

# 747-8I

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# Advanced technology for improved performance

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Technology that matters



# 747-8 New wing design inspired by the 787

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Efficient composite raked tip design

Fly-by-wire composite spoilers and outboard ailerons

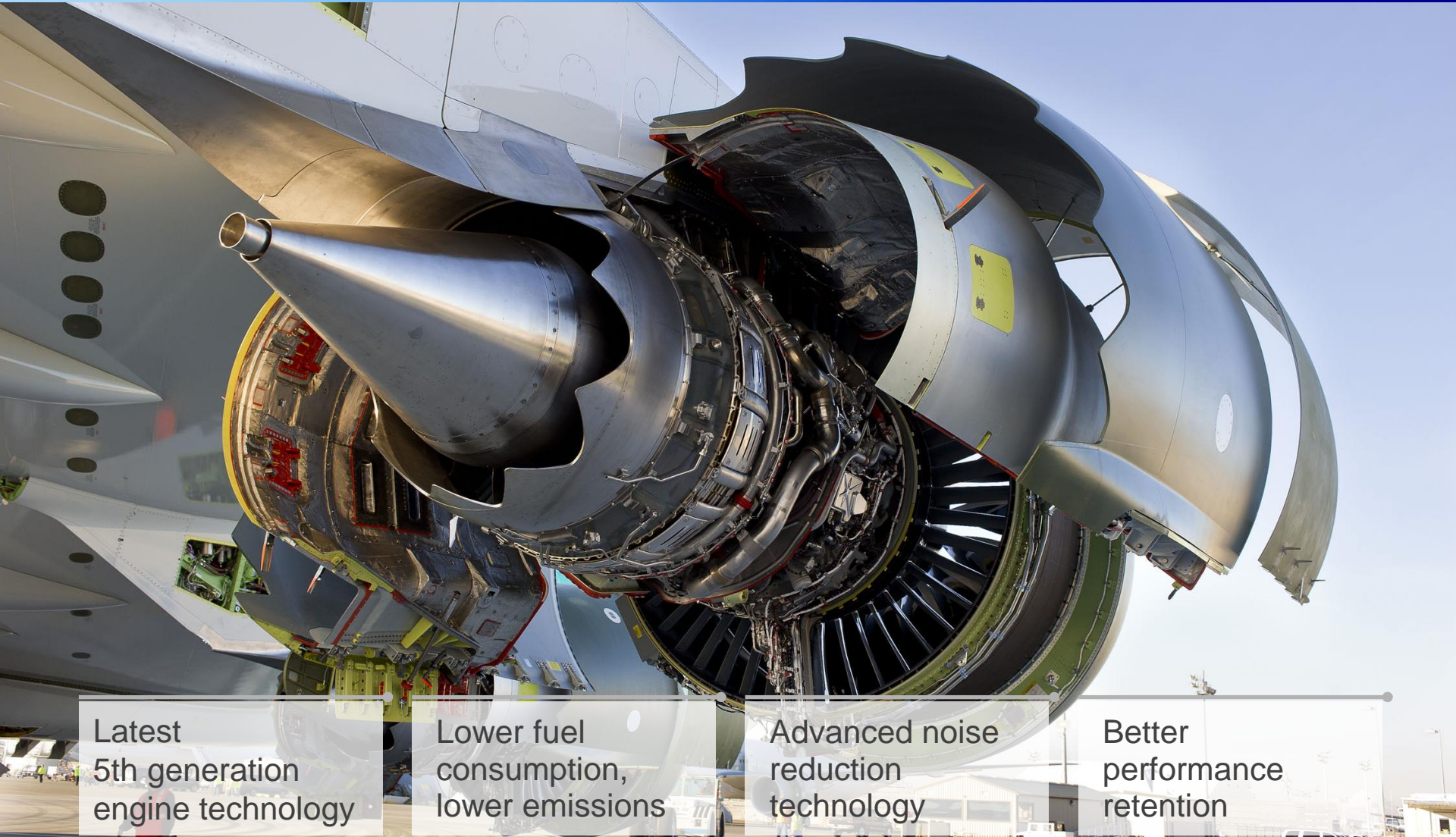
Advanced technology airfoil

Increased wingspan and optimized wing twist

Simplified composite flaps

# 787 generation engines improve fuel efficiency

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Latest  
5th generation  
engine technology

