



# CAPITAL MARKETS DAY 2021

*Driving innovation for sustainable growth*

*December 2, 2021*

# Disclaimer

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## FORWARD-LOOKING STATEMENTS

This document contains forward-looking statements relating to Safran, 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, 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 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; Safran's ability to successfully implement and complete its plans and strategies and to meet its targets; the benefits from Safran's plans and strategies being less than anticipated; the risks described in the Universal Registration Document (URD); the full impact of the outbreak of the COVID-19 disease.

The foregoing list of factors is not exhaustive. Forward-looking statements speak only as of the date they are made. Safran does 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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This document contains supplemental non-GAAP financial information. Readers are cautioned that these measures are unaudited and not directly reflected in the Group's financial statements as prepared under International Financial Reporting Standards and should not be considered as a substitute for GAAP financial measures. In addition, such non-GAAP financial measures may not be comparable to similarly titled information from other companies.

## DEFINITION

Civil aftermarket (expressed in USD): This non-accounting indicator (non-audited) comprises spares and MRO (Maintenance, Repair & Overhaul) revenue for all civil aircraft engines for Safran Aircraft Engines and its subsidiaries and reflects the evolution of the Group's sales in civil aircraft engines aftermarket.

# Agenda

**01.**

Chairman's  
opening remarks

**02.**

Perspectives  
and strategy

**03.**

Research  
& Technology

**04.**

Financial  
Framework

Q&A

BREAK

**05.**

Civil Engines

Q&A

**06.**

Aircraft Interiors

Q&A

**07.**

ESG

CLOSING

# Speakers



**Ross McINNES**

Chairman  
of the Board



**Olivier ANDRIÈS**

CEO



**Eric DALBIÈS**

EVP R&T  
and Innovation



**Delphine DIJOURD**

Head of RISE  
Program  
(on video)



**Pascal BANTEGNIE**

Appointed CFO



**Stéphane DUBOIS**

EVP Corporate  
Human & Social  
Responsibility

## CIVIL ENGINES



**Jean-Paul ALARY**

CEO Aircraft  
Engines



**François PLANAUD**

VP Services & MRO

## AIRCRAFT INTERIORS



**Vincent MASCRÉ**

CEO Seats



**Jorge ORTEGA**

CEO Cabin





Driving innovation for sustainable growth

01.

# Chairman's opening remarks

Ross McINNES,  
Chairman of the Board



02.

## Perspectives & Strategy

Olivier ANDRIÈS,  
CEO

Driving innovation for sustainable growth

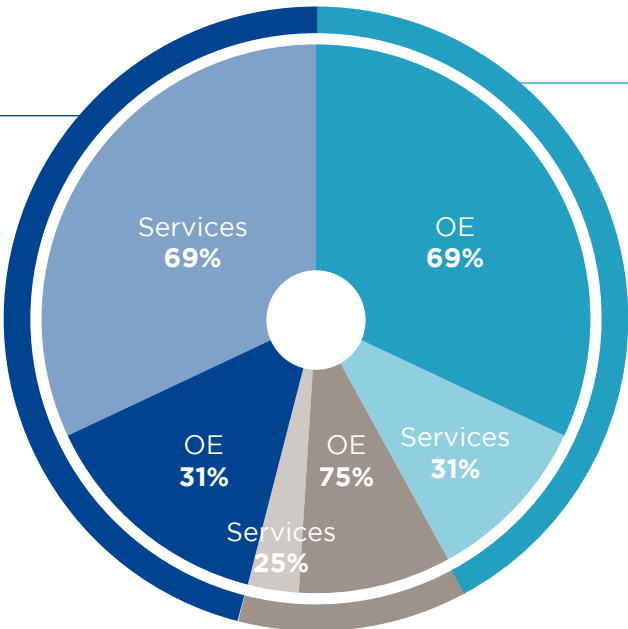


**Safran is rebounding from the Covid crisis  
with strong profitable growth  
at the forefront of sustainable aviation**

# Safran ID card: 3<sup>rd</sup> global aerospace group (excl. airframers)

## Strong leadership positions

Breakdown of 2020 adjusted revenue (€16,498M) by division



### Aerospace Propulsion

**46%**  
€7,663M

**24,204**  
EMPLOYEES

#1 WW through CFMI for narrowbody engines

#1 WW in helicopter turbine engines

**Strong positions** in European military programs: fighter and transport

#2 WW in Seats (BFE\*\*) with strong presence on business/high end

#1 WW in cabin interiors (mainly SFE\*\*\*)

### Aircraft Interiors

**12%**  
€1,922M

**13,928**  
EMPLOYEES

### Aircraft Equipment, Defense and Aerosystems

**42%**  
€6,893M

**38,471**  
EMPLOYEES

#### #1 WW

- Landing gear, carbon brakes
- Electrical power distribution
- Electrical wiring
- Evacuation slides

#### #2 WW

- Oxygen systems
- Engine nacelles & gearbox

#### #2 Europe

- Navigation & Optronics

■ ■ ■ Original Equipment ■ ■ ■ Services

Source Safran

\* including retrofit activities \*\*BFE: buyer-furnished equipment \*\*\*SFE: supplier-furnished equipment



# CMD'18 ambitions delivered despite major crisis

## AMBITIONS

- **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 fully-fledged civil & military engine**

## ACHIEVEMENTS

- **1<sup>st</sup> ramp-up achieved to 1,700 LEAP delivered in 2019, with best-in-class reliability**
- **Zodiac Aerospace integration completed. Synergies delivered and 2022 target already exceeded in 2020**
- **R&T roadmaps maintained through the crisis notably thanks to government funding. Leading architecture, integration and hot section of the FCAS\* engine**

\* FCAS: Future Combat Aircraft System

# Safran well positioned to meet accelerating trends



1

## INDUSTRY TRENDS

**Air transportation  
recovery & growth**

**Decarbonization  
of aviation**

**Defense/Sovereignty  
global dynamic**

## STRATEGY

**Driving  
innovation  
for sustainable  
growth**

## STRONG ASSETS

**Unique technology  
portfolio**

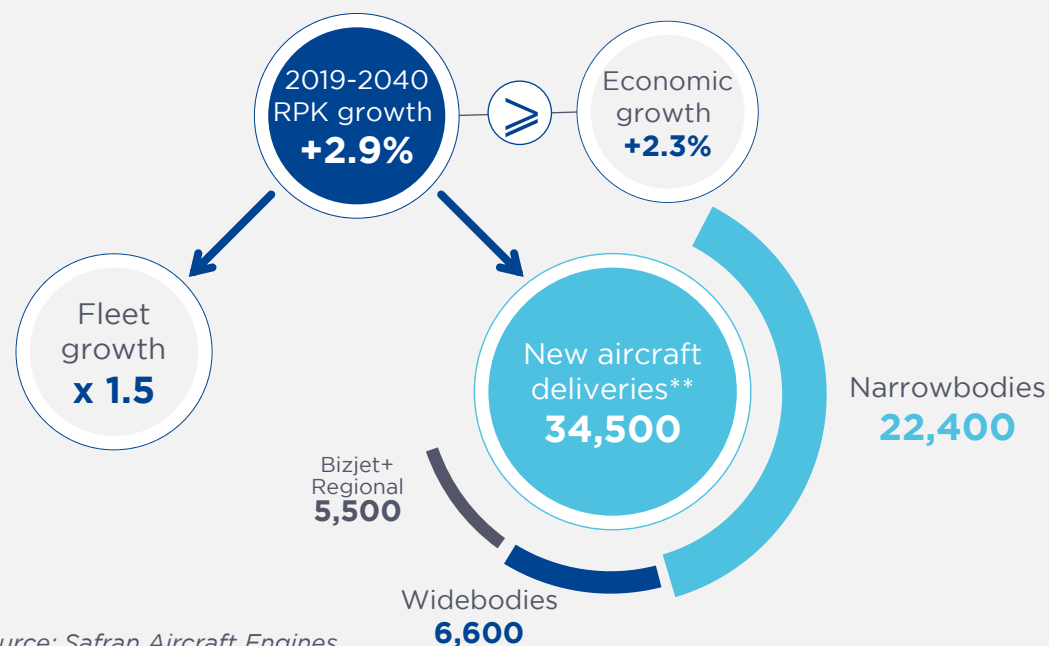
**Operational excellence  
leveraging digital**

**Talented people**

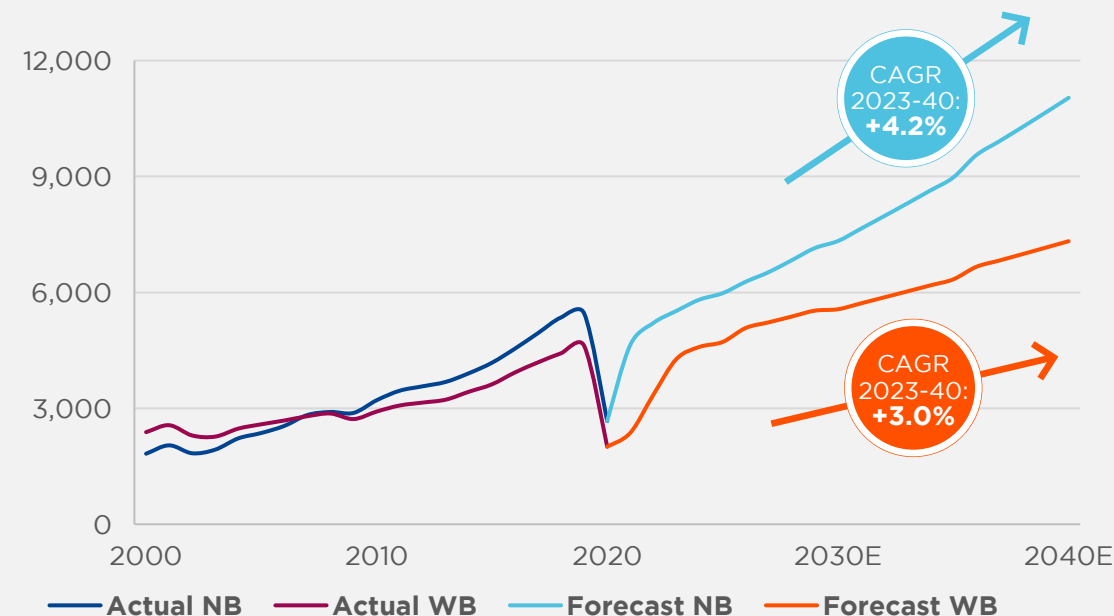
**Financial position**

# Favorable long term market dynamics

**Global air traffic** (measured in RPK\*)  
between 2019 and 2040



**Global aircraft capacity** (measured in ASK\*\*) between 2023 and 2040



**AIR TRAFFIC TO GROW FASTER THAN GDP IN THE NEXT 20 YEARS**  
Solid momentum, especially for narrowbodies

\* RPK: Revenue Passenger Kilometers. Annual growth (reference 2019) ; \*\* Between end 2020 and end 2040 ; \*\*\*ASK: Available Seat Kilometers



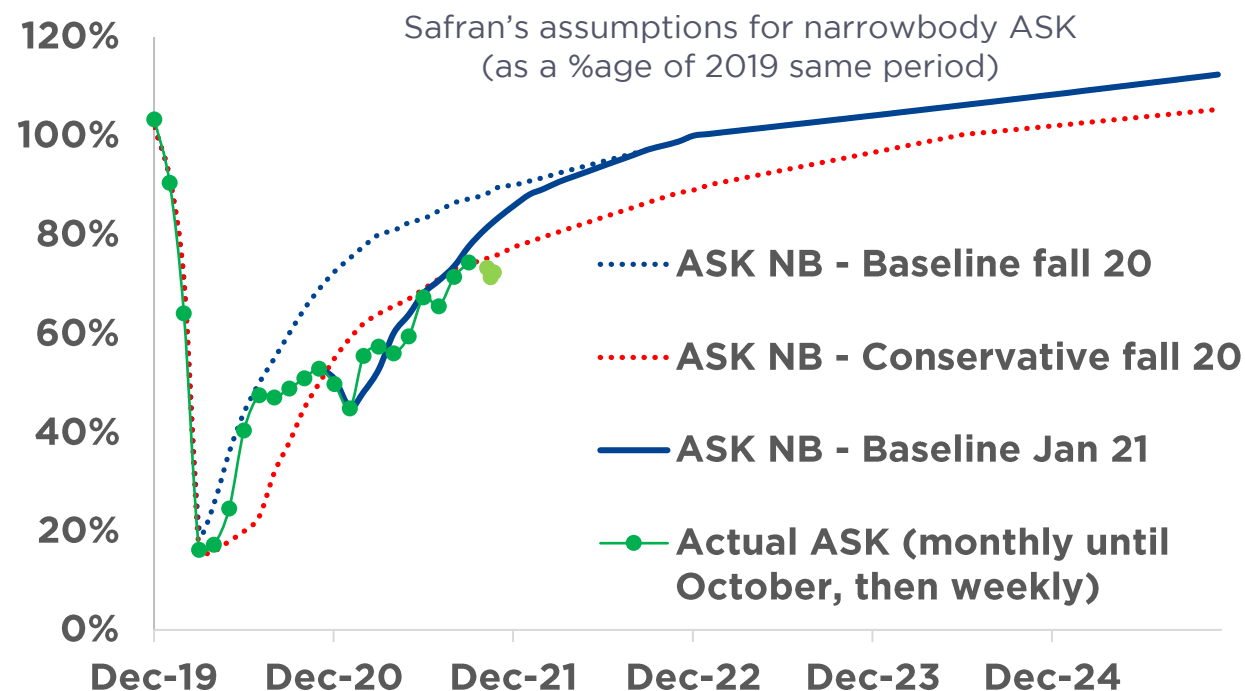
# Air traffic recovery gaining momentum

## NARROWBODY

Capacity (ASK) -28% as of 21<sup>st</sup> of November

Domestic traffic leading recovery

Global narrowbody capacity  
recovery expected by end 2022



## WIDEBODY

More exposed to international traffic and border controls

Slower traffic recovery -40% as of 21<sup>st</sup> of November

Global widebody capacity recovery  
expected by 2025

# In-service fleet: solid positions on most active aircraft

## NARROWBODY

- **Young & active fleet of CFM56-2nd generation aircraft**
  - High aircraft utilization during crisis
  - Low retirements in 2020 and 2021
  - Material impact of future retirements on aftermarket revenue is unlikely in the next few years
- **LEAP-powered aircraft: cycles more than doubled vs. 2019**

## WIDEBODY

- Retirement of older generation aircraft, most with low Safran content: **747, 767, A340...**
- High utilization of 777 powered by GE90-115 driven by freight demand (**Safran engine share ~24%**)



**STRONG AFTERMARKET REVENUE FLOW**

# Equipment aftermarket dynamics

## LANDING SYSTEMS

- **Landing gear:** periodic interval maintenance
- **Wheels and brakes:** per landing (same dynamic as engines)

## AEROSYSTEMS

- **Aerosafety (evacuation slides and oxygen systems):** periodic interval maintenance

## NACELLES

- **Strong ramp-up on A320neo ahead:**  
Initial Provisioning & on-condition maintenance



**WELL-BALANCED** exposure  
to OE and aftermarket

**DIFFERENT BUSINESS MODELS**  
with specific dynamics driving  
aftermarket growth

# Future fleet: onboard 4 high-runners

## NARROWBODY STRONG RAMP-UP

- **A320neo: strong order book and ramp-up**
  - LEAP has 60% market share on all A320 models
- **737 MAX: significant orders resuming in 2021. Inventory burn down ongoing and ramp-up to come**

**2,000 LEAP per year from 2023 onwards**

## WIDEBODY LOWER PRODUCTION RATES UNTIL ~2025

- **A350 and 787 will dominate the widebody market for next 10/15 years**

**Safran provides high equipment content**  
(e.g. landing gear, wiring, electrical distribution)



## 4 MOST ACTIVE PROGRAMS:

- represent ~90% of deliveries over next decade
- pave the way for **strong long-term aftermarket activity**



# Business jets and helicopters

## BUSINESS JETS

- **Moderate impact of Covid**
  - US Biz Jets domestic flights +25% in July 2021 vs 2019 (+5% international)
- **Recovery of deliveries in 2021-2022**
  - Low second hand inventory
- **Worldwide #1 positions\***
  - Nacelles
  - Fuel systems
  - Electrical distribution & wiring



**SPRINGBOARD TO DEVELOP FURTHER OUR POSITIONS** on future commercial platforms

## HELICOPTERS

- **Diversity of missions (military, emergency, medical)**
  - Safran engines flew +15 % more in 2020 vs. 2019
- **Worldwide #1 positions\***
  - Turbines
  - Navigation & Flight Control
  - Fuel Systems
- **Complete portfolio of brand new certified turbines:** Arrano, Ardiden, Aneto
- **Onboard all platforms:** Airbus Helicopters, Bell, Leonardo, Kamov, KAI, HAL...



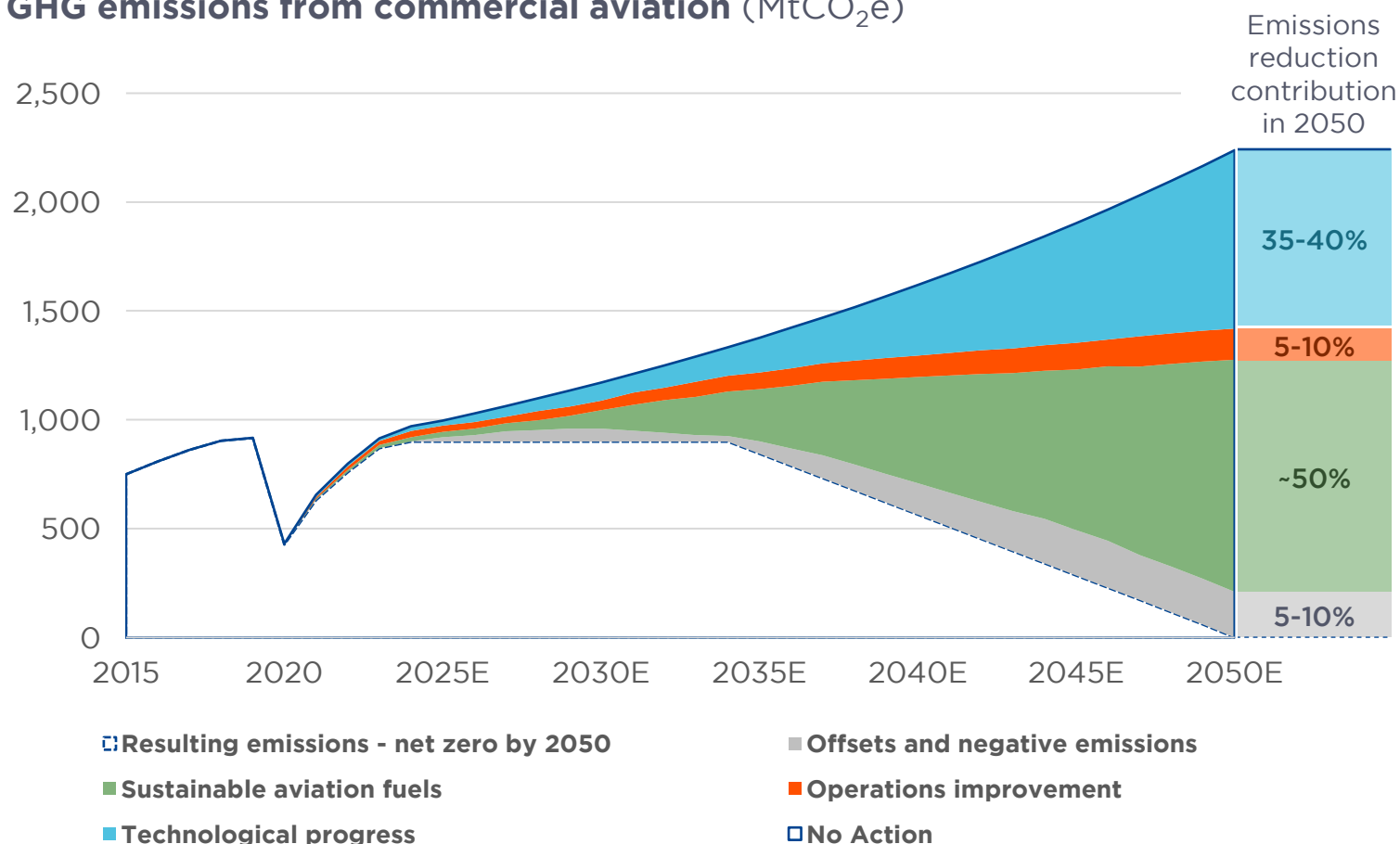
**STRONG LEADERSHIP** in a resilient market

\* Source: Safran

# Safran is committed to net zero aviation by 2050...

## SAFRAN ACTIVE ON LEVERS TO ADDRESS NEARLY 90% OF CO<sub>2</sub> REDUCTION TARGETS

### GHG emissions from commercial aviation (MtCO<sub>2</sub>e)



Source: Safran

Prepare disruptive technology for next-gen engine and aircraft

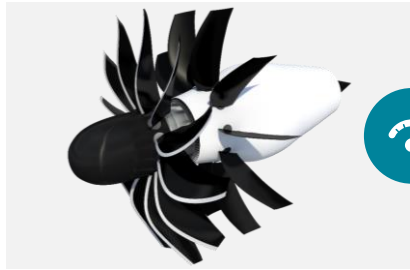
Accelerate the uptake of sustainable aviation fuel (SAF):

- Technically already available
- Only option for widebody

# ... with a dedicated roadmap on CO<sub>2</sub> emissions from products

## Scope 3\*

Decarbonization  
of aviation



**1. Deliver technologies for an ultra-efficient NB aircraft with (30)% fuel burn by 2035**



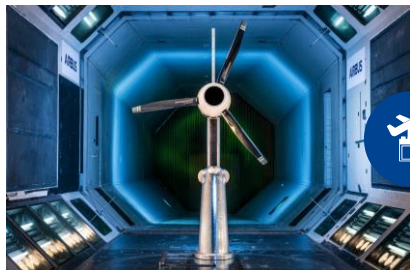
- › RISE program: disruptive technologies for future narrowbody engine providing 20% fuel burn savings
- › Lightweight materials
- › More electric aircraft



**2. Enable the transition to low-carbon fuels**



- › Current engines: push the certification from 50% towards 100% SAF blend
- › Deliver technologies compatible with 100% drop-in SAF
- › Prepare hydrogen solutions



**3. Unlock the potential of electric/hybrid propulsion**



- › Mature hybrid and electric propulsion technologies for new air mobility, helicopters, commuters and regional



**MATURING TECHNOLOGY BUILDING BLOCKS** to meet market demand

\* Mainly product usage. Disclosure of all categories of scope 3 emissions and objective of reduction in 2022.

