



MTU Aero Engines – Paris Air Show 2023

20th of June 2023 | Paris

Welcome

Thomas Franz

Vice President Investor Relations

Agenda

1 Market Environment

Lars Wagner

Chief Executive Officer (CEO) and
Chief Sustainability Officer (CSO)

3 Business Segments

Michael Schreyögg

Chief Program Officer (CPO)

5 Financials

Peter Kameritsch

Chief Financial Officer (CFO)

2 Technology and ESG

Lars Wagner

Chief Executive Officer (CEO) and
Chief Sustainability Officer (CSO)

4 Production

Dr. Silke Maurer

Chief Operating Officer (COO)

6 Q&A

Lars Wagner (CEO & CSO)

Michael Schreyögg (CPO)

Dr. Silke Maurer (COO)

Peter Kameritsch (CFO)

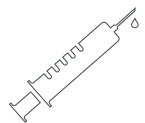


Market Environment

Lars Wagner

Chief Executive Officer (CEO) and
Chief Sustainability Officer (CSO)

Challenges have evolved since fall 2022



Covid-19 pandemic and remaining travel restrictions

- + now endemic
- + China has re-opened earlier than expected
- + last travel restrictions lifted



Russian invasion of Ukraine and related sanctions

- + impact on global air travel has remained limited
- possibility of further escalation, disruptions and sanctions



Energy supply crunch in Europe and global rise in energy prices

- + mild winter and gas alternatives
- + gas prices coming down gradually
- + oil price decline despite OPEC+ cuts

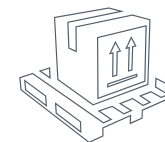
Global economic slowdown and price inflation

- + global economy resilient so far in 2023
- US Fed and ECB raised interest rates further
- \$/€ exchange rate less favorable for MTU



Supply chain constraints and labor shortage

- + global supply chain constraints have eased
- aerospace supply chains remain tight
- labor shortages remain



Ongoing climate discussion

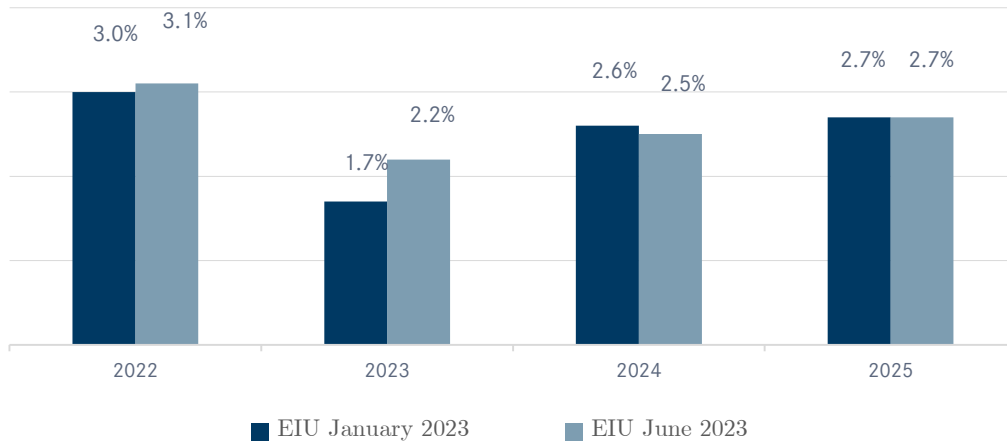
New initiatives e.g. SWITCH, Boeing ecoDemonstrator
SAF: increasing airline commitments
EU agrees binding SAF mandate