Lower fuel  
consumption,  
lower emissions

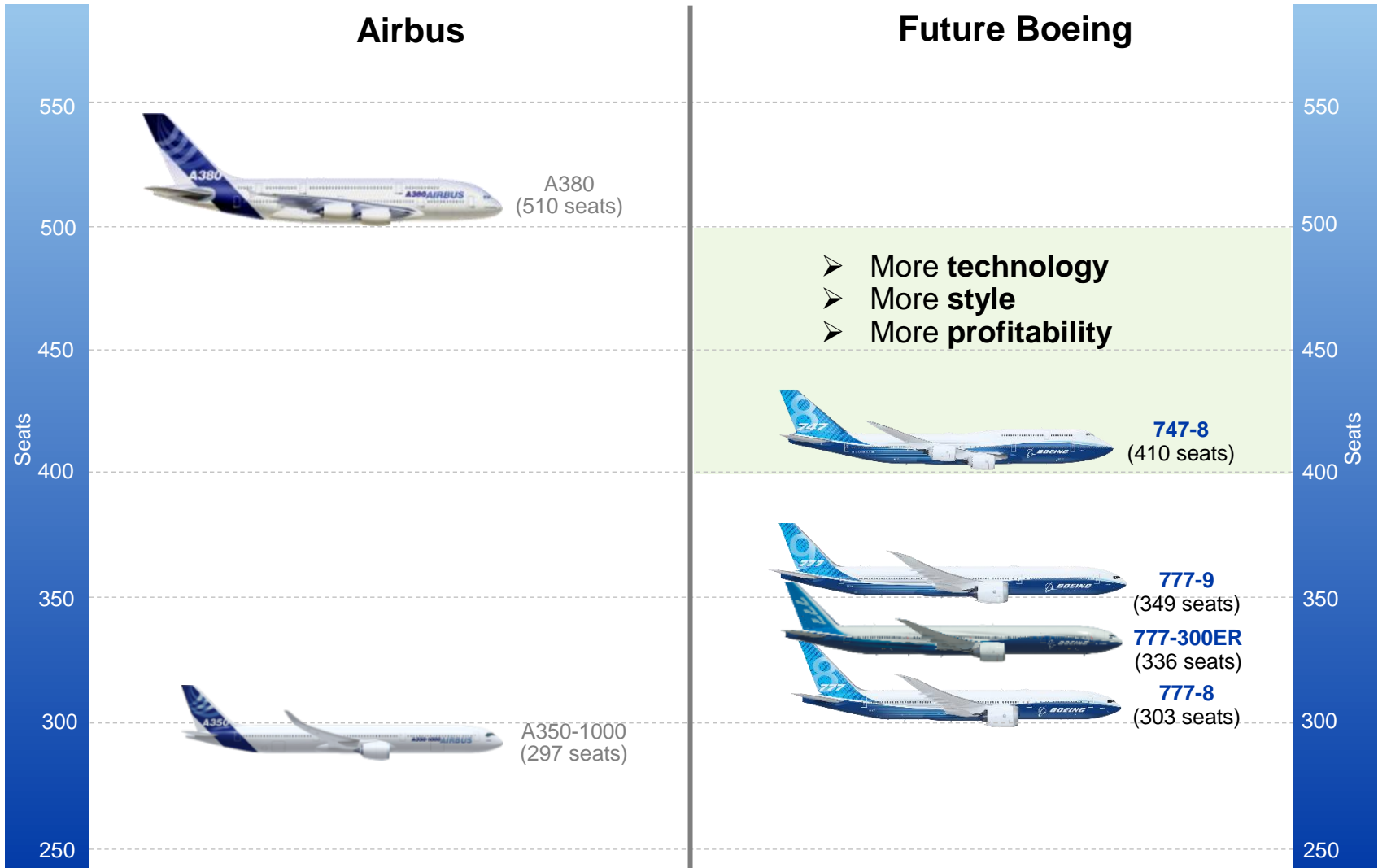
Advanced noise  
reduction  
technology

Better  
performance  
retention

# The Boeing widebody airplane family

747-8 Intercontinental is in a class of its own

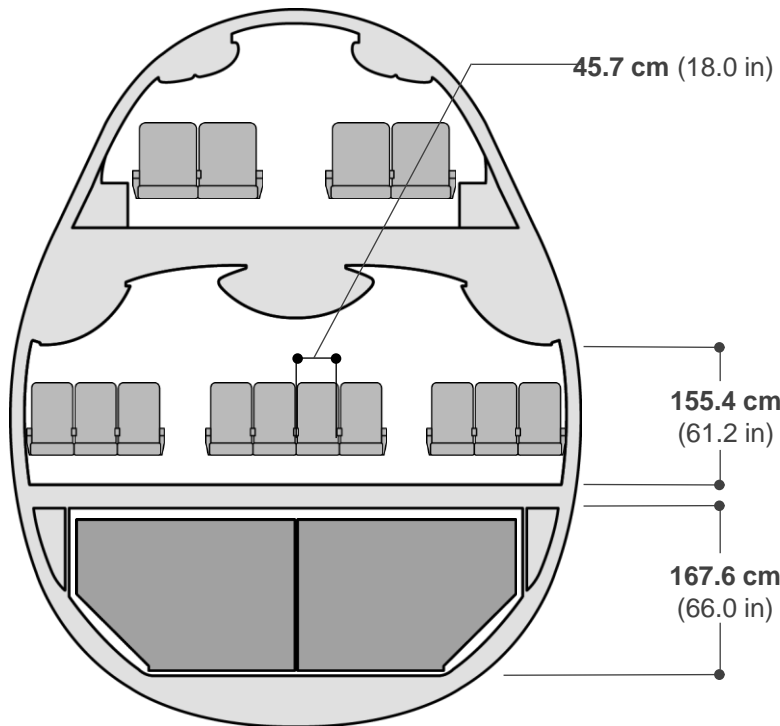
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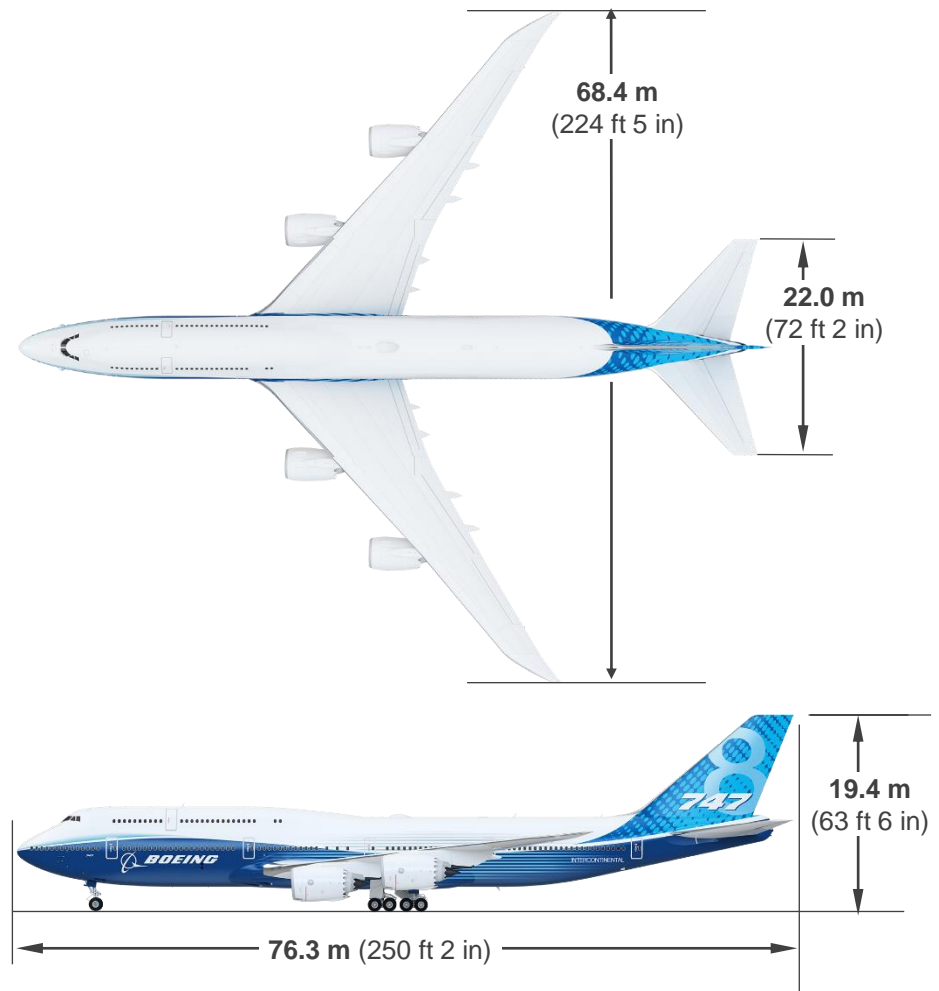
- More **technology**
- More **style**
- More **profitability**

# 747-8 cross section and dimensions

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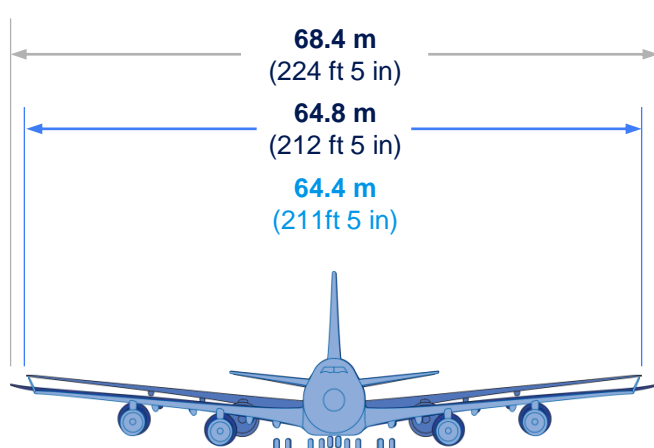
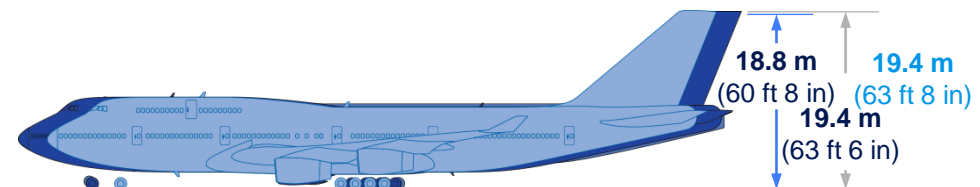
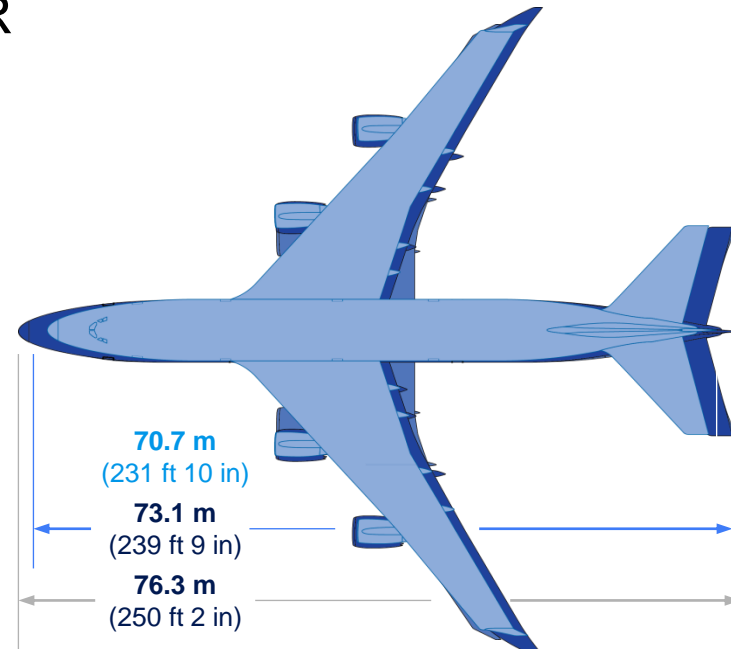
## 747-8 Intercontinental



# Size comparison

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747-400, 747-8, and 777-300ER

