



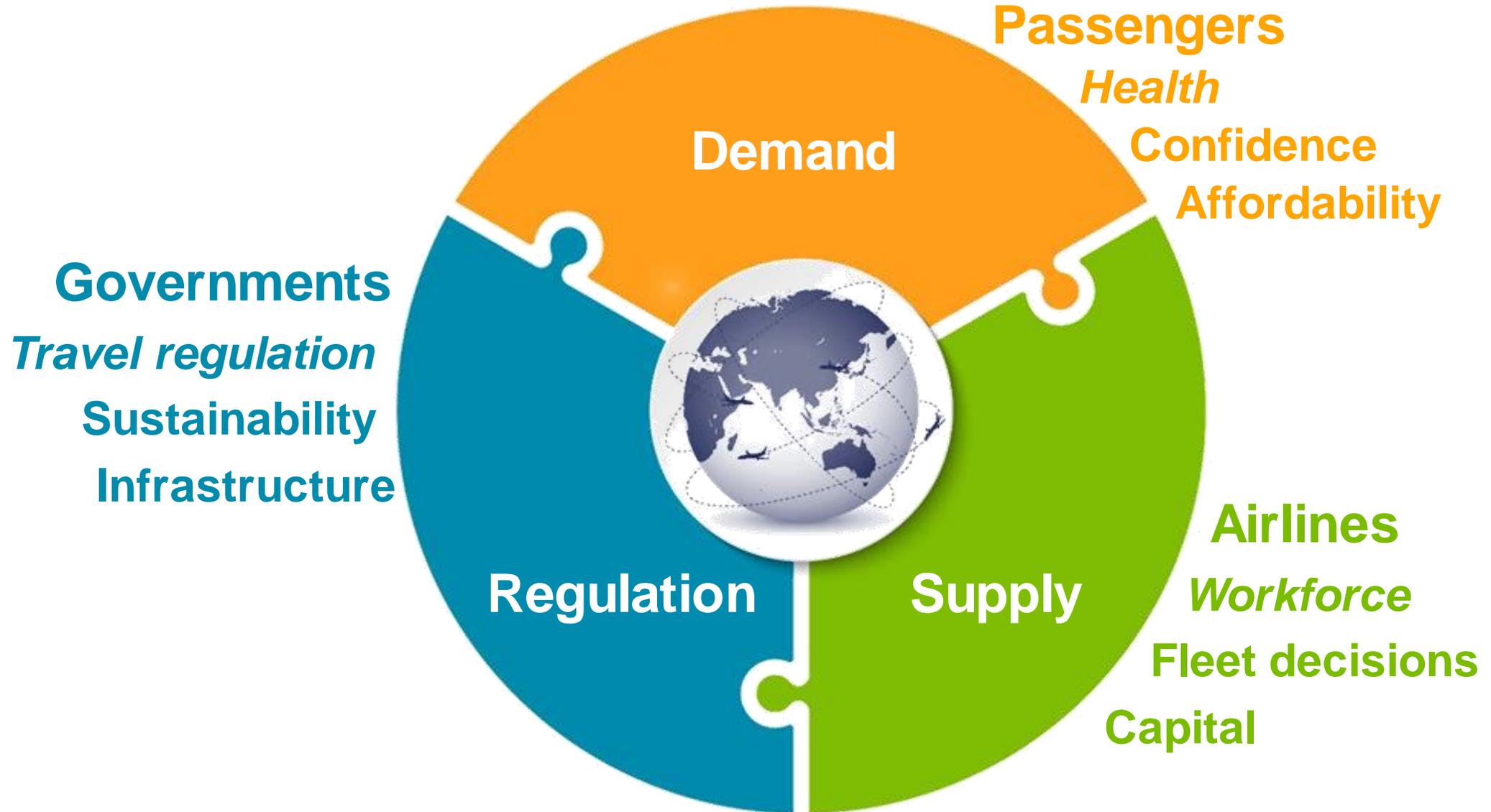
2021 Commercial Market Outlook

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The Boeing Company

September 2021

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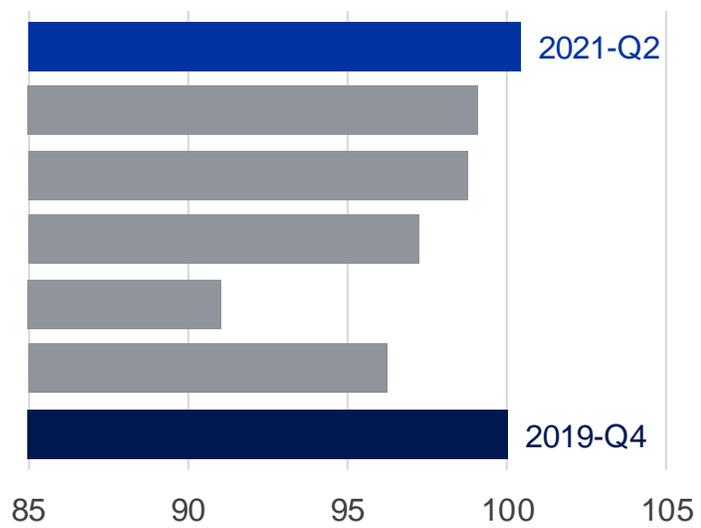
Near-term market dynamics: demand, supply, regulation



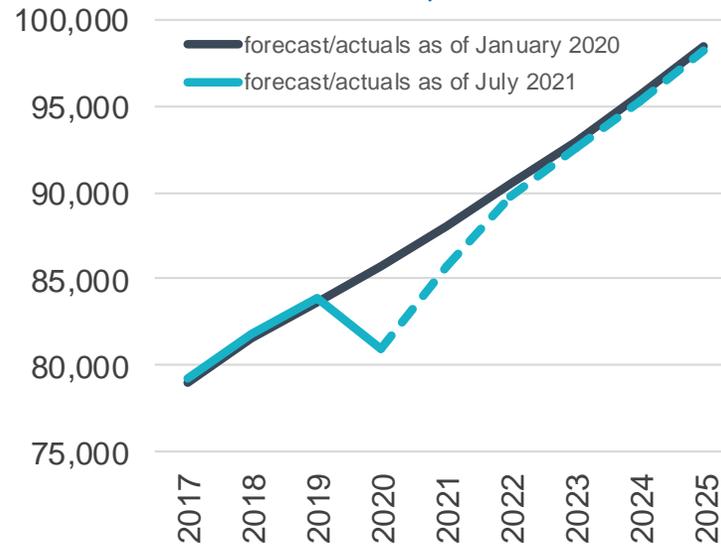
Economy has recovered to pre-crisis levels



