

# **the year ahead** **challenge and opportunity**

**ADS webinar 21<sup>st</sup> January 2021**

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## agenda

- COVID scenarios
- implications for commercial aerospace
  - traffic
  - fleet
  - production
  - upgrades and MRO
  - business aviation
- Q&A

# in April 2020 we considered three scenarios

Source: Achieving the Difference

	<b>The Good</b>  - globally under control in 4-6 months	<b>The Bad</b>  - partial global control in 6-12 months	<b>The Ugly</b> - not under control in 12 months
<b>SOCIAL</b> <ul style="list-style-type: none"> <li>Social media</li> <li>Social distancing</li> <li>Privacy laws/social acceptance</li> <li>Virtual entertainment</li> </ul>	<ul style="list-style-type: none"> <li><b>some residual take-up of virtual leisure</b></li> <li><b>free to travel</b></li> <li>physical distancing relaxed</li> <li>higher hygiene measures</li> <li>relaxation of COVID-19 laws</li> </ul>	<ul style="list-style-type: none"> <li><b>wide acceptance of virtual leisure</b></li> <li><b>travel restrictions on some territories</b></li> <li>physical distancing partially relaxed</li> <li>extreme hygiene measures in some territories</li> <li>relaxation of COVID-19 laws in some territories</li> </ul>	<ul style="list-style-type: none"> <li><b>virtual leisure almost the norm</b></li> <li><b>travel severely restricted</b></li> <li>physical distancing enforced</li> <li><b>acceptance of online delivery of products, services and education</b></li> <li>extreme hygiene measures</li> <li>highly intrusive laws restricting rights</li> </ul>
<b>TECHNOLOGICAL</b> <ul style="list-style-type: none"> <li>Supply chain</li> <li>Biotech</li> <li>Virtual tools</li> <li>Geotracking</li> </ul>	<ul style="list-style-type: none"> <li><b>some momentum for digital technologies and additive manufacturing</b></li> <li>best manufacturing technology applied to bio-supplies in advanced territories</li> <li><b>vaccine due</b></li> <li>minor improvement of virtual tools</li> <li>limited application of AI to geotracking</li> </ul>	<ul style="list-style-type: none"> <li><b>wide acceptance of digital technologies and additive manufacturing</b></li> <li>best manufacturing technology applied to bio-supplies within international alliances</li> <li><b>vaccine coming online in some territories</b></li> <li>advancement of virtual tools</li> <li>development of application of AI to geotracking</li> </ul>	<ul style="list-style-type: none"> <li><b>high uptake of digital technologies and additive manufacturing</b></li> <li>best manufacturing technology applied to local bio-supplies</li> <li><b>vaccine not available</b></li> <li><b>next generation of virtual tools</b></li> <li>priority on application of AI to geotracking</li> </ul>
<b>ECONOMIC</b> <ul style="list-style-type: none"> <li>Global economy</li> <li>Business liquidity</li> <li>Working practices</li> <li>Supply chain</li> </ul>	<ul style="list-style-type: none"> <li><b>global GDP decline 2020, no growth 2021</b></li> <li>poor liquidity through 2020</li> <li>minor changes to working practices</li> <li><b>short-term resource shortages</b></li> <li>medical supplies widely available</li> </ul>	<ul style="list-style-type: none"> <li><b>global GDP decline 2020 and 2021</b></li> <li>poor liquidity through 2020 and 2021</li> <li>severe working practice restrictions in some territories</li> <li><b>lack of resources from some territories results in onshoring</b></li> <li>territorial shortages of medical supplies</li> </ul>	<ul style="list-style-type: none"> <li><b>sustained global recession</b></li> <li>sustained poor liquidity</li> <li>severe working practice restrictions</li> <li><b>unreliability of global supply chain and nationalism results in massive onshoring</b></li> <li>widespread shortages of medical supplies</li> </ul>
<b>ENVIRONMENTAL</b> <ul style="list-style-type: none"> <li>Climate change</li> </ul>	<ul style="list-style-type: none"> <li>short-term improvement in emissions</li> <li>travel demand returns to near normal</li> <li><b>airline rescue packages come with green strings attached</b></li> </ul>	<ul style="list-style-type: none"> <li><b>short-term improvement in emissions, with territorial variations</b></li> <li>lower demand for travel</li> <li><b>some easing of airline green targets</b></li> </ul>	<ul style="list-style-type: none"> <li>increased energy self-reliance</li> <li><b>priorities shift from environment to COVID-19</b></li> <li>travel restrictions</li> </ul>
<b>POLITICAL</b> <ul style="list-style-type: none"> <li>Protectionism</li> <li>Public spending</li> <li>Social intervention</li> <li>Economic policy</li> </ul>	<ul style="list-style-type: none"> <li><b>nations more inward looking</b></li> <li><b>refocussed public spending</b></li> <li><b>economic stimulus</b></li> <li>removal of suppression measures</li> <li>debt management initiatives</li> </ul>	<ul style="list-style-type: none"> <li><b>trade blocs fortified</b></li> <li><b>increased and highly refocussed public spending</b></li> <li>easing of suppression measures with territorial variation</li> <li>ongoing economic stimulus</li> <li><b>highest peace-time debt levels</b></li> </ul>	<ul style="list-style-type: none"> <li>incentives to buy-local</li> <li><b>bankruptcy of nations</b></li> <li>global liquidity crisis</li> <li>increased suppression measures with territorial variation</li> <li><b>constraints on public spending</b></li> <li><b>limited economic stimulus available</b></li> </ul>

