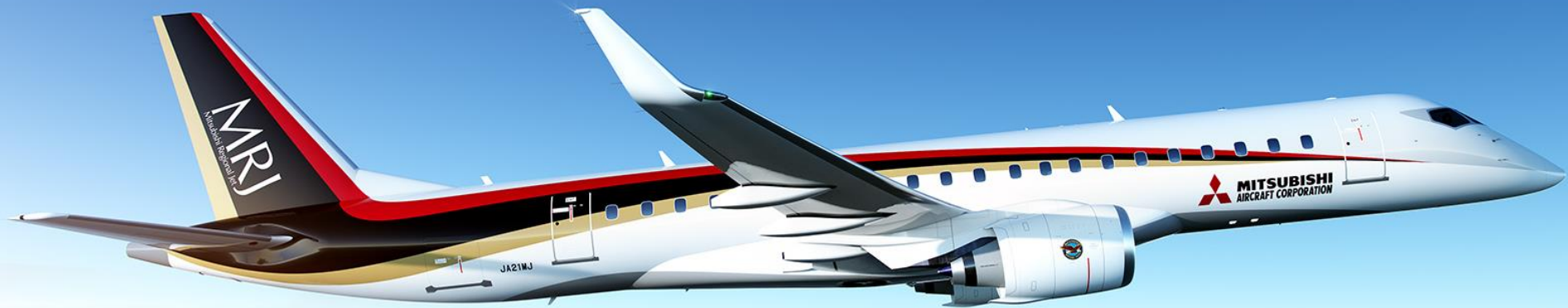


# Regional Market Outlook

MOVE THE WORLD FORWARD

MITSUBISHI  
HEAVY  
INDUSTRIES  
GROUP



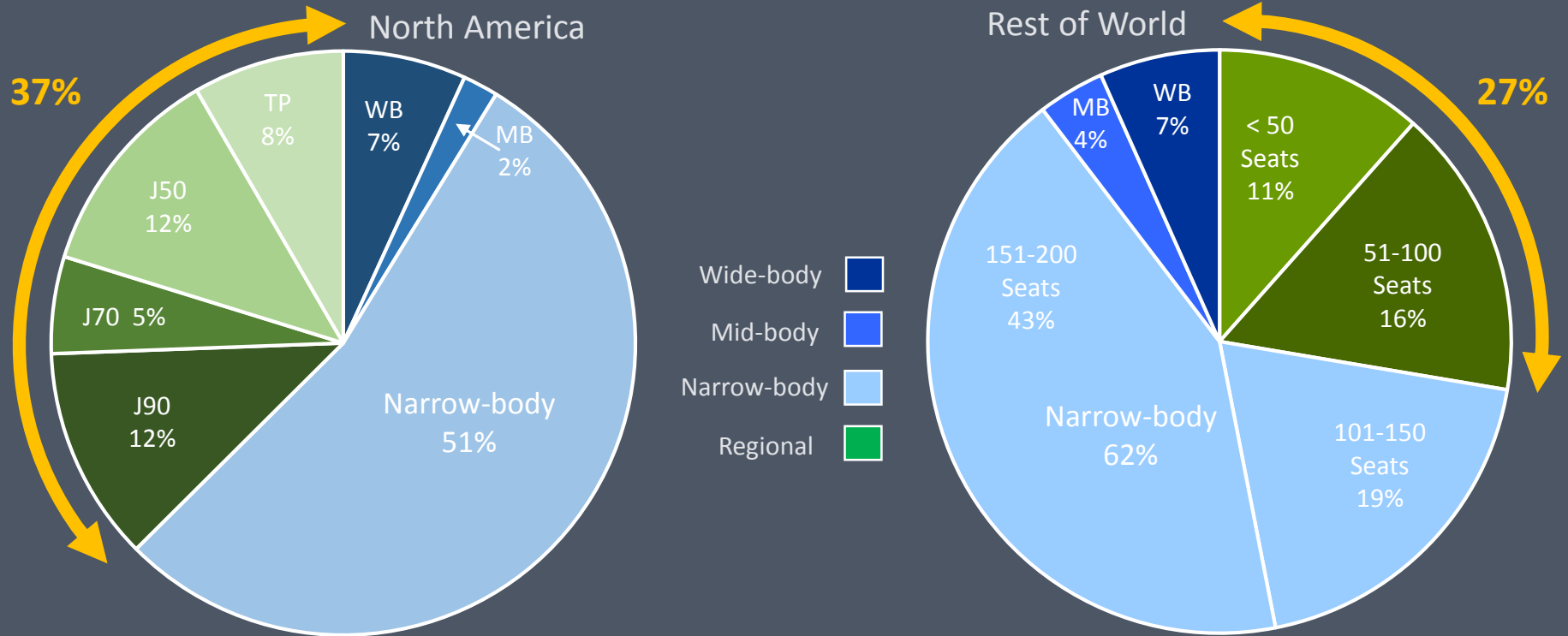
Gordon Preston  
Vice President, Marketing  
Mitsubishi Aircraft Corporation, America  
September 24<sup>th</sup>, 2018