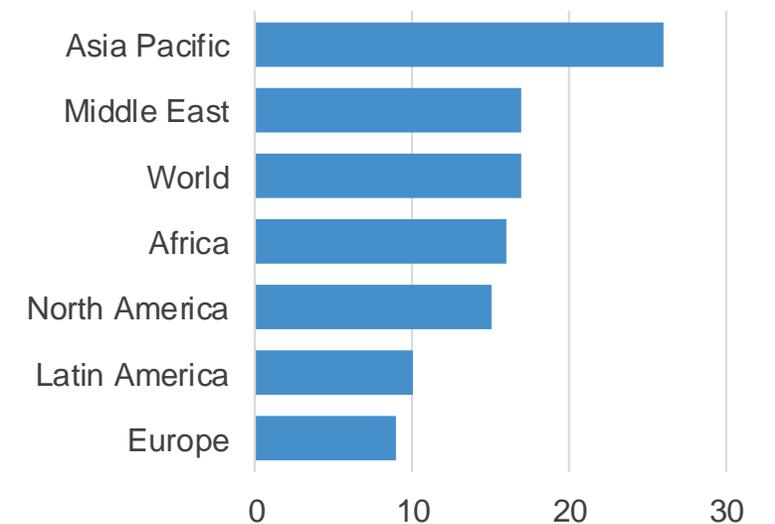
GDP level in % of 4Q 2019



Global GDP, real in USD



2025 GDP % above 2019 levels



COVID restrictions key to air traffic developments

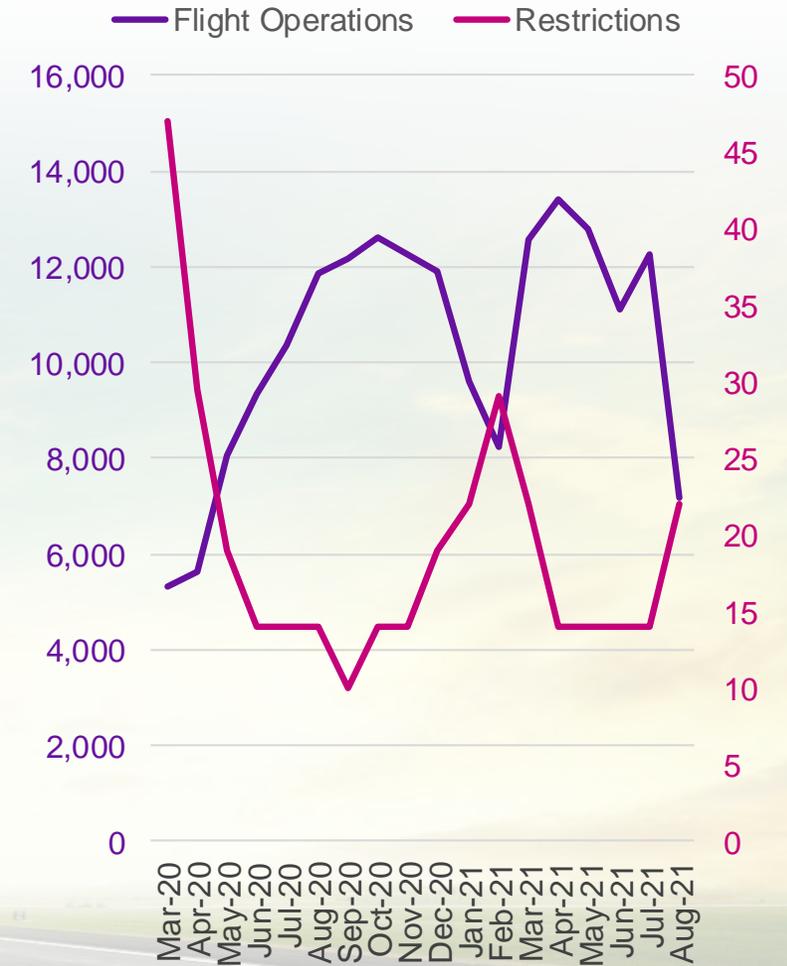
United States



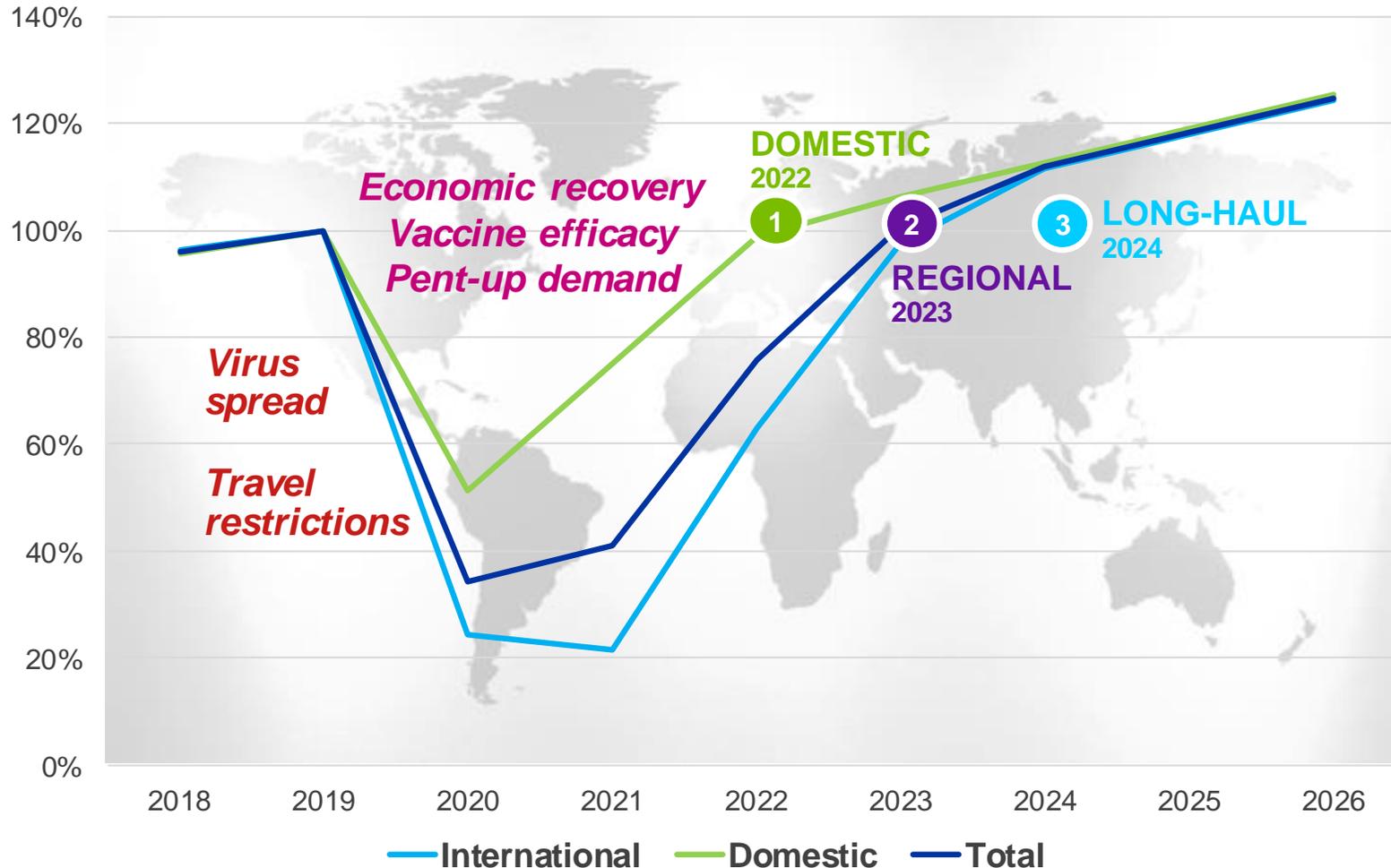
Germany



China



Multi-speed recovery assumptions largely unchanged from CMO 2020



- Domestic markets lead
- LCCs recover fastest
- Single-aisle resilience
- Hubs support long-haul recovery
- 2023-2024 return to 2019 traffic

