



UAS: The Future is Now

Moderator: Brad Hayden

Presenters: James Jinks, Mark Blanks and Paul McDuffee



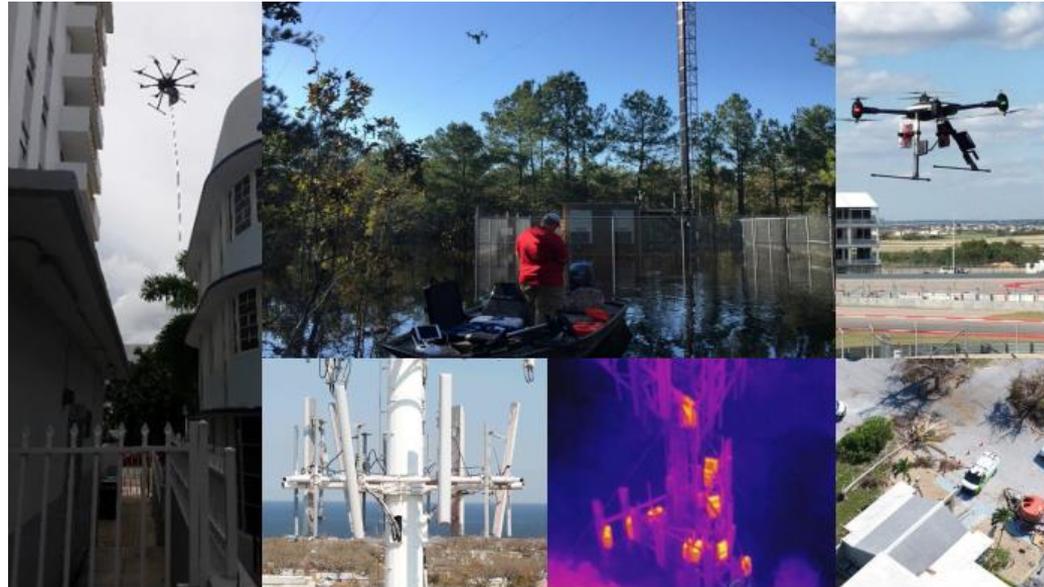
Adding Drones to the Enterprise

UAS Program Management at Verizon

James Jinks, Director – Aviation Services

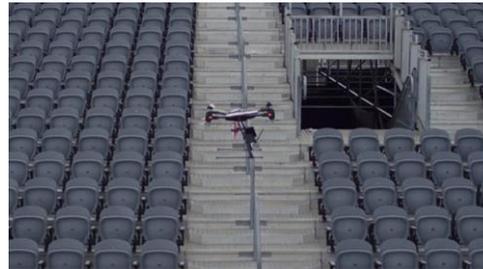
Verizon delivers the promise of the digital world.

- 153,100 Employees
- 35 UAVs
- 32 UAV Pilots
- 500+ Flights



USE CASES

- Videography & Photography for Marketing, News Footage & Mobile Content
- Technology R&D and Product Development
- Infrastructure Inspection & Mapping
- Post-disaster Damage Assessment
- Post-disaster Flying “Cell on Wheels” (COW) Deployment / Airborne LTE (ALO)
- Technology Demonstrations



USE CASES

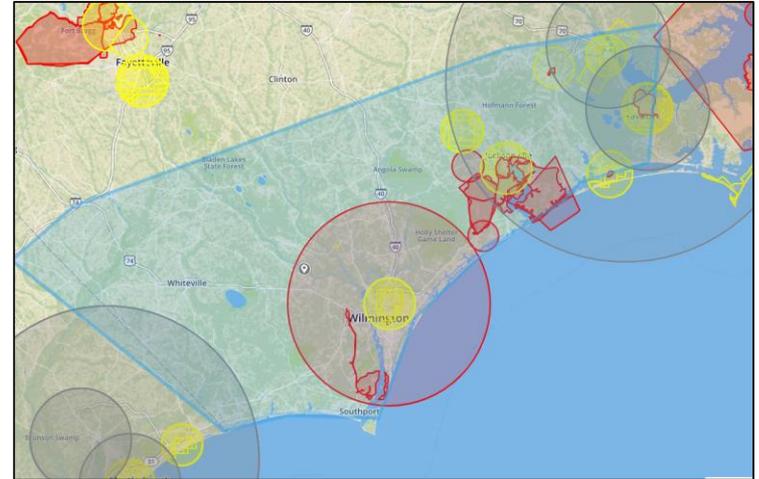
Operation Convergent Response (OCR)

- F4 Tornado/Mass Casualty
- Building Collapse
- Terror Attack
- Trauma Center
- Flooding
- Active Shooter/Hostage
- Cyber Attack
- Emergency Operations Center
- Commercial Airliner Crash



Program Management

- UAS Program falls under Corporate Aviation
- Published UAS Program Policy
 - Operations Manual
 - SOPs
 - Checklists
- Use of Skyward for Fleet Management Required
 - Pilot Credentials
 - Flight Planning & Logging
 - Digital Library
 - FAA LAANC Airspace Access
 - Regulatory Support
- Waivers
- Authorizations



Skyward is used for operational planning and coordination for all Verizon UAS missions.

