Investor & Analyst Day 2015
MTU Aero Engines AG

London, 25 November 2015

Agenda – MTU Investor and Analyst Day 2015

Time	Agenda	Speaker
11:00 – 11:10	Welcome	Michael Röger
11:10 – 11:20	Excellent Position in an Attractive Market	Reiner Winkler
11:20 – 12:10	Geared Turbofan: Flying and Producing Efficiently Technology Roadmap: Key for Success	Dr. Rainer Martens
12:10 – 13:00	Geared up for Growth with a Broad Portfolio Emerging Markets Slowdown: A severe Threat? MRO business: Uniquely Positioned for Growth	Michael Schreyögg

Agenda – MTU Investor and Analyst Day 2015

Time	Agenda	Speaker
13:00 – 14:00	Lunch Break	
14:00 – 14:40	Flight hour Agreements: Beneficial for the Operator and MRO Provider	Reiner Winkler Michael Schreyögg
14:40 – 15:20	Financials & Outlook	Reiner Winkler
15:20	End of Conference	

Excellent Position in an Attractive Market

Reiner Winkler, Chief Executive Officer
London, 25 November 2015

Market Overview

Status	Market Indicator	2014 A	2015 E	2016 E
	Passenger Traffic	+6.0%	+6.7%	
	Airline Profits	$16 bn	$29 bn	
	Crude Oil (Brent)	100 $	54 $	
	Airliner Deliveries	1,350	~ 1,390	
	Airliner Orderbook	11,520	11,710	
	Airliner Engine Fleet	41,410	43,350	

Source: IATA, Ascend, EIA

Commercial OEM: Milestones Set for Future Growth

- Over 7,000 GTF engines on firm order or optioned
- PW1100G-JM (A320neo) received its FAA certification in Jan 2015
- GTF performance in flight test programs according to plan
- Ramp up of new engine programs successfully initiated
- Extension of MTU AE Polska in operation

- First development modules for GE9X in production

- First flight of Gulfstream G500 (PW814) in May 15 and MRJ (PW1200G) in Nov 15

Military Business: Stable Business with Strong Export Potential

- Kuwait signed a MoU for 28 Eurofighter Typhoon aircraft

- First flight of CH-53K powered by GE38 took place in October

- MTU received the EASA certification for maintaining TP400
- TP400 engine production fully ramped up

MRO: Workload Secured for Decades

- MTU signed MRO network agreement for the PW1100G-JM in Jun 2015
- Optimization of V2500 FhA agreements on track

- MTU Maintenance Hannover started maintenance work for airlines in Iran
- GEnx TCF MRO capability established

MTU's Agenda for 2016

- Assembly line for the PW1100G-JM engine in operation
- GTF module production ramped up according to plan
- Position of MTU in the changing MRO market environment optimized
- Continuous improvement of Flight hour Agreement performance
- MRO readiness at MTU Maintenance Hannover for PW1100G-JM achieved
- Technology roadmap to sustain and improve market position pursued
- Implementation of the new IFRS rule 15 underway

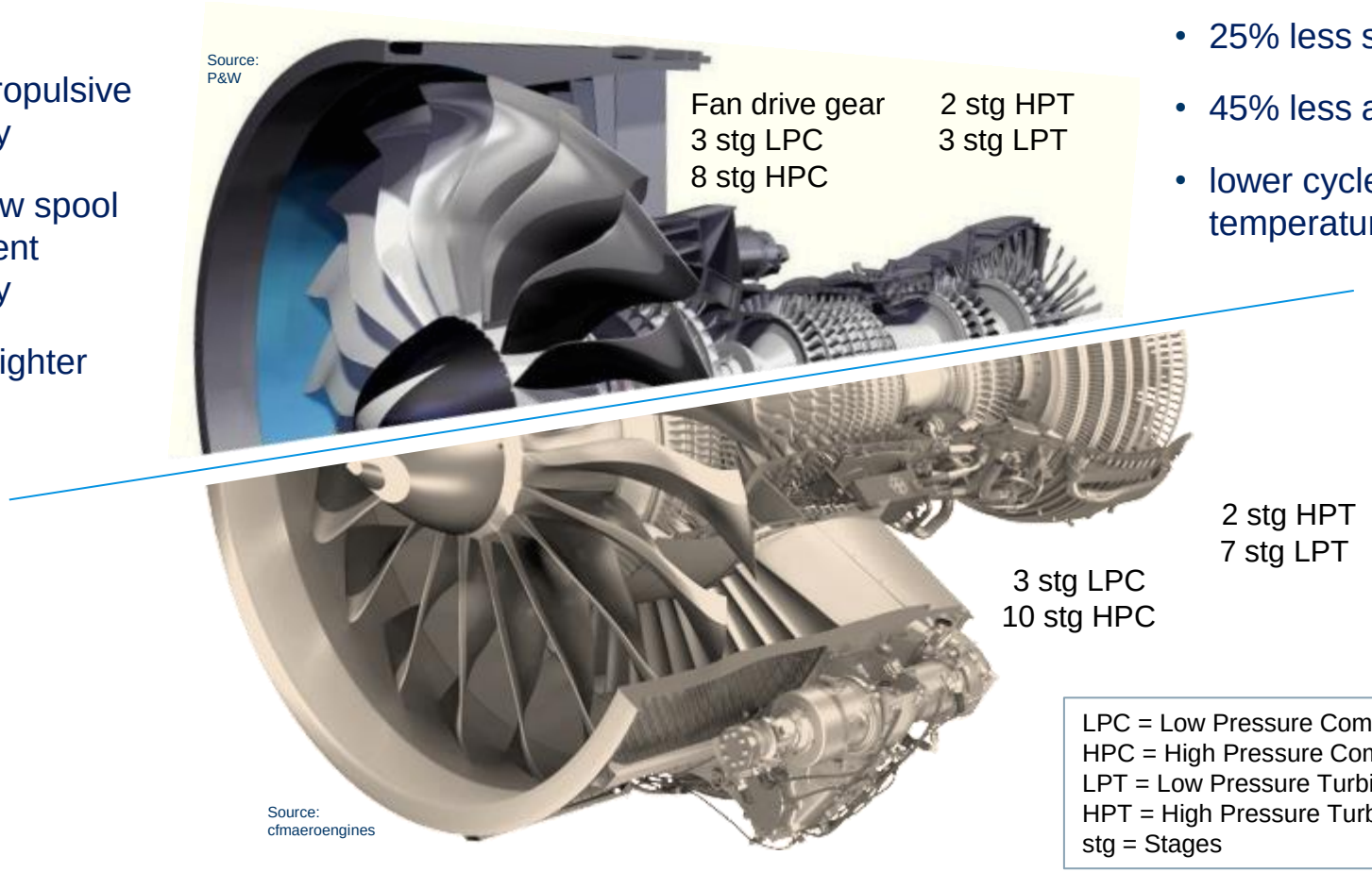


Geared Turbofan:
Flying and Producing Efficiently

Dr. Rainer Martens, Chief Operating Officer
London, 25 November, 2015

The GTF Concept at a Glance: GTF versus Direct Drive Turbo Fan

- higher propulsive efficiency
- higher low spool component efficiency
- shorter, lighter