Global economy has proven resilient so far in 2023

Passenger flights have almost recovered, freighter flights holding up

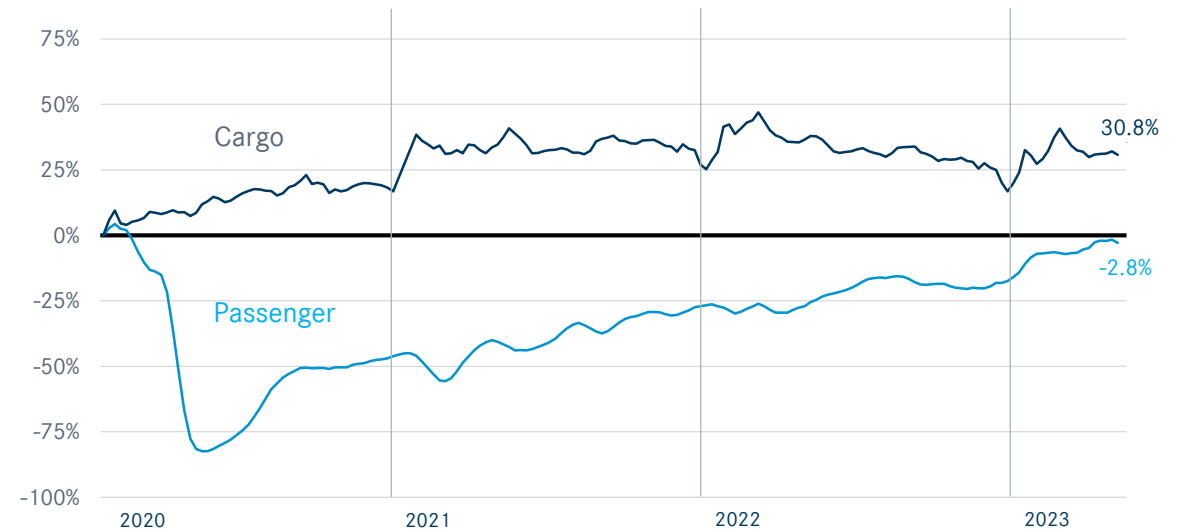
GLOBAL ECONOMIC GROWTH IMPROVING IN 2023



- | Global economy has proven resilient so far in 2023
- | Interest rates to remain high putting pressure on leasing markets
- | Moderate global recovery expected in 2024

Source: EIU = Economist Intelligence Unit

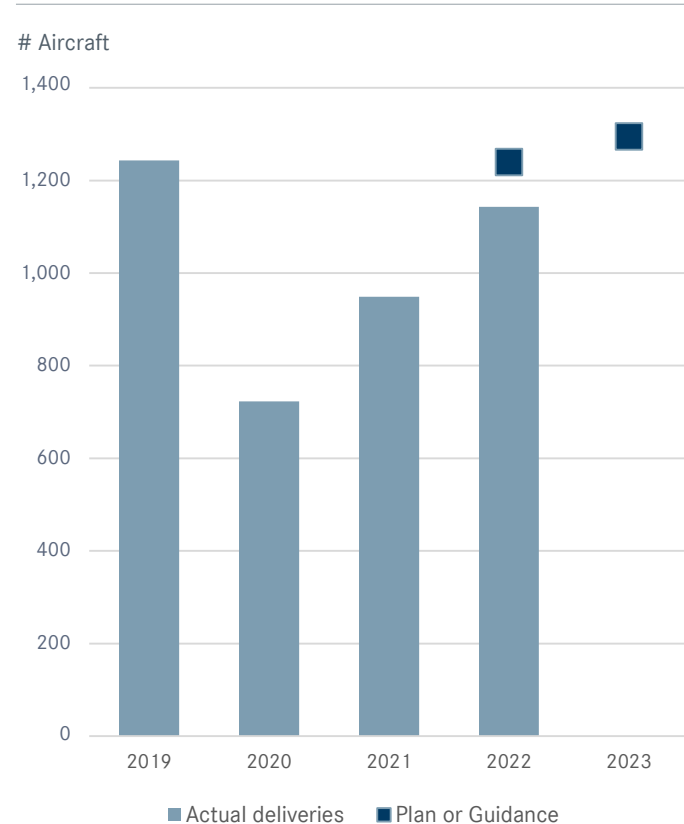
WEEKLY FLIGHT CYCLES COMPARED TO SAME WEEK IN 2019



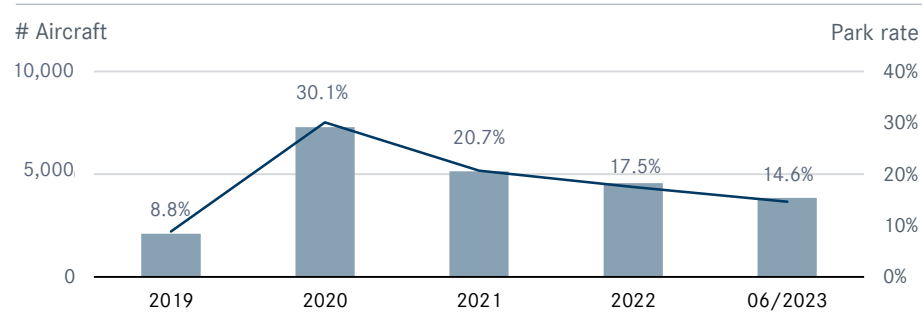
- | China's re-opening boosts Asian traffic, completing recovery
- | Strong upside potential from China's recovering international traffic
- | Dedicated freighter flights remain 30% above 2019 despite weakening cargo demand and recovery of available belly freight capacity

