

IATA WORLD MAINTENANCE & ENGINEERING SYMPOSIUM

**Madrid, Spain
24 – 25 June 2026**



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Opening and Welcome

Iryna Khomenko,

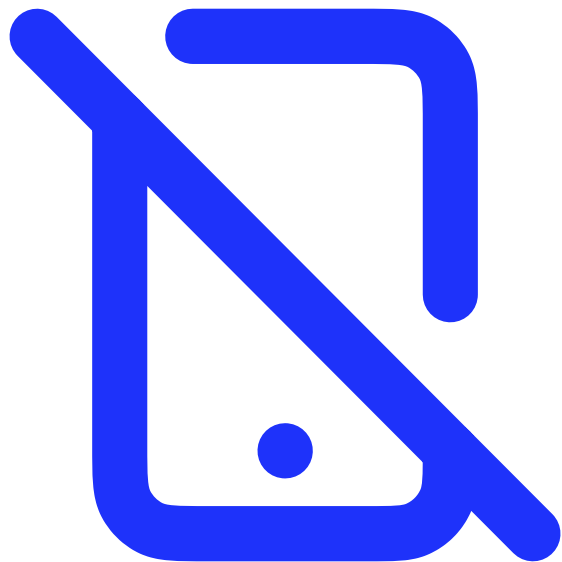
Senior Manager Technical Operations and Supply Chain, IATA

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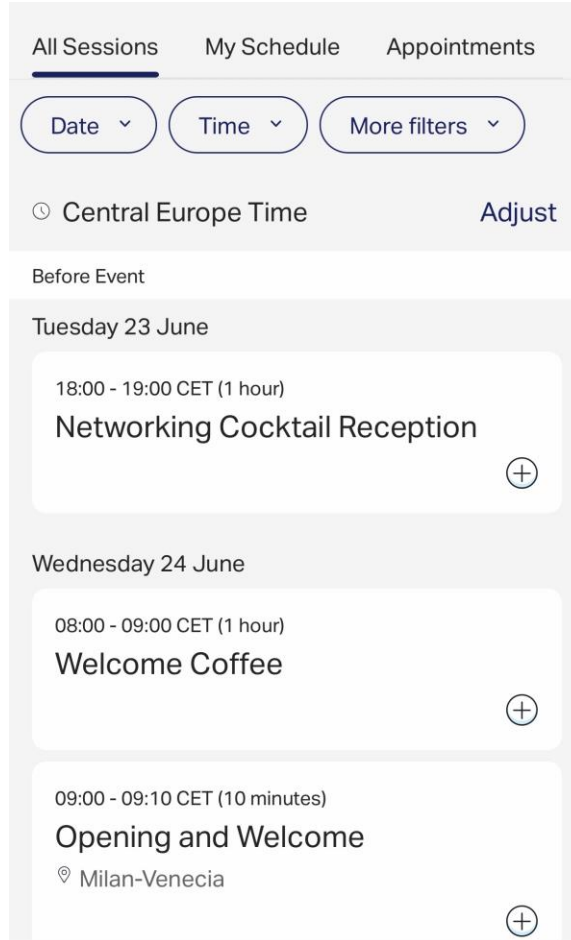
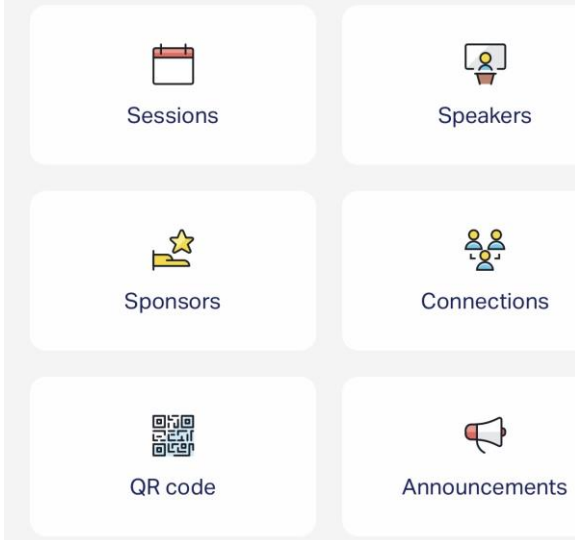
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Event ID: **IATAWMES2026**

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WMES App, Q&A & Survey.

Add session to calendar
and scroll down to access
Q&A and Survey.

From crisis to constraint:
The new normal for the
aviation supply chain

Wed 24/06, 09:10 - 09:30 CET
20 minutes

Milan-Venecia

+ Add to calendar

Add session

Speakers



Stuart Fox
Director Flight and Technical
Operations, IATA

About this session

Plenary Session

About this session

Plenary Session

Live Q&A Hasn't started

Survey



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Keynote

Stuart Fox,
Director Flight and Technical Operations, IATA

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\$11 billion

Industry cost from ongoing supply chain challenges

Enhance supply chain visibility

Open up the aftermarket

Unlock the value of data, digitalization and AI

Build human capacity

Airlines can't run global networks on **guesswork**, but too often that is what they are being asked to do

Opening up the **aftermarket** is a priority

Airlines need more **choice**, more **competition** and more **access**

AI is only as **good**
as the **data** behind it

710,000
new maintenance technicians
required over the next
20 years

Safety mandates must be **ambitious**, but also **deliverable**. Timelines must reflect supply chain **readiness**.

The supply chain is under real **pressure**, but this is not a reason for pessimism. It is a reason for **action**.

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From crisis to constraint: The new normal for the aviation supply chain

Maciej Wardejn,
Senior Manager Industry Finance, IATA

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Industry Outlook:

From crisis to constraint:

The new normal for the aviation supply chain

Maciej Wardejn

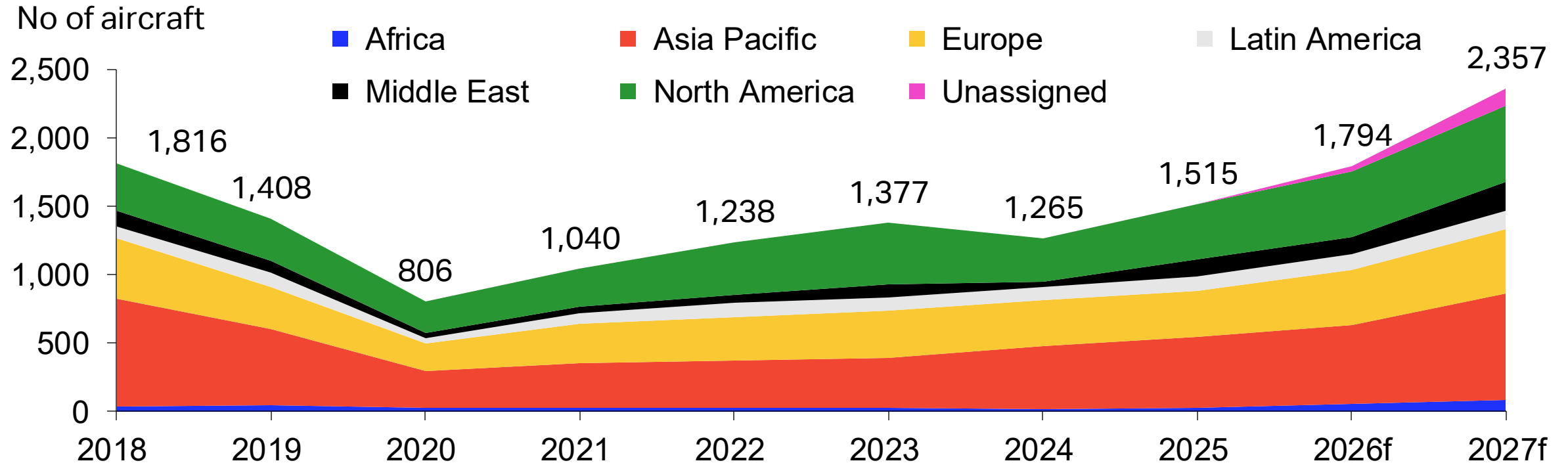
IATA Sustainability and Economics

3 July 2026



The worst may be behind us...

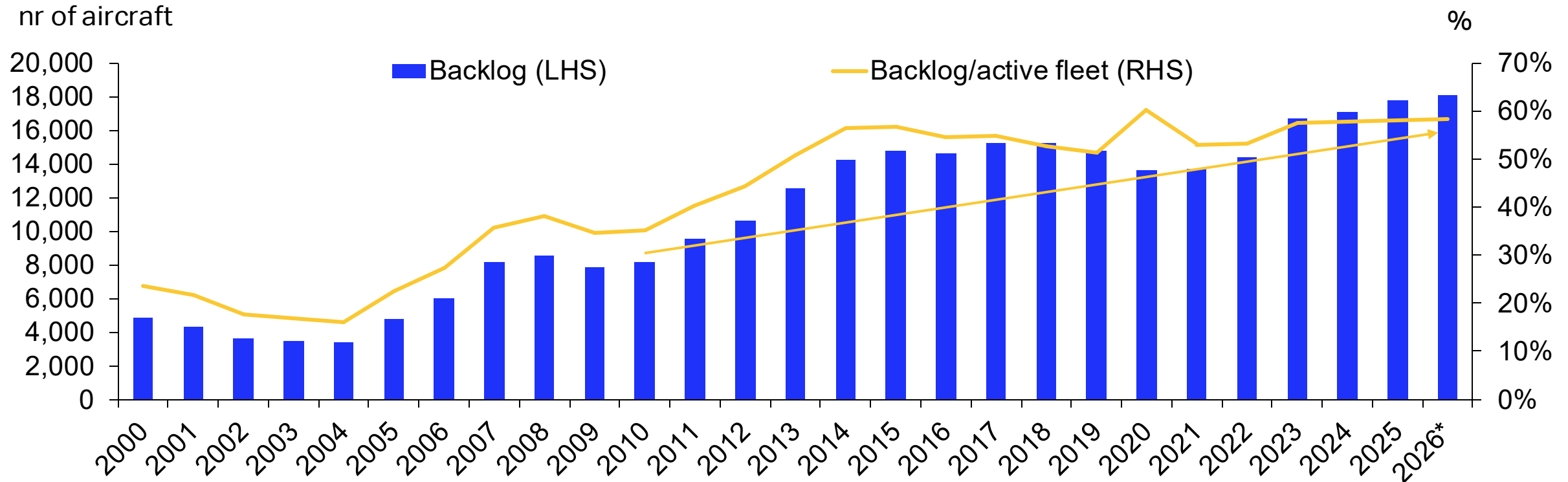
Aircraft deliveries by region



Source: IATA Sustainability and Economics, Cirium Fleets Analyzer. * May 2026 update

..but normalization is years away with backlog doubling over 15 years

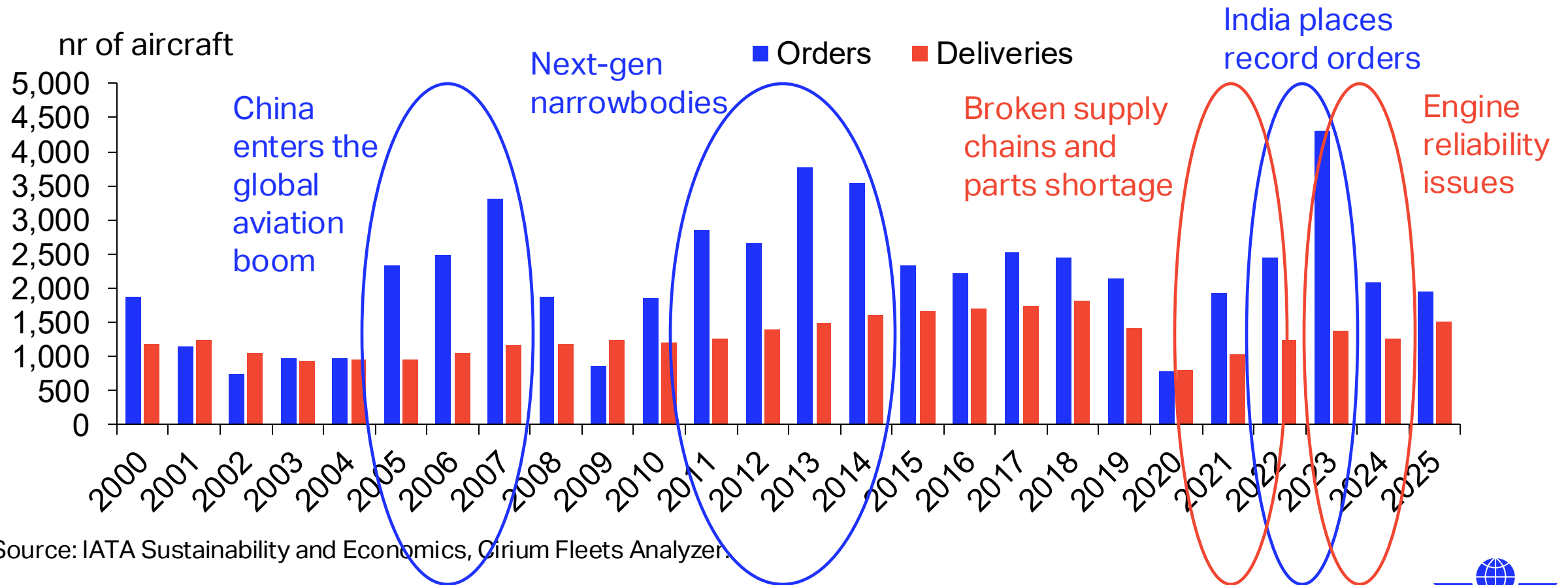
Global aircraft backlog (total number of outstanding orders)



