



CAPITAL MARKETS DAY/2018

**BUILDING THE AEROSPACE
OF TOMORROW**

November 29, 2018



Agenda

- **Welcome**
- **Chairman's opening remarks**
- **Perspectives and strategy**
- **Financial Framework**
 - Q&A*
- **CFM56 / LEAP transition and Aftermarket**
 - Q&A*
 - Break*
- **Zodiac integration and Aircraft Interiors recovery**
- **Innovation**
 - Q&A*
- **Conclusion**

Today's speakers

Chairman's opening remarks



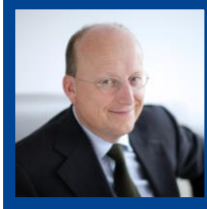
Ross McINNES,
Chairman of the Board

Perspectives and strategy



Philippe PETITCOLIN,
CEO

Financial framework



Bernard DELPIT,
CFO

CFM56 / LEAP transition and Aftermarket



Olivier ANDRIÈS, Safran
Aircraft Engines (SAE) CEO



François BASTIN,
SAE, Commercial Engines



François PLANAUD, SAE,
Services & MRO

Zodiac Aerospace Integration and Aircraft Interiors recovery



Hélène MOREAU-LEROY,
Zodiac Aerospace Integration



Vincent MASCRÉ,
Zodiac Aerospace CEO
& Zodiac Aerospace Seats CEO



Norman JORDAN, Zodiac
Aerospace Cabin CEO

Innovation



Stéphane CUEILLE,
CTO

CHAIRMAN'S OPENING REMARKS

Ross McINNES,
Chairman of the Board



PERSPECTIVES AND STRATEGY

Philippe PETITCOLIN,
CEO



CMD'16 ambitions delivered and exceeded

	Three ambitions	Three achievements
1	Focus on Aerospace and Defense	<ul style="list-style-type: none"> • Successful disposal of Security and Identity businesses • Unparalleled LEAP ramp-up
2	Reinforce our footprint in Aerospace Equipment	<ul style="list-style-type: none"> • Acquisition of Zodiac Aerospace • #2 WW in Aerospace Equipment
3	Sound financial results to get closer to the best peers	<p>Financial objectives outperformed over 2016-2018:</p> <ul style="list-style-type: none"> • Organic growth: mid-single digit p.a • EBIT growing on average by 100bps p.a. • Average EBIT to FCF conversion comfortably above 50%



1

**OUR INDUSTRY: VERY
POSITIVE PERSPECTIVES,
CHANGING INDUSTRIAL
LANDSCAPE**

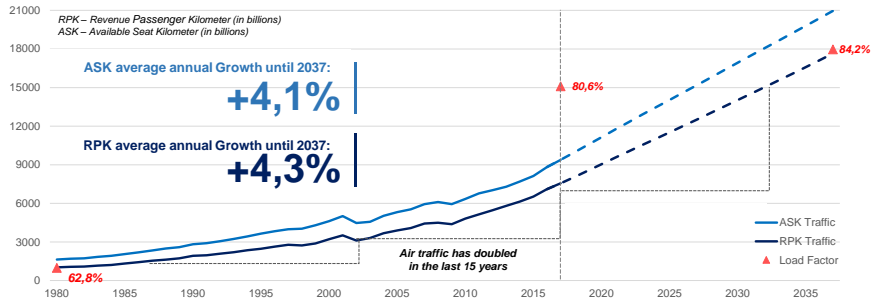
Positive industry trends

Commercial outlook

Doubling of air traffic in the next 20 years

Pressure on capacity: load factors peaking and strong profits for airlines

Scheduled Passenger Network, Worldwide



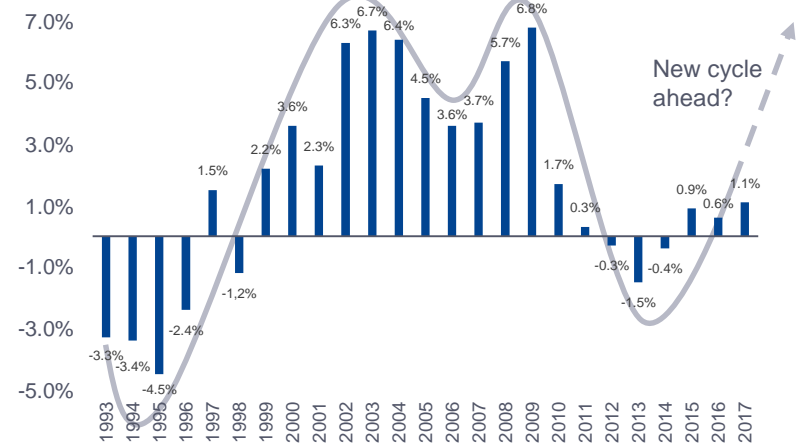
Sources: Safran Aircraft Engines

Military outlook

Increase in military spending (2% GDP NATO spending targets)

New programs and technological transformation

Military spending evolution, Worldwide (as %)



Sources: SIPRI for years 1990-2017

In commercial aviation, planned aircraft deliveries better than anticipated

Very positive outlook for commercial aviation over the 20 coming years:

20-year
annual
economic
growth*
+2.8%

20-year
annual RPK
traffic
growth*
+4.3%

20-year
annual
global fleet
growth*
x1.8

20-year
new aircraft
deliveries*
39,000

Solid deliveries of new aircraft over the next 20 years, particularly narrowbody:

2,800
TURBOPROP
AIRCRAFT

3,600
REGIONAL
JETS

24,100
SHORT-MEDIUM
RANGE AIRCRAFT

8,500
LONG RANGE
AIRCRAFT

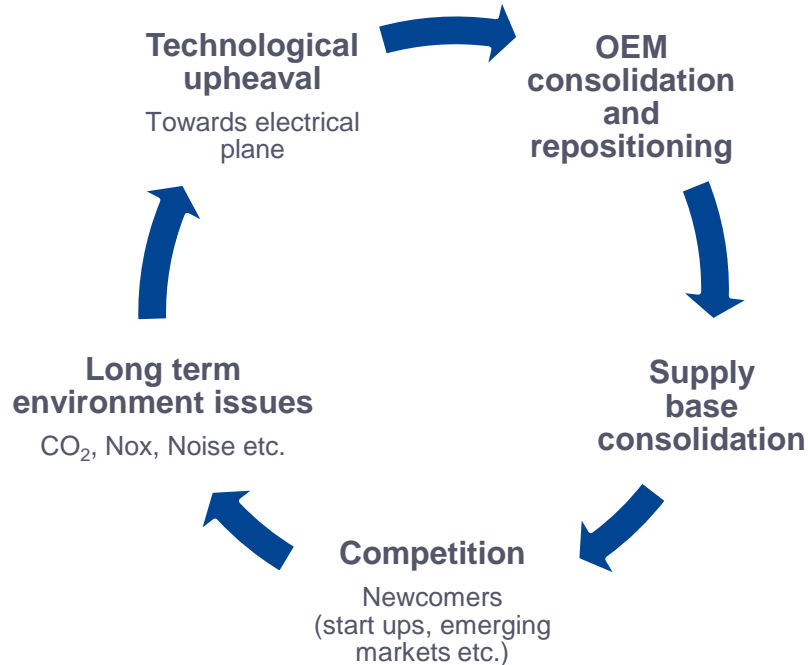
Sources: Safran Aircraft Engines

* Until 2037

► **Solid momentum of new aircraft deliveries**

A changing industrial landscape

Rapid changes



Safran's responses

OEM partner of choice

- Continued cost competitiveness (productivity, Low Cost Countries, etc.)
- Technological excellence and IP protection

Define the next Aerospace state of the art

- R&D
- Disruptive technologies
- Selected partnerships

► **Confirming Leadership**

2

SAFRAN HAS THE ASSETS FOR SUCCESS



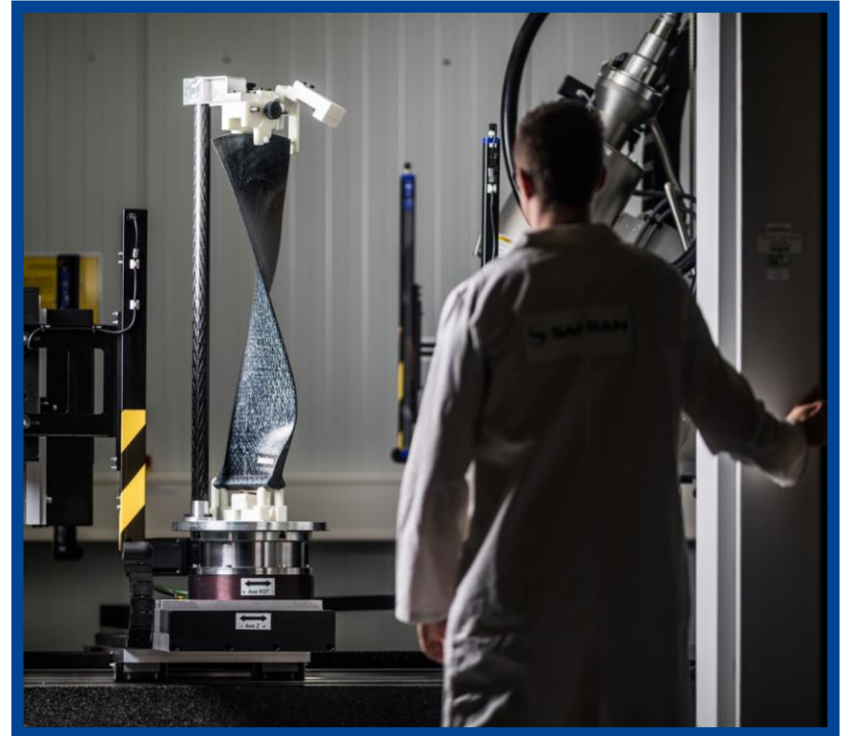
Well-positioned for success: winning products, winning technologies...

**WE HAVE THE KNOW-HOW
AND OPERATIONAL EXCELLENCE**

**WE HAVE
A BALANCED AND WINNING PORTFOLIO**

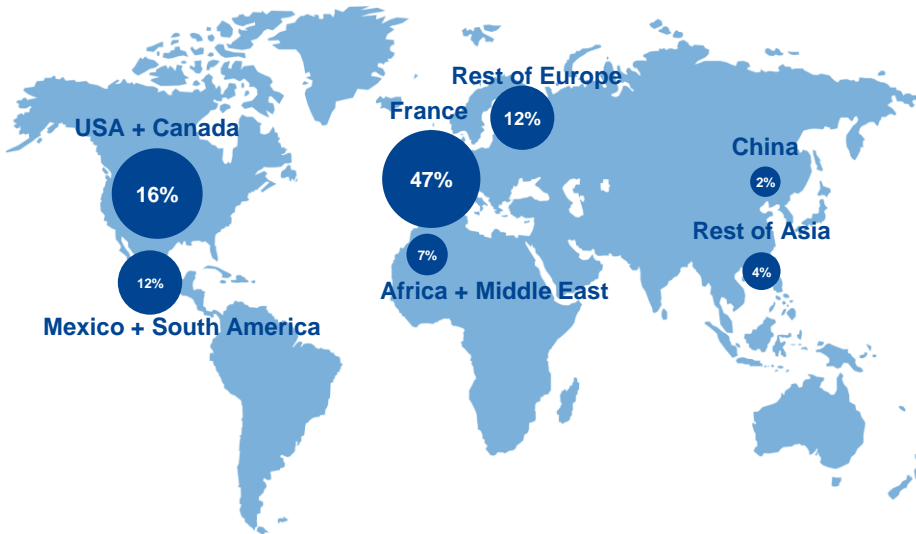
**WE HAVE A CLEAR ROADMAP
FOR THE NEXT 15 YEARS**

- ▶ **New ambitions ahead: leading the industry and preparing the next decades of the Aerospace and Defense industry**



...and talented people

Geographic split of Employees (% , 2018)



An international Group of ~90,000 in 2018

- Reinforced footprint in North America with Zodiac Aerospace
- Upcoming capacities increase in Low Cost Countries (LCC)

Increasing Support and Client Services resources, with upcoming capacities in Maintenance, Repair and Operations (MRO)

A high-tech Group, committed in training and building skills of all its workforce

- 16% of the workforce in R&D
- ~1,200 PhDs

▶ Success comes by developing talents and our team performance



3

**CLEAR AMBITION FOR EACH
BUSINESS:
PREPARING THE NEXT
DECADES OF AEROSPACE
AND DEFENSE INDUSTRY**

Propulsion – Our ambitions for the next 15 years



A FULL-FLEDGED ENGINE MANUFACTURER

**PREPARING THE FUTURE
OF PROPULSION BY DEFINING THE TECHNOLOGIES
OF TOMORROW**



**MANAGING A LARGE INSTALLED BASE OF CIVIL ENGINES,
UPSIDE FOR AFTERMARKET**

Propulsion – Supplying the full spectrum of propulsion technologies

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Narrowbodies: core through our remarkable CFM JV*

Widebodies: through risk and revenue sharing partnerships**

Addressing other market segments: bizjet, regional and military engines

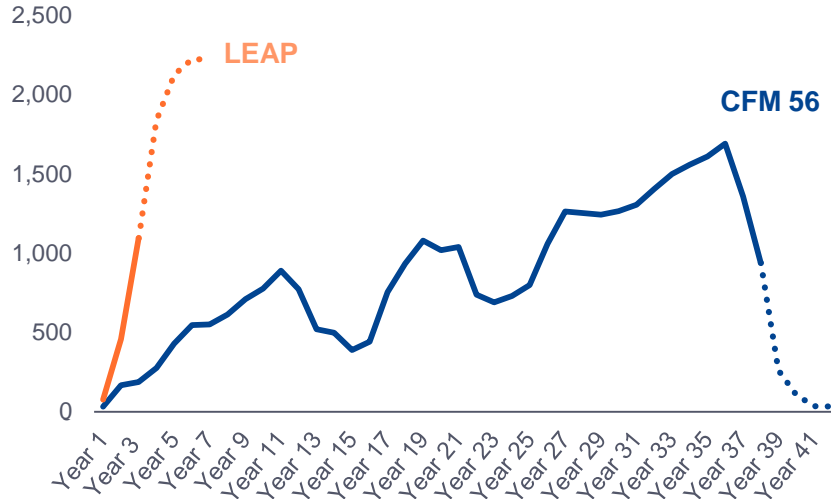
Helicopter engines: #1 WW

** 50-50 JV between Safran and GE*

*** Primarily with GE*

Propulsion – LEAP, the most challenging ramp-up in the Aerospace history; CFM56, a remarkable lifespan

CFM engine deliveries p.a.



LEAP: an unparalleled and ground breaking ramp-up

CFM56: a large installed base

- Remarkable longevity of CFM56: ~5,700 engines delivered in 2015-2018, with a historical high in 2016 (~1,700 engines)

LEAP learning curve experience: a driver for excellence across the Group

► **Upside for our aftermarket perspectives beyond 2025**

Note: « Year # » stands for the number of production years for each engine.
For instance, after 5 years of production, ~600 CFM56 were delivered (in 1985)
vs ~2,000+ LEAP (in 2020).

Propulsion – Other customer segments: growth to come from engine renewals

Bizjets



Priority to develop Silvercrest for Textron Aviation's Hemisphere

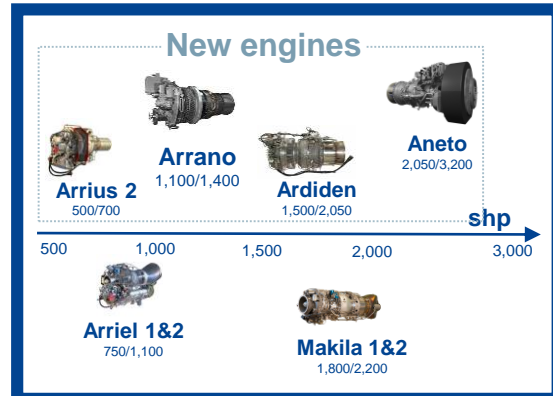
Make it the best engine in its class

Military aircraft



Preparing actively the Future Combat Aircraft (FCAS) with our European partners

Helicopters



A brand new product range with best-in-class engines between 500 shp and 3,200 shp

Propulsion - Preparing future technologies



New forms of propulsion to come

- Environmental constraints
- New mobility needs: urban and regional mobility
- Full electrical propulsion: not expected before 2050 for large commercial aircraft

Hybridation of the propulsion chain: an essential step

VTOLs as the next ground break through: agreement with Bell

Leading the way for the short and long term

- Electrical aircraft with e-taxing, hybrid Ram Air Turbine, etc.
- Know-how with military UAVs
- Additive manufacturing, high temperature CMC materials

▶ Investing today in disruptive technologies is key

Aerospace Equipment – Our ambitions for the next 15 years

Safran in 2018: #2 WW Aerospace Equipment* supplier



Our ambition: becoming #1 WW

Very significant positions in almost all market segments

A world-class business e.g. :

- Landing gear, Wheels and carbon brakes
- Nacelles
- Electrical wiring interconnection systems for aircraft
- Evacuation slides, O₂ systems
- Seats and Cabin

Increasing our competitiveness and being innovative

Offering global packages to clients

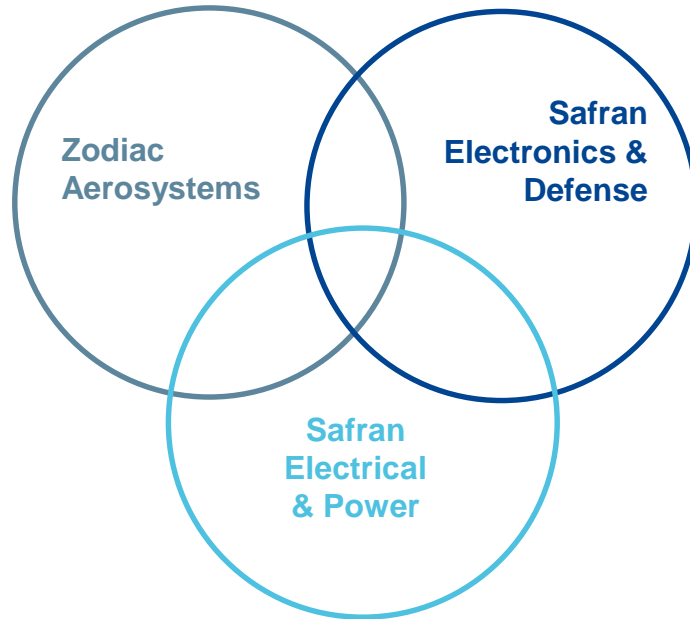
Acting as a key leader in equipment for more electrical aircraft

Leveraging our technologies in our Electronics & Defense niche business (e.g. single pilot)

* Excluding Propulsion activities

▶ Safran as a partner of choice for OEMs

Equipment – Zodiac Aerosystems reinforces our Electronics & Defense / Electrical & Power activities



Aerosystems brings:

- **Complementary** and **additional** products & services in line with Safran DNA

Safran Electronics & Defense:

- Center of excellence in Electronics for the group
- Instrumental in Safran's position in critical systems and equipment

- ▶ **Fully leverage Aerosystems' portfolio to strengthen our positions and to maximize commercial, technological and product synergies**

Equipment - Our assets in a changing landscape

Our assets

1. **Innovative excellence**
2. **Competitive strength**
3. **Agility**

Two illustrations of our agility



Nacelles

- Continuation of the sole source contract with Airbus to supply nacelles for the Leap-1A equipped A320neo (design, production, integration and support)
- No significant impact on our margins overall



APUs

- Partnership with Boeing: a win/win situation strengthening our relationship
- Offering an opportunity to take positions on APUs for commercial aircraft
- Next steps: demonstrator, investments and respond to tenders

Aircraft Interiors – Our ambitions



A new business for Safran, with exciting challenges:

- Maintain design *savoir-faire* and quickly restore operational excellence
- Reinforce the proximity with the airlines
- Become a leader of the connected cabin
- Improve the user experience (passenger, flight crew)

Turn around performance and reach former profitability levels

► **Innovation, operational excellence and customer trust will ensure Safran leadership in this new activity**

Aircraft Interiors – Upcoming growth opportunities

Strong product customization and increased segmentation

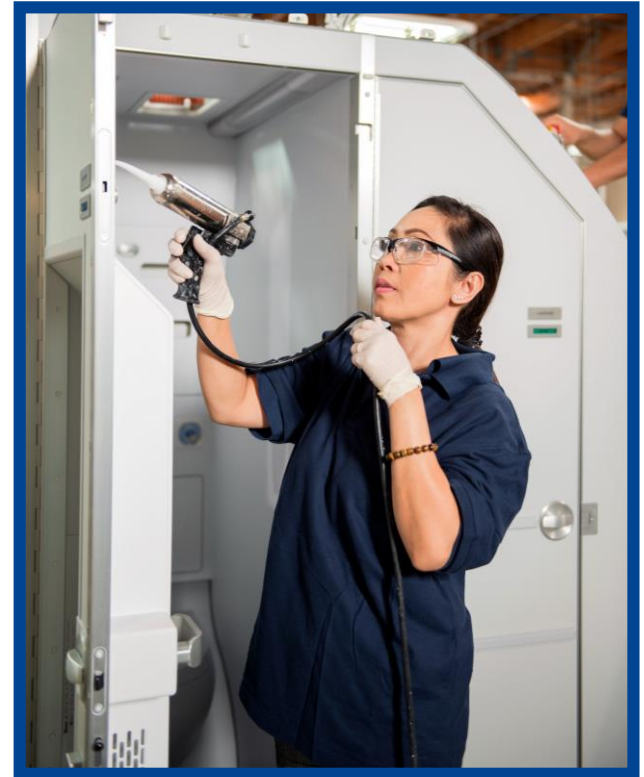
- Cabin is the main differentiator for airlines
- Passengers looking for a modern IFE (simple and reliable) and for connectivity

Dynamic retrofit market (~5% of growth p.a.)

