

# American Copper Council

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# Safety is our responsibility

**Last year 4.3 billion passengers flew safely on 46.1 million flights**

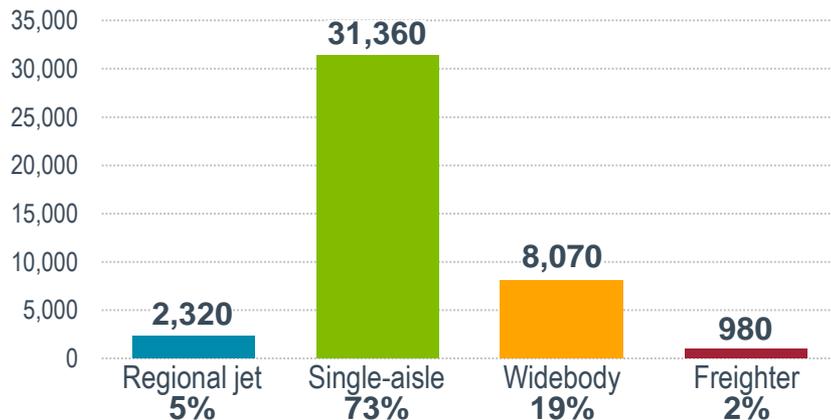


# Airlines will need 42,700 new airplanes valued at \$6.3 trillion



## Airplane deliveries: 42,700

2018 - 2037



## Market value: \$6.3 trillion

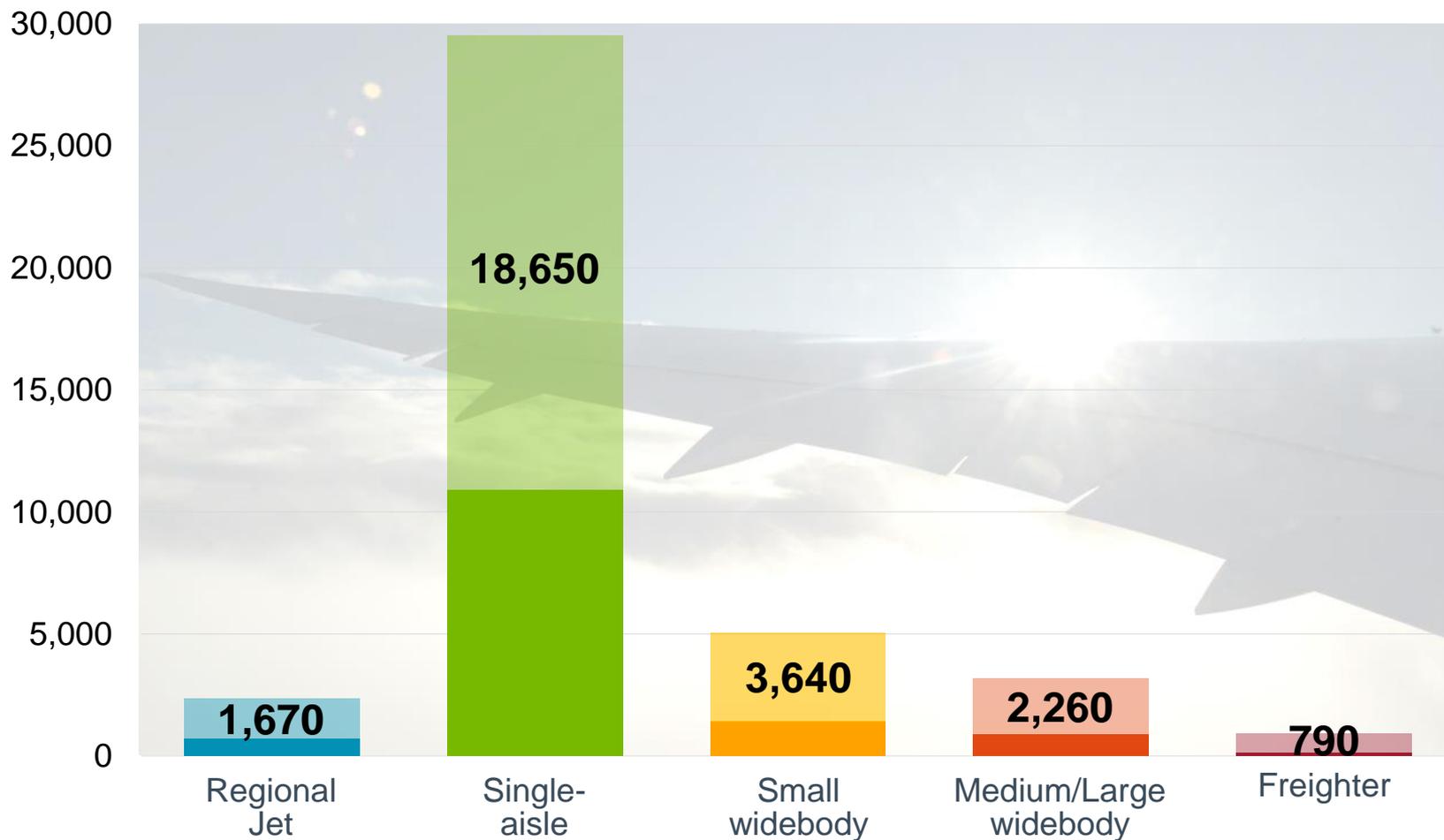
2018 - 2037



NOTE: Market share may not equal 100% due to rounding

# Open demand is there... more than 65% left to sell

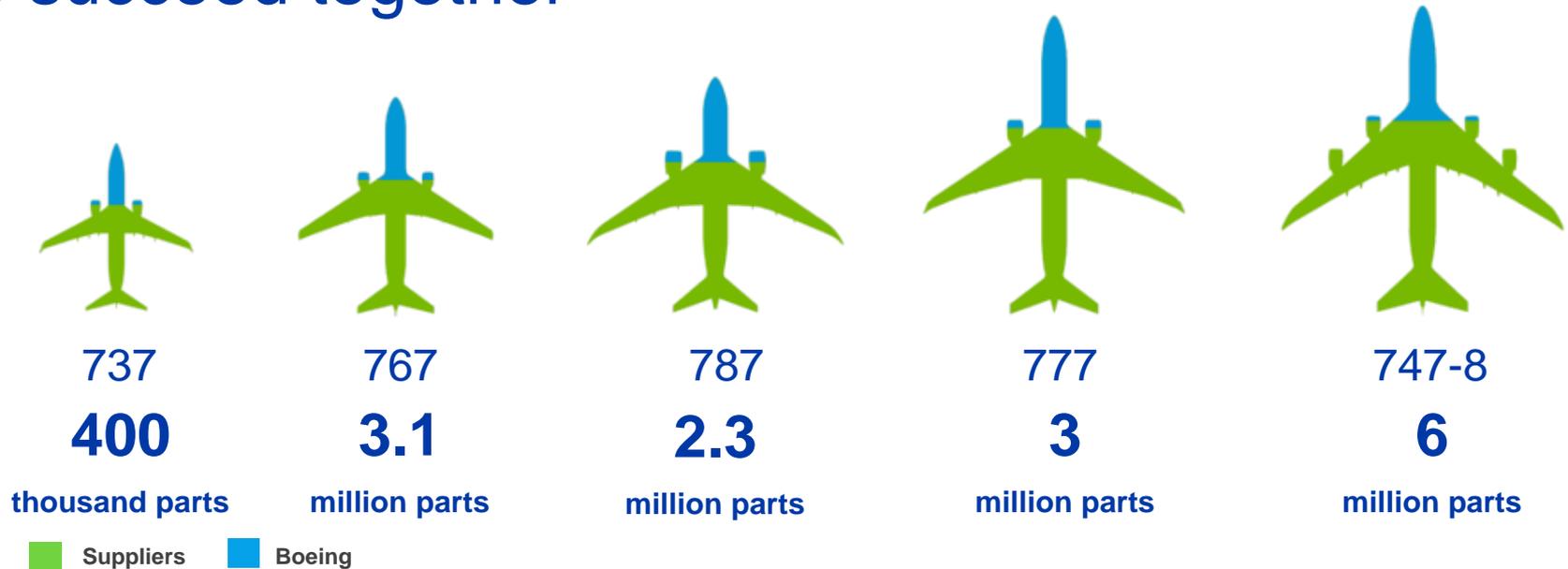
## 2017-2036



Solid shading = backlog, light shading = market opportunity (freighter also includes conversions)

SOURCE: Ascend backlog as of 5/31/2017

# Boeing and our supply chain partners work together to succeed together



# 65%

of our airplanes' cost comes through the supply chain

\$40 billion annual spend • buying +1 billion parts every year  
5,400 supplier factories • 500,000 supplier employees

# Boeing global supplier footprint

\$59 billion annual spend: 12,400 suppliers, 58 countries



**58 Countries**

**6 Regions**

**12,400 Suppliers**

# Re-evaluation of sourcing strategy across all commodities



Structures