Source: IATA Sustainability and Economics, Cirium Fleets Analyzer. * May 2026

Orders continue outpace deliveries

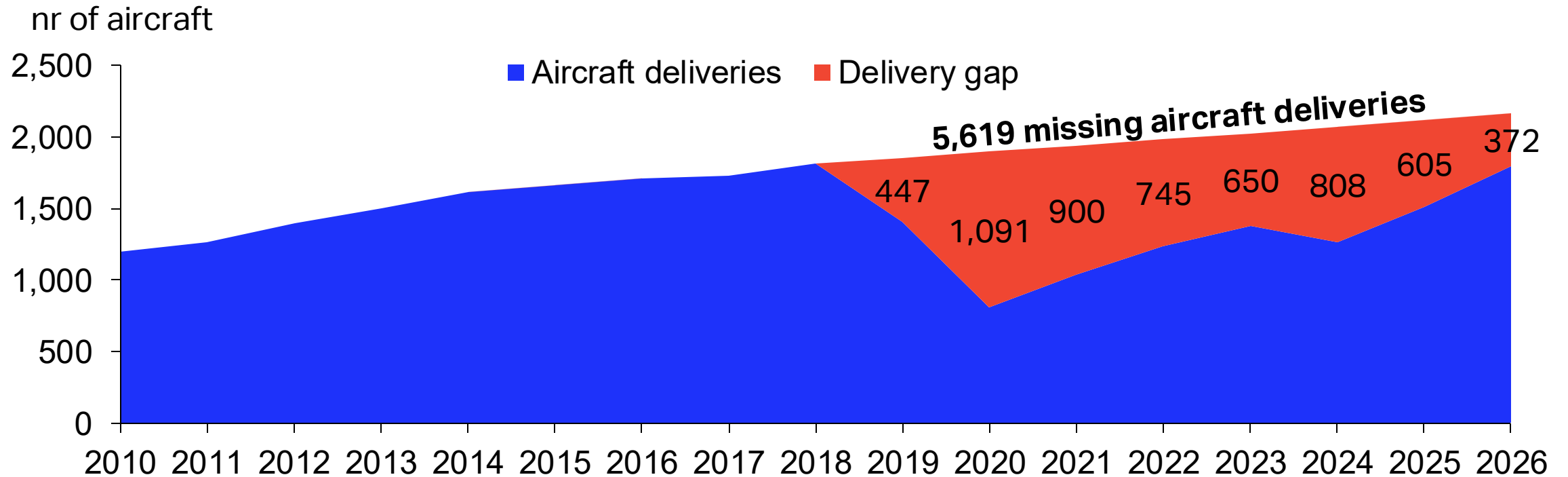
Global number of aircraft gross orders and deliveries



Source: IATA Sustainability and Economics, Cirium Fleets Analyzer.

Pure production gap exceeds 5,600 aircraft

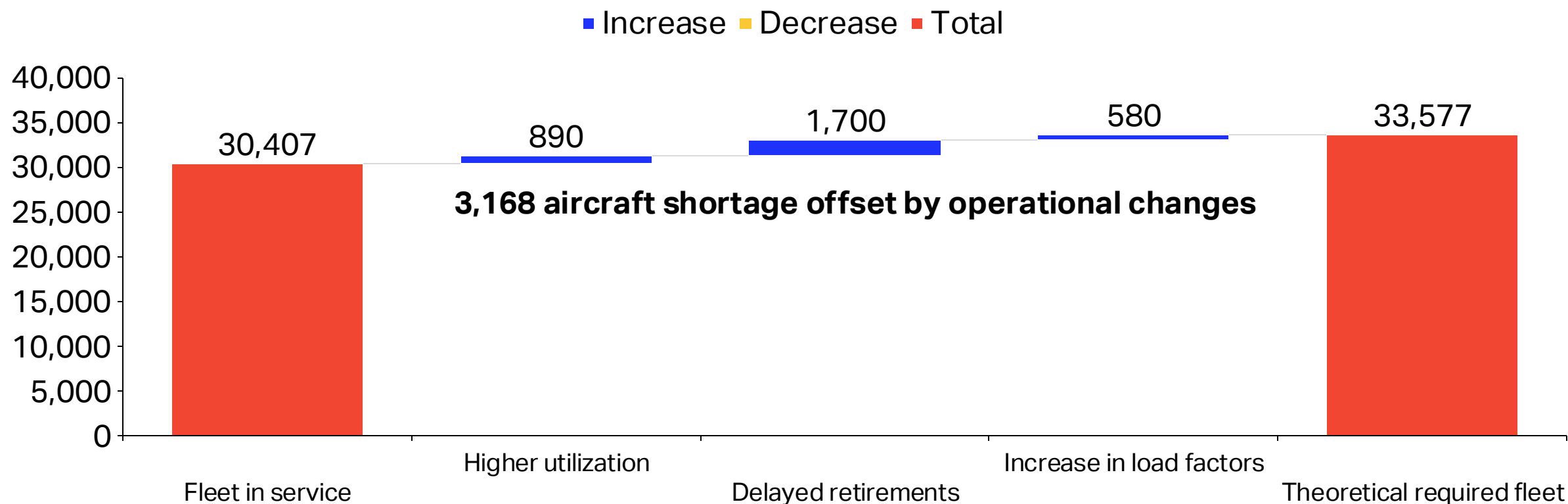
Aircraft deliveries (incl. 2025-26 forecast) compared with theoretical pre-pandemic trend



Source: IATA Sustainability and Economics, Cirium Fleets Analyzer.

