



***Fleet Evaluation and Financial Analysis***  
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***Air Transportation Management***  
***M.Sc. Program***

***Network, Fleet and Schedule***  
***Strategic Planning***  
***Module 9: 31 March 2015***

# *Lecture Objectives*

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- **Identify the key assumptions that are important in aircraft evaluation and how different assumption can change outcomes.**
- **Understanding the mission requirements / mission needs of the network to properly evaluate possible fleet.**
- **How to model different scenarios and how to evaluate key assumptions and sensitivities that impact those assumptions**
- **Understanding the impact of the proposed fleet in terms of growth, replacement and the financial implication of the fleet over the lifetime of the proposed fleet**

# Assumptions – Group Learning Exercise

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What assumptions need to be made when evaluating airplanes?

**4 Groups**

**Take 10 minutes to discuss**

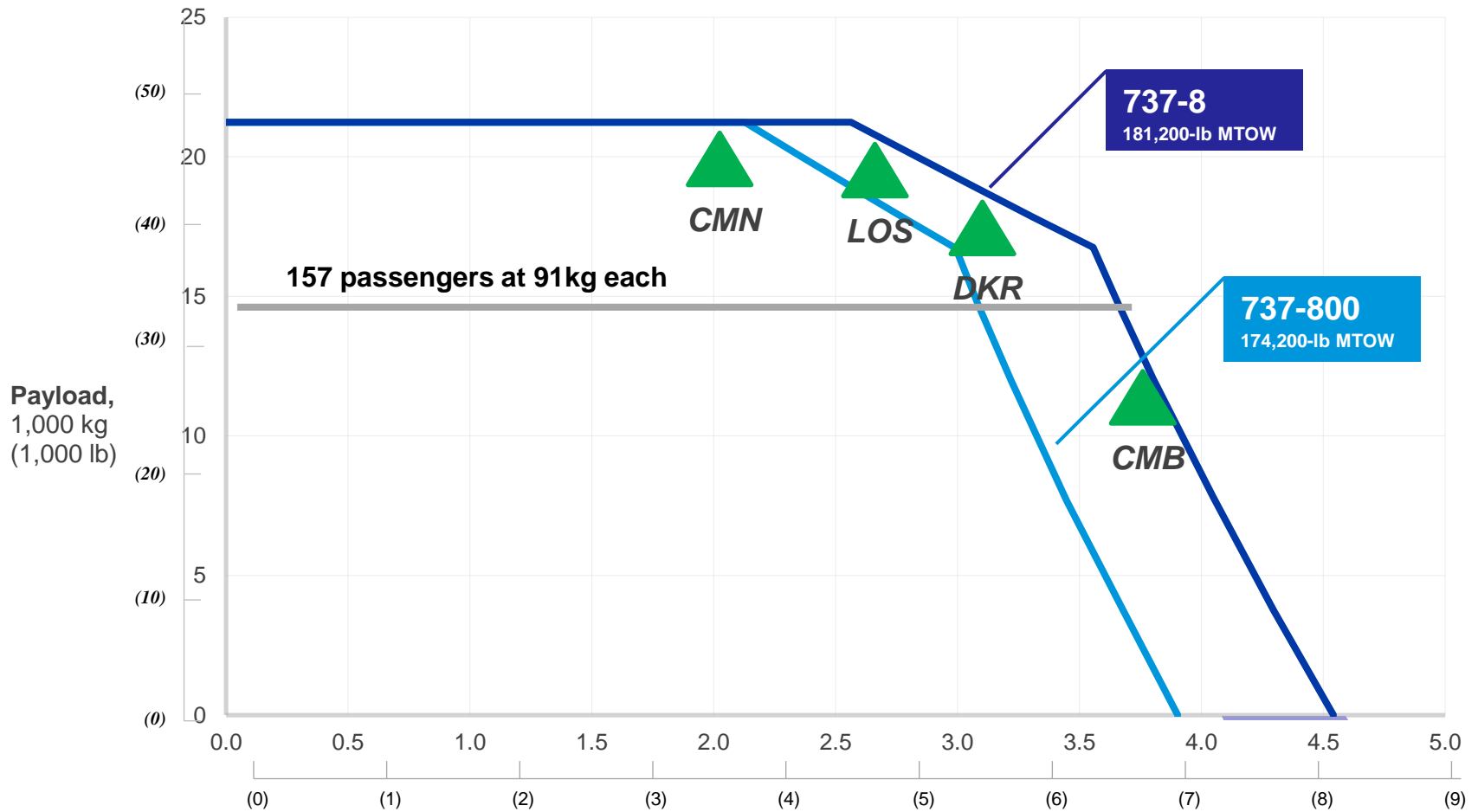
# *Mission Requirements*

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- **Seats**
- **Network Need and Fit**
- **Critical airport performance**

# Payload-Range comparison

- Two-class interior configuration



Typical mission rules

Short/medium weight allowances

737-800 includes optional winglets

Range 1,000 nmi (1,000 km)