On going industry professionalization where operational excellence is a key success factor

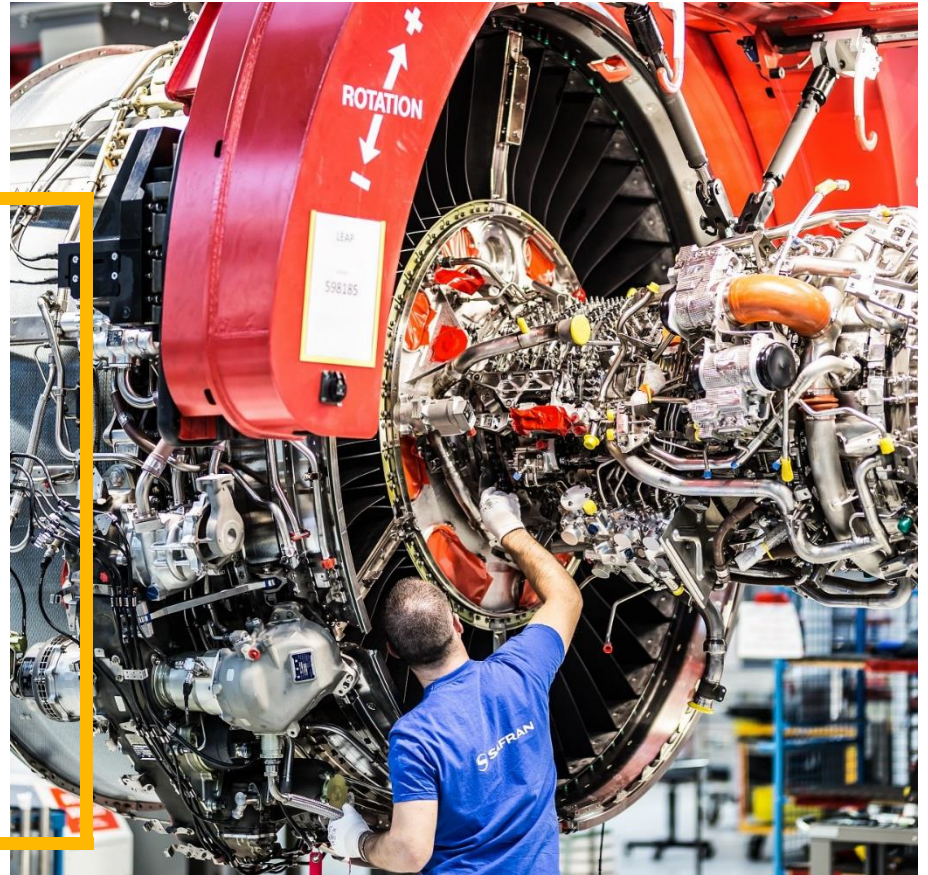
- Supply chain and delivery issues met by all participants
- Products becoming more complex

- ▶ **Aircraft Interiors industry waiting to be strengthened**
- ▶ **Safran has all the assets to succeed**



A clear road map

- ▶ **Complete the LEAP success story with best-in-class OE and aftermarket, in cooperation with our partner GE Aviation**
- ▶ **Successfully integrate Zodiac Aerospace and deliver planned synergies**
- ▶ **Invest in technologies to bolster our key-leading position as a full-fledged civil & military engine manufacturer and to become #1 WW Aerospace Equipment supplier in the next 15 years**



FINANCIAL FRAMEWORK

Bernard DELPIT,
CFO

Key messages

- ▶ **Sound financial policy (hedging, accounting, funding)**
- ▶ **Strong organic growth across all businesses**
- ▶ **Improved performance on profitability and cash**
- ▶ **Disciplined capital allocation and focus on shareholder returns**



1

FINANCE AT THE SERVICE OF EXCELLENCE

- Hedging
- Accounting
- Funding

Hedging policy framework

Safran implements a hedging strategy to reduce uncertainty in a volatile FX environment

- Safran hedges 4 currencies: USD, GBP, CAD and MXN

Safran implements a comprehensive hedging policy

- Strict hedging policy, regularly reviewed and approved by the Board of Directors and the Audit Committee
- Market information is regularly updated: mark-to-market impacts, expected USD net exposure and hedge rate targets on a 4-year horizon
- Safran does not apply hedge accounting and therefore recognizes all changes in the fair value of its derivatives in “Financial income (loss)” since 2005. Restated in “Adjusted P&L”

A USD portfolio resilient to potential market movements

Safran uses leveraged options with barrier levels

- The USD portfolio includes an average of 300 structured instruments, each with different barrier levels
- The barriers at various levels provide resilience to FX movements

This strategy offers genuine alternatives to forward sales

- @ USD 1.13 spot rate, forward contracts provide USD 1.25 with 3-year maturity (swap points at their highest historical levels)
- @ same conditions, leveraged options can achieve USD 1.12 or below, with limited risk

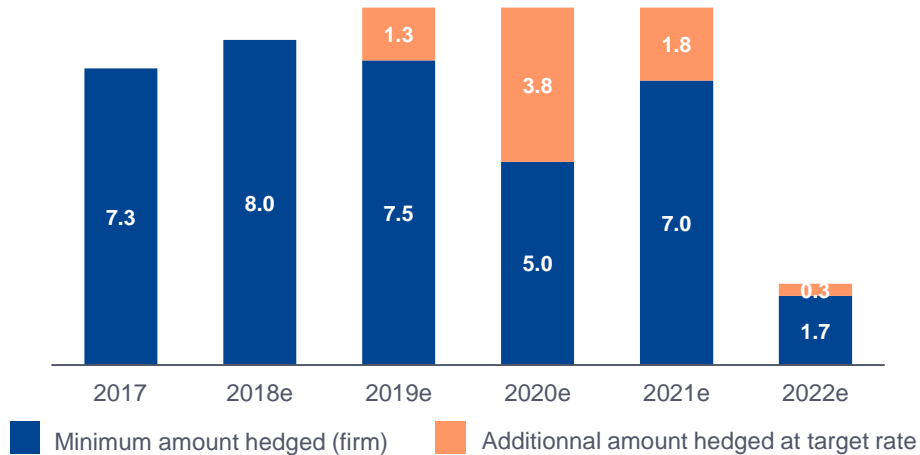
▶ **Safran's active management offers protection for the next 4 years against volatility**

A USD 29.2bn portfolio (mid-November 2018)

Average annual exposure estimated at \$8.8bn going forward

(As of
Nov. 16, 2018, in \$bn)

reflecting the growth of USD-exposed businesses
and former Zodiac Aerospace activities



Hedge rate	2017	2018	2019	2020	2021	2022
Previous targets	1.21	1.18	1.16-1.18	1.16-1.18	1.16-1.20	-
New targets	1.21	1.18	1.18	1.16-1.18	1.15-1.18	1.15-1.18

2018 Exposure raised to \$8.0bn and fully hedged

2019 \$7.5bn achieved through forward sales and knock out options up to \$8.8bn at a target rate of \$1.18

- Knock out options barriers set at various levels between \$1.25 and \$1.32 with maturities up to end 2019

2020 \$5.0bn achieved through forward sales and knock out options up to \$8.8bn at a target rate between \$1.16 and \$1.18

- Knock out options barriers set at various levels between \$1.27 and \$1.32 with maturities up to end 2020

2021 \$7.0bn achieved through knock out options up to \$8.8bn at a target rate between \$1.15 and \$1.18

- Knock out options barriers set at various levels between \$1.22 and \$1.33 with maturities up to mid-2020

2022 \$1.7bn achieved through knock out options

- Knock out options barriers between \$1.22 and \$1.25 with maturities up to end 2019

	Main changes of IFRS15	Estimated impact of IFRS15 for 2018-2022
CFM56 / LEAP transition	<p>Guarantees deducted from Revenues</p> <p>Change in the timing of Revenue recognition as different prices are allocated to installed engines and spare engines (instead of averaging the price for all engines of a contract)</p>	<p>IAS18 Gross Margin breakeven of LEAP: 2020</p> <p>IFRS15 Gross Margin breakeven of LEAP: 2022</p>
Civil Aftermarket	<p>P&L</p> <ul style="list-style-type: none"> T&M and RPFH: Guarantees deducted from Revenues RPFH contracts: change in timing of Revenue recognition as sales are recognized when costs are incurred <p>Balance sheet</p> <ul style="list-style-type: none"> RPFH contracts: difference between Billing and Revenues is booked as deferred Revenue in “Contract Liabilities” or “Contract Assets” 	<p>Limited impact on Civil Aftermarket profile over the period:</p> <p>T&M: limited impact</p> <p>RPFH</p> <ul style="list-style-type: none"> Growing deferred Revenue booked in “Contract Liabilities” driven by the ramp up of LEAP contracts Conservative margin recognition on LEAP contracts
Customer funded R&D	<p>P&L</p> <ul style="list-style-type: none"> No Revenue at the time of the financing Revenue recognized over product delivery <p>Balance sheet</p> <ul style="list-style-type: none"> Financing received is booked as a “Contract Liability” Costs incurred are booked as intangible in “capitalized R&D” 	<p>Limited impact on the profile of self-funded R&D, capitalized R&D and amortized R&D</p>

Note: RPFH= Rate Per Flight Hour

New changes to come with IFRS 16

IFRS 16 (leases) will be applied by Safran starting January 1st, 2019. 2018 will not be restated. The impact of change of accounting method, if any, will impact 2019 opening balance sheet

IFRS 16 impacts for Safran

- Mainly affecting real estate, vehicles and handling equipment currently under operating lease contracts
- Impact on aircraft engine lease contracts not material

Impact on 2019 opening balance sheet (transition impacts)

- ~€500M of liabilities will be recognized (included in net debt position), representing discounted future lease payments
- Equivalent impact in assets (rights-of-use)

Impact going forward

- Ebit / financial expenses: a few million Euros each
- Positive impact for FCF year 1

Safran maintains balanced and diversified debt maturity schedule with active use of financing opportunities

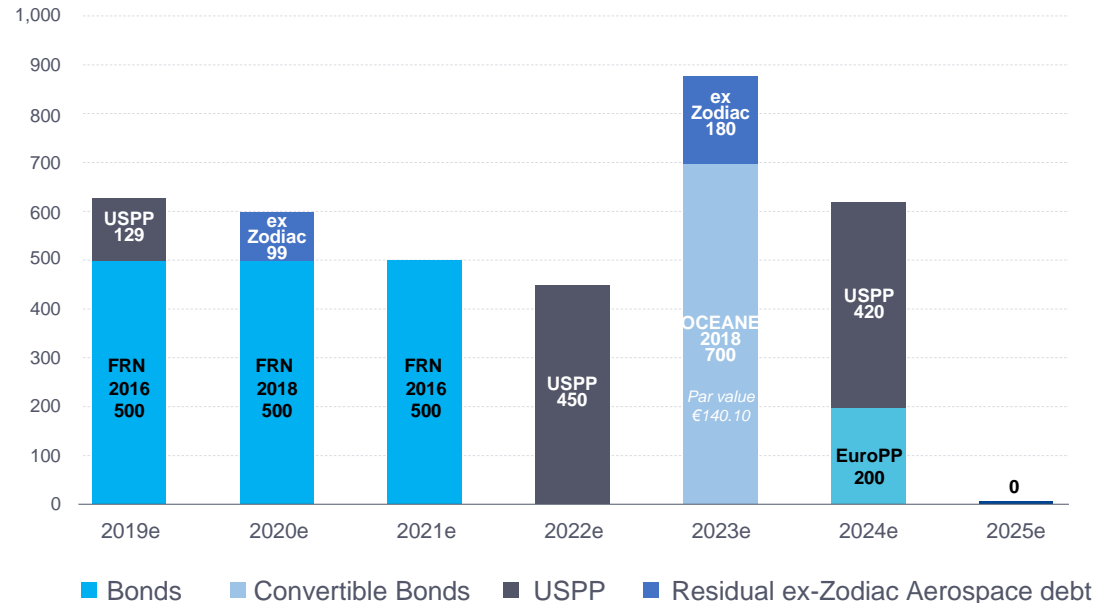
Active management of the balance sheet with cash in-hand

- Safran has paid down €1.3bn of Zodiac Aerospace debt, thus reducing interest expenses. €279M remaining debt is kept until maturity (Schuldschein and EuroPP)
- Safran repurchased the outstanding convertible bonds (OCEANEs) due 2020 (€702M)

Proactive refinancing initiatives at almost zero cost in 2017 and 2018 (FRN, convertible bonds) taking advantage of favorable market conditions

Average cost of debt: almost zero

Debt maturity schedule (€M)





2

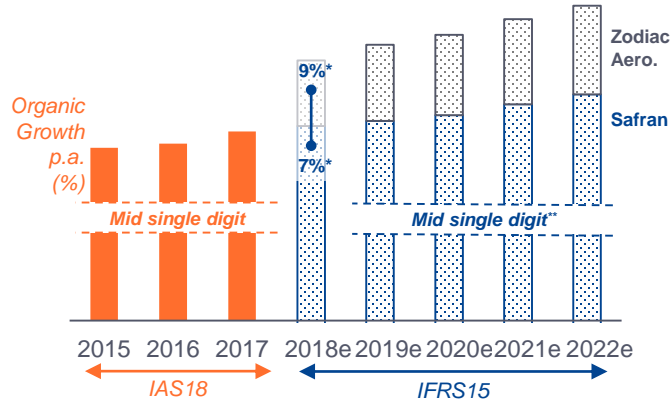
FINANCIAL AMBITION

- Growth
- Margins
- Cash generation
- Capital allocation

Growth

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Adjusted Revenue (€m) and Organic Growth (%)

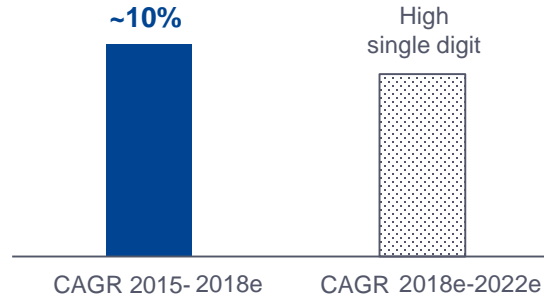


Note: Excluding Zodiac Aerospace for FY15, FY16 and FY17 published and restated; Previous accounting standards for FY15, FY16 and FY17 published

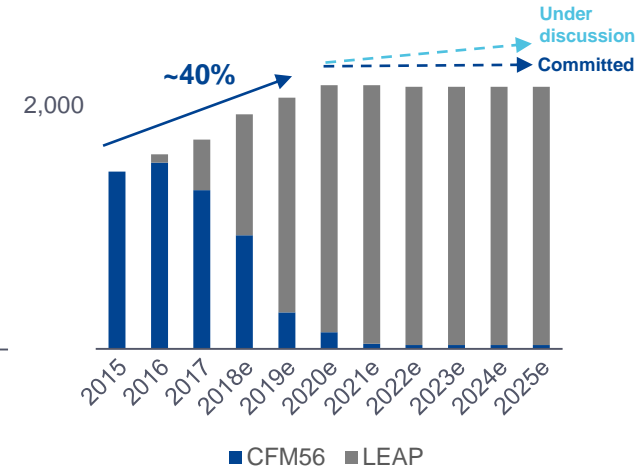
* At an estimated average spot rate of USD 1.21 to the Euro in 2018

** At an estimated average spot rate of USD 1.25 between 2019-2022

Civil Aftermarket Revenue (Growth in \$)



CFM engines deliveries



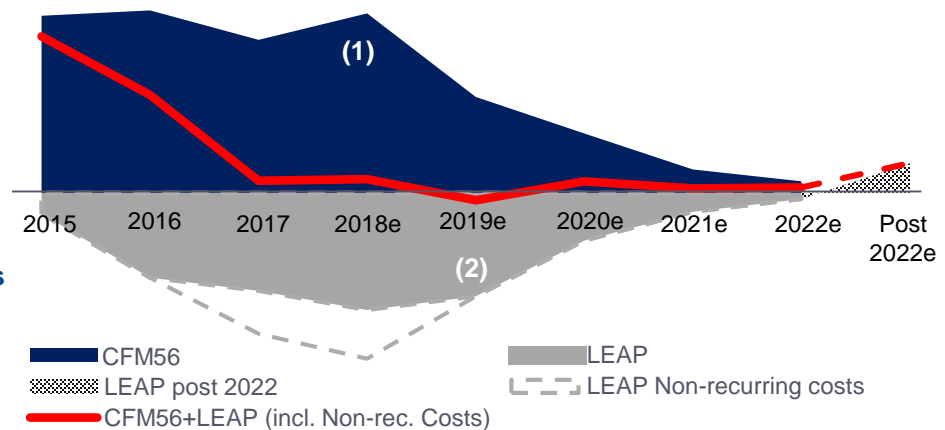
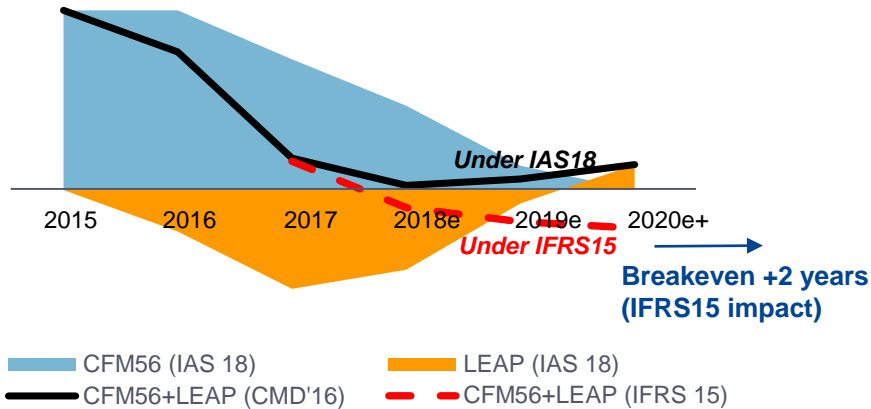
► All businesses are growing

The CFM56-LEAP transition

CFM56 / LEAP Original Equipment (OE) contribution

Impact of IFRS15 on transition profile planned (CMD'16)

CMD'18



In IAS18, Gross Margin LEAP OE breakeven planned at the end of the decade

In IFRS15, Gross Margin LEAP OE breakeven planned after 2020:

- Guarantees are deducted from Revenues
- Gross Margin is calculated with specific prices for OE/spare engines

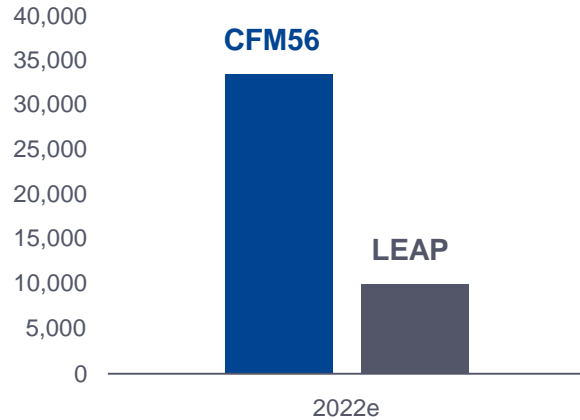
(1) More CFM56 sold at a better price: positive impact of the CFM56 lasting longer than expected + positive product-mix

(2) LEAP cost reduction trajectory in line with initial ambition

► Transition impact better than initially anticipated

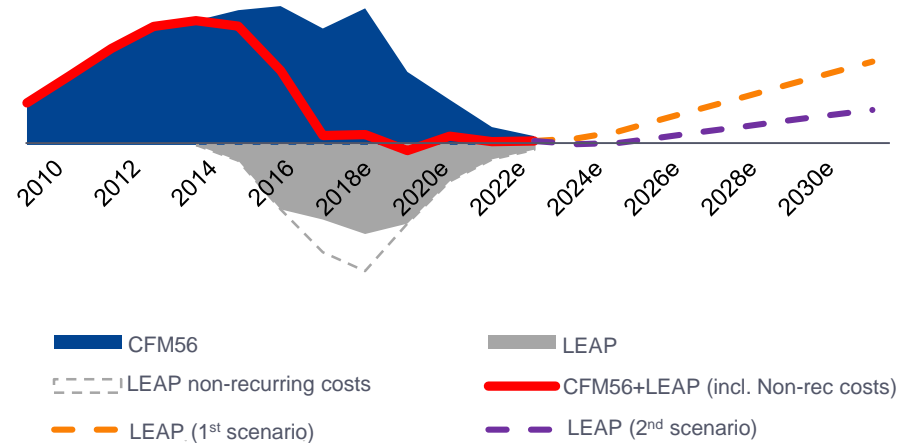
CFM56 / LEAP transition: what's next?