Airlines work hard to offset the shortage

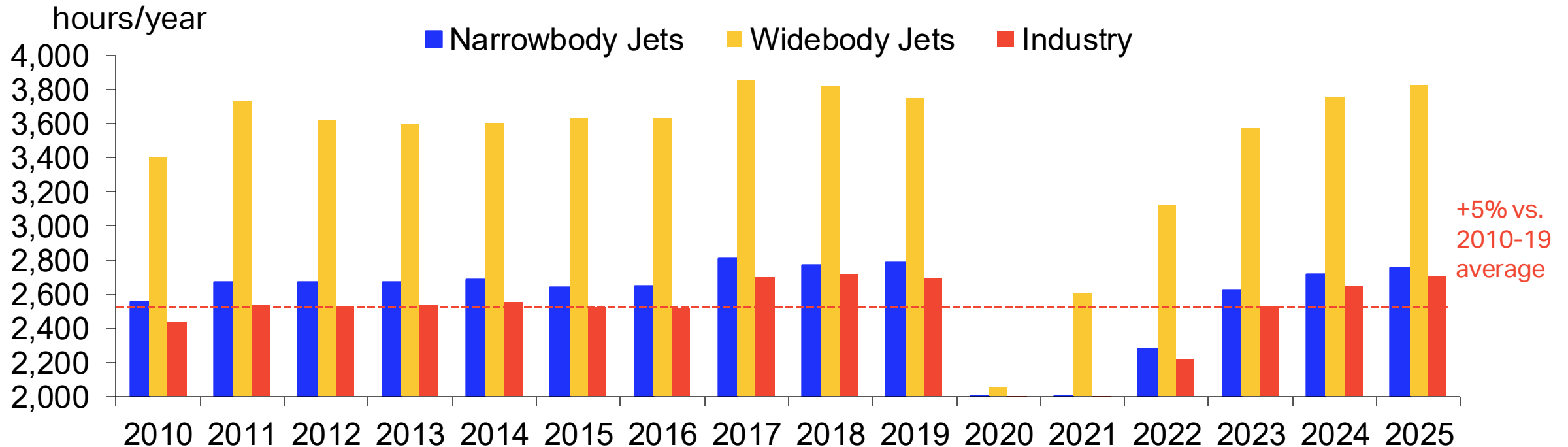
Estimated aircraft shortage absorbed by the industry and theoretical required active fleet



Source: IATA Sustainability and Economics, Cirium Fleets Analyzer.

Reaching the wall – utilization at all time highs

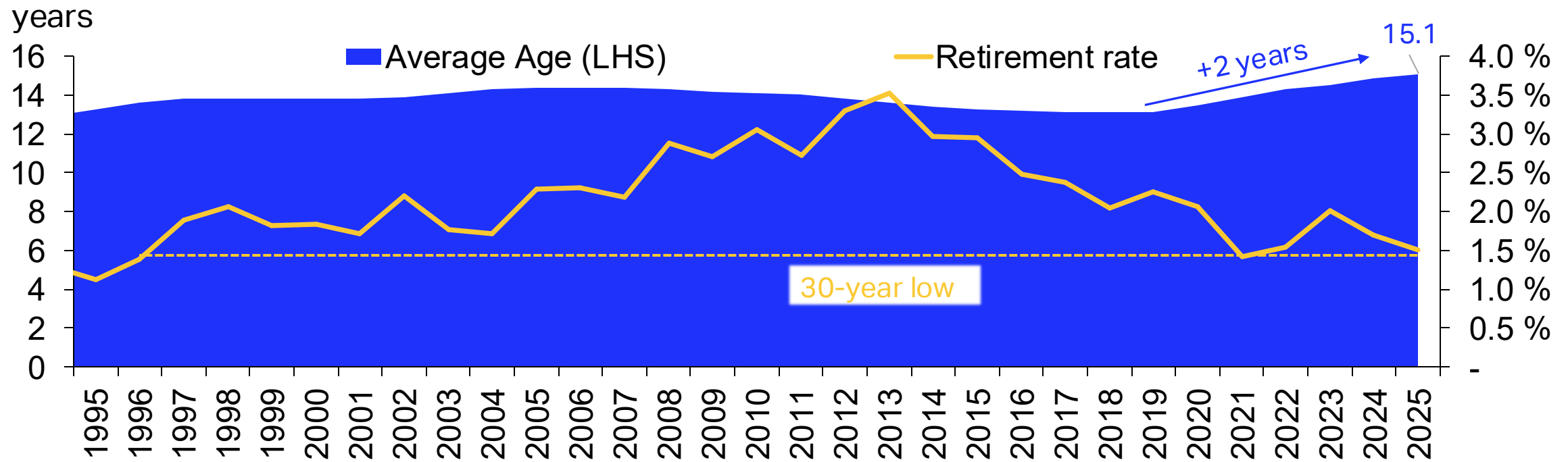
Average aircraft utilization, hours/year



Source: IATA Sustainability and Economics, Cirium Fleets Analyzer.

We are flying on borrowed time

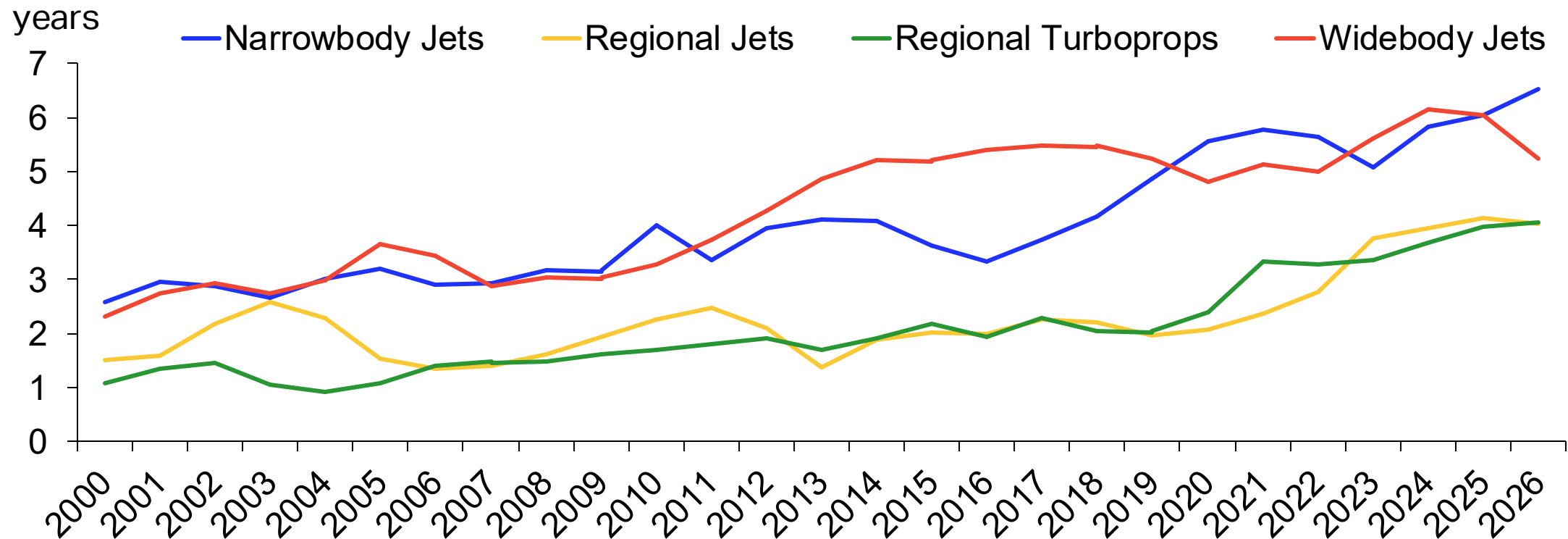
Average age of aircraft and a retirement rate (number of retirements/total fleet)



Source: IATA Sustainability and Economics, Cirium Fleets Analyzer.