# Defense & space activities: resilience and cross-fertilization

- Geopolitical tensions
- Rising defense and space budgets (US, UK, France, India...)
- Defense activities held up well through 2020-2021
- Civil/military duality of:
  - Technologies
  - Supply chain
  - Talents
- Strong positions in defense & space programs
  - Rafale fighter export dynamics
  - Other European, UK and US programs: A400M, Typhoon, C17, F18, V22, CH47
  - Recognized state of the art technologies (navigation, optronics...)
  - Leading architecture, integration and hot section of the 6<sup>th</sup> gen European fighter engine (FCAS)
  - **Space:** 50% ownership of ArianeGroup; instrumentation for testing, telemetry and communications (Safran Data Systems)
  - **Helicopter engines, sighting system, flight control:** H225, NH90, Tiger



**Sovereignty programs nurture Safran's technology roots**



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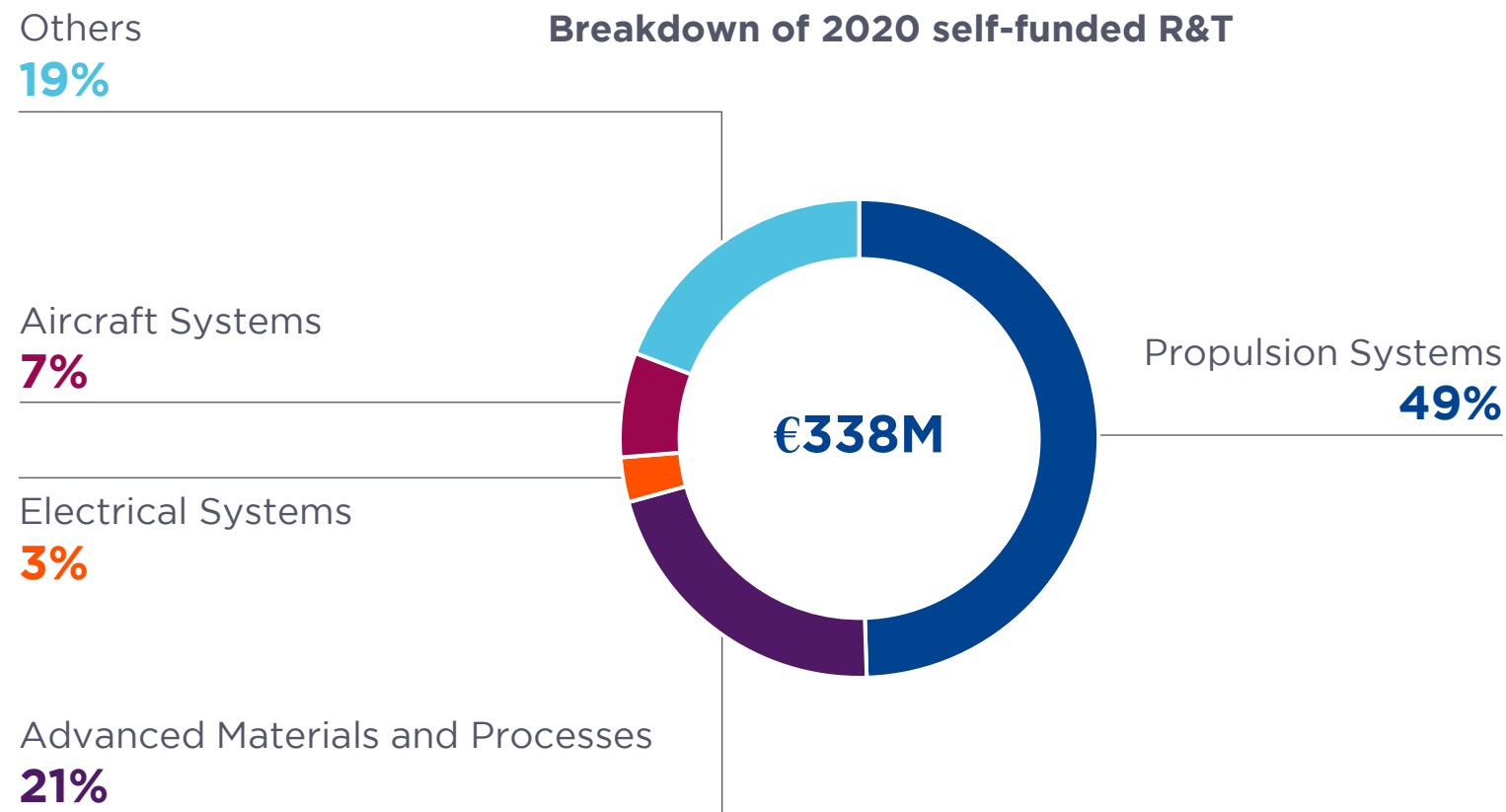
## INDUSTRY TRENDS

## STRATEGY

## STRONG ASSETS



# Unique technology portfolio



**75% of self-funded R&T**  
for sustainable aviation

**€~4.2bn gross R&T spending  
over 2021-2025, of which:**

- €~2.8bn self-funded R&T
- €~1.4bn public funding

**12,000+ employees** in R&D  
highly skilled and  
experienced workforce  
maintained

**+** **ACCELERATED PACE** of investment for decarbonization

# Operational excellence

## RATIONALIZED INDUSTRIAL FOOTPRINT

### 2020

Seats (Camberley UK, Santa Maria US),  
Cabin (Sterling US),  
Electrical & Power (Eatontown US)

### 2021

Cabin (Bellingham and Ontario, US),  
Electrical & Power (Santa Rosa, US)

## EXPANSION IN COST COMPETITIVE COUNTRIES

## STREAMLINED ORGANIZATION

## "ONE SAFRAN"

OUR OPERATING SYSTEM  
TO OPTIMIZE ALL PROCESSES  
(Development, manufacturing, supply chain,  
support and services)

**Proven experience:**  
enabler for **Zodiac Aerospace integration**



## ACCELERATED DIGITAL PLAN IN 2021

**Engineering 4.0:**  
improved time to market

**Manufacturing 4.0:**  
increased efficiency  
and quality (eg. full digital  
continuity with engineering)

**Data 4.0:**  
latest data technologies to extract  
value from our products & processes

**Analytics for services:**  
develop services to improve  
product in service availability  
(eg. predictive maintenance)



Recognized **OPERATIONAL EXCELLENCE** leveraging digital

# Focus on Safran's advanced data analytics capabilities

## SAFRAN ANALYTICS

- **Center of excellence in data analytics with best in class platform**
  - 87 resources with PhD level data scientists
  - 80% of algorithms developed integrate Machine Learning / Deep learning
  - In support of digital transformation streams & companies data teams

## OVERALL SAFRAN DATA CAPABILITIES

- **Data scientists & analysts**
  - 160 data scientists & data analysts
- **Data management resources**
  - 210 resources
- **Support & services: 101 uses cases in progress**
  - Health monitoring, Potential of life, Dispatch reliability advanced services
- **Engineering: 98 uses cases in progress**
  - Cross test and simulation data...
- **Manufacturing: 125 uses cases in progress**
  - Process optimization, non destructive testing...



**A key lever of digital transformation**



# Talented people

76,430 employees (excluding temps) as of 30<sup>th</sup> September 2021

Talented people

## REACTION THROUGH CRISIS

Safran's employees have demonstrated:

- Agility
- Solidarity
- Commitment

Safran has prioritized:

- Retention of key talents (managers and experts)
- Mobility across business and job categories

## ROADMAP

- Ensure forthcoming ramp-up for production and services
- Develop and mature technologies for the next generation of ultra-efficient aircraft
- Accelerate Safran digital transformation



**FOCUS ON KEY COMPETENCIES** - recruitment and upskilling

3

## STRATEGY

**Driving  
innovation  
for sustainable  
growth**

**1 | Organic Growth**

**2 | Portfolio evolution**

## INDUSTRY TRENDS

**Air transportation  
recovery & growth**

**Decarbonization  
of aviation**

**Defense/Sovereignty  
global dynamic**

## STRONG ASSETS

**Unique technology  
portfolio**

**Operational excellence  
leveraging digital**

**Talented people**

**Financial position**

# Aerospace Propulsion

## OUR STRENGTHS

- Large and young installed base of civil engines
- Leading position on fast-growing next generation fleet
- Fully-fledged engine manufacturer

## STRATEGY

- **Execute new ramp-up in OE deliveries for both commercial and military applications (M88)**
- **Ensure smooth aftermarket transition from CFM56 to LEAP**
- **Be at the forefront of air transport decarbonization (RISE)**
- **Consolidate our position as a fully-fledged engine manufacturer (FCAS)**



# Equipment & Defense

## OUR STRENGTHS

- Long-standing high proficiency of main mission and safety critical systems
- Strong aftermarket business models (Wheels & Brakes, Landing gear, Evacuation slides...)
- Strong position on French, European and UK/US defense platforms
- State-of-the-art technology level on navigation and optronics

## STRATEGY

- **Leverage our strengths to grow organically and expand further our portfolio**
- **Prepare technologies and materials for lighter & greener solutions**
- **Be the leader in electrical/hybrid propulsion for new air mobilities**

# Aircraft Interiors

## OUR STRENGTHS

- Operational excellence and customer confidence restored
- Leadership in design: world-class passenger experience for airline differentiation

## STRATEGY

- **Provide unequalled passenger experience**
- **Achieve double-digit profitability when topline comes back**

# Portfolio evolution

## PORTFOLIO REVIEW

- Assessment of Zodiac Aerospace legacy business portfolio launched in 2021
- Criteria to meet alignment with Safran's DNA
  - High barriers to entry (technology, mission critical, differentiation)
  - Strong aftermarket
  - Profitable growth
- Former Zodiac Aerospace activities: **70% confirmed as core** **30% under review**

## SELECTIVE BOLT-ON ACQUISITIONS

- Technology bricks reinforcing our market position in key segments, including through Safran Corporate Ventures
- Securing supply chain when critical
- Financial discipline



# CMD'21 ambitions

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**Execute new LEAP ramp-up and ensure smooth aftermarket transition from CFM56 to LEAP**

**Leverage our leading positions in Equipment & Defense to grow organically and expand further our portfolio**

**Achieve double-digit profitability in Aircraft Interiors when topline comes back**

**Spearhead the technological response to decarbonization**



**Safran is rebounding from the Covid crisis  
with strong profitable growth  
at the forefront of sustainable aviation**



Driving innovation for sustainable growth

03.

## Research & Technology

Eric DALBIÈS  
VP R&T and Innovation

# Research & technology resourced for successful execution

## R&T ROADMAPS



# 40

roadmaps

TECHNOLOGIES

PRODUCTS

INNOVATION

METHODS & TOOLS

## SHARED RESOURCES



# 500

Corporate scientists

SAFRAN TECH R&T CENTER



21% are women

28% are 30 to 34 years old

EXCELLENCE CENTER IN  
INTELLECTUAL PROPERTY

## ECOSYSTEM



# 30

Strategic partnerships

SCIENTIFIC PARTNERSHIPS

TECHNOLOGY PARTNERSHIPS

STARTUPS

50%  
of R&D  
expenses

PUBLIC  
FUNDING

Governments  
(CORAC, MoD)  
and Europe

>100  
experts



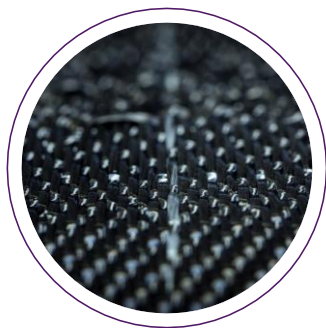
1,000+  
Patent  
filings  
p.a.



**Self-funded R&T effort of €2.8bn from 2021 to 2025**



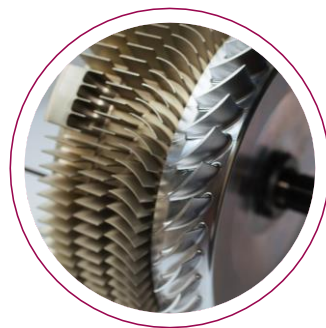
# Continuous investment in next-generation technologies to address decarbonization



## MATERIALS AND PROCESSES

### IDENTIFY AND IMPLEMENT

innovative materials  
and processes for products  
with higher performance, lighter,  
easier to produce and to maintain



## POWER AND ENERGY

### DEVELOP NEW SYSTEMS

and technologies for energy  
to tackle the environmental  
challenge and the new mobilities



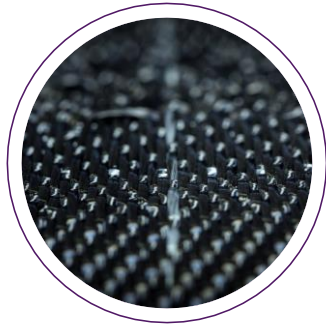
## DIGITAL TECHNOLOGY

### GATHER, PROCESS AND MODEL INFORMATION

to increase  
our productivity and deliver  
competitive and superior  
products and services



**SAFRAN INVESTS IN ENABLING TECHNOLOGIES** to meet our customers' future needs with the broadest portfolio of products on board an aircraft



## MATERIALS AND PROCESSES

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### **IDENTIFY AND IMPLEMENT**

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## POWER AND ENERGY

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## DIGITAL TECHNOLOGY

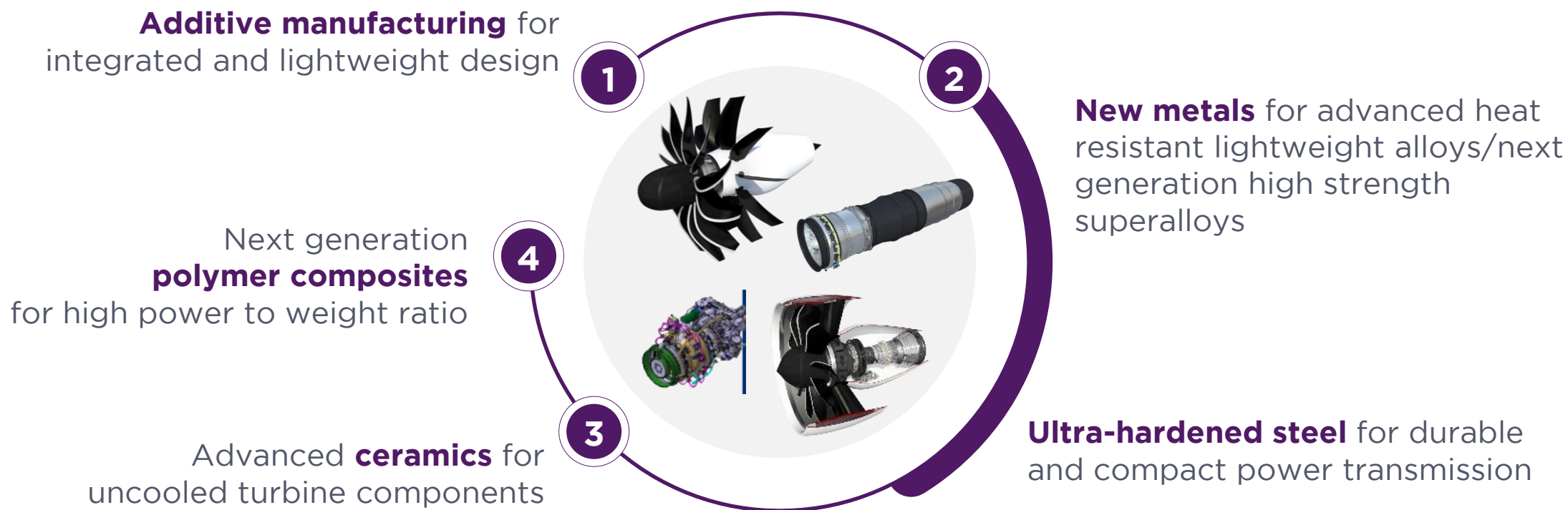
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### **GATHER, PROCESS AND MODEL INFORMATION**

to increase  
our productivity and deliver  
competitive and superior  
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# Materials and processes



**INVESTMENT IN MATERIALS AND ORGANISATION  
FOR DIFFERENTIATING TECHNOLOGIES**

# Additive manufacturing

## ■ A powerful lever for a wide range of aircraft equipment

- Weight savings and increasingly compact parts
- Buy-to-Fly dramatically improved (optimized procurement of raw material)
- Shortened lead times
- Wider & flexible supply chain

## ■ Additive manufacturing is already a reality

- ~10 part numbers certified & flying as of today (including for CFM56 and LEAP)

## ■ Dedicated center of excellence, Safran Additive Manufacturing Campus, live since October 2021

- Shared facility supporting all Group companies



**Structural Engine Casing:**  
200 parts in 1



**Hydraulic unit for A350 landing gear**  
50% weight saving



**Safran Additive Manufacturing Campus**

# New metals

- **New nickel-based superalloys to improve thermo-mechanical performance**

- Mastering metallurgy of turbine disks
- Development of materials for turbine and compressor blades



**Forging high pressure turbine disk**



**High pressure turbine disk**



**High pressure turbine blade coated with low conductivity thermal barrier coating**

- **Race for high modulus steel for reliable and compact reduction gearboxes**

- Nitrited steels for higher fatigue strength
- Optimised dimensioning thanks to digital

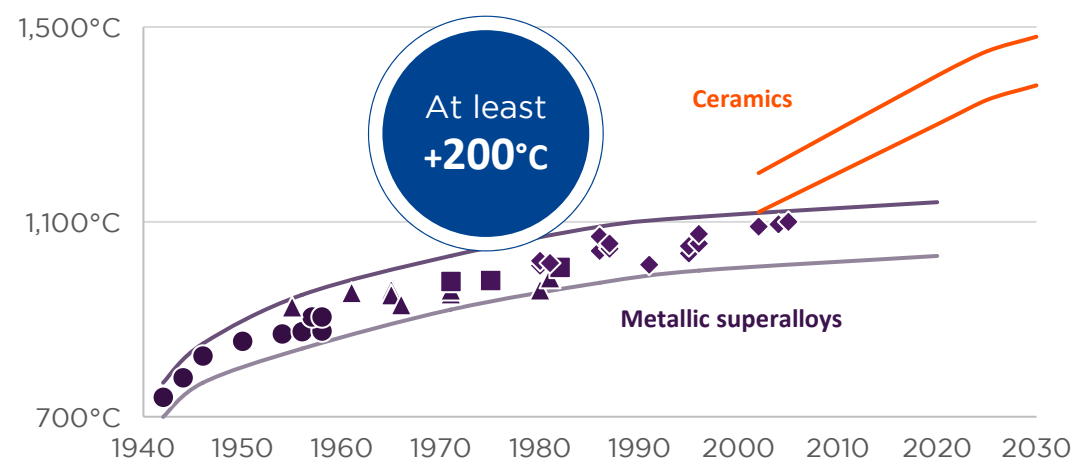


**Heat treatment furnace**

# Ceramics

## HOTTER & LIGHTER: MAJOR LEVER FOR ENGINE DECARBONIZATION

### Maximum temperature of turbine materials



**3x lighter than comparable metallic components**

## SAFRAN CERAMICS: DEDICATED SHARED CENTER OF EXCELLENCE

### Strategic investment

- **10 000** sq.m facility
- **270** equipments
- **110** engineers and scientists, **20 PhD** students



**Ceramic densification furnace**



**Ceramic composites turbine parts**

# Polymer composites

## LIGHTWEIGHT AND EXCELLENT MECHANICAL PROPERTIES

- Disruptive propulsive architectures optimizing fuel consumption
- Weight savings on all equipment across the aircraft (interiors and others)

## SUPPORTED BY SAFRAN COMPOSITES R&T PLATFORM

- In connection with all Group companies and a rich network of partners (academic research, technology platforms and research centers, SME and Start-ups)



**LEAP**  
fan diameter: 2m



Variable pitch fan,  
hollow and de-iced

**RISE**  
open fan diameter: 4m



## MATERIALS AND PROCESSES

---

### **IDENTIFY AND IMPLEMENT**

innovative materials  
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with higher performance, lighter,  
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## POWER AND ENERGY

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### **DEVELOP NEW SYSTEMS**

and technologies for energy  
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## DIGITAL TECHNOLOGY

### **GATHER, PROCESS AND MODEL INFORMATION**

to increase  
our productivity and deliver  
competitive and superior  
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# Accelerate power and energy transition to enable aviation decarbonization

			POWER / THRUST GENERATION		
			Gas turbine	Hybrid electric	Full electric
ENERGY SOURCE	Low carbon fuels	Sustainable Aviation Fuels	Ultra-efficient engine Kerosene replacement	Hybrid turbofan Hybrid propulsion system (series - parallel)	Electric motor
		Power-to-liquid (e-fuels)			
		Hydrogen	Direct combustion H <sub>2</sub> burn		Fuel cell H <sub>2</sub> PAC
		Electricity (direct charge)			Batteries



## PROPULSION ARCHITECTURE - INTEGRATION TECHNOLOGIES

Different best solutions depending on range and size of aircraft

# RISE, an ambitious technology demonstration program

## CONTEXT

- Enable carbon neutral aviation with disruptive aircraft engine
- Strong signal sent on the technological ambition that can be reached by 2035
- A demonstrator to prove the credibility of the architecture no later than 2025/26



## CFM'S ANSWER

- 20+% fuel savings at engine level in 2035 compared to today's most efficient engines
  - Disruptive architecture: Open Fan
  - Next-gen turbine materials
  - Hybrid electric
  - Reduction gearbox
- 100% SAF and H<sub>2</sub> compatibility
- Same noise performance as LEAP
- A head start by Safran and GE since 2019 with early R&T phase, disclosed in June 2021



**WORK TOGETHER** with aircraft manufacturers to **OPTIMIZE AIRFRAME INTEGRATION**

# Deliver technologies capable of 100% drop-in fuels (SAF, e-fuels)

## OUR ACHIEVEMENTS

- **Use of SAF** on engine acceptance tests (target 35+% in 2025)
- **Ground and in-flight demonstrator** on production engines (Makila-2, Arrano/H160, LEAP/A320 - Silvercrest)
- **Strong position** at European and international level (RefuelEU, ESAF alliance, US regulation)

## OUR STRENGTHS

- **Development of products** for linefit and retrofit
- **Strategic partnership** with TotalEnergies (R&T, supply, advocacy)
- **Role in definition of standards** for 100% SAF

## AMBITION

- **Confirm long term performance** of existing engines and equipment with 50% SAF blends
- **Use of higher SAF blends** (over 50% and towards 100%) on Safran products
- **Demonstrate TRL\*6 maturity level by 2025** (ground and flight tests)

\* TRL: Technology readiness level

# Maturing hydrogen aircraft technologies

## 1. Support Airbus in-flight “EarlyDemo” to acquire knowledge about operation and emissions of a liquid H<sub>2</sub> aircraft

- Adaptation of an existing engine



TO PREPARE FOR LARGER SCALE DEMONSTRATOR

## 2. Mature H<sub>2</sub> technologies for aircraft equipment

- Materials and processes for H<sub>2</sub> burn
- Fuel system technologies (valves, heat exchangers, compressors)
- Injection/combustion



 AIRBUS



## 3. Mature fuel cell technologies @1MWe

- Proton Exchange Membrane stacks already demonstrated
- Next steps: multi-stack operations, increased power density