Commercial aviation market outlook trends

Replacement



Fleet renewal

Sustainability

Efficiency

Resilience



Travel demand

Market diversity

Innovation

Versatility

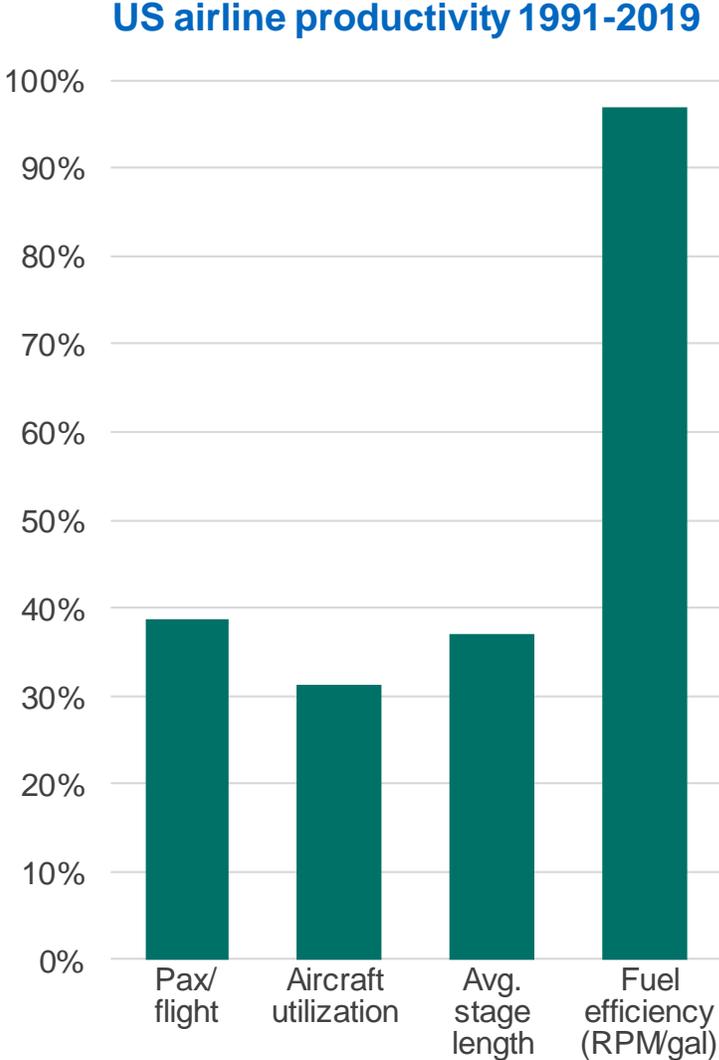
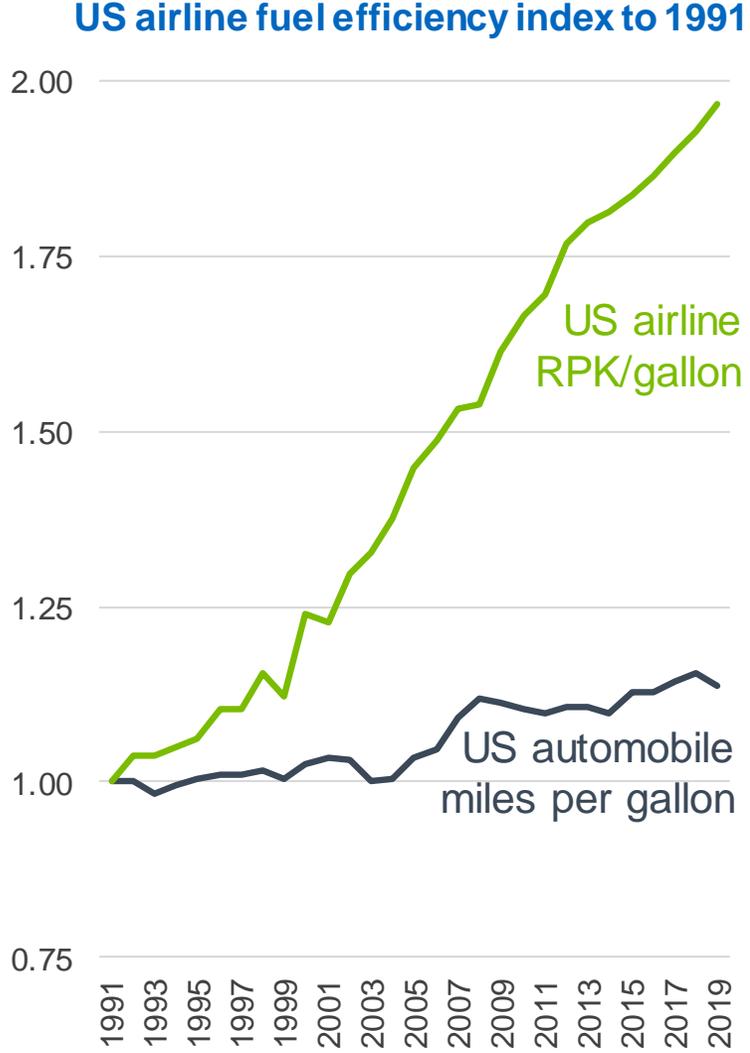


Capability

Network flexibility

Commonality

Commercial aviation relentless drive for efficiency



SOURCE: US DOT Bureau of Transportation Statistics (BTS)



Retirements tracking prior downturn trends

Announced
1,500+

Not flying
4,000-5,000

Formally retired
~450



Fleet renewal provides significant cost savings & environmental benefits;
3,000+ aircraft ready for near-term replacement

Fuel savings

\$9B

per year

Cost savings

\$16B

per year

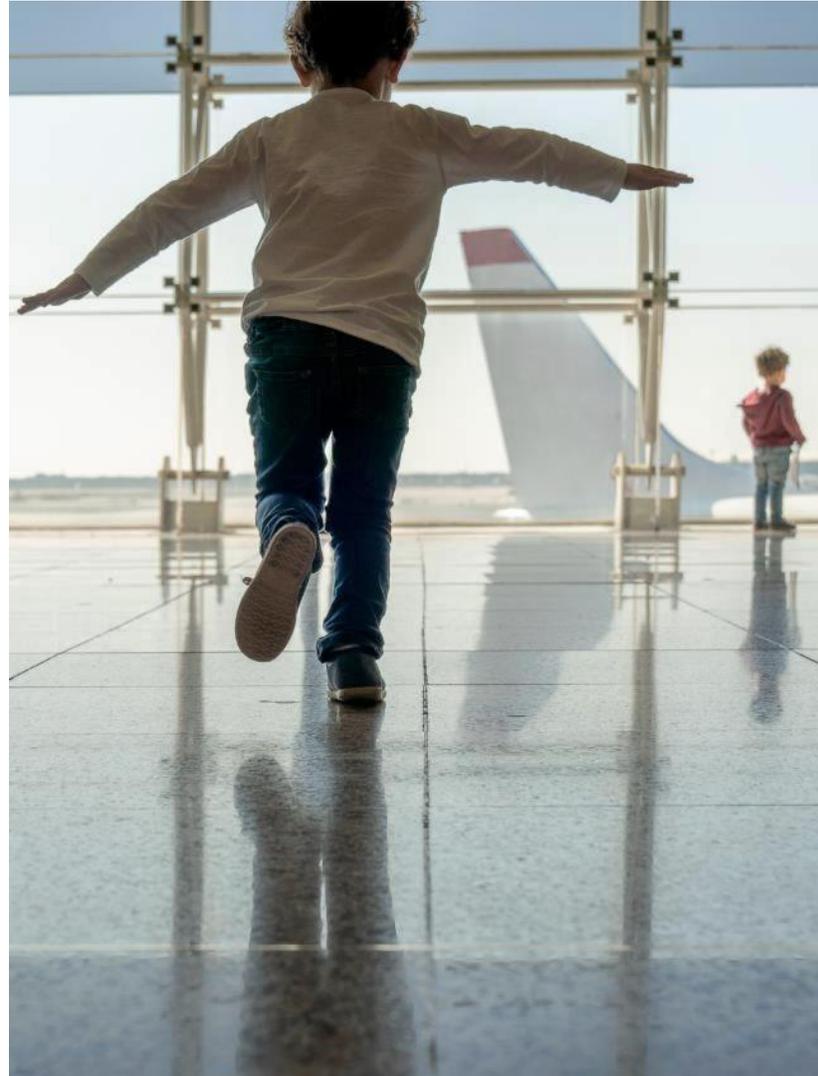
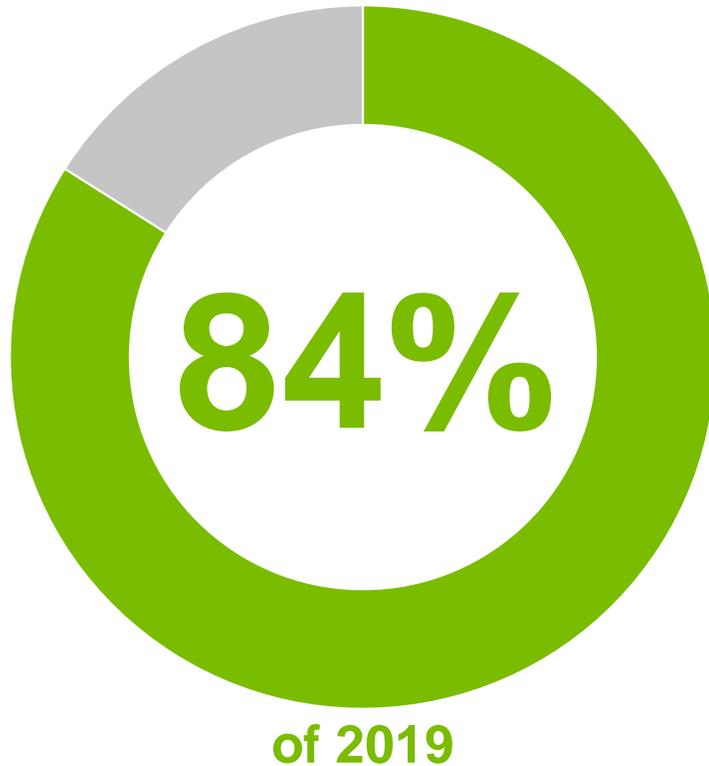
CO₂ reduction

