



Paris Air Show 2019

Investor & Analyst Event

June 19, 2019

Agenda – Analyst / Investor Event at Paris Air Show

Time	Event
15:00	Begin & Welcome
15:00 – 15:45	MTU Management Presentation
15:45 – 16:15	Q&A Session
16:15 – 17:00	Get together
17:00	End of the event



Market Environment & Potential Market Opportunities

Reiner Winkler, Chief Executive Officer

June 19, 2019 – Paris Air Show

Market environment remains encouraging

Market Indicator	2018	2019 F	
Passenger Traffic	+6.5%	+5.0%	... normalizing at historical levels
Airline Profits	\$30 bn	\$28bn	... remain on a healthy level
Crude Oil (Brent)	\$71	\$70	Oil price in a range between \$60 and \$70
Airliner Deliveries	~1,600	t.b.d.	Originally 10% growth expected, but uncertainty due to aircraft grounding
Airliner Orderbook	13,900	stable	... stable on a historically high level, represents 8 years of production
Airliner Engine Fleet	49,900	+4%	Fleet up to meet traffic growth

MTU secured engine orders in the value of 1.3 bn US\$ at the Paris Airshow 2019

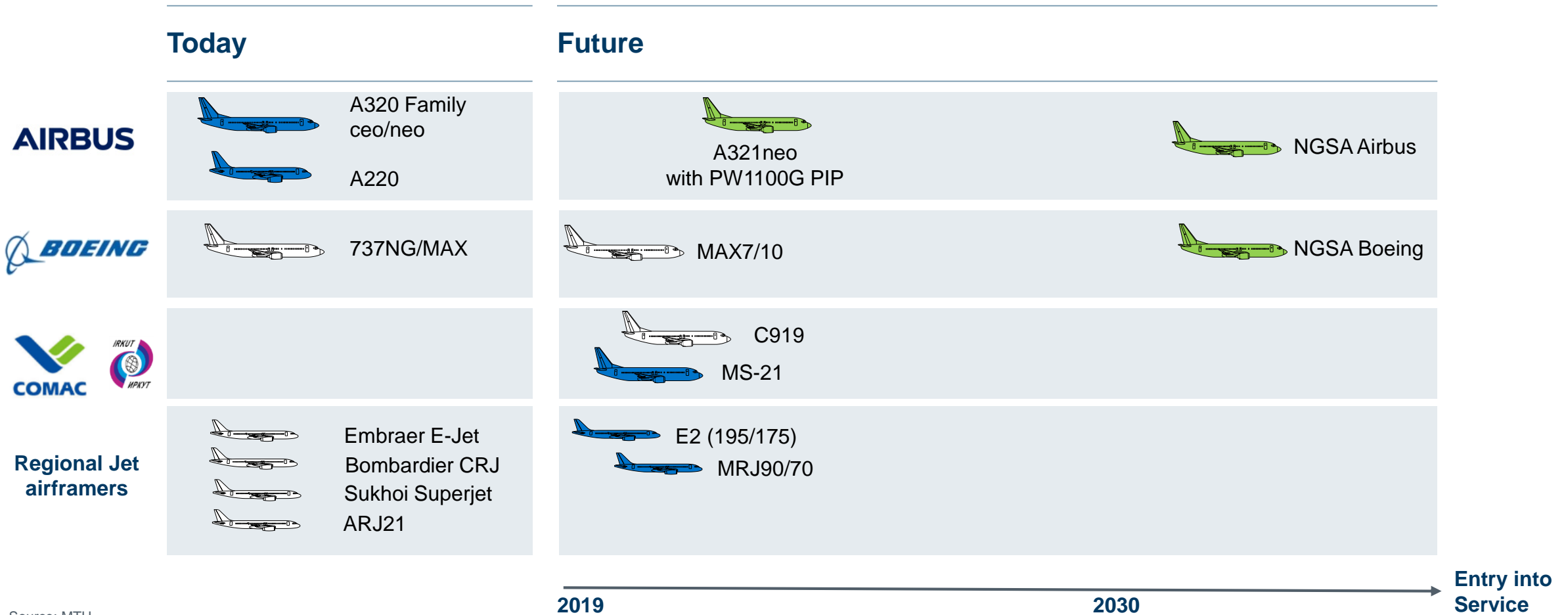
Over 800 GTF and GENX engines have been ordered or optioned



