



From Growth to Success

*Take the Next Steps Now with
FedEx Aerospace Solutions*

September 2023

FedEx



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FedEx Aerospace Solutions*

Panel Topics

- **Panelist Introduction**
- **Current MRO Aftermarket Update**
- **Evolving Trends in Aerospace Aftermarket**
- **MRO Supply Chain Concerns**
- **FedEx Solutions for Aerospace**
- **Aftermarket Case Studies**
- **Digitization, Technology, and Innovation**

Our Panelists Today



Andy Sim

Worldwide Account Manager
Worldwide Sales, Aerospace
FedEx Express Asia Pacific

Moderator



Angie Hong

Vice President
Worldwide Sales
FedEx Express, Asia Pacific,
East and Africa

Middle



Tim French

Managing Director
Worldwide Sales
FedEx Express, Asia Pacific,
East and Africa

Middle



Ken McMahon

Managing Director
Customer Solutions & Special Services
FedEx Express, Asia Pacific,
East and Africa

Middle

APAC MRO Aftermarket Soaring on Strong Air Traffic Recovery



17,620

New Aircraft Needed for Expected Passenger Growth by 2040

Asia Pacific Passenger Traffic to

Grow **5.3%**

Annually for Next 20 Years

Asia Pacific MRO Market

Expected to Grow

\$23.0B

by 2028

Passenger Traffic in Singapore to Increase

126%

Annually for the Next Two Decades

Boeing Predicts Demand for 41,000 New Aircraft Worth

\$7.2T

46%

of Airbus Flights will be Delivered in APAC for the Next 20 Years

Singapore MRO Industry Forecasted to Grow

\$55.6B

by 2026, up from \$41.9B in 2021

Evolving Supply Chain Trends for Aerospace Aftermarket

Rising Demand for Services

MRO

Increasing MRO Demand due to Higher Customer Volume, Parts Requirements, and Aircraft Production



MRO Site Adaptations Challenges

Shifting/Relocating MRO Sites to Tackle Cost, Time, and Space Challenges from Escalating Shipping Volumes

Changing Transport Dynamics for MRO Customers

Airlines Considering In-House Transport vs. MRO-Provided Transport Services



Comprehensive Transport Solutions in Demand

Customers Seeking Transport Partners able to offer Comprehensive One-Stop-Shop Solutions

Strategic Procurement and Inventory Planning

Companies Embracing Strategic Procurement & Inventory Planning for Reduced Costs via In-Region Sourcing and Efficient Inventory Management



Technology-Driven Supply Chain Solutions

Embracing Technology for Supply Chain Optimization and Exploring Tech-Enabled Solutions

Long-Term Supplier Relocation Prospects

Potential Supplier Relocation Driven by Customer Proximity and Cost-Saving Expectations



Focus on Environmental Sustainability

Increasing Emphasis on Environmentally Sustainable Initiatives in MRO Operations

Supply Chain Challenges for Aerospace MRO Operators



Rising Aerospace Parts Costs Escalating Expenses in the Aerospace Part Sector

Need for Tailored Solutions Demand for Flexible, Customized Aerospace Solutions

Shortages in Materials Challenges Posed by Material Scarcity in the Aerospace Industry

Visibility Gaps in Planning Contingency Enhanced Real-Time Visibility and Technology-driven Predictive Analysis

Space Constraints Space Availability Concerns, particularly for Hazardous Goods in Aerospace

24/7 Aerospace Support Expertise Connecting Information and Providing Round-the-Clock Support for Logistics