Industry struggles to ramp up new deliveries fast enough Airlines re-activate aircraft, delay retirements and grow average hours, boosting aftermarket

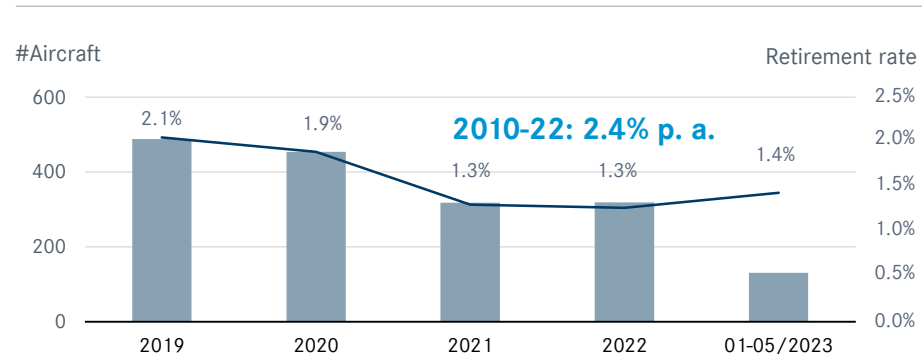
AIRBUS AND BOEING DELIVERIES



INDUSTRY STORAGE AND PARK RATE



INDUSTRY RETIREMENTS AND RETIREMENT RATE



- | Faster than expected post-Covid-19 air travel recovery has complicated efforts to ramp up production amid supply-chain shortages
- | Airlines re-call aircraft from storage
- | Retirements are being delayed with retirement rate at an historic low
- | In-service fleet utilization is recovering fast, boosting aftermarket demand

Sources: OEM, Cirium Fleets Analyzer Note: retirement rate = retirements / total fleet (in service and stored)

Technology & ESG

Lars Wagner
Chief Executive Officer (CEO) and
Chief Sustainability Officer (CSO)

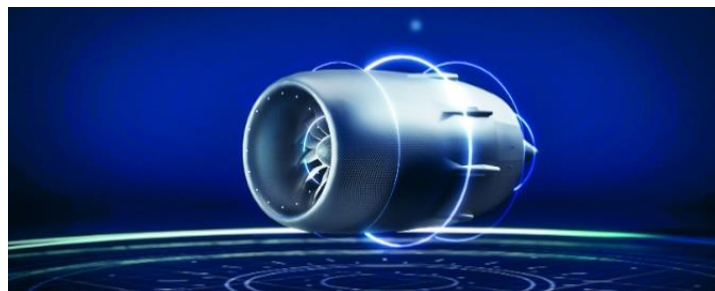
Engine concepts towards emission-free aviation

2ND GENERATION GEARED TURBOFAN



- | Reduced fan pressure ratio and higher overall pressure ratio
- | More efficient components and advanced materials
- | Increased robustness and improved time-on-wing

WET CONCEPT



- | Gas-turbine with waste heat recovery and steam injection into the combustion chamber
- | Applicable to all thrust and range classes
- | Significant reduction of all emissions (incl. non-CO₂-emissions)

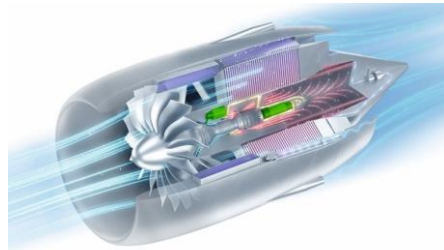
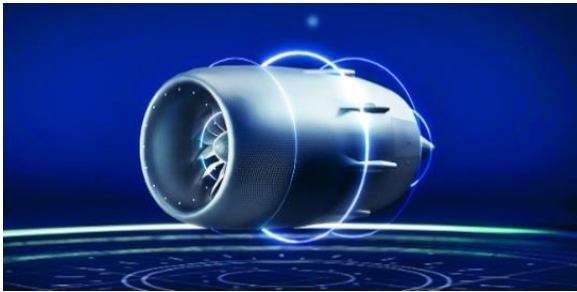
FLYING FUEL CELL



- | An electrochemical reaction in fuel cells transforms chemical energy from H₂ and O₂ into electrical energy
- | Applicable to short and medium range aircraft
- | Largest potential in terms of emission-free flying