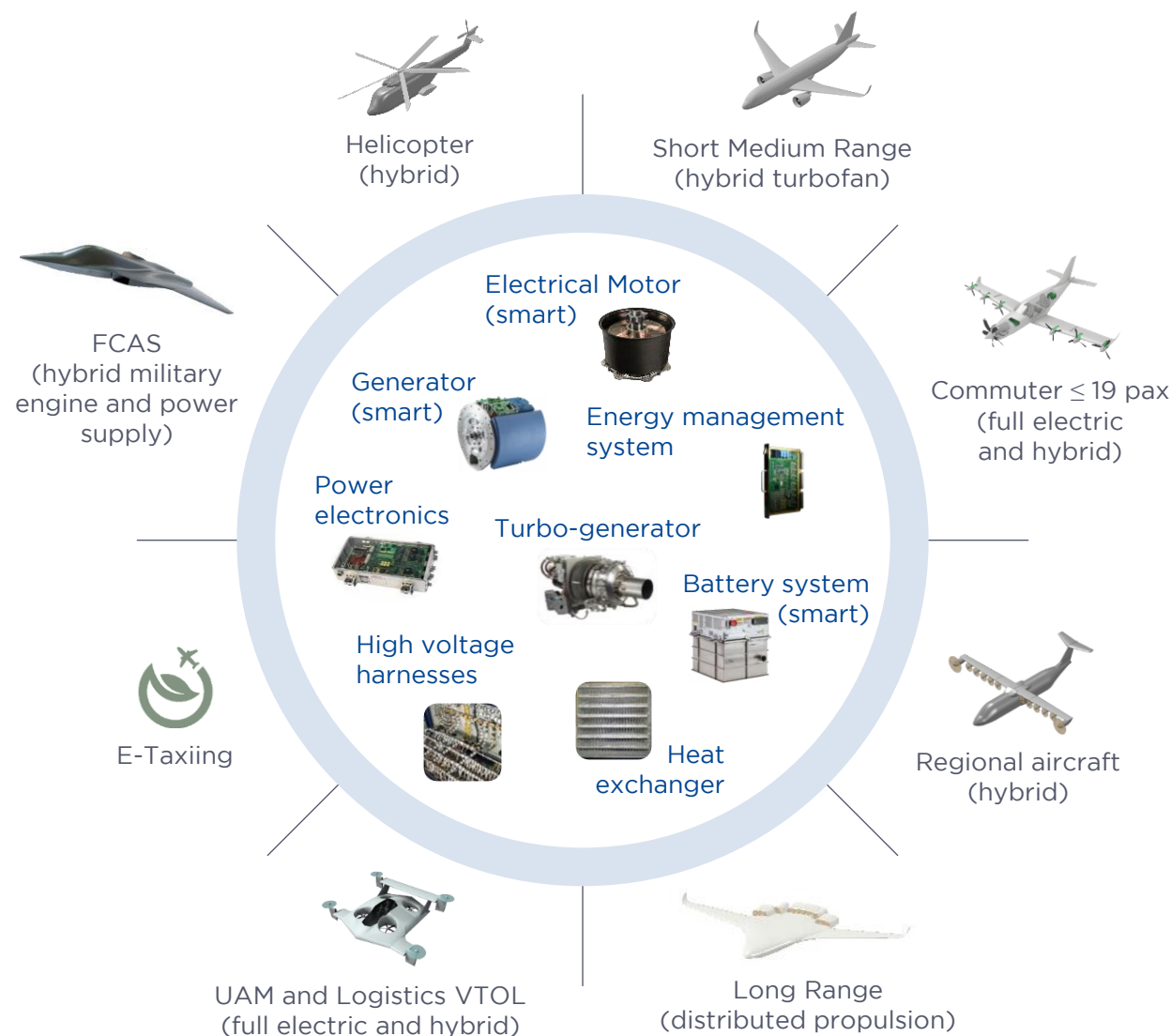
 arianespaceGROUP



**H<sub>2</sub> TECHNOLOGY ASSESSMENT** will be ready to support the launch of a new aircraft program

# Unlock the potential of hybridization and electrification

- **A broad portfolio**  
of technologies and products  
for electrification – hybridization
- **Wide range of functions**  
(fuel burn / CO<sub>2</sub> reduction,  
eco-mode, operability...) and platform targets
- **Synergies** between Safran entities and startups
- **Support from public funding**  
from R&D to industrialization





## MATERIALS AND PROCESSES

---

### IDENTIFY AND IMPLEMENT

innovative materials  
and processes for products  
with higher performance, lighter,  
easier to produce and to maintain



## POWER AND ENERGY

---

### DEVELOP NEW SYSTEMS

and technologies for energy  
to tackle the environmental  
challenge and the new mobilities



## DIGITAL TECHNOLOGY

---

### GATHER, PROCESS AND MODEL INFORMATION

to increase  
our productivity and deliver  
competitive and superior  
products and services

# Safran builds tools and methods based on advanced digital technology

## INFRARED THERMOGRAPHY FOR METALLIC PARTS CONTROL

### TARGET

New NDT\* methods as an alternative to dye penetrant inspection or magnetoscopy

Laser thermography on a Nickel based superalloy disc

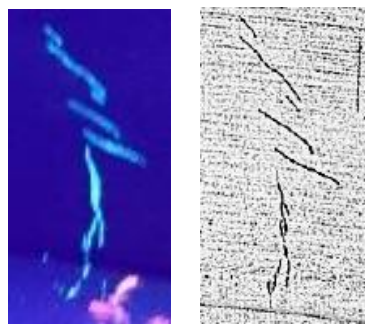
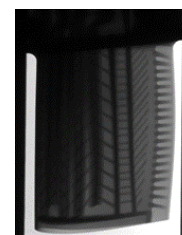


Image of a crack obtained by dye penetrant testing (left) and by thermography (right)

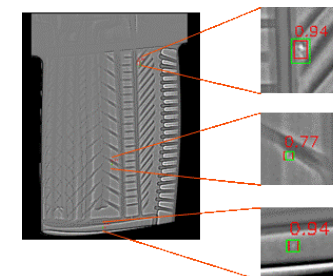
## AI ASSISTED DECISION MAKING

### TARGET

AI algorithm-based assisted decision on X-Ray images of turbine blades



Neural network



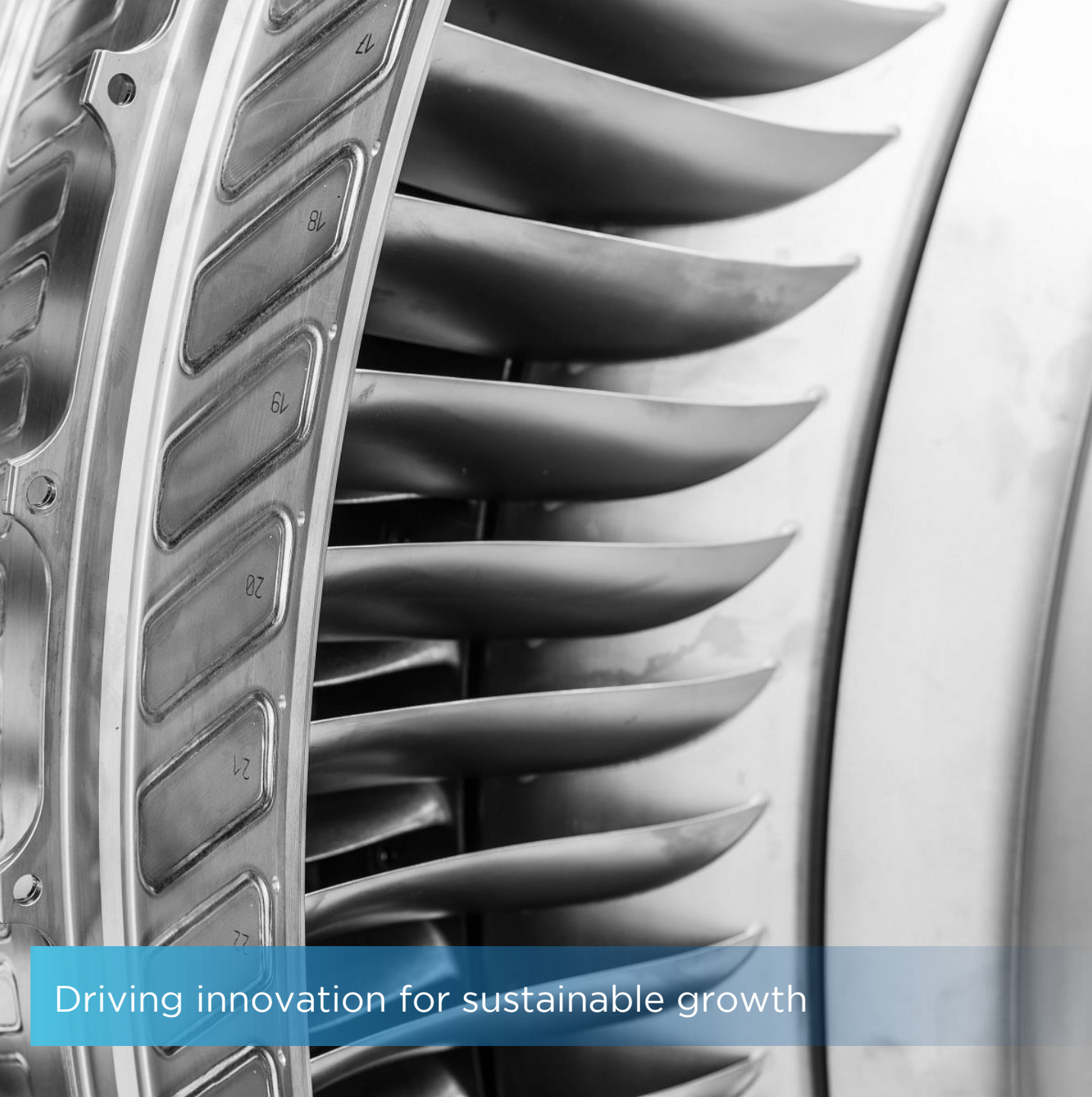
**DIGITAL TECHNOLOGY** supporting productivity (up to 30% of production costs related to NDT). Performance leap for both product design and parts manufacturing

\* NDT: Non-Destructive Testing



# Intensify R&T investment

- **State-of-the-art on all key technologies**
- **Mature technology bricks adaptable to all airframers options**
- **Accelerate the technological response to decarbonization**
- **Disciplined, focused execution**



04.

## Financial Framework

Pascal BANTEGNIE,  
Appointed CFO

Driving innovation for sustainable growth

# Coming out of the Covid crisis as a leaner and stronger company



## LEANER

**Structural progress on cost base**

**Enhanced margin improvement potential and solid cash generation**



## STRONGER

**Return to organic growth**

**Investing for the next 20 years**



## FOCUSED

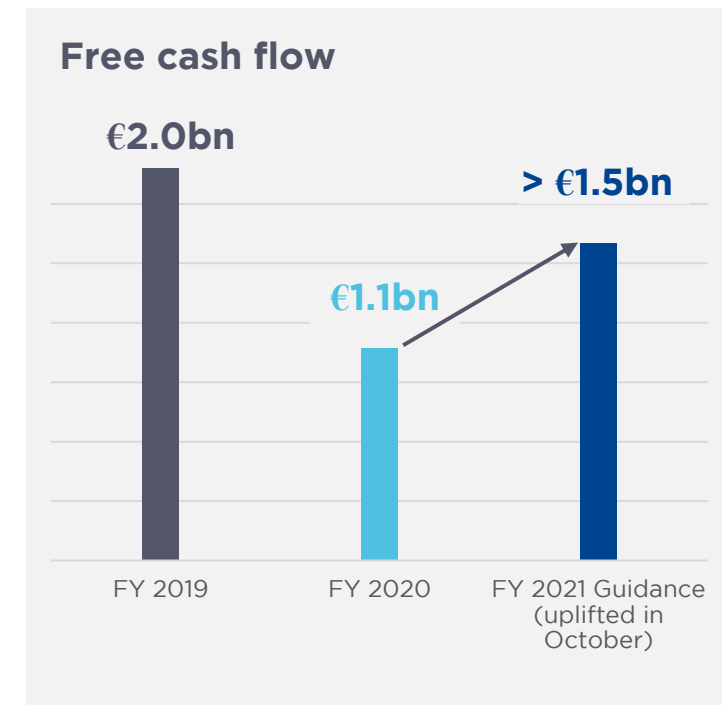
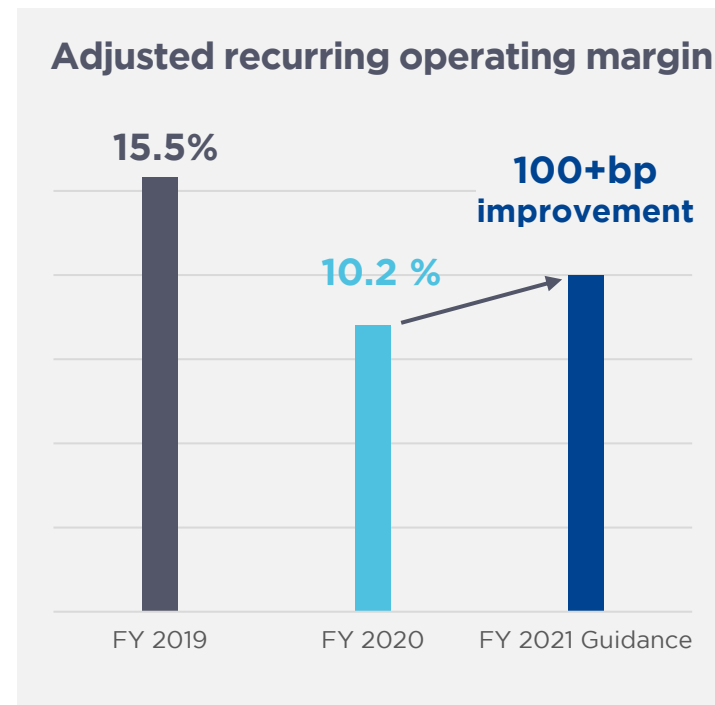
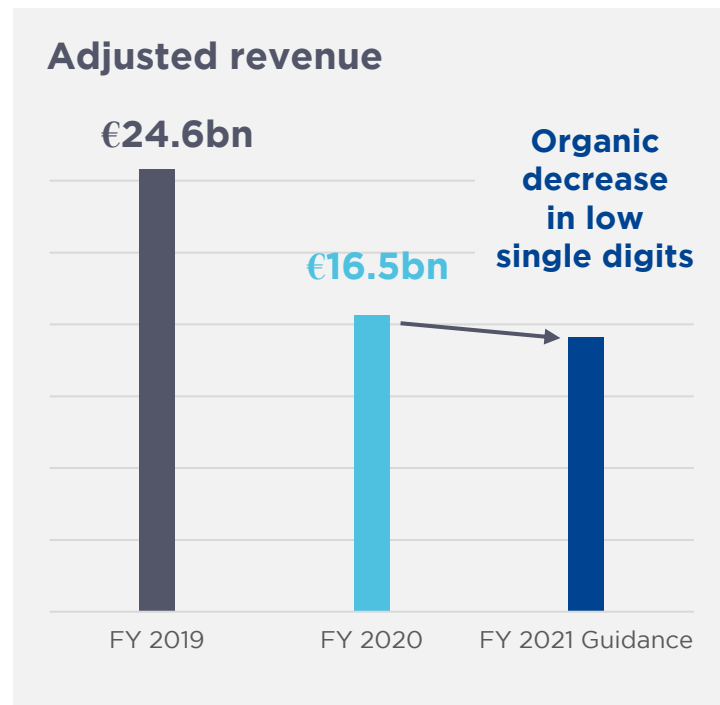
**Portfolio pruning & bolt-on acquisitions**

**Disciplined capital deployment**



**SAFRAN IS SUCCESSFULLY RECOVERING**  
after the worst civil aero crisis in history

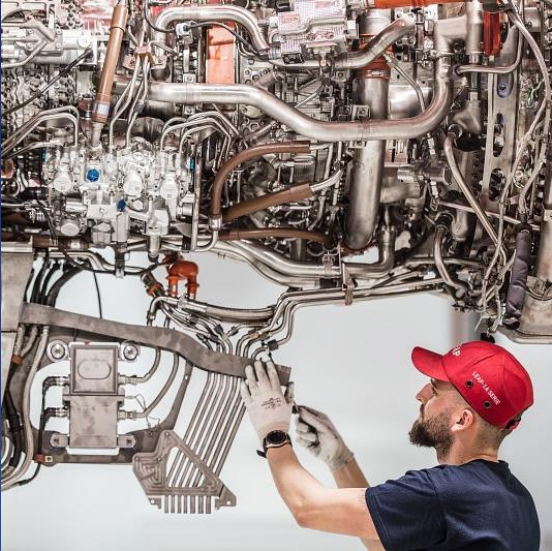
# Robust business model & financial discipline performing throughout crisis



CONTROL OVER COST BASE AND CASH OUTFLOWS



2020-2021: operating margin maintained **above 10%** and free cash flow at **€1+bn/year** throughout the crisis



## 04. Financial Framework

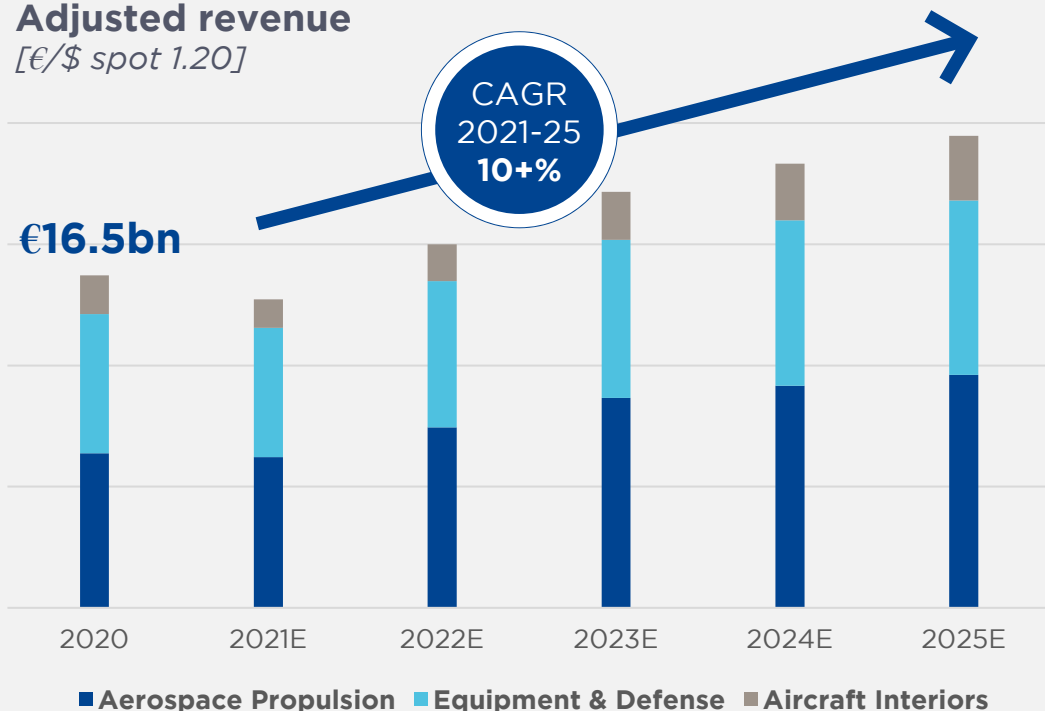
1 |

# 2025 Financial ambition



# Return to robust organic growth

Adjusted revenue  
[€/ \$ spot 1.20]



## ■ Aerospace Propulsion

- OE build rates: LEAP, Rafale and helicopter turbines
- Civil aftermarket: c. 15% CAGR 2021-25

## ■ Equipment & Defense

- OE build rates: nacelles, avionics, landing systems with strong ramp-up in narrowbody, slower rate on widebody
- Services: carbon brakes, landing gear, nacelles

## ■ Aircraft Interiors

- OE and retrofit: catering/cargo, galleys, business class seats
- Aftermarket c. x2,5 by 2025

### Monitoring

- Air traffic recovery pattern, aircraft retirements, OE build rates, Rafale exports, €/ \$ spot rate

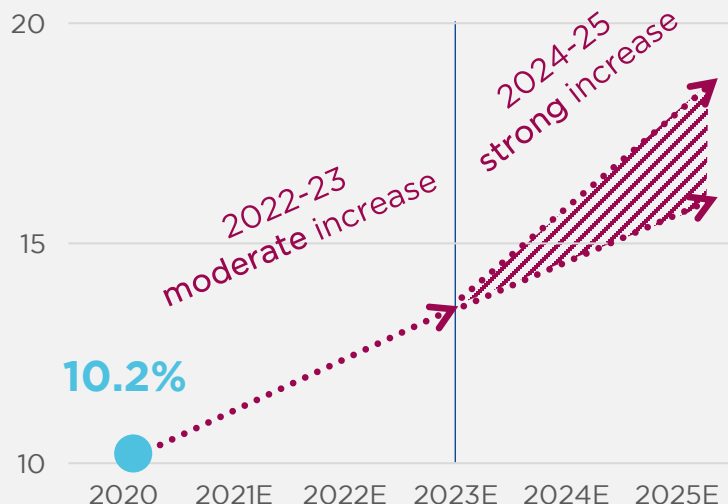


**Structural growth drivers unchanged**

# Mid-term targets for group margin

## Recurring operating margin (% of sales)

[€/€ spot 1.20; €/€ hedge 1.16]



**2025  
ambition**  
**16-18%**

### ■ 5+pts margin improvement 2021-25

- Recurring EBIT to grow twice as fast as revenue
- CAGR 2021-25: 20+%

### ■ Increased profitability mainly driven by growth in services across all divisions

- Service activities account for c. 70% of gross margin

#### Monitoring

- Air traffic recovery pattern and airline behavior in aircraft operations (green time, retirement)
- OE build rates in narrowbody & widebody applications
- Launch of a new large R&D program



**Confirming the 16-18% medium term margin target announced in 2018**



# Lasting improvement on structural cost base

## STRUCTURAL PRODUCTIVITY GAINS TO BE RETAINED

### Footprint

- Optimization of industrial footprint (geographical clustering) and accelerated restructuring of former Zodiac Aerospace activities: synergies delivered and exceeded
- Streamlining of industrial footprint to resorb structural overcapacity
- Reinforcement of CCC\* share in production

**2025 workforce level down c. (10)% compared to 2019**

**Contained general expenses**

## COVID CRISIS EXCEPTIONNAL MEASURES TO FADE OUT END 2022-23

### Personnel costs

- Capping of employee profit sharing
- Furlough schemes and related government funding

### Other Opex

























- Resume spending on strategic priorities (Digital)



**+ €500+M (p.a.) savings vs. 2019 preserved through to 2025**

\*CCC: Cost-Competitive Countries

# Moving parts in margin and indicative phasing

	2021	2022-23	2024-25	
<b>Propulsion revenue mix</b>				Civil aftermarket is expected to grow faster than OE revenue, with a marked trend in 2022-23
<b>CFM56/LEAP transition</b>				Strong decrease in CFM56 deliveries in first years. Increasing LEAP deliveries at negative margin from 2022
<b>Footprint</b>				Implementation costs related to changes in industrial footprint largely recorded in 2021
<b>Personnel</b>				Gain from short time working, cuts in employee benefits and in profit sharing schemes will fade by 2023. Staff reduction impact will remain across 2024-25
<b>Purchasing</b>				Inflationary trends (raw materials, energy, transportation) will weigh until 2023, before we can mitigate these impacts
<b>General expenses</b>				General expenses will grow slower than revenue
<b>IS/IT</b>				IS/IT effort (cyber, digital) to increase as % of sales in the early years and stabilize by 2025
<b>R&amp;D</b>				P&L impact of R&D will increase in 2022-23 and stabilize from 2024