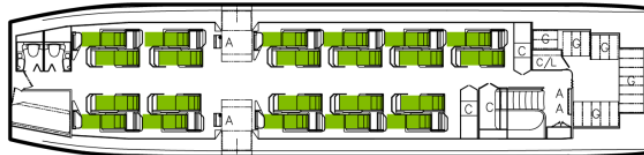


# 747-8 Interior arrangement

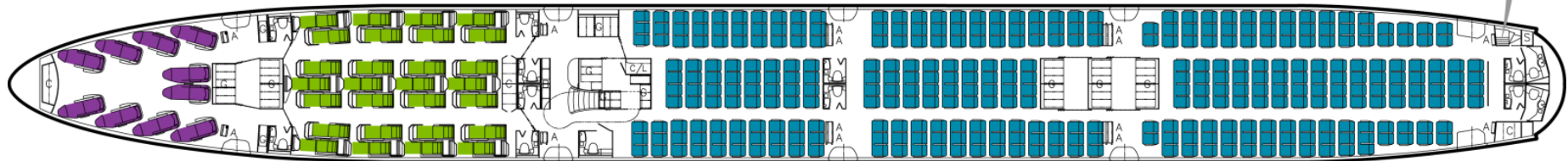
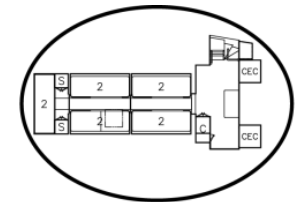
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## 747-8 Intercontinental

- 10 first-class seats
- 50 business-class seats
- 350 standard-economy seats



Overhead cabin crew rest



410 passengers

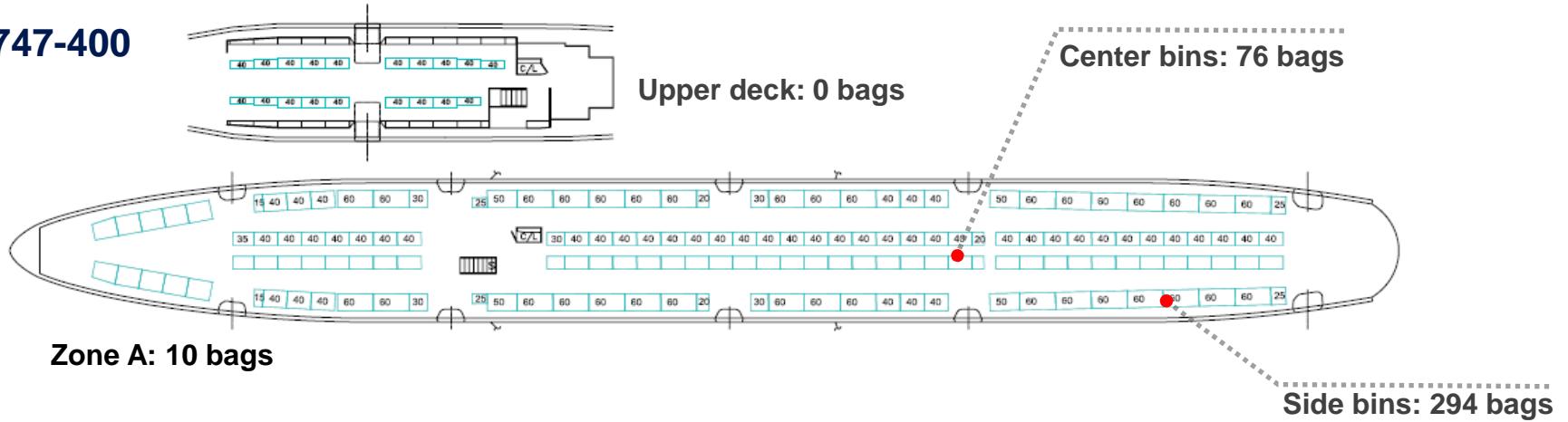


# 747-8 carries 58% more bags overhead than 747-400

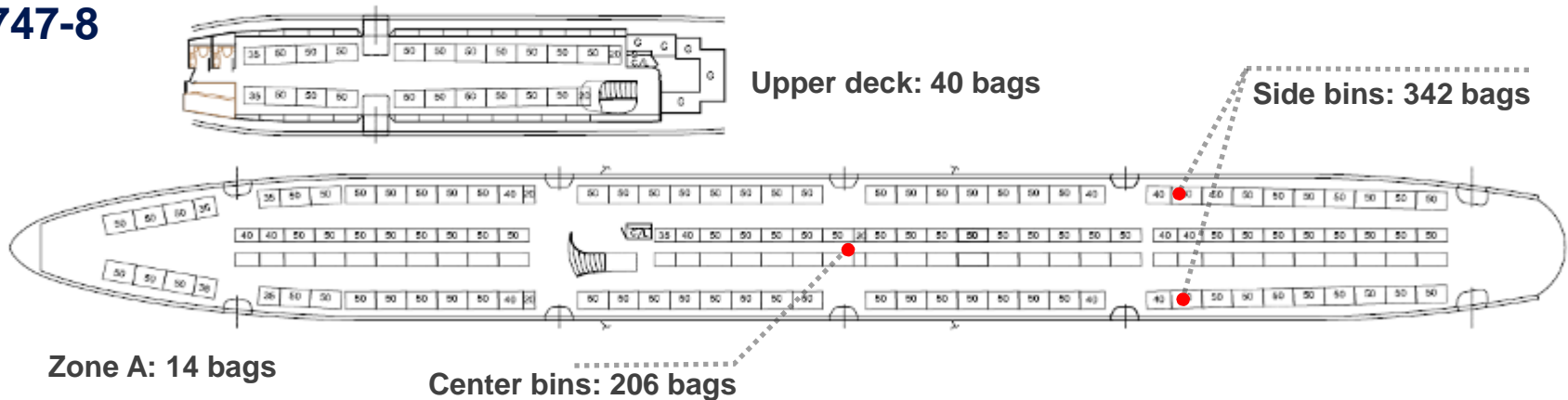
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A place for everyone's bag

**747-400**



**747-8**



# Increased cabin area for greater passenger comfort

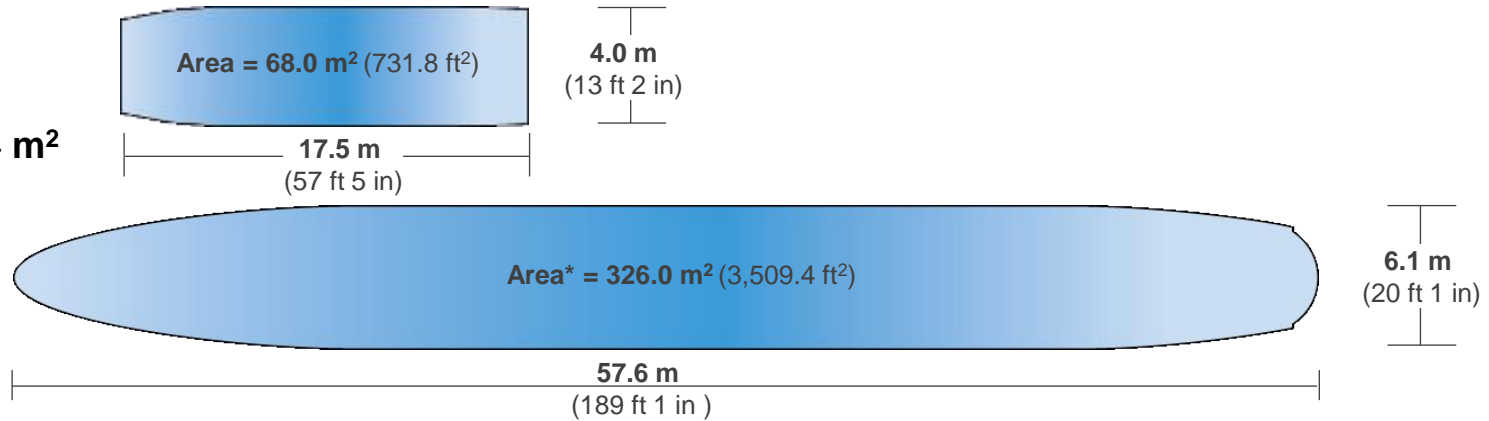
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13% more cabin area than the 747-400