Cumulative number of engine deliveries



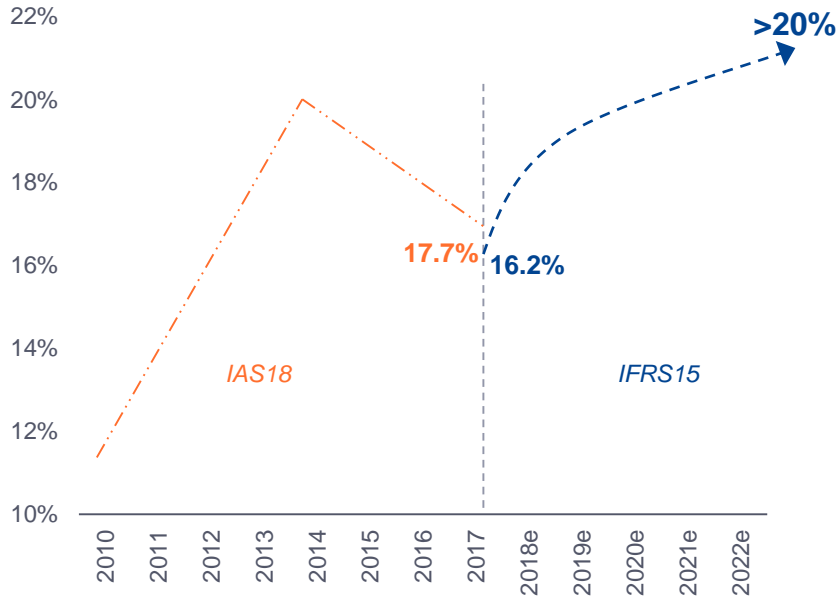
Illustrative impact of price and cost evolution

CFM56 / LEAP OE contribution to Gross Margin



2018-2022 ambition for Propulsion: Recurring Operating Margin trending above 20%

Propulsion Recurring Operating Margin



Assumptions

Civil Aftermarket growth

Completion of the CFM56 / LEAP transition

Narrowbody production rate as committed to airframers

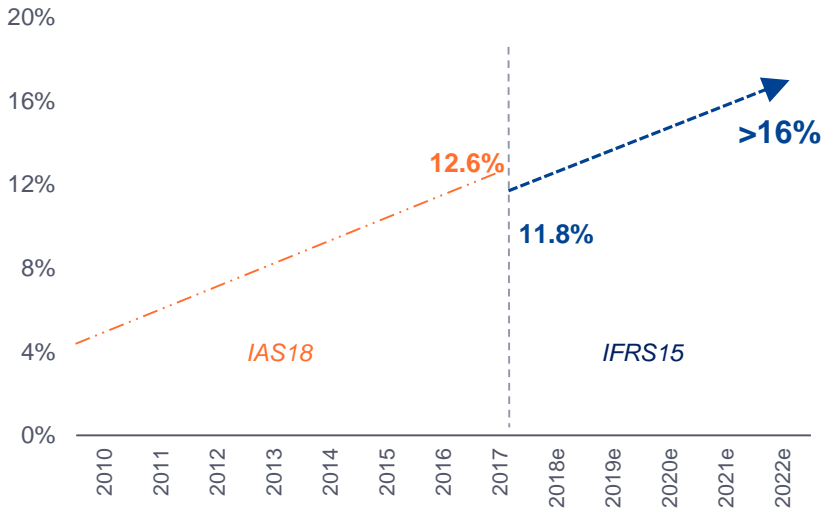
RTDI: increased impact on P&L (headwind)

Helicopters: recovery over the period

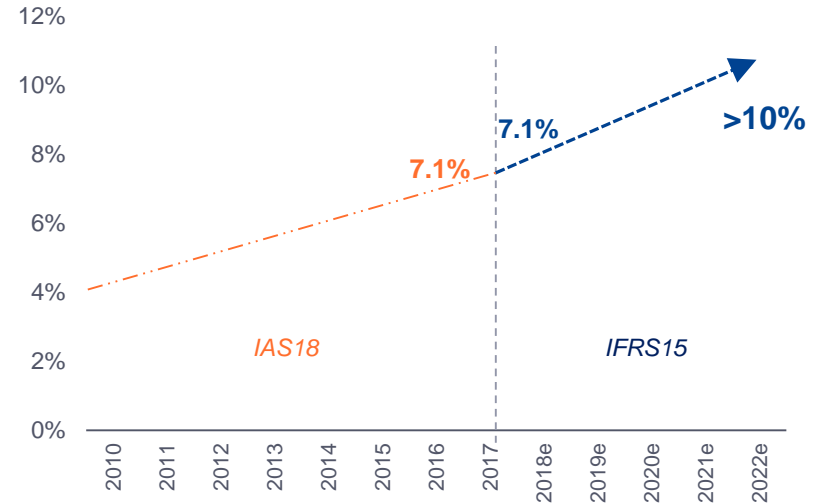
► **Propulsion Margin beats CMD'16 ambition**

2018-2022 ambition: Recurring Operating Margin beyond 16% for Equipment and beyond 10% for Defense

Equipment Recurring Operating Margin



Defense Recurring Operating Margin

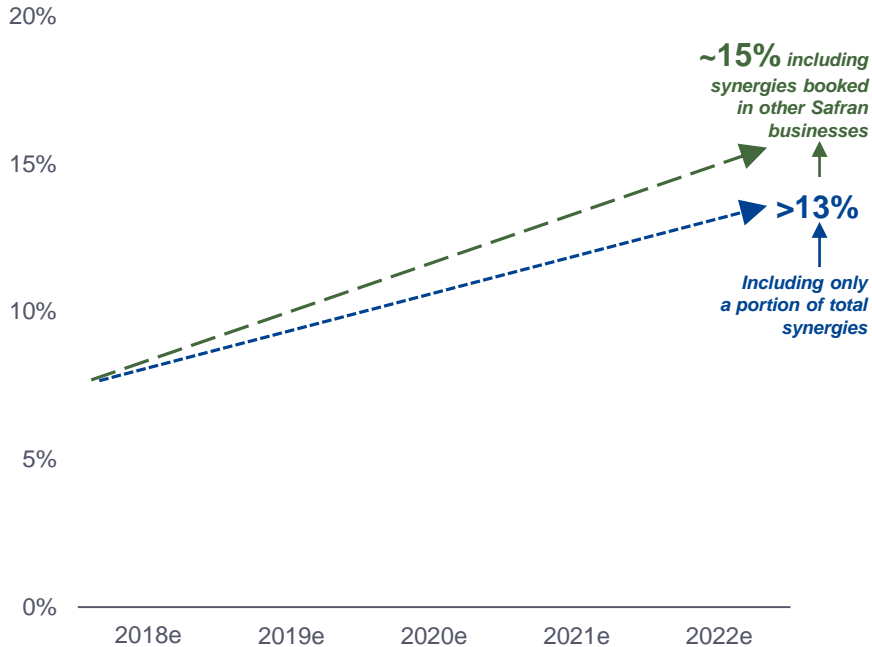


Service Revenue Growth: high-teens over the period
Cost reduction

Executing on contract wins
Cost reduction

2018-2022 ambition for former Zodiac Aerospace: recovery confirmed

Zodiac Aerospace Recurring Operating Margin



Zodiac Acquisition Business Plan targets (May, 2017) to be delivered in 2022:

- €200M cost synergies confirmed
- **>13% Margin in 2022 including only a portion of total synergies**
- Aerosystems above 13%; Aircraft Interiors below 13%
- Other synergies spread over Safran's other Business Units
- €18M synergies on financial costs below Recurring Operating Income

Aerosystems:

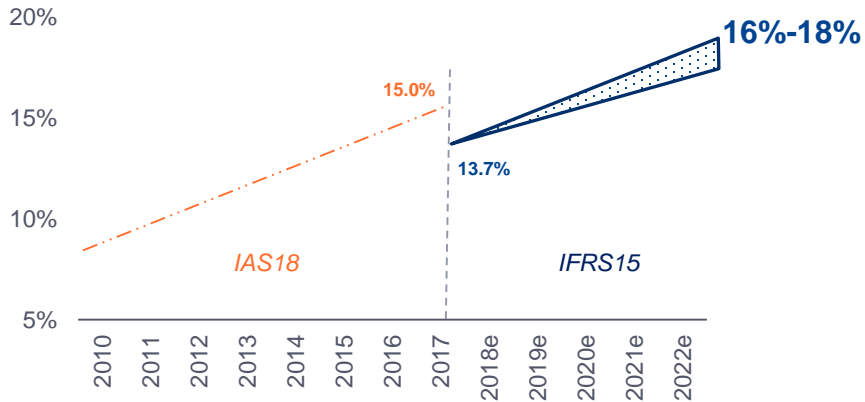
- Low to mid-single digit Revenue growth p.a.
- Aftermarket Growth

Aircraft Interiors:

- Mid-single digit Revenue growth p.a. after 2019
- Increase in aftermarket
- Strong margin recovery

2018-2022 ambition for the Group: a 16-18% margin by 2022

Group Recurring Operating Margin



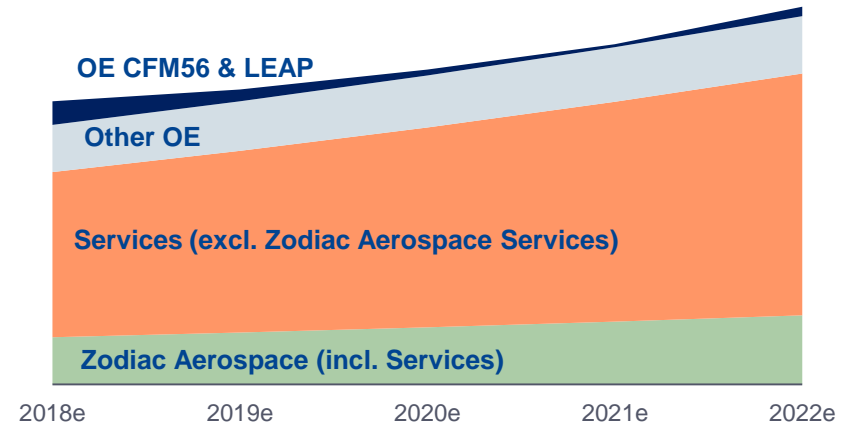
Opportunities:

- LEAP OE Gross Margin
- LEAP Services Margins
- Civil Aftermarket trend
- Euro / Dollar hedge rate

Risks:

- LEAP ramp-up execution
- Aircraft Interiors recovery
- World Economy

Indicative profile of Group Gross Margin

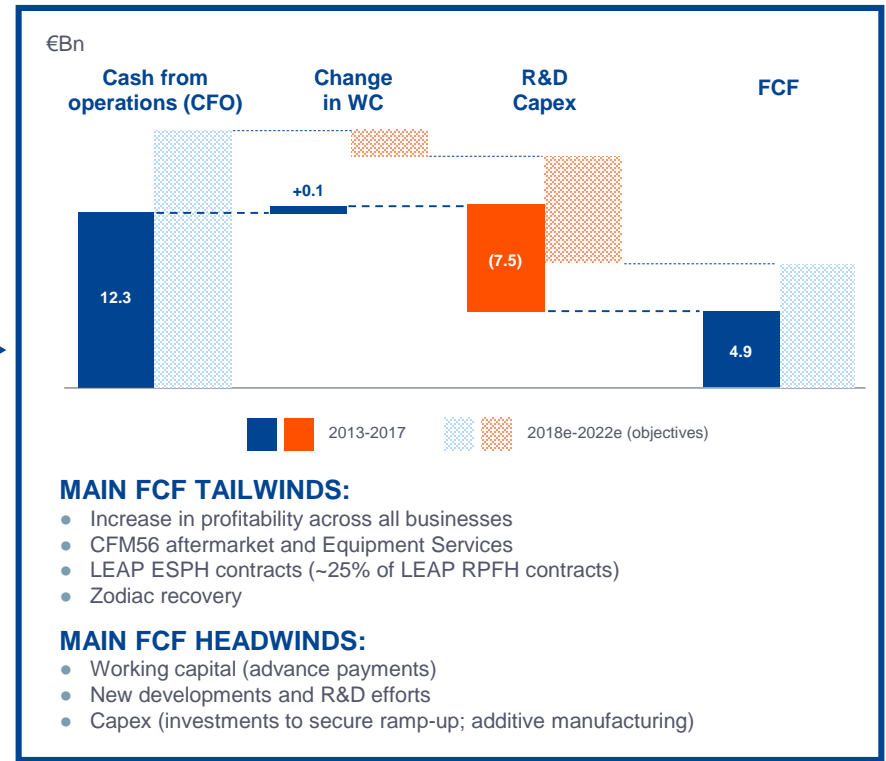
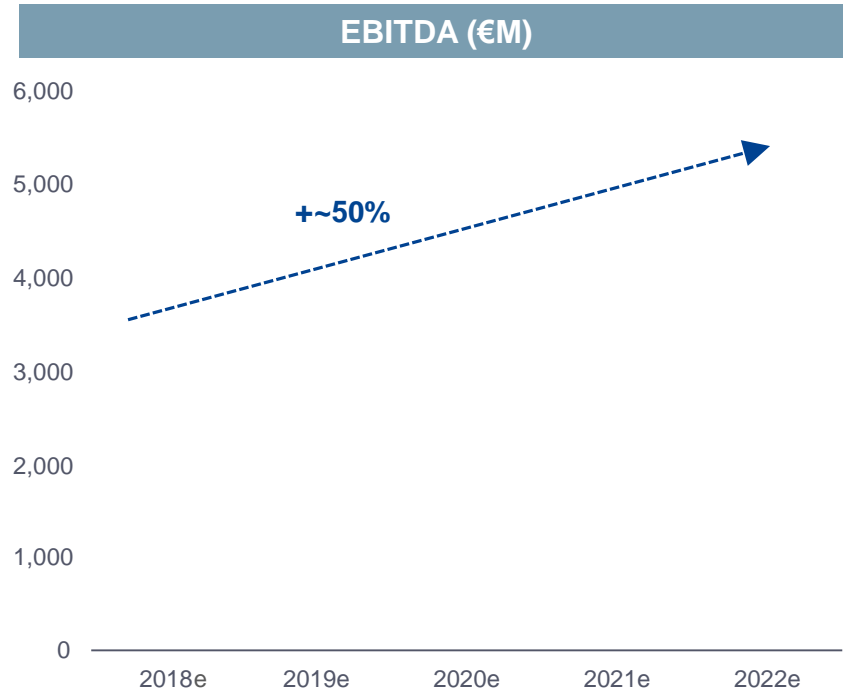


Services activities: a predictable business that should grow by ~30% over the period

Zodiac Aerospace's Gross Margin to increase by ~60% over the period

CFM56 / LEAP transition: limited impact from 2018 to 2022

2018-2022 strong cash flows from operations

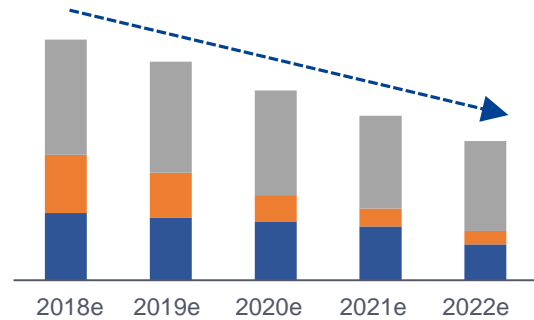


Note: At an estimated average spot rate of USD 1.21 to the Euro in 2018; at a hedged rate of 1.18 and at a spot rate of 1.25 over the period 2019-2022

Note: ESPH= Engine Service Per Hour; RPFH= Rate Per Flight Hour

Focus on working capital

Total advance payments (€bn)
(Projected balance sheet over the period)



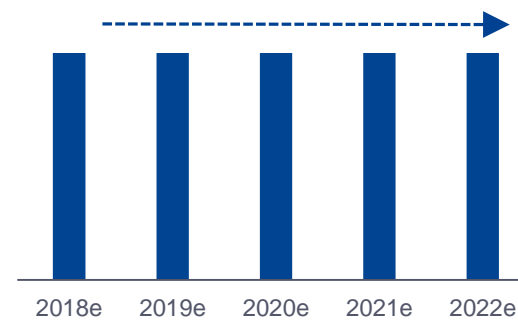
■ LEAP ■ Rafale advance payments ■ Other*

* Includes mainly Helicopters and Military excl. Rafale

Significant reduction of advance payments:

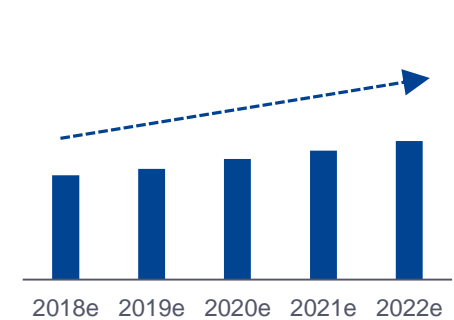
- Reduction of RAFALE advance payments
- End of LEAP ramp up

Inventories and WIP (€bn)
(Projected balance sheet over the period)



Stable inventories and work-in-progress (WIP)

RPFH cash contribution (€bn)
(Projected balance sheet over the period)

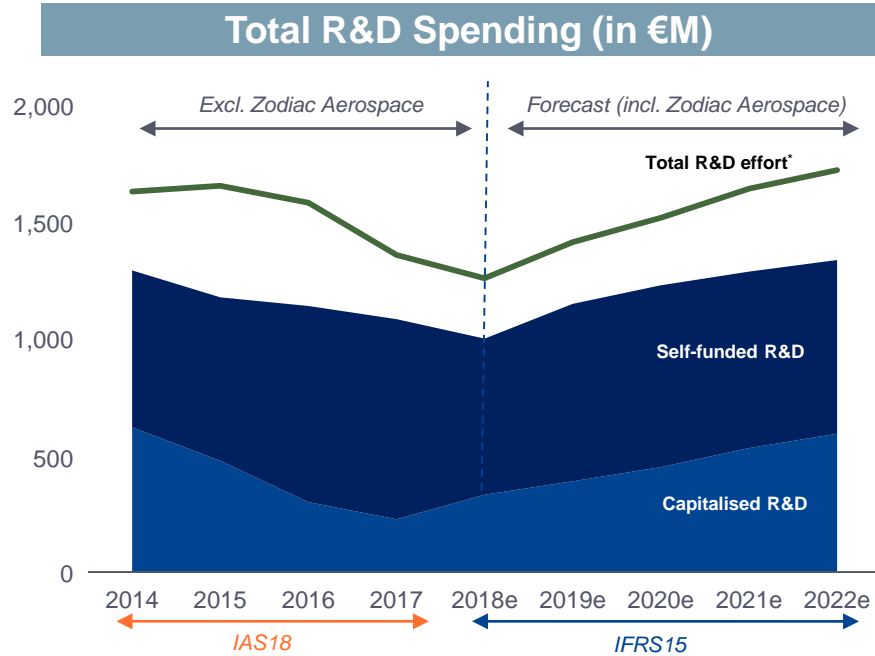


Note: RPFH= Rate Per Flight Hour

LEAP aftermarket: conservative assumptions for RPFH contracts (75% ESPO – 25% ESPH)

ESPO= Engine Service Per Overhaul;
ESPH= Engine Service Per Hour

Focus on R&D: new cycle ahead



Note: Restated figures for 2014-2017 (exclusion of Space and Security)

* Total R&D effort includes R&D sold to third parties, self-funded R&D and capitalised R&D

