

UAS Symposium



Federal Aviation
Administration

EMBRY-RIDDLE
Aeronautical University™

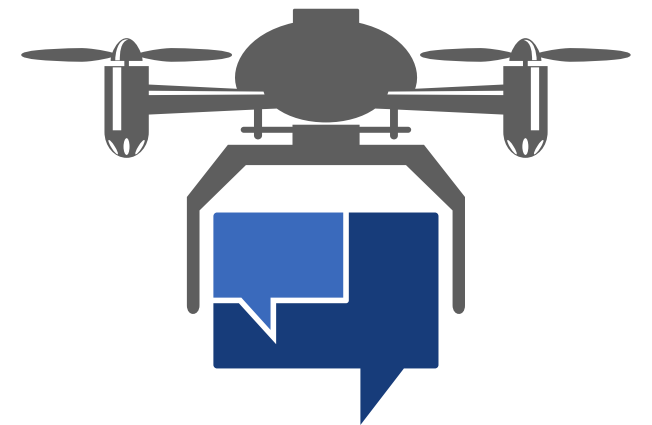
Certification Discussion

Rules of the Game

Moderator: Earl Lawrence

- Dorenda Baker
- John Duncan
- Andy Thurling
- Todd Graetz

Send questions to talkUAS@faa.gov – include breakout session topic in subject line