**747-400**

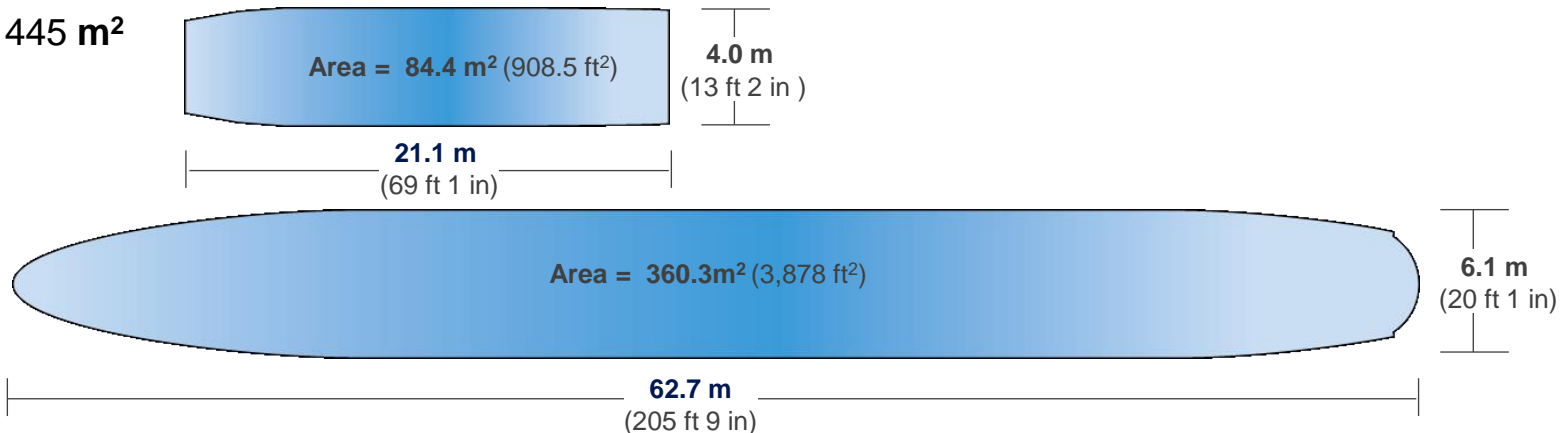
**747-400ER**

Total area 394 m<sup>2</sup>



**747-8**

Total area 445 m<sup>2</sup>



\* Area measured at 25-in off the floor

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# Interior design with the passengers in mind

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787- inspired architecture

Large overhead bins

Advanced lighting design

Exclusive upper deck

Open and inviting architecture

Elegant entryway

Latest generation IFE

# Unmatched and private first class experience

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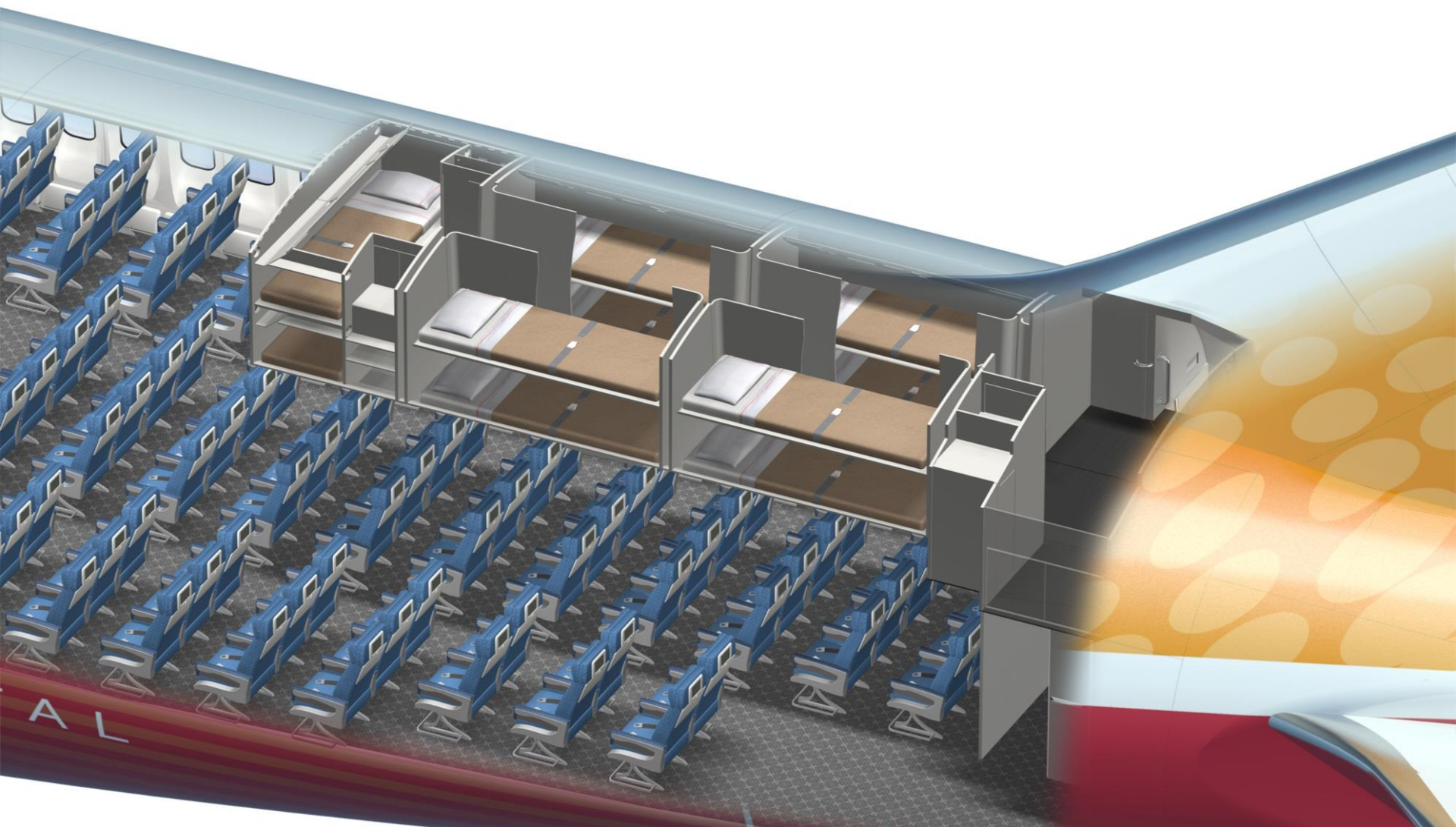






# 747-8 cabin crew rest similar to the 777

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# Lower hold cargo door arrangement

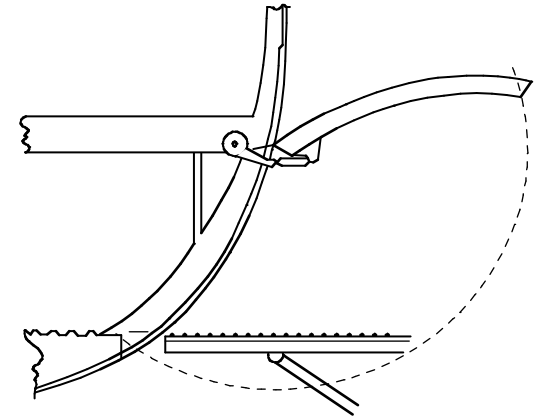
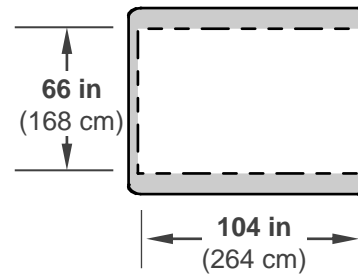
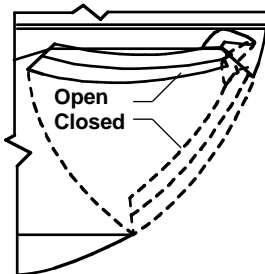
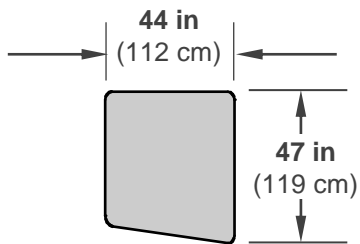
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Bulk cargo compartment door