Incremental impact on margin

Positive

Neutral

Negative



**Accelerated margin expansion** anticipated in 2024-2025

# Mid-term margin targets by division

## ■ Aerospace Propulsion (2020 recurring EBIT €1.2bn)

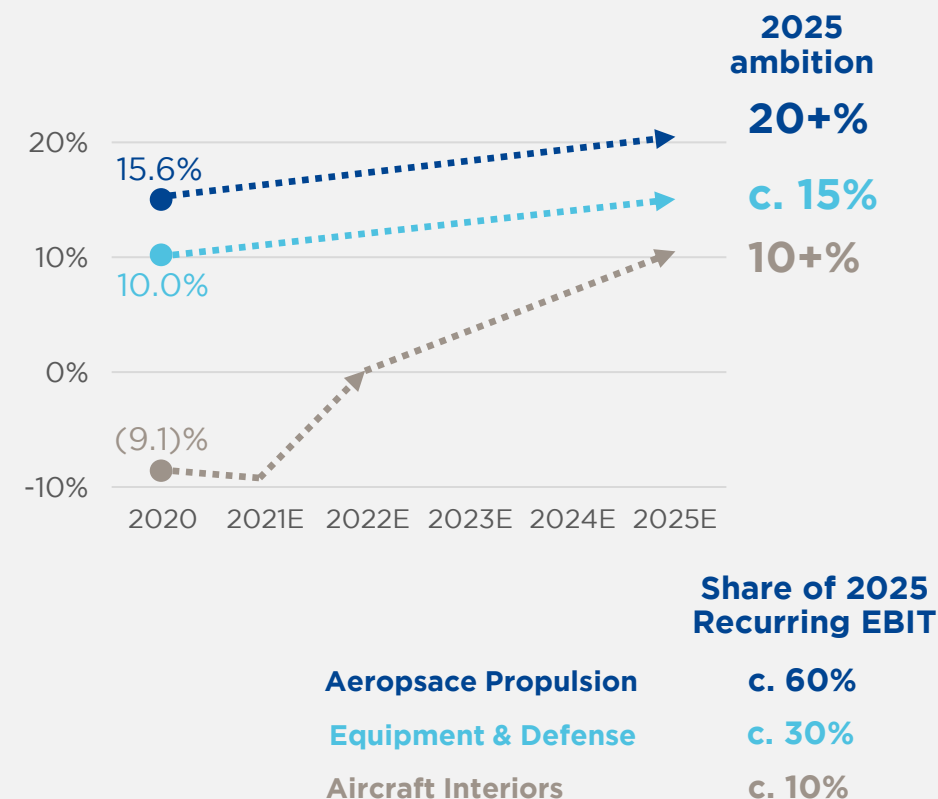
- Civil aftermarket growth driven by young narrowbody engines fleet
- Services in helicopter turbines
- OE build rates: LEAP & M88 engines
- LEAP OE breakeven at the latest in 2025
- Public funding for new engine R&T programs

## ■ Equipment & Defense (2020 recurring EBIT €700M)

- OE build rates on narrowbody. Monitoring rates on widebody
- Services: carbon brakes and landing gear, nacelles, evacuation systems
- Defense budgets, notably in optronics
- Reinforced CCC industrial footprint: China, Mexico & Morocco

## ■ Aircraft Interiors (2020 recurring EBIT €(175)M)

- Resumption of top line growth is key (60% sales decline since 2019)
- Aftermarket c. x2.5 over 2021-25
- Structural cost actions since integration into Safran (synergies target exceeded)
- Increased share of CCC and rationalization of industrial footprint: US, UK and Germany



**Quality assets** with solid aftermarket potential to drive margins up on a resized cost base

# Focus on CFM56 & LEAP aftermarket activities

- **Gradually transitioning from spare parts sales** (CFM56 is 85% spare parts and T&M) **to rate per flight hour** (LEAP will trend toward 60-70% RPFH by 2030 before slowly decreasing over time)
  - T&M: revenue, cost and cash at shop visit
  - RPFH: sales recognized when costs are incurred at shop visit, cash inflow based on hours flown and/or shop visits, profile mix depending upon nature of contracts (ESPH\* or ESPO\*\*)
- **Accounting for LEAP RPFH**
  - 2021-25: no margin recognition (revenue=cost), therefore minimizing revenue and temporarily postponing margin recognition
  - Progressive margin recognition will be implemented from 2026, once maintenance costs will be solidly confirmed, after sufficient shop visit experience
  - The share of RPFH contracts (CFM56 and LEAP) should start to be material after 2026 (c. 20% of revenue)



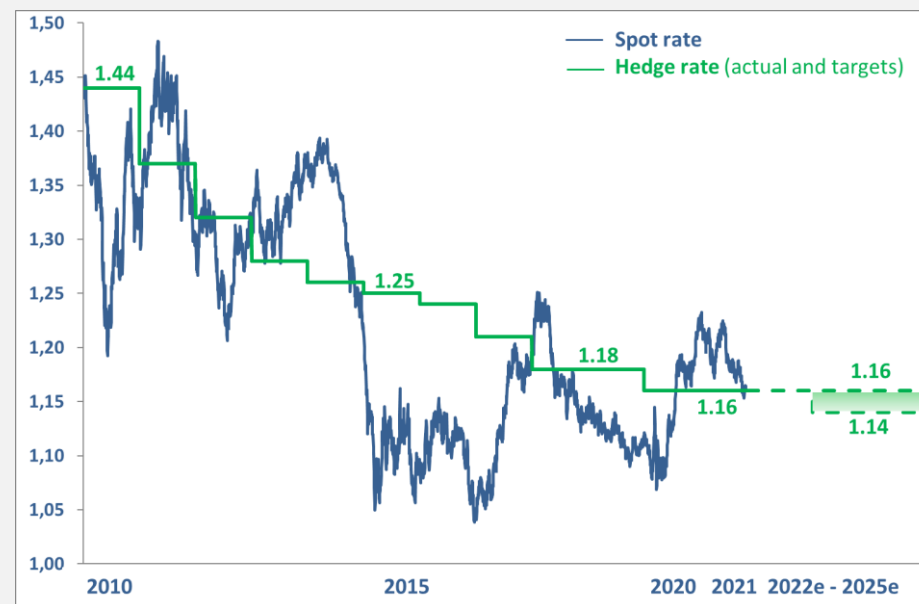
**Adopting a conservative approach to margin recognition for LEAP RPFH**

\* ESPH: Engine service per hour \*\* ESPO: Engine service per overhaul

# USD hedging to protect economic performance

- **A proven expertise and comprehensive portfolio to reduce FX volatility**
  - Protecting the economic performance on a 4-year horizon
  - \$30+bn portfolio mixing forward sales and derivative instruments with KO\* barriers
- **A consistent accounting methodology**
  - Safran recognizes all changes in the fair value of derivatives in “Financial income (loss)” since 2005; restated in Adjusted P&L
- **A factor of economic performance**
  - +/- 10 cents in USD hedge rate equals +/- 300bp EBIT margin

EURUSD rate



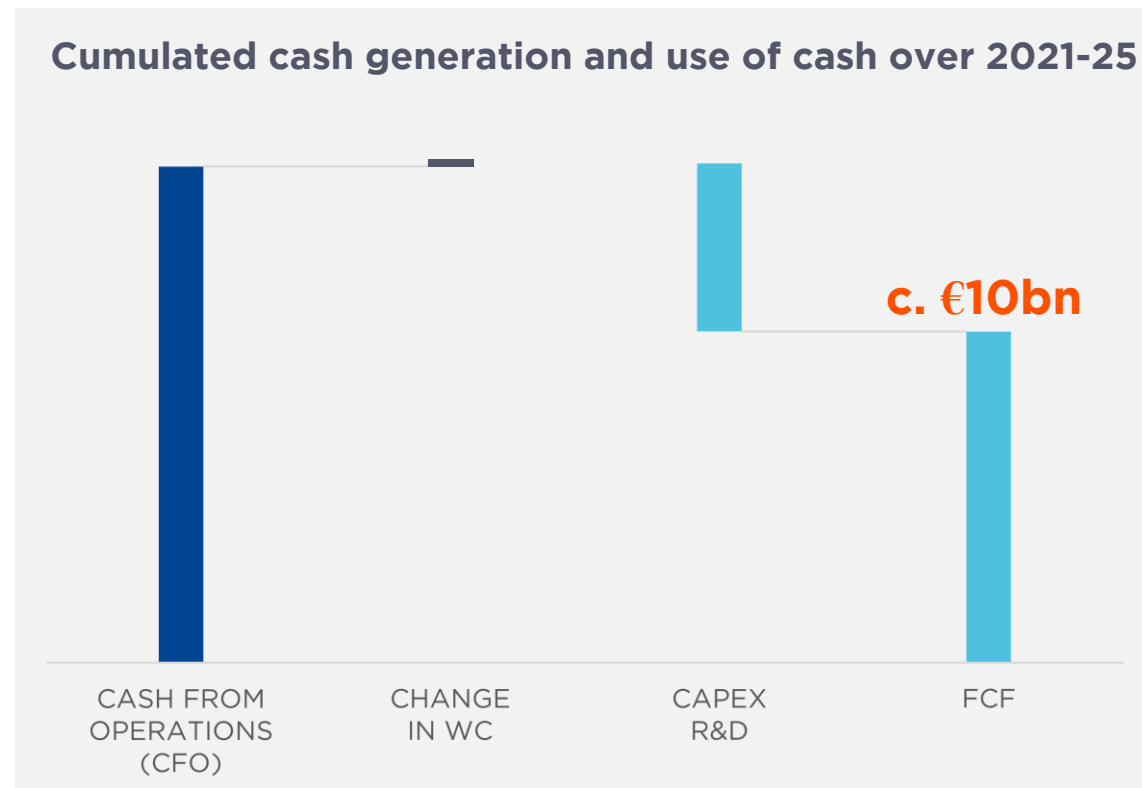
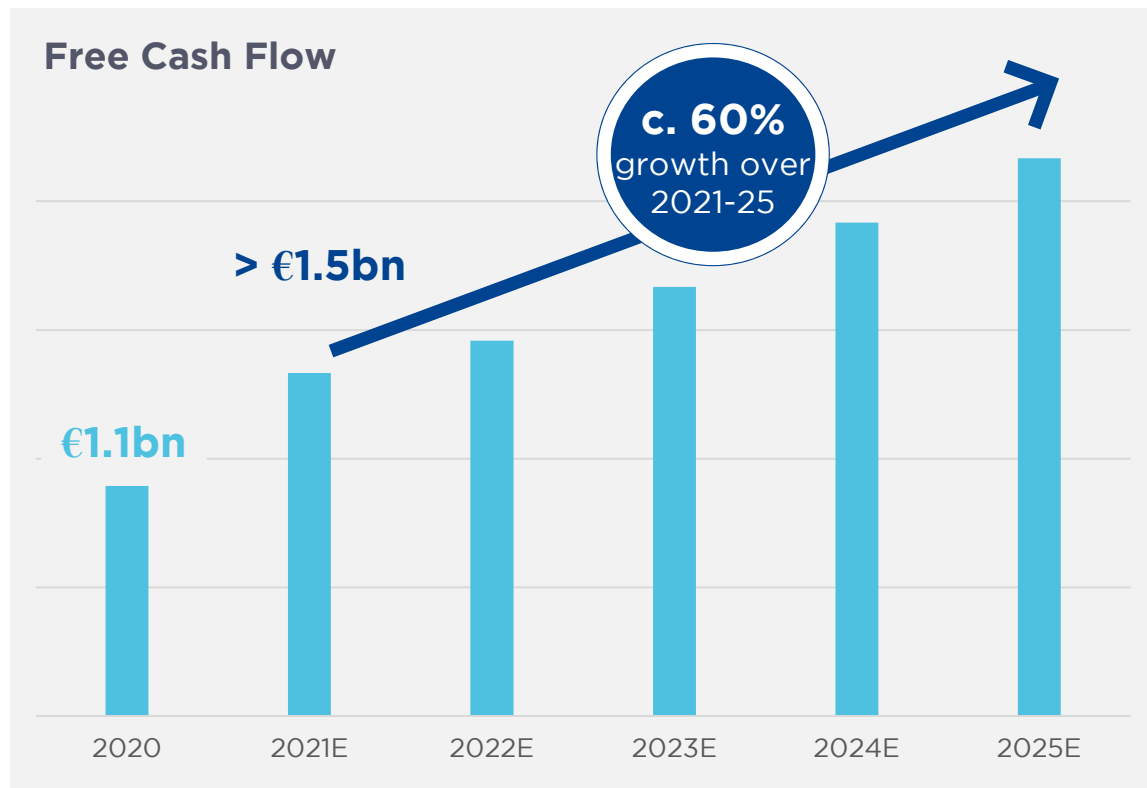
€/ \$	2021	2022e	2023e	2024e	2025e
Hedge rate	1.16	1.14-1.16	1.14-1.16	1.14-1.16	1.14-1.16



**Confident with €/ \$ hedge rate of 1.16 up to 2025**

\* KO: knock-out

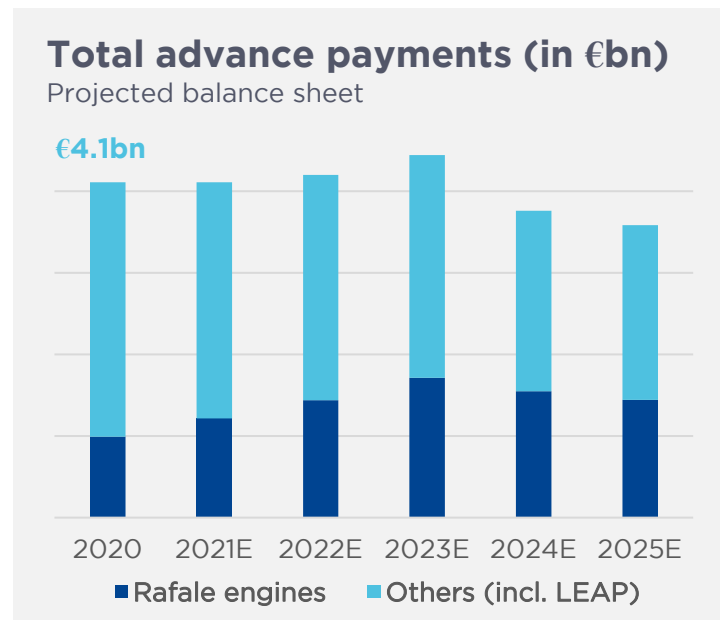
# Around €10bn FCF generation across 2021-25



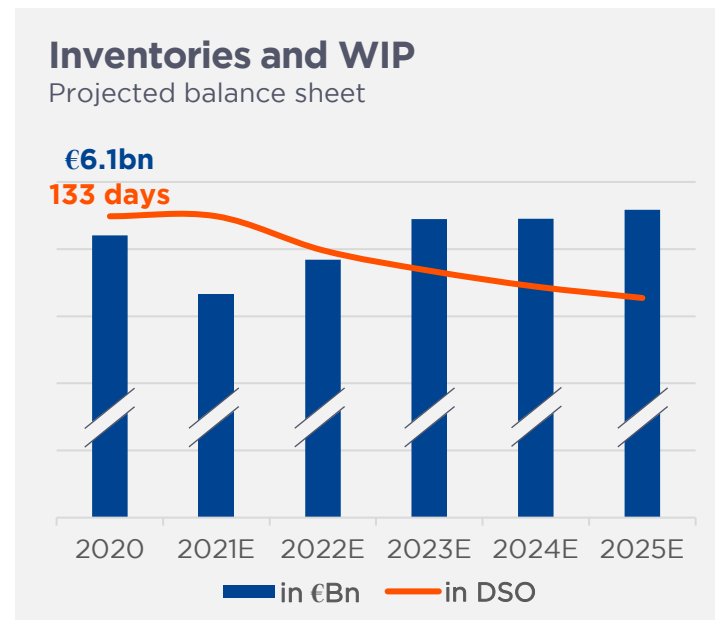
Cash generation **driven by EBITDA c.2x over 2021-25**

**Upscaling EBIT to FCF conversion ratio to 70%** on average for 2021-25

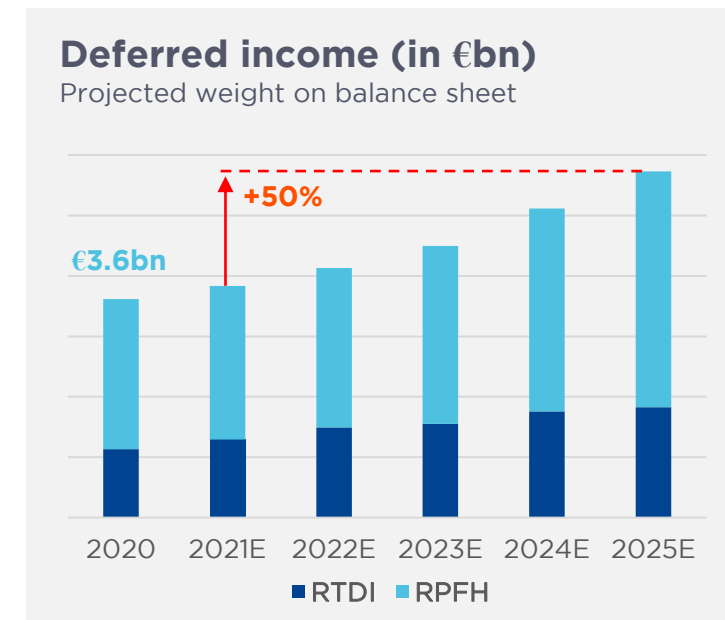
# Main working capital factors



Increasing advance payments from Rafale programs over 2021-23, decreasing elsewhere



Continuous decrease in DSO over 2021-25 thanks to strict inventory level control.  
Almost stable inventory over 2023-25



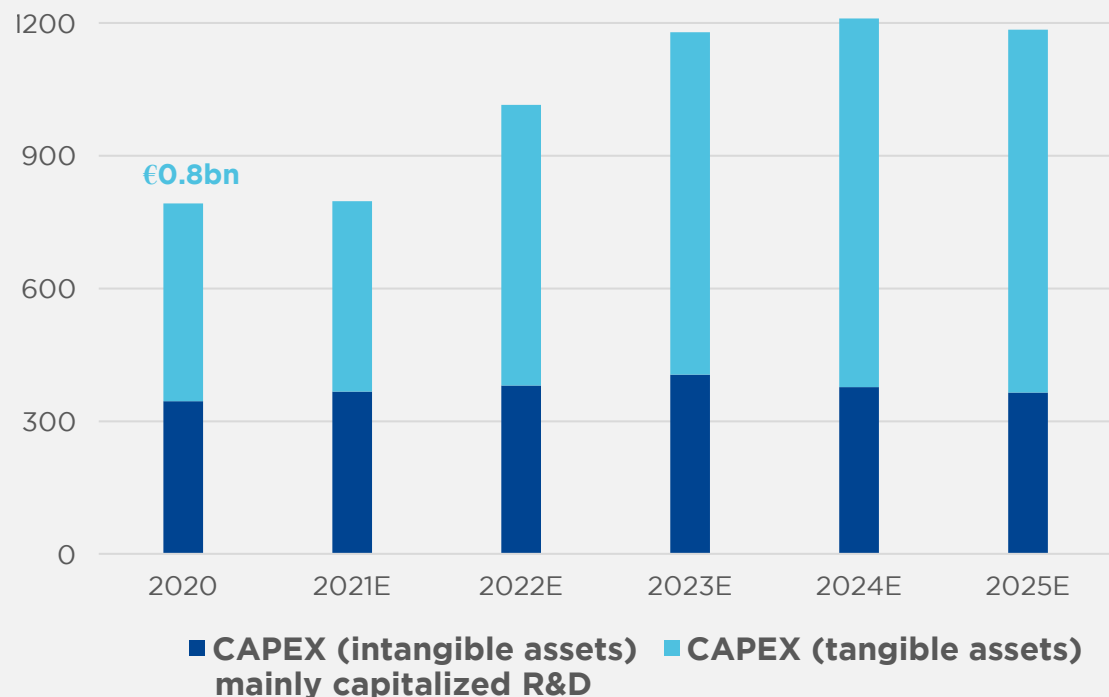
Strong increase in deferred income from both RTDI (IFRS 15) and service contracts per flight hour (mainly LEAP)

**+ Stable working capital over 2021-25**



# Capex focused on areas generating growth & cost savings

Total Capex cash spending (in €M)



- **Growth in capacity**  
LEAP MRO shop
- **Digital**  
Roadmap towards Industry 4.0, cybersecurity
- **Low carbon project**  
Energy supply and consumption, use of SAF\* for engine tests

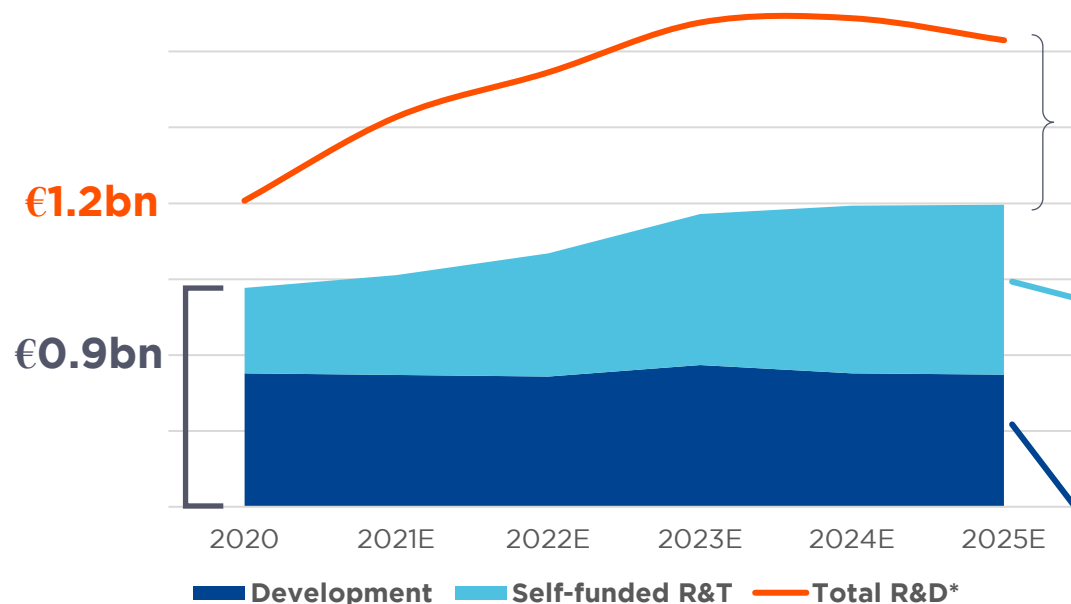


**Selective resumption** of tangible Capex spending (from 3.0% to c. 3.5% of sales)

\*Sustainable Aviation Fuel

# Investing for organic growth

Total R&D expenses\* (in €M)