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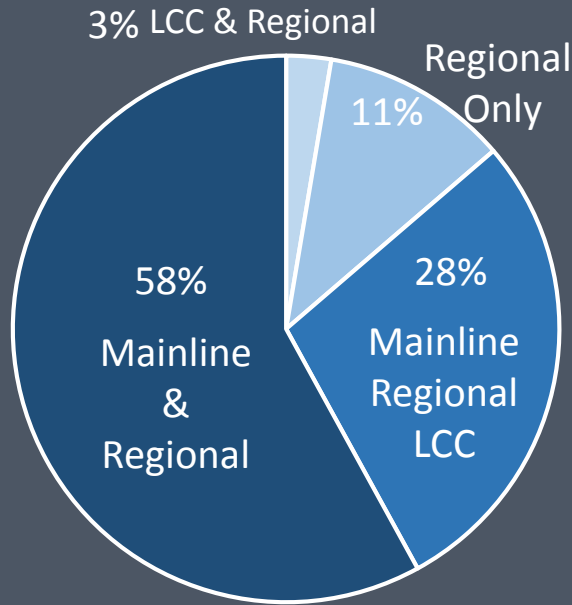


# Global Trend - Regional Aircraft: Between ~ 30% to 40% of Services Worldwide

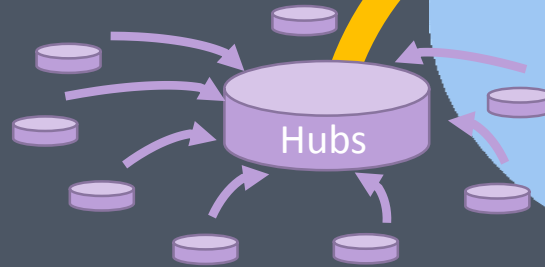


Source: DiioMi/Innovata, Scheduled airline services for May, 2018

# Regional Aircraft - Service Multiplier “Connectivity” in Hub and Spoke Systems



**1,500 Regional N/S markets to U.S. Hubs**



Source: Diiomi/Innovata, Scheduled airline services for May, 2018, US DOT DB1B, Q1 2018, Mitsubishi Aircraft estimate, Maps generated by the Great Circle Mapper ([www.gcmap.com](http://www.gcmap.com)) - copyright © Karl L. Swartz.