Aft cargo compartment door

Forward cargo compartment door



Bulk cargo compartment door

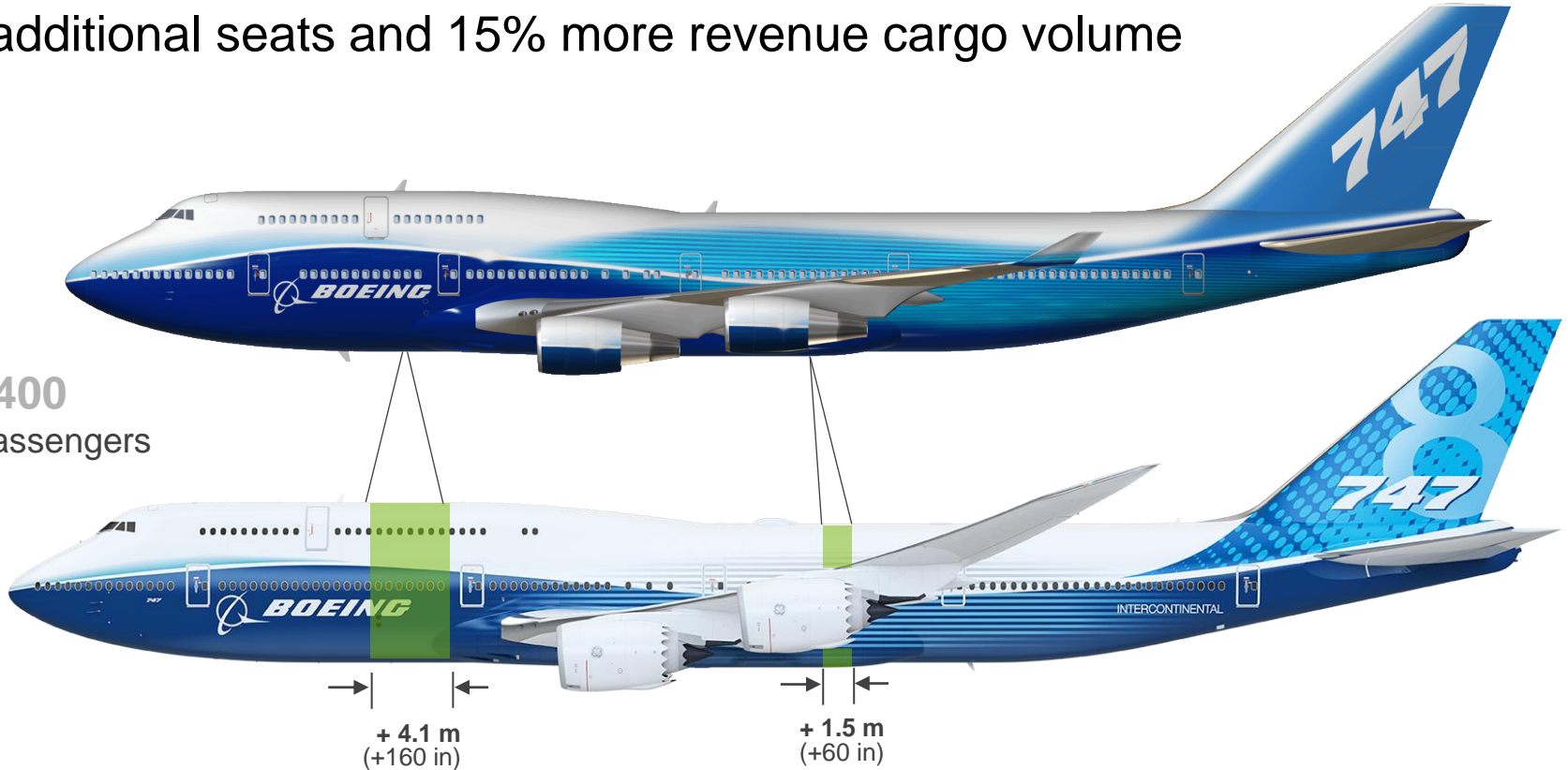
Forward/aft cargo compartment door—view looking forward

# Strategically sized to maximize revenue

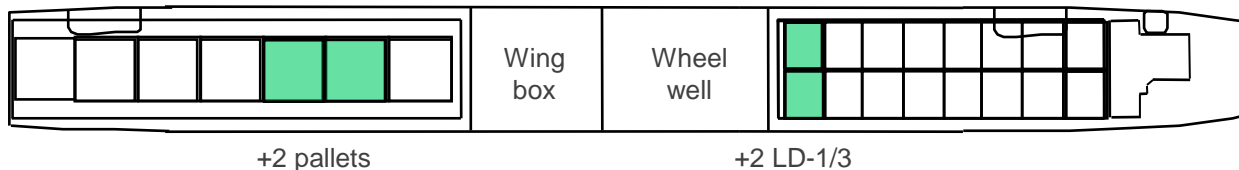
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66 additional seats and 15% more revenue cargo volume

747-400  
344 passengers



747-8 Intercontinental  
410 passengers

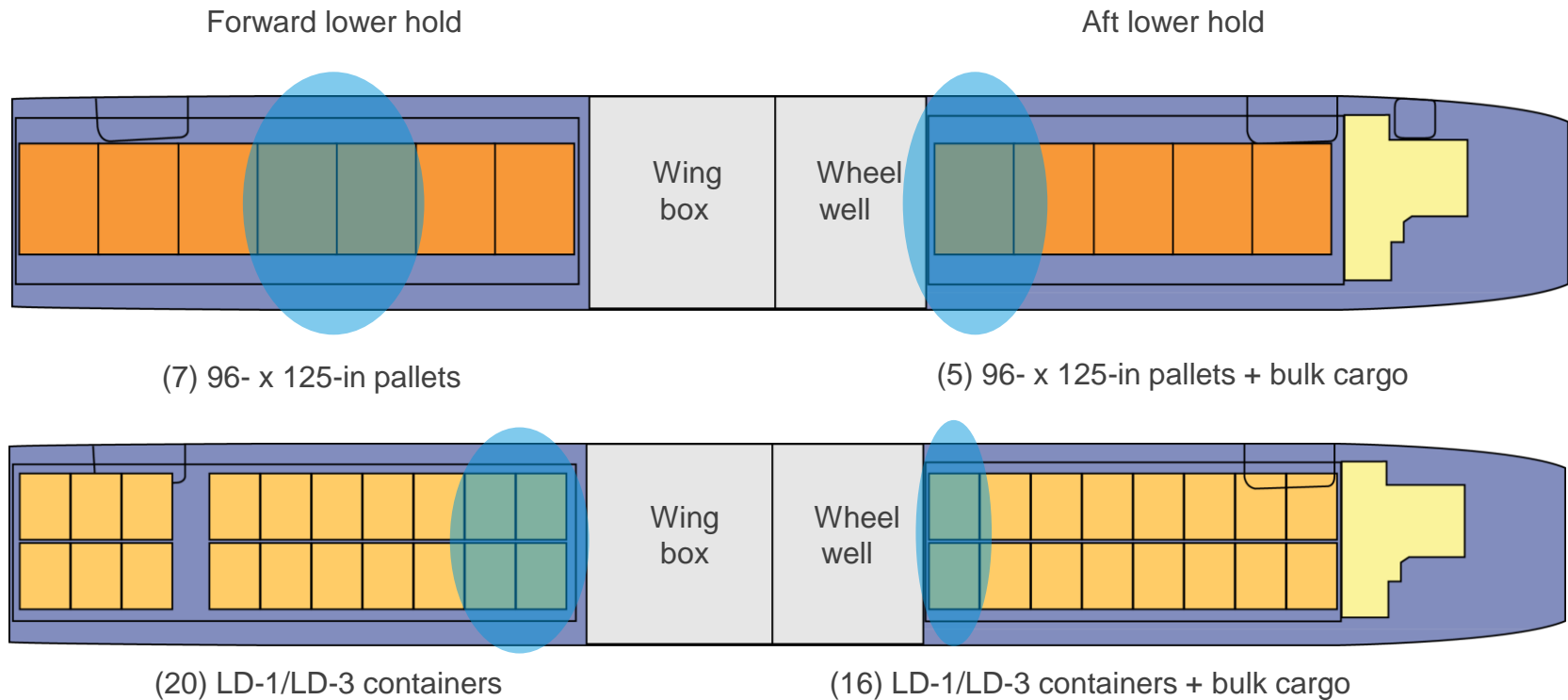


- Standard Rules
- Three-class seating

# Additional cargo volume for more revenue-generating opportunity

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747-8 Intercontinental carries 15% more revenue cargo than the 747-400