- 25% less stages
- 45% less airfoils
- lower cycle temperature

LPC = Low Pressure Compressor
HPC = High Pressure Compressor
LPT = Low Pressure Turbine
HPT = High Pressure Turbine
stg = Stages

GTF offers a superior fuel burn consumption at lower maintenance cost

The GTF Concept at a Glance: Enabling a Reduced Noise Footprint

Narrowbody aircraft
leaving Munich airport

Year 2015
GTF powered A320 NEO
Noise footprint reduced
by approx. 70%

Noise Simulation: Pratt & Whitney SEL Contour Source: Wyle Laboratories

GTF engines help protecting the environment

2015 Development Milestones GTF Engines, PW800, GE9X and GE38

	PW1500G / CSeries	PW1100G-JM / A320neo	PW1200G / MRJ	PW1400G / MS-21	PW1900G / PW1700G / E-Jet 2nd Gen.	PW800 / G500, G600	GE9X / B777X	GE38 / CH-53K
								
First Engine to Test	✓	✓	✓	**2015**	✓ 2016	✓	**2015** Design Freeze	✓
Tested in Flying Testbed	✓	✓	✓	N/A	**2015** 2016	✓	2017	N/A
Engine Certification	✓	✓	2016	**2015**	2016 2017	✓	2018	2018*
First Flight	✓	✓	✓	2016	2016 2017	✓	2018	✓
EIS / Aircraft Certification	2016	**2015**	2017	2017	2018 2020	2018 2019	2020	2019

* GE38: Certification of whole aircraft system after flight testing is completed

Production Ramp Up

		2009	2015	2020
Turbines		800	1150	1850
Compressors		200	320	1580
Turbine Center Frame		30	380	350
Engine Assembly		30	110	290
Total		**1060**	**1960**	**4070**

+10% Yearly increase

+15% Yearly increase

MTU faces a steep increase in commercial engine business

Strategic Setup Production and Supply Chain

High Tech

MTU AE Munich

- Sophisticated parts and production processes
- Automation
- Development of new production technologies
- Know How to support all MTU sites and suppliers

Mid - Low Tech

MTU AE Polska

- Adopting established parts and production lines from Munich
- Improvement of ‘mid tech’ parts and production processes
- Module assembly improved with know how transferred from automotive industry

Raw Material, Mid-Low Tech

Supplier

- Raw parts
- Finished parts as second source
- ‘Low tech’ parts from low cost countries

Risk Mitigation

- Keeping and improving MTU’s high tech knowledge in Munich
- MTU Polska as prime source for ‘mid tech’ parts – supplier as second source
- Dual Source
- Development of advanced manufacturing technology at MTU Munich

The Supply Chain is based on 2 MTU Manufacturing Sites and a Worldwide Network of Suppliers

Measures Ensuring MTU's Ramp Up Capability

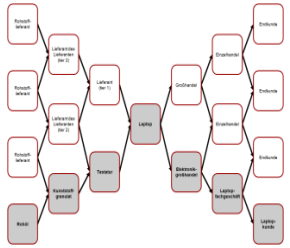
Infrastructure

- Blisk-Building
- Logistic-Building
- Extension MTU-Polska
- NEO Assembly Building 076
- MRO Readiness Hannover

➔ Infrastructure is in place

Prime Supplier

- Blisk
- Blades and Vanes LPT
- Vanes HPC
- Rings
- Supply-Chain Titan-Aluminid



➔ Procurement Teams are operative

New Production Concepts

- Blisk-production
- Rotor-production
- Case-production
- NEO engine assembly

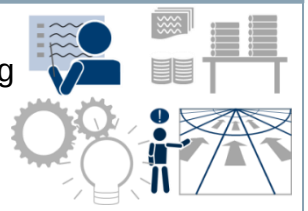
- Electrochemical milling (PECM) Nickel-Blisk
- Hub-Strut-Case production GE9X MTU AE Polska
- Innovative blade-production MTU AE Polska
- Additive manufacturing

➔ High Tech remains our differentiator

Management

- Ramp Up Monitoring for
  - Engineering & manufacturing processes
  - Infrastructure & production concepts
  - Suppliers
- Shop Floor Management
- Office Management

Operational excellence



➔ New approaches improve speed, quality and risk mitigation

Topics are addressed and well under way to support production ramp up

Blisk Manufacturing

Production System Building 077

Changes, Improvements

- Increase of machine hours per year from 3,500 to 6,000
- Increase of Blisk output per year from 500 to 3,600
- 50% reduction of indirect costs
- More efficient use of area
- Increase of shifts from 15 to 18
- Introduction of full automation with option of man free production

New Logistics Building

New Logistics Building

Changes, Improvements

- Increase of goods received per year from 80,000 to 115,000 within 5 years
- Improved efficiency leads to a 14% reduction of process time
- Efficient flow oriented processes
- 30% reduction in lead time
- Weather protected storage of goods

Rotor, Stator Production

Production System Rotor

Changes, Improvements

- Reduction of small quantity part numbers by 70%
- 12% reduction in hourly rate
- 30% reduction in labor time for turning operations
- Increase of disc quantity per year from 2,300 to 3,000
- Decommissioning of 14 machines clears 700 sqm production area

Extension Polska

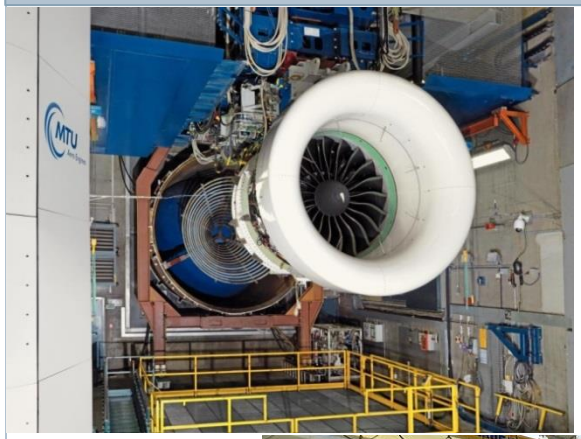
Production MTU AE Polska

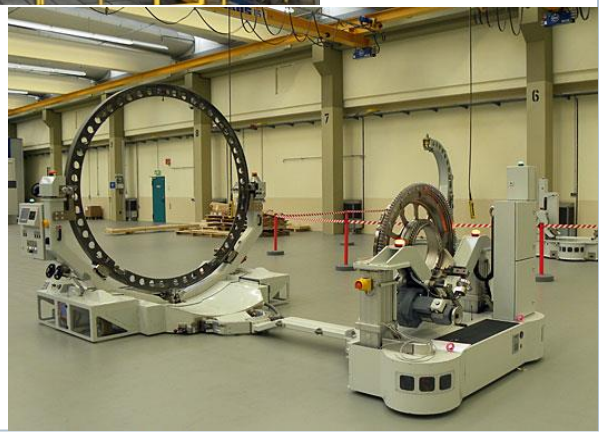
Changes, Improvements

- 20,000 sqm shop floor
- 180k hours engineering capacity
- Low labour rates
- Execution of V2500 Upshare
- ‘Mid Tech’ competencies are kept within MTU putting suppliers under pressure
- GE9X Hub Strut Case production at lowest costs
- Flow oriented assembly lines