## Agenda

Introduction to Mitsubishi Aircraft Corporation

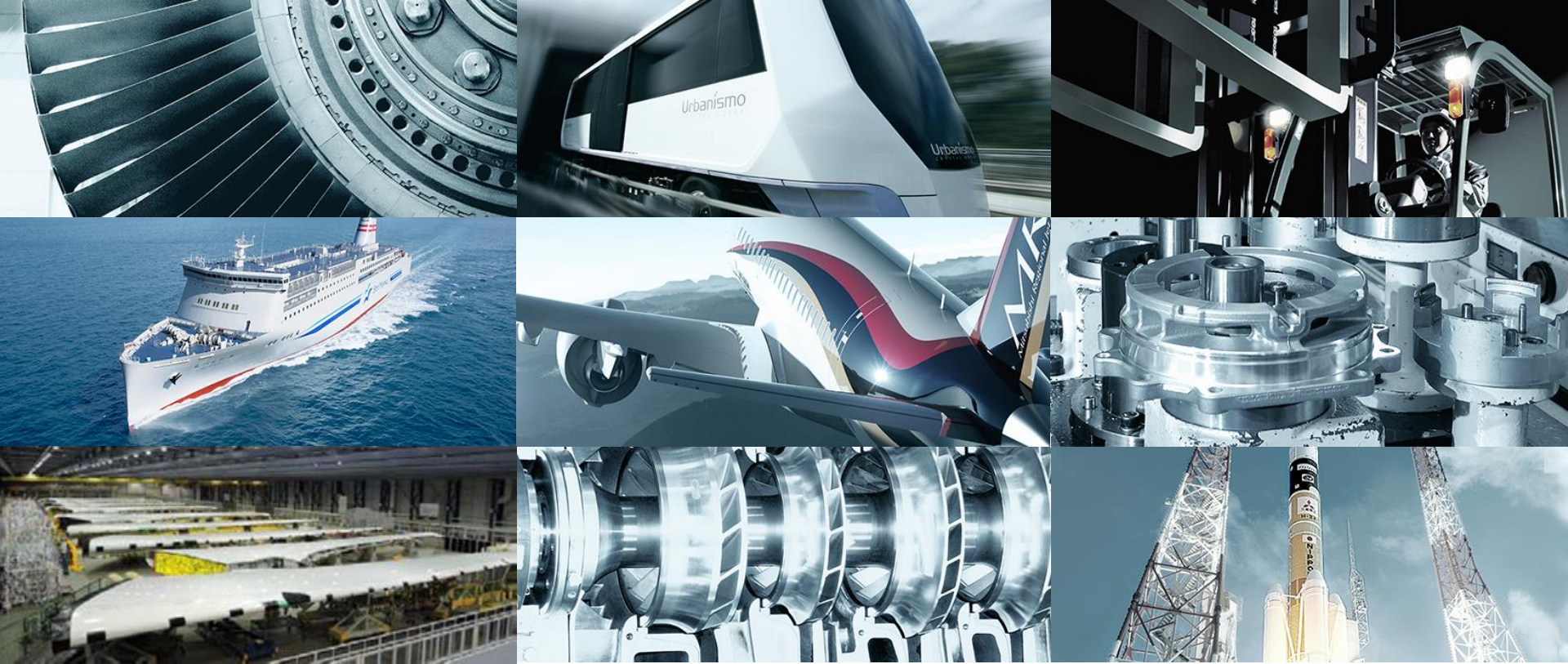
Our View of the Regional Jet Market

Progress of the MRJ Program





# From Steamships to Spaceships: 130+ Years of Engineering Excellence at MHI



# Mitsubishi Aircraft Corporation and the Mitsubishi Regional Jet (MRJ)



Parent company with 130 years of design and engineering experience



Company formed in 2008, headquartered in Nagoya, Japan

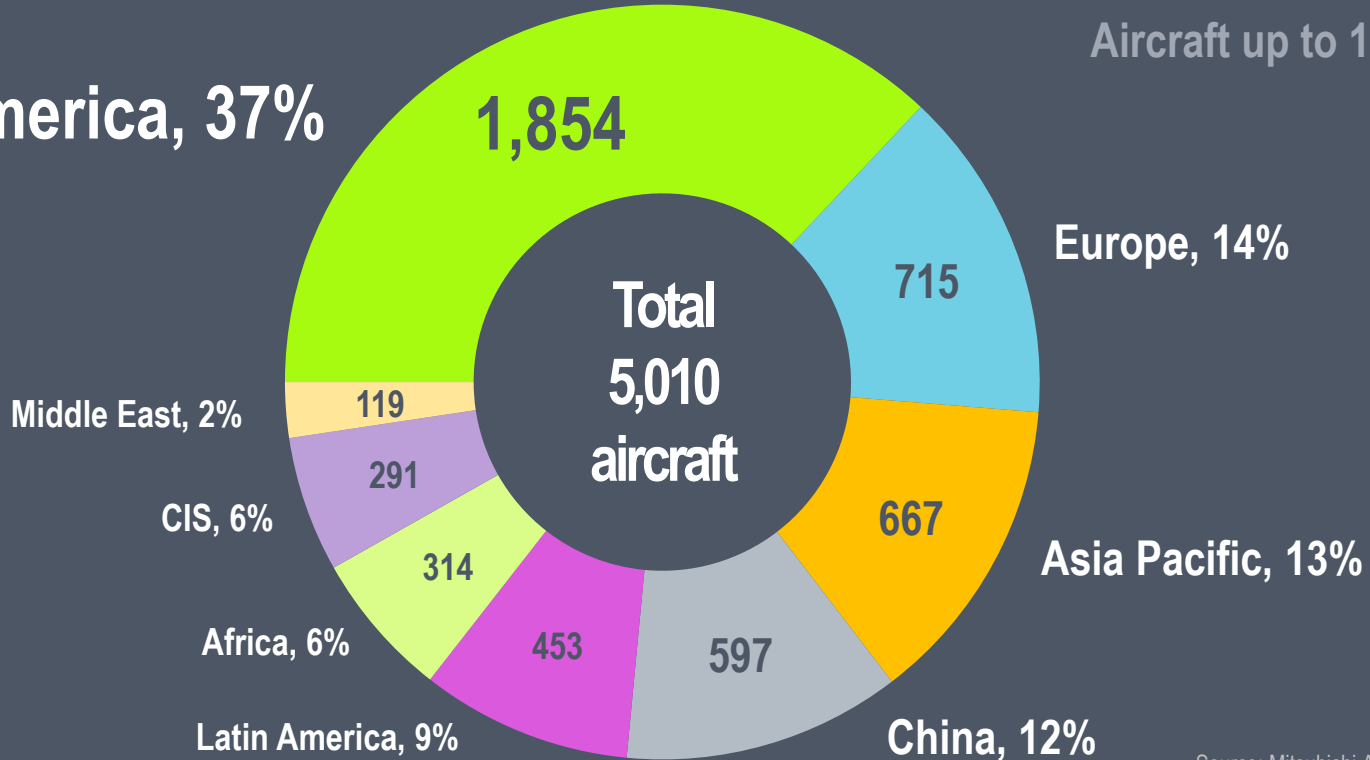