36M tonnes

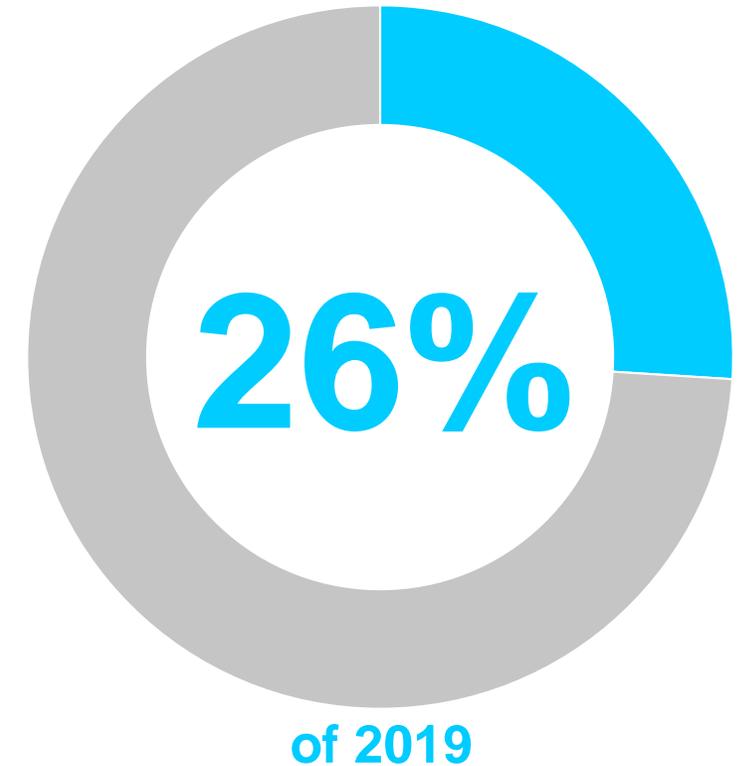
per year

Rapid traffic recovery in markets where travel restrictions able to ease

July Domestic

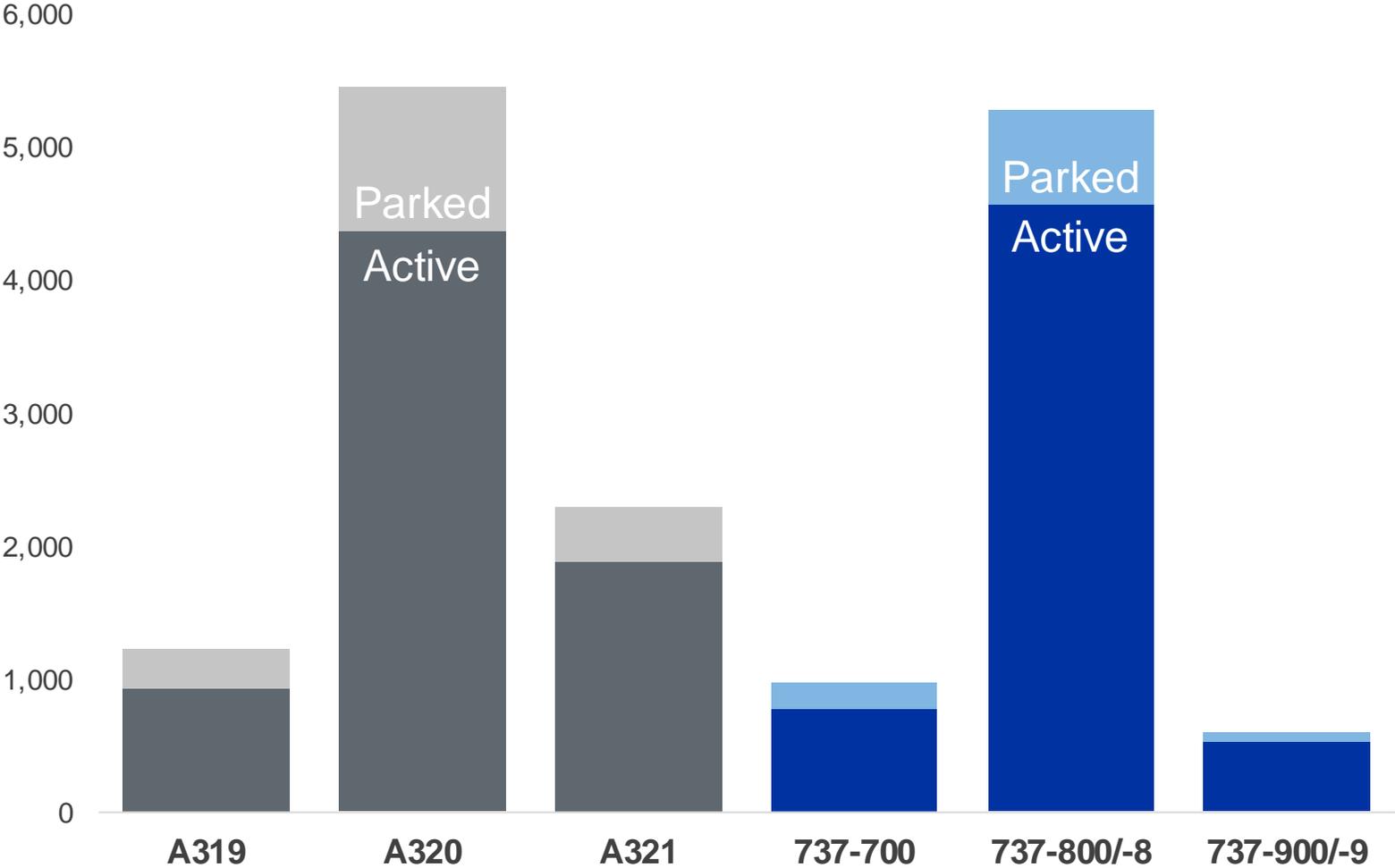


July International



Versatile fleets remain most active

Single-aisle fleet status



SOURCE: Cirium

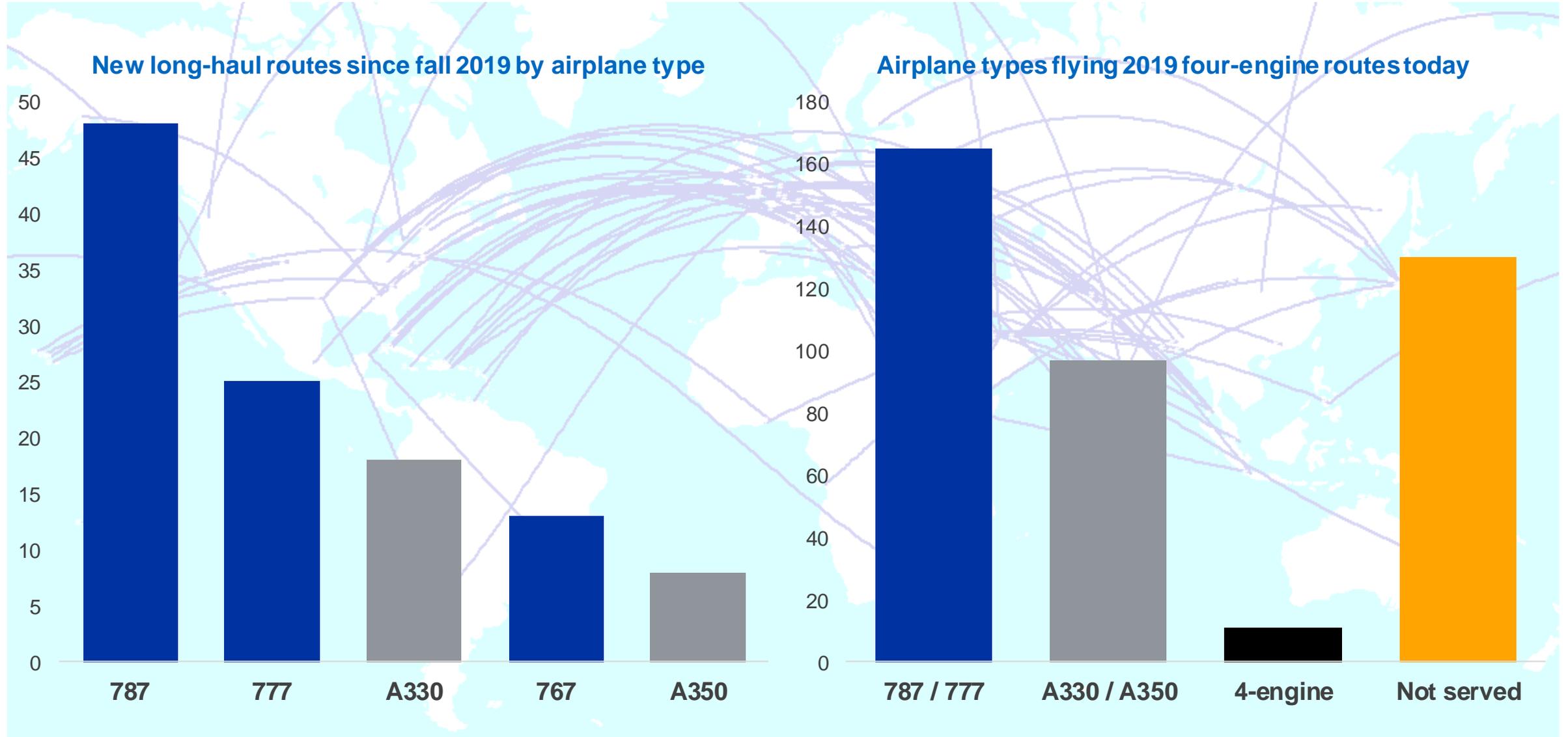


Mid-size single-aisles

70%
of active fleet

~90%
active

Versatile twins drive dynamic long-haul networks



