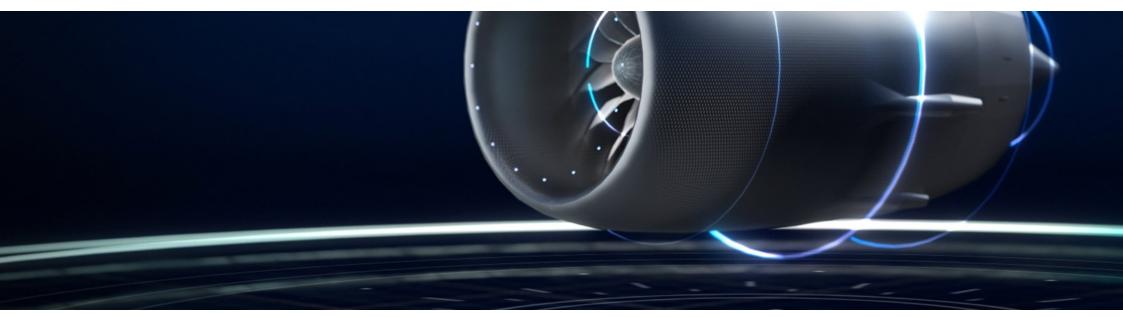
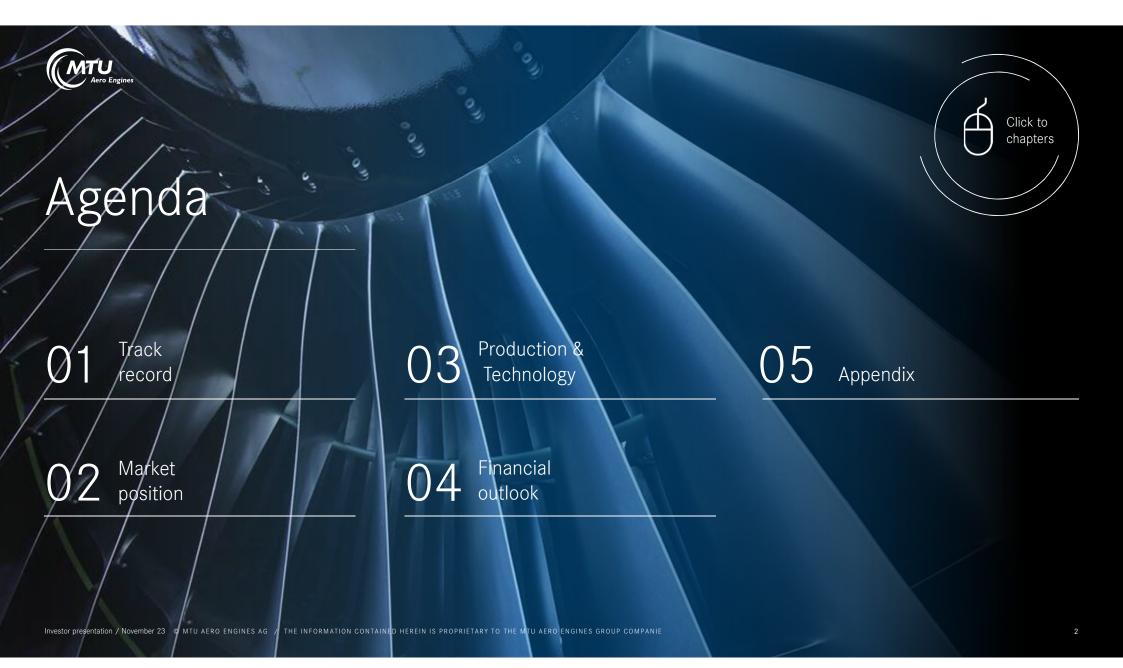


DRIVEN BY VISIONS OF TOMORROW



MTU Aero Engines AG | Investor presentation

December 2023



01 Track record

We are one of the pioneers of the aviation industry and are firmly established in the market as a leading manufacturer of aircraft engines and member of the DAX stock index.



We shape the future of aviation!

WHAT WE DO

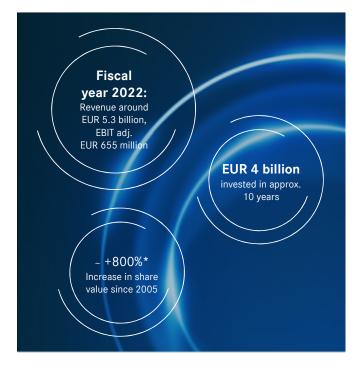
- Design, development, production and support of aircraft engines in all thrust categories
- **Commercial business:** 30% of aircraft have MTU technology on board
- | Military business: full system capability, for more than 80 years
- Commercial MRO: worldwide leader in customized engine service solutions
- | MRO portfolio: 1,100 shop visits per year for 30+ different engine types

HOW WE DO IT

- | People: more than 10,000 engine experts at 16 locations
- Partnerships: with all OEMs, airlines and the German Air Force (program shares from 5% up to 40%)
- | Technology: 200 technology projects, 2,800 patents and 500 inventors
- | Products: high-pressure compressor, low-pressure turbine, turbine center frame
- Process: lifetime excellence (lifecycles from 25 to 50 years)
- **Culture:** innovative and competent

* Basis: 30 November 2023







MTU is built on excellence in these three pillars

COMMERCIAL OEM BUSINESS



- | Revenues: ~ € 1.2 billion (26 %)**
- I Decades of partnerships with OEMs increasingly include maintenance
- | Balanced product portfolio in all thrust categories
- I Order volume secures business beyond mid of this decade
- Approx. 30% of active aircraft with MTU participation

