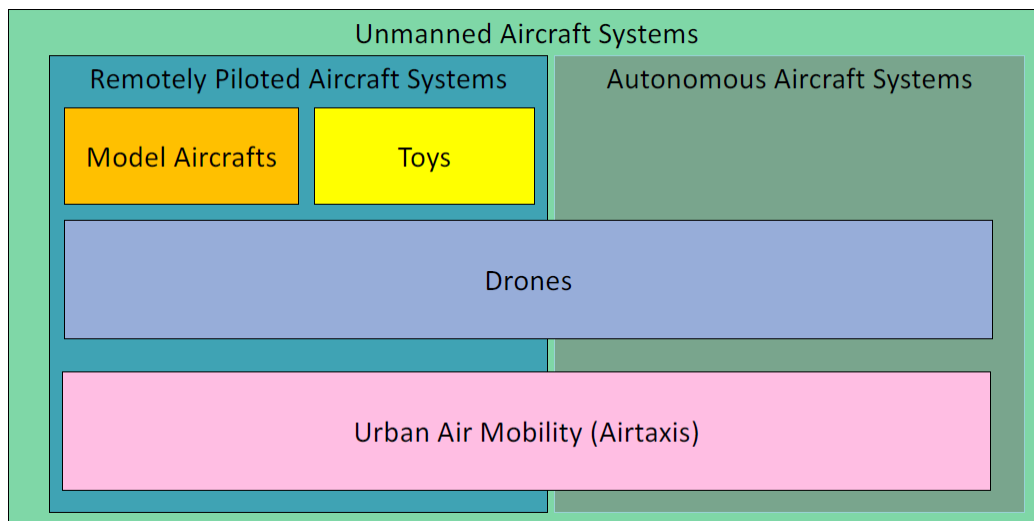
UAS Hardware (week9)

Drone Regulations (week9)

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<https://www.bazl.admin.ch/bazl/en/home/good-to-know/drohnen.html>

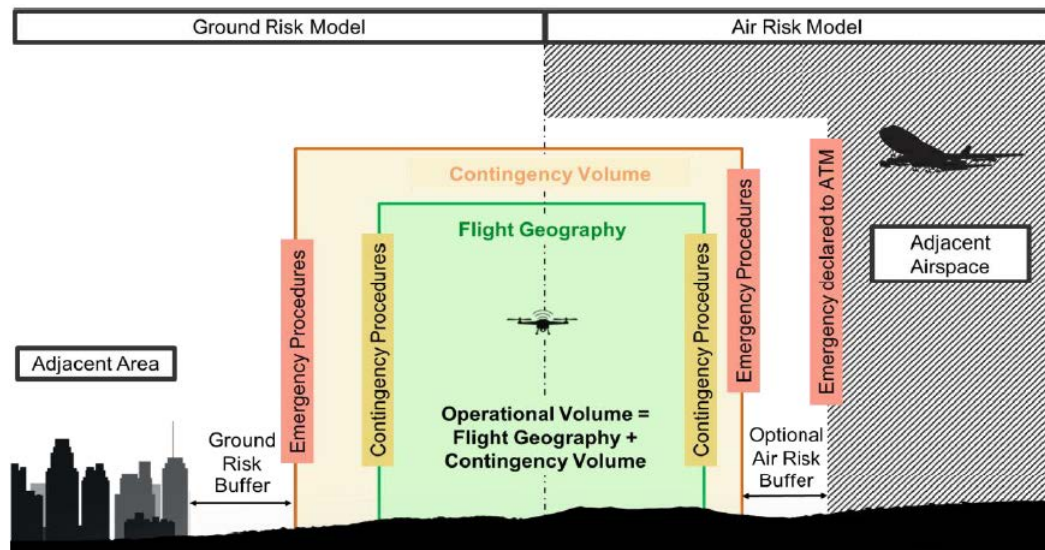
- Unmanned Aircraft Systems (UAS) \Rightarrow Drones; UAS = Remotely piloted aircraft systems / autonomous aircraft systems



- Rules in Aviation: Federal Office of Civil Aviation Switzerland
- Everything which is not forbidden is allowed -> Switzerland
Trust, less difficult for innovation
- 3 Pillar Concept / Drone Categories
 1. Open-Within the legal framework (No Authorization required)
 2. Specific-Not sufficiently safe (Authorization required)
 3. Certified-Approved to accepted standards
- Act
 - **Ordinance on Special Category Aircraft**
 - No authorization required for commercial flights
 - No distinction between Unmanned Aircraft and Model Aircraft
 - **DETEC Ordinance on Special Category Aircraft**
 - No authorization below **30kg**
 - Within direct visual contact (VLOS)
 - Not within a distance $\leq 100\text{m}$ around crowds
 - **ANSP (Skyguide) or Airport responsibility**
 - **> 5km** Distance to civil & military airports/aerodromes
 - **< 150m** AGL (Above Ground Level) within a CTR
- Act in EU
 - Open/Specific/Certified
 - Difference
 - restrictions: MTOM **25kg**
 - maximum flying altitude: **120m**
- Specific Category

*Application for an operating permit on the basis of the **SORA (Specific Operations Risk Assessment)***

Operational Volume = Flight Geography + Contingency Volume



- ? Robustness Levels: Integrity + Assurance
- U-Space

The U-space is a collection of decentralized services that collectively aim to safely and efficiently integrate drones into the airspace and enable drone operations alongside manned flight.

<https://www.bazl.admin.ch/bazl/en/home/good-to-know/drohnen/wichtigsten-regeln/ospace.html.html>

<https://www.skyguide.ch/en/events-media-board/u-space-live-demonstration/>

airspace in block to avoid collision and report the location for further path calculation