NEO Engine Assembly

Production System NEO Engine Assembly



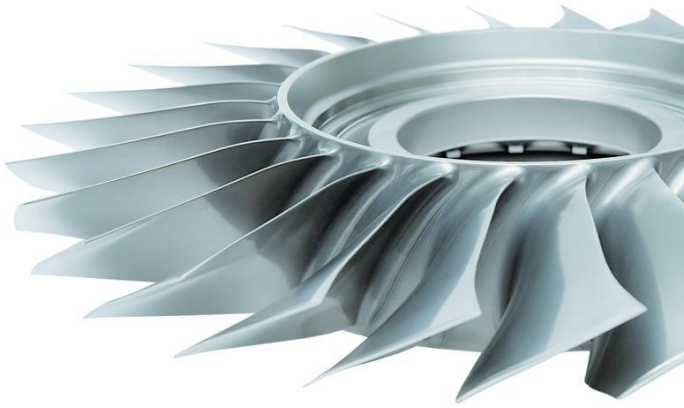


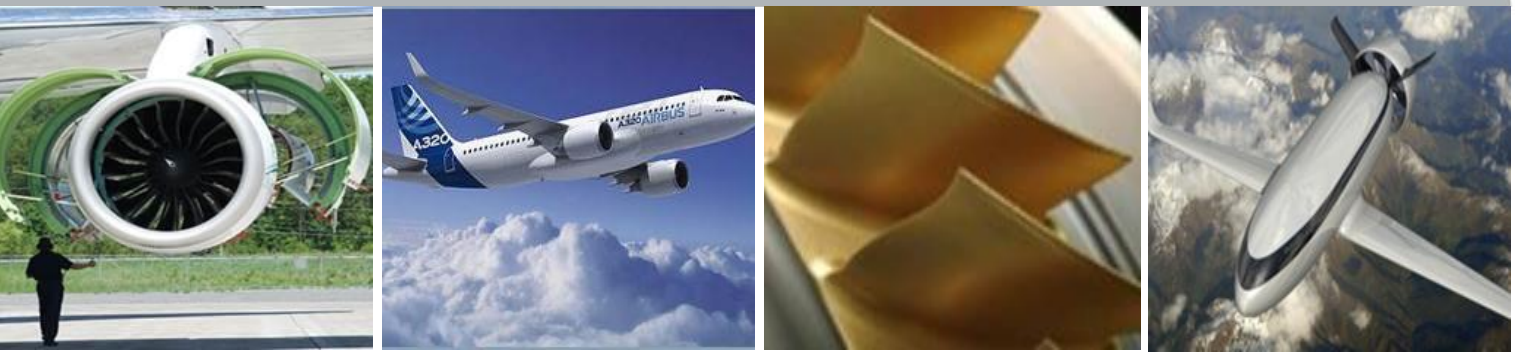
Changes, Improvements

- New civil engine assembly line with 220 engines per year
- Logistic system is based on pull/just-in-sequence principle
- Flow oriented assembly line
- High tech transportation and assembly system
- IT-Supported work flows

Summary GTF

- The GTF is a new revolutionary design with unmatched performance
- The market success of this very efficient and successful product requires MTU's supply chain to come to a new level of quantity and quality
- Successful production ramp up in the past and already implemented activities put MTU's supply chain in an excellent position to execute the future ramp up efficiently





Technology Roadmap: Key for Success

Dr. Rainer Martens, Chief Operating Officer
London, 25 November, 2015

Market Demands - Requirements for Future Engines

Business Environment

- Next generation commercial & military engines
- Performance improvement programs (PIP)
- Environmental regulations
- Flight hour Agreements

Requirements

- Reduction of emissions and noise
- Aggressive production cost targets
- Maintenance cost reduction measures
- Engineering disciplines & manufacturing at excellence

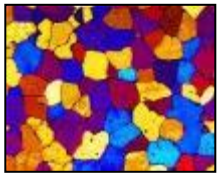
MTU's Technology Roadmap – Meeting the Requirements

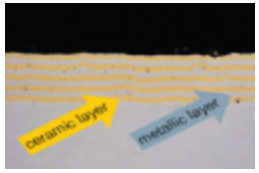
Product

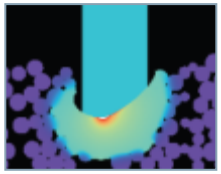
Integrated Compression-System	Improve efficiency, weight, design and pressure ratios
Optimal High Speed LPT & TCF	Improve efficiency, weight design, temperature and erosion/corrosion capability

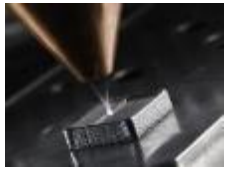
Enabler

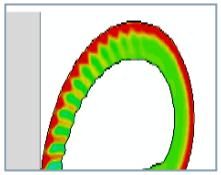
High Temp. Light Weight LPT Materials	Higher cycle parameters, reduce weight, enabling new designs and their producabillity
Additive Manufacturing	Expand portfolio of parts and change of design philosophy
Virtual Design & Production	Improve production processes with an analytical simulation of all relevant parameters









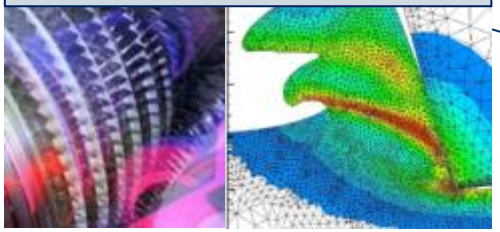


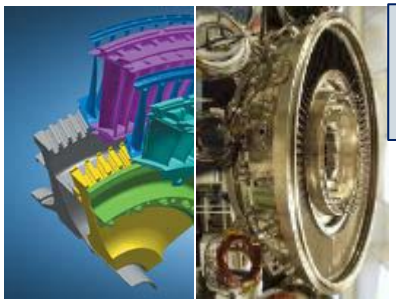
Execution of MTU‘s Technology Roadmap – Technology Network

DLR Köln:
- Computational Fluid Dynamics
- Compressor Testing
- Ceramic Matrix Composites