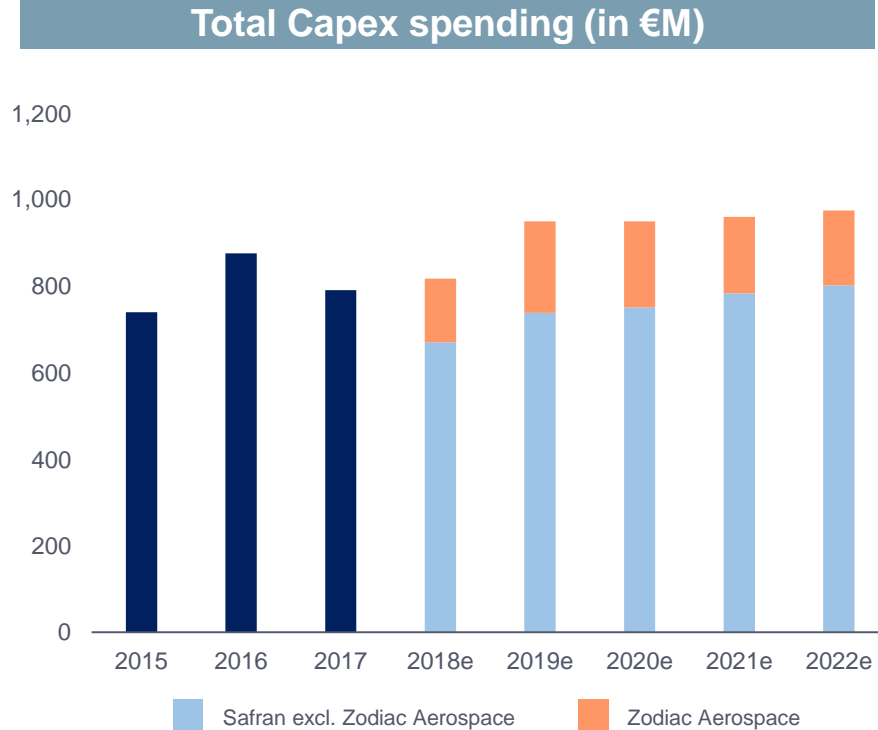
From 2018, new cycle of R&D spending:

- Assumption: NMA launched
- Catch up on Zodiac

**Increased self-funded R&T:
from €460M in 2018 to ~€600M in 2022**

**Self-funded R&D spending between
6% and 7% of sales over 2018-2022**

Focus on Capex



**MRO network development
for LEAP**

**Accelerated development
of additive manufacturing**

Catch up on Zodiac

**Total Capex spending around 4%
of sales over 2018-2022**

2018-2022 Capital allocation policy

FCF IMPROVED OVER 2018-2022



Disciplined M&A policy

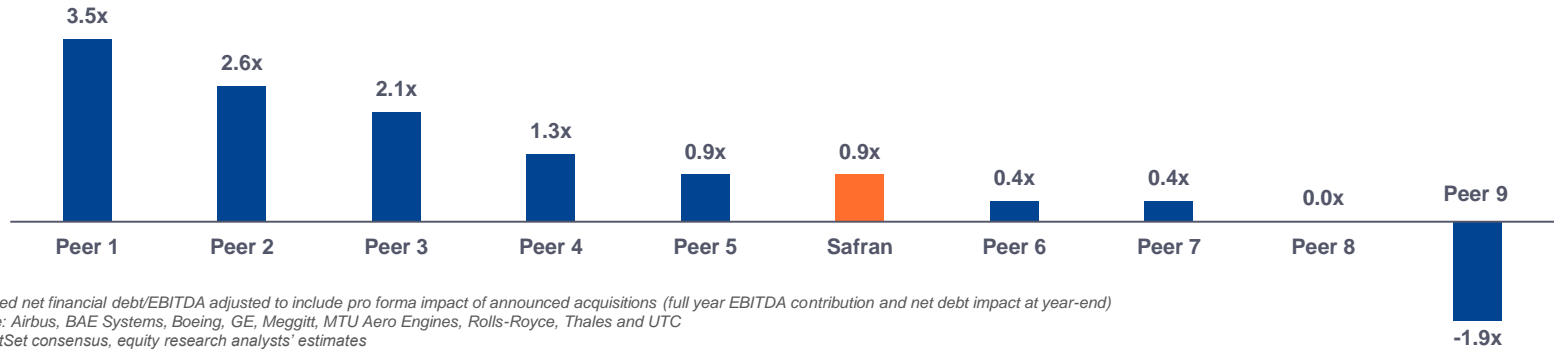
**No major acquisition
currently contemplated
in the coming years**

**Zodiac
portfolio pruning**

**Selective bolt-on's
reinforcing Safran
footprint**
e.g. Rockwell Collins'
actuators, pilot controls
and special products

Reaffirmed objective of strong investment grade profile with efficient balance sheet management

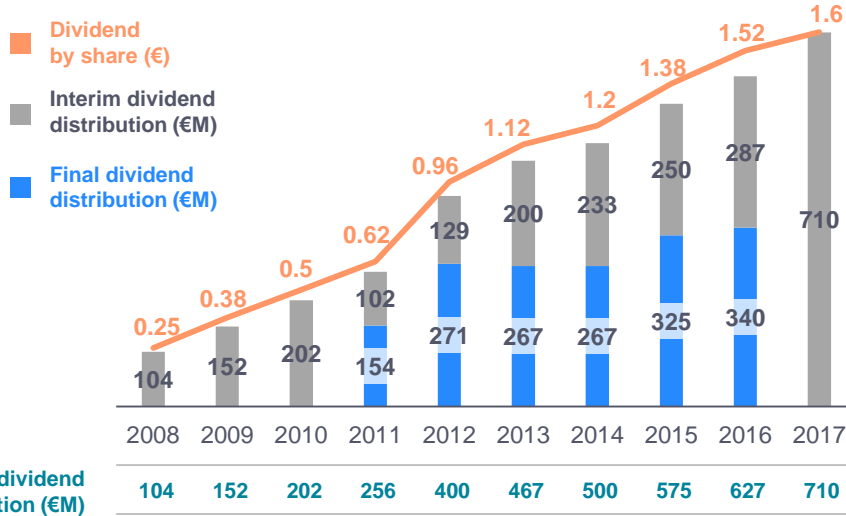
Net financial debt/EBITDA of Safran vs. industry peers (2018e) - Adjusted



- ▶ Following acquisition of Zodiac and ~50% completion of share buyback program, Safran is moderately leveraged
- ▶ Safran's intention: to maintain its leverage in line with best-in-class peers

Shareholders returns (1/2) – Best-in-class TSR over past 10 years

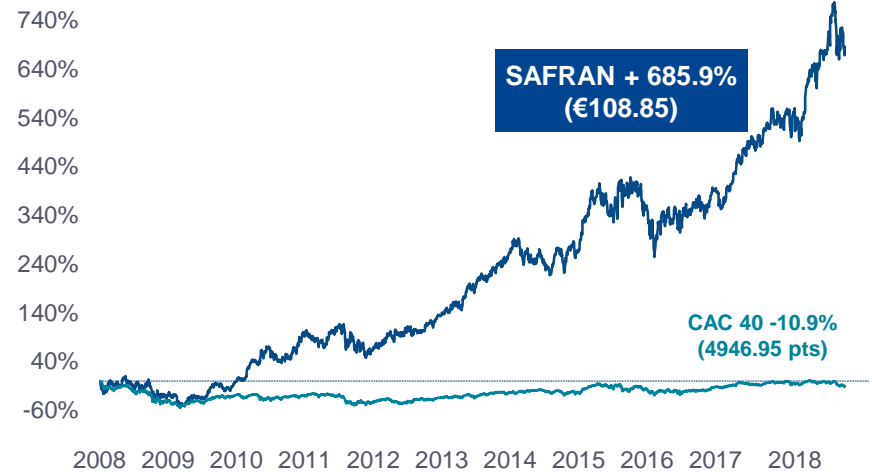
Safran dividend (2008-2017)



Dividends paid: x6.8 between 2008 and 2017

Safran share performance vs. CAC 40 index (2008-2018)

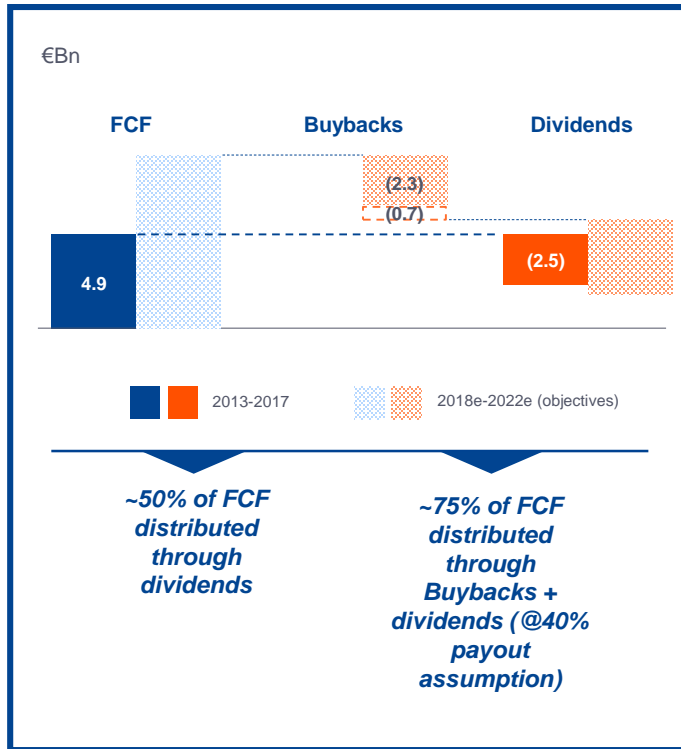
As of November 23, 2018



Share's value: ~+686% since 2008

▶ **Total Shareholder Return (TSR) CAGR 2008-2018: +23.4% p.a**

Shareholders returns (2/2) – Increased cash returns over 2018-2022



More dividends driven by higher results

Over 50% of the €2.3bn buyback program already executed, with €1.1bn to go in the next 12/18 months

- €522M through 2 buyback tranches announced on March 27th and June 29th
- Repurchase of the outstanding convertible bonds (OCEANEs) due Dec 31st, 2020. Treasury shares acquired in 2016 and 2017 to cover exchangeable debt securities reassigned to the €2.3bn share buyback program (6.25 million shares for a total value of €702M)
- New price limit set at the Nov. 27th AGM at €140 / share

Intention to increase the share buyback program by another €700M (to avoid potential dilution of June 2023 OCEANEs)

- ▶ The Board of Directors will review the practice in 2020 in order to ensure growing and attractive equity return for shareholders
- ▶ Over 75% of cumulated FCF to be returned to shareholders over 2018-2022 through buyback, existing dividend practice and a new possible buyback program

2018-2022 Financial wrap-up – Medium term ambition

Continued organic Growth

- Mid-single digit Revenue Growth over 2019-2022 (assuming average spot rate of USD 1.25 to the Euro over 2019-2022)
- Civil Aftermarket growing on average at high-single digit

Best-in-class profitability

- Benefits of medium-term FX hedging policy
- Recurring Operating Margin trending to a 16%-18% range by 2022
- Former Zodiac Aerospace divisions recovery and €200M cost synergies confirmed

Strong cash generation

- EBITDA increase by ~50% between 2018 and 2022
- EBIT to Free Cash Flow conversion above 50% each year and trending above 60%
- Subject to customary elements of uncertainty on the timing of downpayments and the rhythm of payments by certain state customers

Balanced and disciplined capital allocation with increased returns to shareholders to be further reviewed by Board of Directors in 2020



1st Q&A session

STRATEGY AND FINANCIAL FRAMEWORK

Philippe PETITCOLIN,
CEO

Bernard DELPIT,
CFO

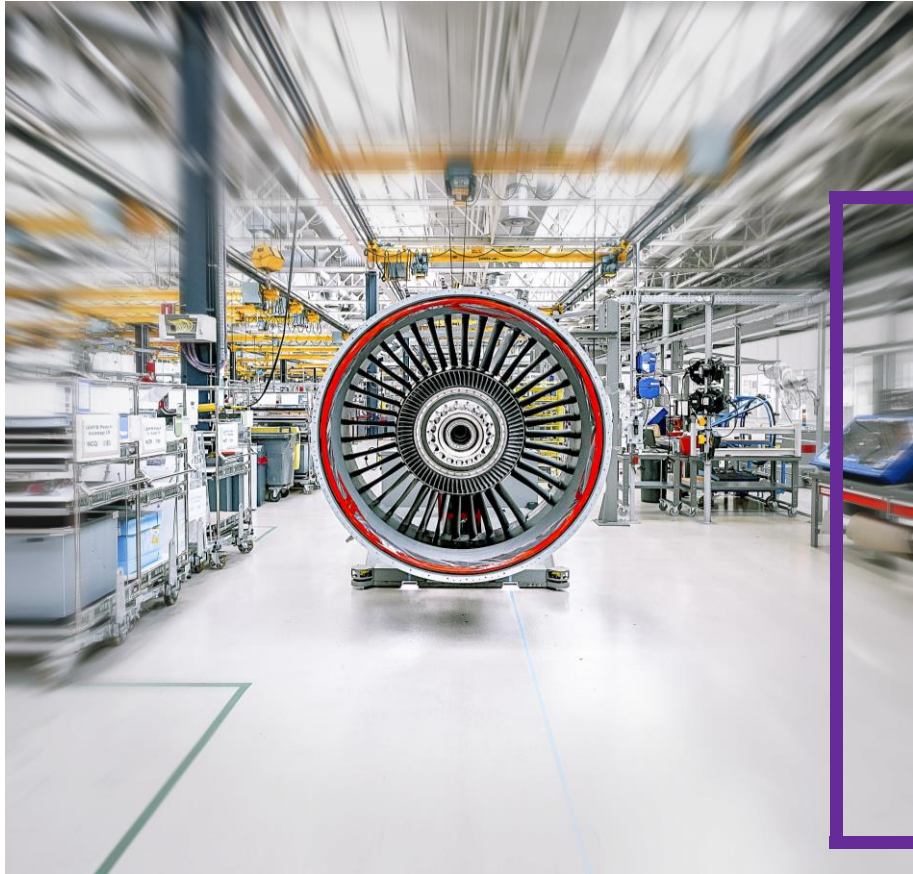
CFM56 / LEAP TRANSITION AND AFTERMARKET

Olivier ANDRIÈS, SAE CEO

François BASTIN, SAE Commercial
Engines

François PLANAUD, SAE Services
& MRO





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CFM56 / LEAP TRANSITION

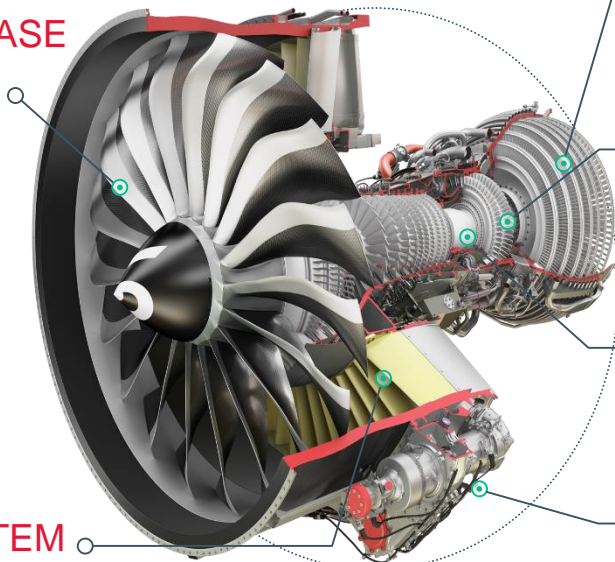
François BASTIN,
SAE Commercial Engines

LEAP: Technology, Experience & Execution

**CAPITAL
MARKETS
DAY/2018**

COMPOSITE FAN BLADES & CASE

Lightweight & durable



ADVANCED 3D AERO

Performance

ADVANCED COOLING

Lightweight & temperature resistant

LEAN COMBUSTOR

Low NOx, durable

FAN MOUNTED AGB

Reliability, Maintainability

DEBRIS REJECTION SYSTEM

Protection against erosion



LEAP

Reliability ⁺

Life cycle maint. cost ^{\$}

Same as CFM56



-15%

lower fuel consumption and reduction in CO₂ emissions



Noise & NOx

-50% vs CAEP6, margin to new regulations (Chap 14)

► It takes a suite of technologies to make a great engine

LEAP: since CMD 2016

ON SPEC



**All performance,
noise and emissions
reduction objectives
met**

ON TIME

LEAP-1A
Entry into service
in August 2016



ON TIME

LEAP-1B
Entry into service
in May 2017



ON TIME

LEAP-1C
First Flight
in May 2017



73 LEAP customers
have accumulated more than
2.5 million
engine flight hours

LEAP: the customer's choice

Market shares, as of October 31, 2018

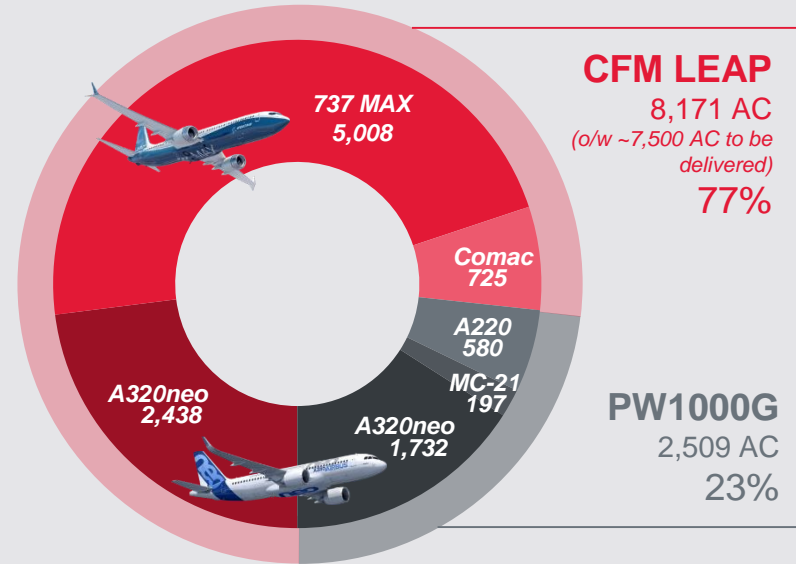
737MAX

CFM LEAP
100%Single
source

A320neo

CFM
LEAP
58%PW
1000G
42%

Based on announced orders and selections



Investor's choice: LEAP market share for A320neo lessors is 67%

LEAP in service: supporting a fleet of more than 500 aircraft...

As of October 31, 2018

A320neo
288 aircraft



737 MAX
231 aircraft



...with unrivalled utilization



Already 99.9% dispatch reliability and still improving!