# Airplane Comparison

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737-800W

**VERSUS**

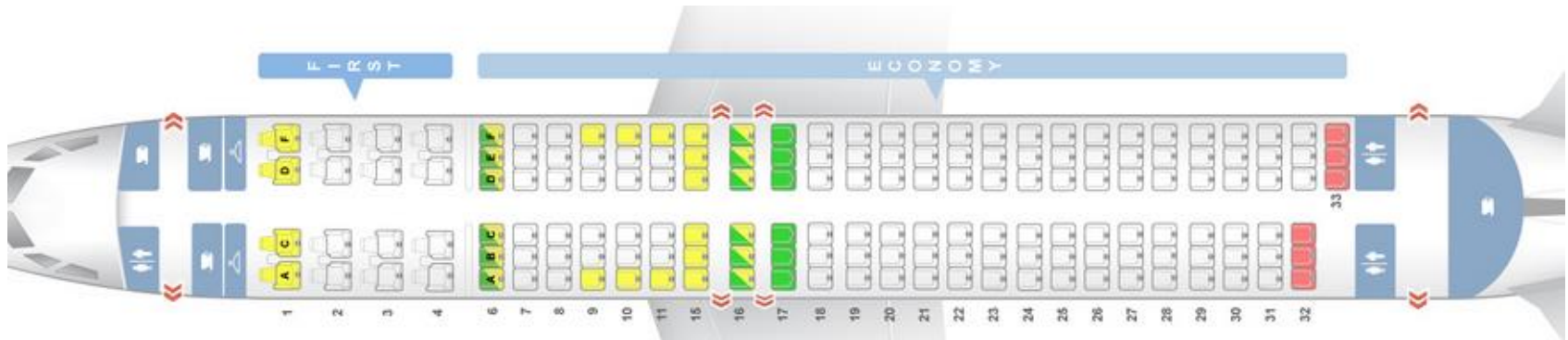


737 MAX 8

# Seating Configurations



16 Business Class, 141 Economy – 157 Total Seats



