



The Power of Flight



CFM International Media Briefing

October 11th, 2018

New Delhi, India

Today's speakers



Gaël Méheust

President and CEO
CFM International



Sebastien Imbourg

Executive Vice President and
General Manager
CFM International



Philippe Couteaux

Executive Vice President
Sales & Marketing
CFM International

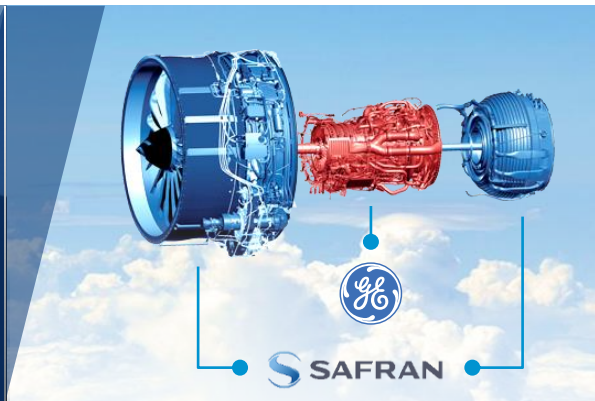


CFM Legacy

CFM International, a long-standing joint company



SAFRAN AIRCRAFT ENGINES & GE,
SUCCESSFUL PARTNERS
for over 40 years



50/50 joint company

THE WORK SPLIT TAKES
ADVANTAGE OF THE
TECHNOLOGICAL EXPERTISE AND
CAPABILITIES OF BOTH GE AND
SAFRAN AIRCRAFT ENGINES



N°1 engine supplier
worldwide for mainline
commercial jets
(over 100 seats)



More than **590**
customers worldwide



Partnership extended
to **2040**

A real 50/50 joint company



Fan &
accessory gearbox



Core engine



Low-pressure
turbine



All activities shared 50/50

Sales, design, development;
production, support & service
– same work share for both CFM56 and LEAP



CFM56® The world best selling commercial engine



AIRBUS

A320ceo



CFM56-5B

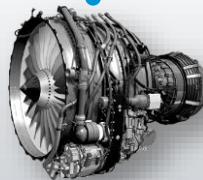


BOEING

737 NG



CFM56-7B



99.98 % Dispatch reliability



CFM56

More than
33,000
CFM56
engines delivered
worldwide



Close to
1 billion
flight hours



24,000
CFM56

engines in service

Support of the fleet
beyond 2040



7 Million
travelers use
CFM-powered
aircraft daily



Every **2 sec.**
a CFM-powered aircraft takes
off somewhere in the world

Jet Airways became
the **First Indian CFM56**
customer in 1993



LEAP Engine



LEAP 10 years on film

LEAP: the CFM56 successor



Program launched in **2008**
to power the new generation of single aisle aircraft.



Selected by Airbus to power the A320neo ;
by Boeing for the B737 MAX; by Comac for the C919.



LEAP

represents the combination of
CFM's reliability and unrivaled
technologies:

- 3D Woven composite fan blades
- CMCs materials
- Additive Manufacturing



LEAP started
commercial operations with A320neo in **2016**



LEAP® The smoothest and most successful EIS in CFM history



AIRBUS

A320neo



ON TIME

LEAP-1A
Entry into service
August 2016



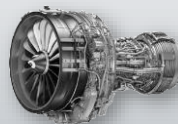
BOEING

737 MAX



ON TIME

LEAP-1B
Entry into service
May 2017



COMAC

C919



ON TIME

LEAP-1C
Engine certification
December 2016



LEAP

16,300+

Engines ordered to date
(End of August 2018)

72+ 
operators on
5 continents

LEAP is delivering what we promised



PERFORMANCE



15+% better fuel efficiency



Thrust, noise, and emissions

BEST-IN-CLASS ASSET UTILIZATION



Product reliability ;
no design issues



Predictive maintenance

LIFE CYCLE MAINTENANCE COST



Global team of support engineers



Broad offerings through CFM Services

LEAP fleet in service: 2 million+ flight hours

96% flown days

741,385+ cycles
1,528,497+ hours
32 operators
10+ hours average per day
~268 aircraft in service

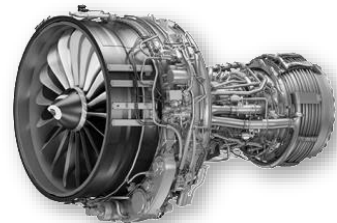
LEAP-1A
 EIS August 2016



Utilization



LEAP-1B
 EIS May 2017



275,463+ cycles
753,453+ hours
41 operators
10+ hours average per day
~219 aircraft in service