FedEx Global Capabilities

Connecting Aerospace Customers Around the World



16.5M

Packages
Shipped Daily



600K+

FedEx
Team Members



697

Aircraft
Worldwide



210K

Motorized
Vehicles

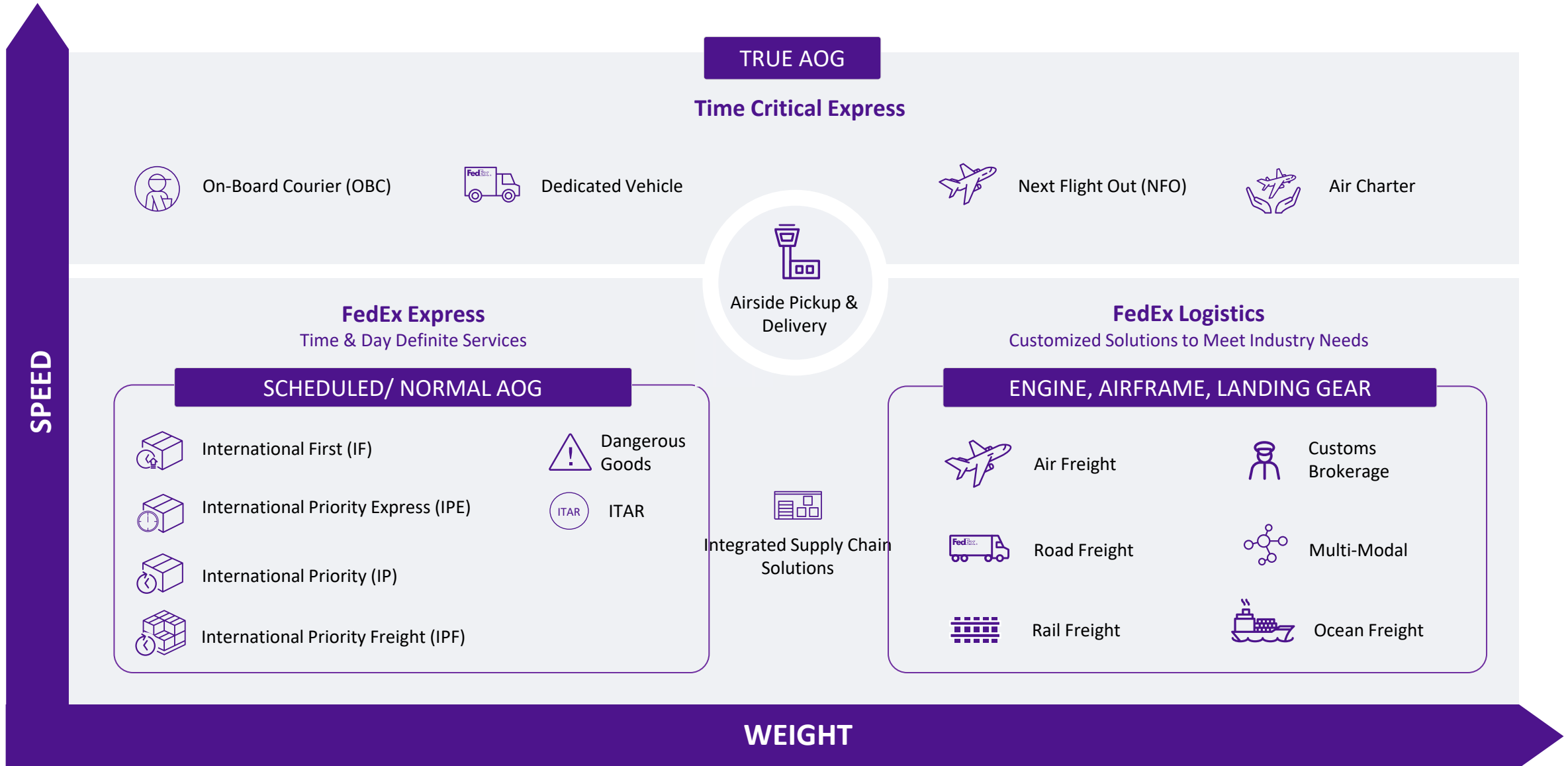


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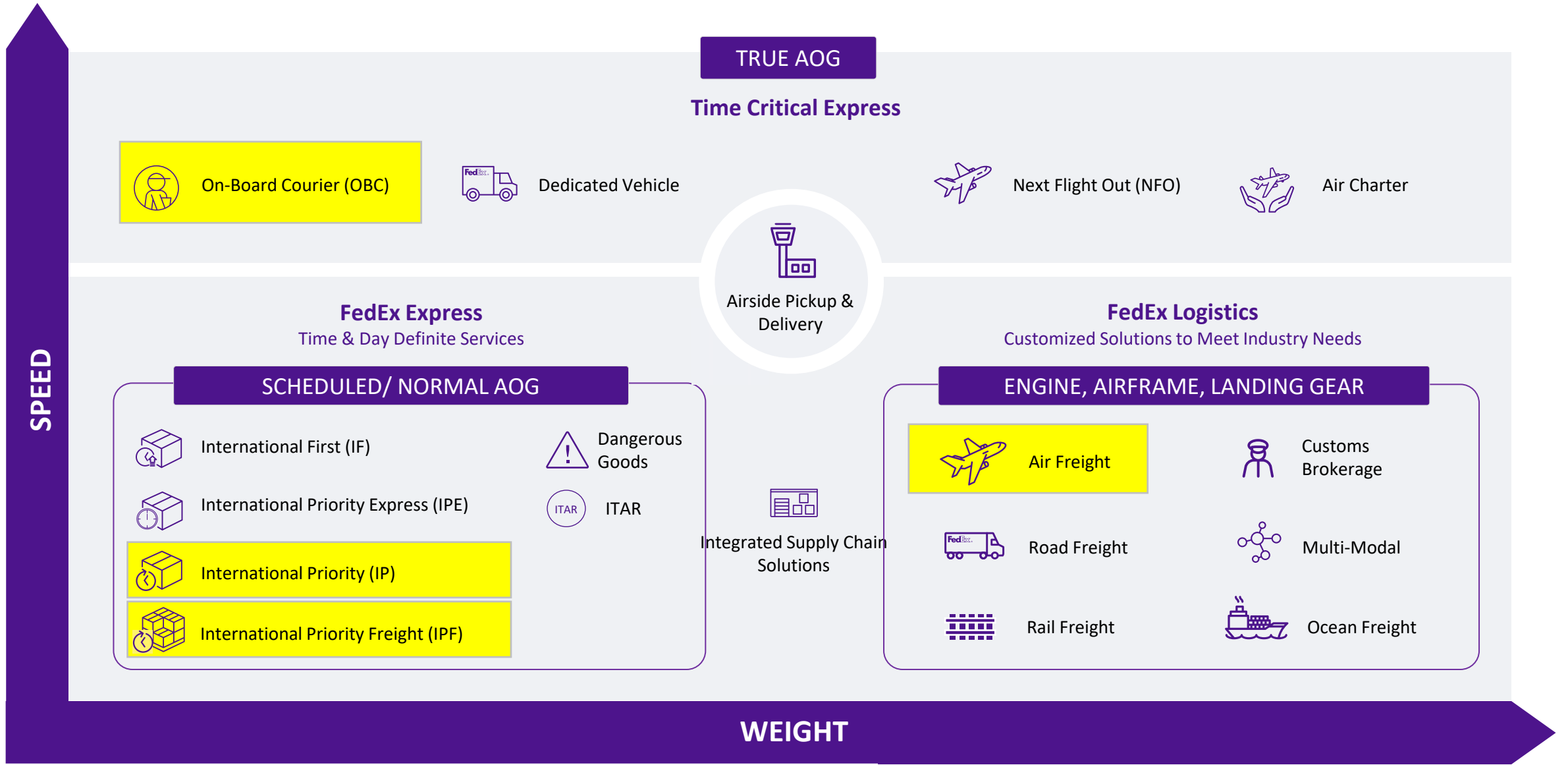
Countries &
Territories Served



One FedEx Solutions for the Aerospace Aftermarket



One FedEx Solutions for the Aerospace Aftermarket



Time Critical Shipment from Japan to United States

AOG | Onboard Courier Delivery within 24 Hours

Customer Requirement

NRT Weekend Pickup + Fastest Connection to SEA

Shipment Commodity

Aircraft Panel Display

1 kg, 55 x 17 x 16 cm, Non-DG

FedEx Solution Components

- FedEx Special Services (SpS)
- Onboard Courier + Hand-Carry from Japan to U.S. OEM



Time Critical Shipment from Japan to United States

AOG | Onboard Courier Delivery within 24 Hours



“Thanks to FedEx for their outstanding service. They saved us from costly service disruptions, and we can always count on them when it truly matters!”



Palletized Cargo from Singapore to France

Scheduled AOG | Priority Movement + Proactive Monitoring

Customer Requirement

Urgent Uplift & Monitoring for Palletized Avionics

Shipment Commodity

Avionics Parts

480 kg, 110 x 86 x 113 cm, Non-DG

FedEx Solution Components

- **FedEx International Priority Freight (Guaranteed Uplift)**
- **FedEx Priority Alert Shipment Monitoring**



