DRONES AND MICROGRIDS NOVEMBER 17, 2025

AARON SYKES

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Current:

Flight Operations Project Manager

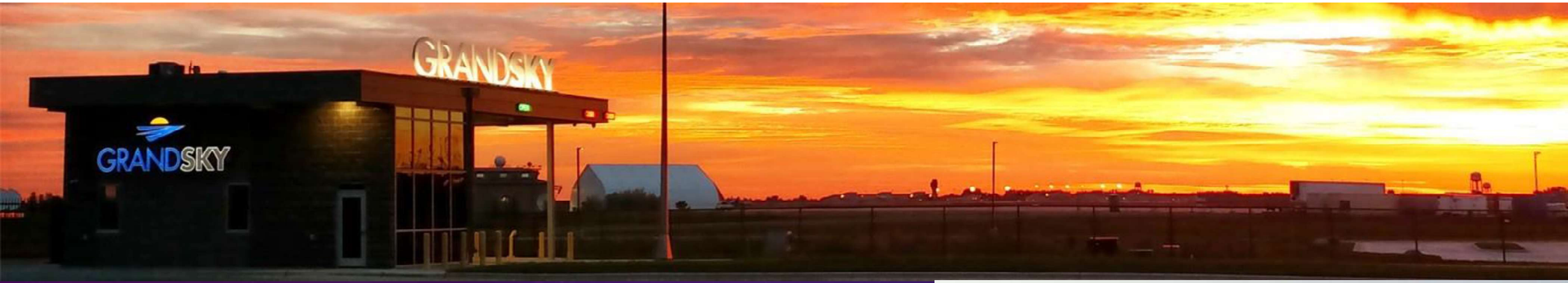
GrandSKY

Previous:

