



AAM Aircraft Working Group Kickoff



AAM Aircraft Working Group Kickoff Agenda

May 28, 2020			
Topic	Speaker	Time (EDT)	Description
Introduction	Carl Russell	3:00PM – 3:20PM	<ul style="list-style-type: none">Welcome attendees, share the meeting agenda, introduce the NASA lead, and discuss the working group's path forward
Panel: Aircraft AAM Moderator: Carl Russell	<ul style="list-style-type: none">AIA: David SilverBell: Jim RyanBoeing: Jon DamushJoby: Greg BowlesUber: Hervé Martins-RivasWisk: Tom Gunnarson	3:20PM – 4:30PM	<ul style="list-style-type: none">Panel with aircraft industry stakeholders to discuss perspectives and viewpoints regarding the integration of AAM
Q & A	Carl Russell <i>(and Panelists as applicable)</i>	4:30PM – 5:00PM	<ul style="list-style-type: none">Open discussion with participants regarding their questions, concerns, etc. through conference.io



Conference.io

Web Address:

<https://arc.cnf.io/sessions/sbmt/#!/dashboard>



Questions and Answers

Web Address:

<https://arc.cnf.io/sessions/sbmt/#!/dashboard>



Upcoming Events

Please visit <https://nari.arc.nasa.gov/aamecosystem> for more details!

- **June Events (Tentative)**

 - Crosscutting Working Group Logistics Meeting

 - UAM Concept of Operations (ConOps) Overview

 - UAM Community ConOps Aircraft Focus (Pillar 1 & 2)

 - Airspace Working Group Kickoff meeting

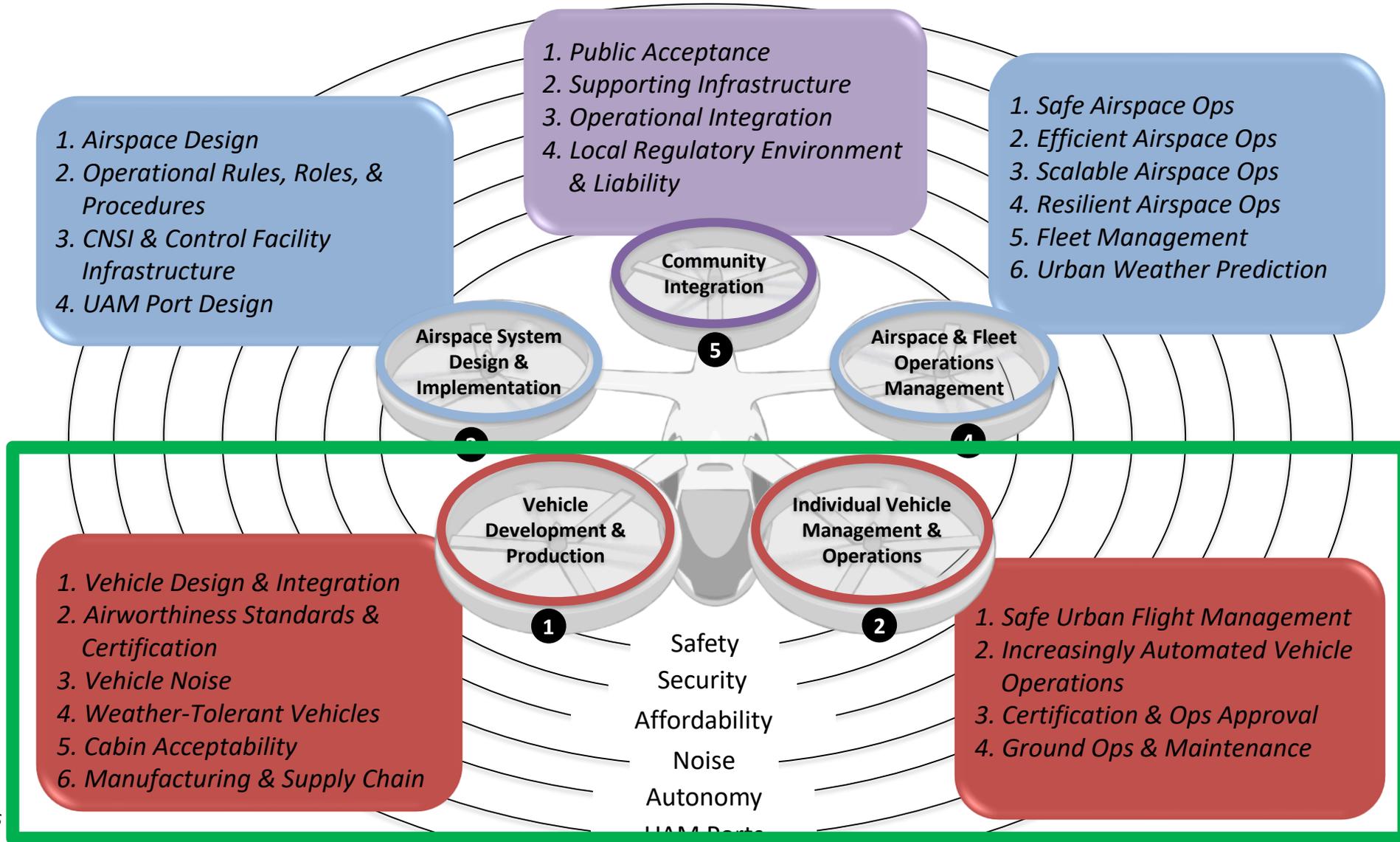
- **July Events (Tentative)**

 - UAM Community ConOps Airspace Focus (Pillar 3 & 4)