Day 0

Day 1-2

Day 2-3

*Shipment Pickup from
Airline Facility*

*FedEx Flight Departure
to CDG*

*Arrival in France &
Customs Release*

*Final Delivery to
Manufacturer*

**Airline
Singapore**



SIN



CDG



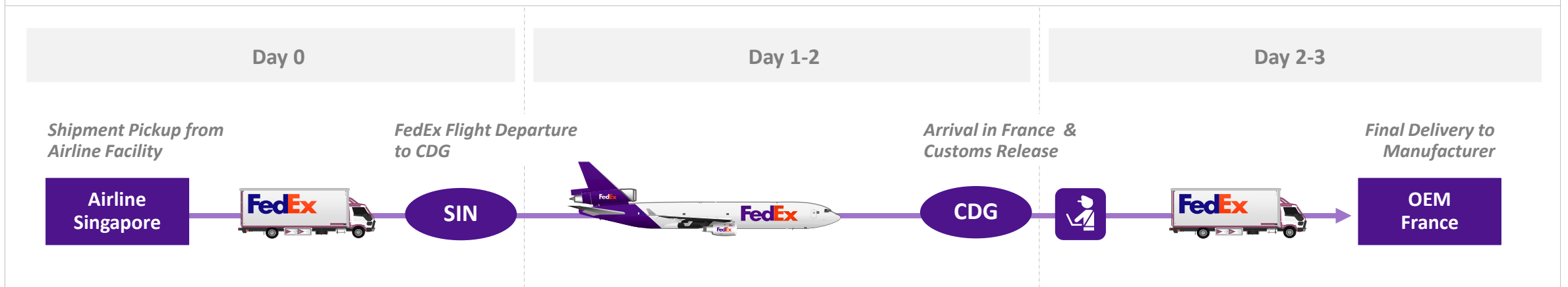
**OEM
France**

Palletized Cargo from Singapore to France

Scheduled AOG | Priority Movement + Proactive Monitoring



“ A big shoutout to FedEx and Jacqueline for the outstanding efforts in ensuring our parts were uplifted during a critical period of flight capacity shortage. Your meticulous arrangement made all the difference, and we couldn't be happier with the results ”



UAE to France Next-Day Movement

Airside Pickup | Urgent Parts Delivery within 36 Hours

Customer Requirement

DXB Airside Pickup + Fastest Connection to CDG

Shipment Commodity

Aircraft Parts

55 kg, 110 x 45 x 40 cm, Non-DG

FedEx Solution Components

- FedEx International Priority
- Airside Pickup, FedEx DXB-CDG Direct Flight



Day 0

Day 1

Day 1.5

Shipment Pickup at DXB Airside

FedEx Flight Departure to CDG

CDG Flight Arrival & Customs Clearance

Shipment Release for Final Delivery

Parts Arrival at Manufacturer



UAE to France Next-Day Movement

Airside Pickup | Urgent Parts Delivery within 36 Hours



“Thanks to FedEx, we can now streamline our Aircraft Critical Parts Just-in-Time logistics seamlessly, directly from our airport facility to the aircraft, without the need for extra landside processes”

Day 0

Day 1

Day 1.5

Shipment Pickup at DXB Airside

FedEx Flight Departure to CDG

CDG Flight Arrival & Customs Clearance

Shipment Release for Final Delivery

Parts Arrival at Manufacturer



Dangerous Goods Transportation from Singapore to Australia

AOG | Dangerous Goods Freight Movement

Customer Requirement

Meet Timeline for Scheduled APU Maintenance

Shipment Commodity

Auxiliary Power Unit [APU]

55 kg, 168 x 142 x 130 cm, Class 3 DG

FedEx Solution Components

- **FedEx International Priority Freight**
- **Dangerous Goods Handling**



Dangerous Goods Transportation from Singapore to Australia

AOG | Dangerous Goods Freight Movement



“The APU made it to SYD on the same day – Incredible job, Divya! You haven’t just saved the day but also saved our Quarter End projection”

Day 0

Day 1

Day 2

Shipment Pickup from MRO Site

FedEx Flight Departure to SYD

Australia Arrival & Customs Clearance

Shipment Release for Final Delivery

APU Arrival at Airline Facility

MRO Singapore



SIN



SYD



Airline Australia

Door-to-Airport Airfreight from Singapore to Vietnam

Weekend Airfreight Movement for Landing Gear

Customer Requirement

Airfreight Movement + Air Ride Trucking

Shipment Commodity

Airbus A330 Landing Gear

650 kg, 355 x 160 x 135 cm, Non-DG

FedEx Solution Components

- FedEx Logistics Airfreight
- Air-Ride Suspension Truck Transport



Day 0

Day 1

Day 2

Pickup from MRO by Air Ride Truck

Commercial Flight Uplift to Hanoi

Vietnam Arrival & Broker Declaration

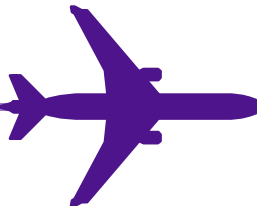
Shipment Release & Local Transport

Arrival of Landing Gear Assembly

MRO Singapore



SIN



HAN



Airline Vietnam

Door-to-Airport Airfreight from Singapore to Vietnam

Weekend Airfreight Movement for Landing Gear



“Huge thanks to Paul and the FedEx team for their amazing support in ensuring the success of our urgent request. Their efforts have made a significant difference in our operations.”