Clean sheet design family of regional jets

# Global Trend - Regional Aircraft: Replacement in US & Europe, Growth in ROW

Aircraft up to 100 Seats

North America, 37%



Source: Mitsubishi Aircraft Forecast 2017-2036



# World RPK Annual Growth Rate Forecast at 4.6%; Mature Markets are Resilient

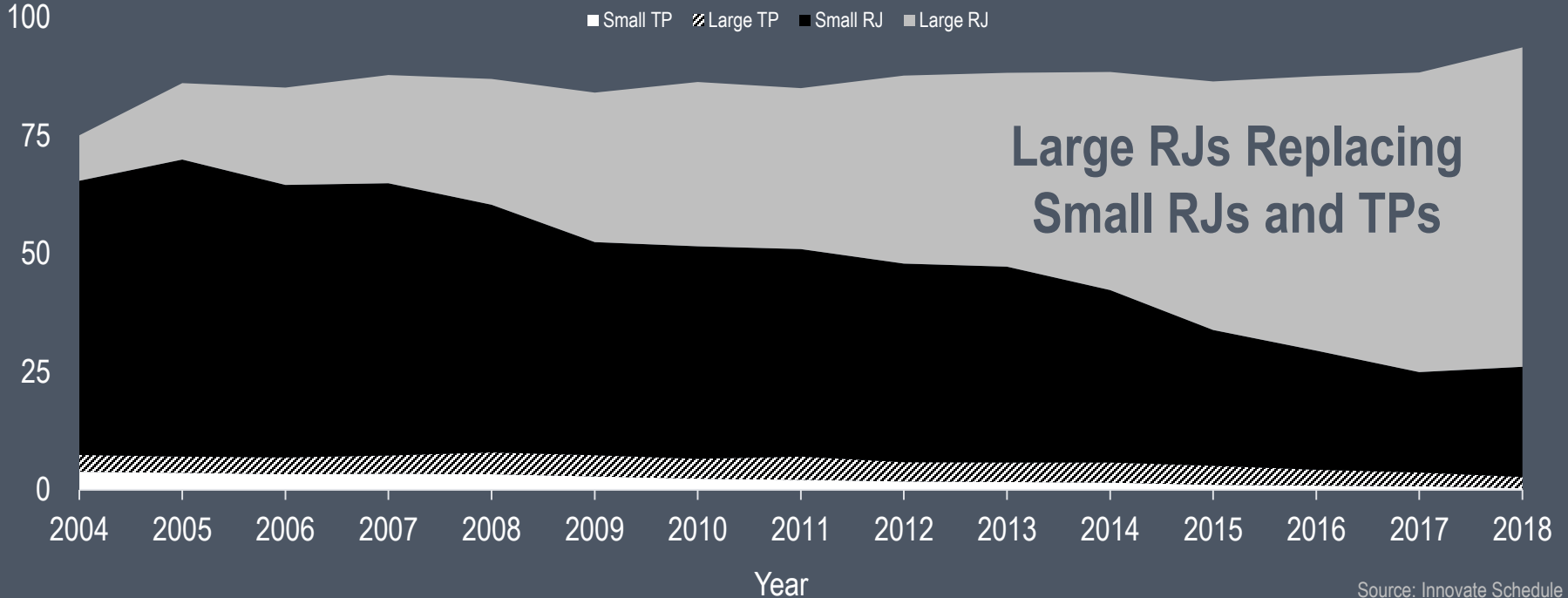


Source: IHS Global Insight, Mitsubishi Demand Forecast 2017-2036

# North America: Regional Capacity is Steady, with Gradual Shift to Large RJs

Annual ASMs (Bil)