World Class Utilization, matching CFM56 standard

Aircraft not flying
(in % of fleet in service)

Source: Flightradar24



Flight hours (h)
/ Average daily utilization

Source: Flightradar24



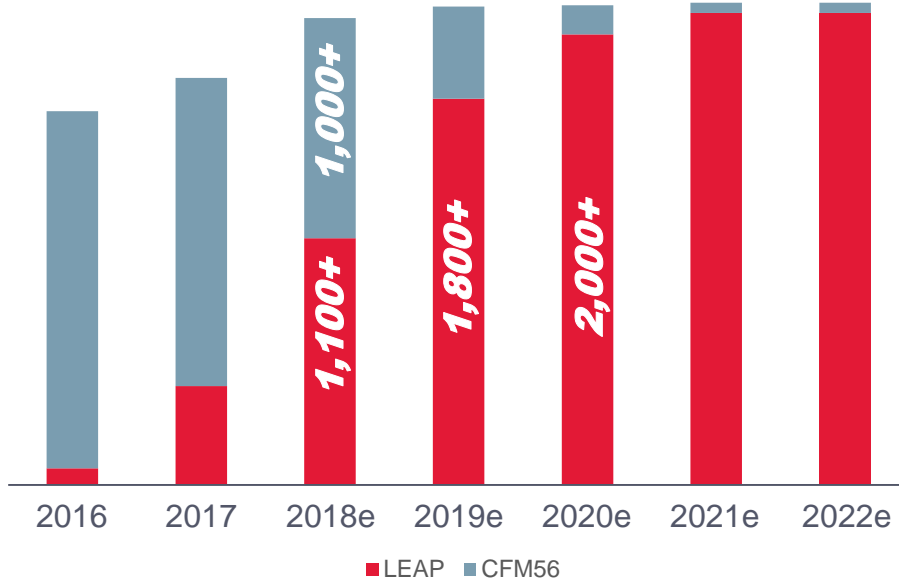
Cornerstone

- Engine designed for reliability

Lever

- Digital advanced monitoring
- 3 call centers, 250+ field engineers
- On site support force operating 24/7 from 15 locations over the world
- 7 MRO shops up and running

Unprecedented ramp-up underway



In 2016, 77 LEAP deliveries,
on top of 1,693 CFM56's

In 2017, 459 LEAP deliveries,
on top of 1,444 CFM56's

In 2018 on track to beat 1,100
LEAP engines deliveries, on top
of more than 1,000 CFM56's

▶ LEAP weekly rate already hit CFM56 historical peak level

Leveraging our Production Management System

Extensive investment: added 3 new plants and pulled in a 3rd pulse line in 2018 alone

Fully active dual sourcing, adding 3rd or 4th when necessary (forged parts, frames)

- Examples: turbine disks, turbine rear vane

Winning the First Time Yield battle:

- Through design updates & process improvements
- Examples (2016 to now): OGVs (20 to 93%), fan blade leading edge (70 to 97%)

SWAT teams to tackle emerging issues at suppliers



Route to Serial Mode

- Systematic risk analysis & abatement



Watch item

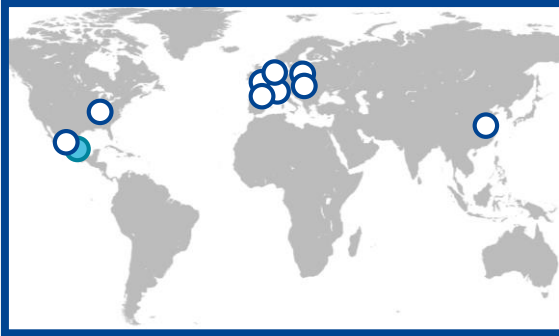
- Forgings and Castings

150 suppliers

14 countries



A steadily extending footprint

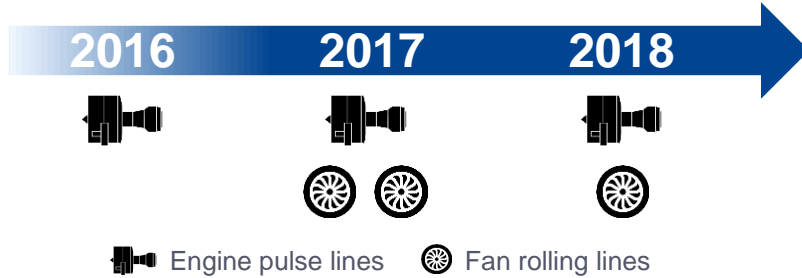


Safran plant development				
Location	Size	Country	Specialisation	Status
Queretaro	6,000 m ²	Mexico	Assembly	2019 ●
Queretaro	31,000 m ²	Mexico	3D composites RTM and OGV	2018 ○
Rzeszow	5,000 m ²	Poland	Compressor Blade machining	2018 ○
Rzeszow	9,300 m ²	Poland	Turbine blade machining	2018 ○
Suzhou	19,000 m ²	China	Machining and assembly	2018 ○
Villaroche	40,000 m ²	France	Logistics for assembly and spares	2017 ○
Gennevilliers	1,500 m ²	France	Precision forging	2016 ○
Le Creusot	4,000 m ²	France	Turbine disk machining	2015 ○
Rochester	31,000 m ²	USA	3D composites RTM	2014 ○
Commercy	27,000 m ²	France	3D composites RTM	2014 ○

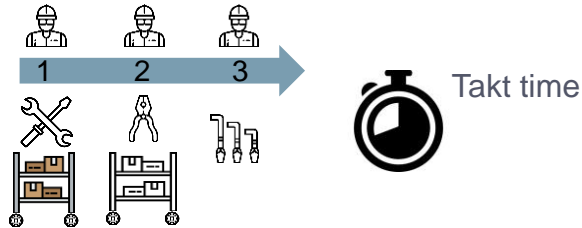
○ In production

► Over 173,000 m² of extensions and new plants in Europe, Asia and the Americas since 2013

Defining the state of the art of engine assembly



- Generalizing the **Pulse** line concept
- Combining it with relentless innovation

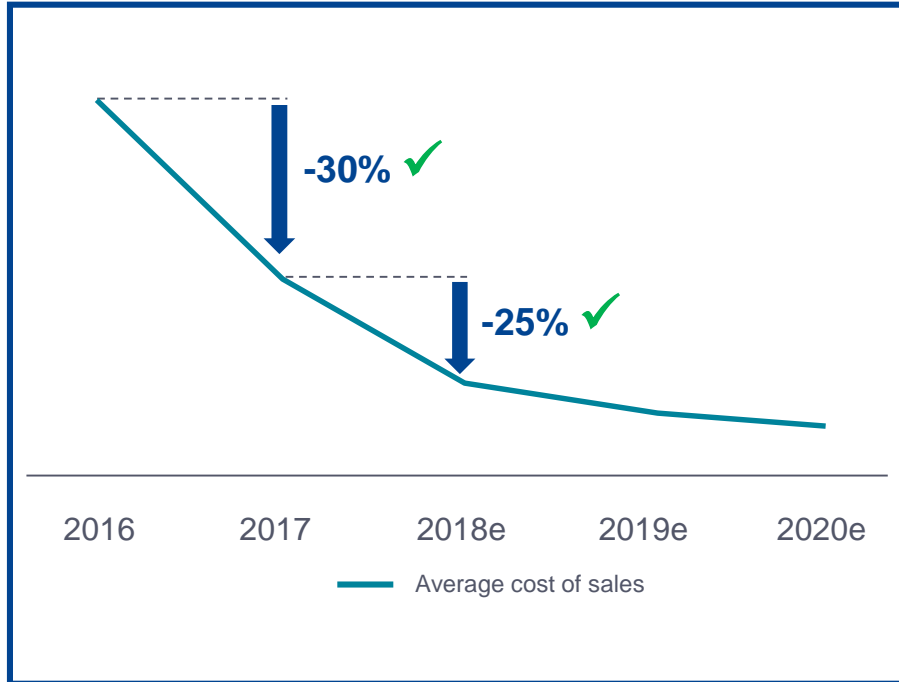


All effective today... and more coming!

- 3 LEAP engine pulse lines, 3 fan module rolling lines
- Friendly engine cradles (4 axes, including +/- 110° engine axis rotation)
- Augmented reality
- Smart tooling
- In line image recognition control
- Collaborative automation (cobots)
- Zero-G handling



Cost reduction: right on track



Before 1st engine delivery, CMD16 learning curve was expressed in terms of Cost of Production

As serial production has started, Cost of Sales metrics becomes more relevant

The achievement to date is in line with the 2020 objective

LEAP Cost reduction: within our plants

Levers	Examples
Design updates for cost	<ul style="list-style-type: none"> ● 1B Turbine rear vane ● Removal of EEC blowers ● 1B Fan frame shroud <div style="display: flex; align-items: center; justify-content: center;"> <div style="font-size: 3em; margin-right: 10px;">}</div> <div> \$90k / engine </div> </div>
Process Optimization	<ul style="list-style-type: none"> ● Closed door machining ● Optimization of inspection times ● Rework elimination
Leveraging our low cost footprint	<ul style="list-style-type: none"> ● China: turbine shafts, disks & module assembly ● Mexico: fan disks, blades, OGVs & module assembly

Closed door machining: Le Creusot (France)



Traditional turbine disk machining

- Batch flow
- One machine for one operator
- Manual on line machine set up

Flexible assisted manufacturing system

- One piece flow
- 2 machines for one operator
- Centralized retooling
- Off line machine set up

Flexible automated manufacturing system

- 3 machines for one operator
- Automated loading
- Closed Door Machining
- Digital data collection

Labor efficiency:
Machining time:

X2.5
-50%

LEAP Cost reduction: with our suppliers



Levers	Examples
Design to cost	<ul style="list-style-type: none"> Cone torque metal coating removal, LPT shaft heat treatment optimization
Lean manufacturing, value chain analysis, process reengineering	<ul style="list-style-type: none"> Turbine disk machining cycle time reduced from 120 to 43 days
Supply base footprint optimization including best cost country	<ul style="list-style-type: none"> Extension of cost share in Morocco, Mexico, Portugal, Poland
Rolling negotiations	<ul style="list-style-type: none"> Contract renewal, market share or volume change, dual sourcing benchmarking

CFM56 / LEAP Transition: the first steps of a success story

**Looking back on 2.5 years
and 2.5 million hours
of operations, LEAP
is already delivering
on all its promises**

- ▶ Performance
(fuel, noise, emissions)
- ▶ Reliability
- ▶ Utilization

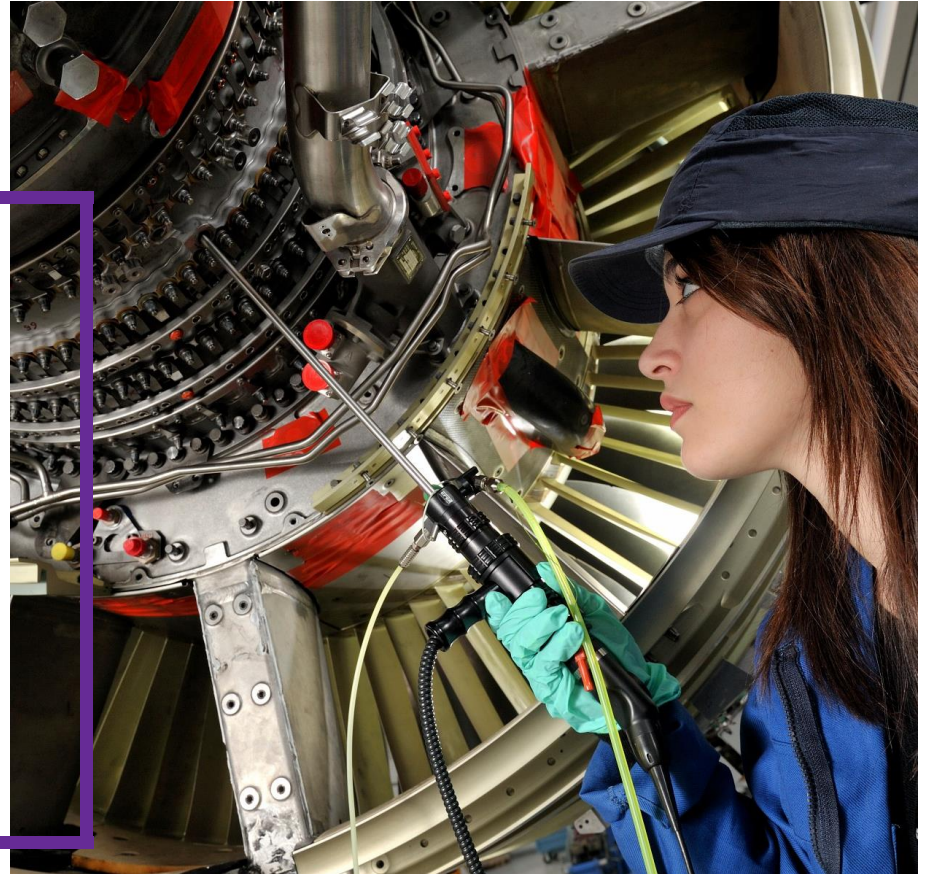
**Historic ramp up
is underway, supported
by a strong production
management system**

**Cost reduction
is right on target**

2

CFM56 / LEAP AFTERMARKET

François PLANAUD,
SAE Services and MRO



CFM56 / LEAP installed base growing

CFM56 / LEAP fleet in service to grow by 4.5% CAGR until 2025

- More than 38,000 CFM56 / LEAP engines will be in operation in 2025

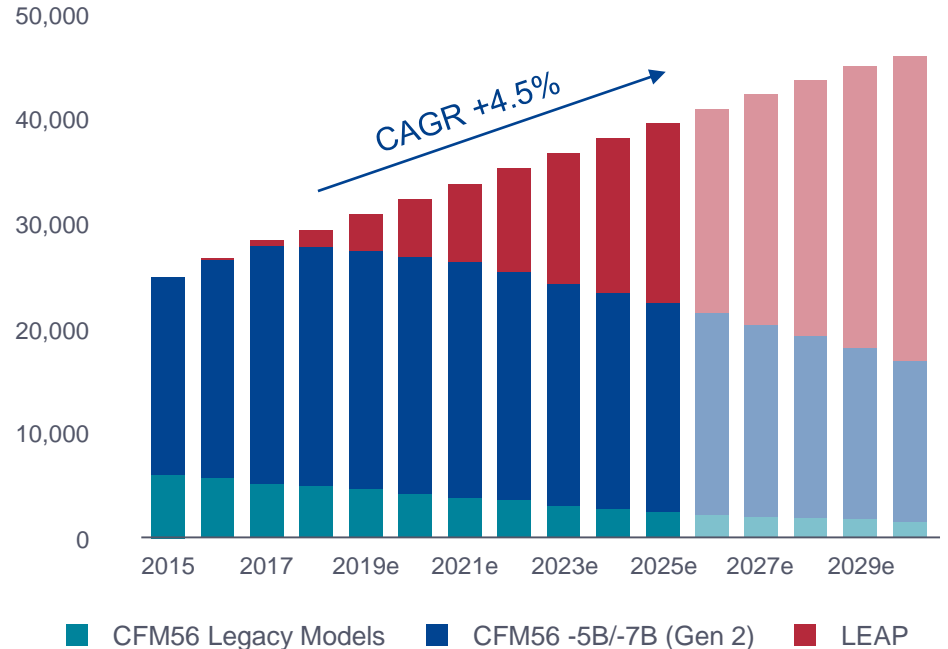
Strong CFM56 installed base over the horizon

- 28,000 CFM56 engines (all models) in operation today
- 22,000+ in 2025

► Sustained CFM fleet growth driven by LEAP deliveries

CFM Fleet in service

Source: CFM fleet data, agreed airframer LEAP rates



CFM56 / LEAP different aftermarket dynamics

CFM56

- Aftermarket business essentially driven by spare parts sales
 - > Large choice of Maintenance, Repair and Overhaul (MRO) providers for Airlines
- Revenue drivers: shop visit volumes, worksopes (content), pricing

LEAP

- Increased customer demand for long term, rate per flight hour agreements
 - > Provides airlines for maintenance cost predictability
 - > 3rd party MRO network will develop over time
- Profitability drivers: engine reliability, fleet management & maintenance cost optimization, additional services

▶ **Transitioning from spare parts model to long term contracts**

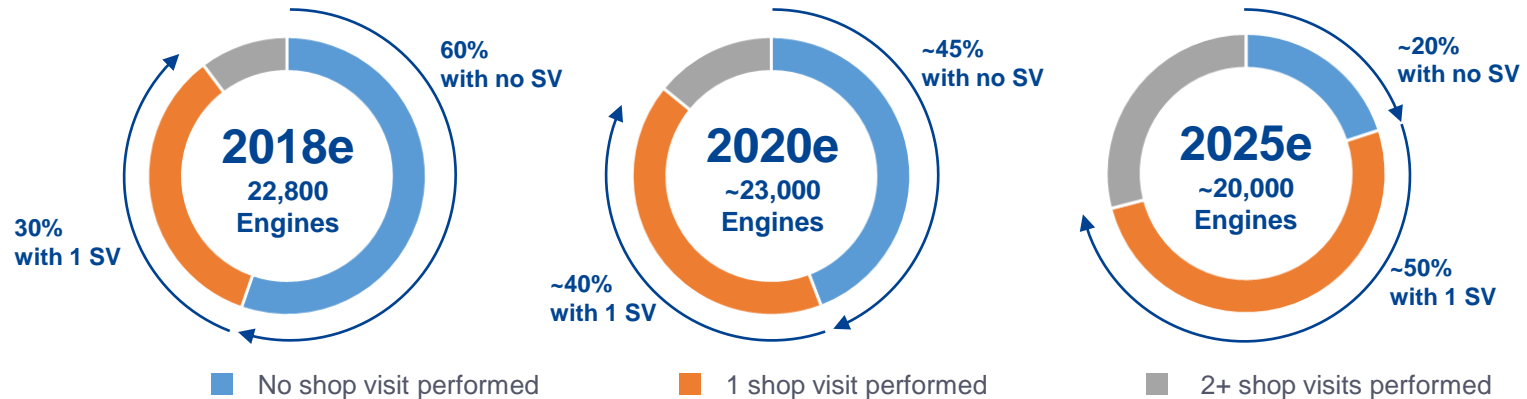
CFM56: -5B/-7B fleet is still a young fleet

As of 2018

60% of CFM56 -5B/-7B in service have had 0 shop visit

CFM56 -5B/-7B fleet split by number of shop visits performed

Source: CFM fleet data



► **Large maintenance activity ahead for CFM56-5B/-7B fleet**

CFM56: Spare parts consumption model

Shop visit forecast

Long term trend

Fleet in service

- Engines in service
- Utilization, area of operation

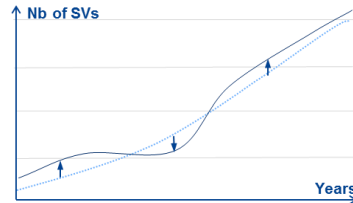
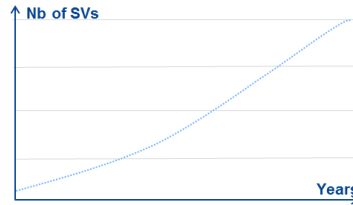
Technical parameters

- Operating data (Flight leg, temperatures...)
- Hardware durability, Life Limited Parts, EGT...

Short term variations

Airlines strategy

- Fleet management
- Financial & operational situation



Spare parts usage at shop visit

Workscope

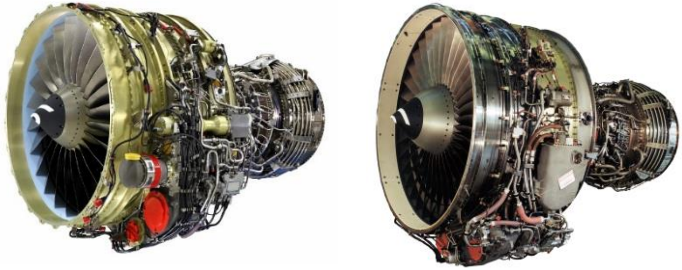
- Module exposure
- Rebuild standards, Life Limited Parts (LLP) replacement

Spare parts consumption

- Replacement rates
- Used parts availability and demand

► Comprehensive spare parts forecast model

CFM56: -5B/-7B shop visit outlook

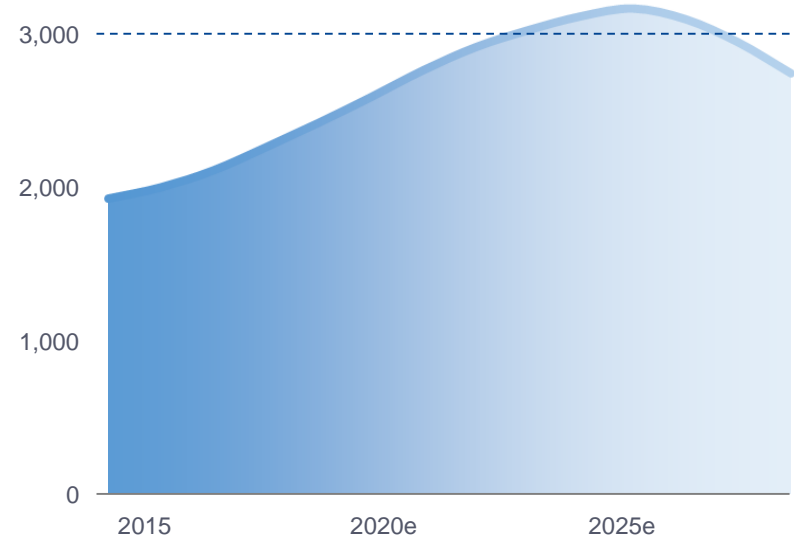


**CFM56-5B/-7B shop visits to grow
by ~5% CAGR until 2025**

**Peak over 3,000 shop visits per year
expected around 2025**

CFM56 -5B/-7B Worldwide shop visits

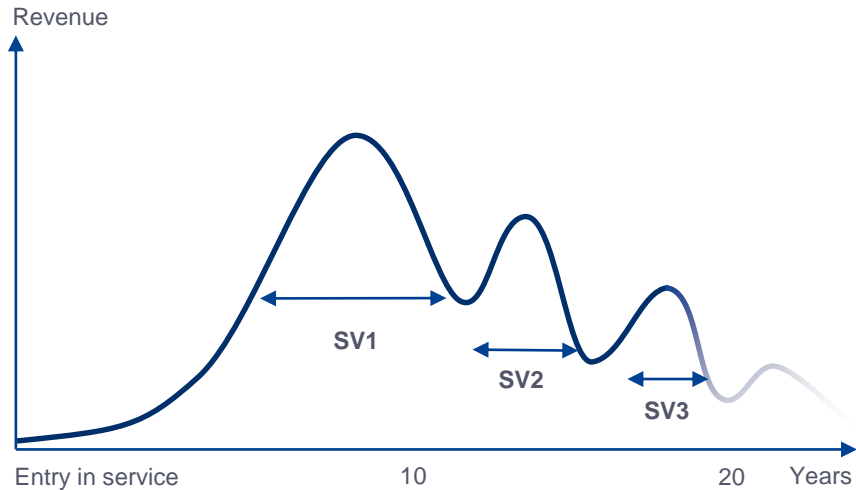
Source: CFM fleet data



► **Higher peak level than in CMD16,
due to additional CFM56 deliveries**

CFM56: -5B/-7B shop visit rank distribution

Fleet-wide average timeline for spare parts revenue



- ▶ Shop visits 1 & 2 are main revenue contributors

Proportion of shop visits 1 & 2 within total of -5B/-7B SV/year

2018e
75%

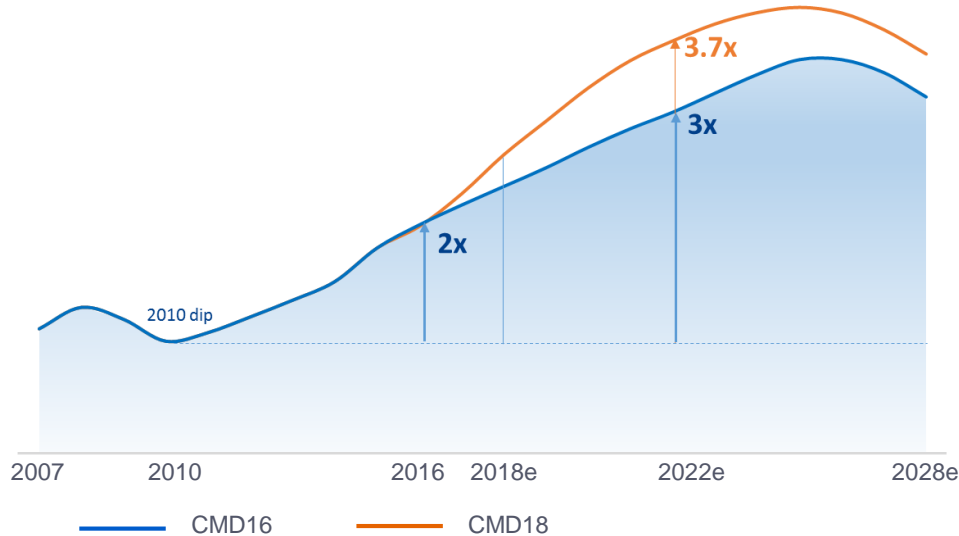
2025e
>66%

- ▶ Large proportion of shop visits 1 & 2

CFM56: Spare parts outlook

Expected CFM56 worldwide spare parts consumption profile (\$)