Undisclosed
customers/lessors
(China)



With 4 airframers and 5 aircraft platforms, the GTF technology is already very well positioned in the single-aisle and regional jet market



Source: MTU

MTU participates in the Next Generation Fighter

MTU and Safran join forces to develop the Next European Fighter Engine (NEFE)



Highlights

- Successor for Eurofighter / Rafale
- First prototype expected by ~2031
- Entry into service expected by ~2040
- Roughly 1,100 engines (incl. spares) expected
- Joint collaboration with Safran announced in Feb. 2019
- MTU as German engine partner
- Clear division of responsibilities
- Achievement of 50% workshare with focus on MTU key competencies
- Customer financed development



Update Commercial OEM and Commercial MRO

Michael Schreyögg, Chief Program Officer

June 19, 2019 – Paris Air Show

Geared Turbofan engines on track

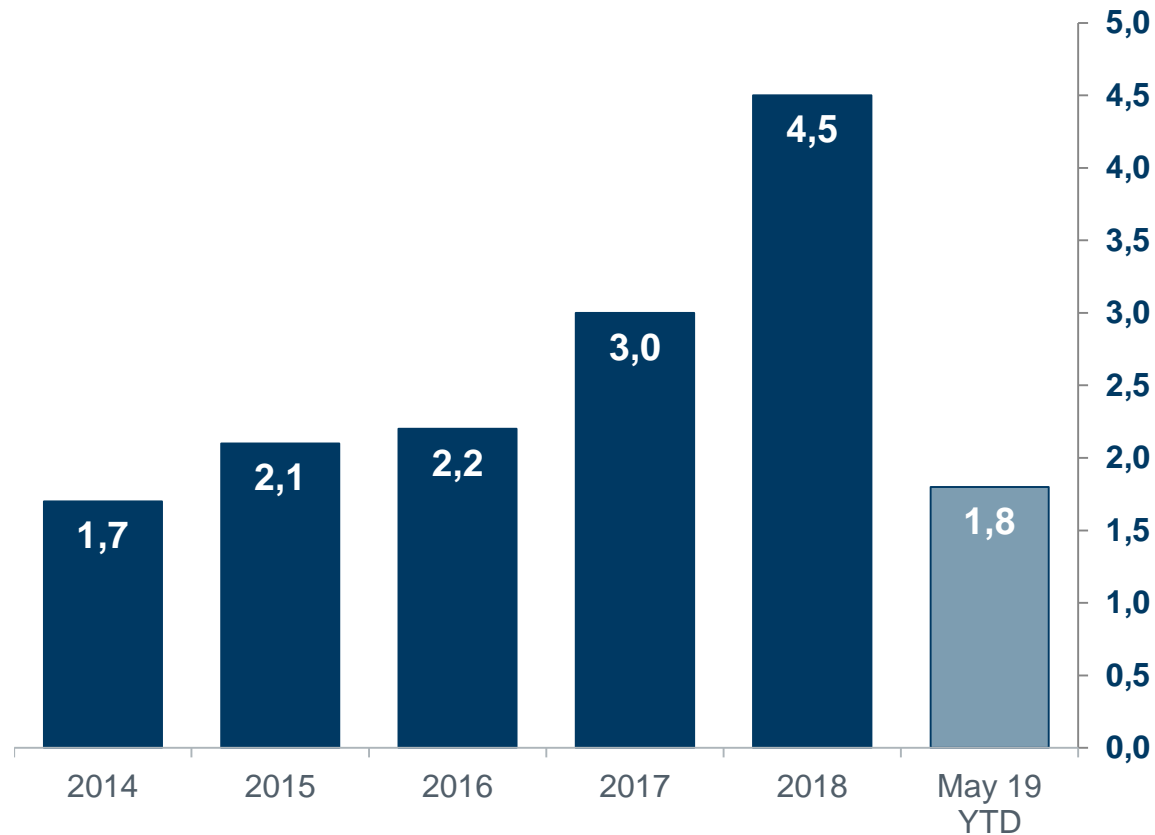


Highlights

- Further ramp up of GTF deliveries in 2019 on track
- 460+ GTF powered aircraft delivered to 37 airline operators worldwide as of May 2019
- GTF engines performed over 2.5 million flight hours
- GTF performance targets all met
- Seal and combustor upgrades implemented in production
- Retrofits being carried out within 2018 to 2020
- ~ 10,000 engine orders and commitments across 5 aircraft platforms