Highlights of engine concepts towards emission-free aviation

SWITCH



- | Synergistic concept combining revolutionary technologies within GTF architecture
 - WET “Water-enhanced Turbofan”
 - EAP “Electric Aircraft Propulsion”
- | Funded by Clean Aviation Joint Undertaking until end 2025
- | International partner consortium including Pratt & Whitney and Airbus lead by MTU

FLYING FUEL CELL



- | eMoSys GmbH is a 100-percent subsidiary of MTU since April 2023
- | eMoSys GmbH is an innovative electric motor developer and small-volume manufacturer located in Starnberg
- | Decades of experience in the area of high-performance electric motors, power electronics and engine control units

We are shaping change by transforming aviation – our CR fields of action



Governance

Responsible corporate governance that includes compliance, data protection and IT-security



Product

Climate action is a key concern, while making flight safety a priority



Manufacturing & Maintenance

Good collaboration, reliable leadership and work safety are important pillars of our success



Procurement

We have established sustainable standards in procurement



Employees

Focus on climate action by working on MTU Green Global and resource protection at our sites



Society

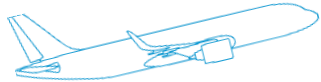
Corporate citizenship: MTU is part of society and a good neighbor and promotes science networks



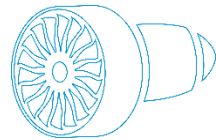
Business Segments

Michael Schreyögg
Chief Program Officer (CPO)

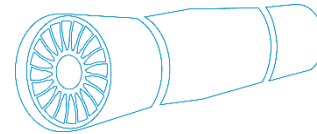
Strong recovery in air traffic, MTU back on track



**Recovery in air
traffic speeds up**



GTF durability issues



**New military
projects on track**



**MRO network
expansion**


The GTF engine is the most fuel efficient, sustainable engine for narrowbody aircraft

GTF engines offer the lowest fuel consumption and CO₂ emissions for today's single-aisle aircraft

 **1,600+**
aircraft in service

 **5 billion+**
liters of fuel saved

 **23 million+**
engine flight hours

 **12 million+**
Metric tonnes of CO₂
avoided

Source: Pratt & Whitney

GTF Advantage provides step-change in performance and durability

- | Entry into service in 2024
- | Better fuel efficiency, higher takeoff thrust for more payload, longer range and better performance at hot and high airports for the A320neo family
- | Reduces fuel consumption and CO₂ emissions by additional 1%, making it 17% better than prior-generation engines
- | Test program with special attention to severe environment operations



We are confident that the GTF engine architecture itself will form the future of aircraft propulsion

Continuous technical upgrades and improvements are key to further improve GTF durability



Situation today

- | Today's GTF production standard provides longer on-wing time and improved maturity, especially in harsh environments
- | 60% of the GTF fleet is operating with the latest hardware
- | Durability is improving on newer GTF configurations



Aircraft on ground situation

- | Much of current GTF fleet still needs upgrades to the latest hardware for greater durability and increased time on-wing
- | Operation in harsh environment is accelerating wear and tear and reducing time on-wing
- | Supply chain pressures are limiting the speed at which GTF engines can be upgraded and returned to service



Measures

- | Continuous incorporation of technical upgrades to improve durability
- | Longer time on-wing will reduce demand for spare parts, spare engines and shop capacity
- | As supply chain constraints will ease, fleet availability and MRO turnaround time will improve
- | Increase GTF MRO capacity