\*Total R&D includes self-funded R&T, development and R&D sold to customers (including external funding)

## R&D sold to customers + external funding

- Significant funding from French government and EU (€1.4bn expected over 2021-25)

## Increasing self-funded R&T

- 75% directed towards sustainable aviation
- +70% over 2021-25; growing from 2.5% to 3.0% of sales

## Stable development expenses, with lower % on sales (from 3.5% to 2% of sales)



**Targeted R&D impact on P&L: c. 4.5% of sales on average (2021-25)**

# Business model driving performance over 2021-25

- **Revenue**  
10+% CAGR
- **Recurring operating margin**  
5+pts margin expansion → **16-18%**
- **Free cash flow**  
70% EBIT conversion ratio



## 04. Financial Framework

# 2 | Capital allocation

# Capital allocation

**ACTIVE  
PORTFOLIO  
MANAGEMENT**

**STRONG  
BALANCE SHEET**

**40% DIVIDEND  
PAYOUT**

# Active portfolio management

- **30% of former Zodiac Aerospace activities under review**
- **€130+M cash proceeds from divested activities over 2019-21:**
  - Silicone coating (medical), water & waste systems (railway), engineering activity
- **M&A strategy focused on bolt-on acquisitions**
  - Redeploying divestment proceeds towards targeted bolt-on
- **€50+M invested in acquisitions over 2019-21:**
  - Sensoror (high precision MEMS sensors), neology (sensors)

## Criteria to meet alignment with Safran's DNA

- Strong aftermarket
- High barriers to entry (technology, mission critical, differentiation)
- Profitable growth

## Stringent financial criteria



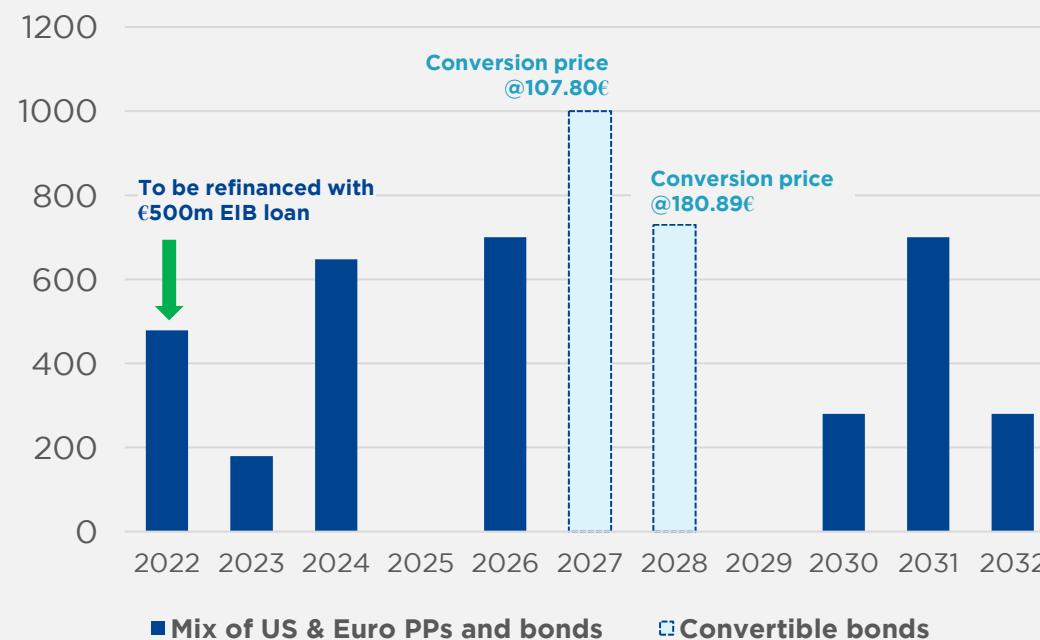
**Accretive impact from divestments on Group EBIT margin**

# A strong balance sheet

- **Proactive financing transactions in 2020-21 and longer-term debt profile**
- **Enhanced Safran's access** to debt capital markets with its first financial rating in February 2021 (S&P **BBB+ stable outlook**)
- **First €500M “green” loan in 2021** with EIB for research relating to decarbonization (10-year loan to be drawn in 2022)

## Debt maturity schedule (€M)

Main long term debt instruments

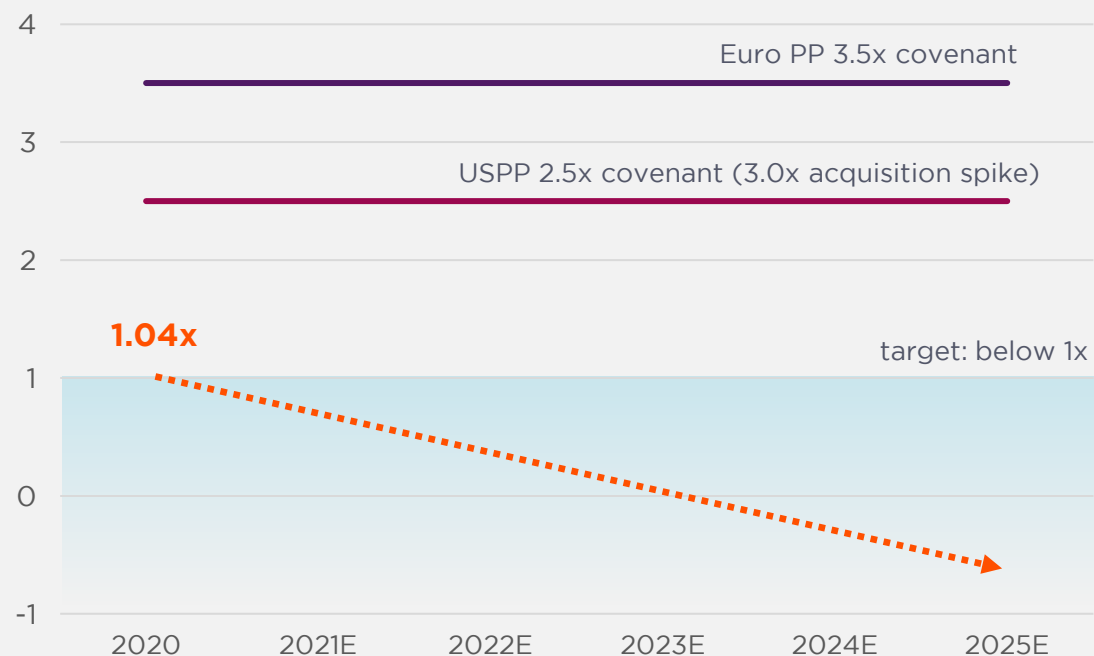


**+ Long-term diversified resources and well distributed maturity profile**



# Commitment to a strong investment grade profile

## Net debt/EBITDA



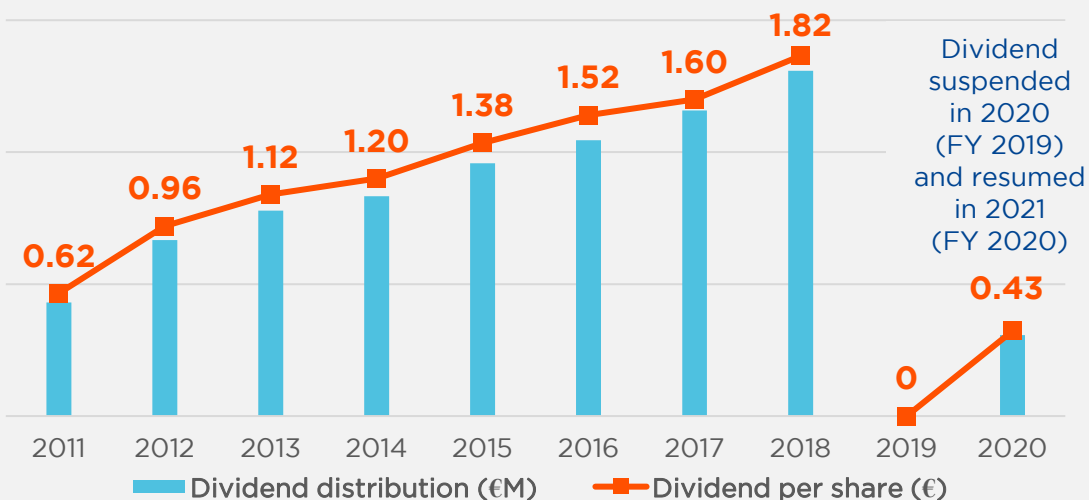
- Safran coming out of the crisis with sound leverage
- Deleveraging through FCF generation towards a **net cash position by 2023**
- In the current context, leverage target below 1x to preserve flexibility



**Keeping low leverage** as full flexibility to fund any development of new programs (organic investment) and/or additional WC needs

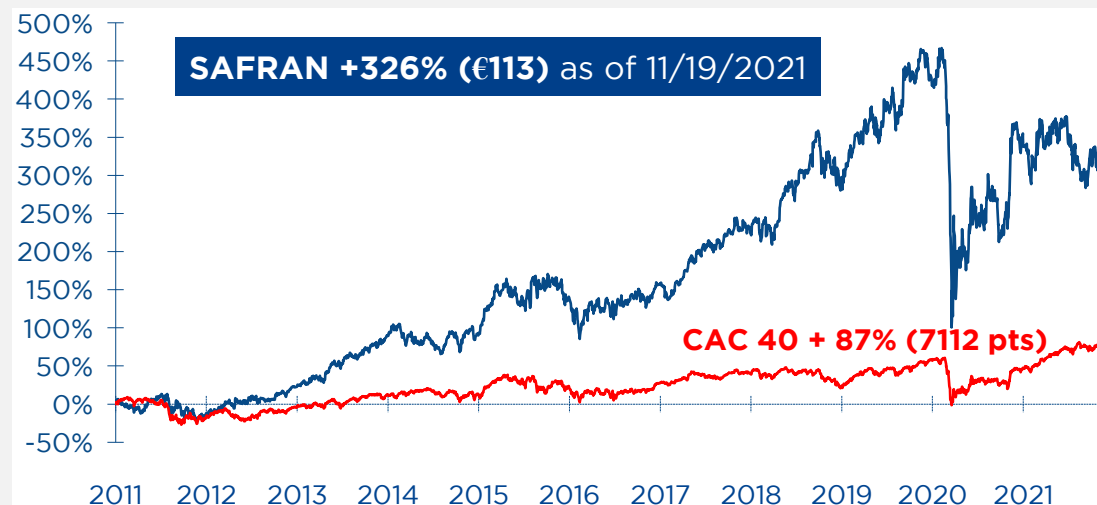
# Shareholder returns: TSR CAGR 2011-21 = +15.0%

Safran dividend (FY 2011-20)



Cumulative 2011-20 dividend payments: c. €4.5bn

Safran share performance vs. CAC 40 index (2011-21)

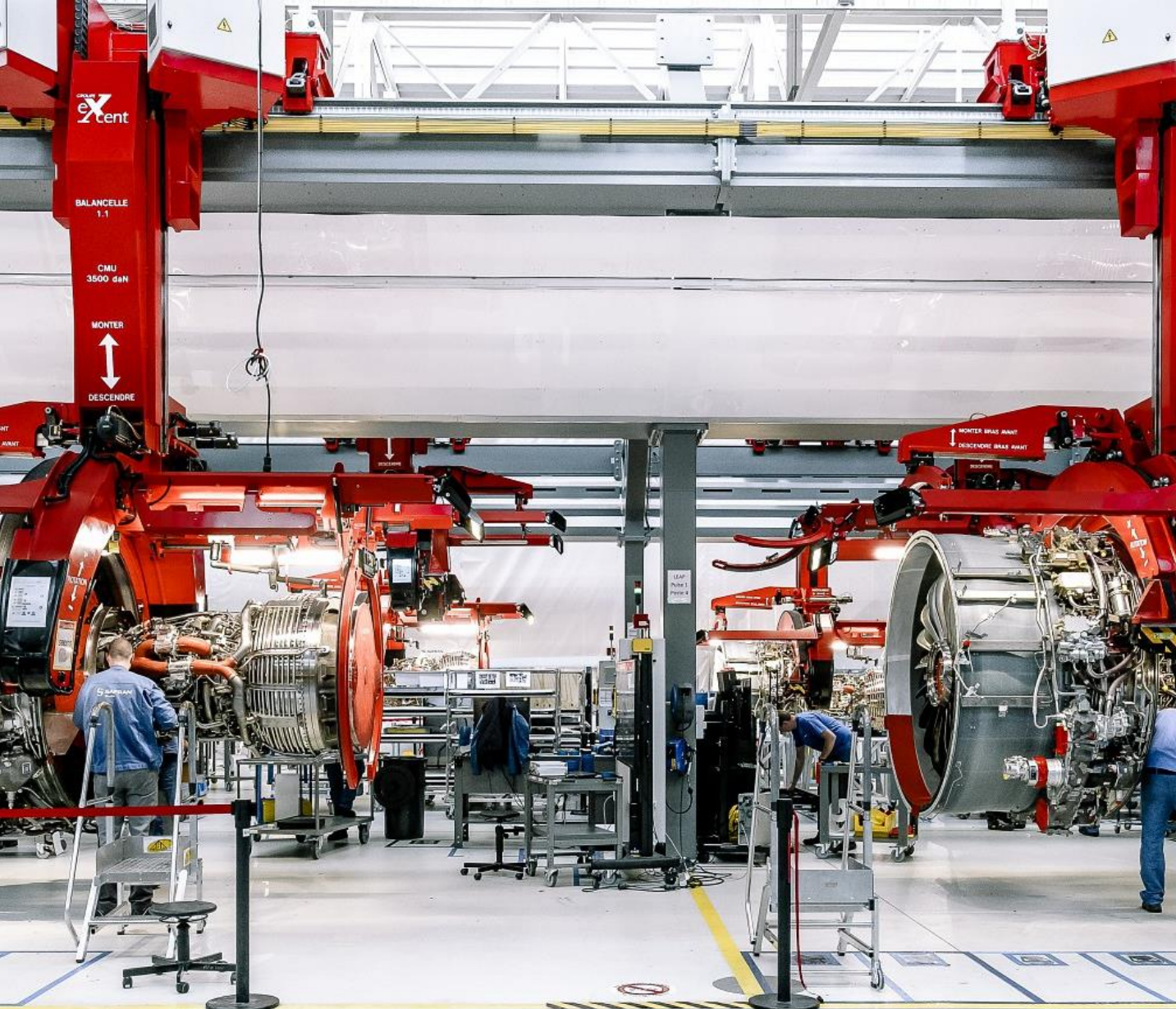


Share value: +326% since 2011

**Target to resume historical practice of 40% dividend payout ratio related to FY 2022 (paid in 2023)\*. Share buyback program not planned in the short term**

**In addition and beyond 2023, the Board of directors will review its practice in order to ensure growing and attractive return to shareholders**

\*Subject to Board's proposal and shareholders' approval



Driving innovation for sustainable growth

05.

## Civil Engines

Jean-Paul ALARY  
CEO Safran Aircraft Engines

François PLANAUD  
VP Services & MRO  
Safran Aircraft Engines





## 05. Civil Engines

1 |  
OE LEAP

# LEAP: a growing reputation & always more reliable

MORE THAN

# 1,600+

aircraft delivered powered by  LEAP  
(end Sept. 2021)

ALWAYS MORE RELIABLE

# 99.95%

departure reliability

MORE THAN

# 13M

engine flight hours

## 79 LEAP-1A operators

IndiGo

easyJet

FRONTIER  
AIRLINES

中国南方航空  
CHINA SOUTHERN



PEGASUS  
AIRLINES

TAP  
TAP PORTUGAL

SAS

Scandinavian Airlines

中國東方航空  
CHINA EASTERN

AirAsia

BRITISH AIRWAYS

## 62 LEAP-1B operators

Southwest

American Airlines

RYANAIR

AIR CANADA

flydubai

TUI

UNITED

TURKISH  
AIRLINES

WESTJET

GOL  
Linhas aereas inteligentes



# LEAP

## Reliability

& Life cycle  
maint. cost  
same as CFM56



**-15%** consumption,  
and reduction in CO<sub>2</sub>  
emissions vs. 2<sup>nd</sup> gen.  
CFM56

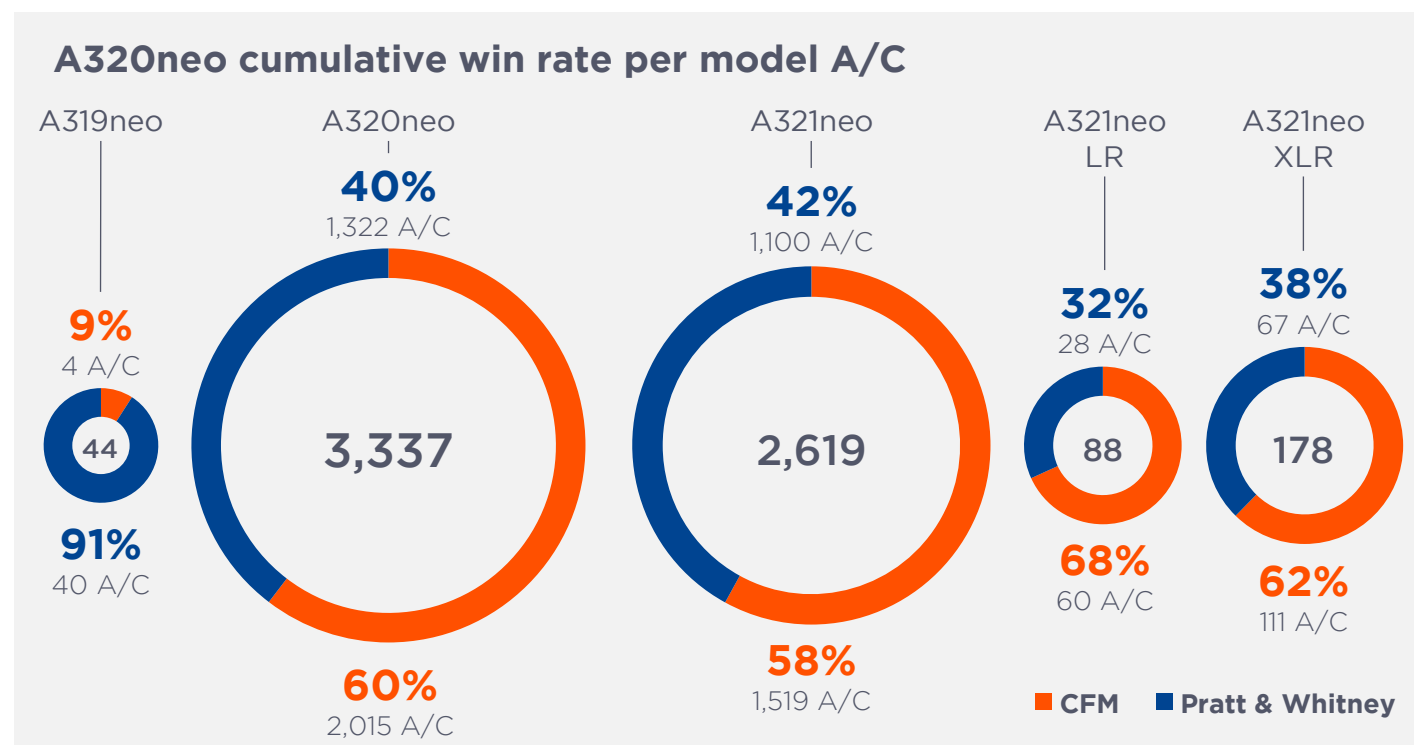
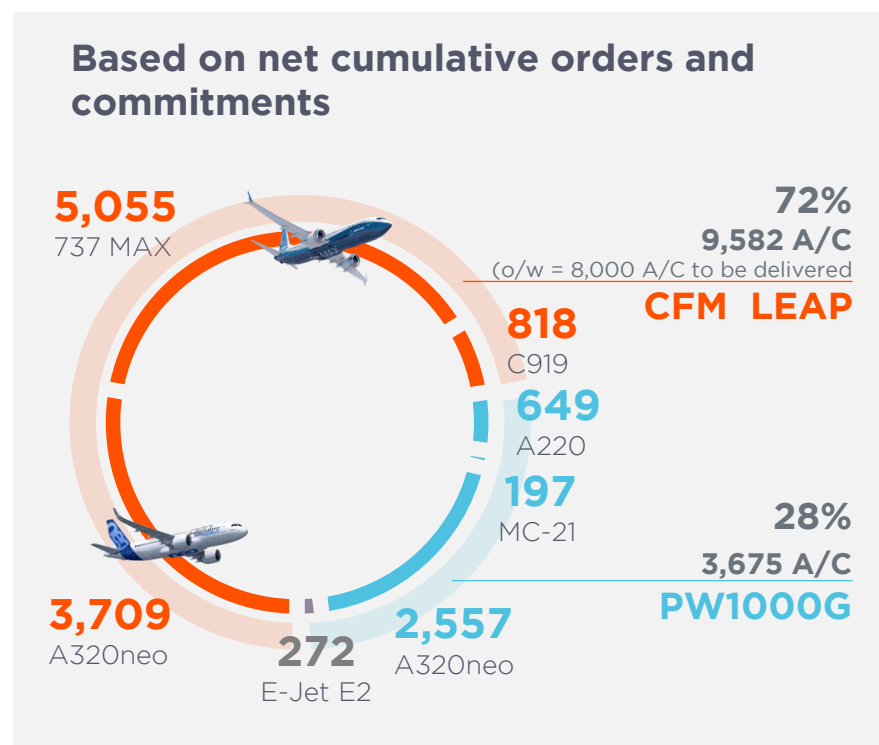


