

Eye on Autonomy

Advancing innovation at a new Boeing center



“This exciting new space will strengthen our relationship with MIT and further our partnership with some of the best minds in the industry. It’s another collaborative step forward to ensure a safe, sustainable aerospace industry for future generations.”

DAVID CALHOUN,
BOEING PRESIDENT AND CEO

OPENING CEREMONY

Boeing Chief Engineer Greg Hyslop (left) and Boeing President and CEO David Calhoun make it official.

PHOTO: EVAN RICHMAN/BOEING

Innovation in autonomy thrives at the new Boeing Aerospace & Autonomy Center at MIT.

In October 2022, Boeing subsidiary Aurora Flight Sciences opened the new office space located at the gateway to the Massachusetts Institute of Technology campus.



BAAC IN BUSINESS

The Boeing Aerospace & Autonomy Center (BAAC) opened on the top (17th) floor of the 314 Main St. building in Cambridge, Massachusetts. Boeing plans to move into the 16th floor in 2023.

PHOTO: MARLISE SORIA/AURORA FLIGHT SCIENCES



VIRTUAL VISION

Boeing AvionX Product Development Vice President Per Beith, previously Aurora president and CEO, tests an augmented reality headset, part of Aurora's exploration into the interactions between humans and autonomy.

PHOTO: MARLISE SORIA/AURORA FLIGHT SCIENCES

Boeing Aerospace & Autonomy Center

MIT

AI ON DISPLAY

The all-new MIT Museum occupies the first three floors of the 314 Main St. building. The artificial intelligence (AI) exhibition, called "AI: Mind the Gap," explores the links — and the gap — between human and machine intelligence.

PHOTO: ANNA OLIVELLA



AI EXPLORATION

The museum's AI exhibition includes an interactive display showing how Aurora's AI fighter pilot (left) stacks up against the skill and intuition of a human pilot (right, larger).

IMAGE: MIT MUSEUM



Autonomy Innovation



Aurora works on cutting-edge research programs at the new center

Pilot Monitoring

Using a low-fidelity flight simulator and a prototype pilot monitoring and cognitive-state estimation system, engineers are providing insights into real-time monitoring of pilot cognition to enhance safety. Noninvasive sensors, such as eye trackers and heart rate monitors, are being used to estimate a pilot's workload and situational awareness.

Urban Air Mobility

Autonomy technology is being developed for electric vertical takeoff and landing (eVTOL) uncrewed air taxis that can take off, cruise and land with oversight from multivehicle supervisors on the ground. Autonomy software can also manage real-world conditions, including navigating other air traffic and redirecting the air taxi's flight path, if an issue arises.

Multivehicle Advanced Teaming

Aurora's onboard autonomy software enables uncrewed aircraft to team with other crewed and uncrewed aircraft, no matter the mission and environmental complexity. Aurora is developing technology requirements so that uncrewed vehicles can work together with Boeing aircraft and others to bring advanced capabilities to customers faster.