Unmanned Aircraft Systems (UAS) Integration

Standards Development

Presented to: American National Standards Institute

Presented by: Earl Lawrence
Director, FAA UAS Integration Office
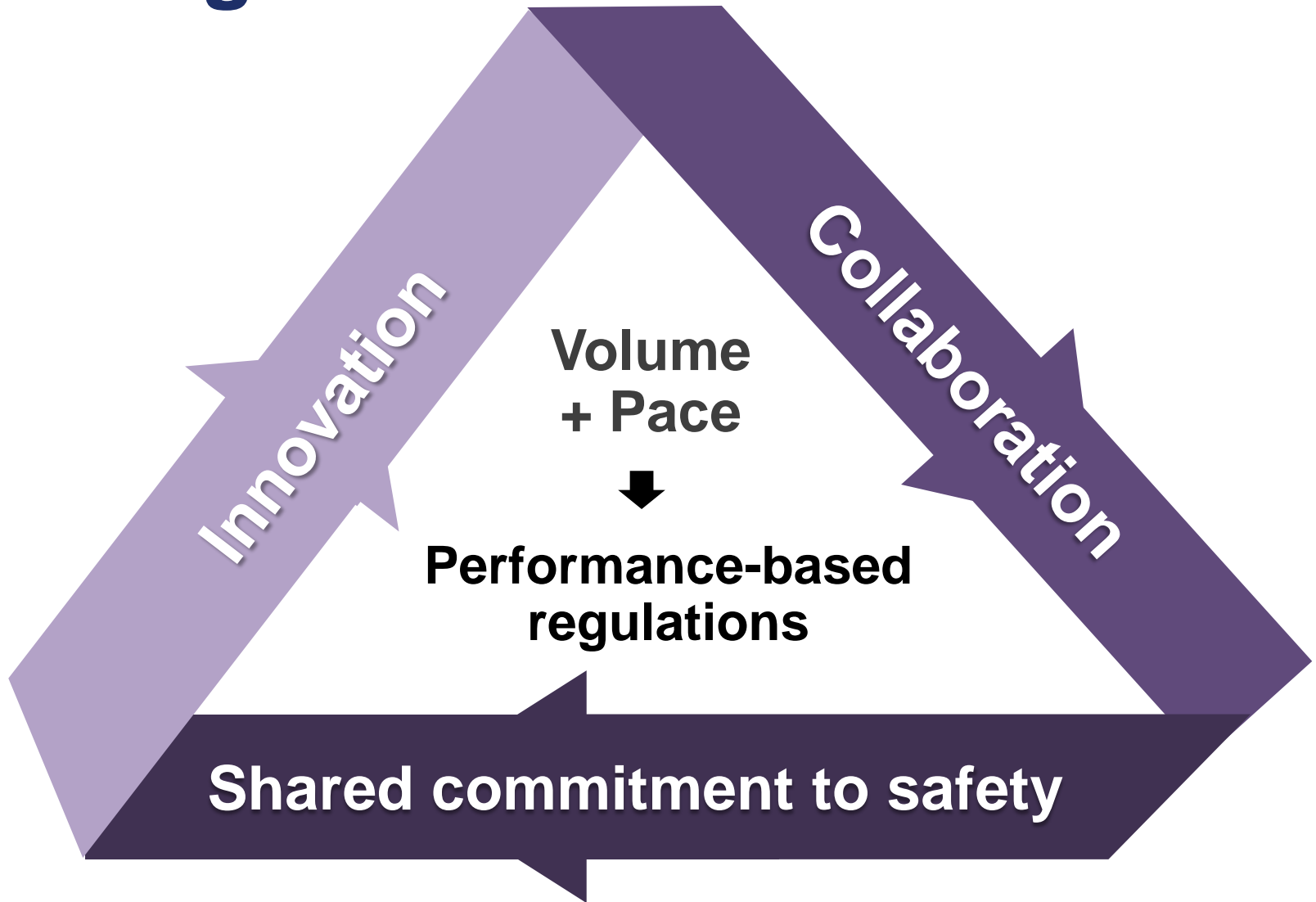
Date: May 19, 2017

FAA and UAS Standards

- **Industry consensus**
  - Supports FAA rules
  - Recommend starting with existing standards

- **Flexibility in meeting FAA safety standards**
  - FAA doesn't require specific standards. FAA requires industry shows it can repeatedly build a safe product.

- **Consensus Standards = Repeatable Process**

Getting There

Innovation

Collaboration

Volume
+ Pace

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**Performance-based
regulations**

Shared commitment to safety

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Presented by: Art Hinaman
Manager, Technical Support Branch
FAA UAS Integration Office

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Federal Aviation Administration

Technical Support Branch (AUS-420)

- **Current areas of focus**
  - Collision avoidance
  - Detect and Avoid
  - Command & Control
  - Design and construction
  - Operations over people

- **Future possibilities**
  - Human factors
  - Operations
  - Airworthiness
  - Swarming

Technical Support Branch (AUS-420)

Committee participation

- RTCA SC-228
  - Working Grp 1 – Detect and Avoid
  - Working Grp 2 – Command & Control

- RTCA SC-147
  - Traffic Alert & Collision Avoidance

- ASTM
  - F38 – Design, Manufacture & Maintenance

UAS Integration Research

- **In support of standards development**
  - Detect and Avoid (DDA) multi-sensor data fusion strategies
  - UAS system safety criteria
  - Integration of collision avoidance into DDA
  - Certification test case to validate sUAS consensus standards
  - sUAS DAA requirements necessary for limited BVLOS operations
  - sUAS well clear definition
  - Part 107 waiver case study