## US Domestic Regional Capacity by Aircraft Category



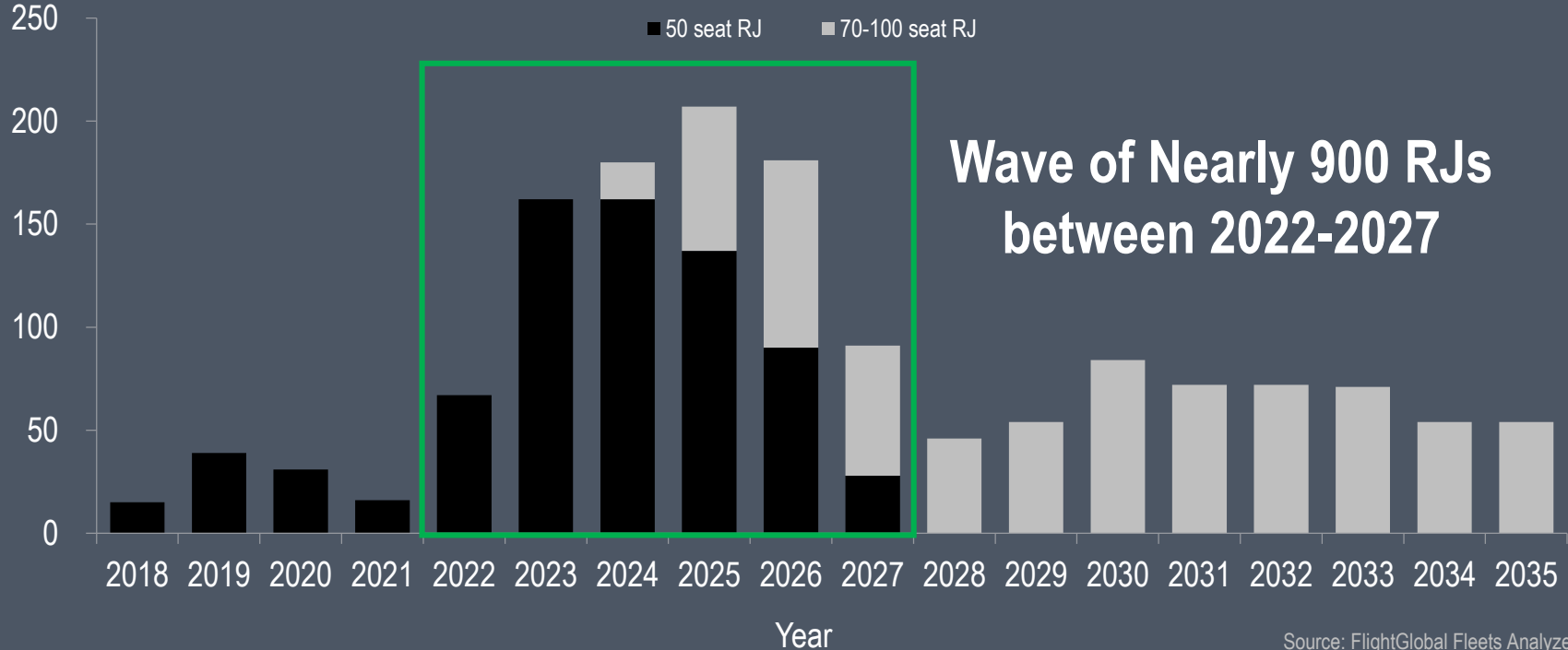
Source: Innovate Schedule Data

# North America: Wave of Regional Jet Replacement Demand Expected

# of Aircraft at 20 Years of Age

Regional Jet Retirement Forecast

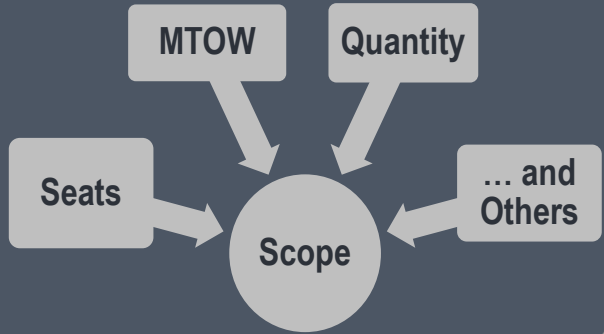
■ 50 seat RJ    ■ 70-100 seat RJ



**Wave of Nearly 900 RJs  
between 2022-2027**

Source: FlightGlobal Fleets Analyzer (Jan. 2018)