MILITARY OEM BUSINESS



- | Revenues: ~ € 0.4 billion (9 %) **
- | European and U.S. engine programs
- | Full system capability
- | R&D is typically customer financed
- I Leading partner of the German Armed Forces

COMMERCIAL MRO BUSINESS*



| Revenues: ~ € 3.1 billion (65 %) **

- | Services: maintenance, leasing and asset mgmt.
- Exposure to highest growth engines (PW 1000G, V2500, CFM56, CF34, GE90)
- I Global network with direct customer business, partner of OEMs and airlines
- | More than 1,400 customers, including over 200 airlines

9M 23 Actuals: Revenues EBIT adj. margin ** € 1.6 billion ** 23.6% 9M 23 Actuals: Revenues EBIT adj. margin ** € 3.1 billion ** 7.2%

MTU group Guidance 2023: Revenue adj. ~ € 6.1 - 6.3 billion | EBIT adj. > ~ € 800 million | FCF > ~ € 326 millon

* MRO = Maintenance, Repair and Overhaul ** Basis: 9M 2023 Actuals (Group Revenues and Commercial OEM revenues adjusted for PW1100G powder metal issue)



MTU looks back on many important names from the German industrial history











1969

50% MAN

50% Daimler Benz

MTU



1989 MTU becomes an affiliate of Deutsche Aerospace, later renamed DaimlerChrysler Aerospace (DASA)



2005

MTU goes public





Today

index

MTU Aero Engines is

established in the DAX,

Germany's primary stock



Focus on **commercial** applications

Focus on military applications



02 Market position

2020-2021 was a test for the entire industry. We have proven resilience in the most severe aviation crisis since the end of the Second World War and are ready to further shape the future of aviation. in unbeatable fuel efficiency



The aero engine industry

CHARACTERISTICS

- Industry players are specialized in different modules and technologies
- | Oligopolistic structure of market
- | **OEM** business and **MRO** are perfect supplements
- New engine deliveries are almost EBIT neutral, spare parts business is the main value driver for the OEM segment

HIGH BARRIERS TO ENTRY

- | High technology expertise required
- | Substantial up front investment (R&D, Concessions) required
- | Long term contracts
- | Structurally captive spare parts business
- Strict certification requirements and regulatory approvals





MTU is an essential partner in the engine value chain



* selected market participants



Long-term fundamentals for the aerospace industry remain intact

Positive market environment for the aviation industry



20-year annual GDP growth 2.5%¹⁾

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20-year annual RPK²⁾ traffic growth 3.5%¹⁾



20-year annual CTK³⁾ traffic growth 3.2%



20-year new aircraft deliveries 42,700

Solid new aircraft deliveries over the next 20 years⁴⁾

32,000 Passenger single-aisle 6,800 Passenger twin-aisle 3,000 Regional jets 900 Freighters

Source: MTU 1) CAGR 2019-41 2) RPK = Revenue Passenger Kilometres 3) CTK = Cargo Tonne Kilometres 4) 2022-41



MTUs unique market position in both segments OEM and MRO

OEM

- Strategic long-term partnership with Pratt & Whitney in the narrowbody market (LPT/HPC) secures growth opportunities
- Partnership on large engines for hot section parts (TCF) with General Electric ensures product diversification
- | BizJets/Regional/**Narrowbodies** the **backbone** of our portfolio
- Higher portion than industry average of freight and military engine applications provides solid ground for the aftermarket
- Excellent access to the MRO market via OEM-Partnerships, independent and Airline JVs
- I MTUs business model provides for a high level of agility proven by the resilience in 2020-2021

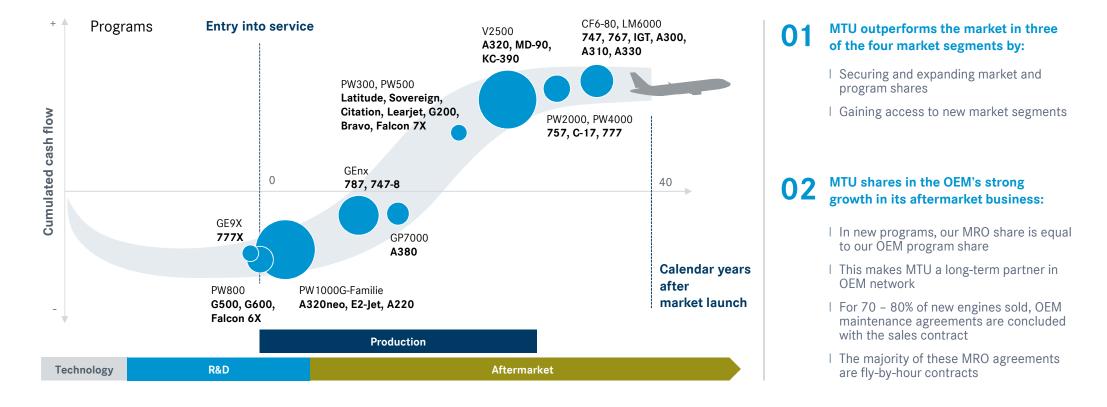
MRO

- No. 1 Independent MRO provider worldwide
- Worldwide **broadest portfolio** with 30+ engine types
- Repair technologies for mature engine programs
- Leading MRO provider for V2500
- Integrated OEM-MRO business secures aftermarket volume and provides opportunities for future programs