Independent MRO continues its success and secures future growth

Independent MRO campaign wins 2014 – 2019 in US\$ billion



Highlights

- Ongoing strong campaign wins over the past years
- 1.8 bn U\$ of new campaign wins secured per May 2019
 - 12 year GE90 contract signed with United Airlines
- PW2000 engine MRO program continues another 10 years
- Independent MRO remains key revenue contributor in coming years
- Launch of “MTU Plus Intelligent Solutions”
- No. 1 independent MRO provider worldwide

Global network of MTU Maintenance centers of excellence

All Locations are getting ready to efficiently master future growth

MTU Maintenance Lease Services



MTU Maintenance Hannover



EME AERO –
New GTF MRO shop



MTU Maintenance Zhuhai



MTU Maintenance Canada



New repair Shop in Serbia

MTU Maintenance
Berlin-Brandenburg

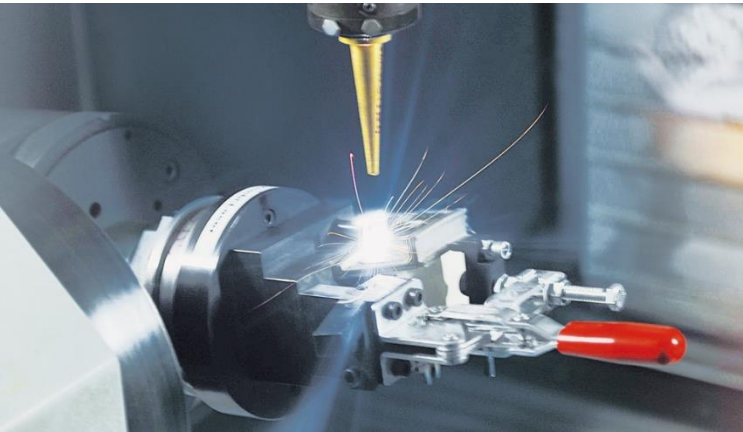


Airfoil Services (ASSB)



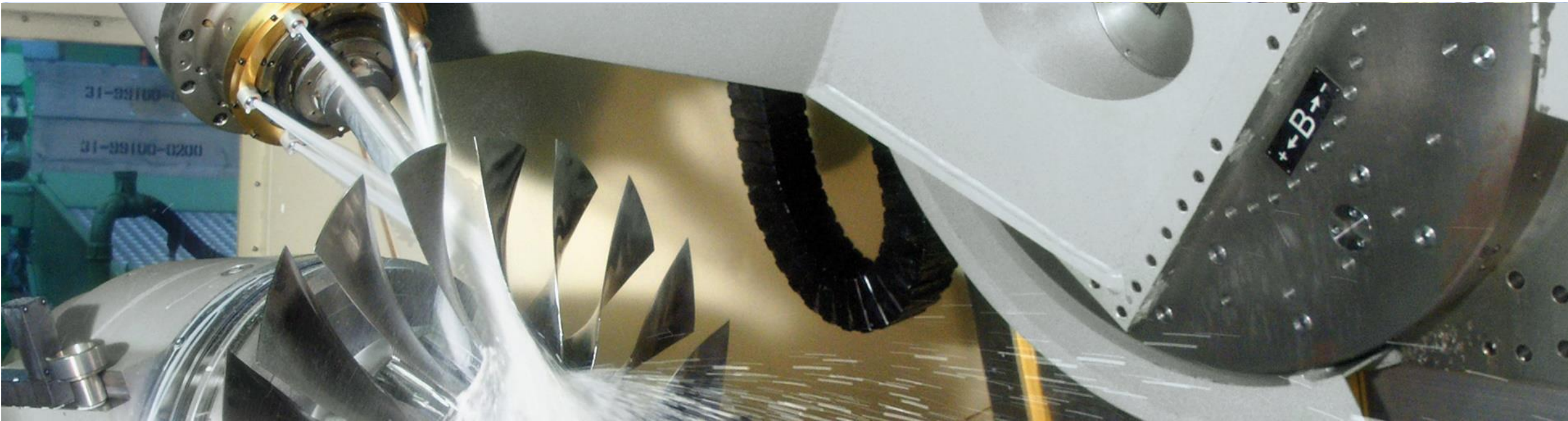
● Maintenance ● Parts Repair ● Other MRO Services