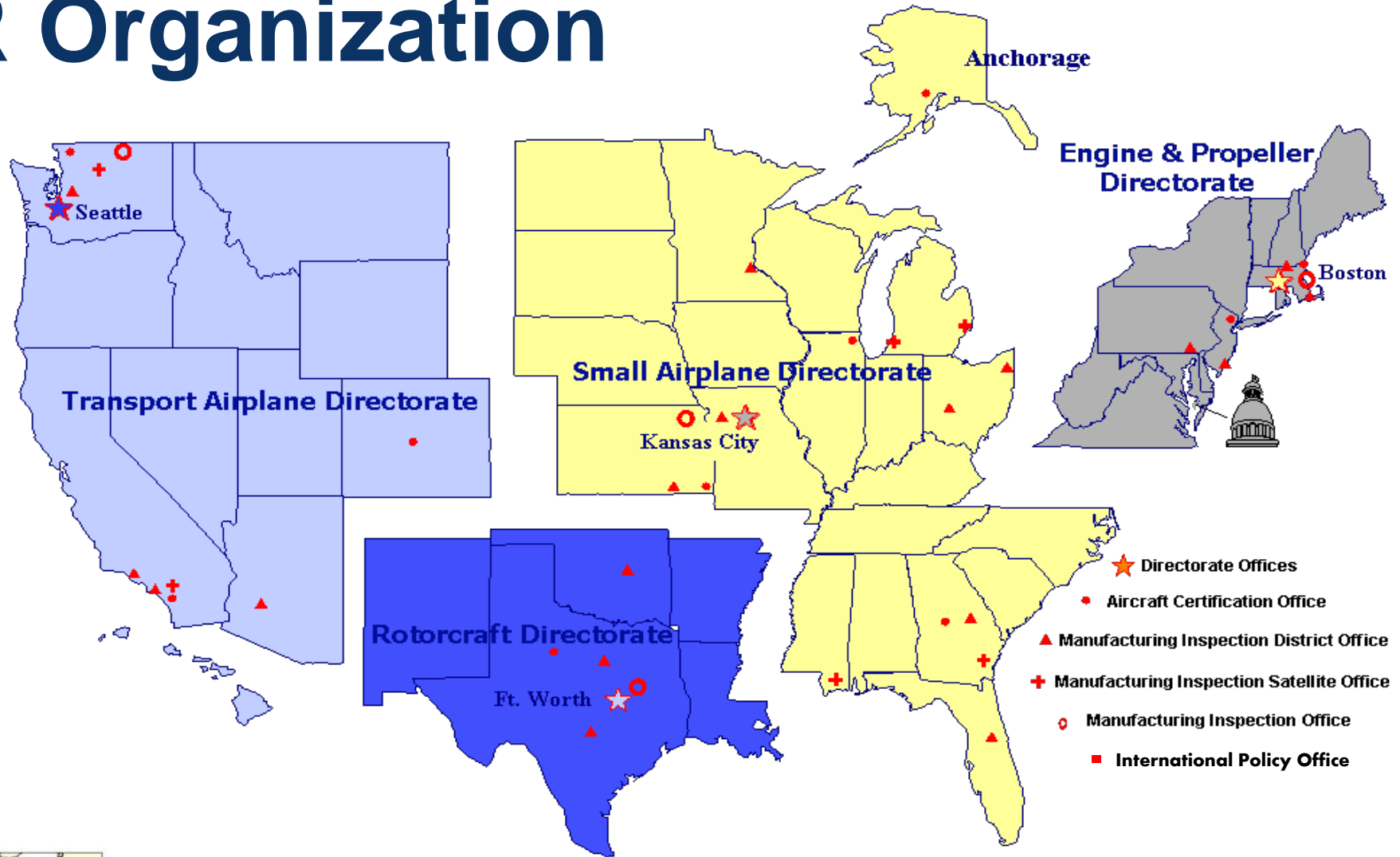


Aircraft Certification Service (AIR)

- Development of Standards and Policy
- Certification and Production of propellers, aircraft parts and appliances;
- Continued operational safety (COS) management