Formalizing the Process



Regulatory Leadership

- FAA
 - Drone Advisory Council
 - LAANC Working Group
 - RemoteID Committee
- AUVSI
- Global UTM Association
- Small UAV Coalition
- NASA
- GSMA
- CTIA



**SMALL UAV
COALITION**
*A Partnership for
Safety & Innovation*



ctia™
Everything Wireless



 Global UTM
Association



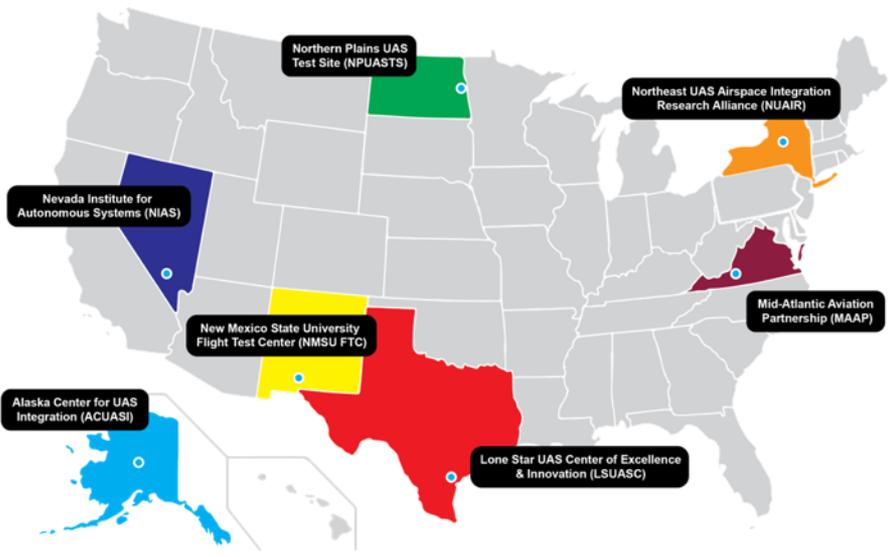
The Future. Faster.

October 16th, 2018 | 1:00pm – 2:00pm

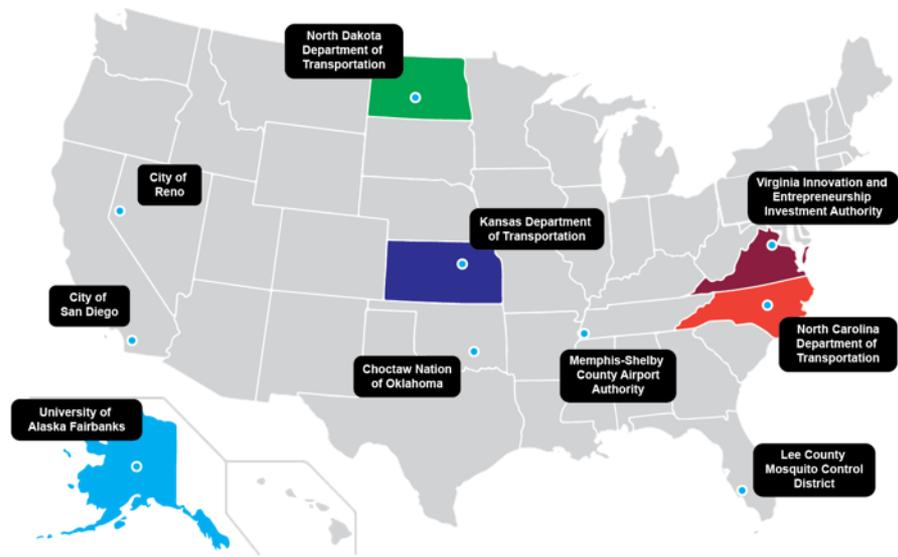
Mark Blanks | Director, Virginia Tech Mid-Atlantic Aviation Partnership

Virginia Tech Mid-Atlantic Aviation Partnership

UAS Test Site and Integration Pilot Program (IPP)



FAA UAS Test Sites



FAA UAS Integration Pilot Programs (IPP)

Program Overviews

UAS Test Site



- Broad scope, focus on test & evaluation
- Building risk-based safety cases
- Testing latest technology developments