the implications

# **COMMERCIAL AEROSPACE**

# global passenger air traffic

## The Good

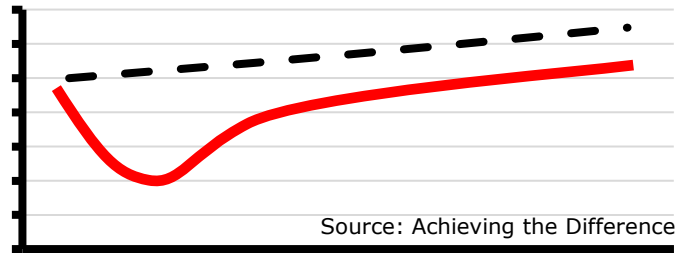
global passenger traffic



2019 2020 2021 2022 2023 2024 2025

## The Bad

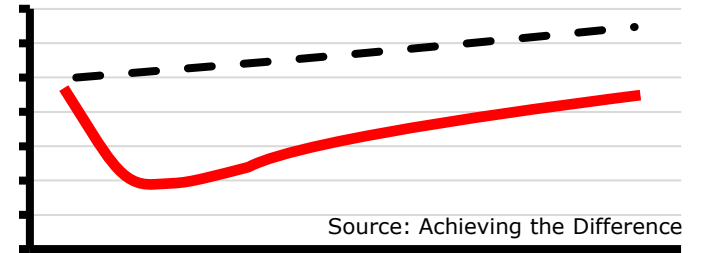
global passenger traffic



2019 2020 2021 2022 2023 2024 2025

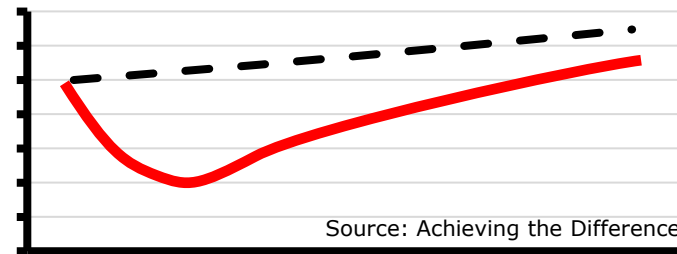
## The Ugly

global passenger traffic



2019 2020 2021 2022 2023 2024 2025