Airlines need to plan with longer horizon than ever

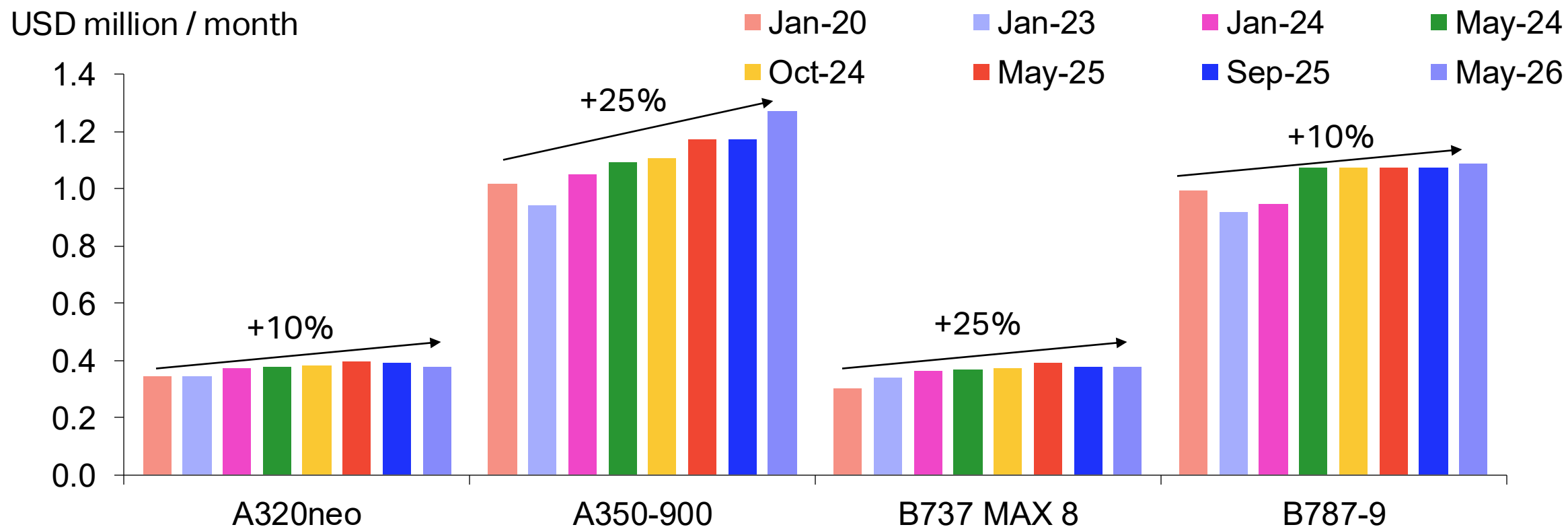
Aircraft waiting time (period between order and delivery date), by the year of delivery, years



Source: IATA Sustainability and Economics, Cirium Fleets Analyzer.

Lease rates peak due to new aircraft shortage

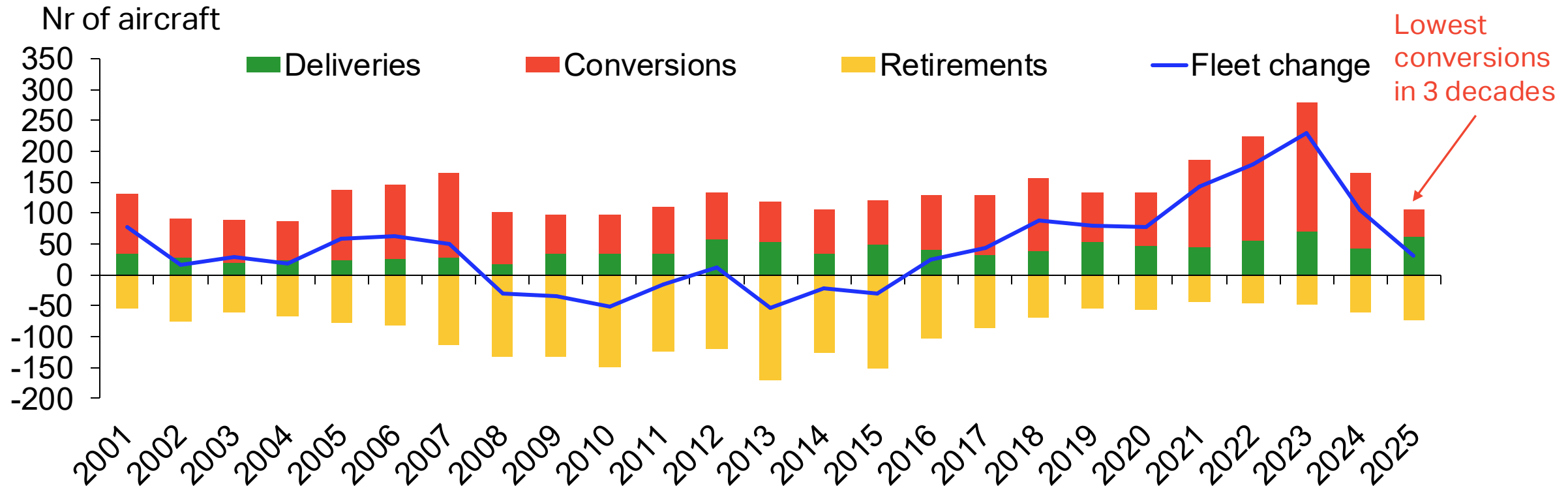
Aircraft lease rates, new aircraft, USD million per month



Source: IATA Sustainability and Economics, Ishka.