Additional volume versus 747-400

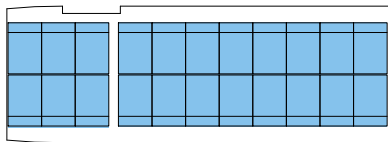
	Forward cargo volume m <sup>3</sup> (ft <sup>3</sup> )	Aft cargo volume m <sup>3</sup> (ft <sup>3</sup> )	Bulk cargo volume, m <sup>3</sup> (ft <sup>3</sup> )	Total cargo volume, m <sup>3</sup> (ft <sup>3</sup> )	Total cargo volume for passenger bags, m <sup>3</sup> (ft <sup>3</sup> )	Revenue cargo volume after passenger bags, m <sup>3</sup> (ft <sup>3</sup> )
<b>747-400</b>	<b>58.8</b> (2,075)	<b>69.4</b> (2,450)	<b>23.6</b> (835)	<b>151.8</b> (5,360)	<b>50.6</b> (1,789)	<b>101.2</b> (3,571)
<b>747-8</b>	<b>82.3</b> (2,905)	<b>79.3</b> (2,800)	<b>14.7</b> (520)	<b>176.3</b> (6,225)	<b>60.4</b> (2,132)	<b>115.9</b> (4,093)

# Flexible cargo arrangements increase revenue capabilities

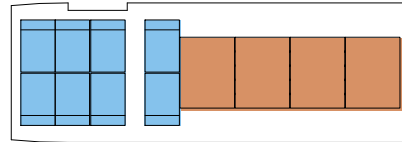
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## 747-8 Intercontinental lower hold cargo arrangements

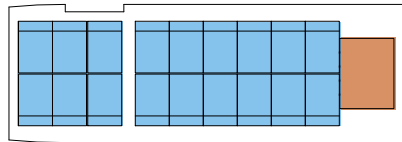
### Forward



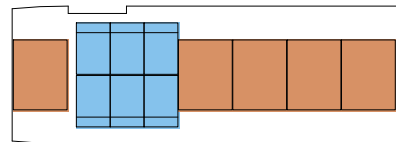
22\*\* LD-1/-3



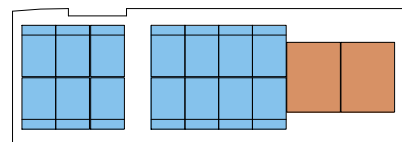
4 pallets and 8 LD-1/-3



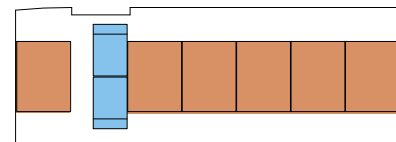
1 pallet and 18 LD-1/-3



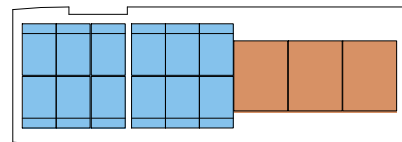
5 pallets and 6 LD-1/-3



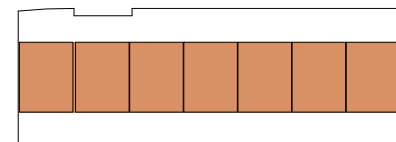
2 pallets and 14 LD-1/-3



6 pallets and 2 LD-1/-3

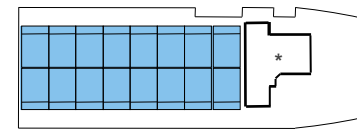


3 pallets and 12 LD-1/-3

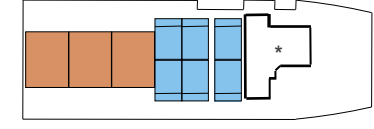


7 pallets

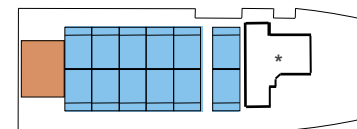
### Aft



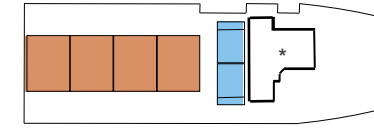
16 LD-1/-3



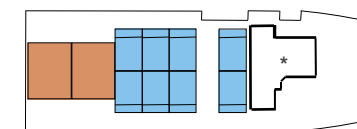
3 pallets and 6 LD-1/-3



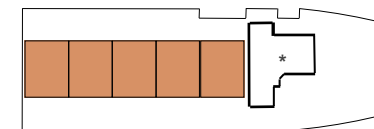
1 pallet and 12 LD-1/-3



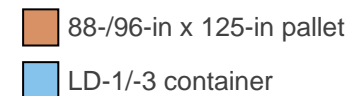
4 pallets and 2 LD-1/-3



2 pallets and 8 LD-1/-3



5 pallets



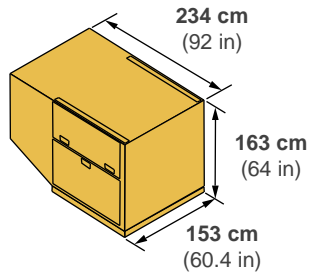
\* Bulk cargo is 14.7 m<sup>3</sup> (520 ft<sup>3</sup>)

\*\* Uses nonstandard load arrangement; standard arrangement is 20 containers

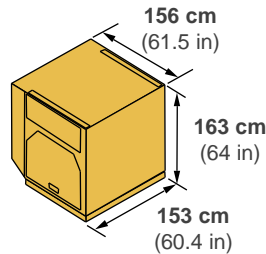
# 747-8 lower hold capability

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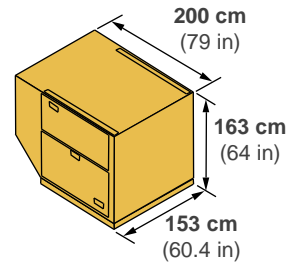
## Containers and pallets



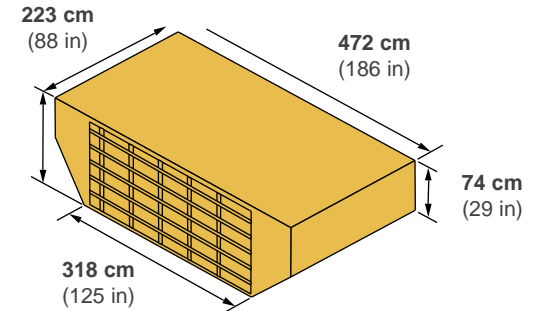
**1,588-kg (3,500-lb)**  
**4.9 m<sup>3</sup> (175 ft<sup>3</sup>)**  
**(LD-1)**



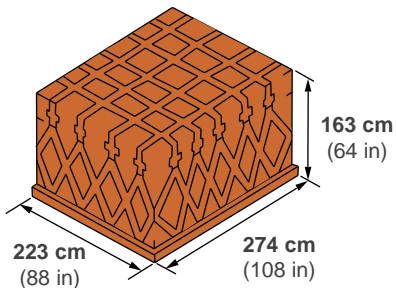
**1,225-kg (2,700-lb)**  
**3.5 m<sup>3</sup> (125 ft<sup>3</sup>)**  
**(LD-2)**



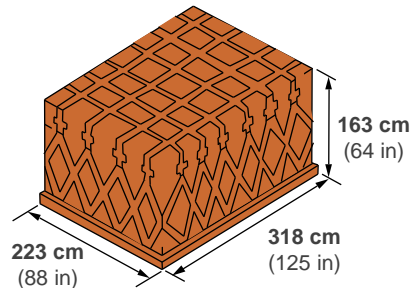
**1,588-kg (3,500-lb)**  
**4.5 m<sup>3</sup> (160 ft<sup>3</sup>)**  
**(LD-3)**