## Noise & Nox

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

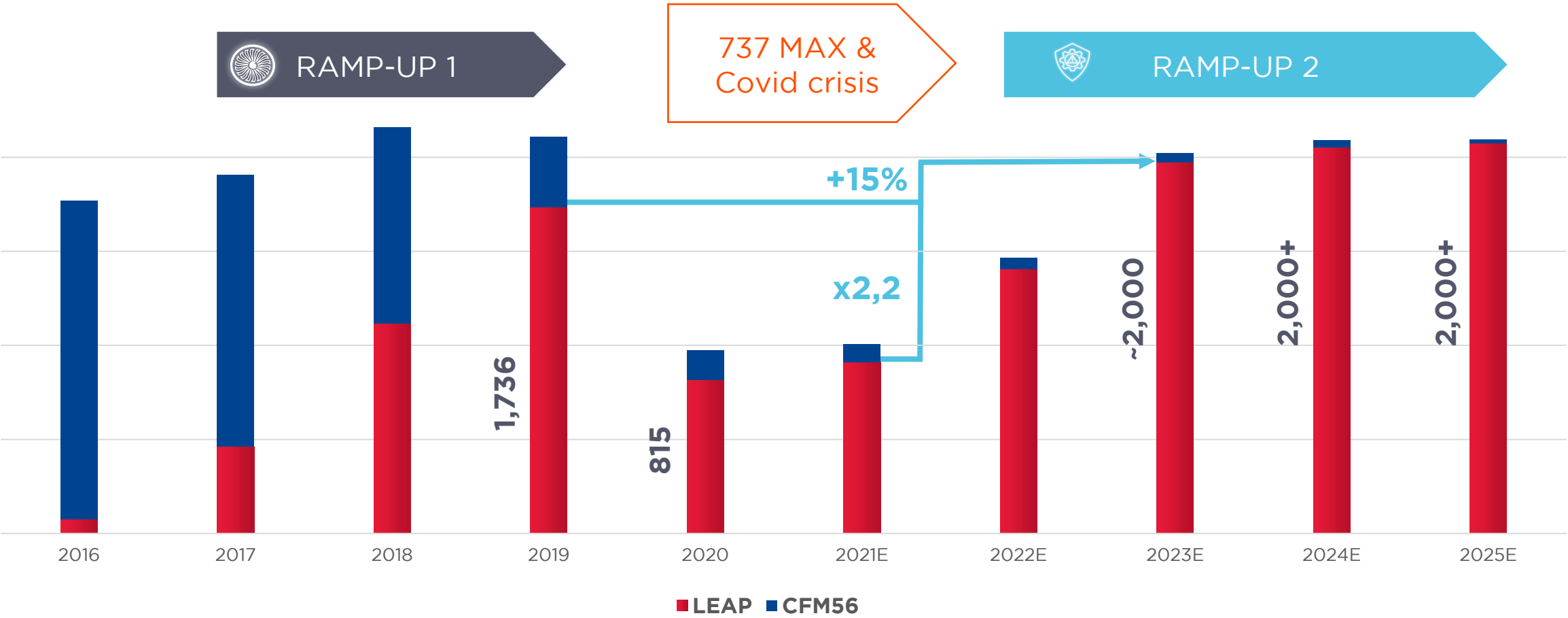
# LEAP: a winning engine

- LEAP-1A/-1B/-1C market share of **72% of the entire narrowbody market** & **60% across all A320neo family main models**
- **The largest engine order of the market: Indigo with 590 aircraft (A/C), 34 already flying**
- **Firm backlog: 10,300+ engines (end of September 2021), of which 1,816 LEAP engines ordered in 9 first months 2021**



# LEAP production: set to hit 2023 run rate

Double production over the next two years





# Enhancing robustness for the second LEAP ramp-up

## RAMP-UP 1



### Leveraging the first ramp-up

- Comprehensive industrial footprint and Capex
- Fully active dual sourcing policy
- Systematic risk analysis and abatement



**Demonstrated capacity over 40 engines/week**

## 737 MAX & Covid crisis



### Supplier monitoring & support throughout the crisis

- LEAP-1B minimum flow ensured
- Supplier Watch Tower for early detection
- Financial support when required



**Supply Capacity & Quality Monitoring initiative launched Dec. 2020 for ramp-up anticipation**

## RAMP-UP 2



### Thorough supply chain risk management

- Formal management engagement & escalation process
- Capacity analysis: HR monitoring, rate demonstration tollgates
- Raw material supply control and contracting
- Robustness/Statistical process control/FTY analysis

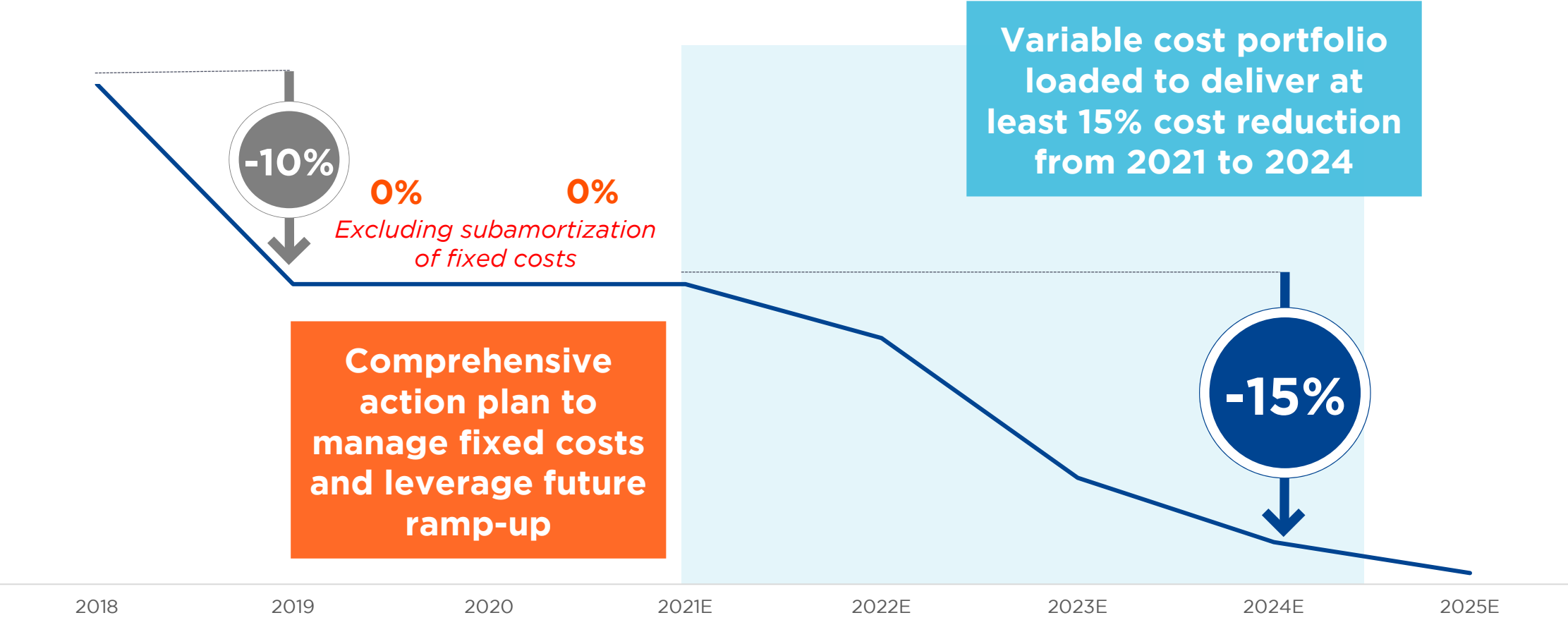


### Main focus:

Competencies, raw materials, forging and casting

# LEAP cost of sales reduction

## LEAP cost of sales



# Driving LEAP in-house cost reduction

4 main pillars to achieve best in class manufacturing excellence with a clear operating culture

## LEAN & RIGHT FIRST TIME

	Design optimization	Enhancing existing manufacturing	Quality robustness	State-of-the-art greenfield
BENCHMARK RESULTS	<p>Material change: <b>-30% cost reduction</b></p>	<p>Closed door machining: <b>+4 production units</b></p>	<p>High efficiency NDT: <b>-50% testing time</b></p>	<p>New facilities: <b>+30% productivity</b></p>
EXAMPLES	<ul style="list-style-type: none"> <li>• LEAP-1B Transient bleed valve removal</li> <li>• Engine kit change from metallic to composite</li> </ul>	<ul style="list-style-type: none"> <li>• Manufacturing 4.0 (Augmented reality, smart tooling, IoT, image recognition, ergonomics, cobot)</li> <li>• Extensive close door machining: fan &amp; turbine disks, turbine shafts</li> <li>• Automated composite manufacturing: fan blades</li> <li>• Low pressure turbine rotor bolting robot</li> </ul>	<ul style="list-style-type: none"> <li>• Data analysis</li> <li>• Statistical Process Control</li> <li>• High performance non destructive testing (NDT)</li> </ul>	<ul style="list-style-type: none"> <li>• India: low pressure turbine rotating seals, ducts</li> <li>• China: turbine nozzle casting</li> </ul>

# Driving LEAP supply chain cost reduction

## 3 main drivers to achieve best cost supply chain efficiency

	Supply chain streamlining	LEAP together 4.0	Strategic sourcing
BENCHMARK RESULTS	Global commodity package: up to <b>30%</b> cost reduction	1 new Value Stream Mapping per month: <b>up to 7 weeks</b> leadtime savings <b>up to -30%</b> in composite fiber use	Raw materials recycling: <b>up to 60%</b> on Titanium and Nickel alloy
EXAMPLES	<ul style="list-style-type: none"> <li>• Market share optimization</li> <li>• Global commodity package tenders: fasteners, small mechanical parts, sheet metal parts,...</li> <li>• Resourcing to best cost: structural casting/air manifold, pipe,...</li> </ul>	<ul style="list-style-type: none"> <li>• Turbine disk forging cost optimization</li> <li>• TiAl (Titanium Aluminide) turbine blade casting optimization</li> <li>• Carbon fiber use reduction</li> <li>• Manufacturing 4.0: metallic fan leading edge</li> </ul>	<ul style="list-style-type: none"> <li>• Long term raw material contracting</li> <li>• Alternative Titanium sourcing</li> <li>• Raw metal recycling</li> </ul>

# LEAP in a nutshell

LEAP  
IS DELIVERING!



READY TO  
RAMP-UP  
AGAIN



OE GROSS MARGIN:  
BREAK-EVEN  
AT THE LATEST IN 2025





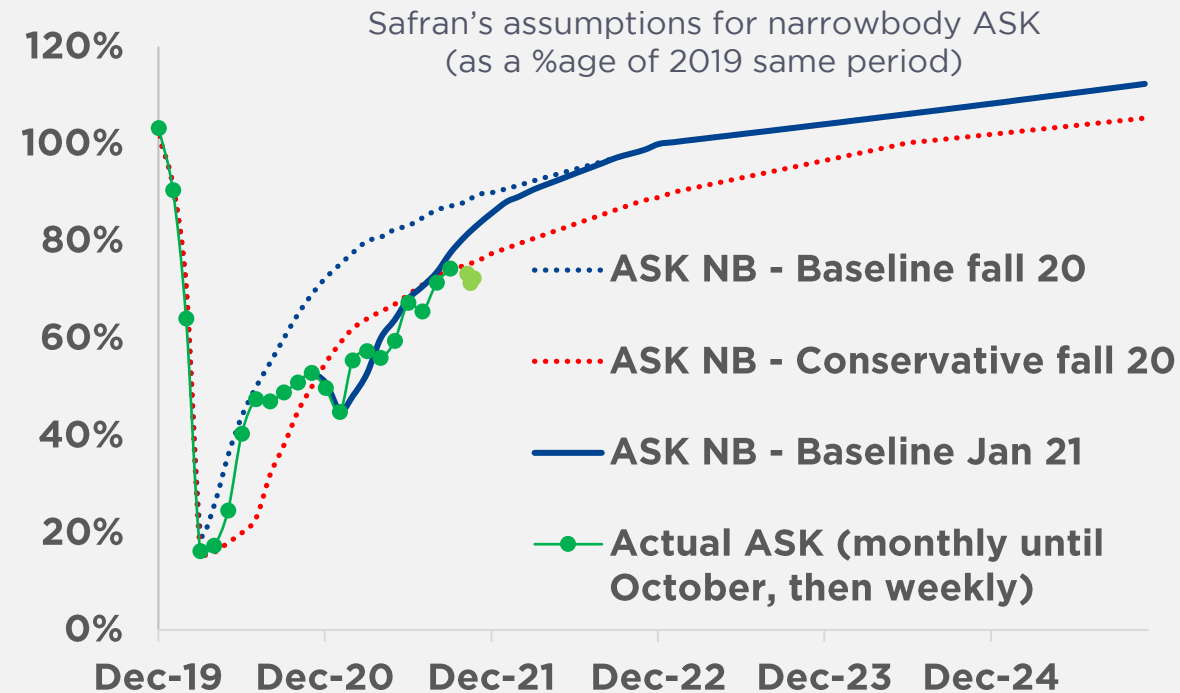
**05.**  
**Civil Engines**

**2 |**  
**Aftermarket**



# Narrowbody traffic main driver of Safran aftermarket

## Narrowbody capacity (World ASK)



- Narrowbody traffic more resilient and recovering faster than widebody
- Expect narrowbody capacity (ASK) to be back to 2019 level by end of 2022
- Healthy and steady growth rate beyond 2022 (4.8% p.a. 2023-25)



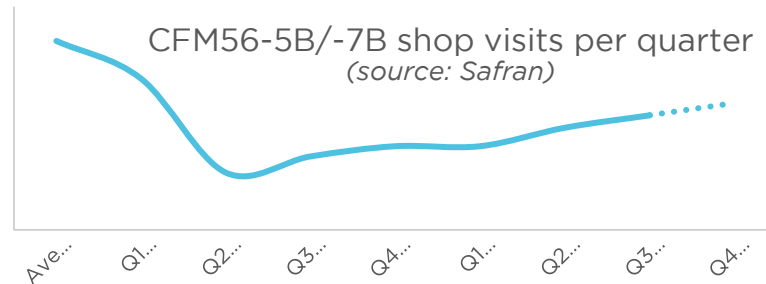
**ON TRACK FOR RECOVERY BY END 2022**



# 2020-2021 aftermarket highlights: CFM56-5B/-7B

## SHOP VISITS

- Steady shop visits recovery, mainly driven by engine cycles



- Shop visit acceleration lagging traffic recovery because of green time
- Aircraft storage decreasing: 16% on -5B/-7B today (vs. 19% average NB fleet)
- Very low actual retirements
  - 85 5B/7B aircraft in 2020, 78 YTD 2021

## SPARE PARTS USAGE AT SHOP VISIT

~ Stable revenue per shop visit in 2020/21



Catalog Price increase  
No significant growth of used parts



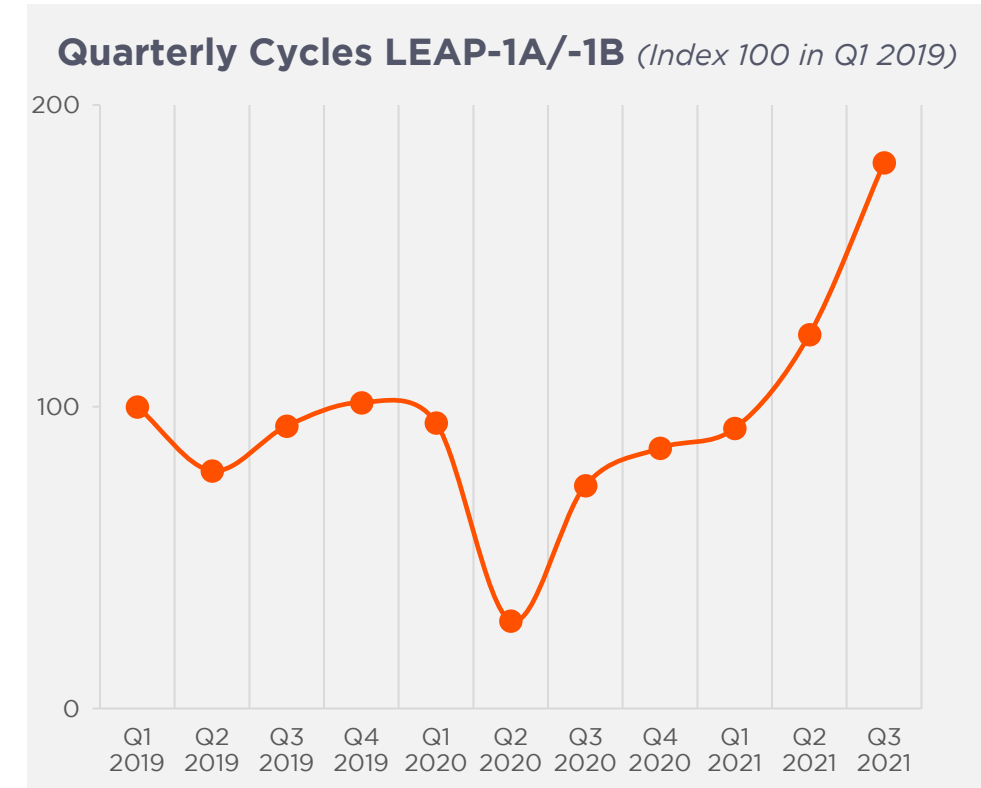
Inventory at MROs impacted 2020 purchases  
Some short term workscope optimization



**CFM56-5B/-7B FLEET WELL POSITIONED to take advantage of the upturn in traffic**

# 2020-2021 aftermarket highlights: LEAP

- **Solid utilization levels as airlines prioritize recent models**
  - LEAP cycles x2 as of Q3 2021 compared to Q3 2019
- **Long term service agreements portfolio continues to grow**
  - 42% of LEAP engine orders include a signed CFM Rate Per Flight Hour (RPFH) service agreement (20% ESPH\*/80% ESPO\*\*)
  - Robustness of portfolio confirmed through crisis
- **Confirmed trend towards RPFH agreements representing 60-70% of installed LEAP fleet**



**+ LEAP recovered rapidly, now growing**

\*ESPH= Engine Services Per Hour / \*\*ESPO= Engine Services per Overhaul

# Aftermarket main drivers

## Traffic assumptions, fleet in service

- Allocation of traffic by generation of aircraft
- Utilization, area of operation



CYCLES

1

## Technical parameters

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



ENGINE REMOVALS

## Airlines strategy

- Fleet management including Green Time
- Financial & operational situation



MAINTENANCE STRATEGY,  
GREEN TIME

## NUMBER OF SHOP VISITS

2

## Workscope

- Module exposure
- Rebuild standards, LLP replacement

## Spare parts consumption

- Replacement rates
- Used parts availability and demand

## Catalog price

- Annual price escalation

## NET REVENUE PER SHOP VISIT

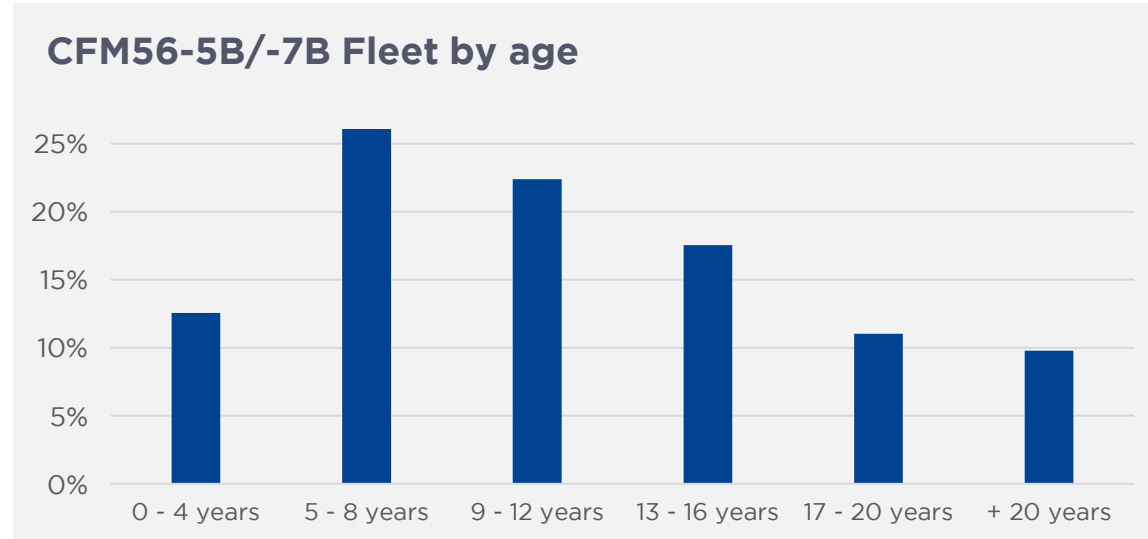
3



**COMPREHENSIVE AND EVOLVING MODEL to support aftermarket forecast**

*\*Exhaust gas temperature*

# CFM56-5B/-7B: a very young fleet



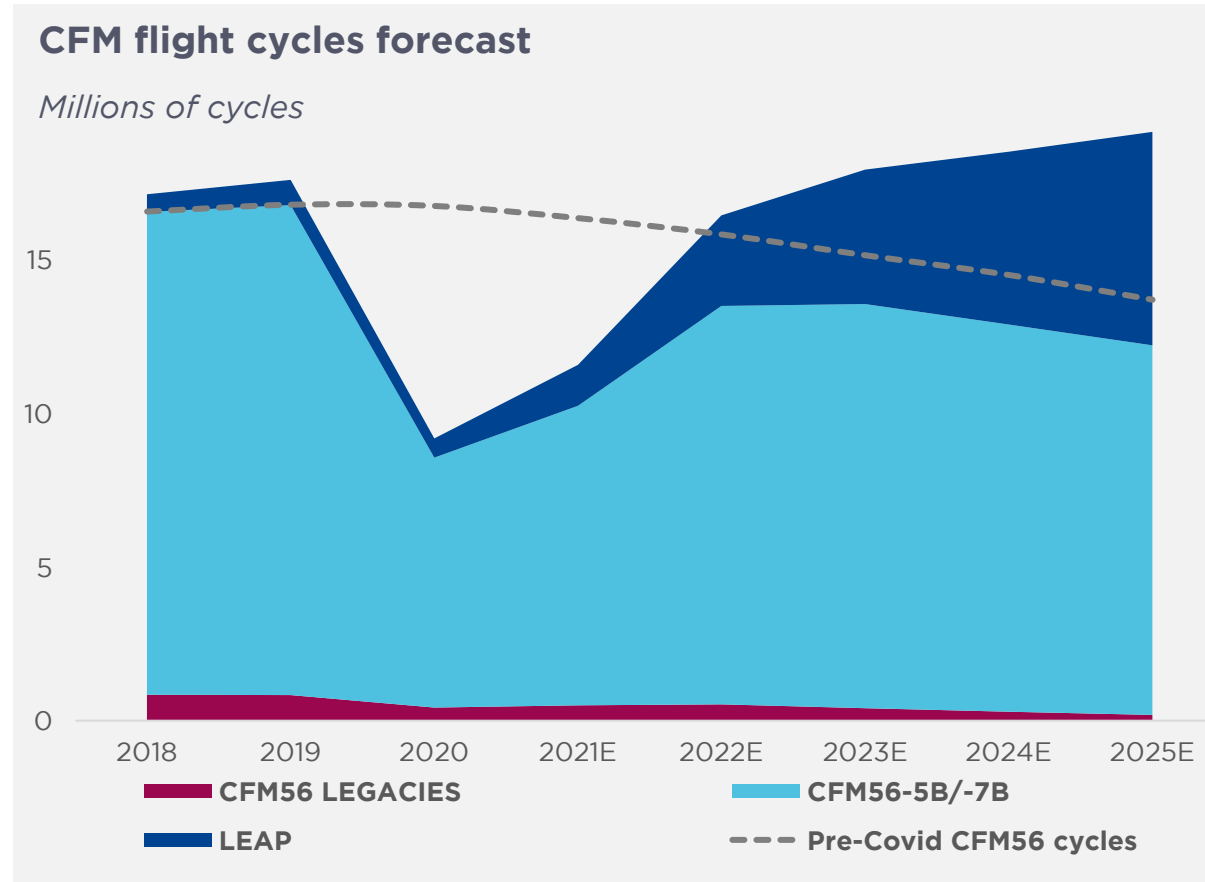
- A large installed base of **23,000 -5B/-7B engines in service\***
- Extremely efficient fleet with engine average age of **11.2 years** (all narrowbody 12.6 years)
- In **2021**, **50%** of -5B/-7B engines have not seen their first shop visit; in **2025**, **30%** of engines with 0 shop visit