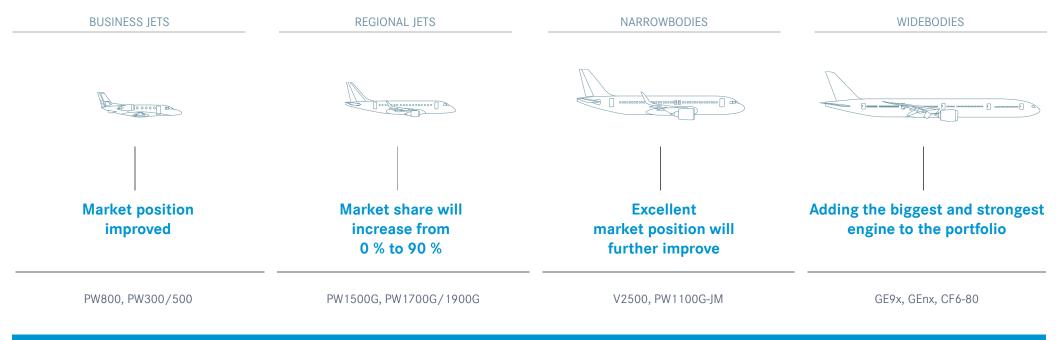


A balanced portfolio in all thrust categories ensure MTU's long-term success





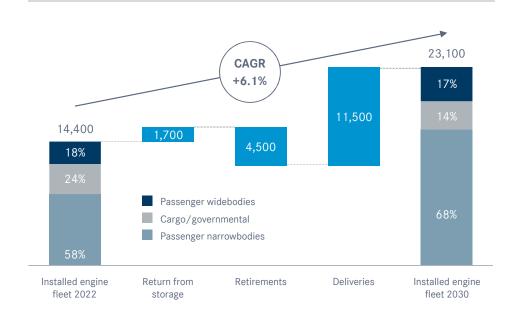
In the commercial OEM business MTU expands its position in all market segments



Optimizing risk profile and growth opportunities by continuous participation in varying thrust classes



MTU's future growth is driven by narrowbody engines



COMMERCIAL ENGINE FLEET WITH MTU PARTICIPATION 2022-2030

NEW ENGINE DELIVERIES 2022-2030

~ 9,000 Passenger narrowbody engine deliveries ~ 2,100 Passenger widebody engine deliveries ~ 450 Cargo and government applications engine deliveries





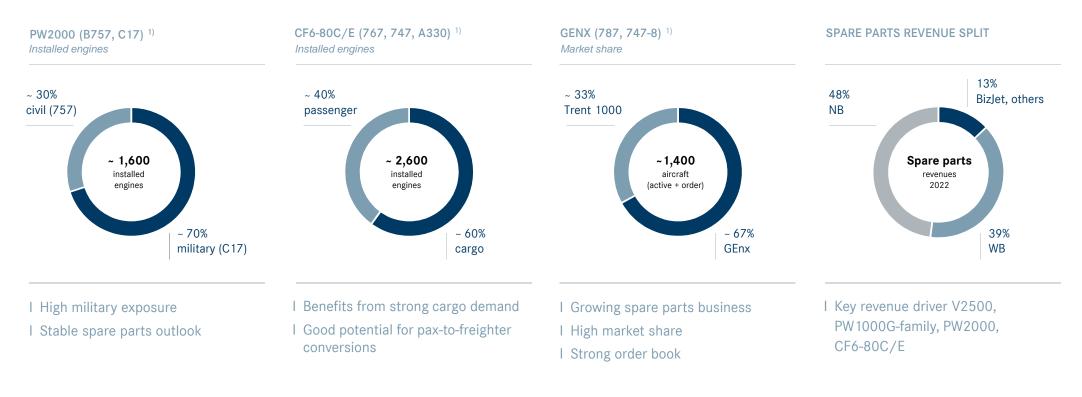




Source: MTU – Engines with MTU participation



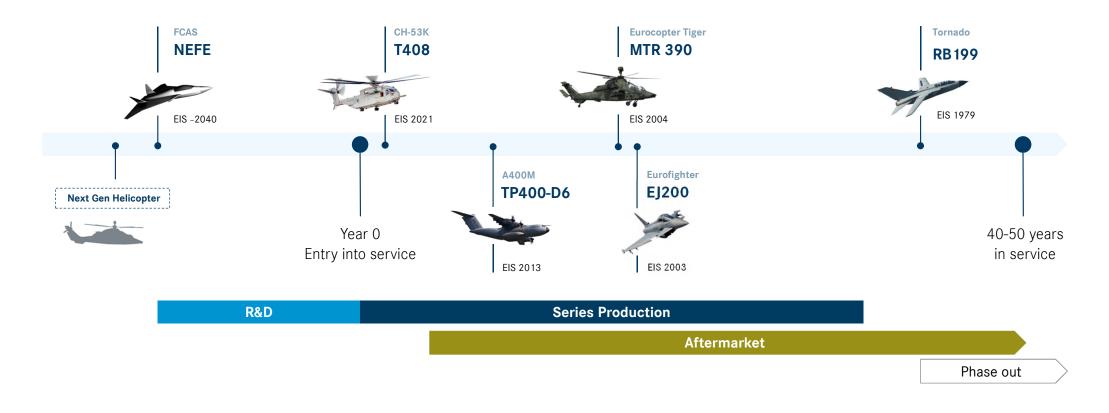
MTU has a strong engine product portfolio to benefit from the aftermarket