Facts of the new parts repair shop in Serbia



Highlights

- 100% MTU subsidiary
- Focus on commercial parts repairs
- Best cost location
- 80% labor cost advantage compared to Germany
- Operations expected to start in 2022
- Initial capacity for 400,000 repair hours
- 400-500 employees with option to double capacity
- 8 ha with option to expand to 22 ha



Status OEM capacity extension and Technology Roadmap

Lars Wagner, Chief Operating Officer

June 19, 2019 – Paris Air Show

Extension of MTU Munich facility

Focus on high tech work, high automation, increase in efficiency and reduction in production costs

New testing center



2019

Extension of logistic center



2020

....

New production center LPT disk



2023

New engineering center



2024

Further optimization of production facilities for next generation of engines



.... mid to long term

MTU Polska enabler for competitive production costs

Focus on low and mid tech work and additive manufacturing processes

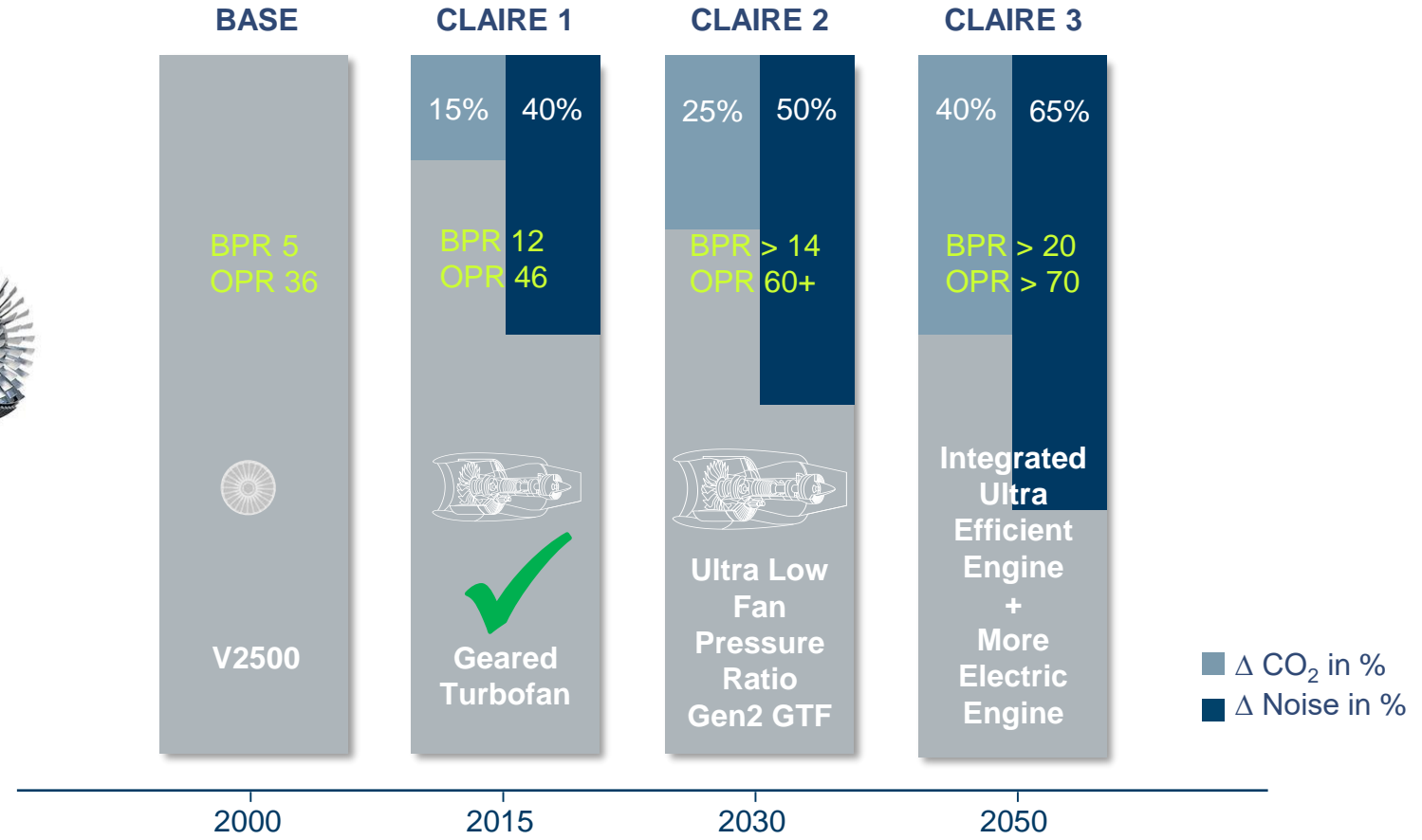
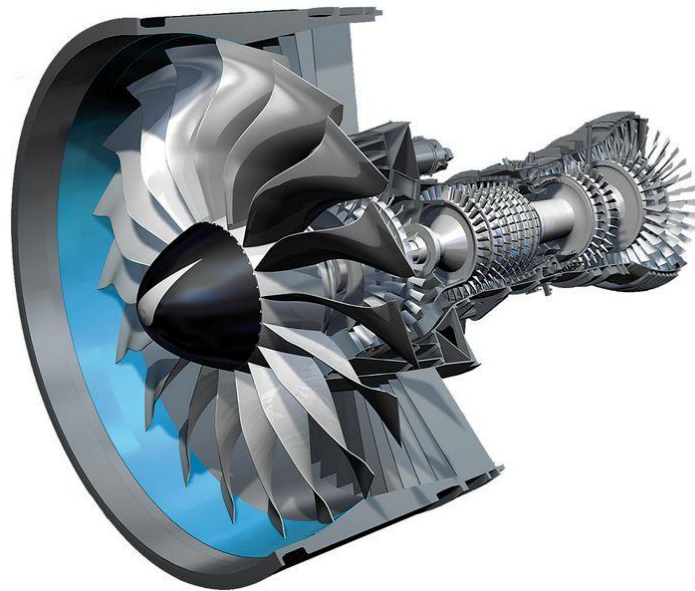