Kick-off for the most advanced engine for the European next-generation fighter



~ 2,000
engines expected

~ 500
engineers at MTU

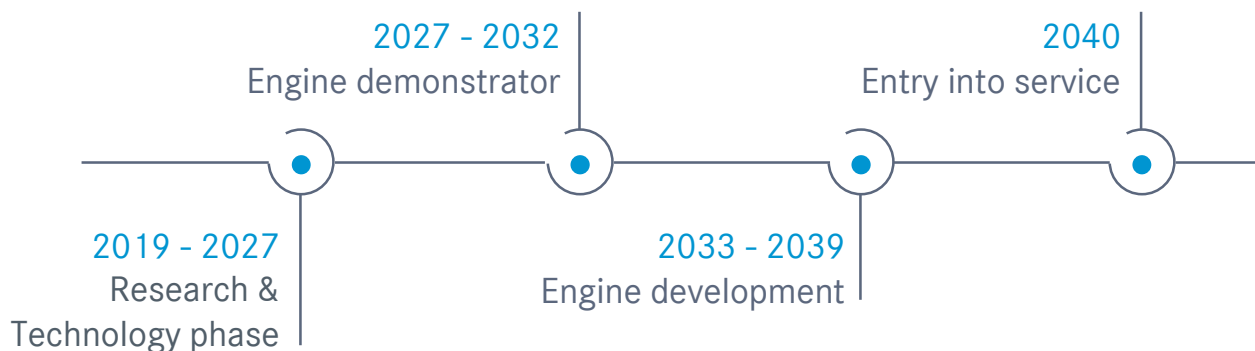
Achievements

- | Foundation of 50:50 JV EUMET in 2021
- | Strong partnerships across Europe
- | Start of demonstrator phase 1B, first milestones reached

Benefits for MTU

- | Further enhancement of technology competencies
- | Establish and expand own supply chain for high-tech products
- | Technology spin-off in commercial engines
- | High revenue potential

TIMELINE OF THE NEXT EUROPEAN FIGHTER ENGINE



Source: www.eumet-engine.eu

Safran and MTU Aero Engines team up to pave the way for a European next-generation helicopter engine



- | Safran Helicopter Engines and MTU Aero Engines have signed a MoU to create a 50/50 joint venture
- | JV intended to develop a new engine for the European Next Generation Rotorcraft Technologies (ENGRT) project
- | MTU and Safran are well positioned together
- | First funding streams via European Defence Fund have been secured