1) Source: MTU 09/2022

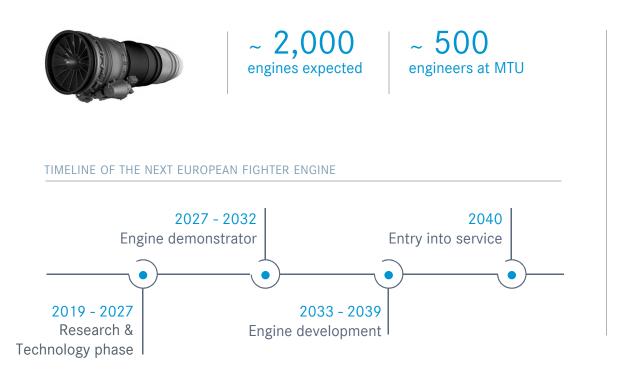


Solid military engine portfolio





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



Source: www.eumet-engine.eu

Investor presentation / November 23 🐵 MTU AERO ENGINES AG / THE INFORMATION CONTAINED HEREIN IS PROPRIETARY TO THE MTU AERO ENGINES GROUP COMPANIE

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

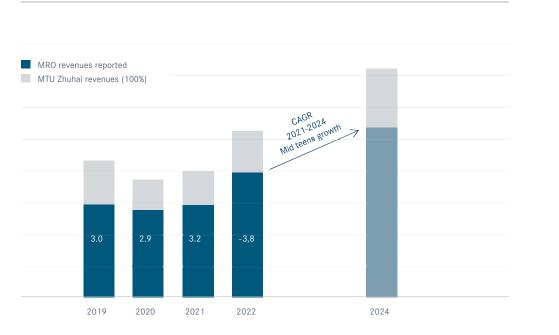
I Establish and expand own supply chain for high-tech products

I Technology spin-off in commercial engines

| High revenue potential



MTU Maintenance weathered the Covid-19 storm and continues to perform above average



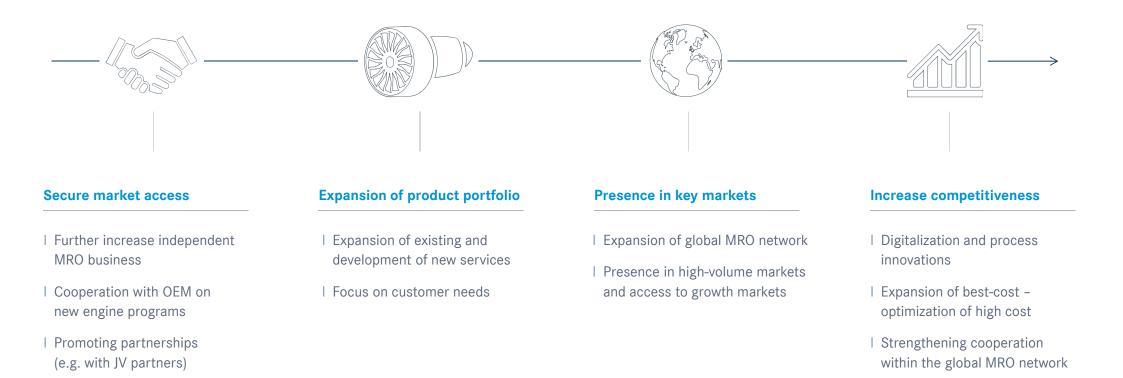
MRO REVENUES 2019 -2024 INCL. REVENUE MTU ZHUHAI (IN USD MILLION)

1) MTU Source

- I Pre-Covid revenue levels already reached in 2021
- I Corona crisis well managed thanks to narrowbody and cargo exposure, high flexibility and quick reactions
- I Faster ramp-up compared to competitors



MTU is working consistently to further strengthen its MRO market presence





MTU offers minimized maintenance costs and the best possible engine value retention

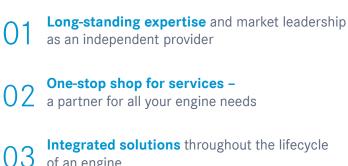
MARKET TRENDS

- | Ongoing demand for independent solutions as an alternative to OEM aftermarket services
- I Increasing focus on newer engine models
- | Growing demand for vertically integrated solutions beyond maintenance

No. 1: MTU is the largest independent maintenance provider in the world



BENEFITS



Integrated solutions throughout the lifecycle





Combined know-how as MRO, lessor and asset 04 **manager** ensures the most cost-efficient solutions



In the more recent programs, MTU increasingly supports the OEMs, providing standardized maintenance solutions

MARKET TRENDS

Current OEM MRO market share is around 56%, tendency further growing

I High number of Airlines are focusing on their core business

70 – 80 % of new engines are sold with an OEM maintenance contract



BENEFITS

Long-term partner in the OEM network

02 Reduction of expenses throughout the lifecycle and **investments**

O3 Reduction of shop visits costs through MRO expertise

04 Ability to set up **best-cost shops**



MTU's unique MRO expertise makes it a preferred airline partner – together with China Southern, MTU has built up the No. 1 shop in China

MARKET TRENDS

- | Strong growth of new airlines and large fleets forecasted
- I Selected Airlines are interested in increasing MRO expertise and in-house capabilities

60 % of the world's new demand comes from growth markets (emerging countries)



BENEFITS

 D1 Local presence with high MTU quality standards
 D2 Access to additional MRO business outside the home market
 D3 Shop visits cost reduction and maximization of margins through MRO expertise