University Hannover:
- Airfoil Dynamics
- MRO

RWTH & FhG Aachen:
- Compressor Aerodynamic
- Manufacturing Technologies





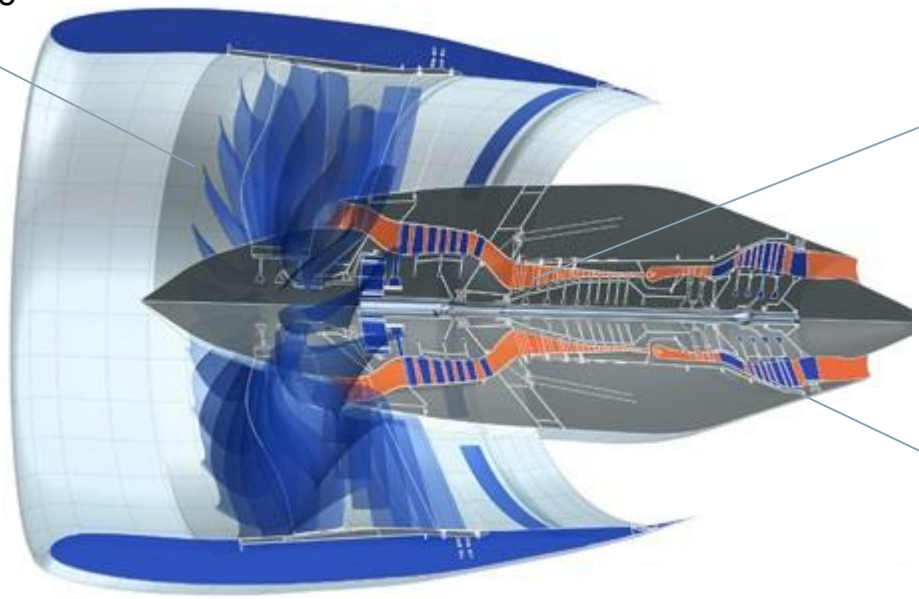
University Stuttgart:
- Turbines
- Turbine Test Facility

TU München:
- Component Design

BW University Neubiberg:
- More Electric Engine

Next Generation GTF - Characteristics

Ultra high BPR 14 -20
with lowest
fan pressure ratio



OPR 60+
integrated
compression
system

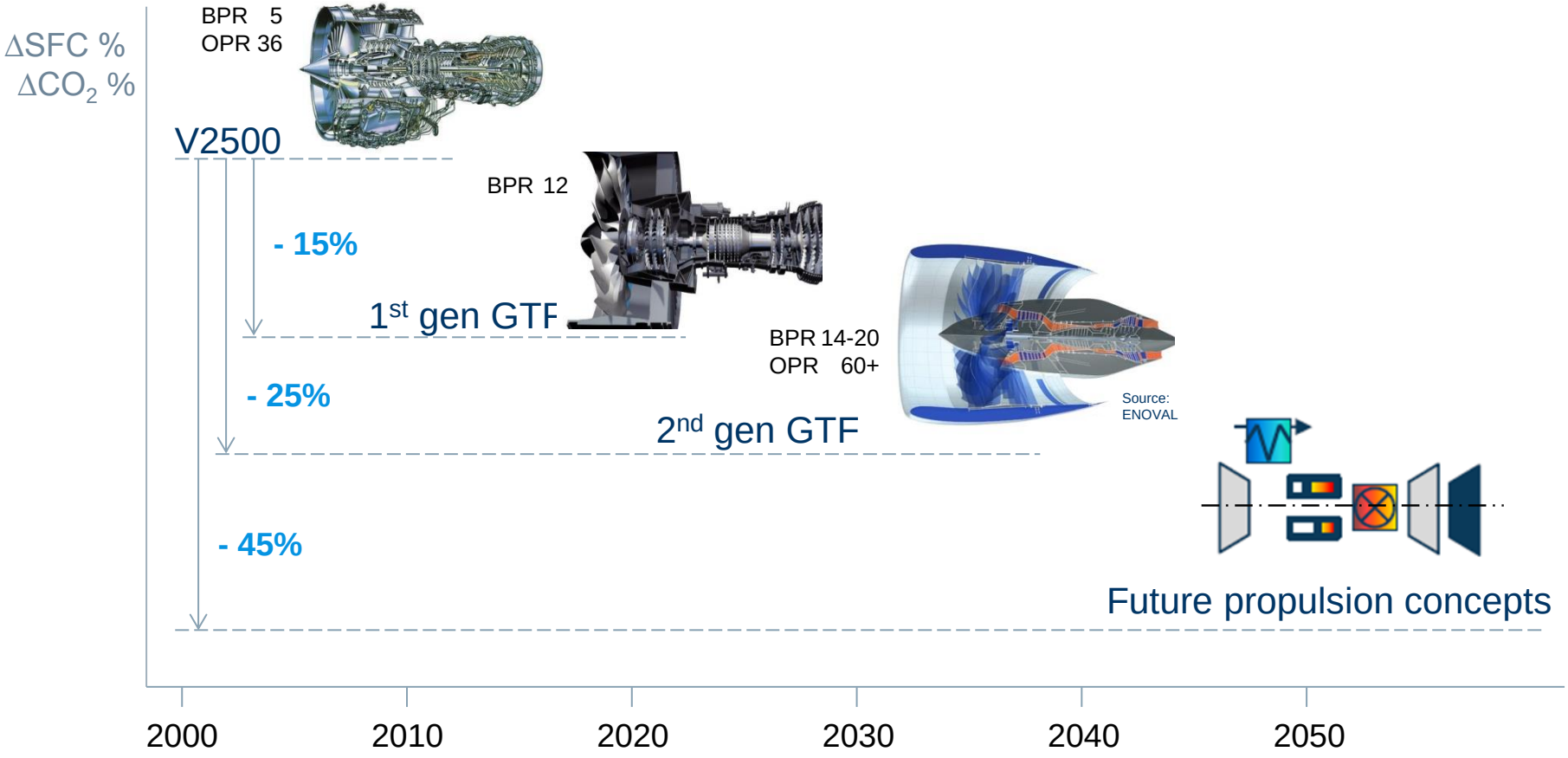
Newest light weight
and
heat resistant materials

Ultra efficient
high speed
expansion system

BPR = By Pass Ratio
OPR = Overall Pressure Ratio

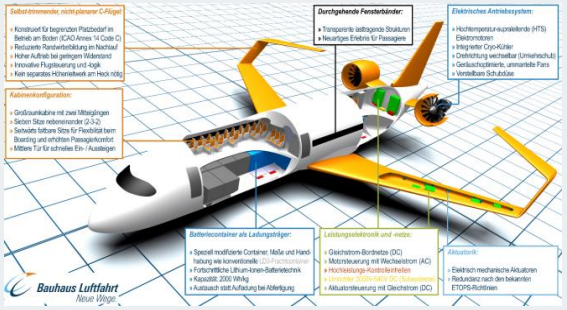
MTU's Technolgy Roadmap will lead to the next generation GTF – applicable for all thrust ranges

Timeline of Future Engine Concepts



The geared jet engine concept offers a substantial improvement potential

A few Words about Electric Flight: Basic Concepts



Electric

- Thrust generated with fans driven by electric motors. No gas turbines on board.
- Energy required for the electric motors is provided by batteries or fuel cells

Hybrid – electric

- Combined system consisting of gas turbine and fans driven by electric motors
- Gas turbine used to generate either electric power or thrust
- Batteries required

