

A perspective on Workforce and Economic Development

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August 3, 2022



Shaping the future of air transportation with concept development, design and deployment of systems and aircraft.

Concept
Development



Economic &
Impact Analyses

Strategic
Planning

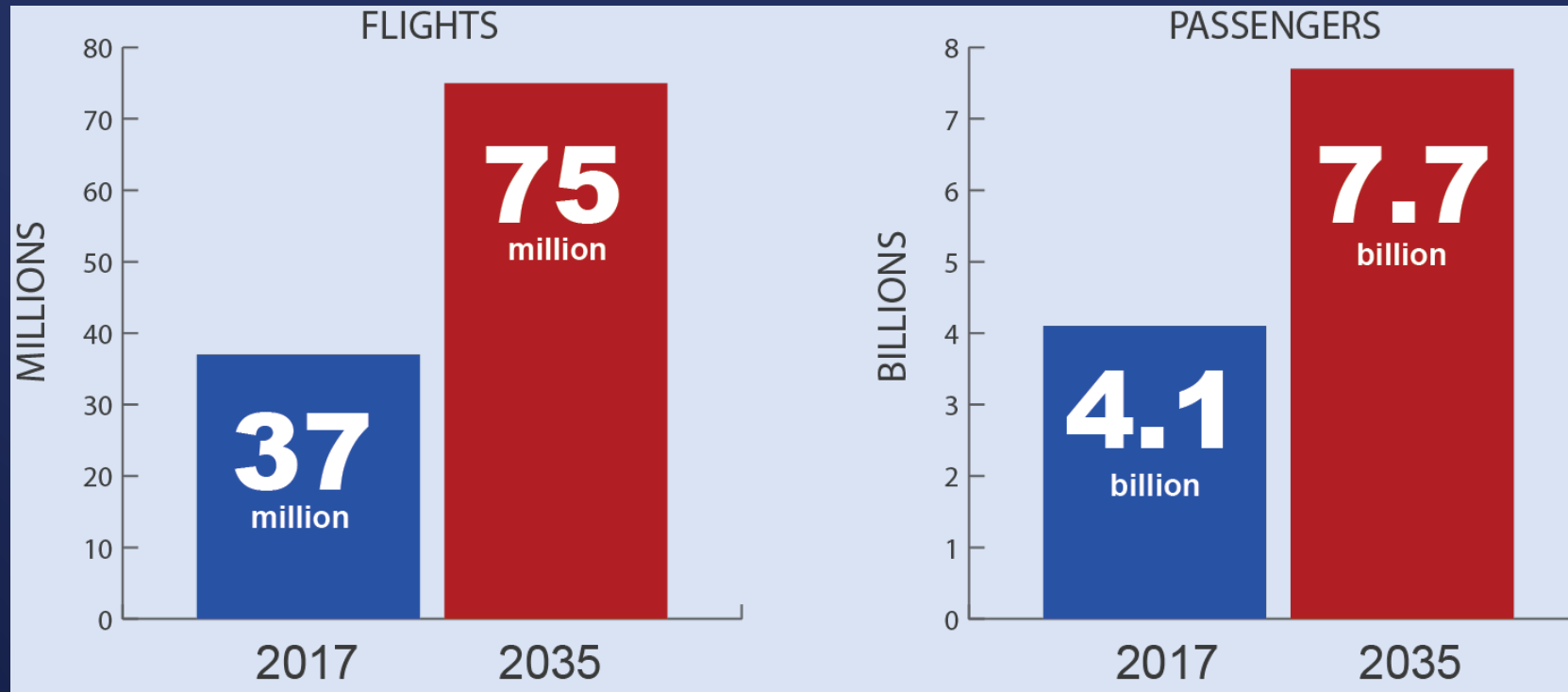


Design & Technology
Development

Implementation &
Project Management



Global Air Traffic Expected to Double by 2035



Requires **41,000** new aircraft
creating **15.5 million** jobs and adding **\$1.5 trillion** to the world economy

Source: ICAO, "The Future of Aviation Report," May 2017 (<https://www.icao.int/Meetings/FutureOfAviation>)