Expansion of our global MRO network is progressing





03 Production & Technology



Leading technology paving the way for emissions-free flight

LEADING TECHNOLOGY FOR CORE ENGINE MODULES AND PRODUCTION PROCESSES

- Fastrunning low-pressure turbine (LPT), high-pressure compressor (HPC) and turbine center frame (TCF)
- MTU as role model for **automation** in aero engine manufacturing (Blisk production centre, Rotor2, electrochemical machining (ECM))
- I In-house competence retained even in volatile market environment

PAVE THE WAY FOR EMISSIONS-FREE FLIGHT

- Sustainable technology paves the ways towards emission-free flights
- I MTUs technology roadmap contains some 150 defined technology projects towards decarbonization
- | Since 2022 climate neutral production at all German sites and at MTU Polska*
- I Similar projects will follow in our other international locations in the near future

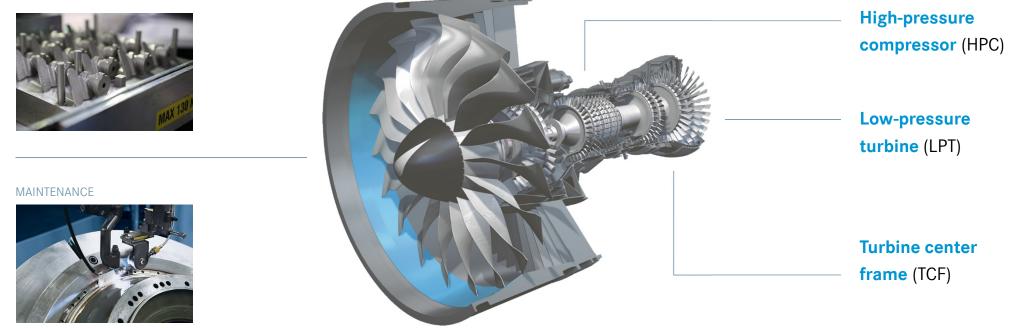


 \ast incl. three approaches for ${\rm CO}_2$ reduction: avoidance, transformation, compensation



MTU focuses on five core engine competencies – three core components and on unique manufacturing and maintenance processes

MANUFACTURING





OEM global footprint – target vision for future manufacturing sites

Target set-up OEM Munich:

Renewed infrastructure and competences GEN2/NEFE/FFC*



- Development/compliance hardware and pre-series
- I High-tech procedures
- Military programs
- I Highly automated production systems

Target set-up OEM Polska:

Enhanced portfolio



I Expansion to static parts with increased complexityI Additive manufacturing

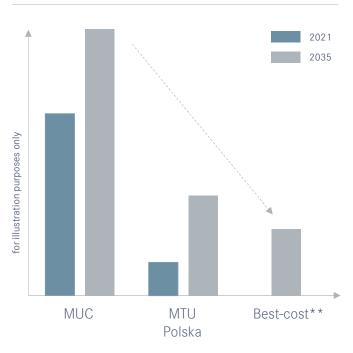
Target set-up OEM best-cost:

Capacity growth



I Low-tech process stepsI Simple parts for training purposesI Labour-intensive, manual production steps and assemblies

LABOUR COST PER HOUR



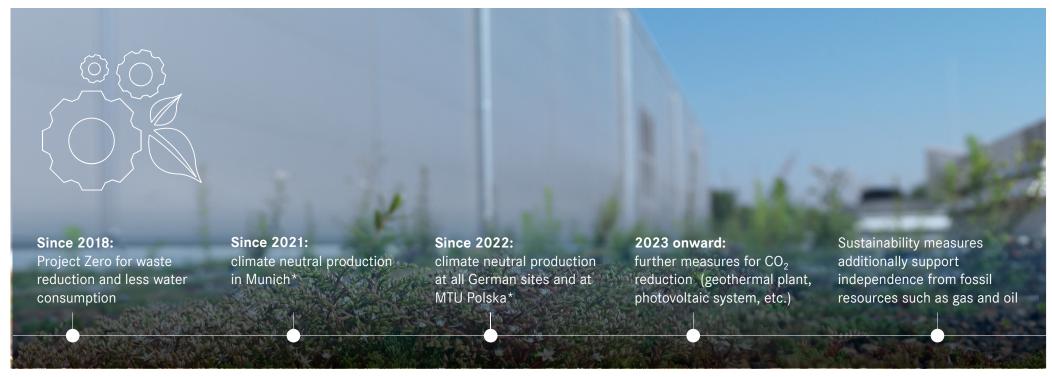
*GEN2 = GTF 2nd generation, NEFE = Next European fighter engine, FFC = Flying fuel cell

** estimate



EcoRoadmap for a sustainable production

60% CO2 reduction by 2030 according to Paris climate agreement



* incl. three approaches for CO_2 reduction: avoidance, transformation, compensation



Energy sources for emission-free aviation



IMPORTANCE OF SAF* FOR NEAR- AND LONG-TERM CLIMATE PROTECTION

Near-term

- I Drop-in application in existing fleet with imminent impact on climate
- | Blend of 50% already certified
- | Sustainable usage of high-efficient existing engines in fleet until end-of-life

Long-term

- | Long-term application for long range due to high energy density
- Usable for all future engine concepts based on high efficient gas turbines
- * SAF = Sustainable Aviation Fuel

IMPORTANCE OF HYDROGEN AS CLEANEST ENERGY CARRIER

Long-term

- | "Green" hydrogen has largest potential for zero emissions
- | Infrastructure and handling more complex than for SAF
- | Due to lower energy density applicable for short range and mid range
- MTU develops a flying fuel cell for hydrogen usage cleanest way of hydrogen consumption without combustion



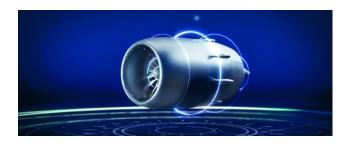
Engine concepts towards emission-free aviation

2ND GENERATION GEARED TURBOFAN



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

WET CONCEPT



- I 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



- I An electrochemical reaction in fuel cells transforms chemical energy from H_2 and O_2 into electrical energy
- Applicable to short and medium range aircraft
- | Largest potential in terms of emission-free flying



04 Financials & outlook

In recent years, we have proven resilience in a challenging market environment. From here, we start the future with a diversified portfolio and a considerable investment in new technologies.