Services



Systems



Interiors



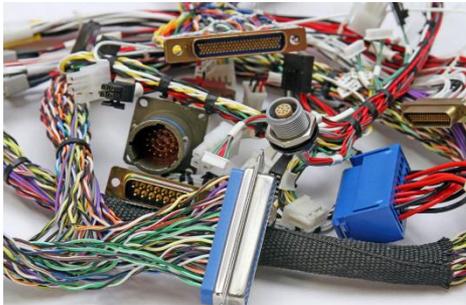
Propulsion



Materials & Standards

# Copper Usage in Boeing Products

- Copper is a key component in the Electrical Standards market
- Primary material used in raw wire for Boeing programs
- Utilized heavily in the following electrical categories:
  - Raw wire
  - Electrical contacts
  - Terminals
  - Splices



**Copper plays a critical role in the Boeing electrical systems**

# Copper Usage in Boeing Products

## ■ Wiring statistics by Program

TOTALS	737NG	737 P8	747-8F	747-8I	767F	767-300ER	777-300ER	777F	787-8
Number of Wire Bundles	492	1,401	1,086	1,357	842	977	1,778	1,498	1,427
Number of Wire Segments	24,050	42,100	56,299	62,361	43,863	51,158	60,848	51,467	72,943
Wire Length (Miles)	41	73	114	138	76	93	103	87	68
Electrical Connectors	3,035	6,537	5,628	7,055	3,914	4,840	7,251	5,163	9,012
Segments per Bundle (avg)	49	30	52	46	52	52	34	34	51
Ft of Wire per Bundle (avg)	440	275	554	537	477	503	306	307	252
Connector Count per Bundle	6.2	4.7	5.2	5.2	4.7	5	4.1	3.5	6.3

# Copper Usage in Boeing Products

Qty per month (2020 build rates)	
Number of Wire Bundles	59,000
Wire Length (Miles)	4,000
Electrical Connectors	340,000