Expansion of our global MRO network is progressing

Canada
Move to new facility 2021



Dallas
Move to new facility 2023



Hannover
Shop expansion 2021



Ludwigsfelde
Shop expansion 2019



Serbia
Opened in October 2022



EME Aero (JV)
New shop 2019



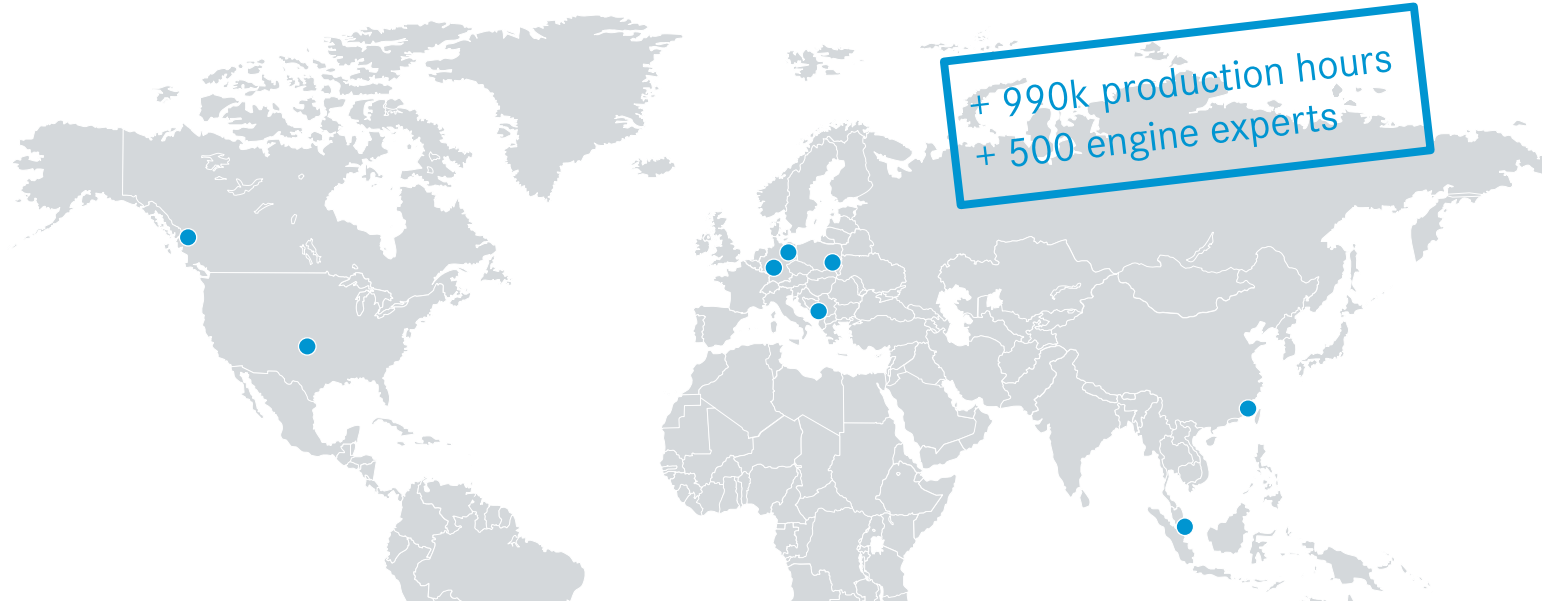
Zhuhai (JV)
Shop expansion 2021



Zhuhai #2 (JV)
New shop 2025



ASSB Airfoil Service (JV)
Shop expansion 2021



Production

Dr. Silke Maurer
Chief Operating Officer (COO)

Challenges for operations will continue – and will be met by a revised strategy

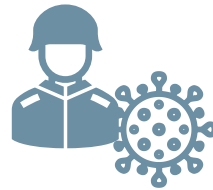
Situation: The present and future are characterized by more changes compared to the past.



Opportunities
New programs
Digitalization



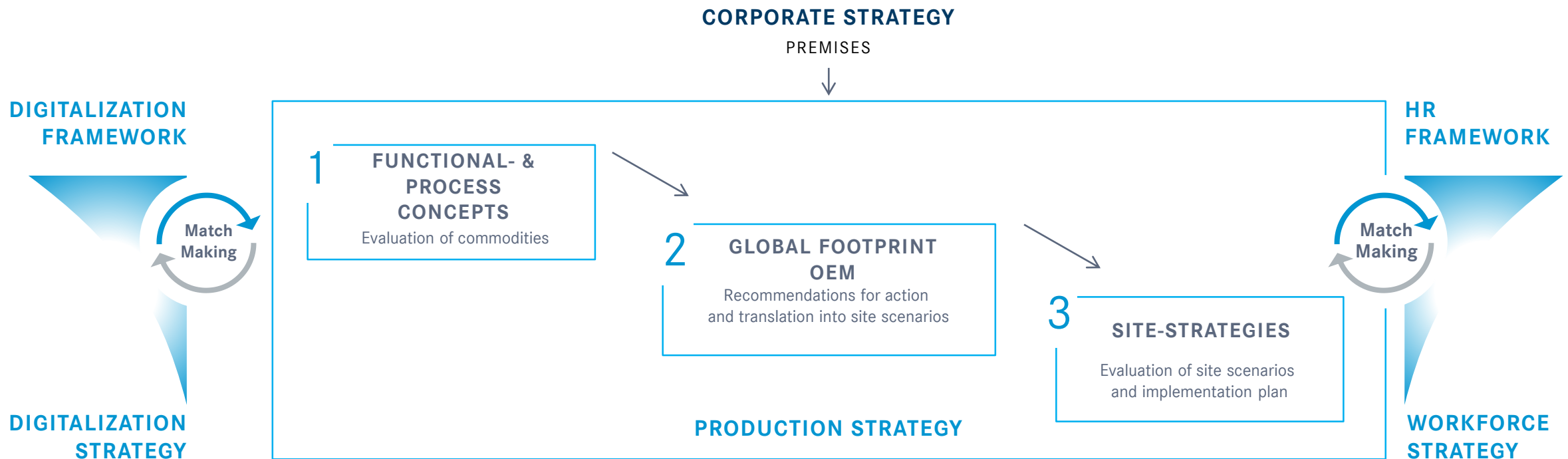
Culture
Network collaboration
Multifunctional teams



Environment
Global crisis
Labor shortage

Operations strategy will be reviewed and redesigned until the end of 2023 to ensure MTU's profitable, continuous and sustainable growth.

The future of production – holistic target picture including digitalization and workforce