Assistant Director, NCAT

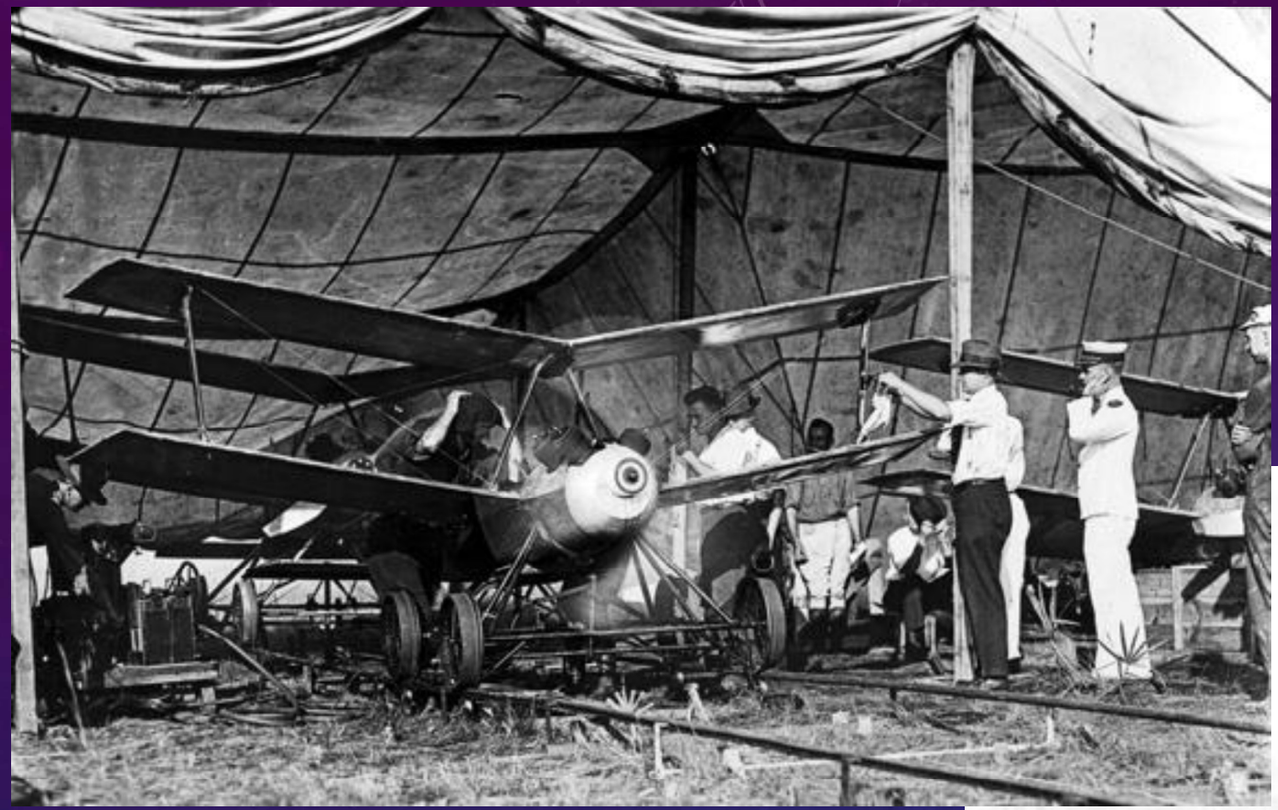
Owner, Solutions 101 LLC

Founder, MAVMeetup

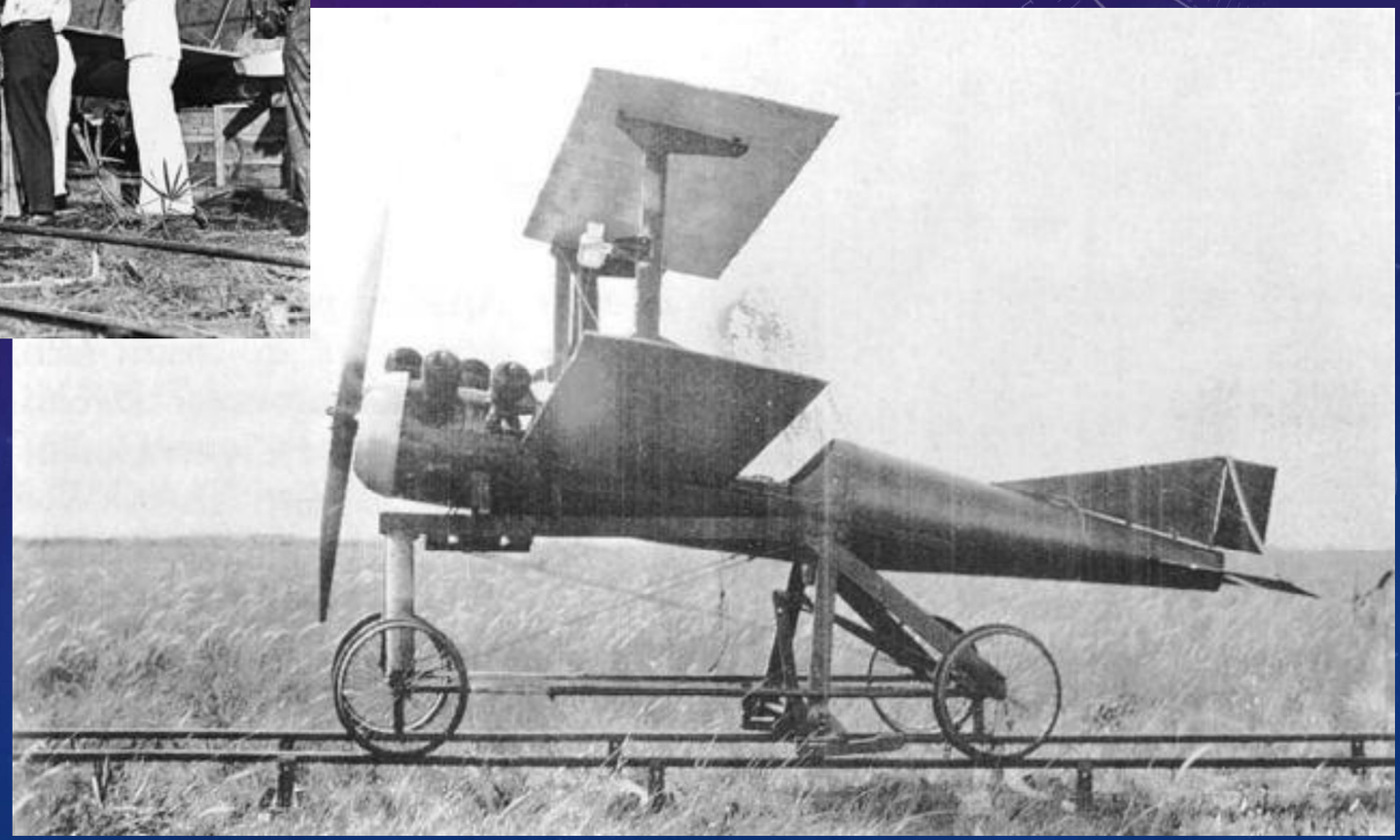


- Located at Grand Forks Air Force Base
- 217 Acres, with Runway Access
- BVLOS Operations
- Current Operations and Tenants
  - Northrop Grumman
  - General Atomics
  - NOAA Weather Drone CRADA
  - Project ULTRA

