

NAS Ops Subcommittee – Spring 2021 Meeting

Discuss possible changes to the industry due to COVID-19 (i.e. new normal)

- Air traffic returning to fuller capacity after COVID-19.
How do you see COVID impacting airline and airport operations?
- COVID affecting aerospace and technology advances:
Are there any technology plans being postponed or accelerated?
What is being done to prepare for these advances?
- Remaining globally competitive
How can the aviation industry restore public confidence?
What planning is occurring for potential future global disruptions (e.g., pandemic, volcano, cyber incident)?

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Discuss Aviation Industry Direction and Challenges

- Research Landscape
 - New Vehicles and New Missions
 - Technology and Materials
 - Data and Processing Power
 - System Wide Advancements and Improvements
- Update drivers by identifying
 - Emerging Challenges/Drivers – near (0-3 yr), mid (3-5 yr), and far (5-10 yr) term
 - Known non-federal work in any of the challenge/driver areas (i.e. potential partners)

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Advances in New Vehicles and New Missions

- **Non-Traditional NAS Access Points**
- **Routine Small Unmanned Aircraft Systems (UAS) Operations Beyond Visual Line of Sight (BVLOS)**
- **Space Operations**
- **Autonomous Ground Service Equipment at Airports**
- **Growth of Mixed Operations (Piloted, Autonomous, Unmanned)**
- **New Mission Types**
- **Supersonic Flight**
- **Urban Air Mobility**

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Advances in Technology and Materials

- **Aircraft Command and Control Using Automation and Remote Sensing Technologies**
- **Certification using New Technologies, Standards, or Processes**
- **Future Fuel Technologies**
- **Infrastructure Resiliency and Continuity of Operations**
- **New Medical Technologies and New Medications**
- **New Vehicles or Components Which Make Use of New Technologies, Software, or Materials**
- **Position, Navigation, & Timing (PNT) Technologies**
- **Remote and Virtual Technologies**
- **New Technologies for Airport Pavement Infrastructure and Design**

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Advances in Data and Processing Power

- **Big Data Analytics and Techniques**
- **Crowd Sourcing Weather Data**
- **Increased Connectivity by Cyber-Physical Systems (Internet of Things [IoT])**
- **Information Assurance and Cybersecurity for All Operations**
- **Risk-Based Decision-Making Techniques and Analytics**
- **Artificial Intelligence (AI)**
- **Human-Machine Teaming and New Technology Interfaces**

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System Wide Advancements and Improvements

- **New Methods and Technologies (Air Traffic Safety, Efficiency, Noise, Emissions, Fuel Use, and Airport Surface Movements)**
- **Methods for Increased Flexibility of Operators**
- **Performance-Based Capabilities**
- **Advancement of Global Standards or Requirements**
- **Human Response to Traffic and Congestion Management**
- **Development of the Workforce of the Future**
- **Advances in Aeromedical Certification**
- **Changing Public Demographics and Requirements**