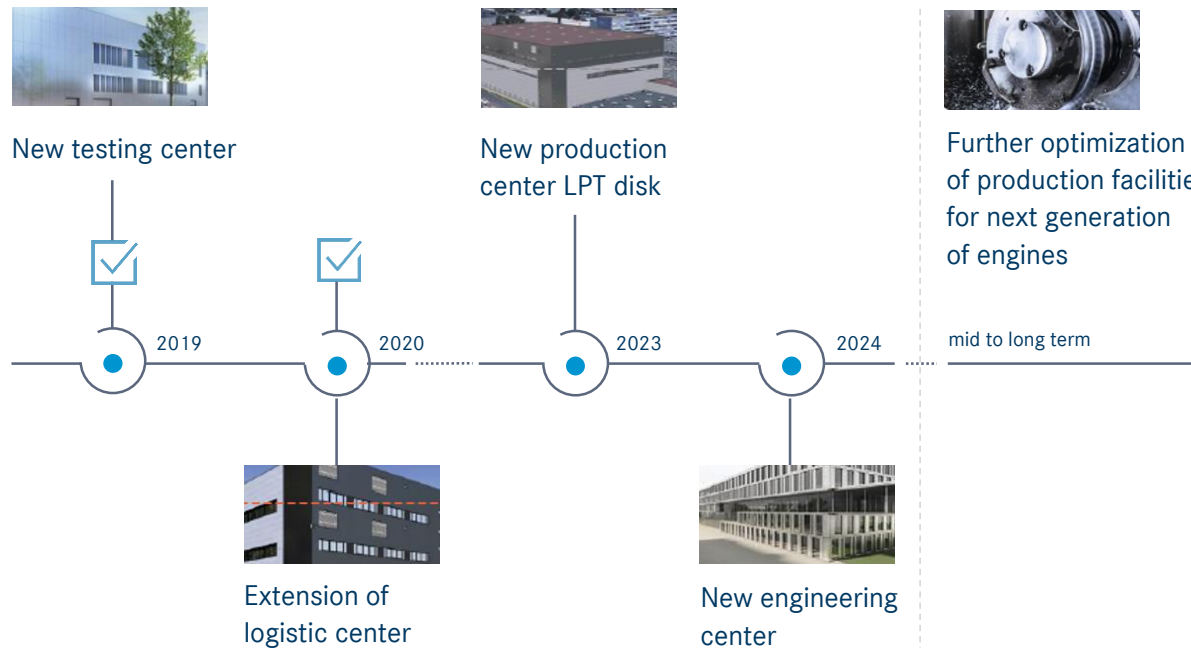


The match making process between production strategy, digitalization and HR ensures a reliable strategic landscape to be well prepared for the upcoming challenges of the future.

Status site development

What was announced in 2019...

... extension of MTU Munich facilities



What is the status quo in 2023 ...

... the new production center LPT disks will be finished until Q4 2023



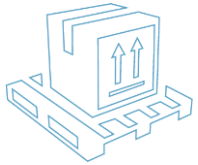
- Reduce production costs
- High tech automation

... the new engineering center is on track



- Building permits available
- Ground breaking is done

Procurement and logistics - safeguarding the volatile material supply



Strategic material buffers along the supply chain

End2end supply chain meetings per commodity at MTU to identify the best spot for material buffers in the supply chain



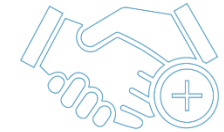
Diversified sourcing strategy

For long lead items, e.g. forgings and pre-materials additional sources were established



Contract management

Proactive extension of long term contracts with existing sources until end of decade



Support for suppliers

Workshops at suppliers to ensure capacity allocation, delivery and continuous improvement

Procurement and logistics – status quo of supply chain

Remaining bottlenecks

- | Bottlenecks are now shifting from pre-materials to later process steps in the supply chain, such as special processes or sub-suppliers
- | Demand recovery faster than expected
- | Bottlenecks mainly caused by labor shortages due to strong downsizing during the pandemic
- | Hiring in progress but remains challenging
- | New resources cause additional qualification efforts and for a temporary period of time lower yield / output

Improvements expected by the end of 2023

Measures:

- | Support of direct suppliers, primarily through technical supplier management in on-site workshops
- | Intensified inspection at MTU to secure production stability providing fast feedback to suppliers in case of problems
- | Qualification of additional manufacturing routes

Financials

Peter Kameritsch
Chief Financial Officer (CFO)

2023 – Business driver

Deviations to previous expectations

- | Supply chain challenges remain determining factor
- | Demand significantly above levels to be satisfied
- | Military programs – increase of funded development work and higher volumes
- | Commercial OE – Higher share of spare engines
- | Commercial Aftermarket - program mix shifts more towards mature engine programs, supply chain pressure limits growth
- | Profitability benefits from positive FX effects
- | Improvements in cost management supportive
- | Working capital management key item to balance operational and financial needs