FIRST DRONES



1918
KETTERING BUG



UNCREWED SYSTEMS

Unique Opportunity

- Innovative
- Iterative
- Limited Human Risk

Ultimate Value

- Mobile Data Collection Platforms
- Flying Computers

CURRENT OPERATIONAL FRAMEWORK

Federal Aviation Regulation Part 107

- Under 400’ AGL
- No operations over people, infrastructure
- No operations in vicinity of airports (without prior coordination)
- Within Visual Line of Sight
- Under 55 lbs GTOW
- “Don’t be THAT guy”

Waivers are exception, not the rule

THE PLATFORMS

Airframe

- Multi-rotor
- VTOL
- Fixed Wing

Propulsion

- Electric
- Hybrid

Manufacturers

- DJI
- Everyone Else
  - Skydio

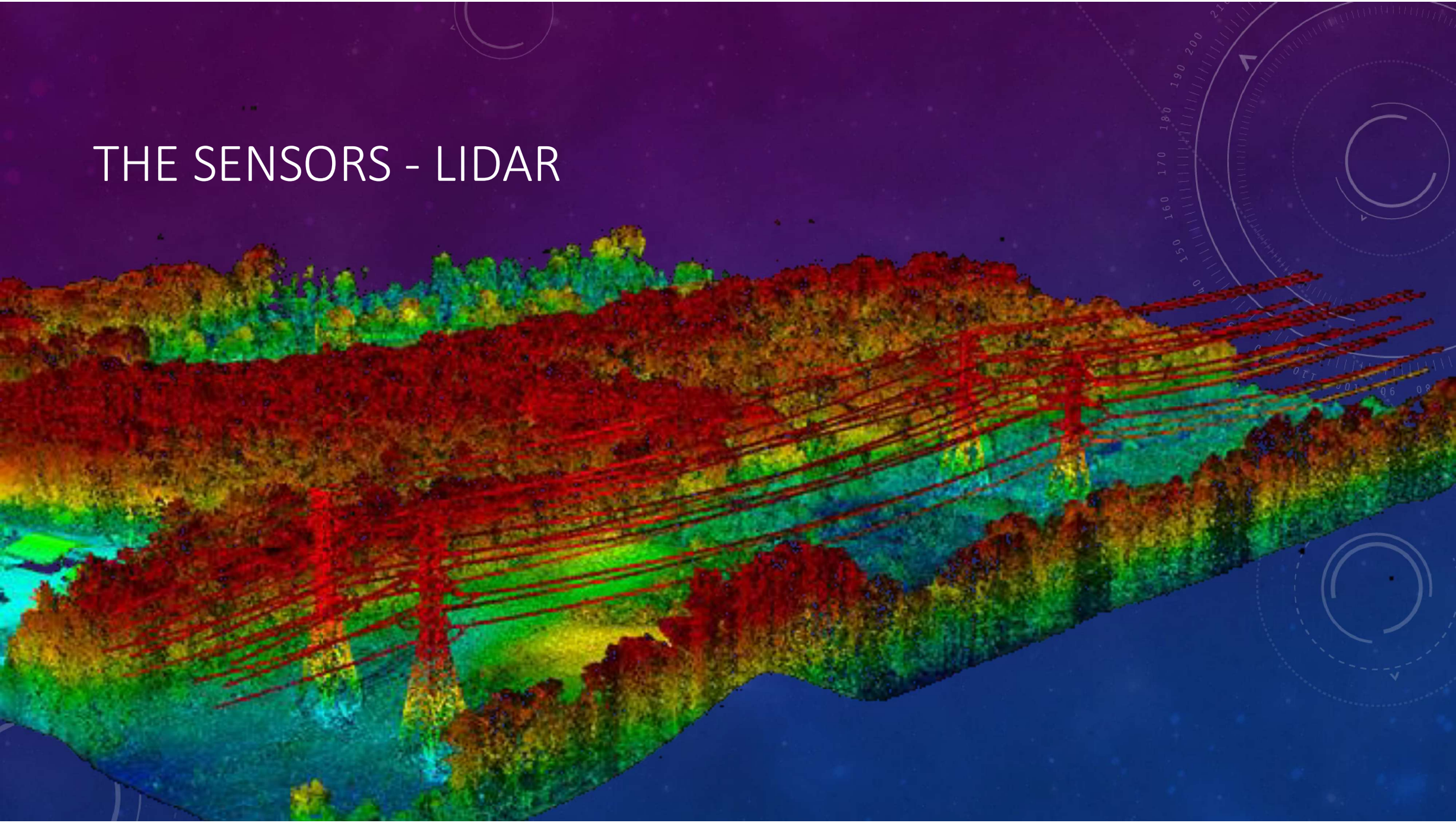
The Pending Cliff – 23 Dec 2025

- DJI Ban
- NDAA/Blue List Compliance