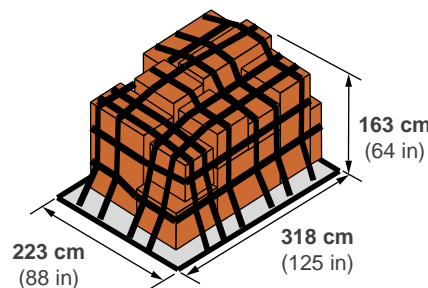
**4,536-kg (10,000-lb)**  
**14.6 m<sup>3</sup> (516 ft<sup>3</sup>)**  
**(LD-29)**



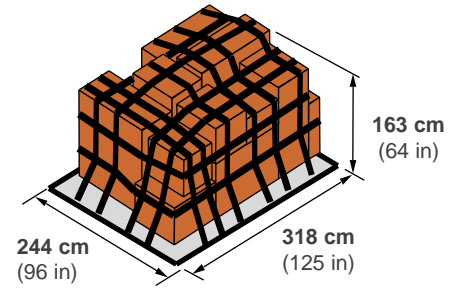
**4,627-kg (10,200-lb)**  
**9.0 m<sup>3</sup> (320 ft<sup>3</sup>) (military)**  
**9.2 m<sup>3</sup> (327 ft<sup>3</sup>) (commercial)**



**4,627-kg (10,200-lb)**  
**10.8 m<sup>3</sup> (381 ft<sup>3</sup>)**  
**(LD-7)**



**4,627-kg (10,200-lb)**  
**10.7 m<sup>3</sup> (379 ft<sup>3</sup>)**  
**(pallet)**



**5,035-kg (11,100-lb)**  
**11.7 m<sup>3</sup> (415 ft<sup>3</sup>)**  
**(pallet)**

# 747-8 Intercontinental performance summary

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		747-8
Passengers	(FC/BC/EC)	<b>410 (10/50/350)</b>
Cargo	pallets/containers <sup>2</sup>	<b>7/16</b>
Engines		<b>GEEx-2B67</b>
Boeing equivalent thrust/Flat-rated temperature	lb/°F	<b>66,500 / 86</b>
Maximum taxi weight	kg (lb)	<b>449,050</b> (990,000)
Maximum takeoff weight	kg (lb)	<b>447,700</b> (987,000)
Maximum landing weight	kg (lb)	<b>312,050</b> (688,000)
Maximum zero fuel weight	kg (lb)	<b>295,300</b> (651,000)
Operating empty weight	kg (lb)	<b>223,850</b> (493,500)
Fuel capacity	L (U.S. gal)	<b>238,610</b> (63,034)
Design range	(MTOW, full passenger payload) nmi (km)	<b>7,730</b> (14,310)
Cruise mach		<b>0.86</b>
Takeoff field length	(SL, 86°F, MTOW) m (ft)	<b>3,260</b> (10,650)
Initial cruise altitude	(MTOW, ISA + 10°C) ft (m)	<b>30,800</b> (9,350)
Landing field length	(MLW) m (ft)	<b>2,000</b> (6,550)
Approach speed	(MLW) kias	<b>152</b>
Fuel burn/seat 3,000 nmi	kg (lb)	<b>138.6</b> (305.6)
Fuel burn/seat 6,000 nmi	kg (lb)	<b>295.7</b> (652.0)

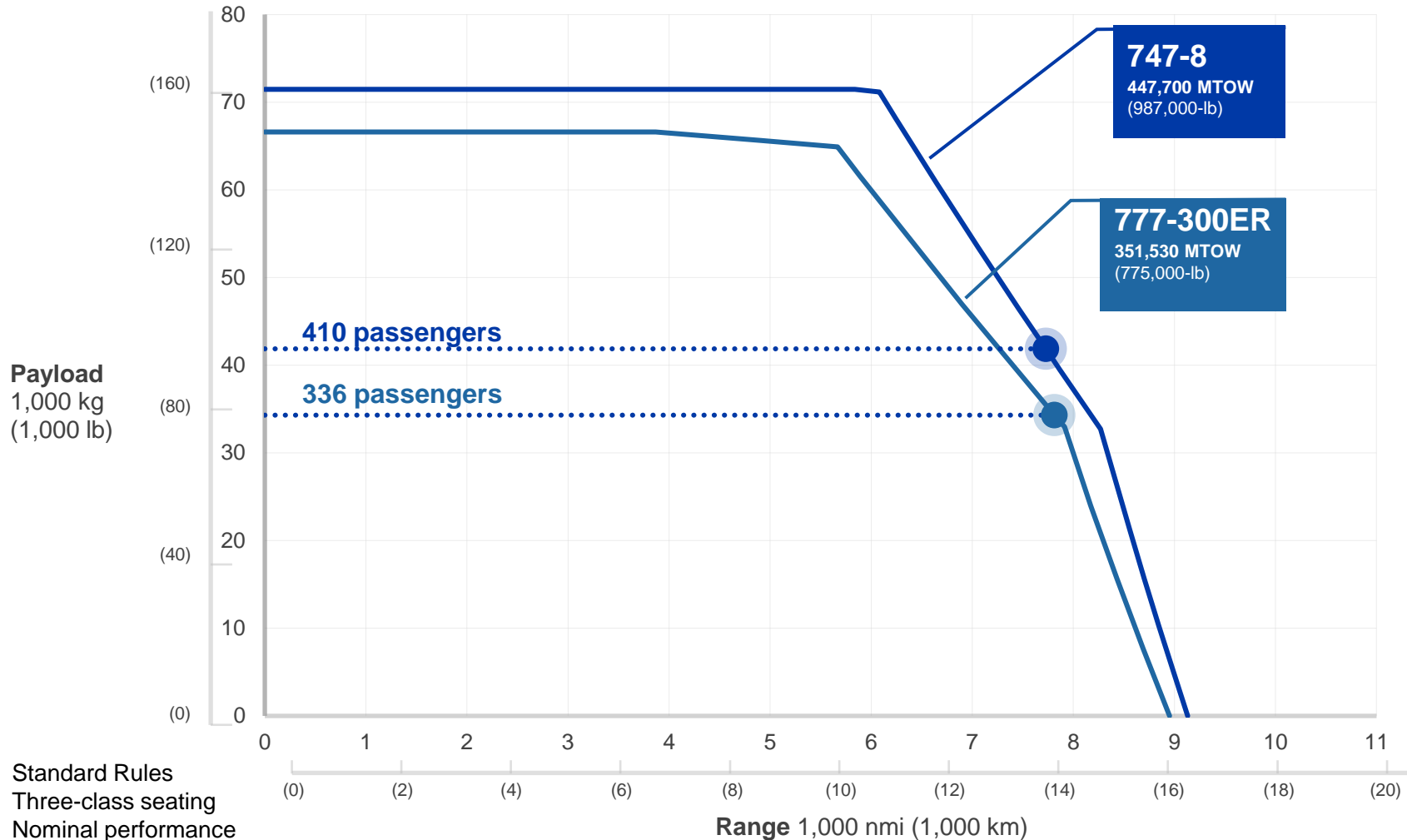
- Standard Rules
- Three class seating

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# 747-8 Intercontinental carries more passengers

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- Standard Rules
- Three-class seating
- Nominal performance
- 225 lb per passengers
- 6.7 lb/US gal fuel density