Highlights

- In operation since 2009
- 1st extension took place in 2014/15
- 2nd extension completed until end of 2019
- 10th anniversary celebrated on May 16, 2019
- Currently over 900 employees
- Engineering and production of components and airfoils, module assembly, parts repair
- Extension of component and airfoil production
- Implementation of additive manufacturing processes

MTU's approach CLAIRE | Clean Air Engine

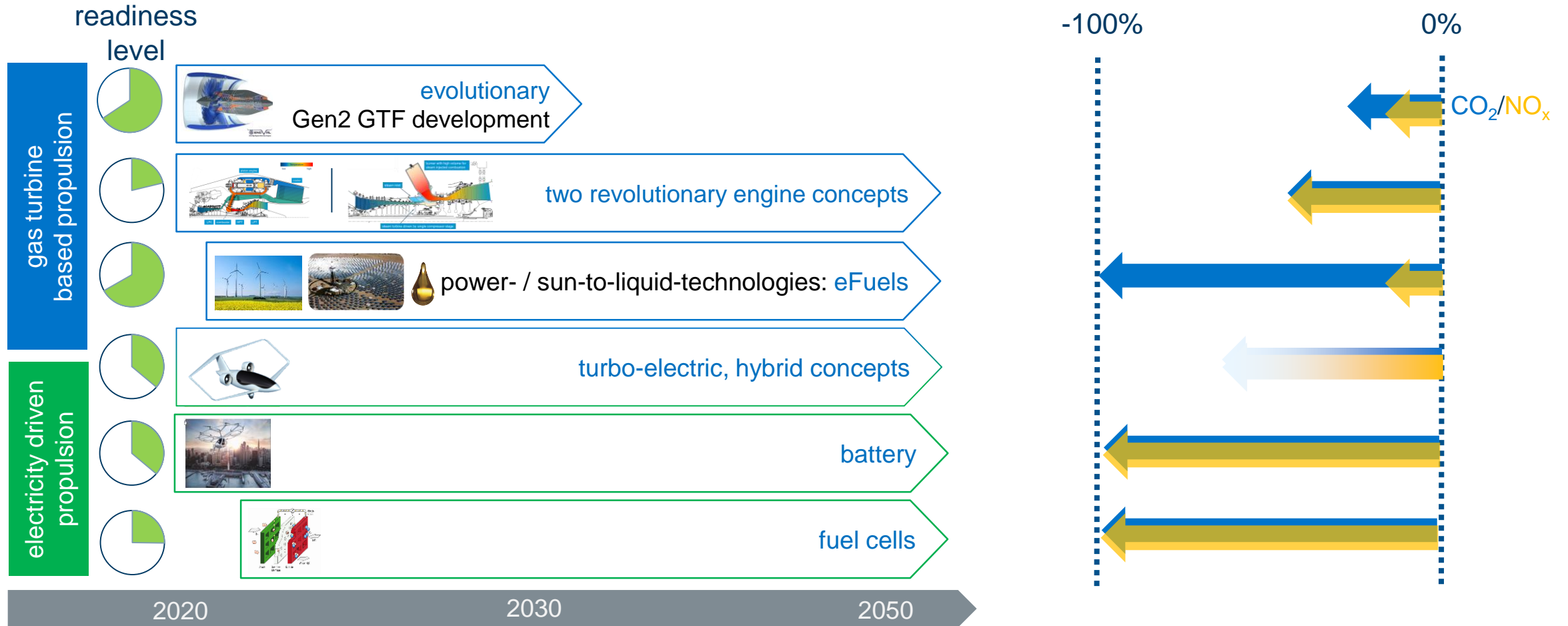
Vision 2020 & Flightpath 2050 Targets



Evolutionary development of GTF-engine for 2030+ / revolutionary ideas needed for 2050

Propulsion concepts roadmap towards “Emission-Free Flying” – our responsibility today

Application range and emission reduction potential



Next European Fighter Engine (NEFE) – a new impulse at the military market

Military technology development for NEFE

Targets

- Long range
- High mission flexibility
- High availability
- Low observability
- Low operating costs