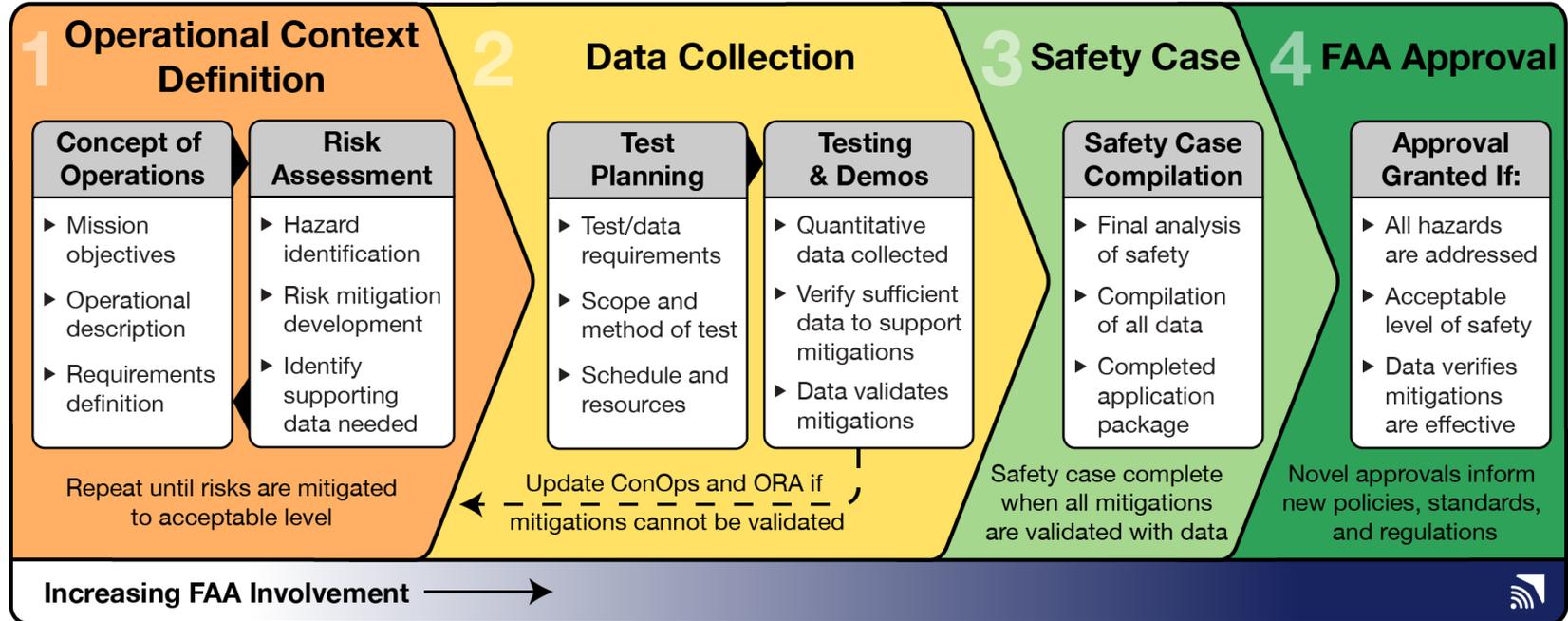
Integration Pilot Program (IPP)



- Narrow scope, focus on commercial deployment
- Enabling next generation of drone operations
- Investigating role of state and local government

Enabling Innovation, Ensuring Safety

Risk-Based Safety Case Development



Integration Pilot Program

Approved Projects



Package Delivery



Linear Infrastructure Inspection



Post-Event Damage Assessment

The Future of Delivery

Wing Package Delivery



Recovering Faster

State Farm Damage Assessment





Opportunities in Urban Air Mobility

Tuesday October 16, 2018

Presented by: Paul McDuffee, Boeing Horizon X/NeXt

Opportunities in Urban Air Mobility

- The current mobility system is experiencing unprecedented congestion and reduced efficiency explained through some staggering facts, including:
- Approximately 25% of global commute times are 90 minutes or greater.
- The cost to build infrastructure is skyrocketing, which puts pressure on emerging markets. For example, New York City area costs are cited as high as \$333 million per mile of highway.
- By 2030, 55% of large cities will be in Asia — primarily China and India.

Opportunities in Urban Air Mobility

- We are re-imagining the future of flight and mobility to address the growing challenges and limitations of sustainable, economic and accessible modes of transportation and infrastructure.
- Cargo and passenger air vehicle prototypes are being built and tested right now. The introduction of these new technologies won't all happen at once; proven technologies will be phased in only after they have gone through a robust development process that includes rigorous testing. Most importantly, there needs to be a new transportation ecosystem that allows autonomous and piloted air vehicles to safely coexist.
- Autonomy is integral to the future of air mobility. It will make travel safe, reliable and accessible. We are building technology that will enable both fully autonomous vehicle operations as well as intelligent systems that will assist pilots during routine operations

Opportunities in Urban Air Mobility

We're transitioning into a Part 135 world!

- Requirements for an operator certificate need to be addressed. New entrants need help!
- Maintenance Requirements for Part 135 operations
- Insurance
- Manuals
- HazMat Manual- Will or Will-Not Carry Program
- Training Programs
- Drug and Alcohol Program Requirements
- Transportation Security Administration (TSA) security program requirements for Part 135 certificate holders
- Minimum Equipment List (MEL)

Opportunities in Urban Air Mobility



Boeing is leading the responsible introduction of a new mobility ecosystem, instead of just focusing on vehicles. Through our technology development and investments, as well as our work with industry leaders, new and existing partners, and regulators, we are uniting the key enablers and stakeholders to shape the ecosystem in a way that prioritizes safety.



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