# North America: US Scope Clause Will Continue to Play Key Role



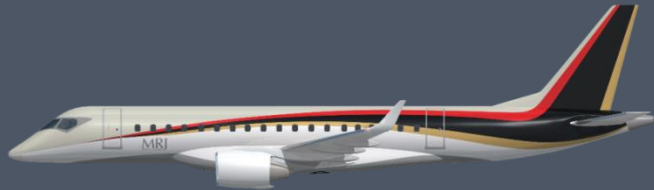
## Future of Scope Difficult to Predict

Current scope expected to continue near-term; however, history has shown relaxation post-EIS of new generation aircraft

## MRJ90: Positioned for US Scope Relief

MRJ product family serves global demand with MRJ90 being eventual 76-seater for US

## MRJ70: Only Clean Sheet Regional Jet Scope Compliant Today





# North America: Regional Pilot Shortage is Real

	Small RJ	Large RJ
Seats per Aircraft	50	70
Daily Market Seats Needed	500	500
Flights Needed	10	8

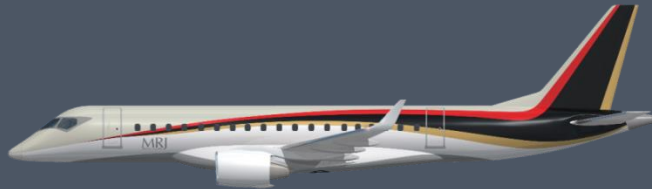
If more flights are needed, then more pilots are needed

## Staffing 50-Seaters Becomes Challenging

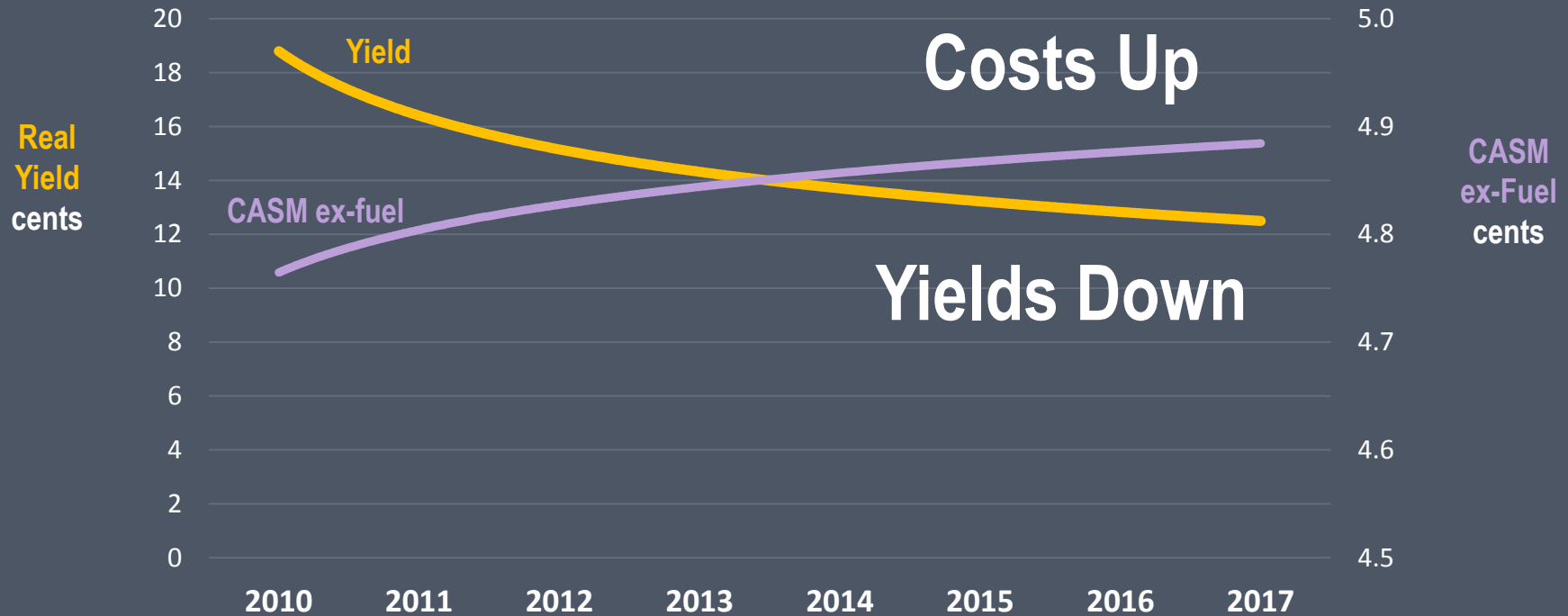
Cascading effect: Pilot outflow is high due to retirements, growth in mainline fleets, staffing of larger RJs, and military pilot retention

## MRJ70: Helps Address Labor Shortage while being Scope Compliant Today

Only new generation jet in the “sweet spot” for replacing 50- to 70-seaters; maintains capacity in regional markets.