THE SENSORS - THERMAL

THE SENSORS
RGB IMAGERY
ORTHOMOSAICS

THE SENSORS - LIDAR



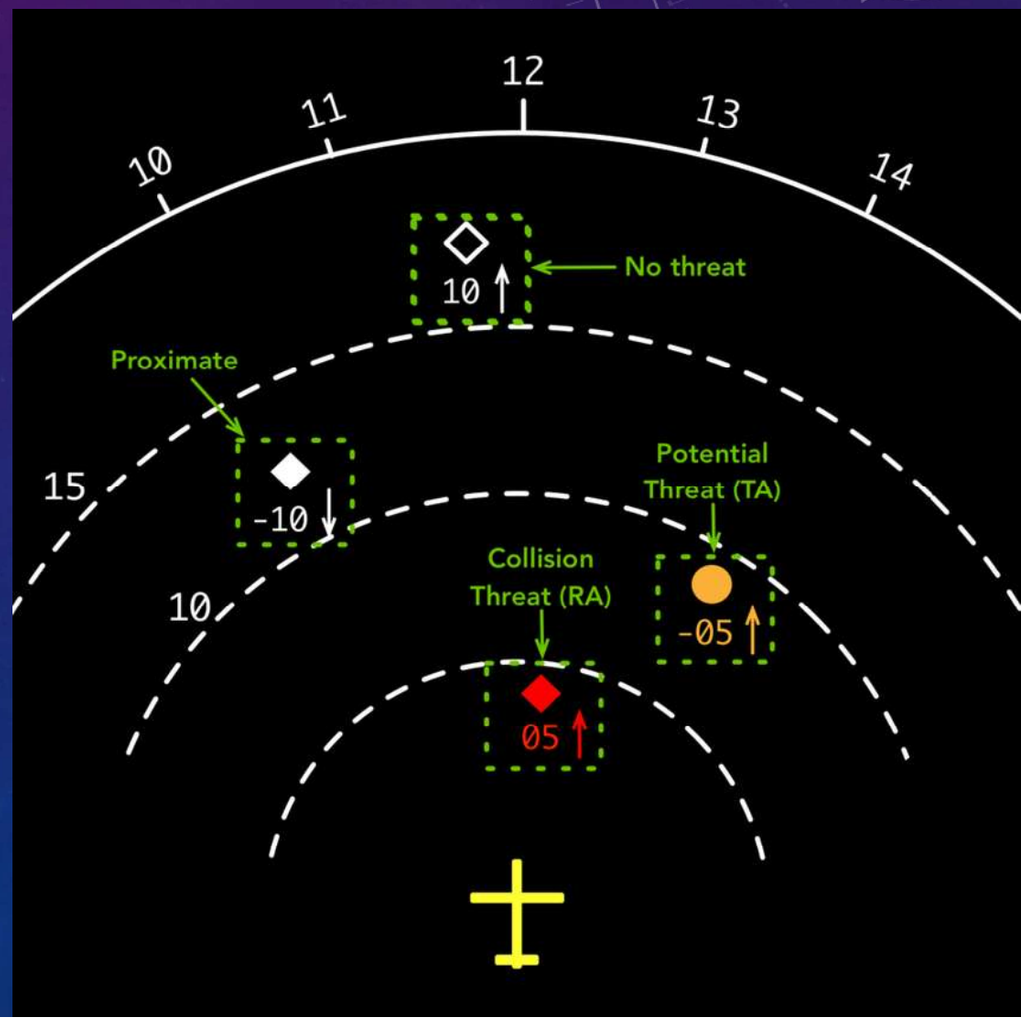
THE FUTURE: OPERATIONAL FRAMEWORK

Federal Aviation Regulation Part 108 and Part 146

- Normalize BVLOS Flights
- Aircraft upto 1,320 lbs GTOW
- Electronic Conspicuity
- Airworthiness Acceptance

New Opportunities

- Delivery Drones
- Crop Spraying
- Drone-In-A-Box
  - Death of the Drone Pilot



THE FUTURE: TECHNOLOGY

Aircraft Design

- Airworthiness Acceptance
- Composites and other advanced materials
- Battery and Propulsion

Digital Revolution

- C2 Links
  - Starlink
- Machine Learning
  - Condition Recognition
  - In-flight mission evolution
- Swarm technology

THANK YOU
&
QUESTIONS

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