16 Business Class, 147 Economy – 163 Total Seats

Seating configurations can have a significant impact on revenue

# *Real-Time Modeling Exercise*

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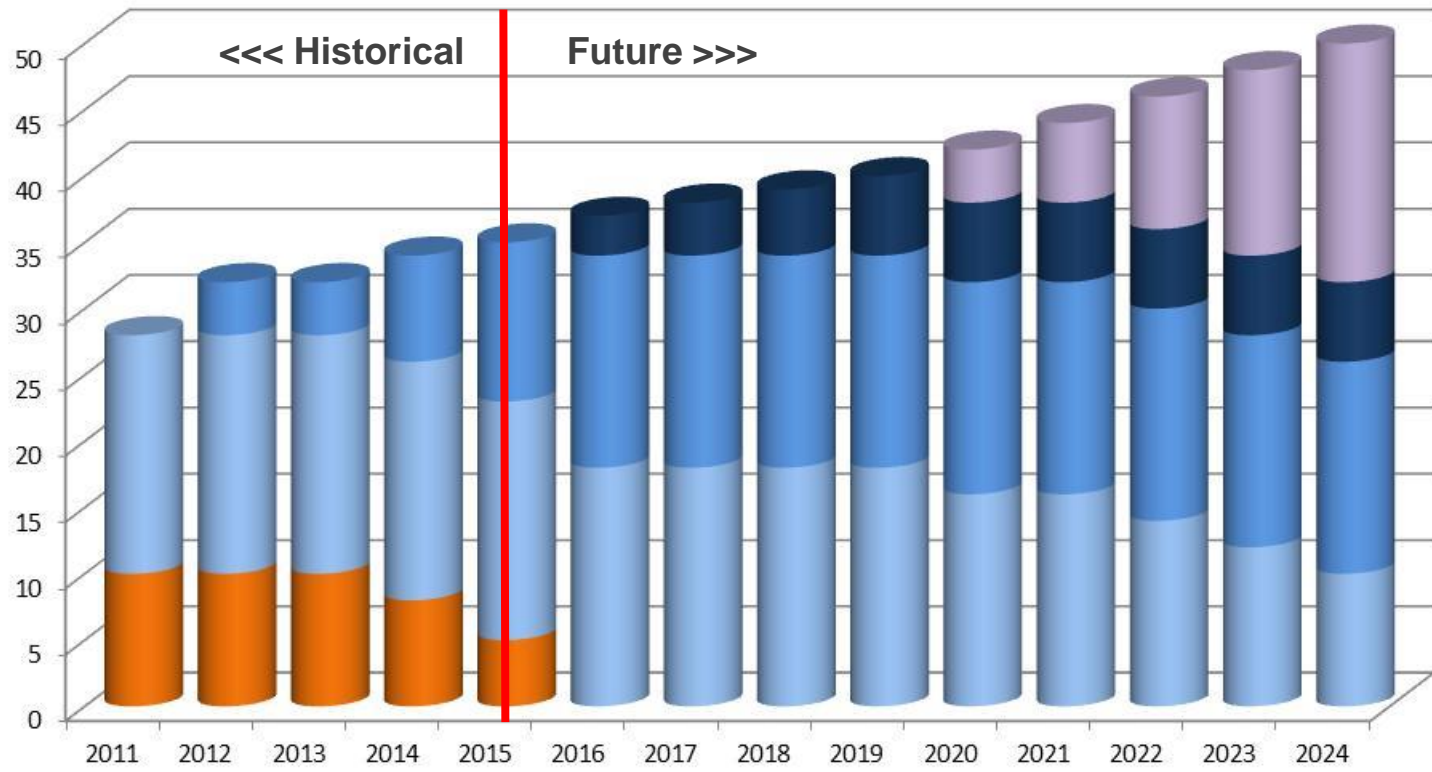