**+ LARGE MAINTENANCE ACTIVITY AHEAD**

*\*All engines, including commercial, business and military applications, including those on stored aircraft*

# CFM fleet utilization outlook by engine generation

1



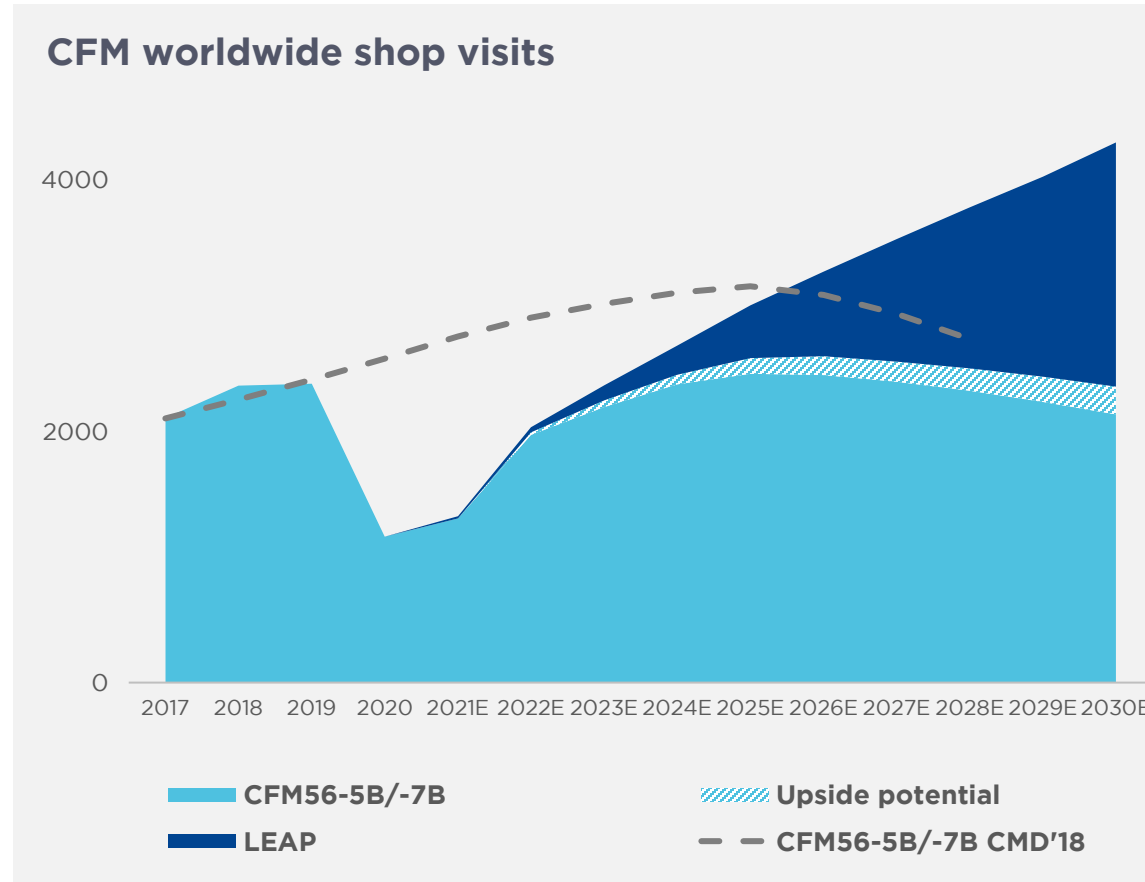
- Strong cycles ramp ahead for LEAP: x2.4 from 2022 to 2025
- CFM56-5B/-7B fleet specific dynamics vs pre-downturn outlook
  - Lower total yearly utilization cycles
  - A younger fleet



**Traffic allocation expected to favor youngest platforms**

# CFM56-5B/-7B and LEAP shop visits outlook

2



## ■ CFM56-5B/-7B

- Recovery to 2019 levels expected by 2024
- Hitting peak level in 2025-2026 at around 2,500 SV
- Possible upside as CFM56-5B/-7B SV's will primarily benefit from potential higher traffic

## ■ LEAP

- Relaying CFM56 growth from 2025
- LEAP number of shop visits ramping faster and higher than CFM56



**High single digit CAGR 2022-2030 for total CFM shop visit activity**

# Net revenue per CFM56-5B/-7B shop visit

3

## SHOP VISITS 1 & 2 AS A PERCENTAGE OF YEARLY -5B/-7B SV

### CMD '18 view

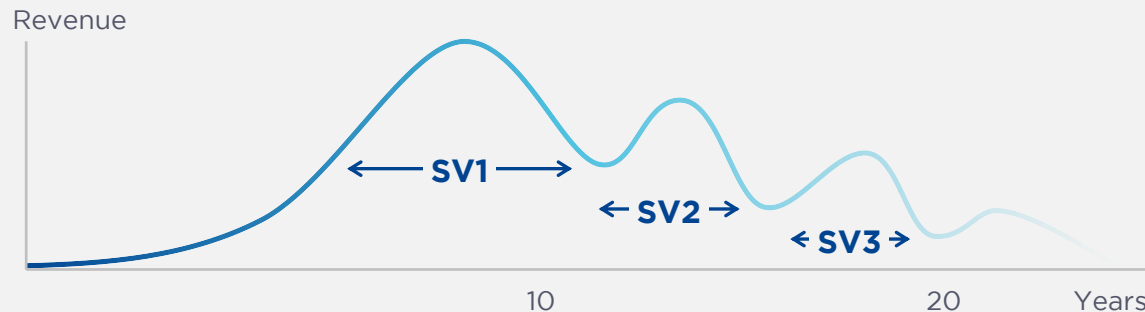
2018	2025E
75%	>66%

### CMD '21 view

2021	2025E
75%	75%



## TYPICAL TIMELINE FOR SPARE PARTS REVENUE



## MAIN DRIVERS AND MARKET DYNAMICS

- Higher proportion of shop visit #1 and #2 than pre-crisis (younger fleet)
  - Improved shop visit mix
- Average workscope maintained next 5+ years
- Catalog price evolution consistent with recent history
- Limited USM\* content increase
  - Limited availability of used LLPs and high consumption parts
  - Various configurations in service

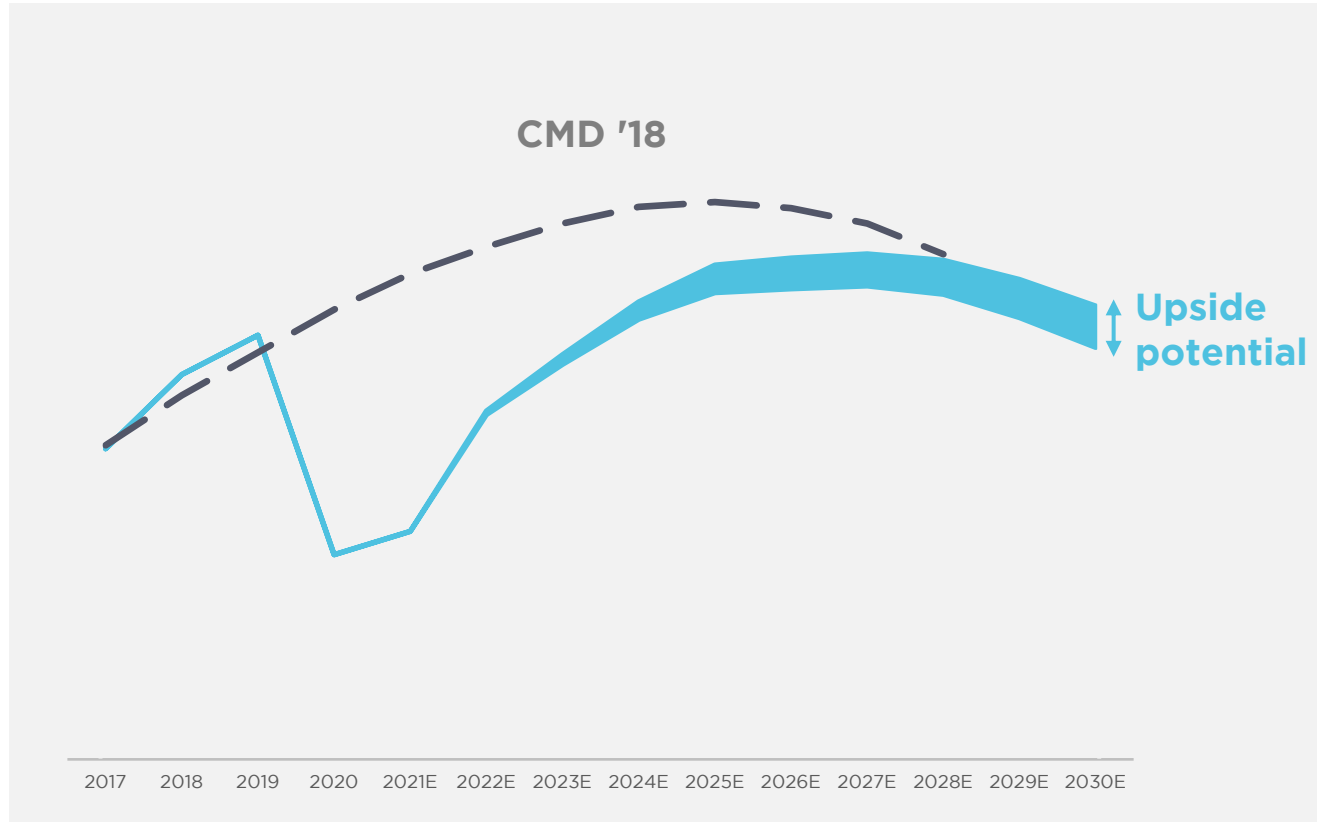


## NET POSITIVE EVOLUTION OF REVENUE PER CFM56-5B/-7B SHOP VISIT

\*USM: Used Serviceable Material



# CFM56-5B/-7B spare parts consumption



- Returning to 2019 levels around 2024
- Prolonged high runrate over 2025/2028 period

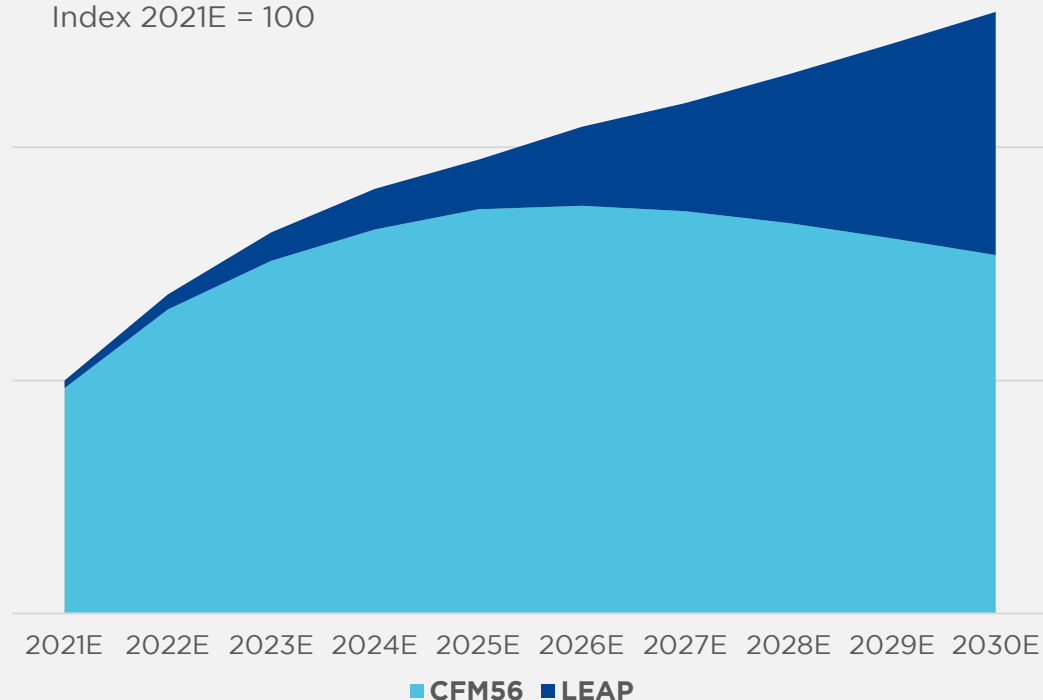


**SIGNIFICANT FLOW OF REVENUE FOR 10+ YEARS**

# CFM56 and LEAP contribution to Civil Aftermarket

Sales in USD for spare parts and service contracts for CFM56 (all generations) and LEAP engines contributing to Safran's Civil Aftermarket Index\*

Index 2021E = 100



\* excl. high thrust engines and others



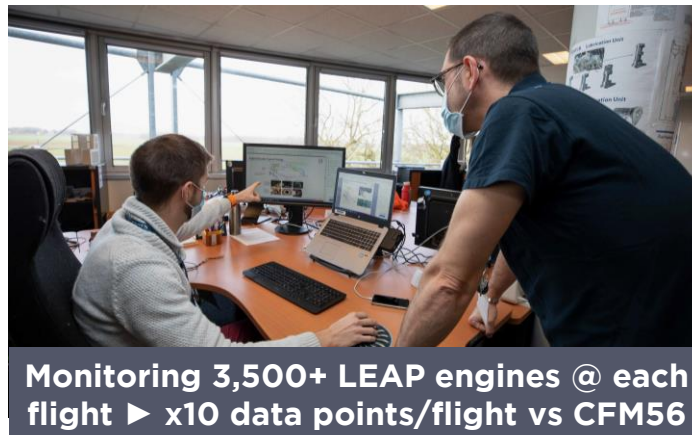
**LEAP relaying CFM56 growth from 2025**

**Robust increase going forward:  
high single digit CAGR over 2022-2030**

# LEAP service contracts: fleet and contract management

- **Enhanced Fleet Management: OEM expertise & digital tools, key enablers**

- **Real time active fleet monitoring:** data collection, early signals detection and analysis, digital twin
- **Proactive and predictive** analytics & remote diagnostics
- Optimized and tailored engine maintenance plans



**Monitoring 3,500+ LEAP engines @ each flight ► x10 data points/flight vs CFM56**

- **Service contracts management**

- Dedicated multi-skilled teams
- Focused on disciplined execution, portfolio cost management and profitability monitoring on each contract
- Managing **customer relationships & proximity**, identifying additional business opportunities

# LEAP service contracts: MRO ramp-up and cost management

## ■ Industrial ramp-up readiness

- **Modernizing and upscaling** current MRO network
- **Building additional MRO facilities:** launch in 2022 for EIS in 2025
- Monitoring capacity increase & demonstrating rates
- Embarking 3<sup>rd</sup> party MRO's



## ■ Maintenance costs management

- Massive **part repair development & industrialization** to optimize shop visit costs: 250+ repairs/year
- Bespoke Workscoping
- Leveraging **lean operations** and 4.0 industry standards
- On-wing vs in-shop maintenance



**ROADMAP IN PLACE to efficiently manage service contracts**

# A robust aftermarket outlook

- **Narrowbody traffic driving Safran civil aftermarket**
- **A young CFM56 fleet well positioned to benefit from recovery**  
Returning to pre-crisis level for shop visits and spare parts sales in 2024, followed by a high runrate until end of the decade
- **LEAP will take over sustained growth**  
Strong ramp-up of shop visits and associated services revenues
- **High single digit growth for CFM56+LEAP contribution to civil aftermarket from 2022 to 2030**  
Progressive transition between CFM56 and LEAP





06.

## Aircraft Interiors

Vincent MASCRÉ  
CEO Seats

Jorge ORTEGA  
CEO Cabin

Driving innovation for sustainable growth



## 05. Aircraft Interiors

1 |

# Safran Seats



# Safran Seats at a glance

**Successful transformation  
& momentum continues**

**Renewed portfolio  
& innovation dynamics**

32% market  
share of a  
reduced  
post Covid  
market

**Business streamlined  
& break-even point improved  
by 40%**

**On track to world leading  
position & double digit  
profitability**

# A successful transformation

## THE IN-DEPTH BUSINESS PROCESS RE-ENGINEERING LAUNCHED IN 2018 IS BEARING FRUIT:

### For our customers

- **100%** on time deliveries to airframers since end of 2019
- **Non-quality** divided by 5
- **Net Promoter Score** customer rating strongly improving
- **Full offerability** of our products with Airbus & Boeing

### Internally

- **Health & safety:** accidents divided by 3
- Purchasing savings above **5% per year**
- Reduction of development costs & leadtime



**MOMENTUM CONTINUES WITH ONGOING PROJECTS** on supply chain, engineering processes, quality right first time & customer centric mindset

# Renewed portfolio & Innovation dynamics

- Safran Seats is now offering to Airlines decision makers brand new products from Economy to First Class:



## Z200

Short & medium range economy  
EIS: July 2022



## Z400

Long range economy  
EIS: January 2021



## Optima

Long range business  
EIS: November 2019



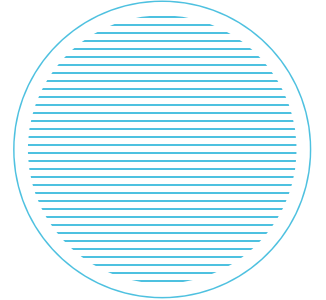
## Skylounge Core

Long range business  
EIS: January 2022



## Versa

Long range business  
EIS: later



A few other undisclosed products in development

- Based on modular platforms, enabling high level of customization to fit airlines branding while controlling development costs & leadtime
- Safran Seats is recognized as an innovator on the market:
  - Privacy
  - Comfort



# A streamlined business

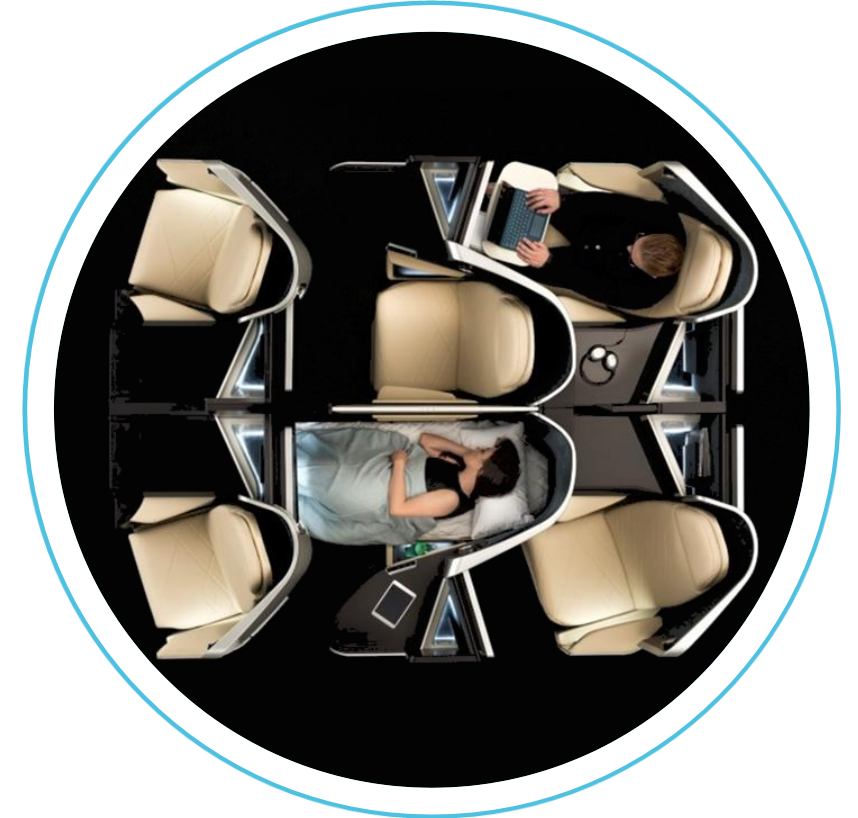
- **Before the crisis, integration synergies with Safran Group were delivering around €50M savings per year for Seats**
- **Major restructuring has been swiftly executed to adapt the business to market conditions:**
  - (40)% on headcount, from 7,745 to 4,735 (end of Q3 2021)
  - Closure of 2 sites, Santa Maria, CA, & Camberley, UK
  - 30% footprint reduction, from 248,000 sqm to 174,000 sqm
  - Furlough on all sites to tactically adjust to low load while keeping skills
  - Reduction in capital expenditure while safeguarding digital transformation



**Target to BREAK-EVEN IN 2022,** with sales 40% lower than in 2019

# Aircraft seating market: road to recovery

- **Demand shock from Covid crisis: -60% on sales in 2021 vs 2019**
- **No consolidation of the market so far**
- **Recovery has started**
  - Airlines have restarted seating projects, as key to passenger experience and airline differentiation
  - Retrofit opportunities rising
  - Back to 2019 sales level expected around 2025
- **Market fundamentals are unchanged**
  - Short cycles & customization
  - Airlines are the customers (BFE\*)
  - More severe certification criteria
  - Need to activate quickly large engineering & industrial capacities
  - Even a potential business class travel long term reduction would be mitigated



\*BFE: Buyer Furnished Equipment

# Safran Seats objective

## In a market starting to recover,

- With a renewed product portfolio enabling solid book to bill ratio,
- With streamlined operations,
- Delivering to customers improvements from business transformation

## Safran Seats confirms its readiness to achieve a leading position on aircraft seating market in:

- Innovation
- On time & on quality
- Intimacy with Airlines



**DOUBLE-DIGIT PROFITABILITY** by 2025





## 05. Aircraft Interiors

2 |

# Safran Cabin



# Cabin at a glance

## THE MARKET

- \$6.7bn pre-pandemic global market
- **Increasing percentage of SFE\*** largely due to delay in widebody recovery
- **Price competition** drives continued increase in competitive cost country engineering & production

## SAFRAN CABIN

- **#1 worldwide with ~22% market share**
  - Closest competitor is 16%
  - Complete cabin and cargo product offering differentiates Safran
  - Cargo market growth aligns with our product offering
- **Clean, Green and Connected technology investments driving future opportunities**

*\*SFE: Supplier Furnished Equipment*

# Innovative products drive growth (1/2)

## CRYSTAL CABIN AWARD FOR BEACON CLEAN LAVATORY

### ■ Clean Lavatory concept

- **External sanitizing** station with waste container
- **Smart mirror** displays digital “clean” messaging
- **Separate wet/dry** countertop zones with enlarged wash basin
- **Anti-microbial and touchless** technologies applied throughout



## FIRST AIR FRANCE A320 RETROFITTED WITH ECOS SHELF BINS

- Air France retrofits 24 A320s with Safran Cabin ECOS Shelf Bins
- ECOS “Efficient Cabin Open Space” shelf bins offer up to 60% more storage capacity
- Air France first to choose ECOS shelf bins



# Innovative products drive growth (2/2)

## FULL RANGE OF CARGO CONTAINERS & PALLETS

### ■ Newly developed Fire Resistant Containers

- **Safe transportation** of li-ion batteries and smartphones
- **Resist a lithium-based fire for 6 hours**

### ■ Selected by Qatar Airways

- Qatar to replace their entire **ULD fleet** of more than 10,000 containers with our new container design in next 5 years

### ■ Other innovations include:

- **SEN Door** solution
- Ground **Containers**
- **Self Roll-up** Doors



## COOL TROLLEY

### ■ Trolleys with full-size insulation and re-useable cooling cassettes; a green alternative to dry-ice







- **Optimizing cooling performance** of catering up to 50%
- **One extra position** for increased serving capacity



# Safran Cabin adaptation continuing (1/2)

- Aggressive transformation driving significant operating/financial performance improvement
- Covid necessitated further aggressive response to adapt to new market reality
  - Headcount worldwide reduced from ~14,200 January, 2020 to ~9,800 Q3 2021
- Continuing drive to competitive cost countries



-  **New plant** inaugurated in **Chihuahua**, MX July, 2020
-  **New Bangkok plant** in 2021 driving Cargo growth
-  **Czech Republic** growth through program transfers
-  **Tijuana**, MX work transfers from So. California
-  Expanded use of **Brazil Engineering**
-  Direct labor rate reducing by **>15%**

**+ Increasing share of labor hours in cost competitive countries** by ~10pts 2020 over 2022

# Safran Cabin adaptation continuing (2/2)

## SITE AND PROCESS OPTIMIZATION

- Fewer, larger sites for more efficiency
  - 4 sites closed in 2020, 3 closed by end of 2021, additional planned for 2022
  - Improved level loading and implementing best practices across Safran Cabin
- One Safran process standards implementation
  - Lower manufacturing and material cost
  - Fewer suppliers
  - Better product consistency
  - Higher quality
  - Shorter lead time
  - Alignment of quality systems



**Square footage reduced from 445,000 sqm to 300,000 sqm (net) since 2017**

# Safran Cabin towards double digit profitability by 2025

- **Recovery accelerating → Target to breakeven in 2022**
- **Core competencies & business process re-engineering driving capability and cost synergies**
  - Engineering
  - Supply chain & purchasing
  - Program management
- **Continuing to invest in innovation-driven growth**
  - 2 Crystal Cabin Awards in 2021
  - “Clean, Green and Connected” projects generating significant market interest





Driving innovation for sustainable growth

07.