Day 0

Day 1

Day 2

Pickup from MRO by Air Ride Truck

Commercial Flight Uplift to Hanoi

Vietnam Arrival & Broker Declaration

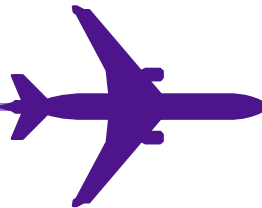
Shipment Release & Local Transport

Arrival of Landing Gear Assembly

MRO Singapore



SIN



HAN



Airline Vietnam

Door-to-Airport Airfreight from Singapore to France

Aircraft Engine Move by Airfreight (Dangerous Goods)

Customer Requirement

Airfreight (Dangerous Goods) + Air Ride Trucking

Shipment Commodity

Aircraft Engine

6,312 kg, 37.3m³, Class 3 DG

FedEx Solution Components

- FedEx Logistics Airfreight (Dangerous Goods)
- Air-Ride Suspension Truck Transport



Day 1

Day 2-3

Day 4

Pickup from MRO by Air-Ride Truck

Commercial Flight Uplift to CDG

CDG Flight Arrival & Broker Declaration

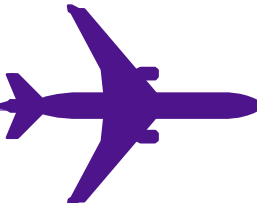
Shipment Release & Local Transport

Engine Delivery to the Airline

MRO Singapore



SIN



CDG



Airline France

Door-to-Airport Airfreight from Singapore to France

Aircraft Engine Move by Airfreight (Dangerous Goods)



“A big shoutout to Paul and Stanley for their outstanding work in making our Engine movement a success within an incredibly short turnaround time. Thank you both for your exceptional efforts!”

Day 1

Day 2-3

Day 4

Pickup from MRO by Air-Ride Truck

Commercial Flight Uplift to CDG

CDG Flight Arrival & Broker Declaration

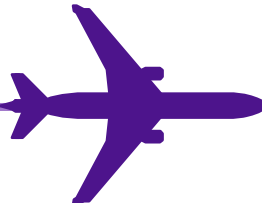
Shipment Release & Local Transport

Engine Delivery to the Airline

MRO Singapore



SIN



CDG



Airline France

FedEx Global Leadership in & ITAR Cargo Transportation

Hazardous

40+
Years

Experience in Shipping Dangerous Goods
& Hazardous Materials

Providing ITAR-Regulated Defense Articles
and Service Logistics

27+
Years

Global Presence
and Participation in Dangerous
Goods Regulatory
Associations

9

Approved Dangerous
Goods and Hazmat
Classifications

3,000

UN/NA Listed Chemicals
and Classes of Hazardous
Materials





FedEx Solutions for Aerospace Industry

the

Knowledgeable Aerospace Experts

Trusted Experts Offering
Accurate Real-Time Updates
and Issue Resolution

Strong Global Network

Broad Service Coverage
delivering Time-Definite &
Express Services around the
World with Fast Transit
Times

Flexible, Customizable Solutions & Support

Customized, Flexible Solutions
for Complex, Changing
Customer Needs including
Onsite Support

Environmental Sustainability Solutions

Green Solutions & Technology
to Reduce the Carbon
Footprint of Supply Chains and
Support Sustainability Goals

Dangerous Goods Handling Capabilities

Strong Dangerous Goods
Handling Expertise to ensure
compliance with Safety,
Control, and Regulatory
Requirements

Digital Systems Integration & Technology

IT Systems Integration with
Customer Platforms and
Automated Processes to
streamline Shipping
Operations



“Information about the package is just as important as the package itself”

Frederick W. Smith
Chairman of the Board
FedEx Corporation



FedEx Sensor-Based Logistics | SenseAware

GPS-Enabled Sensor Device for Security & Visibility of Critical Aerospace Parts, Assets, and Tools 24 x 7



Next-Level Visibility

GPS-Based Tracking of
Aerospace Parts & Tools



AOG Inbound Tracking

Geofencing + Alerts for
Critical AOG Shipments



ULD Location Search

Rapid Identification
& Recovery of ULDs



Engine Stand Locator

On-Demand Locator for
Engine Stands & Assets

senseaware

enabling the world's most critical operations





**“Innovation is a
part of our DNA
at FedEx ”**

Raj Subramaniam

*President & CEO
Corporation*

FedEx



Your One-Stop Aerospace Supply
Chain Partner

Industry Knowledge

Global Network Connectivity

Flexible, Customized Solutions

Dangerous Goods Capabilities

Digitalization & Innovation

