The National Academies of
SCIENCES • ENGINEERING • MEDICINE

DIVISION ON ENGINEERING AND PHYSICAL SCIENCES
AERONAUTICS AND SPACE ENGINEERING BOARD

Committee on Urban Air Mobility Research and Technology

Draft Agenda
Meeting #1: May 22-23, 2019

Wednesday, May 22, 2019

Room 101 — Keck Center
500 Fifth Street NW — Washington, DC 20001

EXECUTIVE SESSION

7:30 a.m.	*Room Opens (Working Breakfast Available in the Room)*	
8:30 a.m.	B&C	Committee
9:15 a.m.	Statement of Task	Committee
10:00 a.m.	*Break*	

OPEN SESSION

10:15 a.m.	NASA's Urban Air Mobility Activities	Ed Waggoner Davis Hackenberg NASA
11:00 a.m.	NASA's Urban Air Mobility Activities (cont.)	Davis Hackenberg NASA
12:00 p.m.	*Working Lunch Available in the Room*	
1:00 p.m.	Technology is Redefining Flight	Peter Shannon Levitate Capital
2:00 p.m.	Industry Views	Eric Allison Uber Elevate
3:00 p.m.	*Break*	
3:15 p.m.	Industry Views	Lisa Ellman Commercial Drone Alliance
4:15 p.m.	Urban Air Mobility: Barriers and Opportunities, A Sikorksy Perspective	Jonathan Hartman Lockheed Martin
4:45 p.m.	UAM and Smart Cities	Brian Hill Deloitte

5:30 p.m.	*Meeting Adjourns to an Alternate Location*	
6:30 p.m.	*Working Dinner at DC Chophouse (509 7th St NW, Washington, DC 20004)*	
8:30 p.m.	*Adjourn for the Day*	

Thursday, May 23, 2019

Room 101 Keck Center

OPEN SESSION

7:30 a.m.	*Room Opens (Working Breakfast Available in the Meeting Room)*	
8:30 a.m.	Meeting convenes	
9:00 a.m.	Looking Ahead to Urban Air Mobility	Steve Bradford FAA
10:00 a.m.	Urban Air Mobility Market Study	Colleen Reiche Booz Allen Hamilton
11:00 a.m.	*Break*	
11:15 a.m.	Industry Views (via Zoom)	Travis Mason Airbus
11:45 a.m.	Industry Views	Carey Cannon Bell
12:15 p.m.	*Working Lunch Available in the Room*	
1:00 p.m.	The UAS Integration Pilot Program	James Grimsley Choctaw Nation
2:00 p.m.	Exploring Urban Air Mobility Challenges	Brock Lascara MITRE

COMMITTEE WILL GO INTO EXECUTIVE SESSION AFTER THE SPEAKERS

3:00 p.m.	*Break*	
3:15 p.m.	Discussion Continues	Committee
4:15 p.m.	Discussion Continues	Committee
5:30 p.m.	*Meeting Adjourns*	

Last updated: May 20, 12 p.m.

Statement of Task:

The National Academies of Sciences, Engineering, and Medicine will convene an ad hoc committee to assess the feasibility of a safe and efficient urban air mobility (UAM) system. In terms of general definition and concept of operations, the committee will consider UAM to be a system for air passenger and cargo transportation within a metropolitan area (including operations over densely populated urban areas), with vehicles ranging from small drones to passenger aircraft with electrically powered vertical take-off and landing (eVTOL) capabilities. For both manned and unmanned aircraft, the study will focus on a system vision (including interface/integration into broader air transportation systems, ground transportation systems, and smart city systems generally), barriers, entrepreneurial approaches, and research projects that are particular to operation in uncontrolled airspace over metropolitan areas. In particular the committee will:

1. Consider
   - Essential characteristics of a UAM system
   - Key barriers to developing and deploying a UAM system that demonstrates the essential characteristics
   - Risk-based approaches to addressing key barriers, so that evolutionary market development can occur, from market emergence with limited operations, through growth and expansion as safety cases and community acceptance allows, and finally to mature operations in urban areas.
   - Progress in related areas, such as the development and implementation of standards and operational capabilities to enable UAS operations, the UAS Traffic Management system, cybersecurity, and urban planning.
   - Highly entrepreneurial approaches, including non-aviation industry entrants, that are relevant to UAM market development.

2. Prepare a report that will:
   - Develop and discuss a recommended national vision for UAM.
   - Identify and prioritize by group the key technical, economic, regulatory, and policy barriers to achieve the vision.
   - Assess the potential impact of highly entrepreneurial approaches, including those that could be implemented by non-aviation industry entrants, in achieving the vision.
   - Recommend key research projects that NASA, other government agencies, industry, and academia could employ to overcome the barriers and facilitate likely approaches to achieving the vision.
   - Assess the potential and benefit for a public-private partnership in addressing the technical, economic, regulatory, policy, and other related (e.g., urban planning) requirements.

The following information is provided for any members of the general public who may be in attendance:

This meeting is being held to gather information to help the committee conduct its study. This committee will examine the information and material obtained during this, and other public meetings, in an effort to inform its work. Although opinions may be stated and lively discussion may ensue, no conclusions are being drawn at this time and no recommendations will be made. In fact, the committee will deliberate thoroughly before writing its draft report. Moreover, once the draft report is written, it must go through a rigorous review by experts who are anonymous to the committee, and the committee then must respond to this review with appropriate revisions that adequately satisfy the Academy's Report Review committee before it is considered an NRC report. Therefore, observers who draw conclusions about the committee's work based on today's discussions will be doing so prematurely. Individual committee members often engage in discussion and questioning for the specific purpose of probing an issue and sharpening an argument. The comments of any given committee member may not necessarily reflect the position he or she may actually hold on the subject under discussion, to say nothing of that person's future position as it may evolve in the course of the project.

NOTES

Keck Center: Is located at 500 Fifth St. NW, in Washington's Penn Quarter district, adjacent to Judiciary Square and the Verizon Center. The closest Metro stations are Gallery Place/Chinatown (Red, Green and Yellow lines; take "7th and F St." exit and turn left) and Judiciary Square (Red line; take National Building Museum exit and turn left). Directions available at the following website: http://www.nationalacademies.org/about/contact/nax.html.

Keck Security/ID Required: Meeting attendees entering the building will need to show a photo ID to the Security Guard, who checks the ID against the attendee list.

Keck Parking: There is plenty of free parking in the Keck Center's underground lot. Access to the lot is off of Sixth Street (between E and F Streets).

Wi-Fi Connection: To connect to the Wi-Fi choose "Visitor Network" then open up a browser and click "Accept terms and conditions." You will then be connected to the internet.

Meals: Lunch and breakfast will be available at the meeting. In order to remain in compliance with government guidelines that preclude civil servants from accepting meals, we have provided a break-down for civil servants needing to reimburse those costs. The reimbursement cost of breakfast is $15 and is $16 for lunch. Checks, payable to the National Academy of Sciences, are preferred. Should you prefer there is also a refectory available for purchasing your meals in the building.