# Global Trend – Unit Costs Rising as Competition Drives Yields Down



Sources: DOT Form 41 (BTS), [www.mit.edu](http://www.mit.edu), FlightGlobal

# Fuel Prices Projected to Rise; Further Influencing Airline Profitability

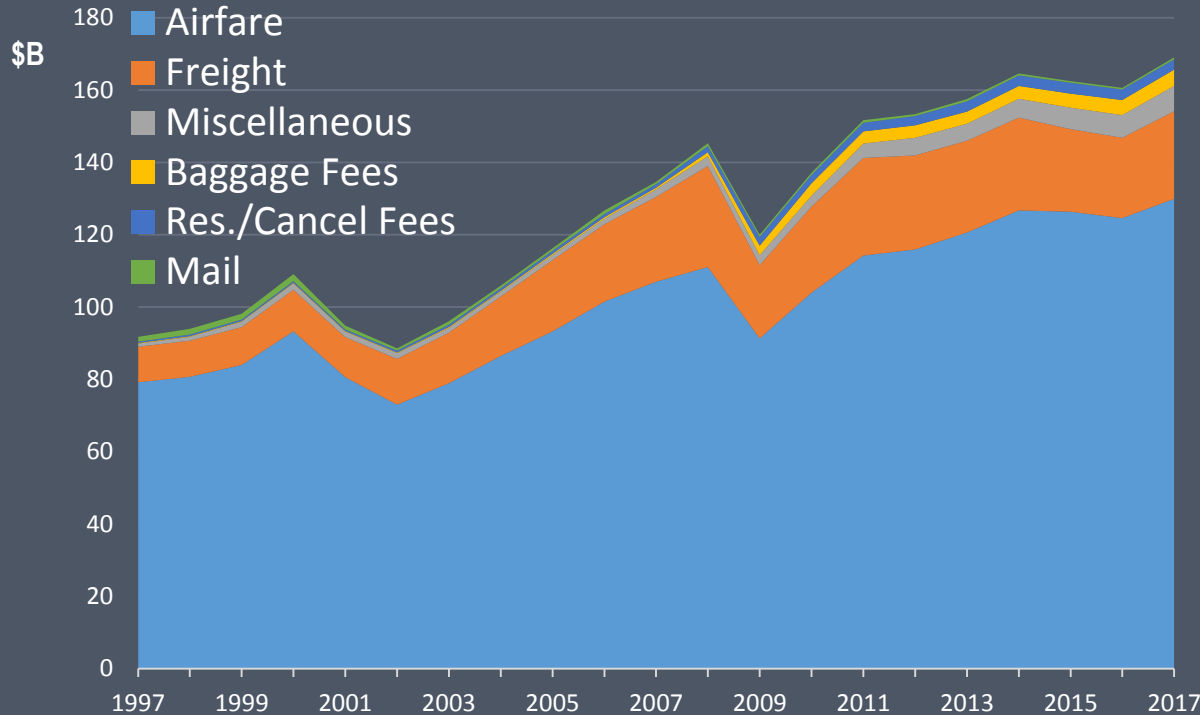
USD per US Gallon

Jet Fuel Price



Source: US Energy Information Administration

# U.S. Trend – Revenue Growth Through Ancillary Products and Fees



**Fees are Becoming  
A Bigger  
Portion of Revenue**

Source: US DOT, Form 41

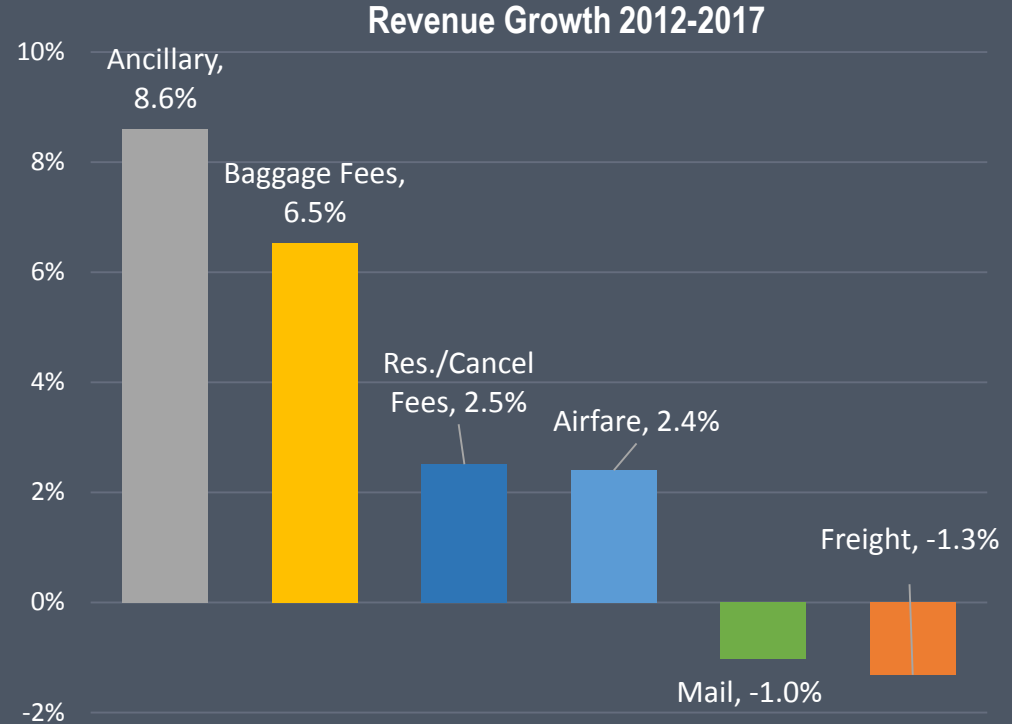


# U.S. Trend – Revenue Growth Through Ancillary Products and Fees

## Fees Fastest Growing Revenue Segment

Ancillary Revenue examples:

- Roll-on bag
- Seat Selection
- More leg room
- Preferred Seating
- Food & Drinks
- WiFi
- In-Flight Entertainment
- Vacation add-ons



Source: US DOT, Form 41



MRJ has the Most Spacious Cabin

Fits oversized  
roller bags

WiFi / IFE

Tallest and  
widest cabin

18.5" wide  
seats

MRJ Amenities for Enhanced Revenue