Cargo capacity has become an unintended casualty

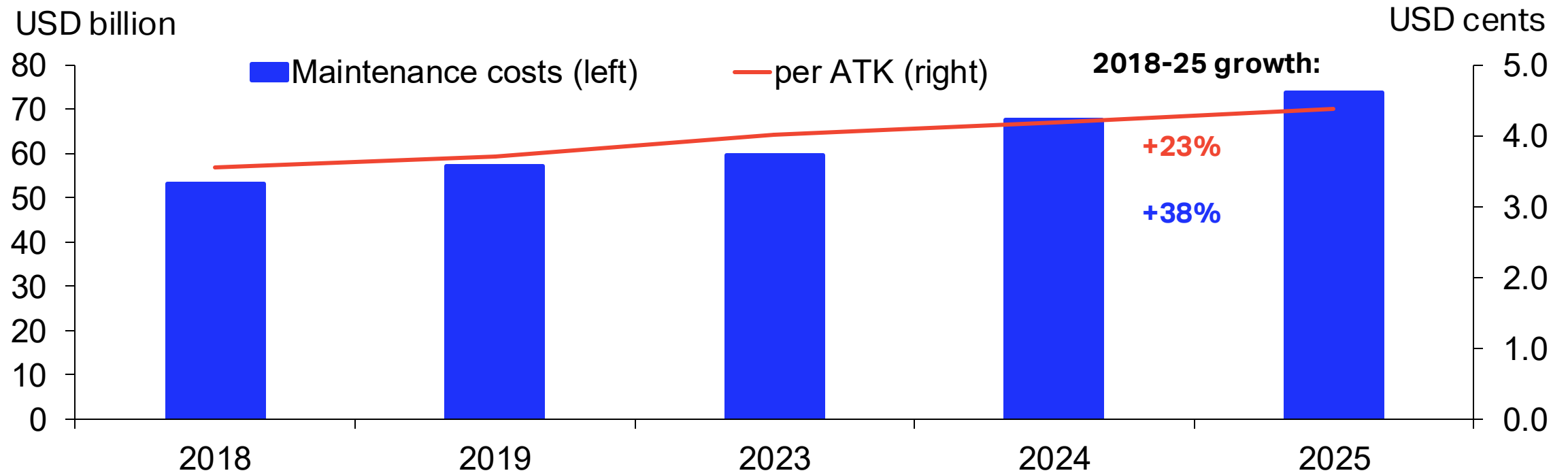
Cargo fleet size change by event type



Source: IATA Sustainability and Economics, Cirium Fleets Analyzer.

Fying older fleets keep the maintenance costs up

Maintenance costs of the global airline industry, USD billion, and maintenance unit cost, per ATK



Source: IATA Sustainability and Economics, Airfinance Global.

It could only get better? But not back to normal.

- Deliveries are growing, but so is demand. As a result, backlogs are unlikely to normalize before the 2030s.
- An aging fleet will remain a structural feature.
- We are moving from a temporary supply chain crisis to a structurally constrained operating environment.
- Airlines need to adapt to the new normal, plan more ahead, grow selectively, and focus on operational flexibility.

Outlook



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From crisis to constraint: The new normal for the aviation supply chain

Maciej Wardejn,
Senior Manager Industry Finance, IATA

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Introduction on the global supply chain issues

Moderated by **Iryna Khomenko**,
Senior Manager Technical Operations and Supply Chain, IATA

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Panelists

Chris Gruener,
Executive Vice President,
BOC Aviation

Willie Walsh,
Director General,
IATA

Enrique Robledo Martín,
Chief Technical Officer,
Iberia

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Networking Coffee Break

Next session starts at 11:00

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Introduction

Stuart Fox,
Director Flight and Technical Operations, IATA

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Supply Chain Challenges - Temporary Crisis or the New Normal

Alex De Gunten,

SVP Government and Industry Affairs, HEICO Aerospace

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Temporary Crisis or The New Normal

A to B

\$7.20

+6%

16 x

Cost to Industry

\$11B

+ > \$20B

15% - 24%

17,000

13-15 yrs

60-90

60-90

200-300+

How did we get
here

OEM consolidation

~70%

> 370

~ 60%

5

2500GB

< 5%

> 700,000

2-5 Yrs

weight in gold

Philosophical Change

Airlines

Lessons

Regulators

IATA

OEMs

A supply chain with a single point of failure guarantees that
Crisis will be our new Normal

Thank You

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Supply Chain Challenges - Temporary Crisis or the New Normal

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SVP Government and Industry Affairs, HEICO Aerospace

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Single aisle aircraft engines MRO 'Strategic levers to address supply chain challenges

Stuart Fox,

Director Flight and Technical Operations, IATA

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Single-Aisle Aircraft Engine MRO

Strategic levers to address supply chain
challenges



Market pressure | LEAP and GTF demand is scaling ahead of aftermarket maturity

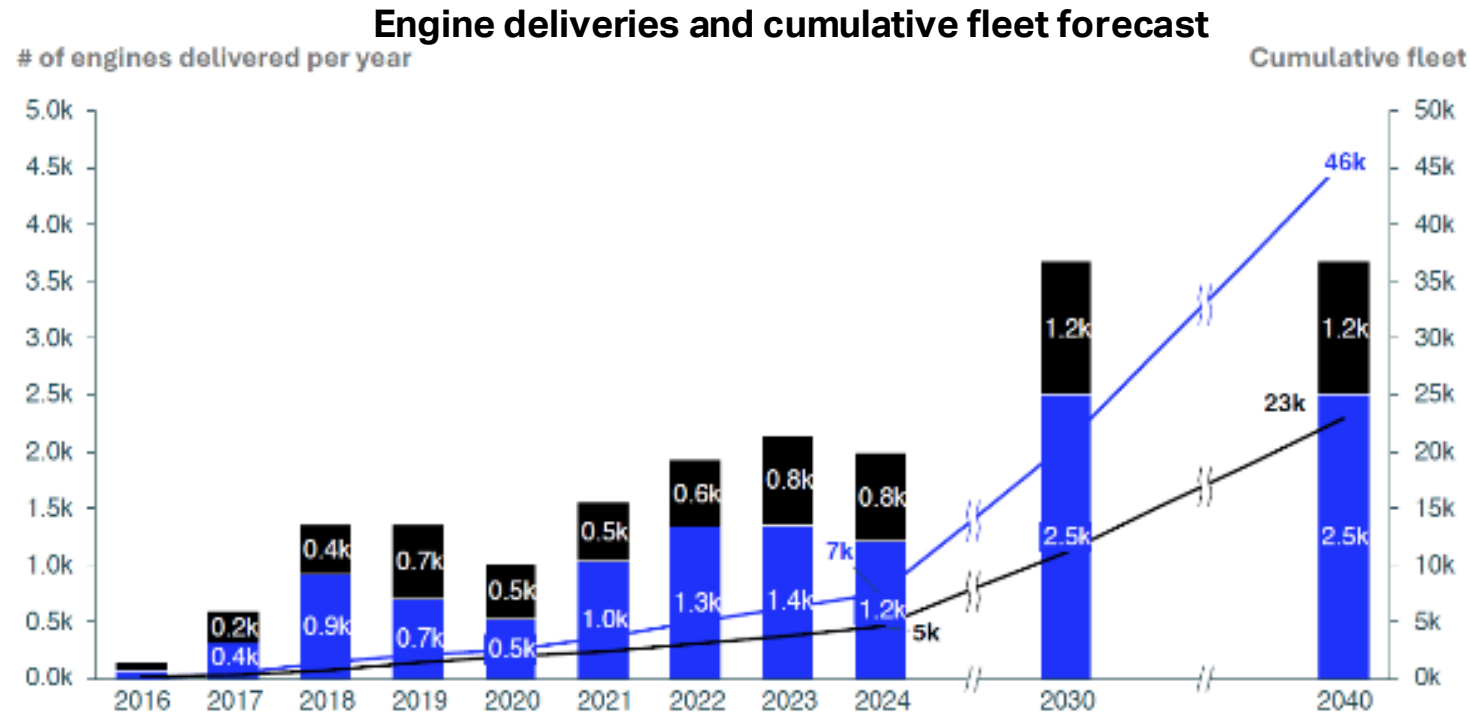


Figure 2: # of engines delivered and forecast – based on aircraft deliveries (excluding spare engines)

