

# FORECASTING OPPORTUNITIES

mitsubishi AERO ADVISORY



# AFTER AN UNPRECEDENTED PANDEMIC, WHERE DO WE GO FROM HERE ?

- Will passengers come back and behave the same way ?
- Will our corporations/businesses work the same way ?
- Will there be more disruptions coming from the Supply Chain ?
- Is climate change becoming the new major focus for our industry ?



# THE BEGINNING OF A NEW ERA

## Strategies to Reduce GHG Emissions in Aviation BY 2050

### NEW AIRCRAFT TECHNOLOGIES

- Sustainable Aviation Fuel
- Hydrogen Fuel Cell, Hydrogen Combustion
- Battery Electric
- Continuous Improvements, Operational Enhancements

Key factors impacting implementation, availability, economics, infrastructure and environmental sustainability

### ADVANCED AIR MOBILITY (AAM)

- Top Industry Players, associated Technology readiness and timelines
- Market potential (route analysis, population distribution, success factors)
- Operational challenges (battery charging, air navigation, airport congestion, pilot availability)

Impact of the arrival of a new aircraft segment to travel patterns, industry resources and public perception

# SUSTAINABLE AVIATION ROADMAP

THE AVAILABILITY, TIMING AND IMPACT OF THE DIFFERENT STRATEGIES

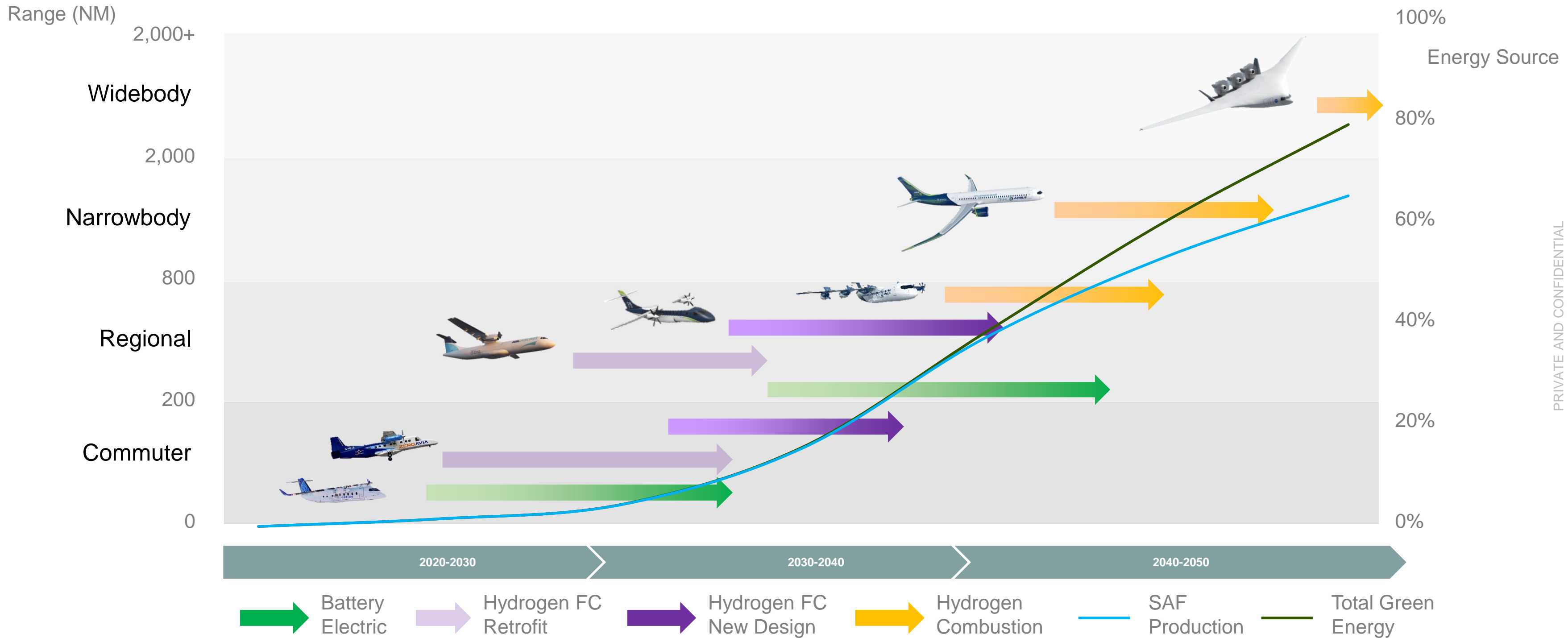


- Strategies to Reduce Greenhouse Gas Emissions in Aviation
- Sustainable Developments and Timelines by Aircraft Segment
- Forecast by Fuel Type and Fleet Type
- Recommendations on path to Net Zero 2050