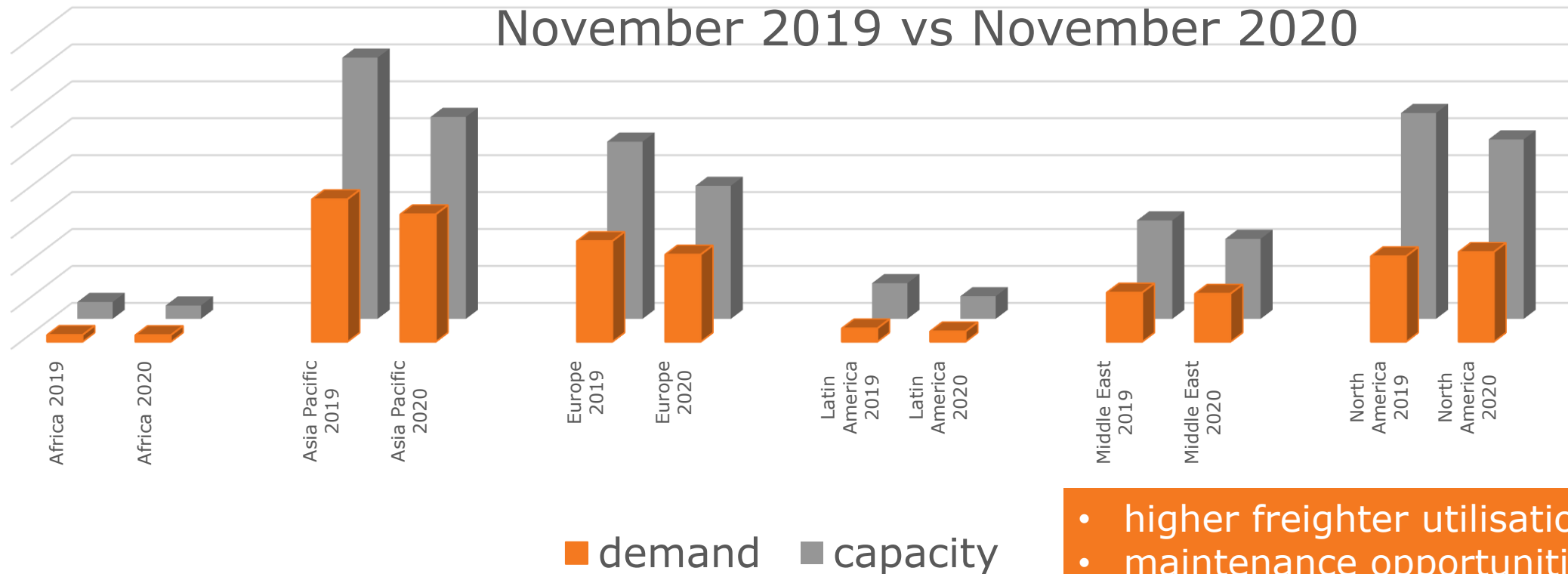
global passenger traffic



2019 2020 2021 2022 2023 2024 2025

## The Bad-Ugly

global air cargo traffic & capacity  
 globally, demand down 6.6% and capacity down 20%  
 but regional variation exists

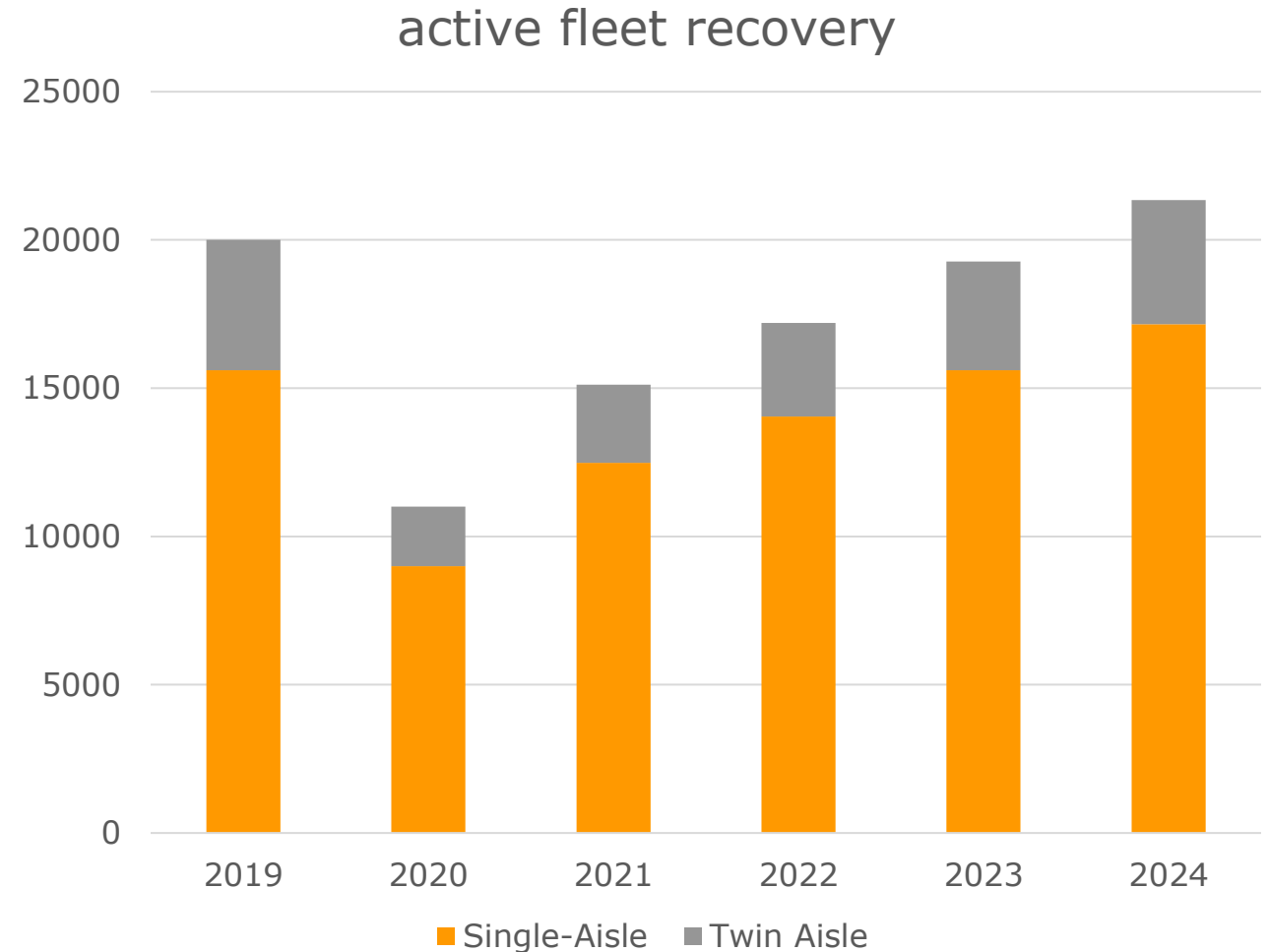


- higher freighter utilisation
- maintenance opportunities
- emergence of 'preighters'
- some demand for new/converted freighters