Source: CFM fleet data



2017/2018 benefiting from tailwinds

- Positive global context:
 - > Traffic growth and high fleet utilization
 - > Airlines financial health
- Strong MRO activity & high-content worksopes

Higher perspective over the horizon

- Main contributor to civil aftermarket growth
- Year to year anticipated variations

Peaking in 2025

▶ Stronger outlook for future CFM56 spare parts

LEAP: moving to Services with different type of offerings and contracts

Spare parts purchase Time & Material



Spot Sales / Short term agreement

- Spare parts sales to MRO shops or operators
- T&M overhaul agreements for an engine or a batch
- Workscope control by operator

Cash at point of sale

Rate Per Flight Hour ESPH* / ESPO**



Long Term agreement

- Typically 8 to 12 years
- Agreement covering a defined fleet
- Additional services (Lease Engines, Engineering...)
- MRO provider manages Time on Wing and maintenance cost

Cash per the hour (ESPH) or at shop visit (ESPO)

► **Increasing scope of services to address customers needs**

*ESPH: Engine Service Per Hour **ESPO: Engine Service Per Overhaul

LEAP: Long term contracts performance management

Leveraging on our expertise



OEM expertise

- Wide range of services
- Engine design knowledge



Fleet management & maintenance optimization

- Shop visit schedule
- On wing/quick turns interventions



Operational performance

- Optimized workscoping
- State of the art MRO facilities

Bringing digital tools and analytics

Integrated Data Collection

- Larger quantity of Engine data
- Environment (Weather, routes, ...)

Predictive maintenance

- Continuous Remote Monitoring & diagnostics (e.g. advanced vibration analytics...)
 - > Reduces physical interventions on engines
- Customized maintenance and inspections plans (e.g. Waterwash recommendations...)
- Dedicated teams developing advanced analytics



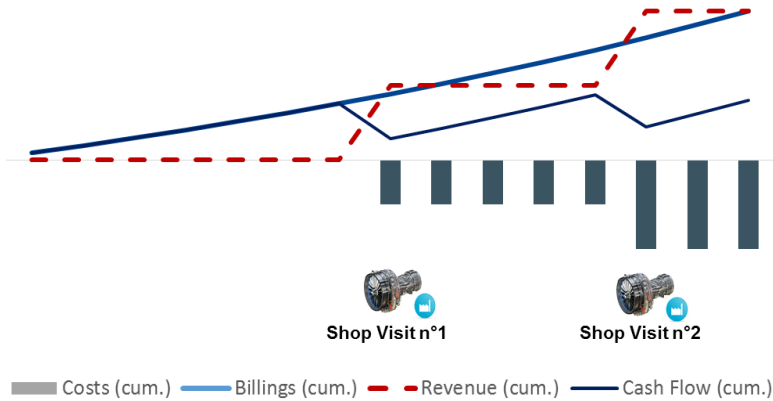
Enhanced fleet management

- Multi-parameters optimized engine removal plans

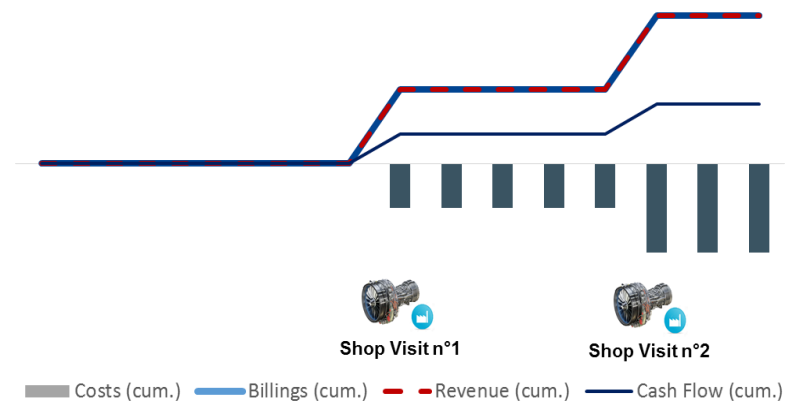
▶ A wide suite of levers to manage performance

ESPH and ESPO illustrative cash profile

Engine Services Per Hour (ESPH)



Engine Services Per Overhaul (ESPO)



Revenue: IFRS15 Sales **Cash Flow:** Net Billings less Costs
Billings: Cash in **Costs:** Cash out

- ▶ Similar revenue patterns in both cases
- ▶ Improved cash profile for ESPH vs ESPO

LEAP: Rate Per Flight Hours agreements portfolio

To date, 28% of LEAP engine orders include a signed CFM Rate Per Flight Hour (RPFH) long term agreement

- Split between ESPH and ESPO: 25% ESPH /75% ESPO

Within 3/5 years, expected RPFH agreements to represent 60-70% of LEAP installed fleet as further discussions are on-going with a large panel of LEAP customers

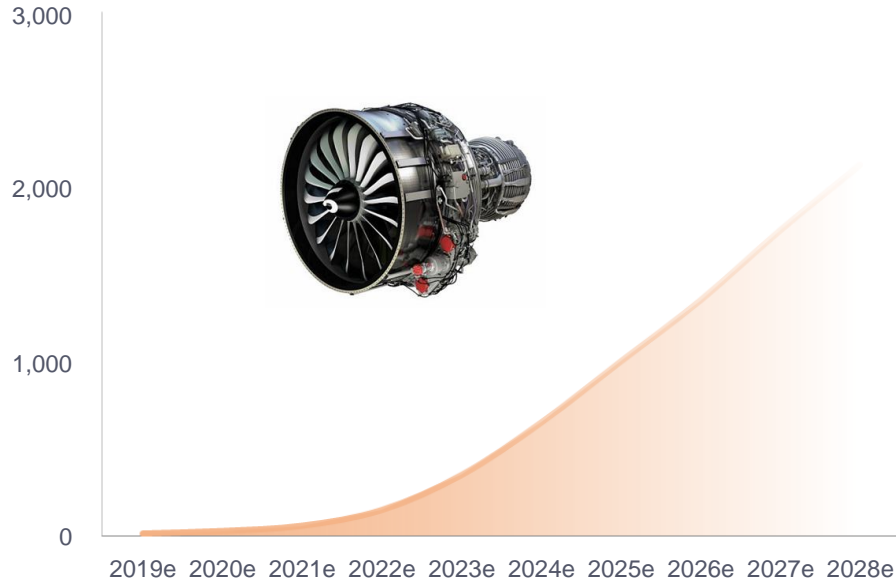
- Anticipated split between ESPH/ESPO to be similar for future contracts

We assume later switch to T&M or spare parts model as fleet matures and worldwide overhaul demand increases (typically 8/10 years after EIS)

▶ **RPFH agreements trending to 60-70% of LEAP installed fleet**

LEAP: Shop visits & MRO footprint

Worldwide shop visits



LEAP worldwide shop visits

- Expect strong ramp-up of shop visits as a result of new engines deliveries profile
- ~1,000 shop visits in 2025

Maintenance activity for Safran

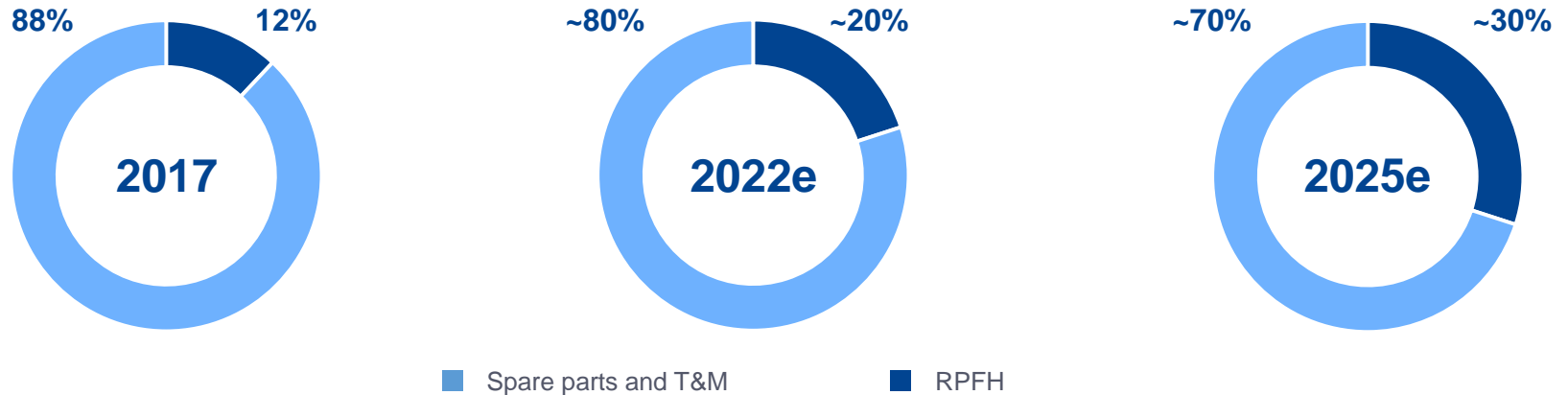
- Long term Services portfolio will translate into significantly higher industrial maintenance volumes (x3 vs CFM56)

Planned extension of current Safran maintenance network footprint

► Preparing for LEAP MRO ramp-up

CFM56 and LEAP mix of aftermarket revenues

Distribution of CFM56+LEAP aftermarket revenues by nature



- ▶ Smooth and progressive ramp-up of RPFH contracts
- ▶ Spare parts and T&M will be the main revenue channel up to 2025+

Civil Aftermarket key messages

CFM56

- CFM56 spare parts keep driving civil aftermarket growth until 2025

LEAP

- LEAP Services will progressively ramp up and provide the relay for growth

- ▶ **High single digit growth for total CFM56 & LEAP aftermarket revenues**





2nd Q&A session

CFM56 / LEAP TRANSITION AND AFTERMARKET

Olivier ANDRIÈS,
SAE CEO

François BASTIN,
SAE Commercial Engines

François PLANAUD,
SAE Services & MRO

ZODIAC INTEGRATION AND AIRCRAFT INTERIORS RECOVERY

Hélène MOREAU-LEROY,
Zodiac Aerospace Integration

Vincent MASCRÉ, Zodiac Aerospace CEO
& Zodiac Aerospace Seats CEO

Norman JORDAN,
Zodiac Aerospace Cabin CEO



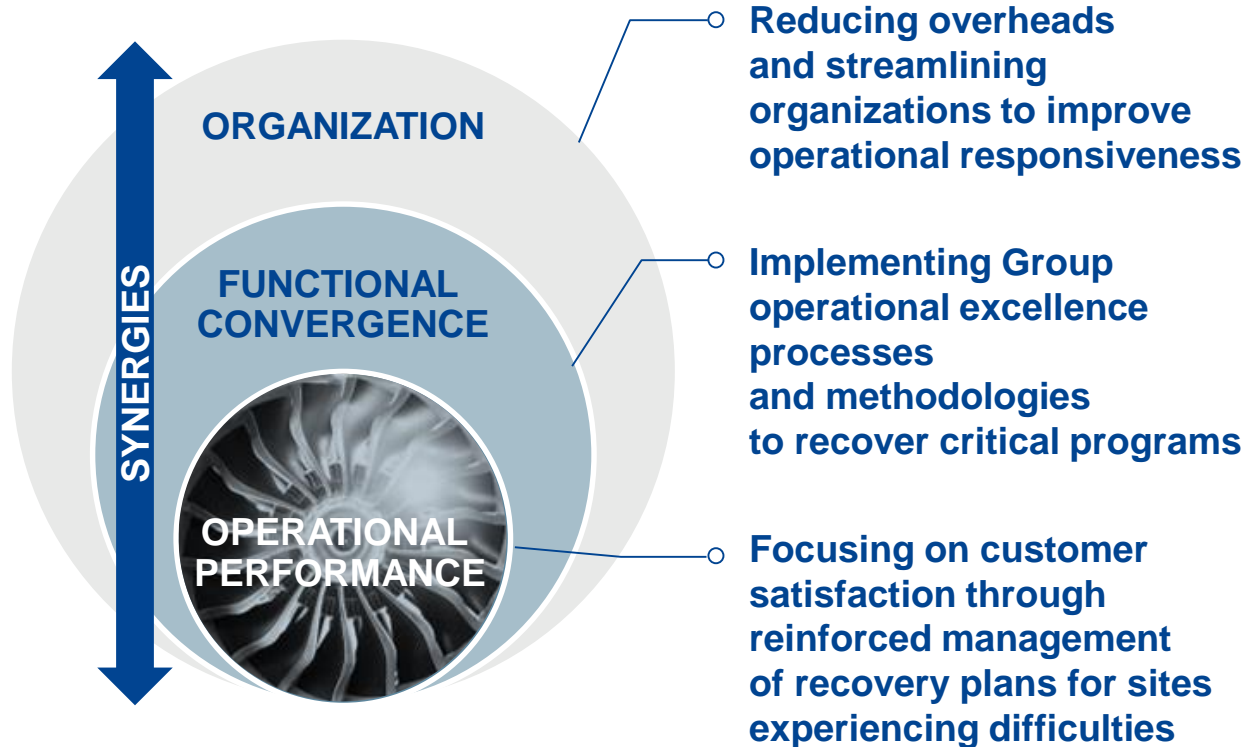


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ZODIAC AEROSPACE INTEGRATION

Hélène MOREAU-LEROY,
Zodiac Aerospace Integration

3 priority levels of integration and value creation



INTEGRATION PROJECT IN PLACE AND DELIVERING

- ✓ Roadmaps defined in all workstreams and being timely deployed
- ✓ 250+ people directly involved
- ✓ Strong monitoring and ownership of synergies

Organization: streamlining

Fully integrate Zodiac Aerospace into Safran for a lean governance and efficient operations

- Central corporate functions regrouped – **generating €15M synergies year on year**
- Direct representation of Seats, Cabin and Aerosystems on Safran Executive Committee
- Rebranding of Zodiac Aerospace with Safran names

2018
-
2019

Reinforcing organizations while controlling overheads

- Strong control on overheads representing **150-200 bps of Zodiac Aerospace EBIT margin improvement**

2018
-
2022

► **Organizational changes support a quick delivery of corporate function synergies, efficient operations and the development of Safran culture**

Functional convergence and operational performance

Central
functions
alignment

Functional processes, reporting and compliance in place for control and cost savings

Operational
excellence
deployment

Safran operational standards being deployed

25+ sites coached with dedicated operational projects

20 priority programs reviewed under Safran standards by end 2018 and 100+ by 2019

- Program / project management
- Manufacturing
- Supply chain
- Development (design & industrialize)

Lean-Sigma
roll-out

Safran Lean-Sigma culture deployed at rapid pace

1,000+ people trained on Safran sessions with more than 200 improvement projects launched

Recovery:
leverage
talents

Leverage our talents on key sites to accelerate the operational recovery

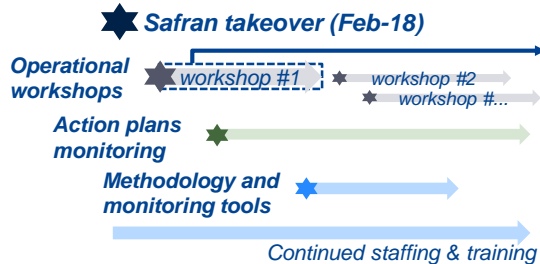
Strong dedication of on-sites teams with the support of 50+ Safran key executives appointed at Zodiac Aerospace

- ▶ **Processes & methodologies deployed to drive efficiency and productivity**
- ▶ **Ensuring quick instillation of performance and accountability culture**

Operational recovery on-track – case study of Seats France

Gradually deploying the full scope of integration actions to support on-site operational recovery

General context of site support



Focus on manufacturing workshop #1

Issue addressed

- For a dedicated production line
- 5S
 - Value stream mapping
 - Quality
 - Performance monitoring

Resources involved

- 2 Safran Master Black Belts
- 18 people on-site
- Branch top management sponsorship



KEY RESULTS

- ✓ Redesign of the production line with 20% reduction of workstations
- ✓ Improvement of lead time by 30%
- ✓ Cost to achieve quality divided by 2



▶ **Operational turnaround now flowing**

Synergies

Initial plan confirmed

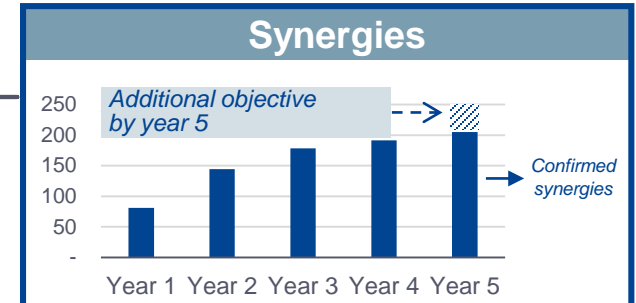
- Annual €200M pre-tax run rate cost synergies will be fully delivered by 2022
- Strong monitoring in place and clear ownership across Safran
- One-off synergies implementation costs in line with plan (€215M)

Further areas of efficiency will be investigated between now and 2022

- Including prospective analysis of business optimization on Aerosystems

Additional savings below EBIT and improved cash flow generation

- Financial costs saving on Zodiac Aerospace – €18M annual savings
- A better Working Capital driven by operational and footprint optimization



SOURCES OF INITIAL SYNERGIES

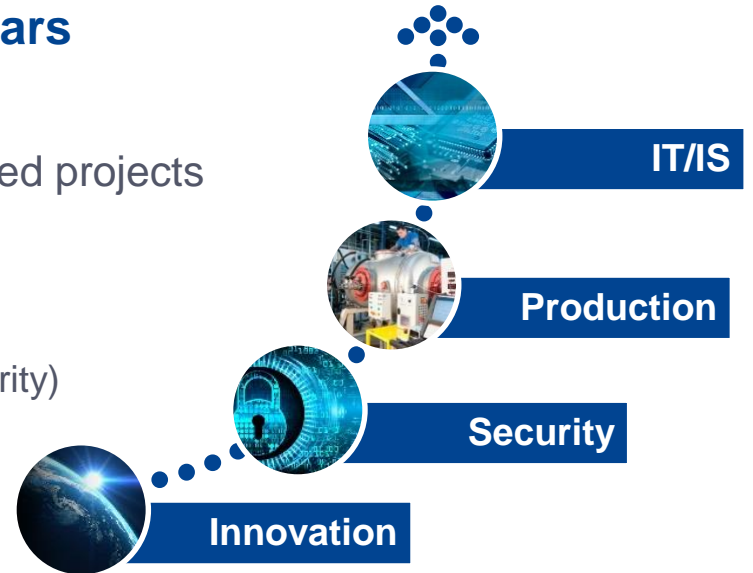
- ✓ Purchasing
- ✓ Industrial efficiency
- ✓ Optimized central R&T
- ✓ Central functions consolidation, with reduction of
 - ✓ external costs
 - ✓ overheads

- ▶ **Robust synergies in line with original plan**
- ▶ **Further opportunities being investigated**

Investing to strengthen Zodiac Aerospace

Focusing on core areas to ensure strong pillars of future growth:

- Overall information systems upgrades with dedicated projects
- Investments
 - > To upgrade factory standards
 - > To meet Safran security standards (including cyber security)
- Ensure continued innovation for a leading position and state-of-the-art technologies



▶ Investing in Zodiac Aerospace reinforcement to prepare for a future growth



2

AIRCRAFT INTERIORS

Vincent MASCRÉ,
Zodiac Aerospace CEO & Zodiac Aerospace
Seats CEO

Norman JORDAN,
Zodiac Aerospace Cabin CEO

Aircraft Interiors: a broad portfolio of integrated solutions and equipment



**OVERHEAD
BINS & CABIN
LININGS**



LAVATORIES



**GALLEYS
& CATERING
EQUIPMENT**
(Ovens, Coffee
Makers, Trolleys
etc.)



SEATS
(& crew seats)



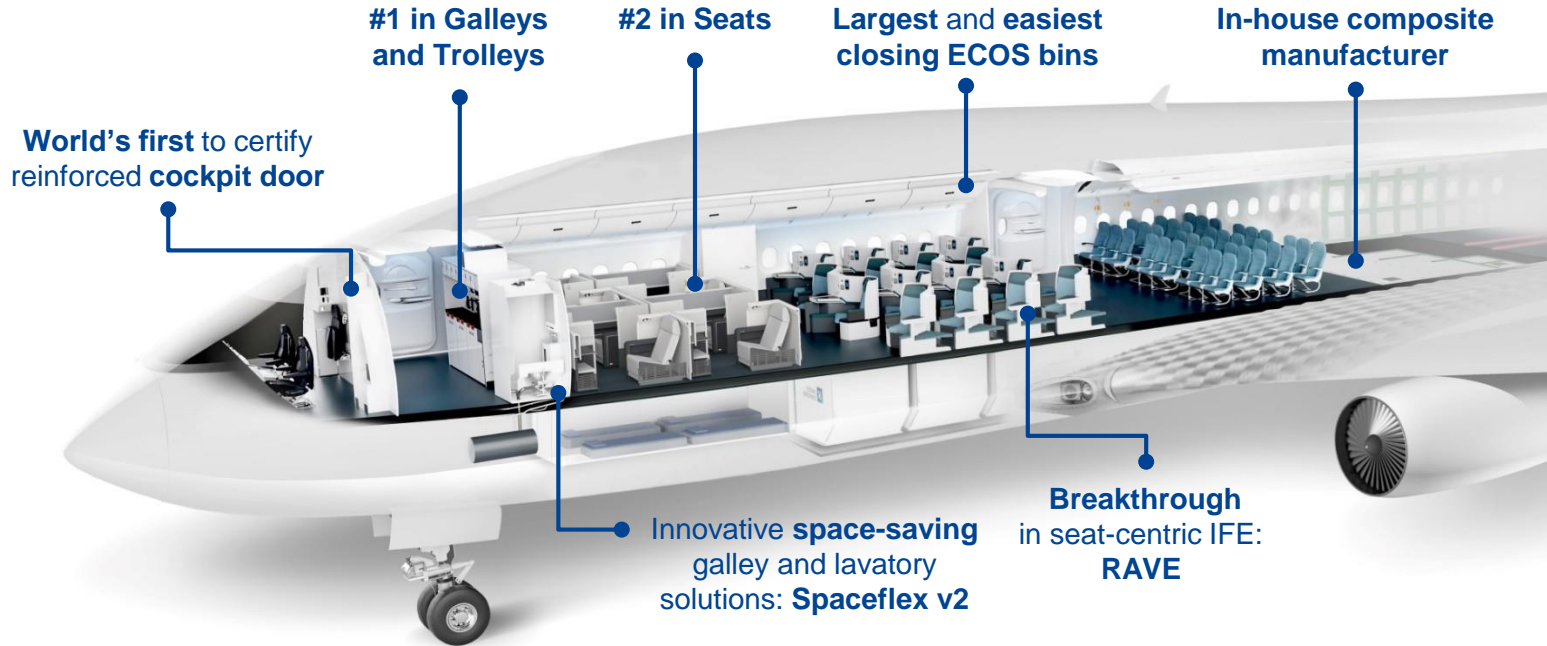
**INFLIGHT
ENTERTAINMENT**



VIP CABIN

- ▶ **Ensure safety and comfort (even wellness) for passengers**
- ▶ **Maximize efficiency and differentiation for airlines**

A world leader in Aircraft Interiors



- ▶ **The widest interiors portfolio worldwide**
- ▶ **Innovator on the market: technology and integration capability**

Aircraft Interiors are attractive for Safran

\$12.8 Billion in 2018 worldwide market ⁽¹⁾

Growing market: 2018-2022 forecasted CAGR: +3.2% CABIN, +4.6% SEATS, +7% IFE ⁽¹⁾

Regular business opportunities mitigating cyclicity of aircraft projects:

- Short product life cycles (Development = 2 years, Production = 6 to 8 years)
- Airline driven retrofits

2 Business Models:

- Supplier Furnished Equipment (SFE) → Tier 1 equipment provider, airframer driven
- Buyer Furnished Equipment (BFE) → Airlines are the customers
 - > Cabin ≈ 50/50 SFE vs BFE, Seats & IFE mostly BFE

(1) Internal study + Counterpoint Market Intelligence Ltd : Aircraft Interiors review - 2017

▶ **A dynamic market enabling a direct relationship with airlines who are the key industry drivers**

Aircraft Interiors industry is changing

	Industry changes	Safran's know-how
Airlines	<ul style="list-style-type: none"> • Customization and product segmentation • Connected cabin 	<ul style="list-style-type: none"> • Design • Innovation on architecture and technology • Bespoke solutions offers for “leaders” • Modular products lines • Equipment life monitoring + passengers apps
Authorities	<ul style="list-style-type: none"> • Certification: more stringent rules 	<ul style="list-style-type: none"> • Advanced analysis & test capabilities
Airframers	<ul style="list-style-type: none"> • Competition is coming 	<ul style="list-style-type: none"> • Integrated cabin solutions & innovation

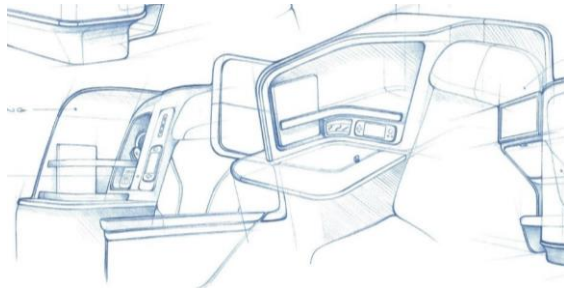
► **Innovation, cost reduction... and attractive design**

Innovation & design, to *thrive together* with our airline customers

Passenger experience goes beyond pure functional experience to propose an emotional experience

200 employees working on

- Advanced concepts
- Style & Perceived quality
- Research & Technology



- More than 1,200 patents in portfolio
- A dedicated innovation & design studio in California
- An annual Symposium to test our advanced innovations with the market

Seats: Today

Products & Market

- N°2 worldwide with 30% market share
- Return to offerability
- More than 150 Airlines customers, on most of the Airframer platforms
- Recognized as innovative and fitting customer experience expectations
- Poor aftermarket performance ratings

Footprint & Processes

- 3 product-oriented Business Units + 3 centers of excellence for key sub-assemblies (France, UK, USA)
- 2 competitive factories for metallic & composite components in Mexico & Tunisia



- In recovery mode with a few development challenges still work in-process
- Lack of standards & formalized processes

Seats: Our ambition

Products & Market

- Re-conquer customer base on all segments after non-offerability period:
 - > Back to 35% market share
- Offer innovative Economy & Business products based on modular platforms (standardization + customization):
 - > One award winning product per year
- Streamline and grow aftermarket business to improve services to customer:
 - > Enter the Top 5 of Airlines ratings in Services

Footprint & Processes

- Set-up robust design and supply chain processes to restore excellence in execution:
 - > On-time delivery 100%
 - Reduce industrial & purchasing costs:
 - > Ramp-up of volumes from low cost countries
 - > Full-scale Lean/Sigma
- ➔ **Target: 4% total costs improvement per year**

Cabin: Today

Products & Market

- N°1 worldwide with 22% market share⁽¹⁾, followed closely by Rockwell-Collins and Diehl Aerosystems
- Customer base split 50/50 between OEMs and Airlines
- Strong (70%+) market share in regional jet complete interiors, catering equipment, and single-aisle galleys
- Products recognized as innovative and well-designed
- Product durability, reliability, and in-service support improvement required
- Increasing competition from OEMs and China

Footprint & Processes

- Composed of 8 acquisitions made between 2005-2014
- 30 sites and 13,900 employees
- Product development, engineering, testing and final assembly in the USA, Canada, Germany, France, and the Netherlands
- Final assembly, sub-assembly, metal fabrication, and drafting in Czech Republic, Mexico, Thailand, and Brazil
- Lack of standardization and integration of the legacy business units
- Operational performance on a recovery path

(1) Safran + Counterpoint Market Intelligence Ltd: Aircraft Interiors review - 2017

Cabin: Our ambition

Products & Market

- Enhance N°1 market position
- Regain the trust of our customers by improving our operational performance, both quality and delivery
 - > 100% OTD
- Deliver best in class customer service and durable, reliable and easy to use products
 - > Regain a positive reputation with airlines and OEMs
- Innovate in the areas of connected cabin, modular product architecture, composite materials, and automation

Footprint & Processes

- Full deployment of Lean Sigma “One Safran”
- Product centers of excellence oriented around 4 product classes: floor-to-floor (bins and liners), lavatories, galleys, and equipment
- Common product platforms with high part commonality
- Improved cost competitiveness with higher competitive country footprint and benefits of part commonality
 - > Site consolidation from 30 sites to 23 sites
- Supply chain consolidation

In-Flight Entertainment

Today

Market products:

- N° 3 worldwide (5% market share)
- RAVE product technology leader
 - > Fully seat-centric, thin, light, high-definition
- Fastest growth in the market (AGR + 20%)

Footprint:

- Fabless company, 450 employees in USA & Germany
- Agile development process with modular software architecture

Our ambition

- Double sales in 5 years, driven by technology lead
- From IFE platform, expand to Global connectivity business
- From IFE & connectivity systems, expand to value added services
 - > Advertising, passenger digitalization and Analytics

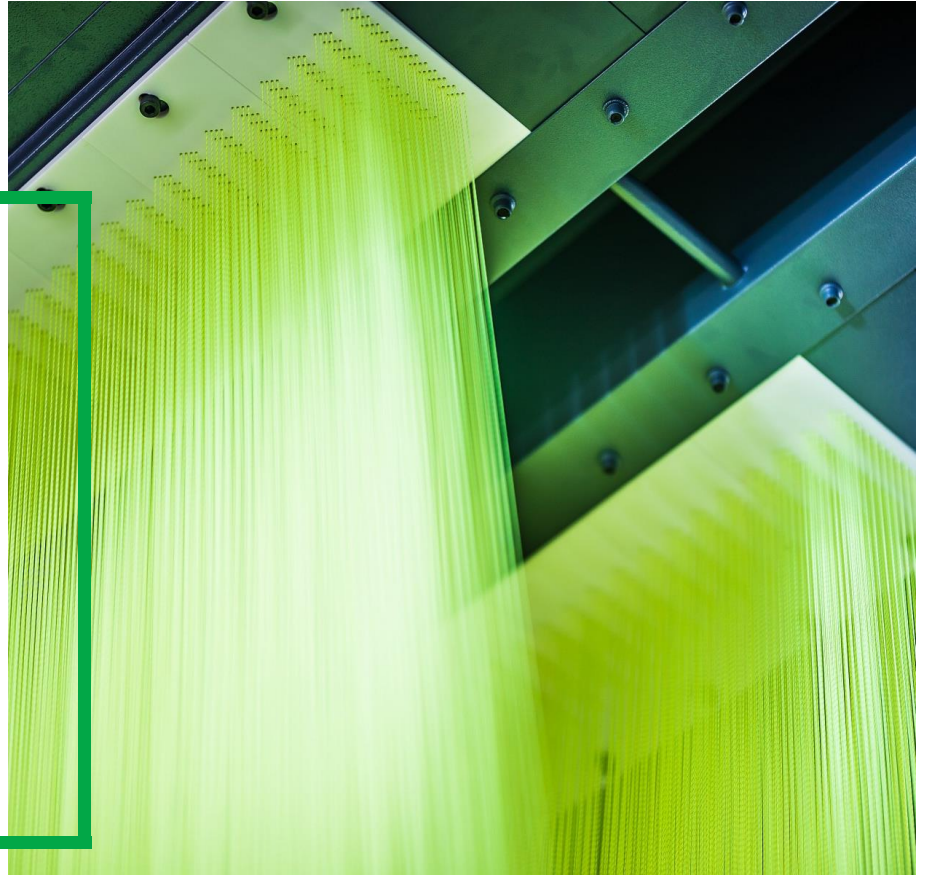
Our vision for Safran Interiors: customized global excellence

Restore full confidence from our customers through:

- **Quality & performance of our products and services**
 - > Innovate through technology and architecture, while leveraging our « *well designed and passenger friendly* » product reputation
- **Excellence of our operations**
 - > Set up standards and reduce costs, including legacy footprint streamline and Low Cost Countries ramp-up

Deliver robust financial returns:

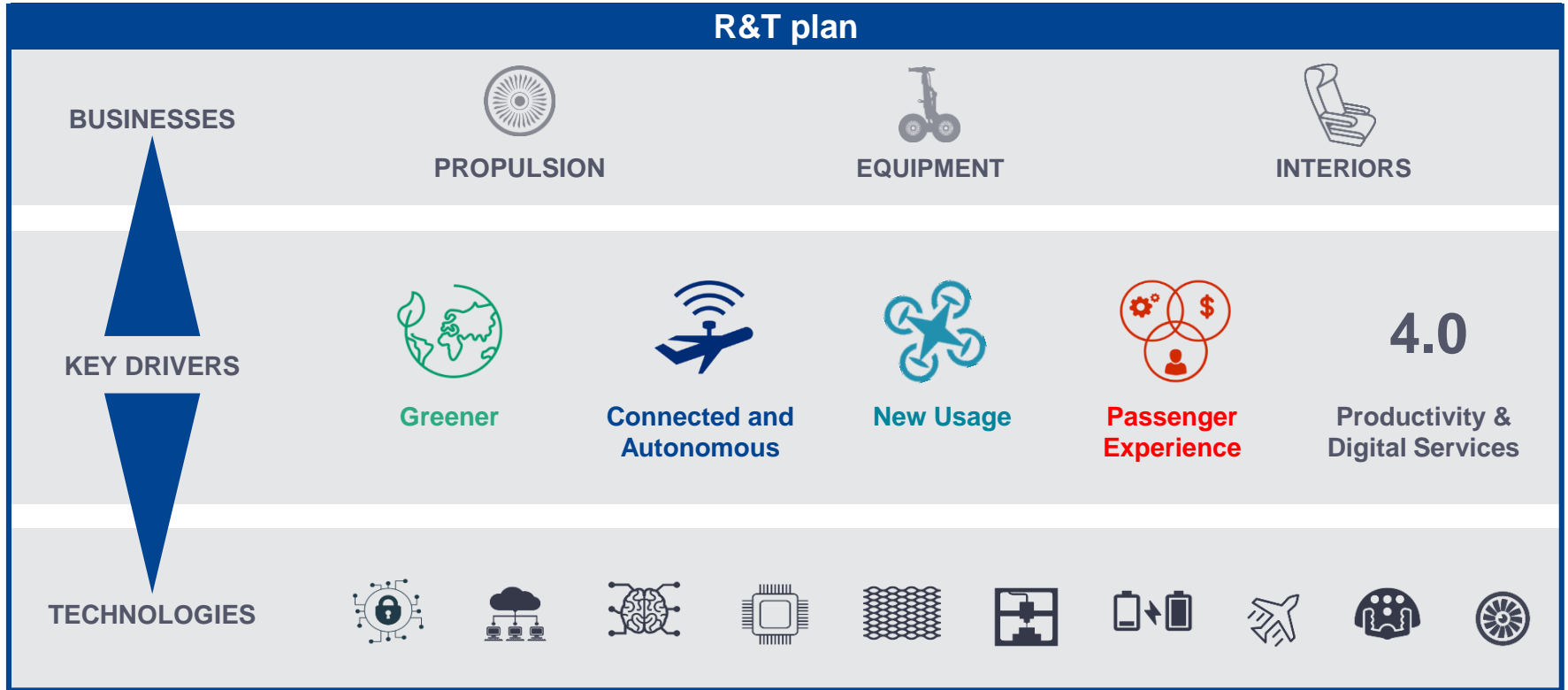
- Return to sustainable double-digit profitability



INNOVATION POWERING SAFRAN

Stéphane CUEILLE,
Chief Technology Officer

Technology, key to our competitiveness



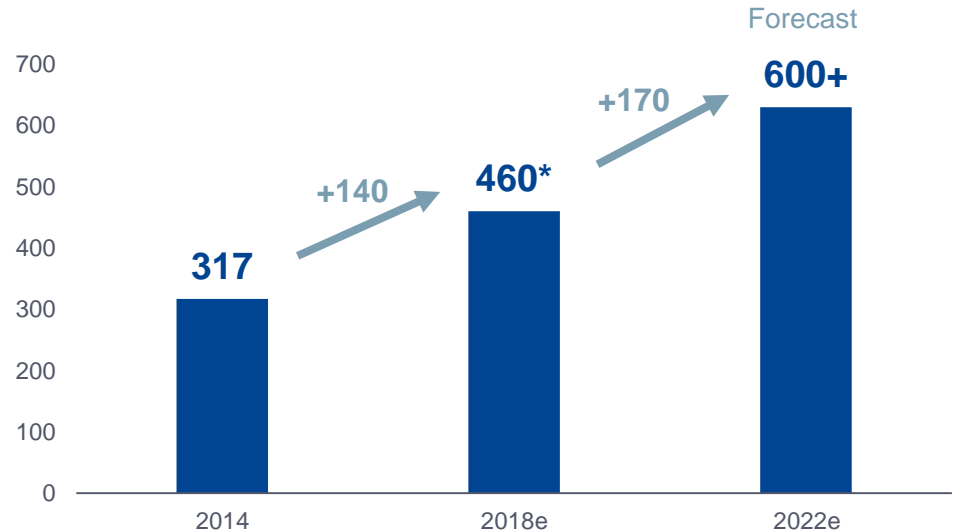
A growing investment in R&T and Innovation

**SAFRAN
RT&I**

€460M*

~3,000 FTE | 900 patents / year

Self-funded R&T and Innovation (€M)



* Self-funded R&T 2018 – including Zodiac Aerospace (€30M)