 - UAM Community ConOps Community Integration Focus (Pillar 5)



UAM Framework and Barriers



- Vehicle Barriers
- Airspace Barriers
- Community Integration Barriers
- # Pillar number



Pillar 1: Vehicle Development & Production

Category	Pillar	Operational obj.	Description
1 Vehicle Development & Operations	1 Vehicle Development & Production <i>Design, certify and produce airworthy, mission-capable, integrated vehicles that operate safely in all weather conditions required by the mission, with adequate passenger comfort and sufficiently low levels of noise.</i>	Vehicle Design & Integration	<ul style="list-style-type: none"> Develop “mission-capable,” integrated vehicles with automated flight critical systems that are compatible with UAM Ports and meet all required attributes simultaneously to be safe; operationally and economically competitive with competing transportation modes; environmentally responsible; and secure from digital attack.
		Airworthiness Standards & Certification	<ul style="list-style-type: none"> Develop a means of initially certifying and allowing for continuing certification of novel and/or rapidly evolving vehicles in a cost- and time-effective manner, including developing certification requirements and means of compliance for vehicles and propulsion systems as well as ensuring harmonious international regulations and standards.
		Vehicle Noise	<ul style="list-style-type: none"> Develop vehicle designs and technologies to reduce vehicle noise during all phases of flight; including taxi, take-off/departure, approach/landing, and cruise.
		Weather-Tolerant Vehicles	<ul style="list-style-type: none"> Develop vehicles that are capable of safely flying into and maintaining control in poor, yet frequently experienced, weather conditions, including moderately high winds, low visibility, and high density altitudes.
		Cabin Acceptability	<ul style="list-style-type: none"> Develop vehicles that provide an acceptable level of passenger comfort and payload protection including ride quality, cabin noise, interior climate control, and vibrations.
		Manufacturing and Supply Chain	<ul style="list-style-type: none"> Develop safe, certifiable, high-volume, affordable, secure and rapid manufacturing capabilities as well as a supporting supply chain ecosystem that is robust and scalable.



Pillar 2: Individual Vehicle Management & Operations

Category	Pillar	Operational obj.	Description
1 Vehicle Development & Operations	2 Individual Vehicle Management & Operations <i>Safely operate UAM vehicles in and around metropolitan areas while maintaining compliance with all required operational rules and procedures.</i>	Safe Urban Flight Management	<ul style="list-style-type: none">Develop capabilities for safe, efficient, and accommodating flight planning and execution in metropolitan areas, including navigation performance sufficient for medium complexity operations in urban environments, assuring controlled flight for safe contingency management (including cyber attacks), and compliance with regulations other constraints (such as noise limits).
		Increasingly Automated Vehicle Operations	<ul style="list-style-type: none">Develop highly automated capabilities and associated operational procedures to enable cost-effective scalability by increasing the ratio of vehicle operations to human operators and support staff.
		Certification & Operations Approval	<ul style="list-style-type: none">Develop a framework and corresponding methods of compliance for the holistic certification of advanced automation, humans, and operations of a UAM aircraft, as well as regulations and approval processes for commercial urban operations.
		Ground Operations & Maintenance	<ul style="list-style-type: none">Develop guidance and requirements to ensure safe and efficient maintenance and routine vehicle handling between flights, including considerations for UAM Port design and operations.



Aircraft Working Group Path Forward

- Working group will be a single, open group
 - Won't have sub-groups
 - All discussions open to the public
- Aircraft WG meetings up to once per month
 - Kickoff covers a broad range of topics
 - Subsequent meetings will each be focused on a single topic
 - More discussion-based
- Aircraft WG leads
 - WG lead: Carl Russell – carl.r.russell@nasa.gov
 - Project Coordinator (NARI): BreeAnn Stallsmith – breeann.m.stallsmith@nasa.gov



Aircraft WG Kickoff Panel



David Silver
VP for Civil Aviation
Aerospace Industries Association



Greg Bowles
Head of Government Affairs
Joby Aviation



Jon Damush
Senior Director, New Business Ventures
Boeing NeXt



Hervé Martins-rivas
Vehicle Partners Engineering Lead
Uber Elevate



Jim Ryan
Sr. Advance Vertical Lift Program Manager
Bell



Tom Gunnarson
Lead of Regulatory Affairs
Wisk