[SOURCE: IATA, 2021, "Air Cargo Demand Improves in November, Capacity Remains Constrained", IATA.org, 7th January 2021](https://www.iata.org/en/pressroom/2021/01-07-2021)

## active commercial fleet

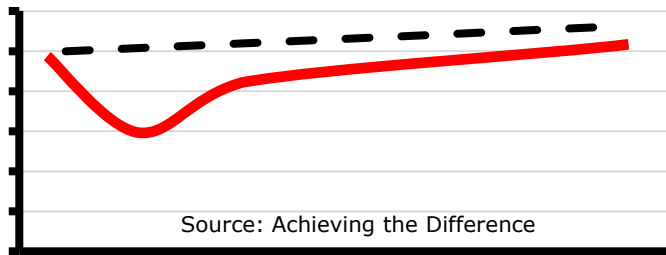
- smaller fleet until traffic recovers
- single aisle recovering first
- lower load factors
- some shift to single aisle in medium term



# aircraft deliveries

## The Good

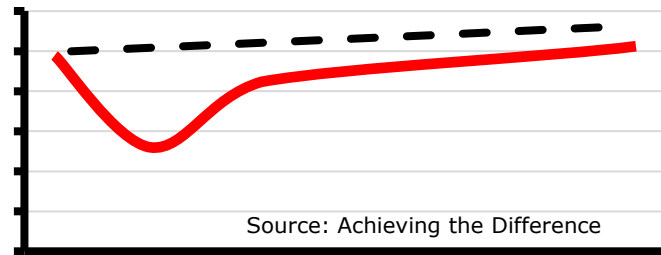
new aircraft deliveries



2019 2020 2021 2022 2023 2024 2025

## The Bad

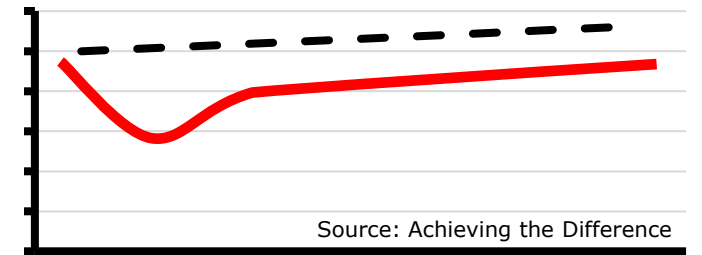
new aircraft deliveries



2019 2020 2021 2022 2023 2024 2025

## The Ugly

new aircraft deliveries



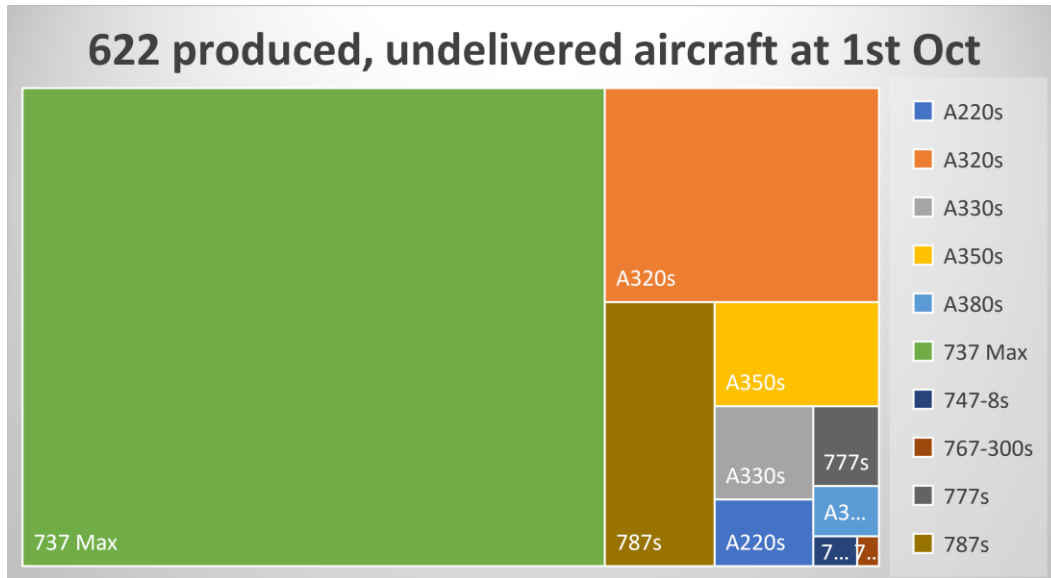
2019 2020 2021 2022 2023 2024 2025

Source: Achieving the Difference

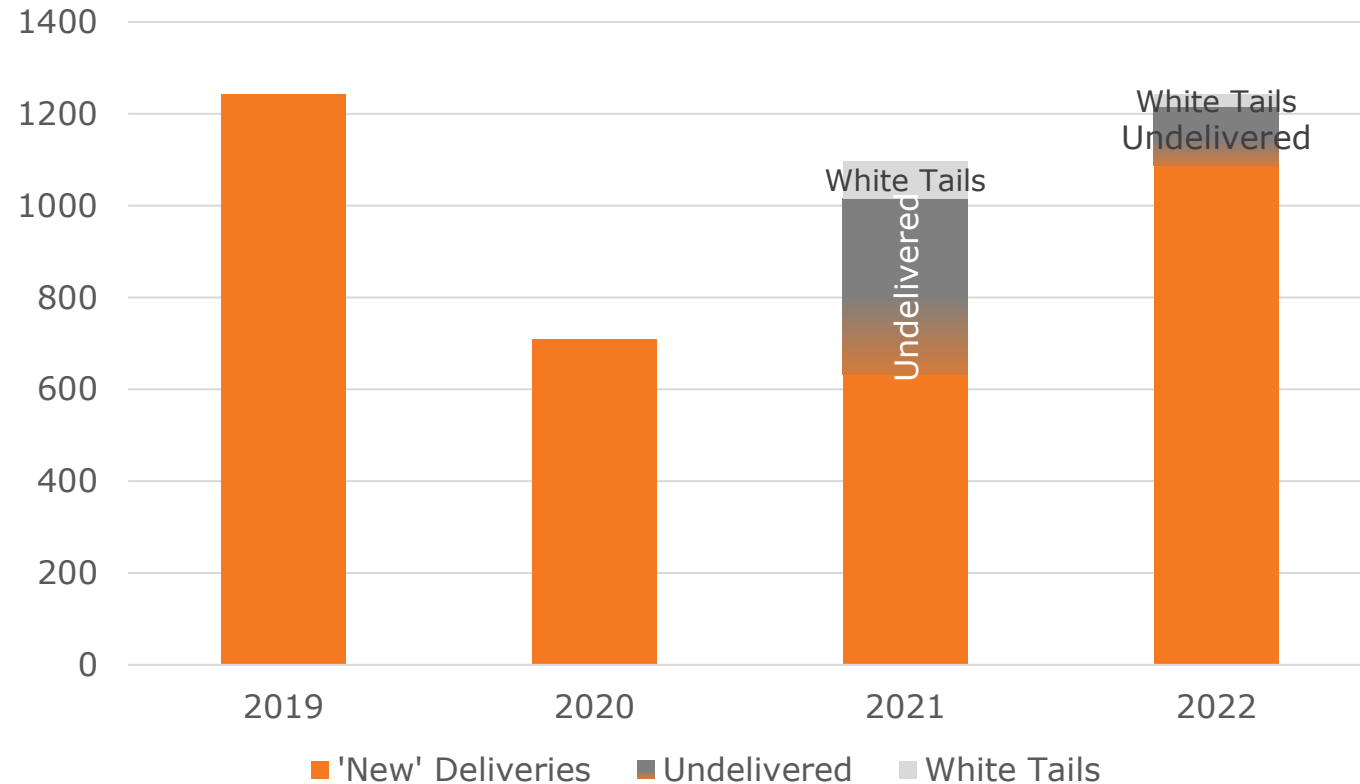


# undelivered aircraft slow new-build recovery

potential deliveries



SOURCE: HEMMERDINGER, J., 2020, "Airbus and Boeing still hold nearly 200 undelivered jets, excluding 737 Max", Flightglobal.com, 1<sup>st</sup> October 2020