Weight is driving the use of electric components

A few Words about Electric Flight: Technical Challenges

Battery Technology:

- For an application in short range regional jets todays batteries require a tenfold improvement in energy density as well as in power density – both requirements are contradictory
- Extrapolating todays improvement in Battery Technology it will take more than 30 years to achieve the required improvements

Power Distribution and Conversion:

- Using today's conventional electrical power distribution and power conversion (electric – thrust) technologies would lead to high weight not suitable in commercial aircraft
- Use of high temperature superconductivity will be required. Cooling down to a temperature of ~45°K (-230°C) is necessary. A blackout of cooling will result in loss of thrust

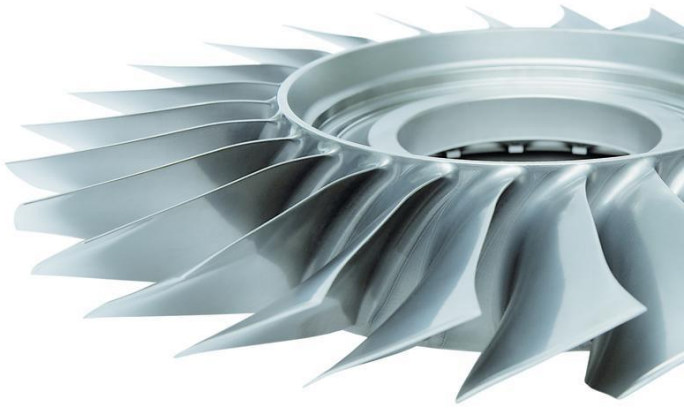
Flight safety and Certification:

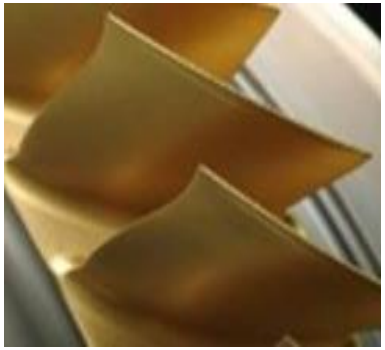
- All these new technologies have to prove reliability and have to be certified

Today Electric Flight can only be realized for small short-range (2-4 seats) aircraft.
For small regional jets electric flight might be imaginable in 30+ years.

Summary Technology

- MTU‘s Technology Roadmap will lead to a next generation GTF – incorporating a wide range of new technologies
- With the next generation GTF MTU is well positioned to cover the full range of thrust for future aircraft and applications
- Turbo Engines will power aircrafts for a long time – the challenges for incorporating electric flight are very high




Thank you for your attention!

Questions & Answers

Geared up for Growth with a Broad Portfolio

Michael Schreyögg, Chief Program Officer
London, 25 November 2015

Business Jet & Regional Jet Market

PW300/PW500/PW800

- Installed base of more than 7,000 engines
- 10 business jet applications in operation
- Dassault Falcon 8X in development
- PW800 exclusive engine for future Gulfstream large business jets

PW1200/PW1500
PW1700/PW1900

- 3,400 orders and options
- GTF family exclusively powers future Regional Jets from Embraer, Mitsubishi and Bombardier
- New market for MTU OEM with a future market share of 90% expected

CF34

- ~6,600 engines flying
- Exclusive powerplant for current regional jets
- Fast MRO growth with over 800 off-wing shop visits
- 12% market share

Expected average annual growth rate of mid teens until 2025

Narrowbody Market

PW1100G-JM

- Strong order book
- ~50% market share on A320neo family in total; higher market share of ~70% on A321neo
- 15% improved fuel efficiency, additional 2% by 2019
- Designed for lower maintenance cost

V2500

- ~ 5,600 engines flying
- Strong growth of spare parts sales until mid of next decade
- #1 MRO provider - capability in 2 locations

CFM56

- Largest installed fleet
- Strong MRO growth
- #1 independent provider: over 10% market share
- ~ 900m$ new contract wins in 2015
- 3 MTU MRO locations with CFM56 capability

Excellent narrowbody market position leads to continuous OEM & MRO growth

Widebody Market

GE9X

- Revenue potential 4 bn€
- 950 orders and options
- Entry into service expected in 2020
- Exclusive engine for Boeing 777X
- MTU will be partner of GE-MRO network

GEnX

- Market share of 60% on 787, exclusive on 747-8
- In production since 2011
- ~770 engines in service
- Market expectation of 4,400 engines
- MTU is partner of the GE-MRO network
- Exp. MRO revenue 3 bn€

GE90-110/-115B

- ~ 1,500 engines flying; strong MRO growth
- Independent MRO offer with growing market share
- 5 exclusive customers with contract volume of ~1 bn$

Strong partnership with GE Aviation in the widebody market

Military Business

GE38

- Power for CH-53K for US marine corps
- Latest Technology Turboshaft engine
- First flight October 2015
- Engine could be used for additional applications
- Strong transatlantic partnership

TP400-D6

- Ramp up successfully achieved
- More than 100 engines produced
- 16 aircraft are operated by 5 nations
- Aircraft well positioned for export

EJ200

- Strong revenue contribution, both OEM&MRO
- 450 Eurofighter in service
- 1,180 engines delivered
- Production of until 2021
- Strong export potential

Successful new product introduction for the international military market

Emerging Markets Slowdown: A Severe Threat?

Michael Schreyögg, Chief Program Officer
London, 25 November 2015

Emerging Market Slowdown Represents a Risk for OE and Aftermarket

- Emerging markets (EM) currently experience slower or negative GDP growth and large currency depreciations against the US$

  This is caused by the slowdown in China, sliding commodity prices and the looming prospect of rising US interest rates

- Passenger traffic growth in EM has remained robust in September

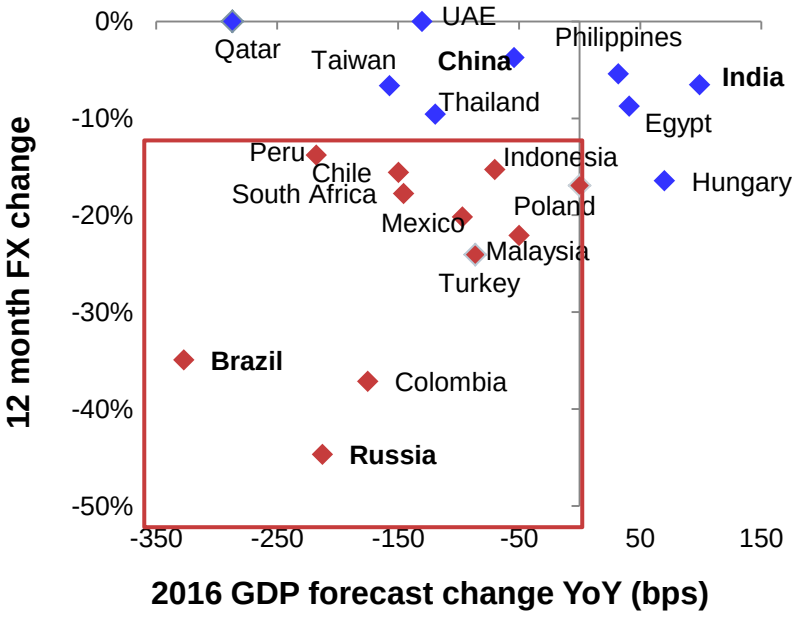
  IATA Sep: Lat. Am. +7.9%, Asia +6.8%, China +12.5%, India +13.2%, Russia +12.1%

- EM represent 32% of the commercial jet engine fleet and 36% of firm orders to be delivered in the next 3 years

How much of MTU's fleet and orders is exposed to a potential slowdown of EM?