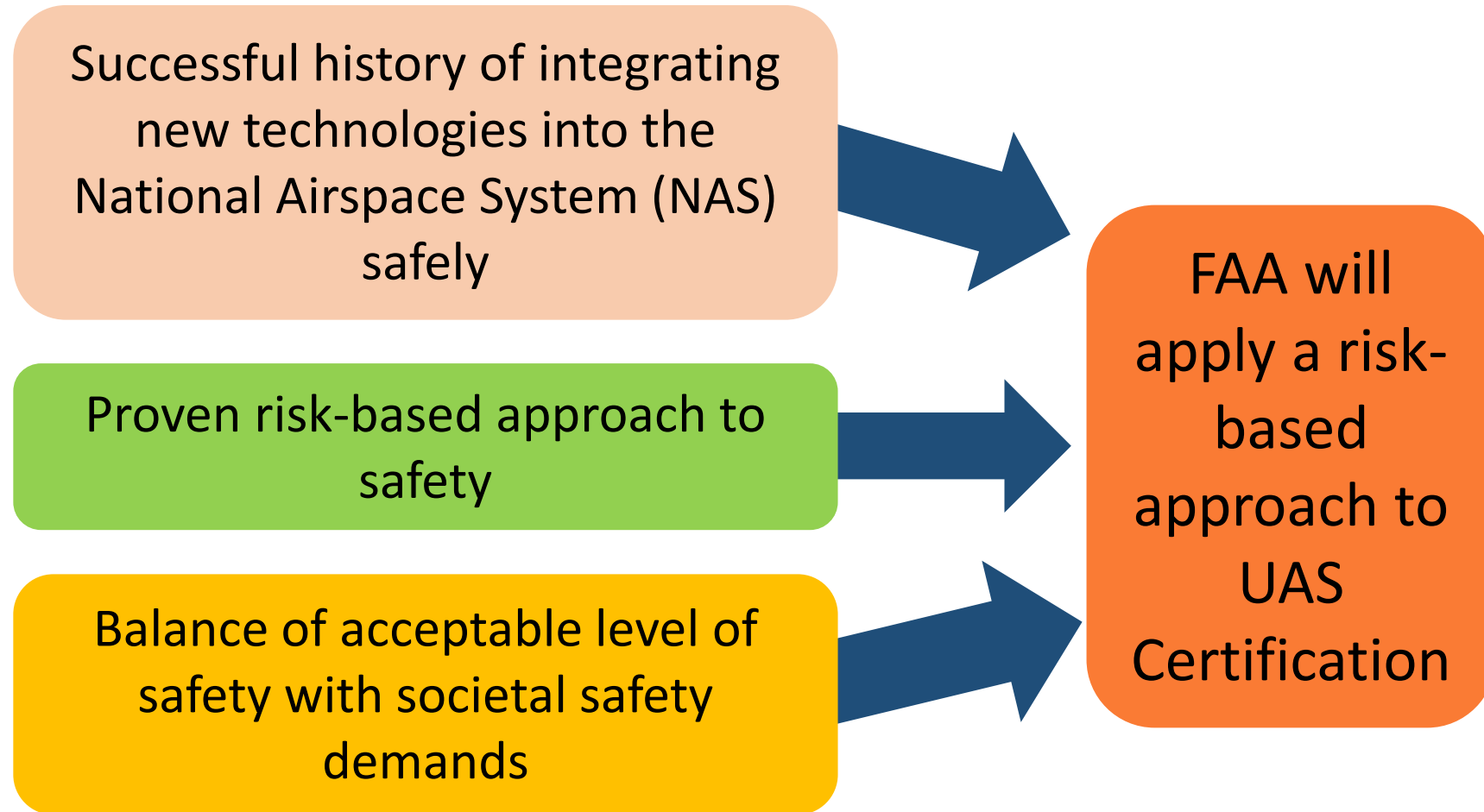
AIR Organization



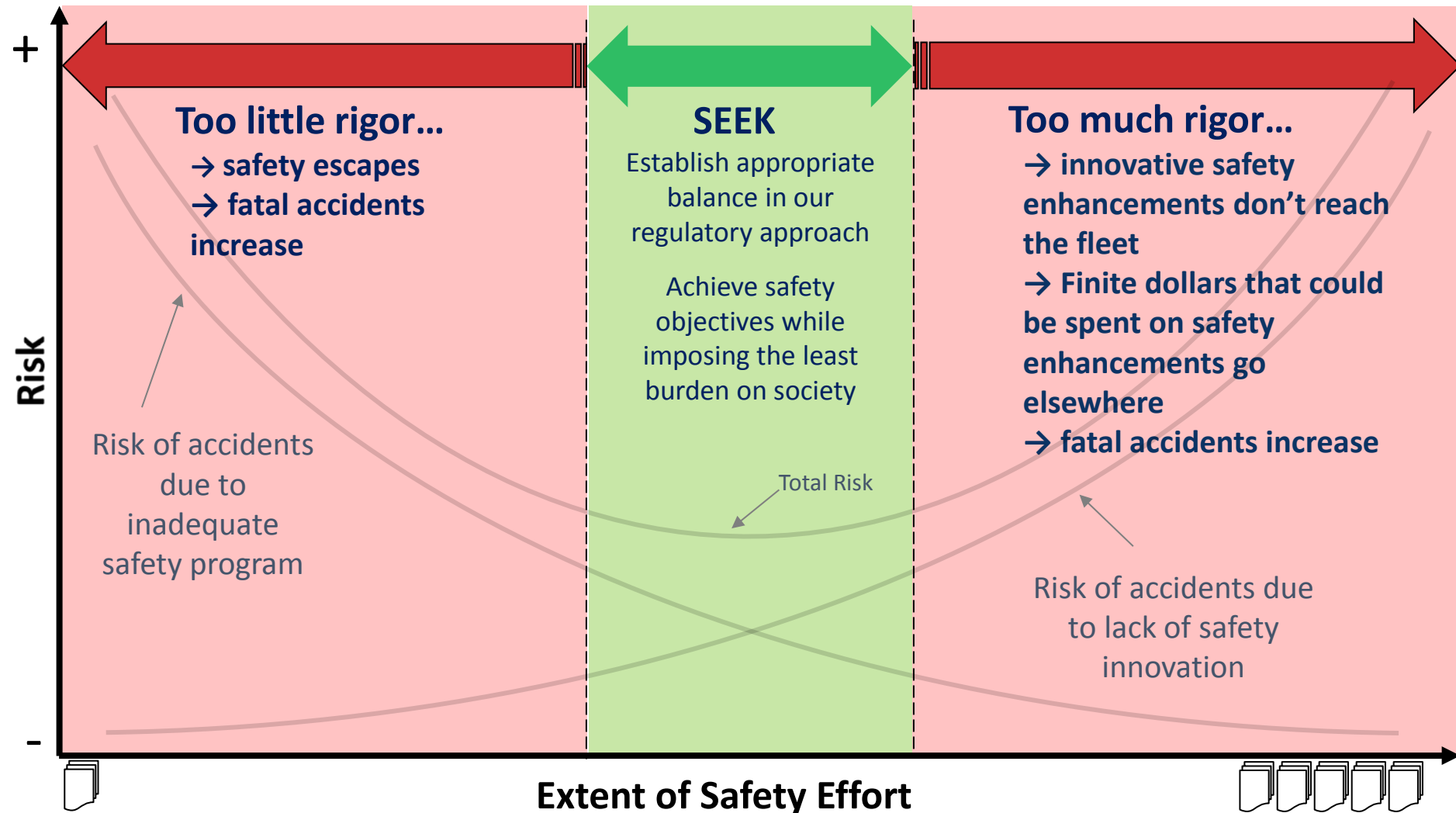
- ★ Directorate Offices
- Aircraft Certification Office
- ▲ Manufacturing Inspection District Office
- ⊕ Manufacturing Inspection Satellite Office
- Manufacturing Inspection Office
- International Policy Office