96% flown days

Fleet statistics are for engines



PRODUCTION & SUPPORT

Unprecedented ramp-up



BACKLOG:
15,450 LEAP
434 CFM56



- Represents **~7 years** of production at current levels
... uninterrupted LEAP engine deliveries since April 2016
- ... **1,000th LEAP engine** delivered in July
... LEAP powering **75%** of new single-aisle deliveries
- Planned rate of **1,100 LEAP** engines in 2018 ; **2,000** in 2020

ON WATCH

- ramp rate increasing ... **dual and multiple source** strategy on critical parts 100% in place
- 8 new facilities built at Safran and GE to support the ramp-up
- 1+ billion USD investments in capacities

CFM Global Support Capability



- 250+ field service engineers
- 10 Overhaul shops
- 8 Component repair shops
- 15 On-site support locations
- 5 Customer training facilities
- 4 Material distribution centers



Training Center
Hyderabad

Planned capability

CFM Training Center in Hyderabad



- This facility dedicated to CFM56 Training **was inaugurated in 2010**
- It provides advanced hands-on courses in line maintenance and borescope inspection for CFM56-7B and CFM56-5B engines
- In 2018, **CFM adds LEAP-1A and LEAP-1B capabilities**



REPRESENTS A **15 MILLION** USD INVESTMENT



500 ENGINEERS ARE TRAINED ANNUALLY





Maintaining best in-class utilization



30 specifically-trained LEAP experts that can be deployed where they are needed



250+ fields service engineers + 3 call centers
2,200 inquiries / month < **Four-hour** turn around on critical cases



96% response to customers on-time



8 onsite support locations



< 30-day average turnaround time, wing-to-wing



A strong industry

Industry is strong



GLOBAL FLEET WILL ALMOST DOUBLE IN THE NEXT 20 YEARS



1,000 net new aircraft to be added to worldwide fleet in 2018

CONSUMERS WILL SPEND **1% of GDP** ON AIR TRAVEL ... \$870 BILLION



RPKs grew **6%** in April vs. 2017
Average load factor is above **80%**



~\$34 BILLION*
NET PROFIT
PROJECTED FOR 2018

* Source: IATA June 2018 Economic Forecast

ON WATCH ...



Fuel costs ... now ~24% of average op cost vs
34% for Indian operators

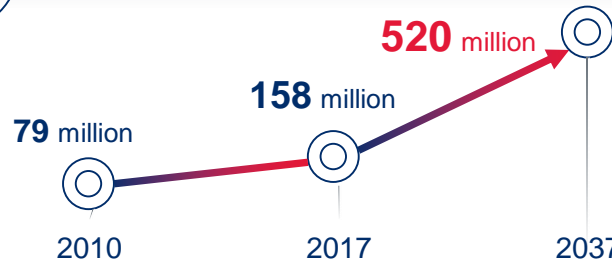


Trebling of passenger traffic in India in the next 20 years

India is a strategic market



INDIAN AVIATION IS GROWING FAST



INDIA IS GOING TO BE THE THIRD LARGEST DOMESTIC MARKET

- The 98 million domestic passenger trips in 2017 equal 7.3% of India's population.

* Source: IATA forecasts





CFM in India

CFM, 25 years in India



1993

Jet Airways began operation in with four CFM56-3-powered Boeing 737s



2005

Air India began operating Airbus A320neo aircraft powered by CFM56-5B engines



2010

CFM Opens New CFM56 Training Center in Hyderabad



2014

SpiceJet finalizes 1st LEAP-1B engine order to power 42 Boeing 737 MAX aircraft



2017

Air India became first LEAP operator in India, shortly followed by Vistara

2018

SpiceJet, signs with CFM engine/services contract supporting 300+ LEAP-1B

Vistara signs LOI for 50 additional A320/321 neo powered by LEAP-1A

CFM56 in India



As of September 30, 2018



- 500 CFM56 engines in service with 11 operators
- CFM56: market share vs competition: 64%



LEAP airlines in India



Our LEAP customers in India on A320 NEO and B737 Max aircraft



4 Airlines operating LEAP-powered Aircraft

Air India	A320 NEO	21
Vistara	A320 NEO	9
Jet Airways	737MAX	5
SpiceJet	737MAX	1



LEAP Market share in India : **64%**

What's next ?



SpiceJet and Jet Airways entry into service in 2018 with LEAP-1B engines



Support Indian Aviation industry growth



1,000 engines to be delivered in India in the coming years





Thank you!

cfmaeroengines.com/india2018