Guidance 2023 updated

ORGANIC REVENUE

Military
Up mid teens %



Commercial OE
Up thirty %



Commercial Spares
Up high teens to low twenties %



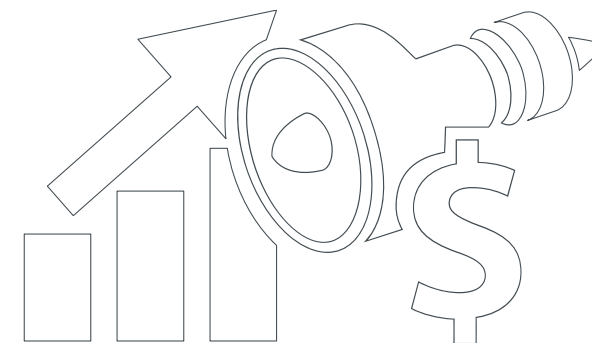
Commercial MRO
MRO up high teens %
GTF share at mid to high thirties % of revenue



Total Group Sales
EUR 6.1 – 6.3 bn €

EBIT adj.
>800 Mio €

FCF adj.
> 2022 actuals



Analyst & Investor Day Questions & Answers

Lars Wagner

Chief Executive Officer (CEO) and
Chief Sustainability Officer (CSO)

Michael Schreyögg

Chief Program Officer (CPO)

Dr. Silke Maurer

Chief Operating Officer (COO)

Peter Kameritsch

Chief Financial Officer (CFO)

Q&A

Cautionary Note Regarding Forward-Looking Statements

Certain of the statements contained herein may be statements of future expectations and other forward-looking statements that are 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 expressed or implied in such statements. In addition to statements that are forward-looking by reason of context, the words "may," "will," "should," "expect," "plan," "intend," "anticipate," "forecast," "believe," "estimate," "predict," "potential," or "continue" and similar expressions identify forward-looking statements.

Actual results, performance or events may differ materially from those in such statements due to, without limitation, (i) competition from other companies in MTU's industry and MTU's ability to retain or increase its market share, (ii) MTU's reliance on certain customers for its sales, (iii) risks related to MTU's participation in consortia and risk and revenue sharing agreements for new aero engine programs, (iv) the impact of non-compete provisions included in certain of MTU's contracts, (v) the impact of a decline in German or other European defense budgets or changes in funding priorities for military aircraft, (vi) risks associated with government funding, (vii) the impact of significant disruptions in MTU's supply from key vendors, (viii) the continued success of MTU's research and development initiatives, (ix) currency exchange rate fluctuations, (x) changes in tax legislation, (xi) the impact of any product liability claims, (xii) MTU's ability to comply with regulations affecting its business and its ability to respond to changes in the regulatory environment, (xiii) the cyclicity of the airline industry and the current financial difficulties of commercial airlines, (xiv) our substantial leverage and (xv) general local and global economic conditions. Many of these factors may be more likely to occur, or more pronounced, as a result of terrorist activities and their consequences.

The company assumes no obligation to update any forward-looking statement.

Any securities referred to herein have not been and will not be registered under the U.S. Securities Act of 1933, as amended (the "Securities Act"), and may not be offered or sold without registration thereunder or pursuant to an available exemption therefrom. Any public offering of securities of MTU Aero Engines to be made in the United States would have to be made by means of a prospectus that would be obtainable from MTU Aero Engines and would contain detailed information about the issuer of the securities and its management, as well as financial statements.

Neither this document nor the information contained herein constitutes an offer to sell or the solicitation of an offer to buy any securities.

These materials do not constitute an offer of securities for sale in the United States; the securities may not be offered or sold in the United States absent registration or an exemption from registration.

No money, securities or other consideration is being solicited, and, if sent in response to the information contained herein, will not be accepted. Cautionary Note Regarding Forward-Looking Statements

Proprietary Notice

Proprietary Notice

This document contains proprietary information of the MTU Aero Engines AG group companies.
The document and its contents shall not be copied or disclosed to any third party or used for any purpose other than that for which it is provided, without the prior written agreement of MTU Aero Engines AG.

Thank you for your attention.



Contact

Please contact us if you have any further questions

MTU Aero Engines AG
Investor Relations
Dachauer Str. 665
80995 München

Thomas Franz
Vice President Investor Relations
Tel.: +49 89 1489 4787
thomas.franz@mtu.de

Claudia Heinle
Senior Manager Investor Relations
Tel.: +49 89 1489 3911
claudia.heinle@mtu.de

Matthias Spies
Senior Manager Investor Relations
Tel.: +49 89 1489 4108
matthias.spies@mtu.de

Fingerfood & Drinks



+ + + Sorry, there are technical difficulties + + + Please stand by



MTU Aero Engines – Paris Air Show 2023

20th of June 2023 / Paris