20-year forecast: long-term fundamentals remain intact

Growth rates from 2019 base year



World economy
(GDP)

2.7%



Passenger traffic
(RPK)

4.0%



Cargo traffic
(RTK)

4.0%



Fleet growth
(jets)

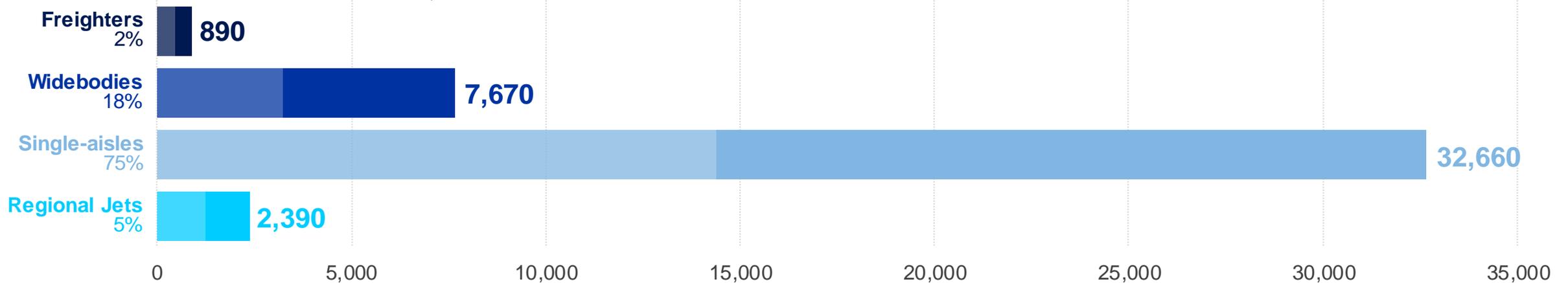
3.1%

First decade delivery impact, long-term resilience led by single-aisles



New airplane deliveries 2021-2030:
19,330

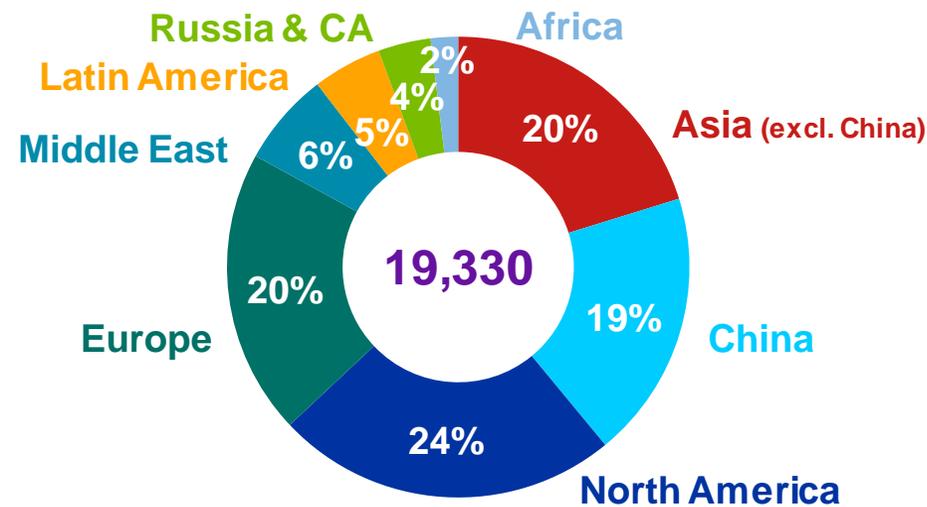
New airplane deliveries 2021-2040:
43,610