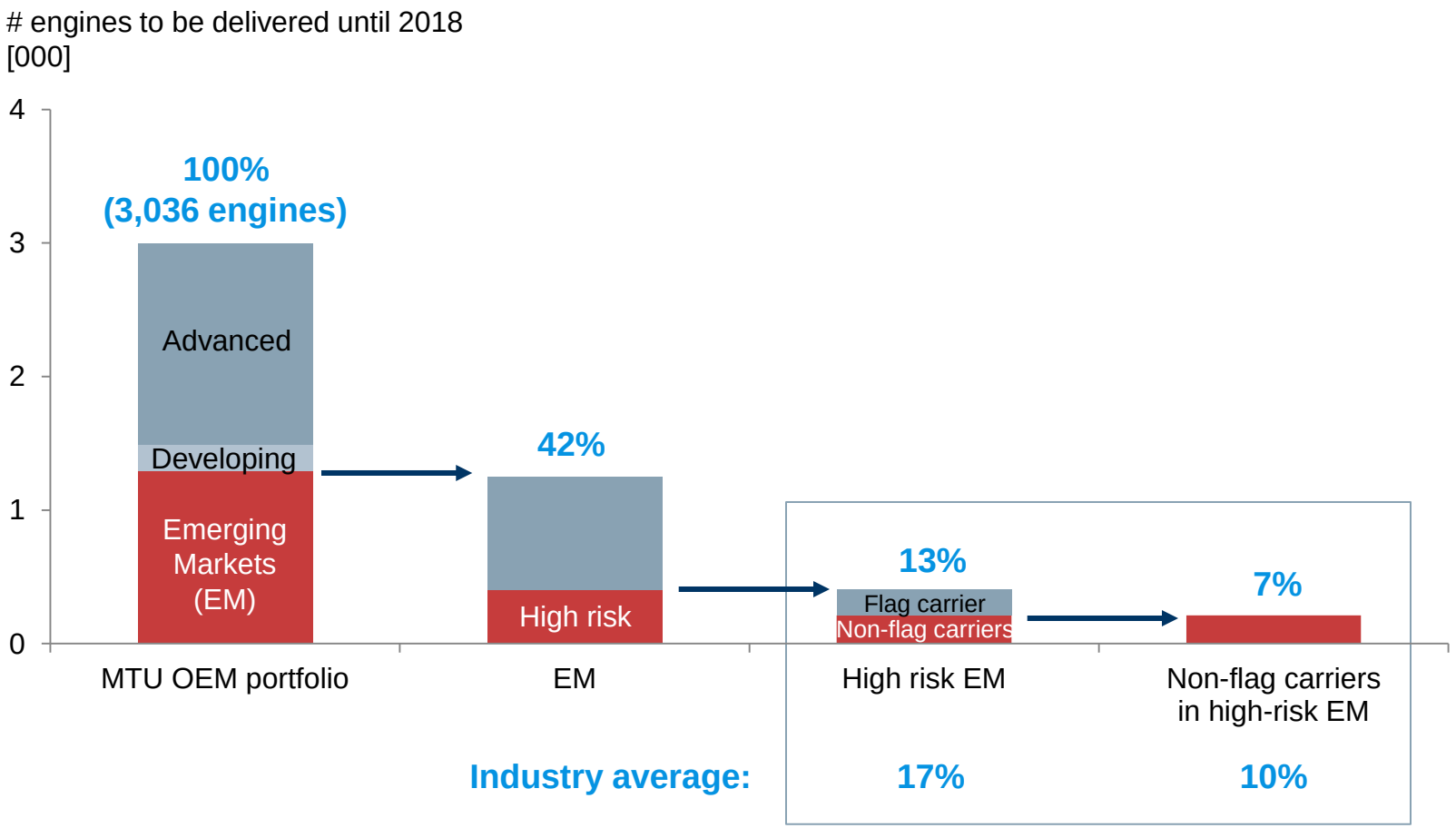
Method to Assess MTU's Exposure

- **Top-down assessment**
- **11 high risk EM countries identified**
  - GDP growth forecast downgrade for 2016
  - Currency devaluation vs. US$ in last 12m (rising US$ costs for aircraft, fuel, etc.)
- **Focus on non-flag carriers** in high risk EM (flag carriers with a lower risk)
- **Exposure of MTU's OEM portfolio** via:
  - share of **in-service fleet** (spare parts)
  - share of **orders of next 3 years** (OE)