- First prototype 2031+
- Entry-into-service 2040+

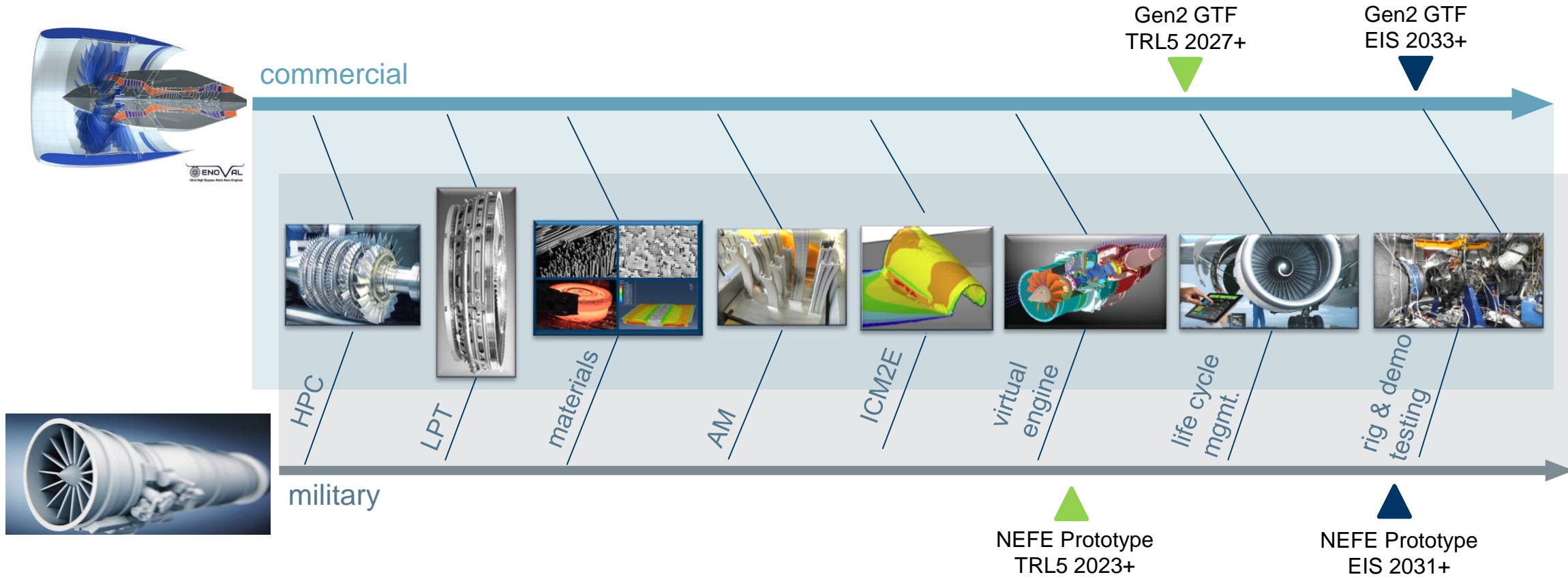


Key enabler

- Variable cycle engine technology
- Very efficient components
- High temperature, low weight materials
- Integrated aircraft / engine heat management
- Full digitalized design and aftermarket process

Key Synergies | Technical, Competences & Technology Funding

Commercial & Military Technology Development