Note: Actual engine delivery differs from these figures because of 2 factors:
 i) lead time between engine delivery and aircraft delivery
 ii) spare engines (which are not included in this chart)

Source: Emerton estimate

GTF Deliveries ■
 Leap Deliveries ■
 GTF cumulative fleet —
 LEAP cumulative fleet —

The single-aisle engine aftermarket needs more capacity, parts flow and repair capability before the LEAP and GTF shop-visit wave arrives

IATA advocacy | Engine MRO is a fleet availability issue for the single-aisle market

- New-generation single-aisle engines are scaling before mature time on wing
- The operational risk
- Shop capacity matters, but we need resilience
- Airlines need to reduce exposure to engine maintenance demand spikes



IATA is advocating for more engine MRO capacity, approved repairs, wider parts access and greater airline choice

IATA action agenda | Build single-aisle engine aftermarket resilience ahead of the next shop-visit wave

OEM and network investment is essential, but airline relief depends on usable capacity: parts, approved repairs, spare engines, test capacity and customer control over work scope

**Increase parts
availability**

IATA action agenda | Build single-aisle engine aftermarket resilience ahead of the next shop-visit wave

**Increase parts
availability**

**Improve
market access**

IATA action agenda | Build single-aisle engine aftermarket resilience ahead of the next shop-visit wave

**Increase parts
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**Secure
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IATA action agenda | Build single-aisle engine aftermarket resilience ahead of the next shop-visit wave

**Increase parts
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**Extend best
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IATA action agenda | Build single-aisle engine aftermarket resilience ahead of the next shop-visit wave

**Increase parts
availability**

**Improve
market access**

**Secure
customer
protections**

**Extend best
practice**

**Improve engine
visibility**

More usable engine MRO capacity, more approved repairs, wider parts access and greater airline choice

Single aisle aircraft engines MRO 'Strategic levers to address supply chain challenges

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Director Flight and Technical Operations, IATA

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Opening up the aftermarket

Moderated by **Stuart Fox**
Director Flight and Technical Operations, IATA

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Panelists

Phil Baxendale,
Director of Engineering,
British Airways

Jean-Marc Domergue,
VP - Contracts,
CFM

Aman Sandhu,
Director Systems Service Engineering,
Boeing Company, The

Andre Schneider,
Head of Engineering & Maintenance -
SI Customer Services,
Airbus

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IATP

Essam Hanafy,
Chairman and Custodian, International Airlines Technical Pool (IATP)

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How to share technical resources in an effective way

Essam Hanafy, (EgyptAir)
Chairman, IATP

IATA World Maintenance & Engineering Symposium
Madrid, Spain
24-25 June

➤ **IATP Mission**

The IATP is a convention of Airlines sharing Technical Resources to generate economic savings and support on time dispatch reliability and operational safety.

➤ **IATP Organization Definition**

The IATP is a non-profit, independent, non-political global organization based on a democratic culture with equal opportunities for all member Airlines and their delegates.

➤ **Technical Resources Definition**

Technical Resources includes, but not limited to, aircraft spare parts, line maintenance, ground handling equipment, aircraft recovery kits, engines and technical training.

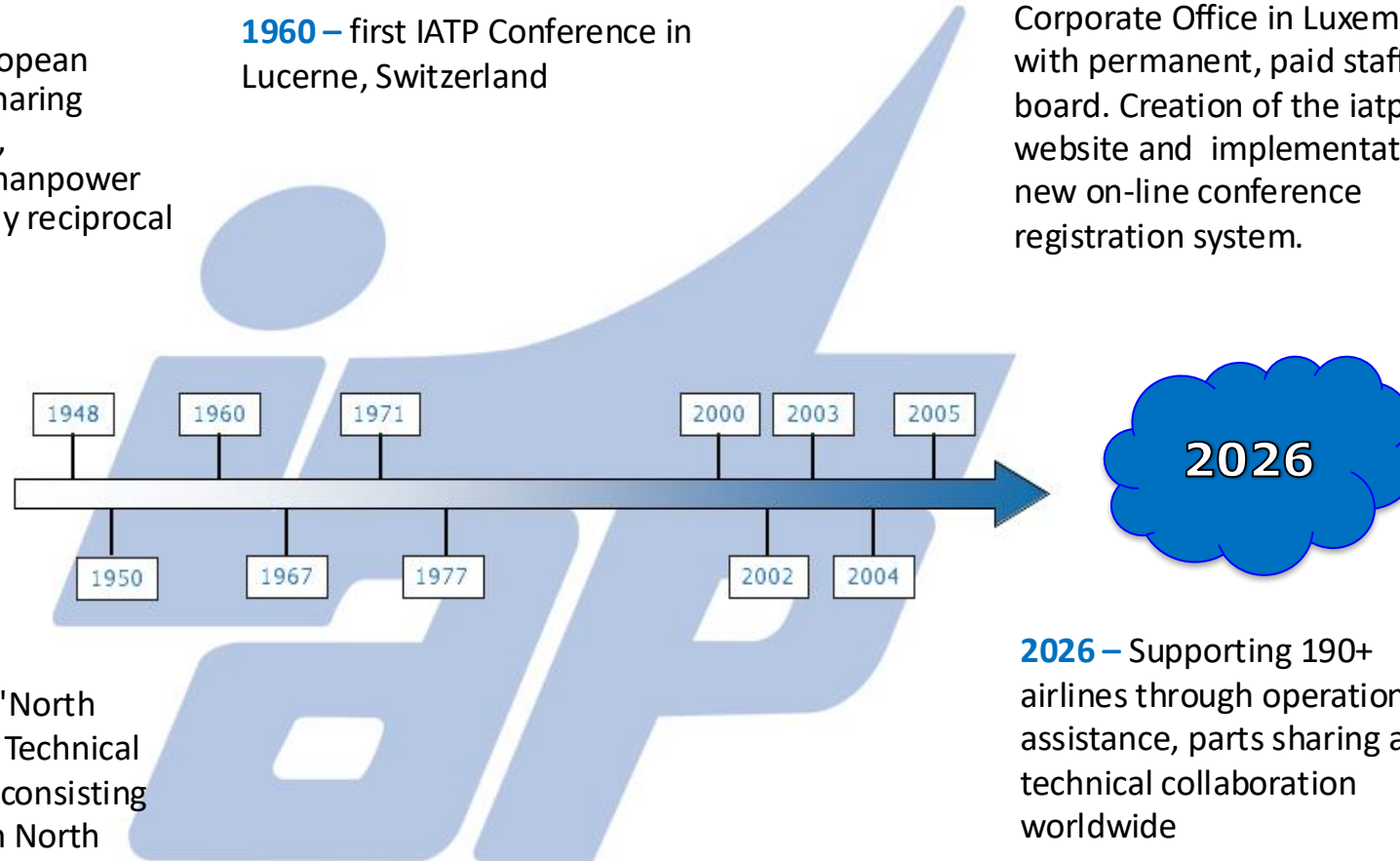
Brief history of IATP

1948 – A few European airlines started sharing aircraft materials, equipment and manpower resources. Entirely reciprocal without financial settlement.