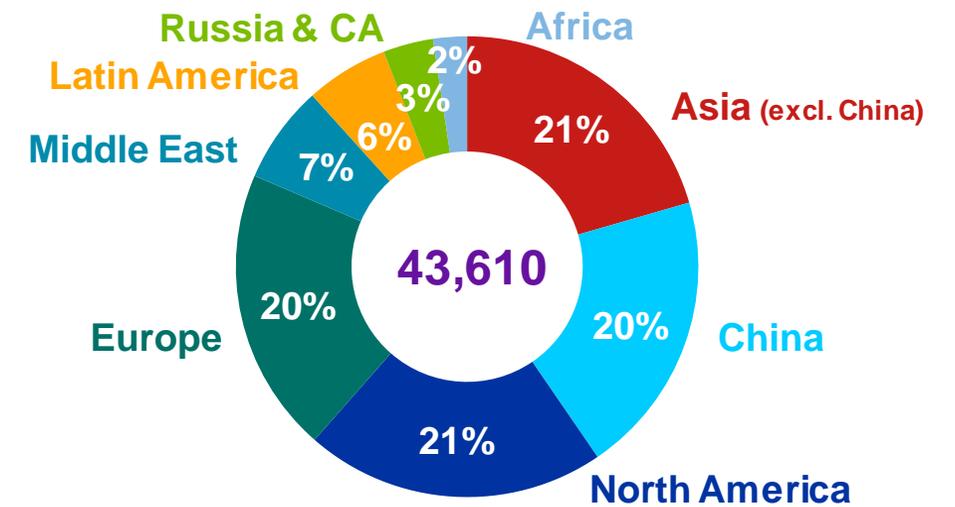
Regionally diverse future airplane demand



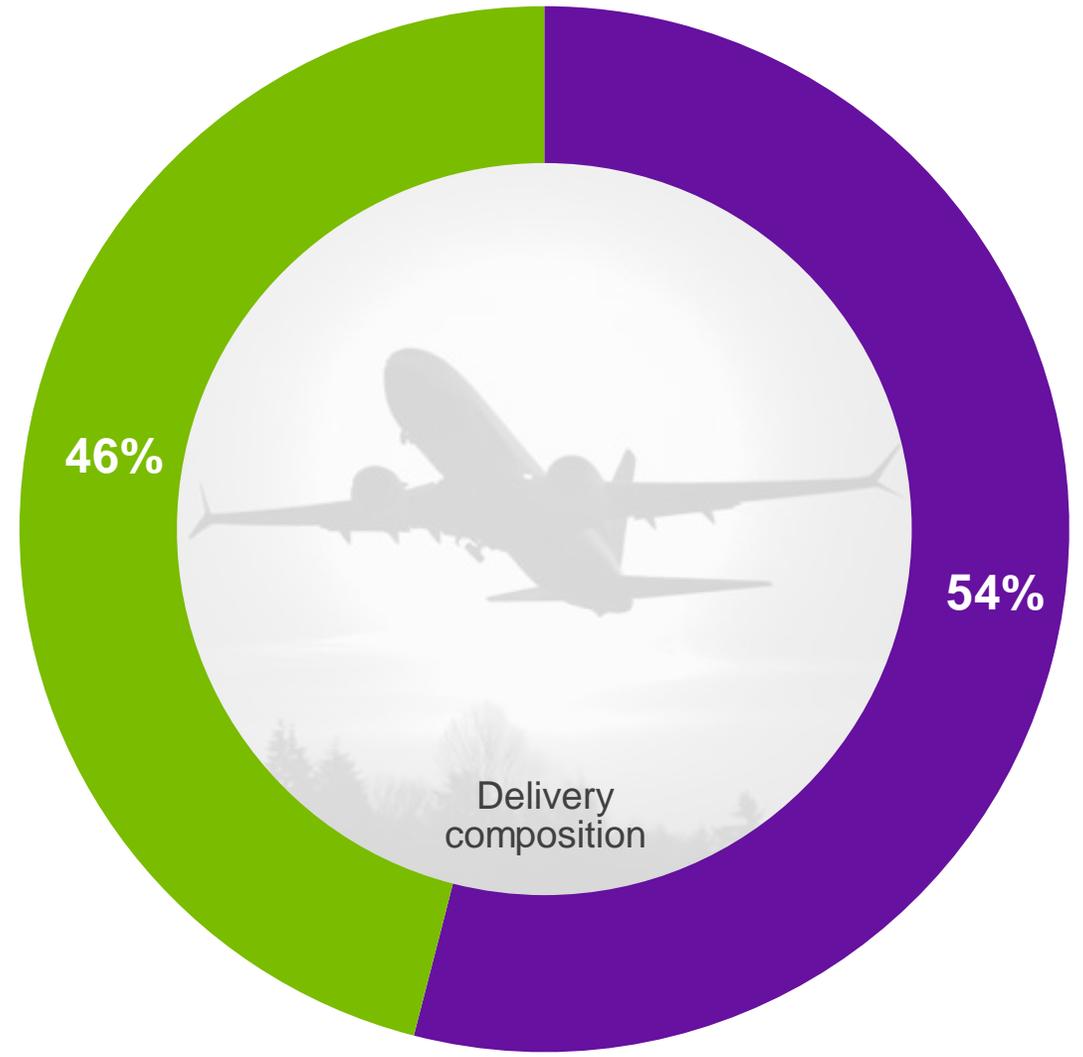
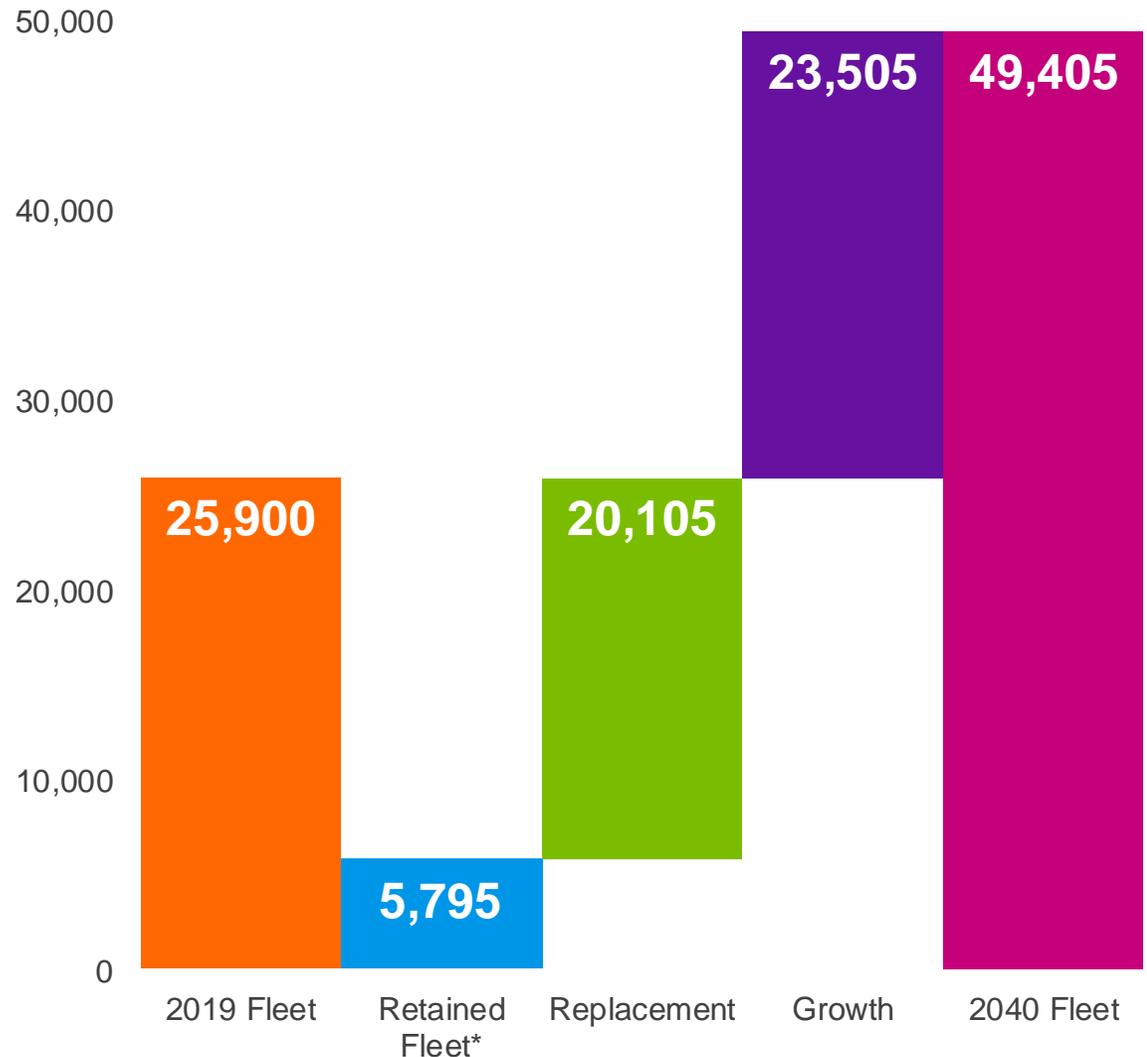
New airplane deliveries by region: **2021-2030**