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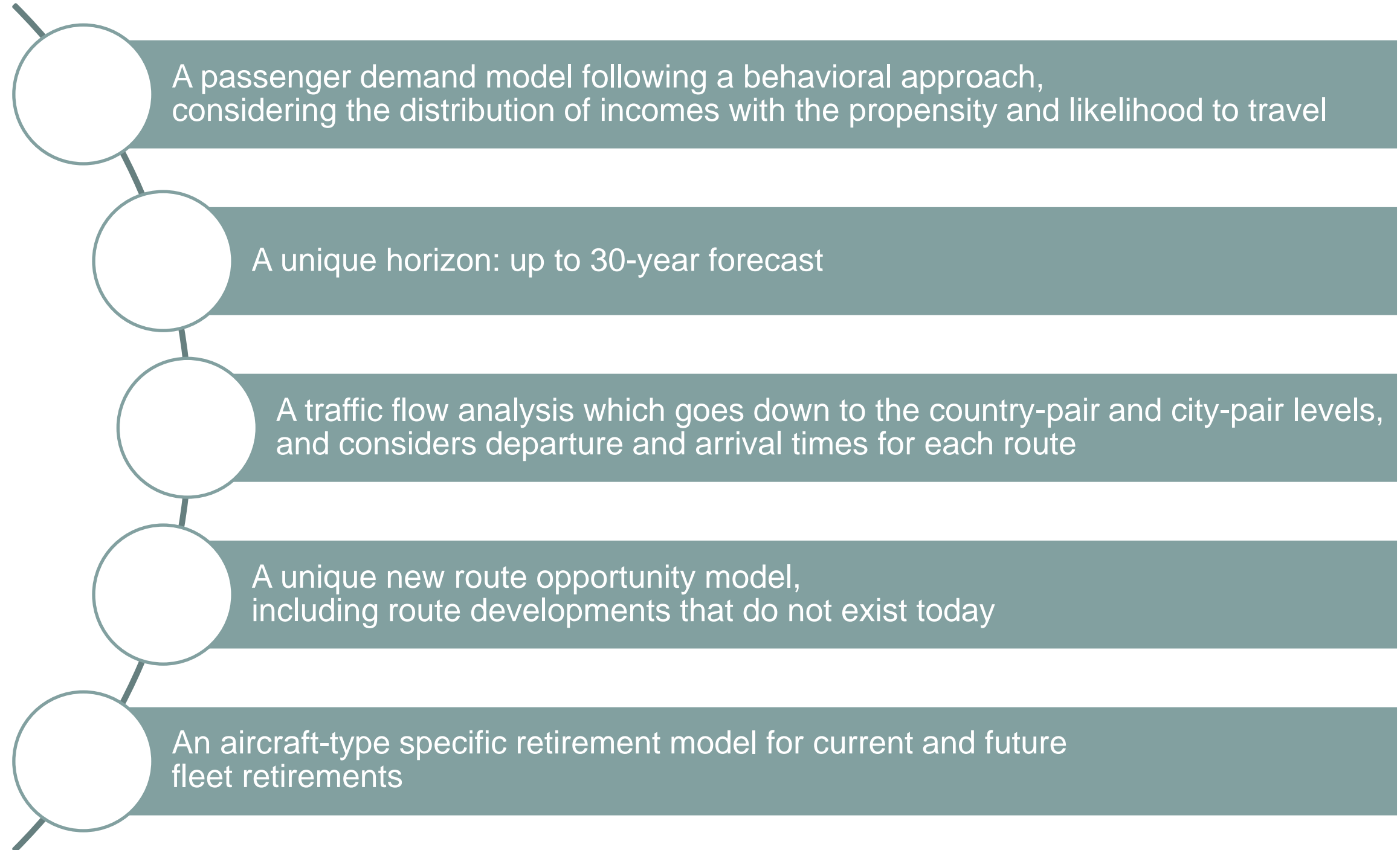
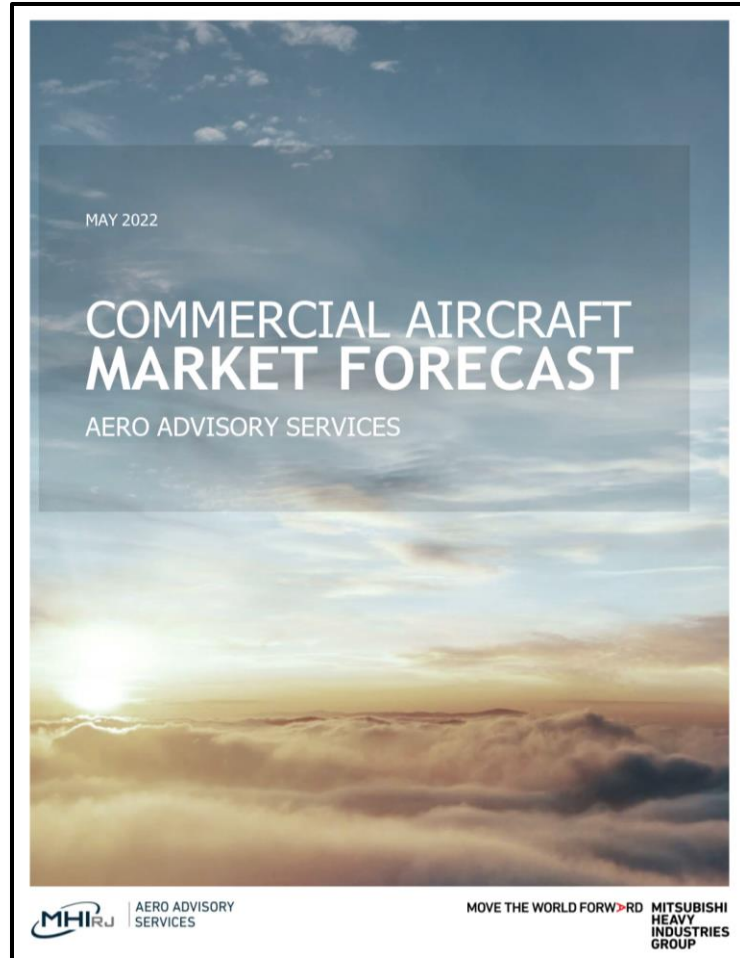
# SUSTAINABILITY HAS BECOME A MAJOR FOCUS, NEW TECHNOLOGY WILL COME FROM THE “BOTTOM”



