



TRANSPORTATION: MARKET AND OUTLOOK

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WHEN YOU NEED TO BE SURE



Global transportation expected to exceed USD 3.8 trillion in 2016 –
37% growth rate over five years



Aerospace Industry is estimated to double the number of commercial planes by 2030



Automotive Industry is being eyed by outside players that want in on the "\$10tn mobility market (10tn miles traveled x \$1/mile)



Rail Industry will focus on the total journey with connections to other transport modes with annual growth rates for Rolling Stock & Services of 7%



With world GDP stable at approximately 3% annually through 2030 the total **seaborne trade** is anticipated to grow by an average of 6% year-on-year.

**Major driver – emerging economies
with megacities increasing in number and size**

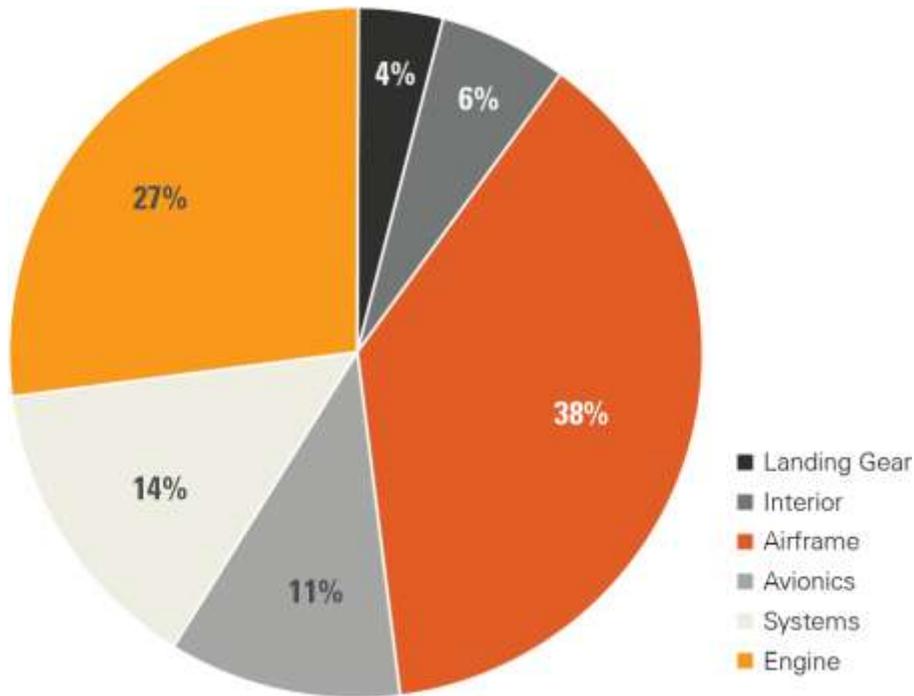
	DEFEND	OPTIMIZE	EXPAND	DIVERSIFY
INTELLIGENT TRANSPORT SYSTEMS <ul style="list-style-type: none"> • Road Safety Enforcement • Traffic Management • Smart Mobility 				  
TESTING SERVICES <ul style="list-style-type: none"> • Powertrain • Materials • Dynamics • Electronics 				  
FIELD SERVICES <ul style="list-style-type: none"> • Supply Chain • Retail Network • Asset Management 			   	
REGULATED SERVICES <ul style="list-style-type: none"> • Safety & Emissions • Homologation 			  	

- Total aerospace & defense market: USD 700-1,000 billion:
 - 60 percent in US
 - 34 percent in Europe
 - 6 percent in Asia-Pacific
- Outsourced aerospace TIC market: ~ USD 10 billion
- Globalized production = increased requirements, tighter regulations, outsourced laboratories
- Unforgiving international standards and market competition
- Market scope: inspection/laboratory testing services for products, metals/composites, chemicals, software, MRO

- Soaring profits and growth drive the commercial aviation industry
 - Record aircraft production levels worth USD 4.9 trillion by 2024
 - Demand for next-gen aircraft and engines
 - Interest rates low, financing readily available
 - Carrier-operating costs down with oil prices
 - Major economies improving
 - Growing passenger demand