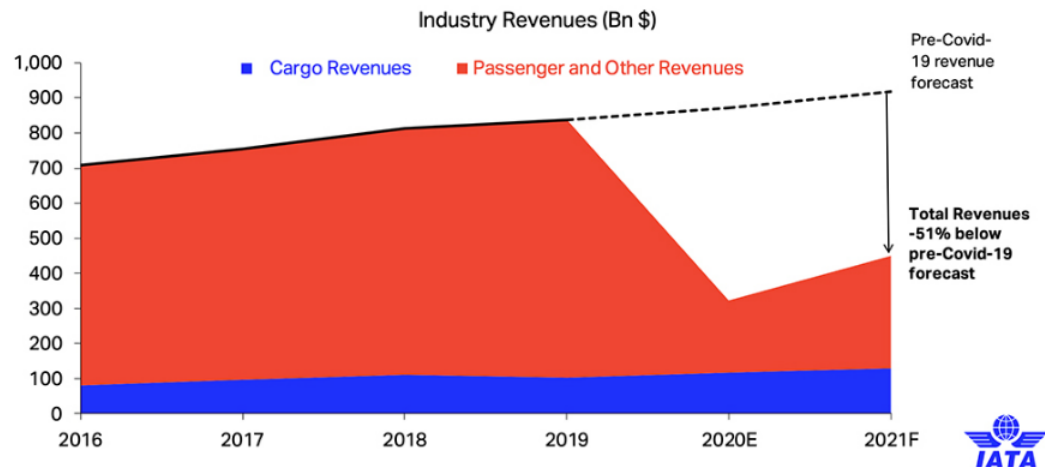
Airbus - "very low double-digit number" of 'white-tails' at end Sept<sup>1</sup> likely to have limited fit  
 Boeing - 100 737 MAX white tails<sup>2</sup> – cancellations so already fitted out

<sup>1</sup> KAMINSKI-MORROW, D., 2020, "Airbus acknowledges 'white-tails' among inventory of stored aircraft", Flightglobal.com, 29<sup>th</sup> October 2020

<sup>2</sup> LEVINE-WEINBERG, A, 2020, "Boeing's 737 MAX White-Tail Problem: Will Any U.S. Airlines Help?", The Motley Fool, 15<sup>th</sup> November 2020

## upgrades and MRO

- even if traffic recovered in 2021, airlines will not achieve cash break-even – IATA<sup>3</sup>
  - expect expenditure on upgrades to be minimised to essentials
- new aircraft deliveries drive retirements – reduces upgrade demand
- heavy check bow-wave followed by cycles

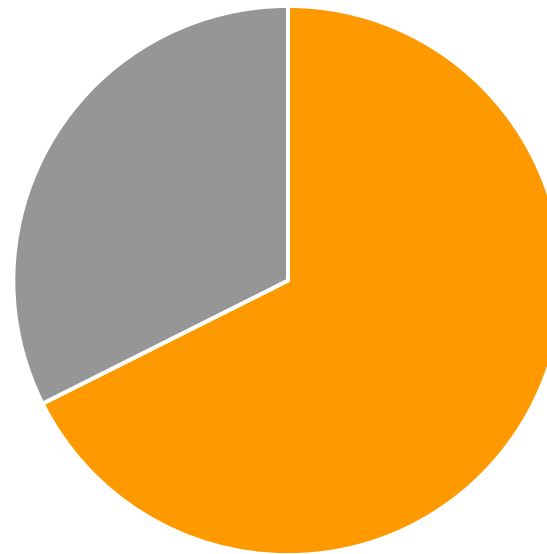


<sup>3</sup> IATA, 2020, "Is cash break-even "even" possible in 2021? ", IATA.org 30<sup>th</sup> October 2020