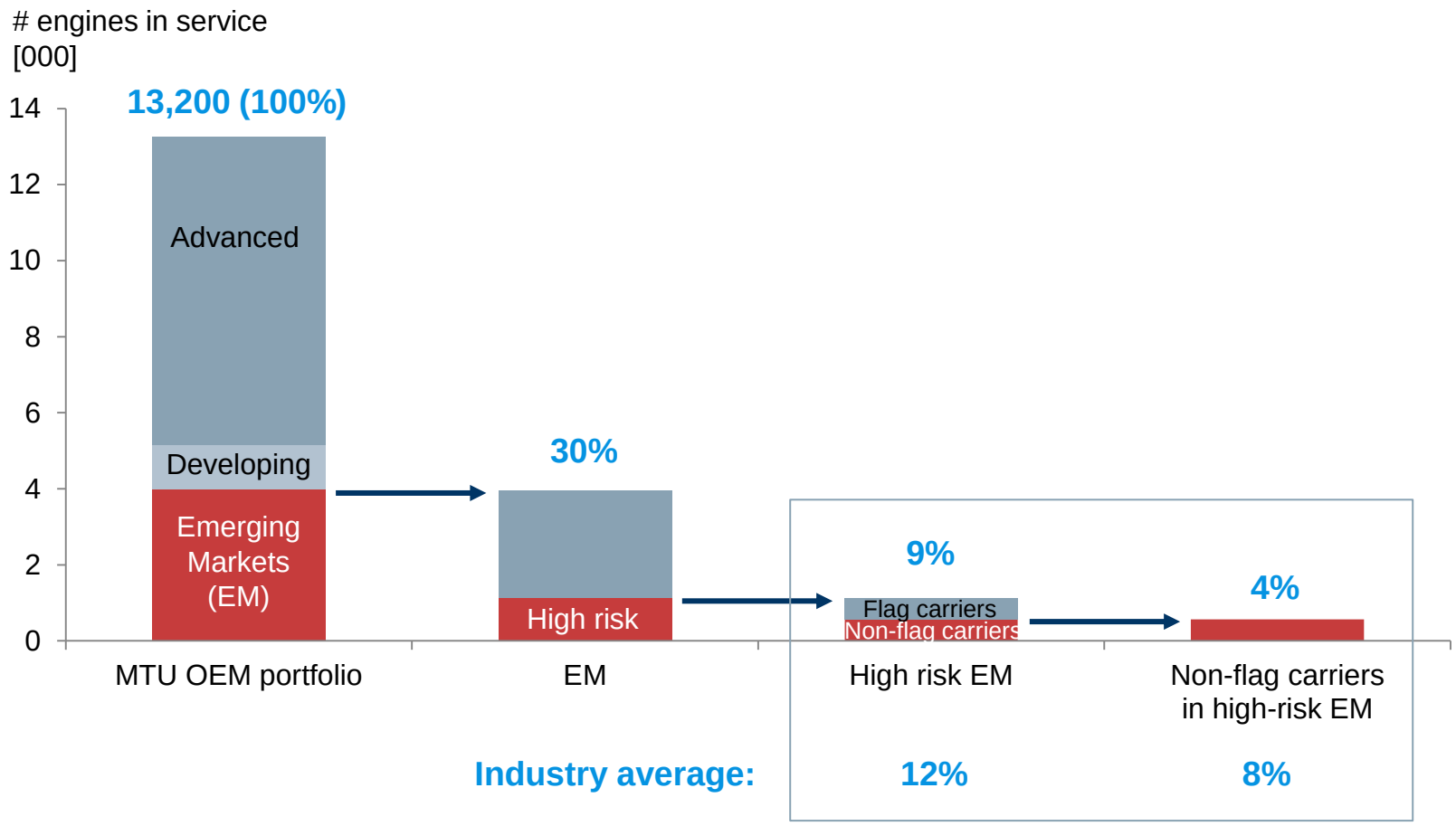
Source: MTU, IMF, Bloomberg

Exposure of MTU Deliveries is Limited and Below Industry Average



Source: Ascend, MTU

Exposure of MTU Fleet is also Limited and Below Industry Average



Source: Ascend, MTU

MTU‘s Exposure to Emerging Markets: Limited and Manageable

- 11 emerging countries have been identified as high risk (Brazil, Russia, Mexico, Indonesia, Turkey, Poland, Colombia, South Africa, Malaysia, Chile, Peru)
- High risk EM have ordered 13% of MTU’s engines to be delivered in the next 3 years and operate 9% of MTU’s fleet
- This reduces to 7% and 4% respectively when only secondary carriers in high risk EM are considered
- Such shares are below industry average
- Should it occur, this risk is limited and manageable for MTU

MRO Business:
Uniquely Positioned for Growth

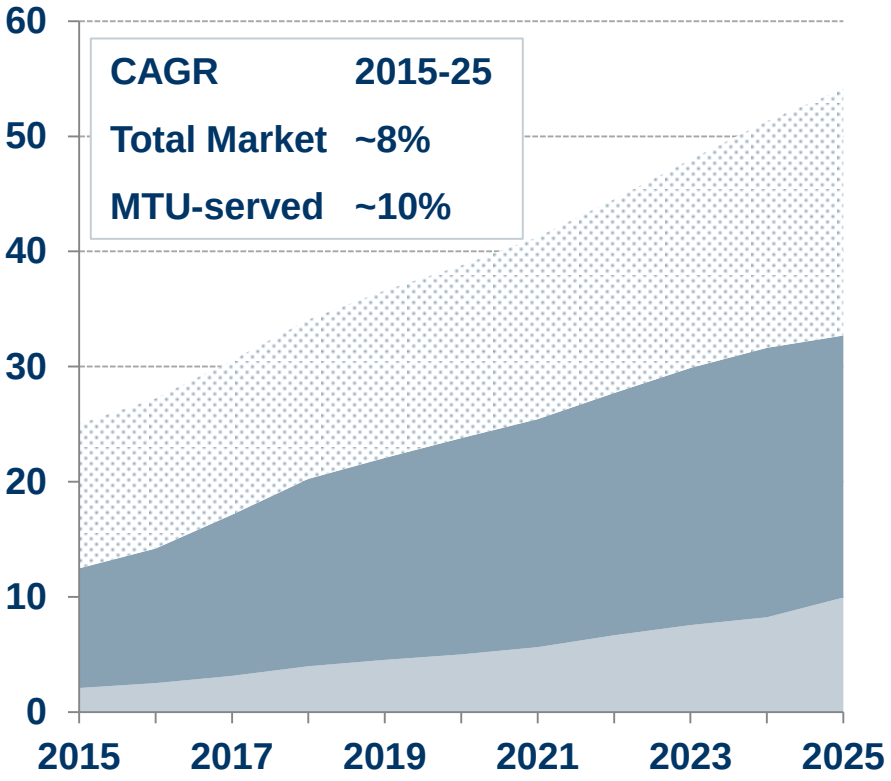
Michael Schreyögg, Chief Programm Officer
London, 25 November 2015

MTU's Diversified Approach Ensures a Broad Market Coverage

1 Independent	2 OEM cooperation	3 Airline cooperation
• Over 700 customers (airlines, MROs, lessors…) • #1 independent for engine MRO • Integrated solutions • 120 IGT/ Marine customers	• MTU is OEM network partner • MRO share is secured at program entry for entire life	• JV with China Southern • JV with Lufthansa Technik (ASSB)
CF34, CF6, CFM56, GE90G, PW2000, V2500 LM IGTs, Vericor	GEnx, GP7000, PWC, V2500, PW1000G, GE9X	V2500, CFM56 Parts repair

MTU's MRO Portfolio is the Basis for Future Growth

MRO Sales ($bn)



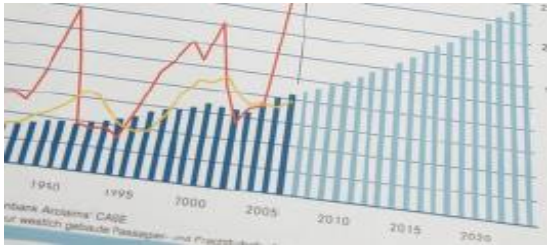
CAGR	Market Approach	Portfolio
6%	No access as of today	-
8%	Independent or Airline Cooperation	CF34, CFM56, CF6, GE90G, PW2000, V2500
17%	OEM Cooperation	PW1000G, GEnx, GP7000, V2500…

Source: MTU, escalated

MTU has the **largest engine MRO portfolio** of all providers:
The market MTU serves **will grow over-proportionally at 10% p.a.**

1 Independent Business

MARKET TRENDS



- Market CAGR ~8% over next 10 years
- Increasing demand for integrated solutions
- Consolidation of pure independents expected