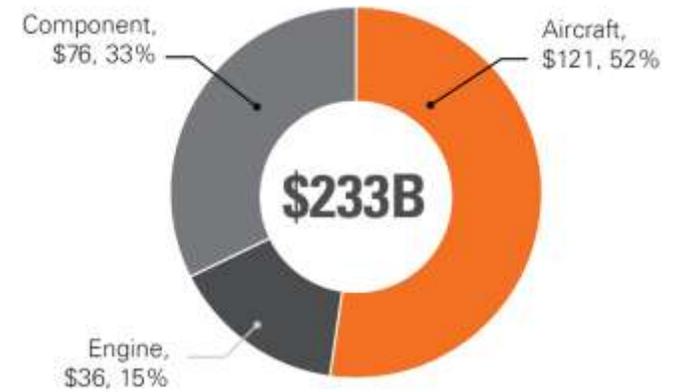
- Challenge: surging orders, supply chain and production
 - Manufacturing backlogs at Boeing and Airbus >12,400 aircraft at Q3 2015 – represents 9 years of current production
 - Demand drivers bolstering other players:
 - Regional and business jets: Bombardier, Gulfstream, Honda, Mitsubishi, Embraer
 - Producers in China and Russia

COMPONENTS VALUE AS % OF AIRCRAFT VALUE

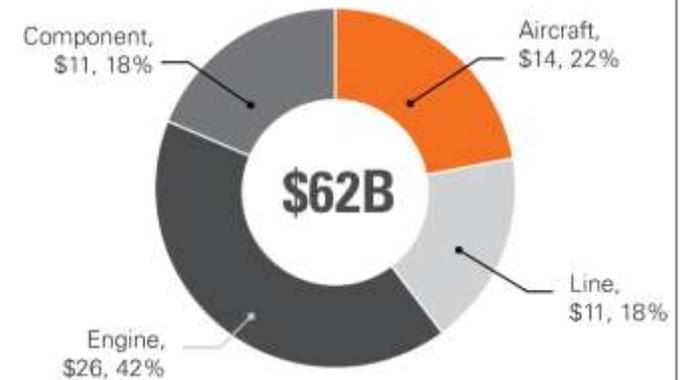


COMMERCIAL AEROSPACE MARKET

PRODUCTION

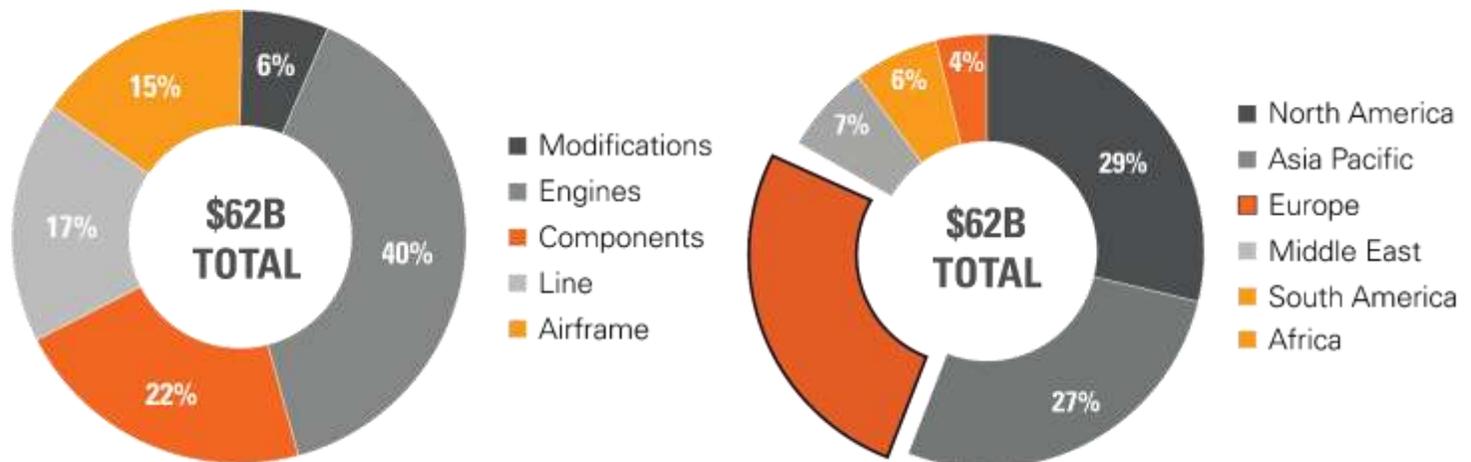


MRO

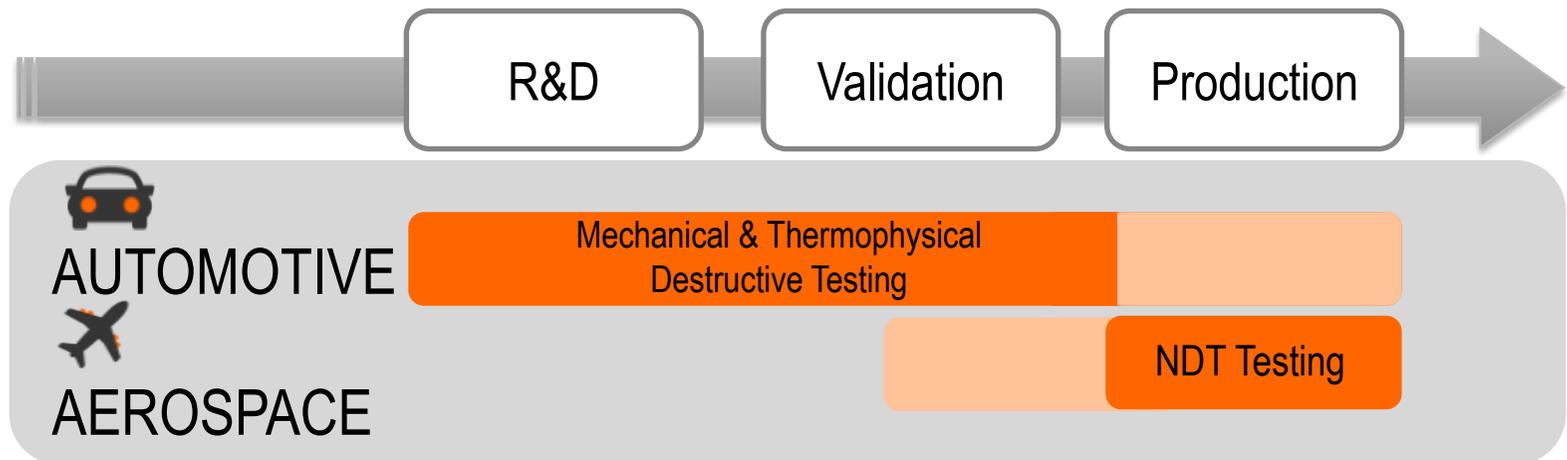


MAINTENANCE, REPAIR AND OVERHAUL

- Market > USD 60billion
- Will grow to over USD 90 billion by 2023
- Global airline fleet expected to double over the next 20 years – 40,000 new planes commissioned
- MRO driven by technology – mobile maintenance ‘at-the-asset’
- Integration of ‘apps’ part of a full information system



- **Combined service offering:** leverage test technologies and network across aerospace, automotive, rail and marine
- Combination of destructive and non-destructive testing





- Aerospace hotspot
 - 100 companies – 11,500 highly qualified employees
 - 25% growth rate – production export > USD 1 billion

- Automotive hotspot
 - 150 companies – 70,000 employees
 - 17% growth rate – production export USD 4 billion

- Boeing's new Ecosystem project
 - 120 suppliers
 - 8,700 jobs
 - Increase aerospace exports by USD 1 billion



- Acquired several advanced testing & engineering activities
- Doubling testing capacities with a 33,000 sq ft state-of-the-art hydraulic laboratory in Troy, MI
- All ex-owners of recent lab acquisitions remain on the SGS team, providing access to an outstanding pool of entrepreneurs
- Created a single sales organization
- Identification and implementation of operational efficiency improvements



- Execution of diversification of service portfolio – expansion in key geographies
- Strong acquisition pipeline
- Digital business transformation
 - Technology driven transformation: improve performance
 - Digitalization through acquisitions: diversification and accelerated growth
- **Going** double digit



MISSION 2020

**UNDER
CONTROL**

TAKE OFF COMPLETED

WHEN YOU NEED TO BE SURE

SGS