## younger commercial fleet

- many older aircraft will not return to service in the recovery

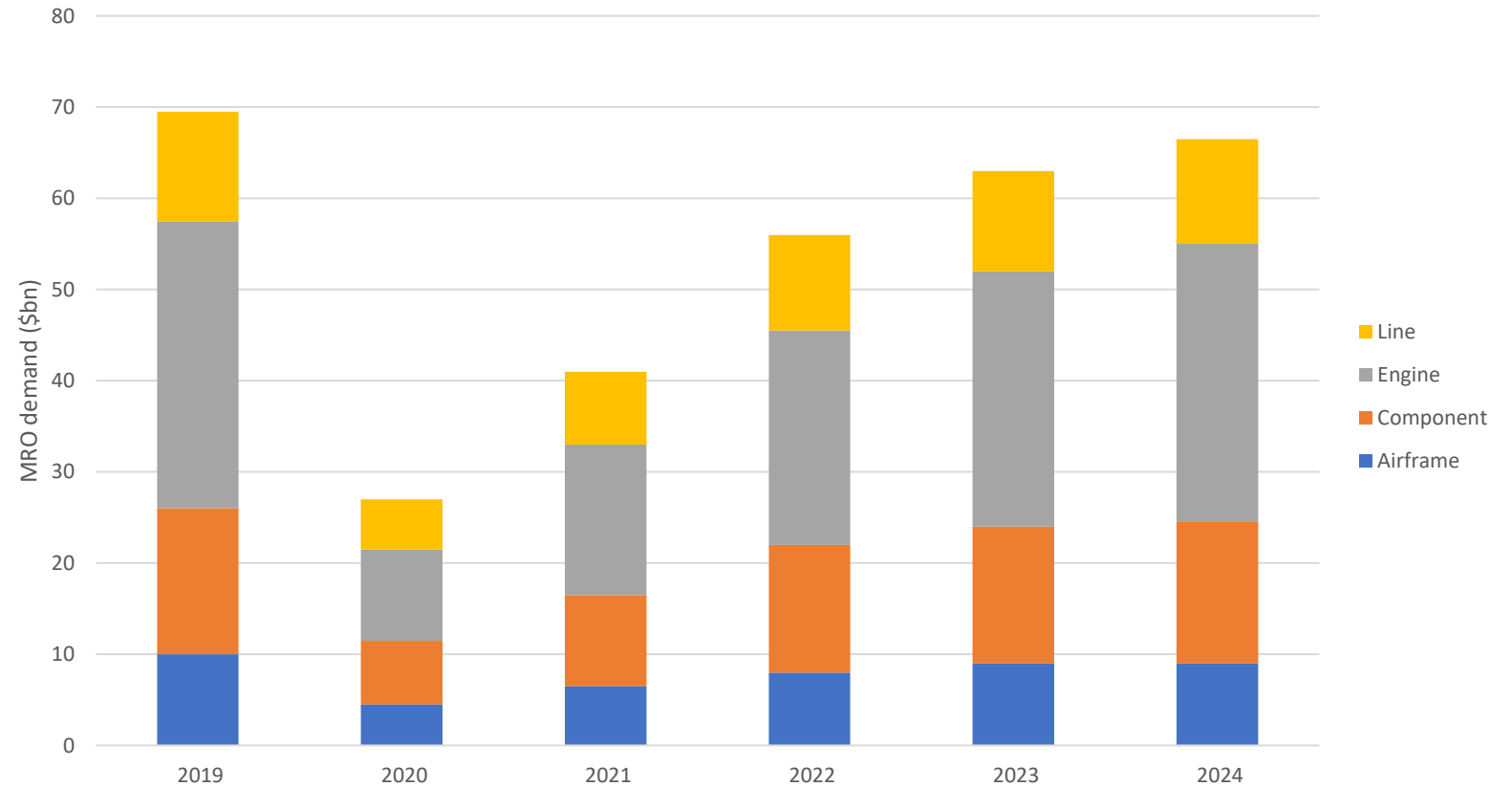
almost 4,000 retirements 2020-2023



■ single aisle ■ twin aisle