Financial strength setting the ground for new investments

FINANCIAL STRENGTH

- Strong balance sheet with a healthy leverage and high level of liquidity
- Diversified funding mix no short-term refinancing required
- Resilience proven in crisis years 2020-2021
- | Investment grade rating
- | Moody's: Baa3 (stable)
- | Fitch: BBB (stable)
- SETS THE GROUND FOR OUR INVESTMENT
- I Into **new technologies** towards emission-free flights and our contribution to **decarbonization**
- | Into our ongoing efforts in **digitization** and **automation**
- In higher program shares in future engine programs





Fleet management program for GTF engine

Quality escape on Pratt & Whitney produced parts leads to accelerated engine removals and inspections for PW1100 engine

FINANCIAL IMPACT

- I MTU has to share obligations for customer support as well as expenses for additional MRO-efforts
- **Customer support** estimated at 5.3 bn\$ @100% for PW1100G corresponds with additional MTU obligations of 961 m\$
 - Revenue effective build up of refund liabilities for warranty and liability risks
- Additional MRO-efforts estimated at 1.5 bn\$ @100% for PW1100G
 - Revenue effective refund liability catch up for invoice corrections/subsequent costs of 52 m\$
 - | COGS effective write-down of inventories by 17 m\$
 - Remainder of additional MRO-efforts (approx. 200m\$ @18%) will need to be recognized in the course of future aftermarket revenue recognition

Total effect on reported revenues	1,013 m\$	956 m€
Total effect on reported EBIT	1,030m\$	972 m€

9M reported key financials

(in m €)	9M 2022	9M 2023
Revenues	3,818	3,653
EBIT	331	-410



Guidance 2023 - Adjusted EBIT and adj. FCF 2023 confirmed

Reported figures will be impacted by GTF fleet management plan



*subject to adjustment



Mid term outlook until 2025

 Demand recovery remains strong – Business parameters from last years mid term outlook remain valid and intact

Military business: strong development in new engines and services

Commercial OE: benefits from rate increases on all major platforms

Commercial spare parts: strong demand following growing flight activities

Commercial MRO:

improved market position in independent business accompanied by strong GTF volumes

- FX environment around USD/EUR parity provides strong uplift for revenues and EBIT adj.
- I 2024 EBIT adj. expected significantly above 2019 results
- | FCF impacted by GTF fleet management program

AMBITION FOR 2025

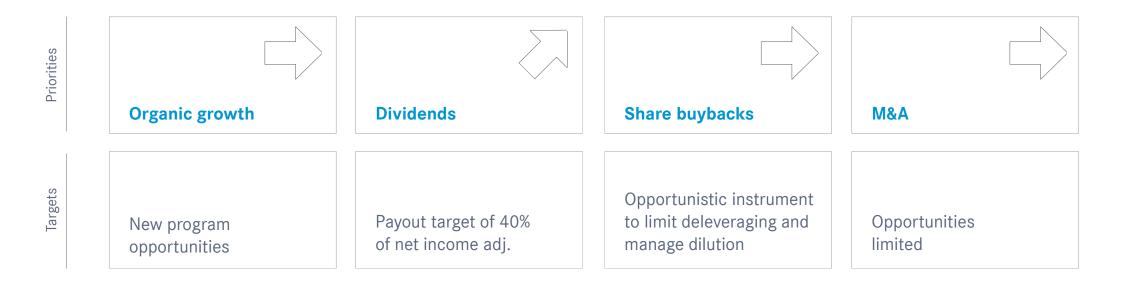






MTU's financial policy remains prudent and reliable Balanced leverage ratio target - 0.5 to 1.5 x net debt/EBITDA

MTU's cash deployment strategy





MTU is well positioned in the market to benefit from further growth and to deal with market challenges



Economic slowdown

A strong financial and contractual position prepares well to deal with current challenges and realize opportunities



Financial vision underlines strong performance targets

Outlook of reaching record revenues of >8bn \in with an EBIT adj. of >1bn \in in 2025 as next waypoint of success story



Decarbonization and climate protection

Achieve net-zero carbon emissions by 2050 in production MTU with clear technology roadmap (Gen2 GTF, WET, FFC) addressing CO_2 and non- CO_2 -emissions



Defence & Sovereignty

MTU plays a key role in Europe's most important current & future military engine programs



Recovery & growth

Recovery expected for 2024, long-term growth and ongoing strong orderbooks \rightarrow Operational excellence in OEM and MRO as basis for re-ramp up and long-term growth



Reshuffling of global supply chain

MTU's supply chain is challenging but stable, thanks to its multiple source strategy