Significant synergies between commercial and military technology development achievable



Guidance 2019, Long term Outlook and Cash Deployment Strategy

Peter Kameritsch, CFO

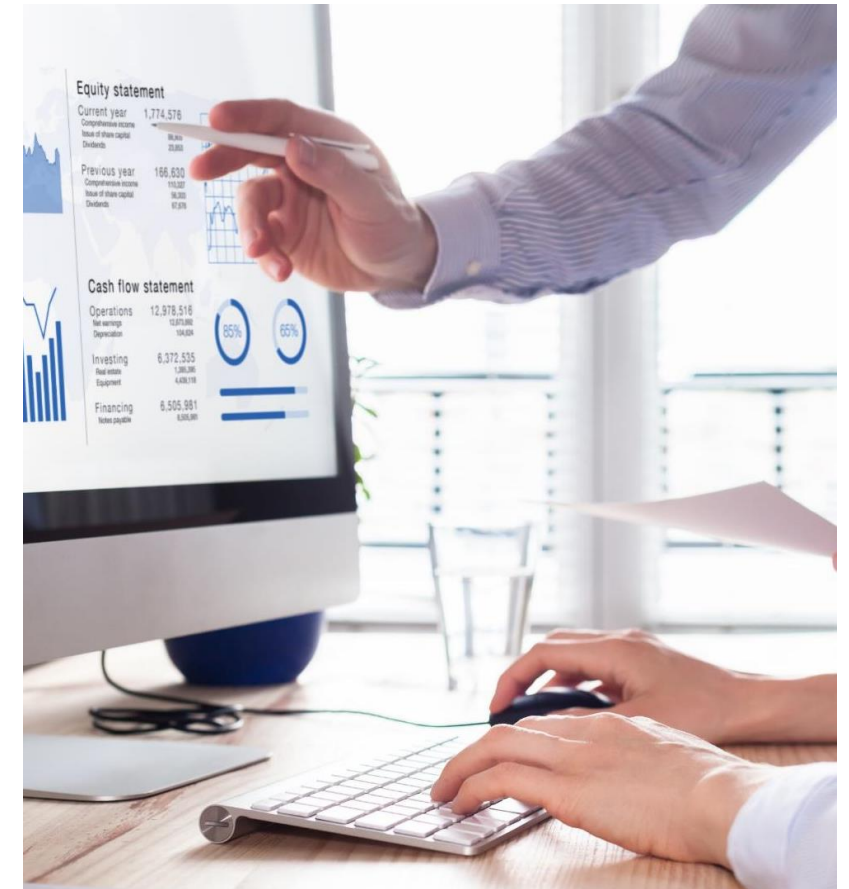
June 19, 2019 – Paris Air Show

Guidance 2019 confirmed

Organic Growth

Military revenues	+ 10%	↑↑
Commercial OE	Up low teens	↑↑
Commercial Spares	Up mid to high single digit	↑↑
Commercial MRO	Up high single digit*	↑↑