## commercial MRO

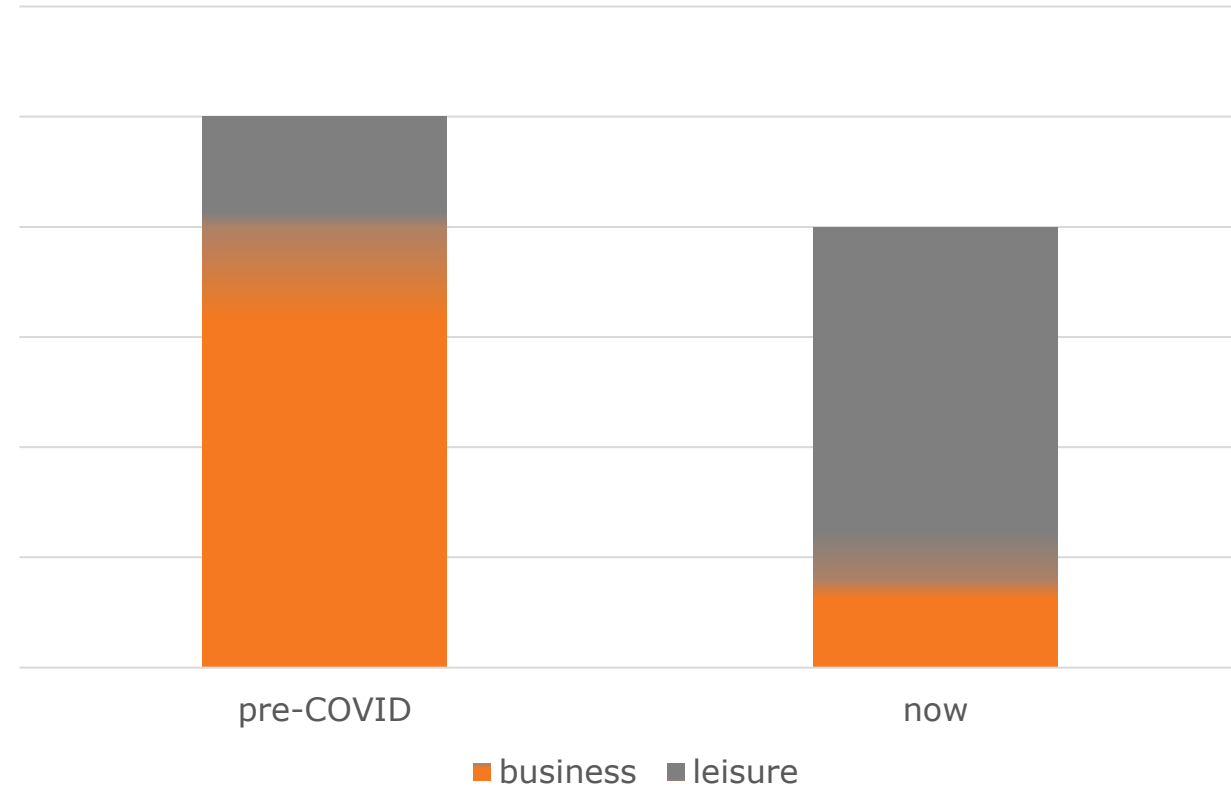
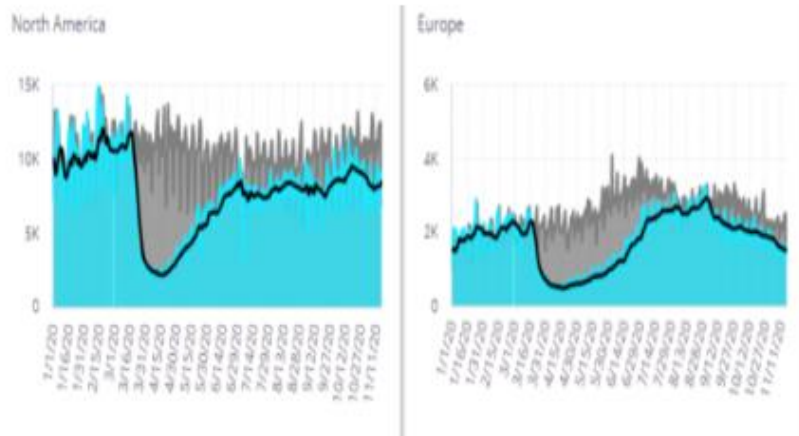
- use of green-time on major systems and airframes
- use of newer types