# ***Other Considerations***

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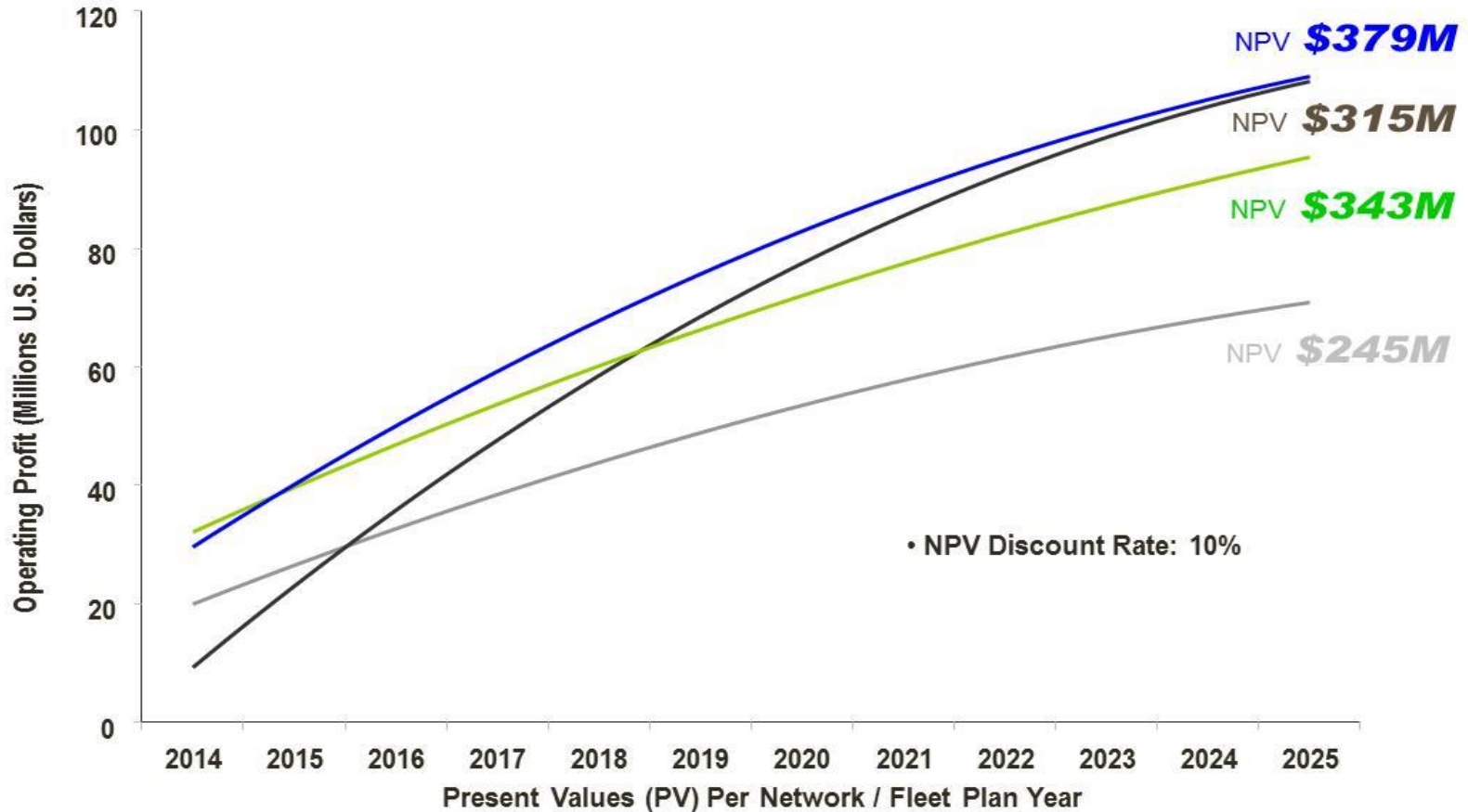
- **Flight Operations**
  - Training impact / Commonality
  - Complexity
- **Customer Service / Airports**
  - Gate impact
  - Runway / Taxiway impact
- **Maintenance**
  - Training impact / Commonality
  - Facility space for maintenance work
  - Regional knowledge of the airplane type
- **Commercial**
  - Advertising opportunities
  - Revenue generating opportunities

# Growth / Fleet Phasing



- Impact of fleet on growth, network and replacement
- Delivery position availability impact on aircraft replacement

# Financial evaluation over multiple years



- Comparing different scenarios over the life of the assets can produce different results
- Using NPV comparisons or other financial models will highlight differences of scenarios

## *Key Takeaways*

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- **Assumptions are critical in fleet analysis**
- **Know how to understand network requirements and aircraft performance impacts on mission needs**
- **Test key variables to understand risk elements to the business**
- **Evaluate the fleet over the expected lifetime of the aircraft purchase**