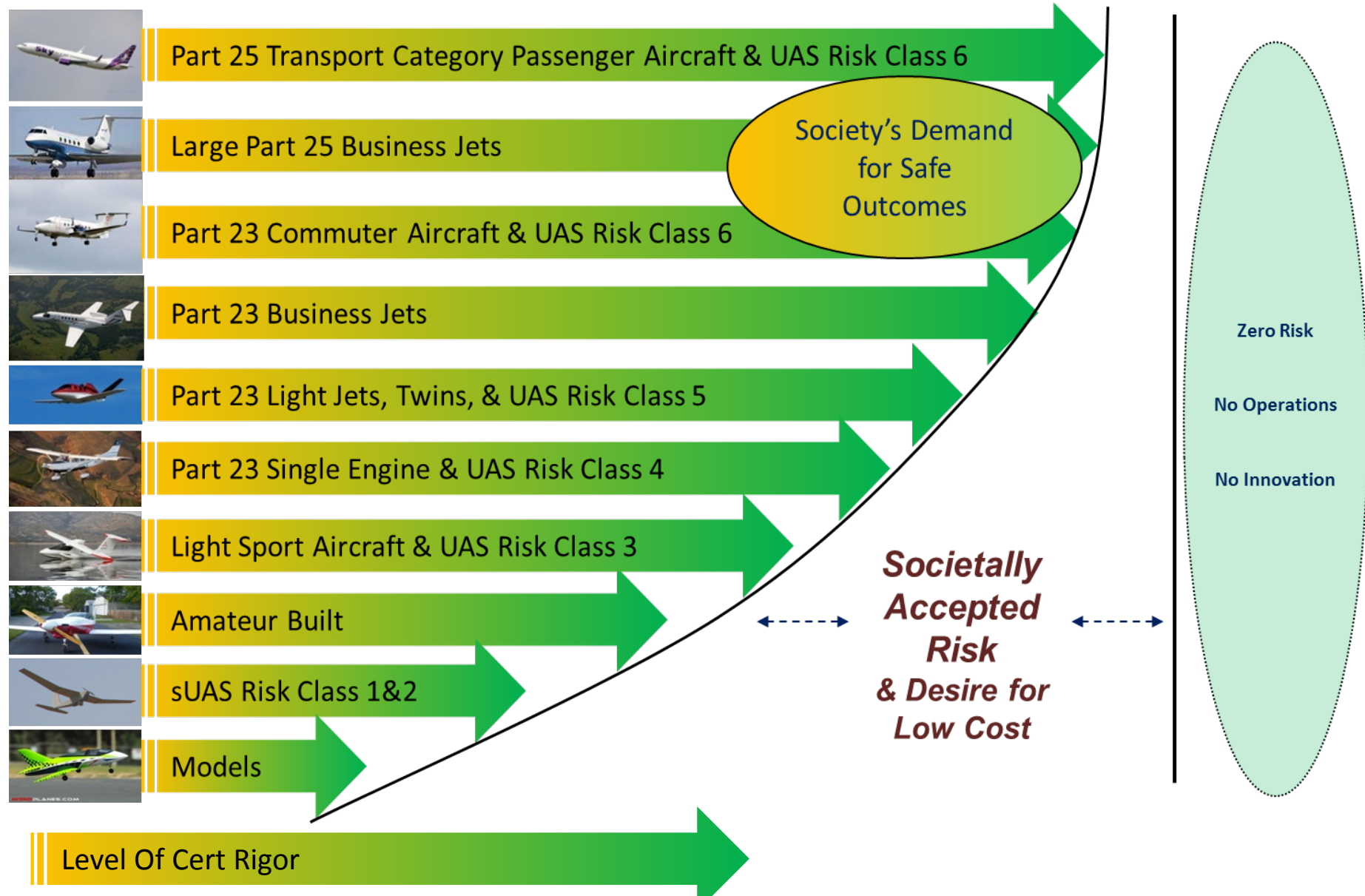
UAS Safety – From Experience



System Safety – The Safety Continuum

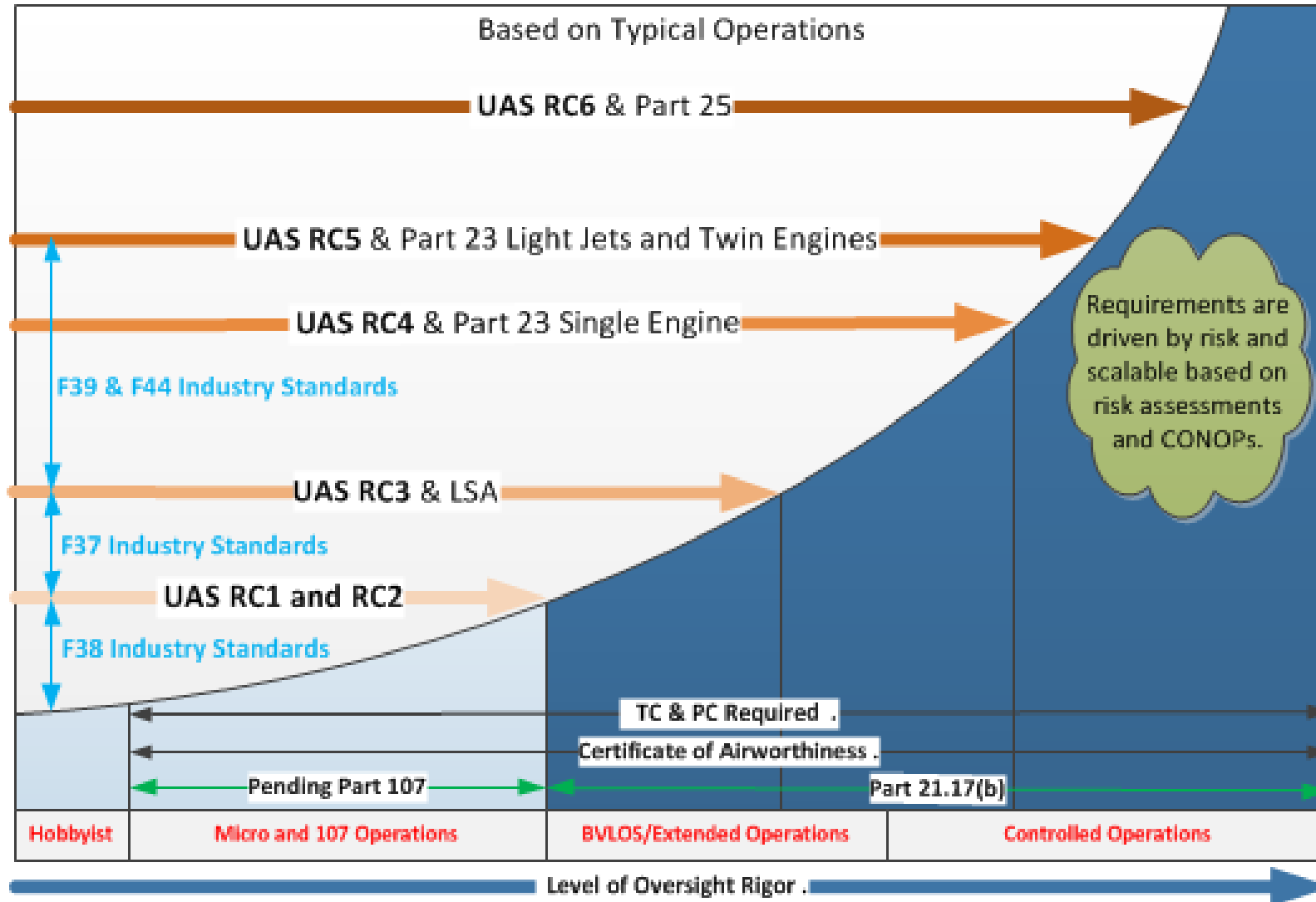


Applying Our Safety Continuum

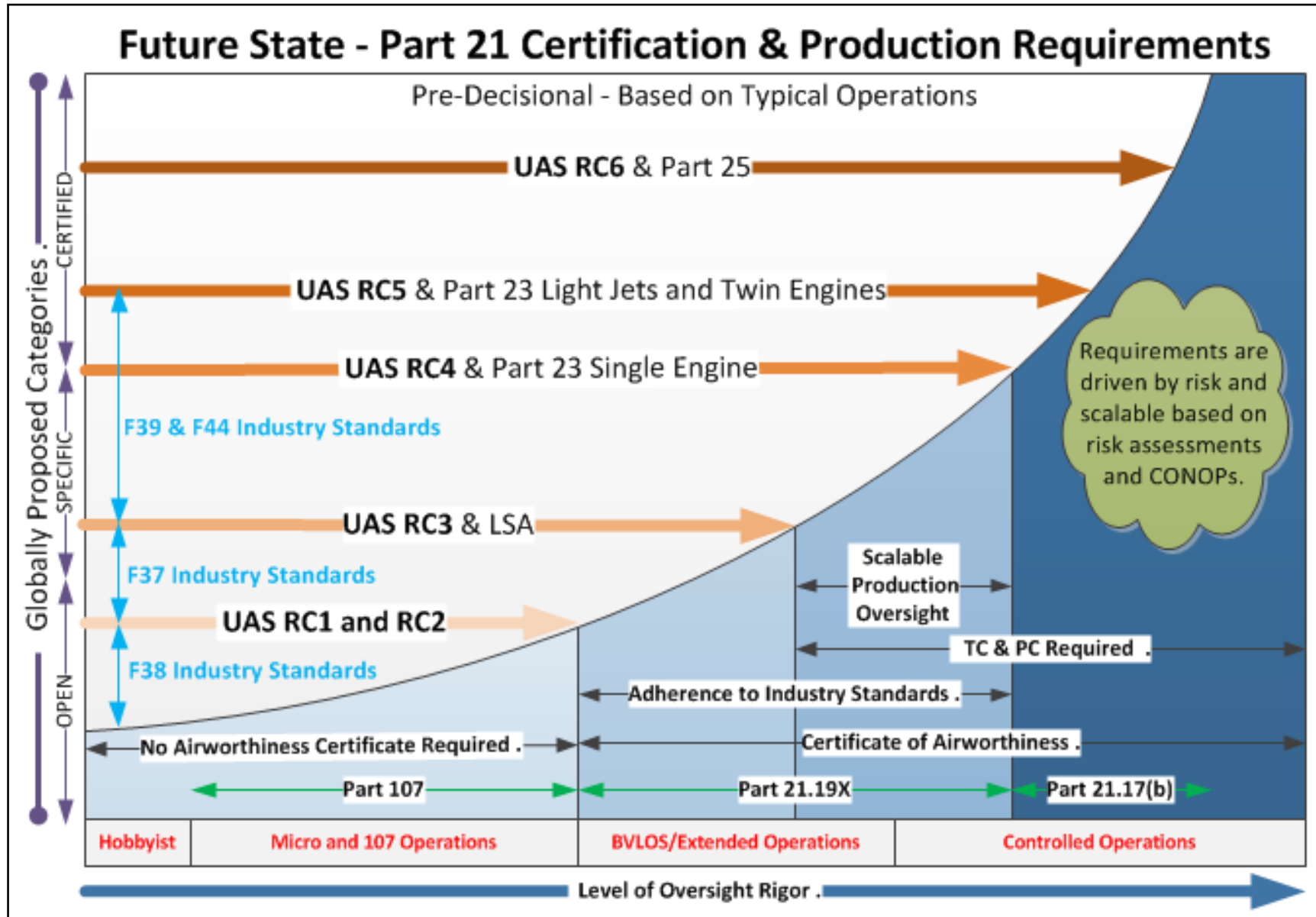


Existing Regulatory Framework

Part 21 Certification & Production Requirements



Future Regulatory Continuum



Scalable Production Oversight

- **Establish production certificate (PC) risk categories similar to the type certificate (TC) risk classes**
 - Current resources will not accommodate PCs for all UAS
 - Scalable approach allows the dedication of FAA resources where the risk is highest

Strategic Goal, Risk-Based Certification

Rising to the Challenge

- **Creating Our Regulatory Continuum Now**

- Working pathfinders and 13 projects under the current regulatory structure
- International Collaboration - ICAO, EASA, etc.

- **Ready for the Future**

- Our certification projects inform future rule changes
- Considering further changes for low and medium risk UAS

- **Importance of Industry Engagement**

- Engage **EARLY** and **OFTEN** about new technologies
- Upfront involvement will help the FAA determine the certification basis and get out of the critical path to certification

Open For Business! <https://www.faa.gov/uas/>



www.faa.gov/uas/

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FAA Mission & Responsibilities

The FAA's mission is to protect life and property within the National Airspace System (NAS).

The Flight Standards Service fulfills its part of the FAA mission through:

- *Standards* (pilots, mechanics, air carriers, air operators, training facilities)
- *Certification* (“licensing” of those who meet standards)
- *Continued Operational Safety* (risk-based decision-making)

The goal of these functions is to provide protection for operators, passengers, and non-participants (people and property on the ground).