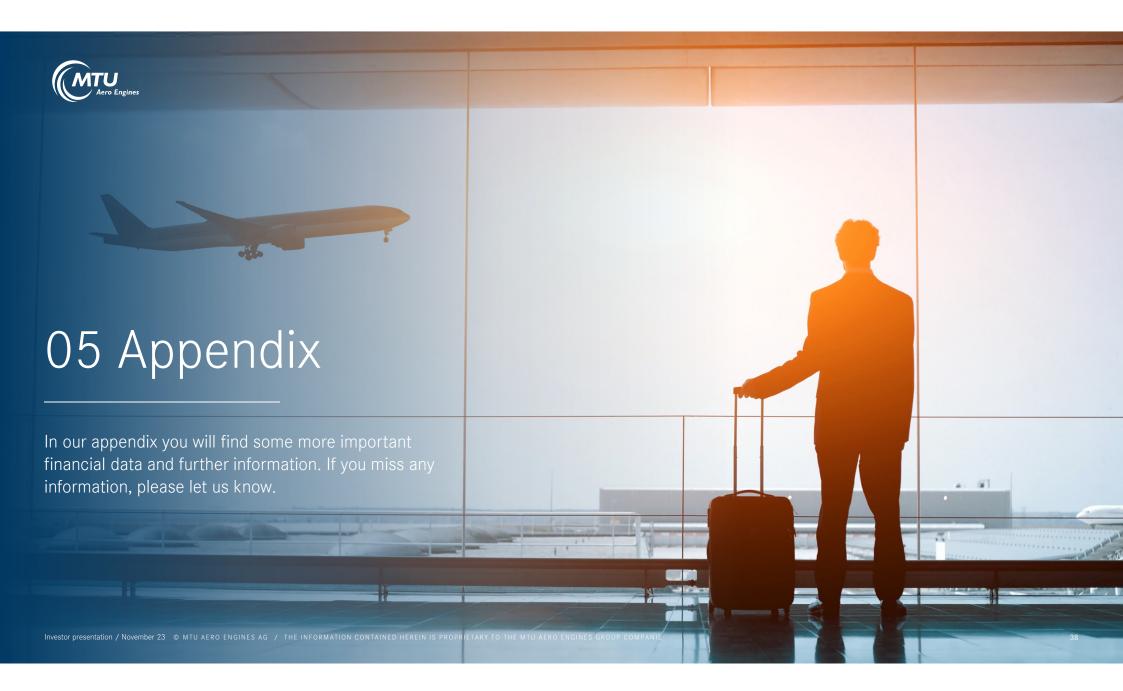
Industry re-shaping

Fleet renewal, focus on efficiency \rightarrow MTU with strong product portfolio – GTF engines offer double-digit improvements in fuel burn and operating costs



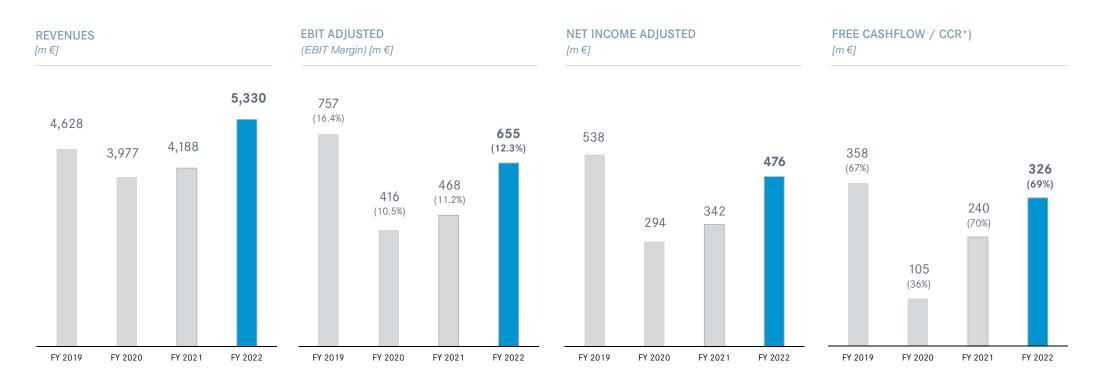
Retain and attract talent

MTU offers a lot of benefits to attract new talented employees (innovative culture, leadership values)





Key Financials

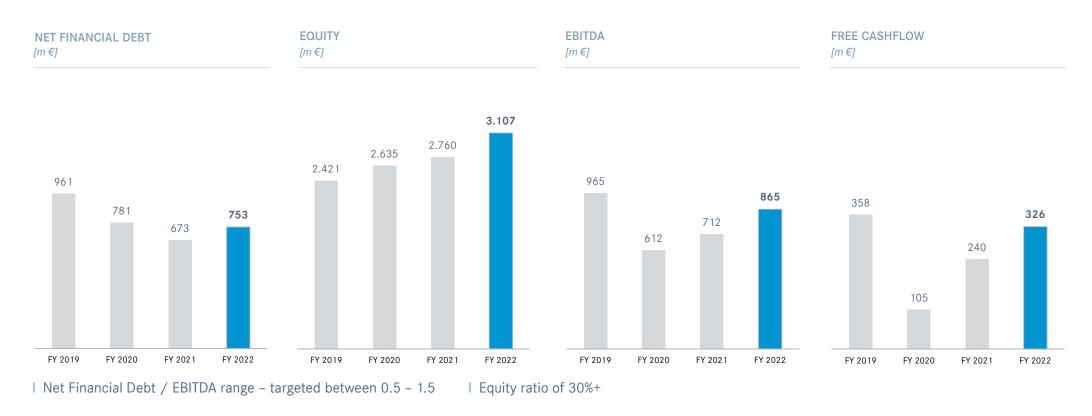


* CCR Cash conversion rate = FCF/ Net Income adj.