# 747-8 same range as the A380 with less risk

StartupBoeing

## Full passenger payload

### 747-8

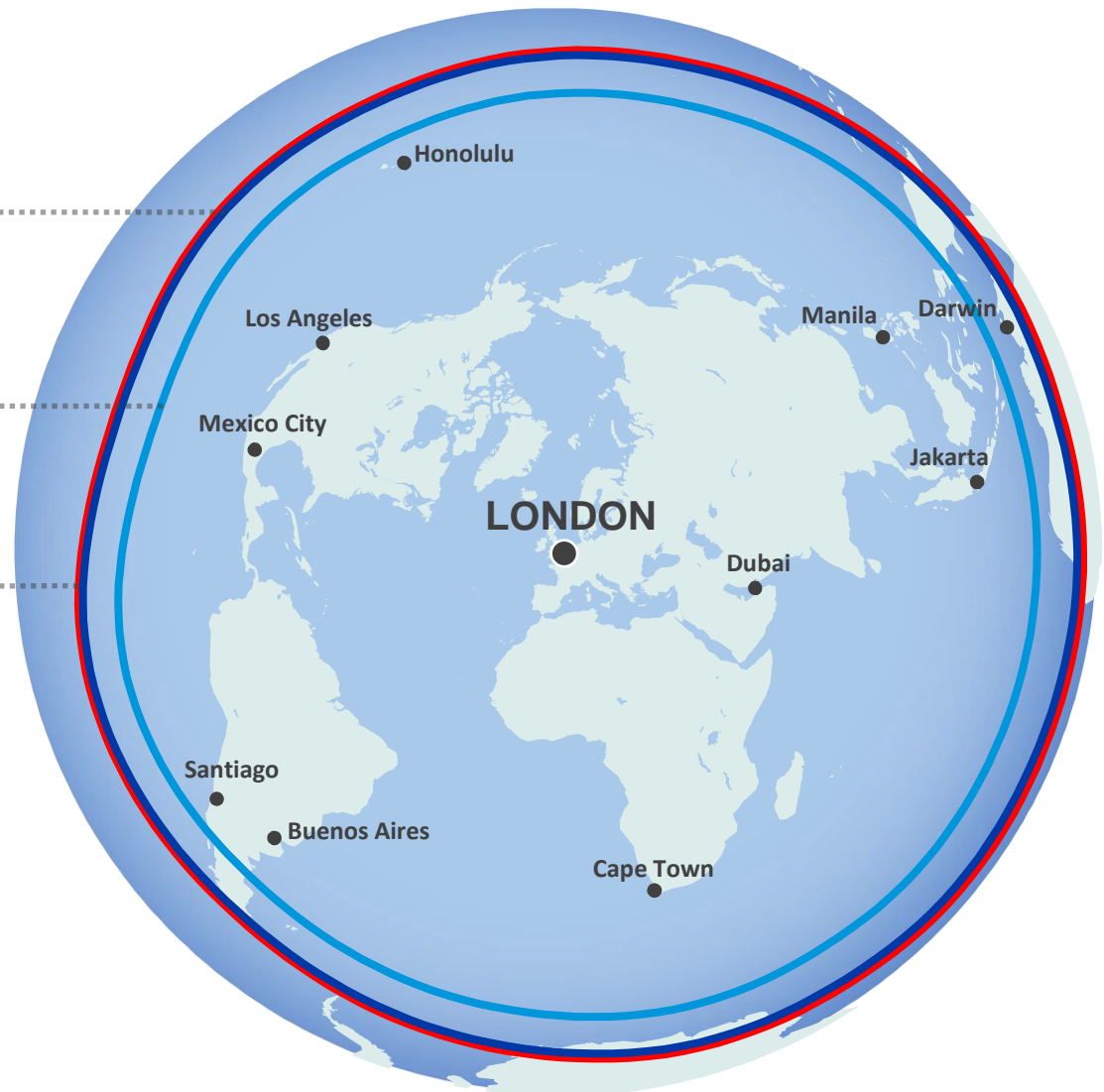
447,700-kg (987,000-lb) MTOW  
410 three-class passengers

### 747-400

396,900-kg (875,000-lb) MTOW  
344 three-class passengers

### A380-800

575,000-kg (1,267,700-lb) MTOW  
510 three-class passengers



- Standard Rules
- 85% annual winds
- Airways and traffic allowances included
- Range capability from London



# 747-8 advanced flight deck offers operational commonality

StartupBoeing

Same type rating as the 747-400

**3 days**

difference training

Customizable  
electronic checklist

Airport Moving  
Map

Advanced  
navigation aids

New flight  
management  
computer

# 777 and 747-8 crew scheduling and flexibility

StartupBoeing

Instrument format and location are virtually identical



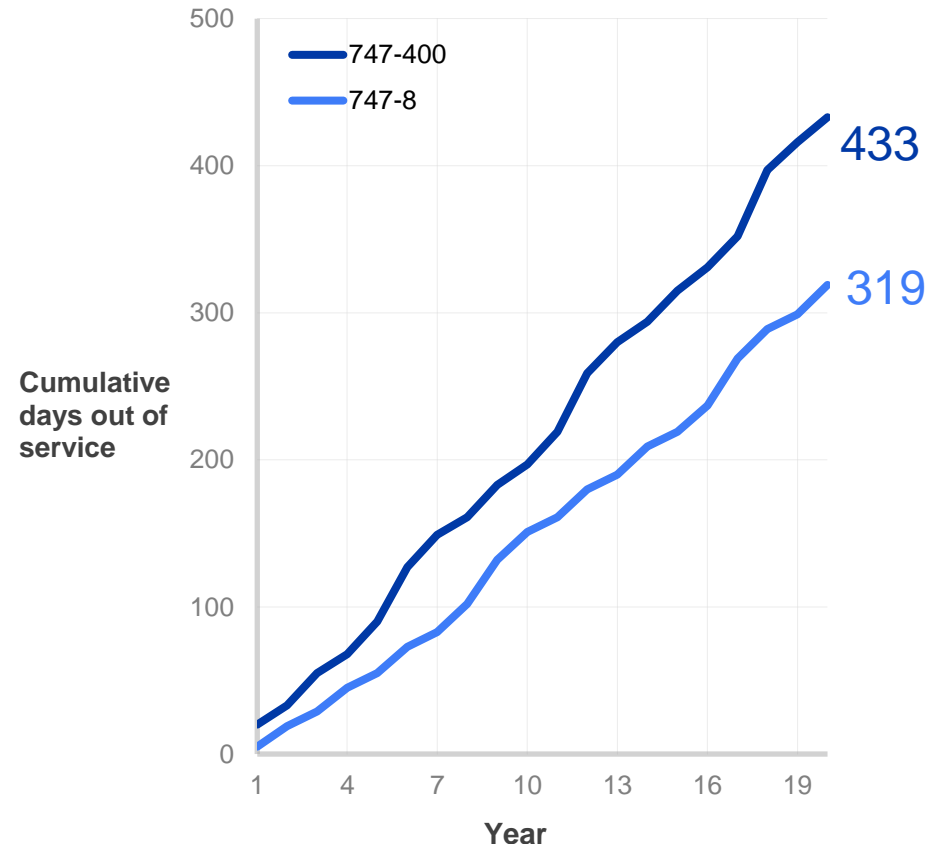
- STAR curriculums can be used for obtaining both Type Ratings.
- Similar Boeing flight deck configuration and flight crew procedures facilitate easy transition.<sup>1</sup>
- Comparable Takeoff and Landing currency enables crew scheduling flexibility.

# Proven airframe increases check intervals

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## 747-8 enables greater asset utilizations

	747-400 original	747-400 current	747-8
<b>A-check interval</b> (typical duration)	<b>750 hrs</b> (2 days)	<b>1,000 hrs</b> (2 days)	<b>1,000 hrs</b> (1 day)
<b>C-check interval</b> (typical duration)	<b>7,500 hrs</b> <b>18 mo</b> (12 days)	<b>10,000 hrs</b> <b>24 mo</b> (12 days)	<b>10,000 hrs</b> <b>24 mo</b> (9 days)
<b>D-check interval</b> (typical duration)	<b>6 years</b> (22 days)	<b>8 / 8 / 6 / 6</b> <b>years</b> (22 days)	<b>8 / 8 / 6 / 6</b> <b>years</b> (20 days)



New material and system fine tuning reduces check duration

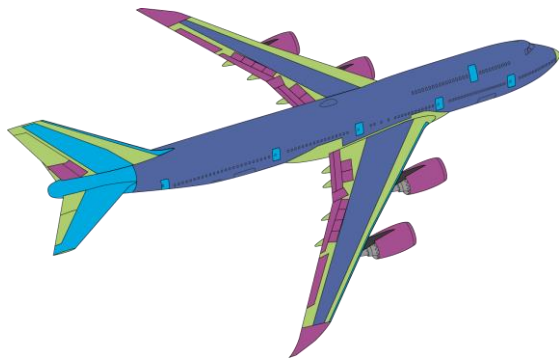
Less maintenance tasks for a more capable airplane

Letter checks noted above for 747-8 are given for reference only. All tasks are parameter-driven.

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# 747-8 is cleaner, quieter, and more efficient

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- Advanced materials

- New GEnX Engines

- New wing

18% reduction in carbon emissions and fuel used

Below CAEP/6 limits for NOx\*

Quieter than Chapter 4 requirements

Compared with the 747-400, except for NOx and noise