## ESG

Olivier ANDRIÈS  
CEO

Stéphane DUBOIS  
EVP Corporate Human  
& Social Responsibility





## 07. ESG

# Summary

- 1 | ESG strategy 2025
- 2 | Reduce emissions from operations
- 3 | Be an exemplary employer
- 4 | Embody responsible industry
- 5 | Contribute to a safer world



## 07. ESG

# 1 | ESG strategy 2025

## ...contributing to Safran purpose

---

*"Thanks to the commitment of our employees, proven innovation and operational excellence, Safran designs, builds and supports high-tech solutions to contribute to a safer, more sustainable world, where air transport is more environmentally friendly, comfortable and accessible. We also apply our skills to develop solutions that meet strategic needs, such as defense and access to space."*

# ESG strategy 2025: 4 pillars and 12 commitments

Aligned with 12 of the 17 UN's Sustainable Development Goals



## Decarbonize aviation



**1.** Make carbon neutral aircraft the R&T priority



**2.** Reduce CO<sub>2</sub> emissions throughout our value chain



**3.** Involve employees in the reduction of their carbon footprint



## Be an exemplary employer



**4.** Accelerate training in the skills and professions of tomorrow



**5.** Ensure health and safety of employees, improve the quality of life at work and maintain a thriving social dialogue



**6.** Encourage equal opportunities and promote diversity



## Embody responsible industry



**7.** Uphold the highest standards of ethics



**8.** Strengthen responsible supply chain management and support suppliers



**9.** Respect the environment and natural resources



## Affirm our commitment to citizenship



**10.** Be at the forefront of innovation to protect citizens



**11.** Develop partnerships for training and research



**12.** Enhance professional and social integration



: Addressed in this presentation

# A dedicated ESG governance

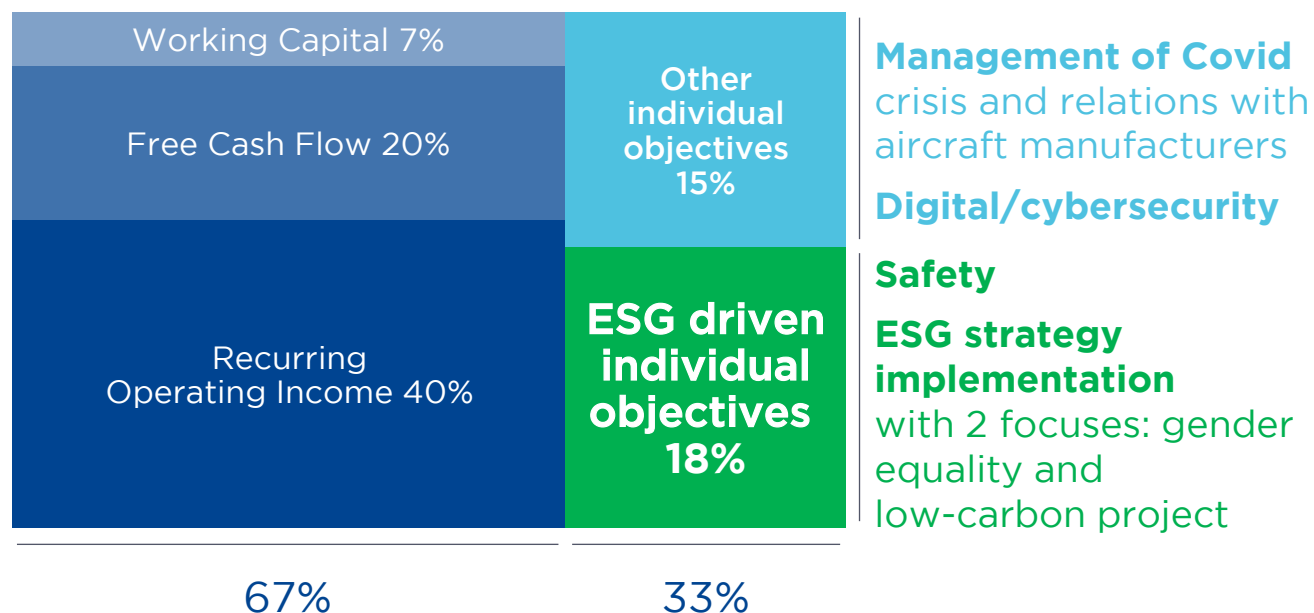
To embark all Group employees





# ESG driving CEO compensation

## 1. CEO's annual variable compensation (in 2021)



## 2. Long-term incentive plan ESG criteria

- To be implemented in 2022
- Projected **ESG driven performance criteria** (subject to Board approval):

**From 10 to 20%**

Other long-term incentive plan criteria remain (TSR, FCF, ROI\*)





- Will apply also to Group's Executive Committee members

**+ CEO COMPENSATION linked to short and long term ESG performance**

\* TSR: Total Shareholder Return, FCF: Free Cash Flow, ROI: Recurring Operating Income  
Reference: annual budget for annual variable compensation; Group's medium-term plan for long-term incentive plan.



# SAFRAN ESG ratings

		Safran	Peer comparison
 <p>Rating from “CCC” to “AAA” (“AAA” being the highest)</p>		<b>BBB</b>	<b>Above the average</b> of 31 companies in the A&D sector <i>August 2021</i>
 <p>Rating evaluating ESG risk level, with the lowest rating corresponding to the best non financial performance</p>		<b>22.9</b> Medium risk	<b>2<sup>nd</sup></b> out of 91 companies in the A&D sector <i>November 2021</i>
 <p>Rating reviewed every 2 years</p>		<b>62/100</b> Advanced level	<b>1<sup>st</sup></b> out of 20 companies in the A&D sector <i>April 2021</i>
 <p>Understanding of environmental challenges for the company Rating from “D” to “A” (“A” being the highest)</p>		<b>A-</b> Leadership	In the top <b>25%</b> out of 136 companies in the transport OEM sector <i>December 2020</i>



**A RECOGNIZED ESG PERFORMANCE**



## 07. ESG

2 |

Reduce  
emissions  
from operations



# Towards a full Scope 3 disclosure in 2022

2021<sup>(1)</sup>

- Emissions from use of products: initial partial declaration of direct emissions **from engines**:
  - 41.9 Mt CO<sub>2</sub>eq. in 2019,
  - 20.6 Mt CO<sub>2</sub>eq. in 2020
- Other indirect emissions: extended category declarations (vs. 2020):
  - Purchases of goods and services: 5.7 Mt CO<sub>2</sub>eq. in 2019
  - Freight: 0.3 Mt CO<sub>2</sub>eq. in 2019
  - Employee commuting: 0.1 Mt CO<sub>2</sub>eq. in 2019

2022<sup>(1)</sup>

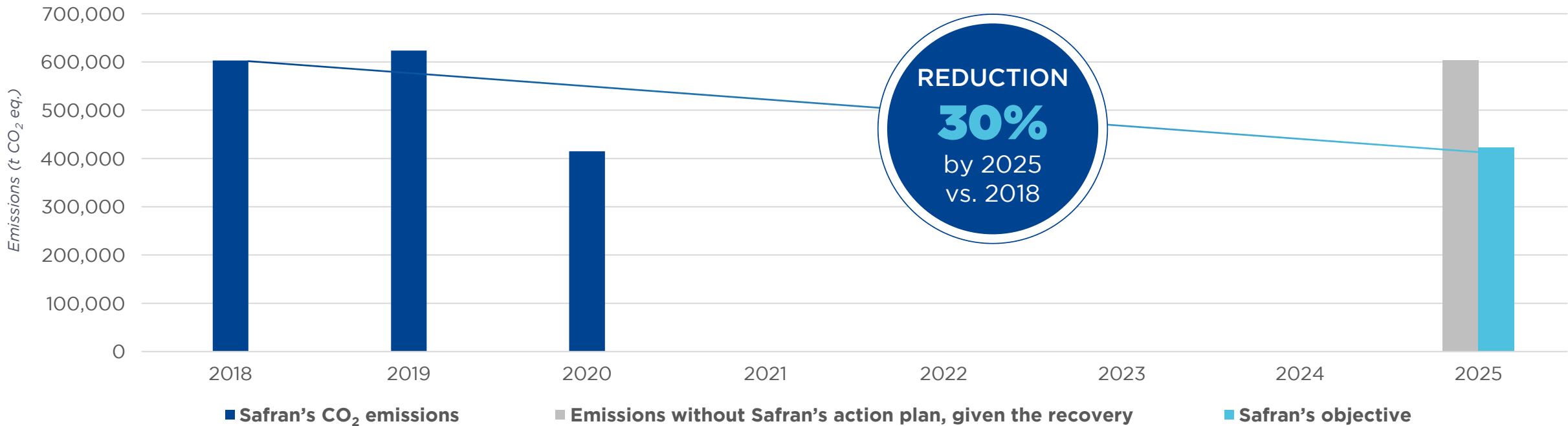
- **Full declaration for all categories**, notably for the use of products across the Group scope
- **Reduction objectives for Scope 3 emissions**

(1) Year of disclosure (Universal Registration Document Y-1).

# Target 30% emissions from operations reduction by 2025

Scope 1&2\*

## EMISSIONS FROM OPERATIONS\*\*



**+ AN AMBITIOUS COMMITMENT, IN LINE WITH 1.5°C SCENARIO**

\* Scope 1: direct greenhouse gas emissions linked to the combustion of energy sources such as gas, liquefied petroleum gas and aviation fuel as well as refrigerant emissions during the production phases at Safran sites / Scope 2: indirect emissions linked to the consumption of energy, electrical power or heating/cooling at Safran sites  
\*\* Less than 1% of total Safran carbon footprint (the vast majority being emissions from use of sold products)

# Levers to reduce emissions from operations

Scope 1&2

## ENABLERS

### Drive the change



## 2020 AND 2021 ACTIONS

- › **Internal carbon price** (shadow pricing) in investment process
- › Low-carbon targets in top management evaluation
- › Low-carbon integrated into mid-term planning exercise

### Use less energy

- New industrial building standard (derived from top labels)
- Energy management system deployment (efficiency and sufficiency for production & infrastructures)
- Energy recovery (fatal heat, gas in carbon brakes process, ...)



- › New **low-carbon Additive Manufacturing Campus** in Le Haillan
- › Heat recovery in Gennevilliers foundry
- › Relamping projects in multiple sites

### Better sourcing

- Switch to renewable energy sources



- › **Sustainable Aviation Fuel used for engine testing since Sept. 2021: 10% since Oct. 2021, >35% in 2025**
- › On-site photovoltaic panels (Sendayan, Milmort, Valence,...)
- › Renewable Power Purchase Agreement signed in Mexico covering 5 Safran facilities



**A CLEAR ACTION PLAN** with continuous progress



## 07. ESG

3 |

# Be an exemplary employer





# The fundamentals of our HR Responsibility

**PASSIONATE**  
*people* FOR OUR  
SUSTAINABLE FUTURE

**1** **we**  
ENSURE  
DIVERSITY  
AND INCLUSION

**you**  
MAKE  
THE DIFFERENCE



**2** **we**  
DEVELOP  
SKILLS AND BUILD  
OPPORTUNITIES

**you**  
SHAPE OUR  
FUTURE



**3** **we**  
CREATE A  
TRUSTWORTHY  
WORK PLACE

**you**  
DARE TO  
ACT & INNOVATE



**4** **we**  
PROMOTE  
COLLABORATION  
AND MUTUAL SUPPORT

**you**  
ARE PART  
OF THE TEAM



# Develop an inclusive culture to be truly differentiated

## A COMMITMENT TO

- **Develop training** on diversity and non-discrimination for all employees
- **Communicate & raise awareness** through conferences & webinars on stereotypes and unconscious bias
- **Reinforce** actions against sexism
- **Make visible** a diversity of role models
- **Signature** of the **Diversity Charter** worldwide
- **Pursue** our actions in favor of people with disabilities, especially in recruitment and job retention
- **Develop** the **pay equity** policy

## ACTIONS

- › **Early 2022, accelerate and operate a deeper transformation**
- › **Launch a diversity, inclusion and non-discrimination barometer**
- › **Definition of a Diversity & Inclusion policy for the Group**



**ESSENTIAL** to meet the challenges of tomorrow

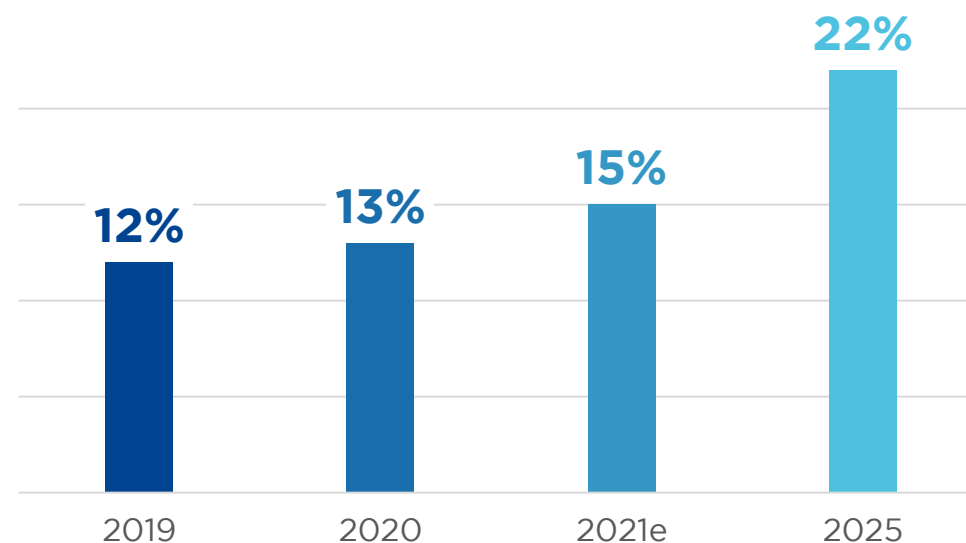
# A strong commitment to gender diversity

## 3 AMBITIONS

- 1. Operate a change in corporate culture, towards more inclusion and professional mixity**
  - Improve our score on the gender equality index<sup>(1)</sup> (2021: 89/100)
  - Sensitization, training and fight against unconscious bias
  - Visibility given to female employees at Safran
- 2. Increase the number of women leaders**
  - Professional equality objectives deployed for CEO & Executive Committee
  - Dedicated training programs for women
  - Personalized career follow-up, mentoring and peer coaching
- 3. Strengthen Safran's attractiveness for women**
  - Awareness-raising from school
  - Active partner of the Paris Dauphine "Women and Science"
  - Obtaining the International Label of Gender Equality (GEEIS) on our sites (2021: obtained for 7 Group entities in 4 countries)

## 2025 KEY OBJECTIVE

% of women in senior management (base: 570\*)



\* End of December 2020 data / 2021e: Sept. 2021 data



**DIVERSITY OF PROFILES AND EXPERIENCES** are factors of innovation, and collective performance

(1) French legal index relating to the pay gap between men and women (scope: French employees)

# Safran: a leader in skills development

## AN ATTRACTIVE GROUP

Implement **common base** of social measures

**Support & encourage mobility** within the Group through a proactive policy which supports skills development

**Accelerate the re-skilling paths** to create more opportunities within jobs under transformation

**Enable all employees to self-assess their competencies**

Reinforce **training** for all employees

# 3<sup>RD</sup>

in Forbes latest ranking in A&D sector



Signature of the **New French and European agreements** in line with the European Pact for Skills for Aerospace and Defense launched on 16 November 2020



More than **60% open professional positions** covered by internal mobility in France in 2021



Communication to raise **employees' awareness on job & and skills** evolutions



Launch of an **employee centric tool** in 2022



**Training target** for all employees from 18 hours in 2022 to **26 hours in 2025**



## ATTRACT AND RETAIN TALENTS: a strong Safran commitment



07.  
ESG

4 |

Embody  
responsible  
industry



# Maintain culture of ethics and integrity

## A ROBUST TRADE COMPLIANCE PROGRAM

- **Signatory of the United Nations Global Compact**, classified as advanced, the highest standard in terms of ESG performance
- **Tone at the top:** commitment reflected in a representation letter signed by CEO every year in all tier-one companies
- Based on **corruption risk mapping, evaluation on ethical requirements** adapted to the risk profiles (customers, suppliers, partners)
- **Signature by all employees** of the Ethics Charter and the Code of Conduct. Signature by all concerned employees of the Conflict of Interest Charter
- A **dedicated organization** (27 Trade Compliance Officers in 2020) with appropriate procedures
- **Whistleblowing system** for all employees of the Group and external partners



**ZERO TOLERANCE** of corruption

## 2025 OBJECTIVE

**100%**  
of senior executives and  
exposed and affected people\*  
are trained in anti-corruption

*\* Exposed and affected employees in the Purchasing, Human Resources and Labor Relations, Legal, Finance, Audit and Internal Control, Trade Compliance, Risks and Insurance and Communications Departments, as well as affected employees among customers, suppliers and partners.*



# Strengthen responsible relationships with suppliers and subcontractors

## TODAY

### Support suppliers during Covid crisis

- Signature of the responsible purchasing Gifas Charter
- Investment in the French Ace Aéro Partenaires fund

### Reinforce our responsible purchasing policy aligned with the Duty of Care

- New Responsible Purchasing and supplier relationship label received by Safran in 2020 (compatible with ISO 20400-2014)
- Annual renewal of the SME pact membership (member since 2010)

## TOMORROW

### Prepare the supply chain for the future challenges

- R&T partnerships with suppliers to develop specific materials to meet the challenges of the future in metallurgy and composites (ex: Aubert&Duval, Solvay,...)
- Work with the main aerospace & defense players on maintaining a French supply chain for defense products (electronics in particular)

### Engage our suppliers to reduce overall GHG emissions along our value chain

- Initiate a strategic dialogue with top suppliers on their low-carbon roadmap
- Use carbon criterion with our internal carbon price to select suppliers

**40%**  
in 2020

Purchasing from suppliers who have signed the Safran responsible purchasing chart<sup>(1)</sup>

**TARGET**  
**80%**  
in 2025



**ENGAGE OUR SUPPLY CHAIN** towards responsibility and sustainability

*(1) Or using an equivalent responsible purchasing charter*



07.  
ESG

5 |

Contribute  
to a safer world



# Safran is a responsible actor in a highly regulated defense industry

## REGULATIONS / EXPORT CONTROL

**STRICT  
COMPLIANCE**

Safran's involvement

- Respects the following international regulations signed by France<sup>1</sup>
- Comply with the French 2017 law on the Corporate Duty of Vigilance
- Subject to the French regulation regarding defense product export
- Implemented strict compliance procedures with export control regulations and laws<sup>2</sup> in all Group companies

## CONTROVERSIAL WEAPONS

**NO**

Safran's involvement

- Not involved in any activity related to controversial weapons<sup>3</sup>

<sup>1</sup> The Missile Technology Control Regime, The Non-Proliferation of Nuclear Weapons Treaty, The Convention on Cluster Munitions, The Convention on Anti-Personnel Mines, the Wassenaar Arrangement, the EU common position on arms export, the Arms Trade Treaty

<sup>2</sup> Related to its activities, including French, European Union, United Nations and United States restrictions

<sup>3</sup> Activities typically banned under international treaties: i.e. anti-personnel landmines (as defined by EU taxonomy), cluster munitions (as defined by EU taxonomy), chemical and biological weapons (as defined by EU taxonomy), blinding lasers, autonomous lethal weapon systems, depleted uranium ammunition or white phosphorus weapons

# Safran will continue to provide the best of its technology to contribute to stability, key to sustainability

## NUCLEAR DETERRENCE

**INDIRECT**  
through  
ArianeGroup  
(JV 50/50)

Safran's involvement

- Safran contributes to French nuclear deterrence which allows peace, security and independence of France and Europe
- Aligned with French national strategy, France being a nuclear power who has made the sovereign choice of basing its national defense policy on nuclear deterrence

## NUCLEAR WARHEADS

**NO**

Safran's involvement

- Safran and ArianeGroup do not manufacture nuclear heads for M51 missiles

# How Safran embraces ESG stakes?

- **Decarbonization: from a long time technical effort to a structural step change**
- **Diversity: legacy starting point and strong commitment to accelerate**
- **Stability: best of Safran's technology to serve France's sovereign choice of defense**



# CAPITAL MARKETS DAY 2021

## CLOSING REMARKS



# Key takeaways

- Positive outlook for long term growth in air transportation
- Global leadership positions
- Onboard high-runners, young civil engines fleet
- Leaner organization to deliver increased profitability
- Accelerated pace of investment for decarbonization
- Portfolio evolution consistent with Safran's DNA



**Safran is rebounding from the Covid crisis  
with strong profitable growth  
at the forefront of sustainable aviation**