Regulatory Parts – Rules of the Road

Part 91 – General Operating Rules

Part 61 – Pilot Knowledge & Skill Requirements

Part 135 – Air Transportation – Small Aircraft

Part 121 – Air Transportation – Large Aircraft

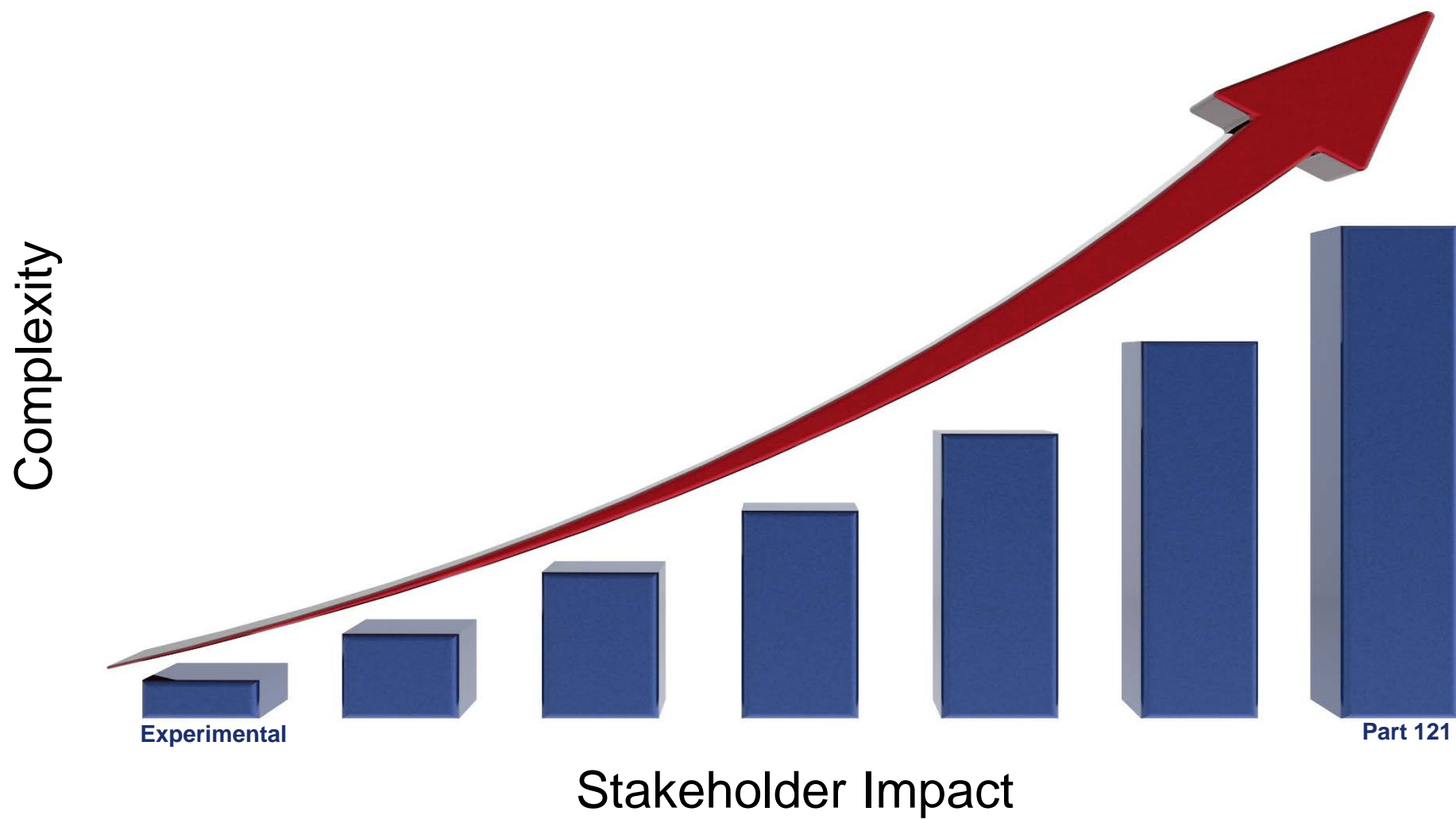
Part 137 – Agricultural Operations

Part 133 – External Load Operations

Part 141 – Pilot Schools



Regulatory Requirements



FAA Vision for UAS Integration

Safe, efficient, and timely integration of UAS into the National Airspace System (NAS)

- The FAA did not envision UAS when today's prescriptive civil aviation safety regulations were developed.
- As UAS activity increased, the FAA recognized the need for integration of these aircraft into the NAS.
 - We have begun to set standards for full integration of UAS, which will eventually be treated like any other aircraft.
 - In the near term, the FAA is accommodating the demand for UAS operations by creating a niche in the NAS (part 107 and section 333 exemptions) to enable UAS activity.
 - This approach allows UAS to operate as the FAA works to create performance-based (vice prescriptive) standards that enable UAS operations.

Looking Ahead

- UAS are becoming more complex and more capable. We expect UAS to further evolve in size and complexity that will be comparable to that of manned aircraft.
- Next steps will involve expanding the scope of operations under part 107.
- To achieve the goal of full integration into the NAS, however, the FAA will have to make broad changes in the structure and scope of existing rules to accommodate UAS.
- These changes will shift regulations from the existing prescriptive approach to a performance-based standard.



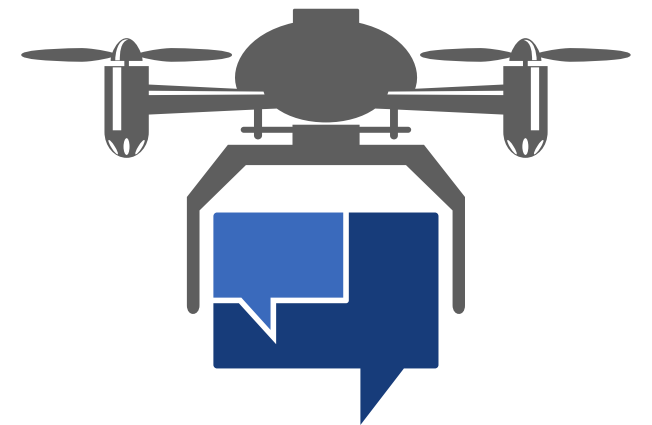
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Aviation Lifecycle