New airplane deliveries by region: **2021-2040**



Delivering sustainable growth, 80% fleet renewal over next 20 years



*Retained fleet includes 2020 deliveries

Air cargo and freighter market outlook trends

Capacity



Passenger recovery

Conversion supply

Freighter value

E-commerce & logistics



Growth

Emerging markets

Business models

Replacement



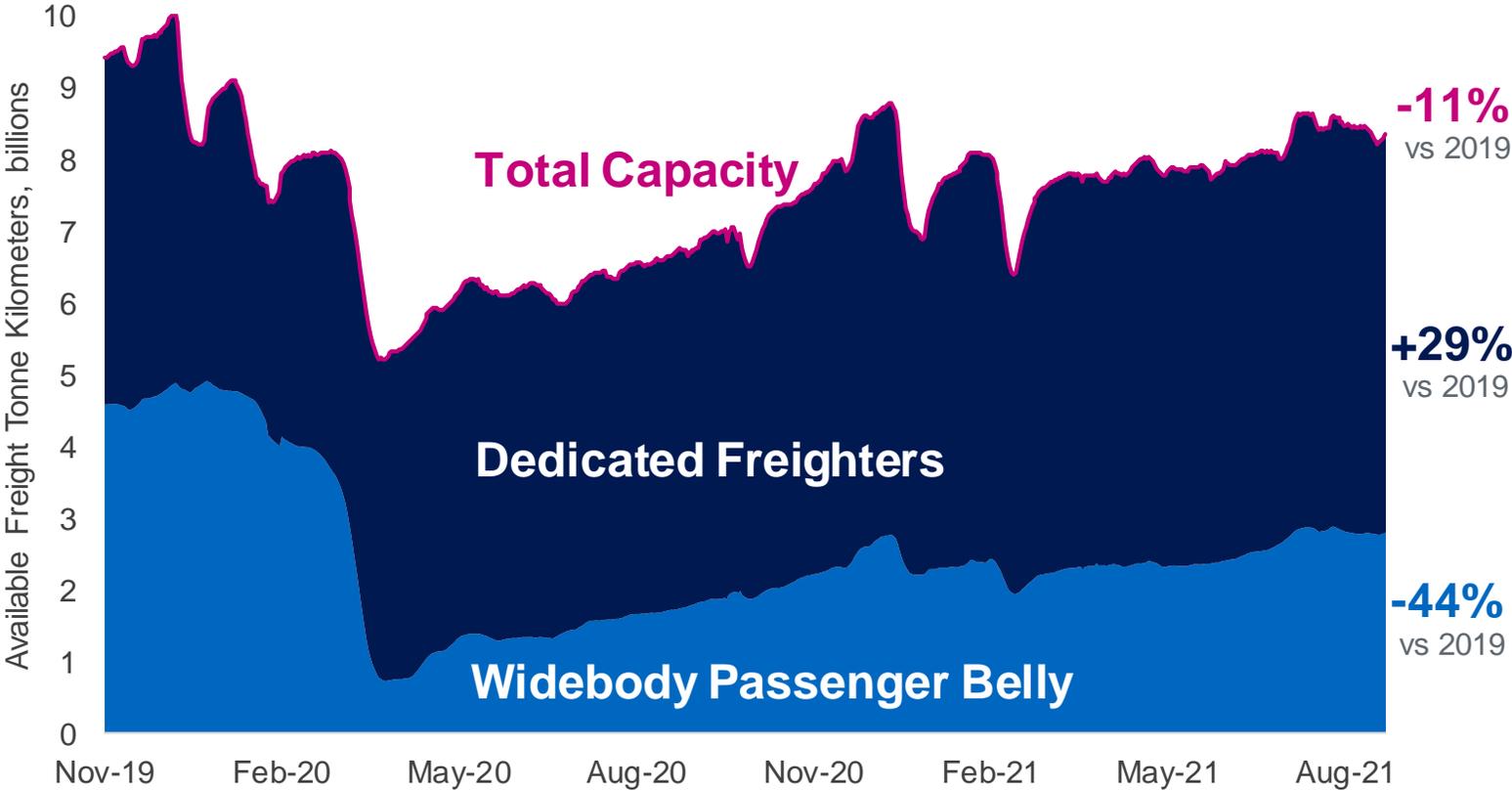
Efficiency

Capability

Sustainability

Long-haul passenger service reductions driving near-term demand for freighter capacity

Global air cargo capacity
Moving 7 day total



SOURCES: BR&T-E ADAPT/FlightRadar24, Boeing analysis



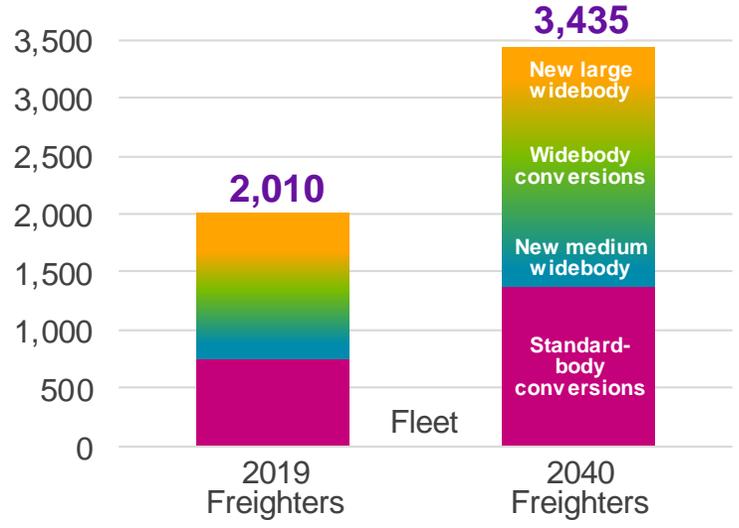
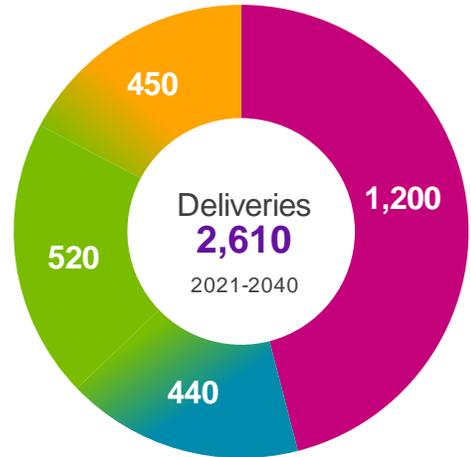
World air cargo traffic above pre-pandemic levels despite capacity loss