1960 – first IATP Conference in Lucerne, Switzerland

2005 – Opening of the IATP Corporate Office in Luxembourg with permanent, paid staff on board. Creation of the iatp.com website and implementation of a new on-line conference registration system.

1977 – A second organization, the "North American Airlines Technical Pool" (N.A.A.T.P.), consisting of 16 airlines from North America, merged with IATP in February 1977.



2026 – Supporting 190+ airlines through operational assistance, parts sharing and technical collaboration worldwide

➤ Global Network:

- 142 Member Airlines
- 50 Sponsored Airline Members (17 Equalized and 33 Guests)
- 45 Associate Members
- Share **6,675** items valued at **\$ 169 M** (SS2025)
- **Parts Pool Groups** covering all major aircraft types
- **350** stations with parts pool available
- Provide line maintenance pooling at **900+** stations
- Provide **12** Aircraft Recovery Kits worldwide
- Provide info on Technical Training Capabilities List
- Engine pooling

Pools:

- ✓ Parts Pool
- ✓ Equipment Pool
- ✓ Maintenance Pool
- ✓ Aircraft Recovery Pool
- ✓ Engines Pool

Project Groups:

- ✓ Airbus Models & Derivatives
- ✓ Boeing Models & Derivatives
- ✓ APU (Auxiliary Power Unit)
- ✓ Landing Gear

Committees:

- ✓ Authorities Requirements
- ✓ Maintenance Pooling Agreements
- ✓ Platform Steering
- ✓ Station Restrictions
- ✓ Supplier Services

IATP Technical Watch Forum: Enabling Commonality & Interchangeability



IATP Technical Watch Forum

- Network of airline technical experts.
- Reviews and discusses:
 - Part number commonality
 - Interchangeability opportunities
 - Technical equivalencies
 - Emerging maintenance challenges
- Facilitates knowledge sharing and industry best practices.

Industry benefit

- Better utilization of available inventories.
- Identification of alternative solutions.
- Reduced dependence on specific part sources.
- Supports a more competitive and flexible aftermarket.

The Industry Challenge: Supply Chain & Aftermarket Constraints

Today's Reality

- Parts shortages affecting fleet availability
- Long lead times for critical components
- Rising MRO and aftermarket costs
- Dependence on limited suppliers
- Pressure to improve sustainability and repairability

How can the industry lower costs, increase competition, and strengthen resilience?

The answer is not only producing more parts, but also making better use of the resources, inventories, and expertise that already exist across the industry. Through parts sharing, technical cooperation, and collective expertise, airlines can reduce costs, improve resilience, and strengthen global supply chains.

The IATP Pooling Concept: A Proven Model



The IATP pooling concept represents a key factor in reducing investments and costs, while helping our members maintain their technical dispatch reliability targets.

The concept dates back to 1948, when six European airlines established a cooperative framework to avoid duplicating spare parts, tools, and engineering resources at every station they served. This initiative marked the birth of the IATP pooling concept.

Today, the principle remains unchanged: collaboration enables airlines to optimize resources, reduce costs, and improve operational support across the network.

Delivering Value in a Changing Environment



While the volume of parts distributed to stations has decreased over time, critical LRU NO-GO components are still required in significant quantities.

Recent global supply chain disruptions have clearly demonstrated the value of component sharing. The success of the IATP pooling model also during this period has reinforced its importance as a reliable and cost-effective solution for maintaining operational continuity.

The ability to access shared inventory across the network remains one of the strongest benefits offered to members.

Growth and Benefits for Members



The continued growth of IATP reflects the value it delivers to the industry.

- Full membership has increased from 110 to 142 airlines over the last ten years.
- More than 6,700 parts are shared across 350 stations worldwide.
- The shared inventory represents a value of approximately USD 169 million.
- Line Maintenance support is available at over 900 stations globally.

Expanding Services, Skills and Digitalization



Several important initiatives are currently underway:

- Development of APU pooling and landing gear pooling programs.
- Collaboration with EAMTC to establish lean training pathways and address the industry's shortage of qualified technical personnel.
- Ongoing discussions with EASA regarding workforce development and innovative training solutions.
- Cooperation with IATA to create a complementary framework leveraging the IATA Smart Hub MRO ecosystem. Areas of focus include supply chain visibility, data tracking, Fair Market Value (FMV) initiatives, and the expansion of PMA opportunities.

Aftermarket Challenges and IATP



IATP helps airlines navigate aftermarket challenges through:

- Parts sharing and pooling
- Line maintenance cooperation
- Technical collaboration
- Sharing operational resources and expertise

Conference value

Twice each year, IATP brings together aviation industry professionals in the spirit of cooperation to share resources, exchange best practices, develop line maintenance partnerships, optimize pooling arrangements, reduce costs, and improve operational efficiency and technical dispatch reliability, preparing to handle the incoming season.

Parts Pooling value

- Reduce AOG exposure
- Improve fleet availability
- Lower inventory carrying costs
- Faster response to shortages

Looking Ahead: IATP & MRO SmartHub



Pooling + Visibility = Greater Resilience

- **IATP Contribution**
 - ✓ Global airline pooling network
 - ✓ Access to serviceable aircraft materials
 - ✓ Proven collaborative model

- **IATA MRO SmartHub Contribution**
 - ✓ Enhanced parts visibility
 - ✓ Materials availability analytics
 - ✓ Improved sourcing intelligence

Shared Objective

- Helping airlines access the right part, at the right time, through stronger industry collaboration.

IATP Outlook

- *IATP looks forward to **a fruitful cooperation with IATA** under the **MRO SmartHub** initiative, combining **pooling expertise** and **digital visibility** to **strengthen airline operational resilience** and support the industry through ongoing **supply chain challenges**.*

Thank you for your attention!

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Networking Lunch

Next session starts at 14:00

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