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# MARKET FORECAST

## ECONOMETRIC VS BEHAVIORAL APPROACH

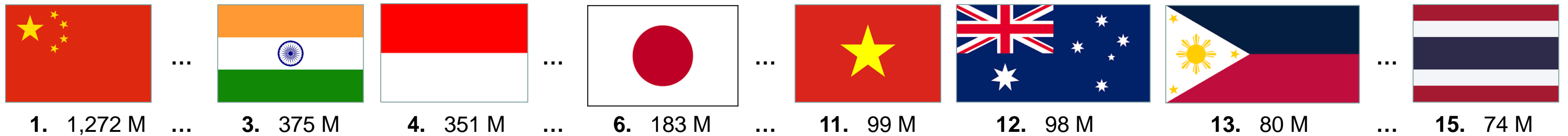


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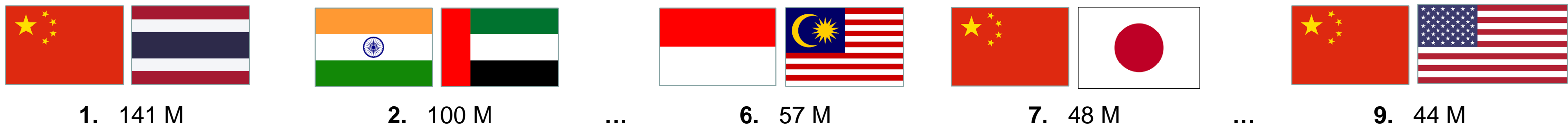
# MAJOR SHIFTS WILL HAPPEN...

## “The world’s largest market”

- The Southeast Asia & Pacific region is on track to become the largest air travel market in the world
- High price elasticity continues to propel LCC growth
- Growing number of start-ups, despite stabilized (restructured) national carriers
- 8 of the top 15 domestic markets are going to be in the Asia region (*seats in 2050*)



- 5 of the top 10 cross-border markets are going to be in the Asia region (*seats 2050*)



# ... RESULTING IN A DIFFERENT FLEET MIX

- The Asia Pacific region is going to be the 3<sup>rd</sup> largest aircraft market in the world after Western Europe and North America, with China on the 4<sup>th</sup> place
- The region is the most important wide-body market in the world in front of Western Europe and the Middle East. Wide-bodies represent the second largest category
- 2<sup>nd</sup> largest narrow-body market after Western Europe, with China being 3<sup>rd</sup> place, narrow-bodies represent the largest category
- Smaller market demand for small narrow-body and region aircraft, however still 4<sup>th</sup> position in the world respectively after the traditional markets North America and Western Europe



2020-2040 delivery split Asia & Pacific	Total aircraft	Large widebodies	Widebodies	Narrowbodies	Small narrowbodies	Regional aircraft
<b>2019 in-service fleet</b>	<b>4,005</b>	60	1,207	1,915	223	600
<b>2020-2040 deliveries</b>	<b>5,969</b>	0	1,459	3,272	743	495
Growth	2,468	-45	507	1,525	457	24
Replacement	3,456	0	952	1,747	286	471
<b>2040 in-service fleet</b>	<b>6,473</b>	15	1,714	3,440	680	624
<i>Fleet Growth</i>	<i>+62%</i>	<i>-75%</i>	<i>+42%</i>	<i>+80%</i>	<i>+205%</i>	<i>+4%</i>

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# PLANNING STARTS NOW !

*NETWORK, FLEET & PRODUCT STRATEGY ARE ALL BECOMING SHORT-TERM PRIORITIES*



**RESTRUCTURE YOUR NETWORK**



**OPTIMIZE YOUR HUBS**



**ENHANCE YOUR AIRCRAFT UTILIZATION AND SCHEDULES**



**RETHINK YOUR FLEET MIX**



**IMPROVE YOUR REVENUE STRUCTURE**



**THANK YOU !**

**MOVE THE WORLD FORWARD**