Total Group Sales	~ 4.7 bn €
EBIT adj. margin	~ 15.5%
Net Income adj.	Growth in line with EBIT adj.
CCR**	55% - 65% (ex 50% - 60%)





*) Direct invoicing to IAE for V2500 OEM-MRO from MTU-Z in 2019 will lead to stable Com. MRO revenues – refer to our Investor & Analyst Day 2018 (see I&A presentation page 82-83,87,90)

**) CCR = Free Cash Flow vs. Net Income adj.

19 June 2019

Long-term outlook 2019–2025

Improved Free Cashflow conversion confirmed despite ongoing capacity build-up

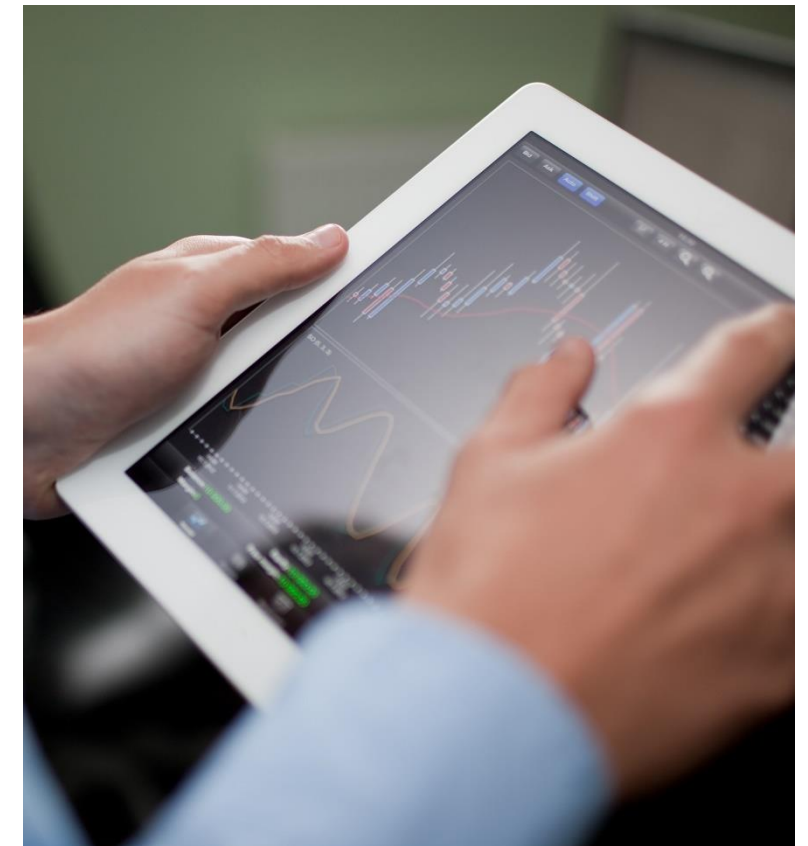
Net Income adj.	Steady growth	
Working Capital	Growing less than revenues <ul style="list-style-type: none"> • No consumption of prepayments • Inventory turns will improve • More FHAs with preferential Cashflow profile 	
CF from investing	Will decline moderately <ul style="list-style-type: none"> • Less payments for intangibles • Mid-term higher spendings for capacity build-up (PPE) and automation • R&D capitalization declines as programs enter into service 	
CCR*	High double digit %	

*) Cash Conversion Rate = Free Cashflow/Net Income adj.

MTU's target is a balanced leverage ratio in the range of 1 x net Debt/EBITDA

MTU's Cash Deployment Strategy

Prio	Instrument	2019–2025	
I	Investment in organic growth	Limited opportunities for new programs Ongoing spendings for capacity build-up	↘
II	Dividend deployment	Growth stronger than net income	↗
III	Share buyback programs	Instrument to limit deleveraging and manage dilution	↗
IV	M&A	No new targets expected	→





Thank you very much for your attention!

Q&A

June 19, 2019 – Paris Air Show