SOURCE: IATA, Boeing analysis



Freighter fleet to grow by 70% by 2040



Commercial aviation services market outlook trends

Recovery



Evolution



Transformation



Used parts supply

Freighter conversions

E-enabled ops growth

Fleet renewal & training

Digital enablement

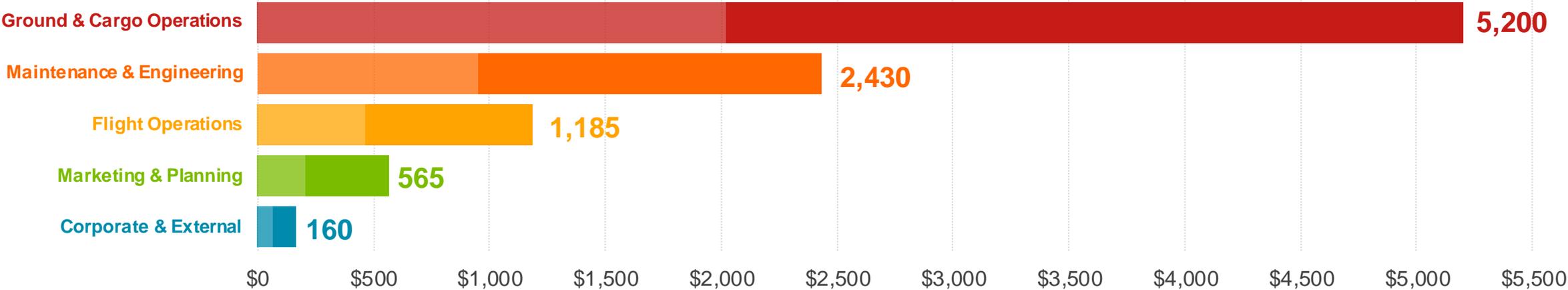
Operations optimization

\$9.5 trillion commercial services market; First decade utilization impact, longer-term transformation



Commercial Aviation Services 2021-2030:
\$3.7T

Commercial Aviation Services 2021-2040:
\$9.5T





Commercial aviation needs 2.1 million new personnel to meet projected air travel demand

Pilots

612,000

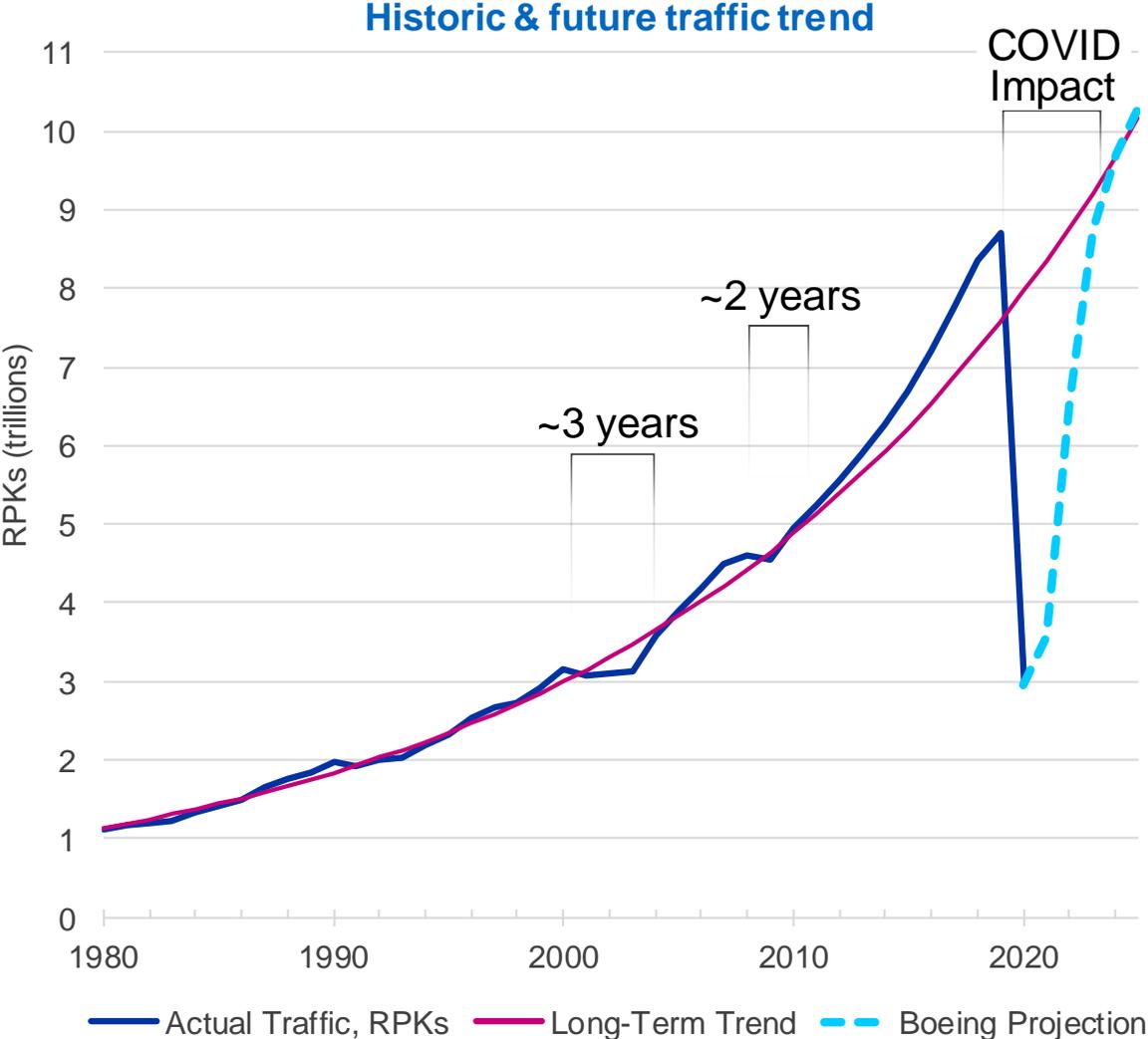
Technicians

626,000

Cabin Crew

886,000

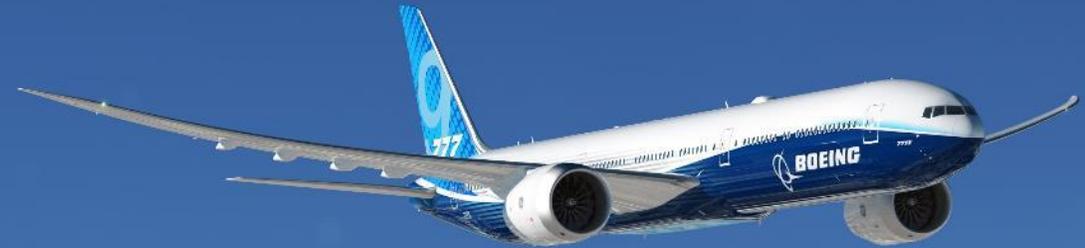
Aviation proven resilient over and over again



RPKs = Revenue Passenger Kilometers
SOURCES: 2000-2020 IATA stats, Boeing analysis



Most versatile family of aircraft



Offering the most
capability & productivity

Designed for efficiency
& sustainability

Delivering versatility
for a dynamic market



Summary



Recovery progress largely as expected

Near-term volatility driven by virus, policy dynamics

Demand fundamentals drive resilience in long-term outlook

Single-aisle leads recovery; robust freighter demand

Commercial aviation services follow global fleet trends