# MRJ Product Family Clean Sheet Advantages: Tailored to Market Needs

**Highest  
Fuel  
Efficiency**

**20%**

Lower Fuel Burn



**Lowest  
Environmental  
Impact**

**40%**

Quieter



**Most  
Passenger  
Comfort**

**18.5"**

Seat Width



**Improving  
Airlines'  
Bottom Line**

**10%**

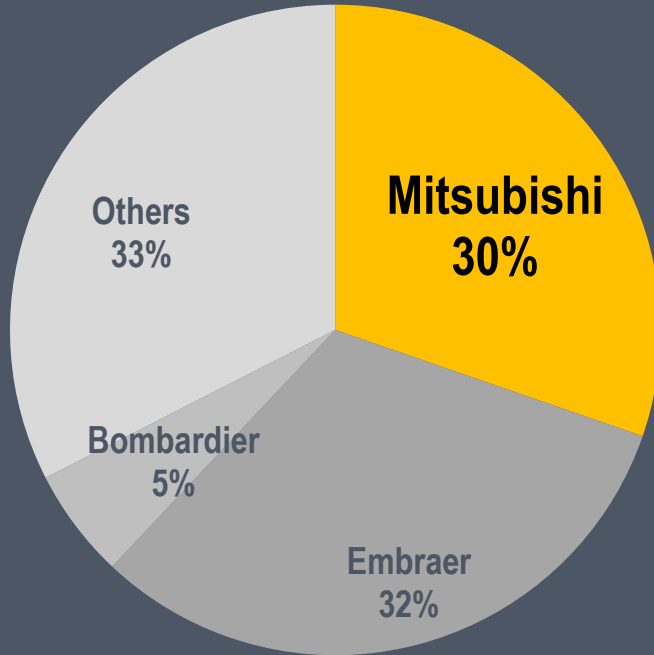
Lower Operating Cost





# MRJ Order Status: MRJ has a Prominent Share in the RJ Segment

RJ Firm Order Backlog



Over 200 firm orders,  
Nearly 400 commitments



Source: FlightGlobal Fleet Analyzer, RJs Under 100 Seats, Others include COMAC, Sukhoi, Antonov

# MRJ Today – Meeting our Flight Test Milestones, Focused on EIS in 2020



# Mitsubishi Aircraft Corporation Regional Market Outlook: Closing Thoughts

**Regional Market is Robust  
and Here to Stay**

**Airlines Leveraging New  
Technology**



**MRJ Family is the right regional jet for the future**

# Thank You

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