U.S. Airports are Underutilized




1.6% of all trips 50-500 miles taken by air

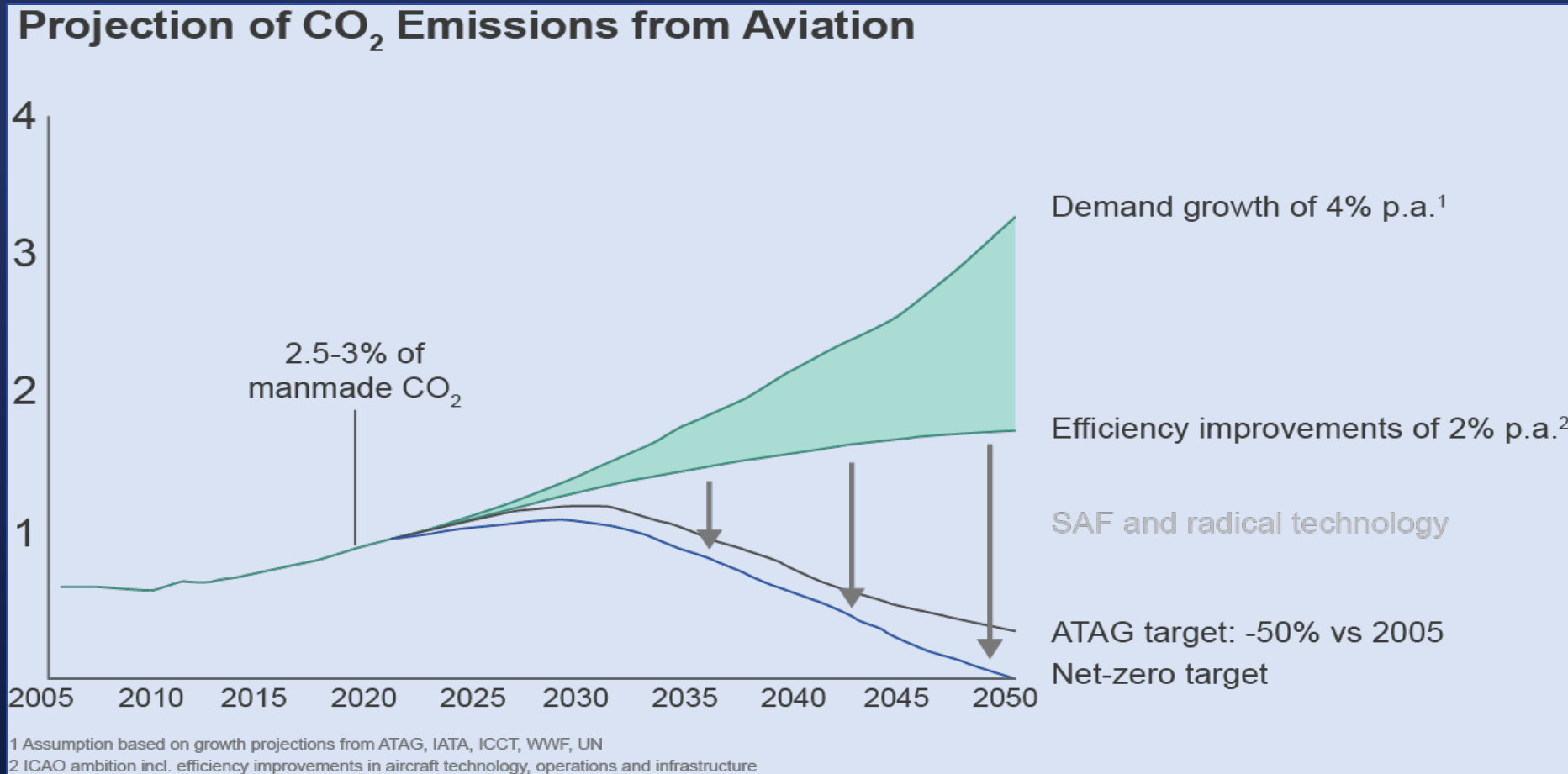
5,050 U.S.
public airports

0.6% of U.S. airports
support 70% of flights

Source: NASA "Regional Air
Mobility Report," April 2021



Future Must be Accomplished Sustainably



Source: Clean World Economic Forum, "Sky for Tomorrow: Sustainable Aviation Fuels as a Pathway to Net-Zero Aviation," November 2020



Boeing/NASA Sugar-Volt



NASA N-3X



Airbus/Rolls-Royce e-Thrust



NASA STARC-ABL

Innovations Emerging in Aircraft Design and Fuel



NASA/ESAero ECO-150



Airbus H2 TurboProp



Airbus H2 TurboFan



Boeing/GE/NASA HERO



Advanced Air Mobility (AAM)

- Moves people and cargo between places not conveniently served by surface transportation and underserved by aviation.
- Enables smart multimodal transportation connecting urban areas and regions and increasing the resiliency of the system

FUTURE OF
AVIATION

Advancing Aerial Mobility
through Technology, Sustainability,
and On-Demand Flight



Moving Cargo and People



On-Demand
Air Taxi



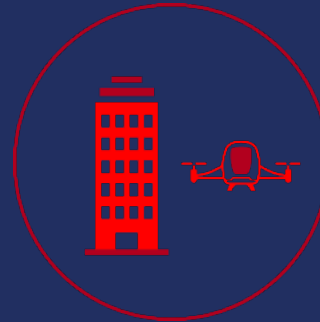
Regional
Air Mobility



Airport
Shuttle



Emergency Services
Medical Air Ambulance



Corporate/Business
Aviation



Cargo & Freight
Delivery

Disruptive Technologies, New Skills, Revolutionary Workforce



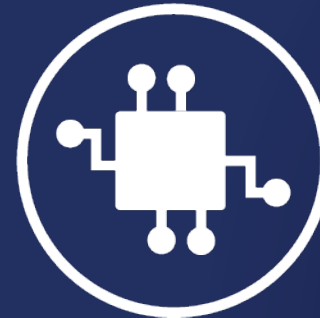
Electric Propulsion
(Motors, Batteries)

Advanced
Manufacturing
(Additive, Composite)



Pilot Assist
Systems

Digital Information
Sharing and Data
Processing



Communication,
navigation, and
surveillance
improvements