SAFRAN R&T and Innovation: state of the art organization and processes

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DAY/2018**

R&T roadmaps

40

Safran roadmaps

Products

Innovation

Methods & Tools

Technologies

Shared resources

600

Corporate Scientists



SAFRAN TECH
R&T CENTER



SAFRAN
ANALYTICS

**INTELLECTUAL PROPERTY
CENTER OF EXCELLENCE**

Corporate initiatives

4

Initiatives On Going



HYBRID
PROPULSION



AUTONOMOUS
SYSTEMS



ADDITIVE
MANUFACTURING



DIGITAL

Ecosystem

30

Strategic partnerships



SAFRAN
VENTURES



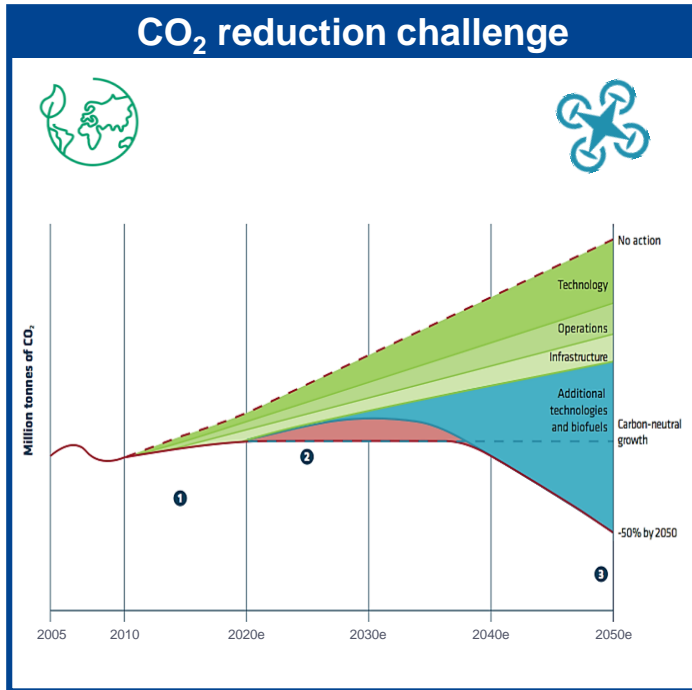
SCIENTIFIC
PARTNERSHIPS



TECHNOLOGY
PARTNERSHIPS

SAFRAN at the core of energy & propulsion challenges

CAPITAL
MARKETS
DAY/2018



Ultra-efficient gas turbine propulsion



Hybrid propulsion and Electrification



Use of Low Carbon Fuels





High efficiency advanced turbine propulsion

Open Rotor: a key milestone achieved – a true option for the future

Clean Sky SAGE2 Full-Scale Open Rotor Ground Test Demo



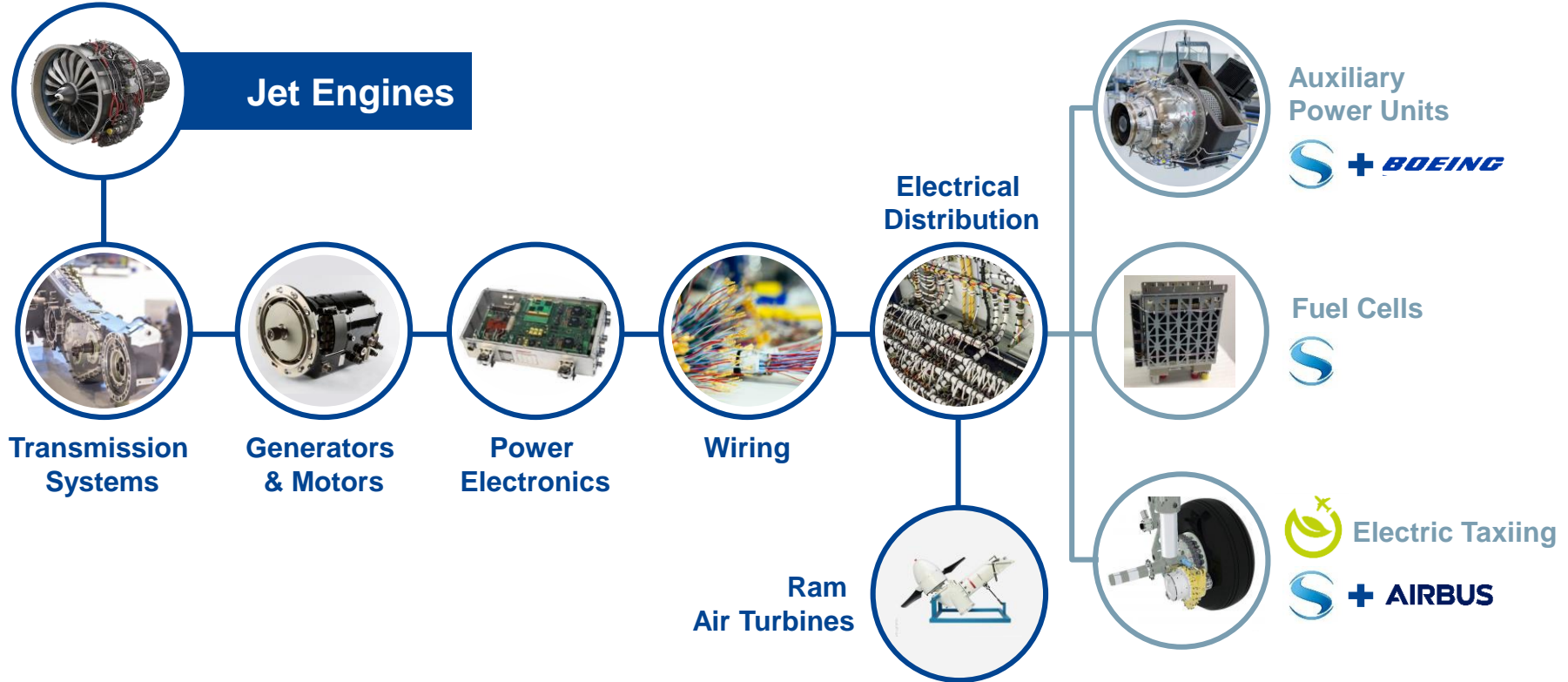
The only engine architecture allowing a 15% reduction of fuel consumption and CO₂ emissions compared to the LEAP Engine

- 3D-woven carbon fiber blades
- Same performance in terms of emitted noise as the LEAP engine
- Specific control system with Pitch Control Mechanism





Optimizing energy onboard the aircraft



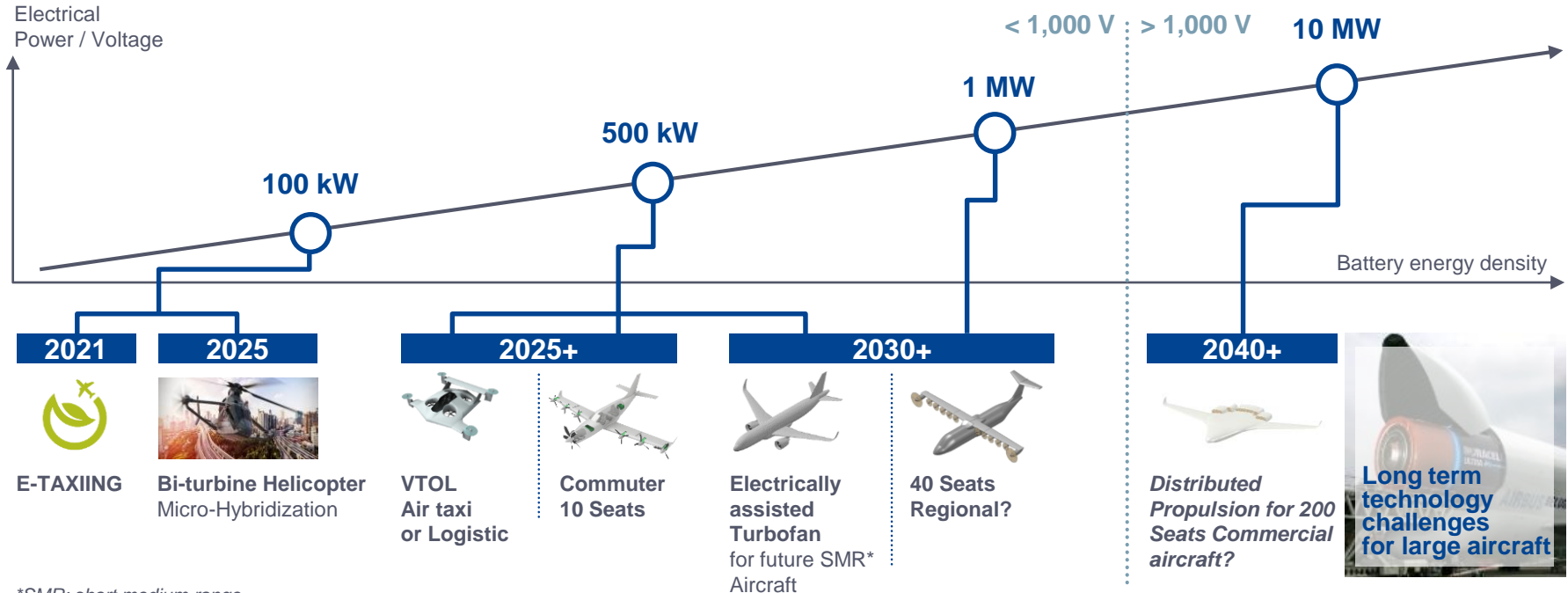


SAFRAN pioneering hybrid electric energy & propulsion

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A stepped approach

Potential of new usage, lower electrical power, shorter distance



*SMR: short medium range



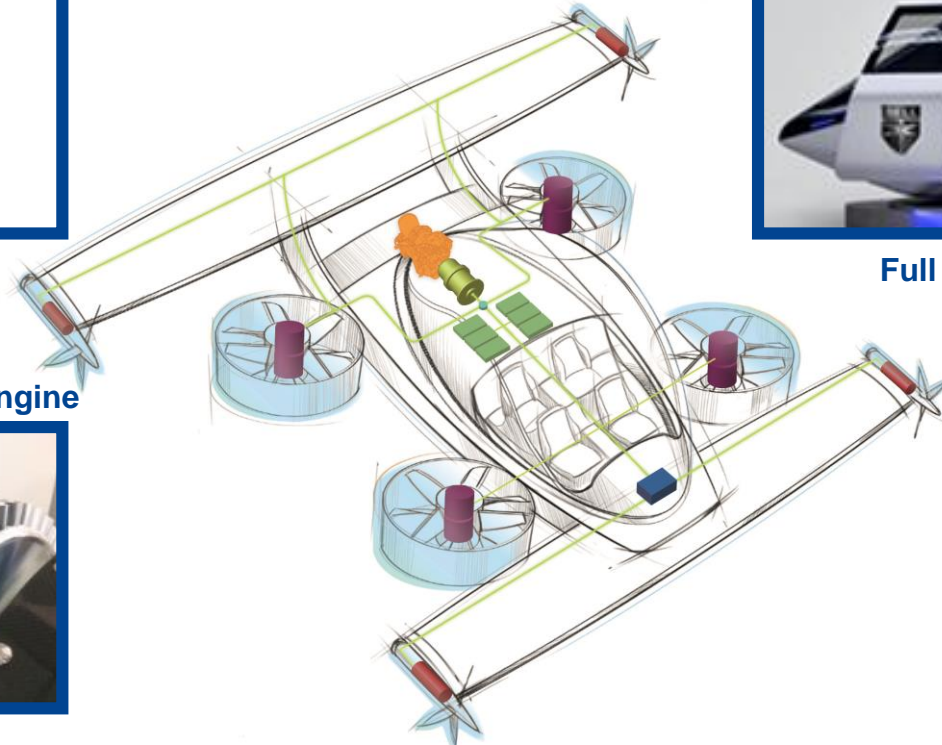
Vtol hybrid electric distributed propulsion

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Generator

**High power density
integrated electrical engine**



Full scale flight demo 2021 with Bell

**First test of a full hybrid
propulsive system (June 2018)**



Advanced materials & manufacturing processes

Polymer matrix composites



10% weight benefit, enabling advanced propulsion efficiency

Ceramic matrix composites



*+200°C & -60% weight:
A game-changing class of material*

**A core capability
for product
performance
and industrial
competitiveness**

High performance alloys



*+20% strength and x2 durability
for critical equipments*

Advanced non destructive testing



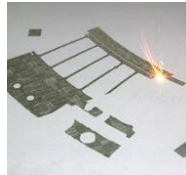
*20% cost reduction
and improved process control*

Turbine airfoil technologies



5-10% engine fuel burn benefit

Additive manufacturing: making it a reality



Accelerating transition
from R&T
to Product insertion
across Safran



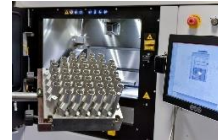
Benefits

- ▶ Weight
- ▶ Lead time
- ▶ Performance
- ▶ Supply-chain dependency
- ▶ Reduction of assemblies

Certified parts

Arrano

LEAP, APUs ...



Ambitious targets for new designs / products

Supported by full scale demonstrators



Engine

50 parts to 1 Weight -25%
Cost -15% Lead time / 6



Equipment

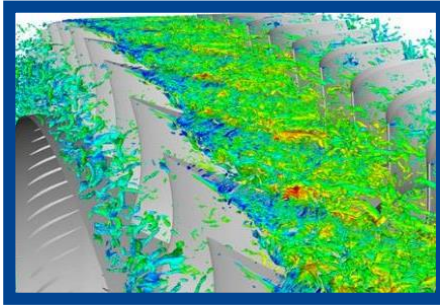
Additive campus project

Mutualized
R&T and
production
Center

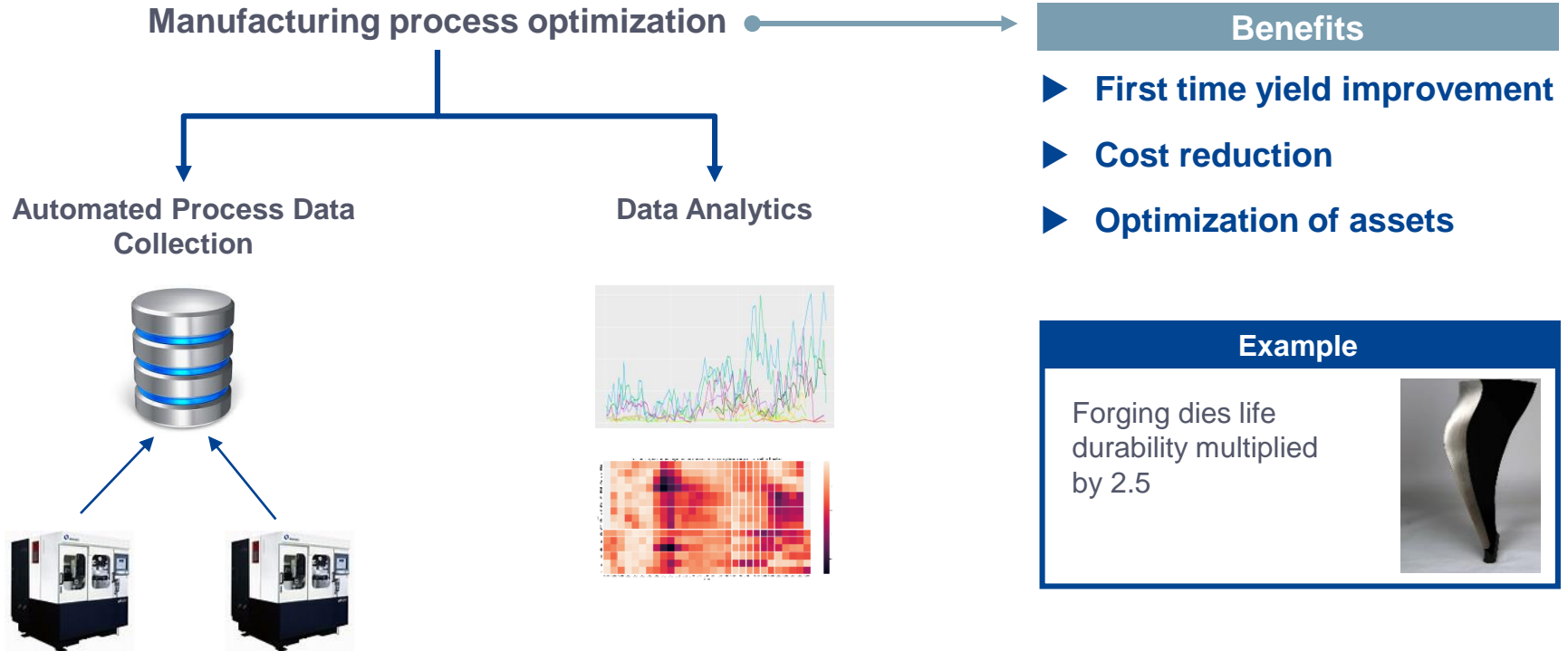


Digital at the core of our business processes

Manufacturing – Services – R&D



Data Analytics supporting the ramp-up of LEAP





Autonomous systems

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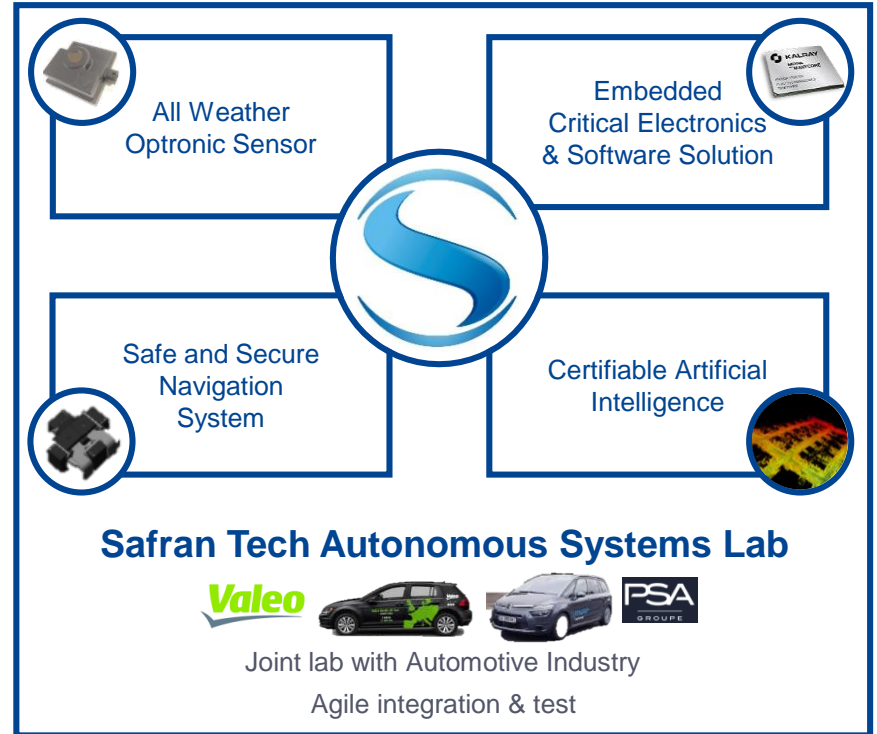
Defense Robotics



Drones



Pilot Assistance



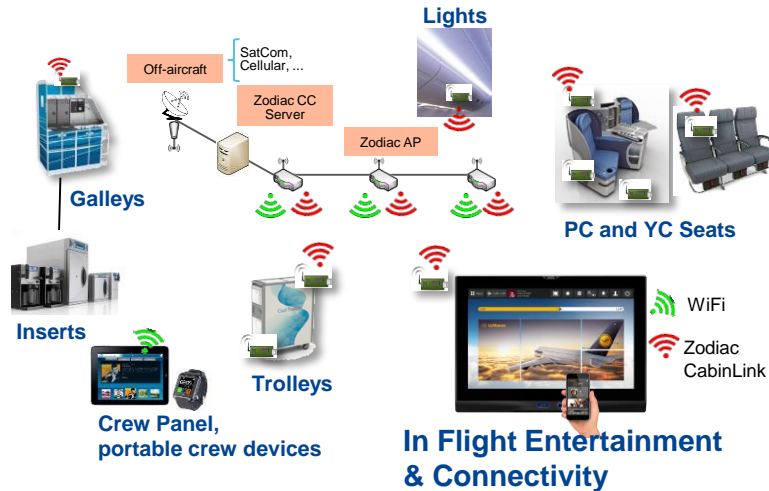


Innovation in cabin

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Connected cabin

- Passenger experience
- Operations & maintenance
- New revenue generation



ZEO: Safran design studio

- A unique combination of industrial design, advanced concept engineering and a mockup & prototype shop
- An open, collaborative environment dedicated to innovation





3rd Q&A session

ZODIAC AEROSPACE INTEGRATION AND R&D

Hélène MOREAU-LEROY,
Zodiac Aerospace Integration

Vincent MASCRÉ,
Zodiac Aerospace CEO & Zodiac Aerospace Seats CEO

Norman JORDAN,
Zodiac Aerospace Cabin CEO

Stéphane CUEILLE,
Chief Technology Officer

Closing remarks by Philippe PETITCOLIN, CEO

The most successful Aerospace and Defense company worldwide, ready to capture future growth

Focused at the same time on both short and long term with:

- An extreme attention to execution and operational excellence
- Growing investment in R&T and innovation to prepare the future

Disclaimer

**CAPITAL
MARKETS
DAY/2018**

FORWARD-LOOKING STATEMENTS

This document contains forward-looking statements relating to Safran, Zodiac Aerospace and their combined businesses, which do not refer to historical facts but refer to expectations based on management's current views and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance, or events to differ materially from those included in such statements. These statements or disclosures may discuss goals, intentions and expectations as to future trends, synergies, value accretions, plans, events, results of operations or financial condition, or state other information relating to Safran, Zodiac Aerospace and their combined businesses, based on current beliefs of management as well as assumptions made by, and information currently available to, management. Forward-looking statements generally will be accompanied by words such as "anticipate," "believe," "plan," "could," "would," "estimate," "expect," "forecast," "guidance," "intend," "may," "possible," "potential," "predict," "project" or other similar words, phrases or expressions. Many of these risks and uncertainties relate to factors that are beyond Safran's or Zodiac Aerospace's control. Therefore, investors and shareholders should not place undue reliance on such statements. Factors that could cause actual results to differ materially from those in the forward-looking statements include, but are not limited to: uncertainties related in particular to the economic, financial, competitive, tax or regulatory environment; the risks that the new businesses will not be integrated successfully or that the combined company will not realize estimated cost savings and synergies; Safran's or Zodiac Aerospace's ability to successfully implement and complete its plans and strategies and to meet its targets; the benefits from Safran's or Zodiac Aerospace's (and their combined businesses) plans and strategies being less than anticipated; and the risks described in the registration document (document de référence). The foregoing list of factors is not exhaustive. Forward-looking statements speak only as of the date they are made. Safran and Zodiac Aerospace do not assume any obligation to update any public information or forward-looking statement in this document to reflect events or circumstances after the date of this document, except as may be required by applicable laws.

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**POWERED
BY TRUST**