Source: Achieving the Difference based on public data from ICF and Roland Berger

# 'business' aviation recovered to ~80% of 2019 levels

recovery driven by leisure travel

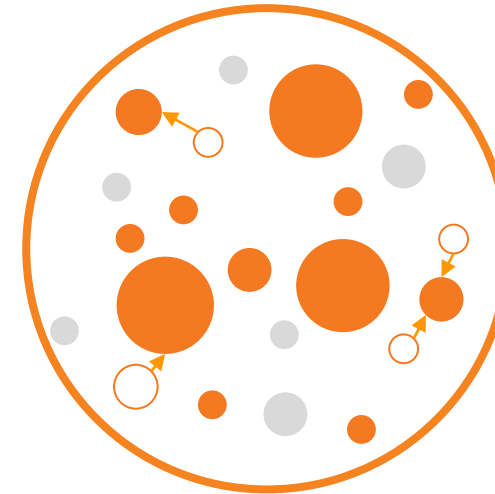
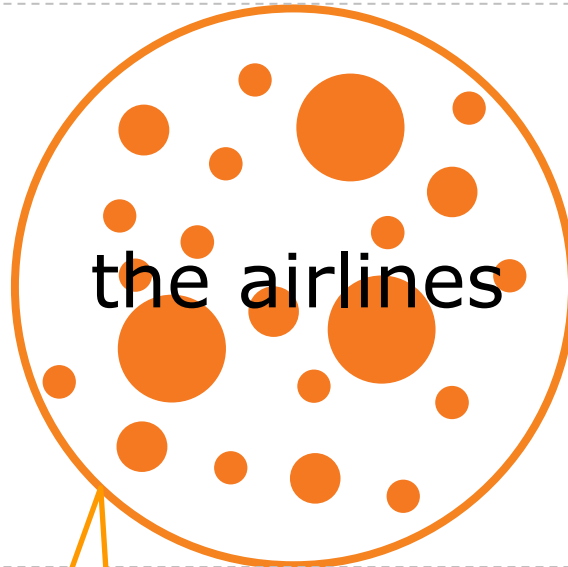


source: WINGX, November 18th, 2020

# airline industry

**pre-COVID-19**

**post-COVID-19**



the airlines

system scale

Source: Achieving the Difference

- government support saves most
- when support ends...
  - airline failures
  - consolidation

**civil aerospace supply chain affected similarly**

## summary

- it's bad but vaccines put recovery in sight
- near-term opportunities
  - white tails
  - cargo
  - business aviation
- medium-term
  - defence – depends on capability

# QUESTIONS

**the difference is...**

## ...strategic decisions with confidence

- increase your chances of success with our proven approach
  - we've designed, tried and tested process and tools so you don't have to
- identify powerful insights to gain a clear competitive advantage in your chosen markets
  - experienced market researchers and experts
- ensure a shared commitment to future development through involvement and engagement
  - concentrated **virtual** workshops with trained facilitators

...achieved by market focused strategy