Strong balance sheet provides good cushion against current volatile market environment

Key credit figures



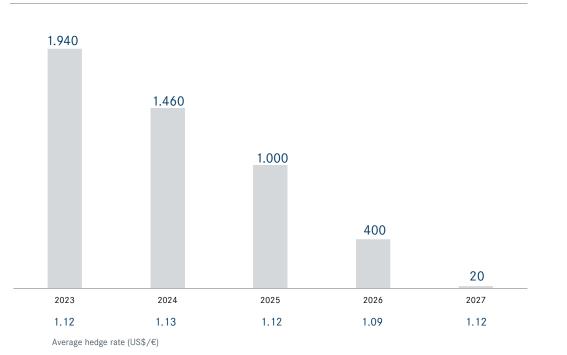


MTU's debt profile

AMOUNT	COUPON	ISSUE DATE	MATURITY
500 m€	Customary market reference rates plus an additional margin; unused credit facilities are subject to a loan commitment fee		29 June 2027
500 m€	3.00%	01 July 2020	01 July 2025
500 m€	0.05% Conversion Price € 378.4252 (Premium 55%)	18 Sept 2019	18 March 2027
100 m€	3.55%	12 June 2013	12 June 2028
	500 m€ 500 m€ 500 m€	500 m€ Customary market reference rates plus an additional margin; unused credit facilities are subject to a loan commitment fee 500 m€ 3.00% 500 m€ 0.05% Conversion Price € 378.4252 (Premium 55%)	500 m€ Customary market reference rates plus an additional margin; unused credit facilities are subject to a loan commitment fee 500 m€ 3.00% 500 m€ 0.05% 500 m€ 0.05% Conversion Price € 378.4252 (Premium 55%)



USD exchange rate / Hedge portfolio



HEDGE BOOK AS OF OCTOBER 11TH, 2023 IN MILLION USD

HEDGING MODEL - USD EXPOSURE

- Approx. 75% of USD revenues are covered with USD costs via procurement ("**natural hedging**")
- I USD sensitivity will rise over the next years due to increasing net USD exposure

ROLLING HEDGING MODEL

- I Exchange rate analysis and new hedging contracts on a quarterly basis
- Hedging period: maximum 20 following quarters
- | For MTU hedging remains an instrument for **risk mitigation**
- I Sensitivity pre hedging: 10 cent move in USD/EUR exchange rate has an impact of ~ EUR 150 million on EBIT (2024)



Commercial engine portfolio

AIRCRAFT SEGMENT	ENGINE	PROGRAM SHARE	AIRCRAFT APPLICATION
Widebody	GP7000	22.5%	A380
(50 – 120 klb)	PW4000G	12.5%	B777
	CF6-80C	9.1%	B747-400, B767, Boeing MD-11, A310
	GEnx	6.6%	B787 Dreamliner, B747-8
	CF6-80E	n.n.	A330
	CF6-50/80A	n.n.	DC 10-30, B767, A310
	GE9X	4%	В777Х
Narrowbody (20 – 50 klb)	PW2000	21.2%	B757, C-17
	PW1100G-JM	18%	A320neo
	PW6000	18%	A318
	V2500	16%	A320 family, Boeing MD-90
	JT8D-200	12.5%	Boeing MD-80 range
Regional Jets	PW1500G	17%	A220 (former Bombardier Cseries)
(13 – 24 klb)	PW1900G	17%	Embraer E-Jet Gen 2
Business Jets	PW300	25% (PW305/306)	Learjet 60, Do328 JET, Gulfstream G200, Hawker
(3 – 16 klb)		15% (PW307)	1000, Dessault Falcon 7X, Cessna Sovereign
	PW500	25%	Cessna Bravo, Cessna Excel
	PW800	15%	Gulfstream G500, G600, Falcon 6X



Military engine portfolio

30	0 %	Eurofighter Typhoon
9 40	0 %	Panavia Tornado
4.	.4 %	F414: F/A-18 E/F Super Hornet; EA-18G Growler
) 22	2.2 %	A400M
90 4(0 %	Eurocopter Tiger
18	8.4 %	CH-53K (US-HTH)
	9 4 4 0 2 90 4	40 % 4.4 % 22.2 % 90 40 %



MTU Management Board

Lars Wagner

Chief Executive Officer



- | CEO at MTU Aero Engines AG since January 2023
- His responsibilities include technology and engineering, human resources, corporate strategy, corporate communications and legal affairs
- He joined MTU in 2015 as Executive Vice
 President, OEM Operations and acted as COO from
 January 2018 to December 2022. Before joining
 MTU, he held several managing positions at Airbus.

Peter Kameritsch Chief Financial Officer & Chief Information Officer



- Member of Executive Board acting as CFO and CIO since January 2018
- He joined MTU in 1999 and worked in various management positions in finance, investor relations and corporate strategy at different MTU locations

Michael Schreyögg Chief Program Officer



- I Member of Executive Board since July 2013
- He oversees marketing & sales and program management in MTU's MRO, commercial and defense programs
- He joined MTU in 1990 and was in charge for several commercial and military programs before he took over the responsibility for MTU's military business in 2008

Dr. Silke Maurer Chief Operating Officer



- I Member of Executive Board since February 2023
- She oversees procurement, production, assembly and corporate quality



IR Kalender

2024

29 February

Conference call **Full year results 2023**

30 April

Conference call **Q1 2024 results**

8 May

Annual general meeting for the fiscal year 2023

26 July

Conference call

Q2 2024 results

24 October

Conference call **Q3 2024 results**



Thank you for your attention.

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Contact

Please contact us if you have any further questions

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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 cyclicality 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.

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