CHARACTERISTICS

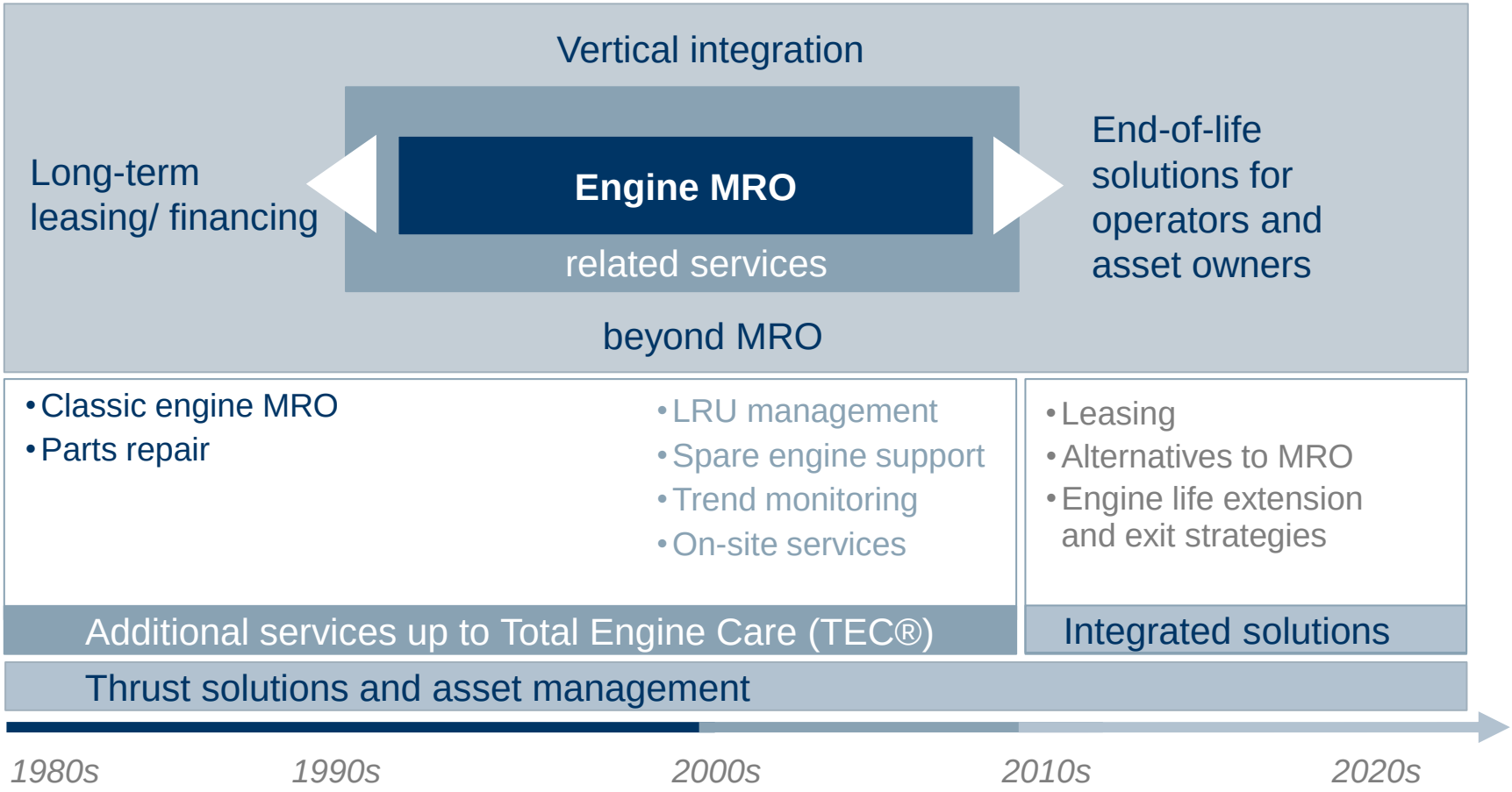
- Direct customer contact
- Highly competitive market with strong price and performance focus
- Customized services

MTU POSITIONING

- Largest MRO portfolio, #1 independent
- Tailored/ integrated solutions over entire engine life
- Alternative material solutions
- High MTU internal synergies

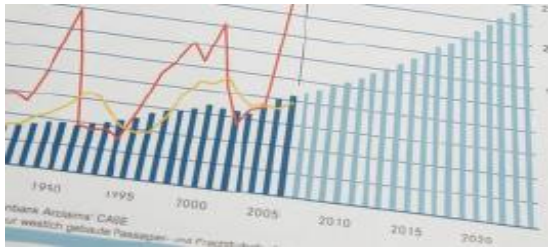
1 Independent: Evolution of MTU‘s Business Model

From an engine MRO to a provider of service solutions



2 OEM Cooperation

MARKET TRENDS



- Increasing OEM market coverage
- OEM-FHA share has grown up to 40%
- Majority of new engines are sold with OEM-FHA
- Airline concentration on core business

CHARACTERISTICS

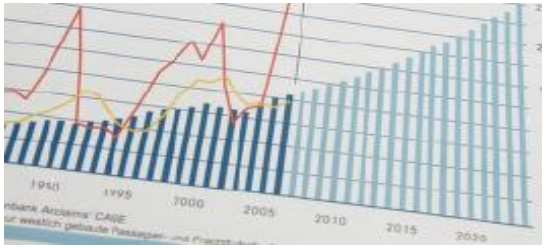
- OEM is contract holder
- Long term deals with focus on reducing life-cycle cost
- Competition within OEM network

MTU POSITIONING

- OEM program share secures MRO workload for decades
- Standardization of workscopes leads to economies of scale
- Use of MTU‘s expertise to best manage fleets of OEMs
- Future capacity additions in low cost environment

3 Airline Cooperation

MARKET TRENDS



- 60% of global order books come from emerging markets
- Strong growth young airlines with large future fleets
- Interest to build up MRO expertise

CHARACTERISTICS

- Partners provide baseload volume and access to licences
- Presence in growing markets helps 3rd party business
- Highly competitive shops due to low labor cost environment

MTU POSITIONING

- Local presence with high MTU quality standards
- Activities in low-cost labor countries
- Access to fast growing Chinese/Asian market via JV
- MTU network benefits from more repair volume and offload

3 MTU Maintenance Zhuhai – A Success Story

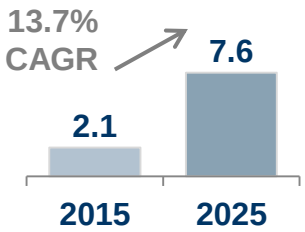
Joint Venture with China Southern Air Holding

Company Key Facts

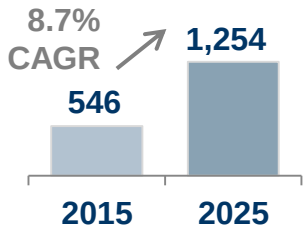
- 50:50 joint venture since 2001
- Portfolio: V2500-A5, CFM56-3/5B/7
  future potential: PW1100G, LEAP
- Capacity: 300 shop visits after extension 2012 (+50%)
- Employees: >700

Fast Growing Chinese Market

Revenues
(bn. $)



Shop visits



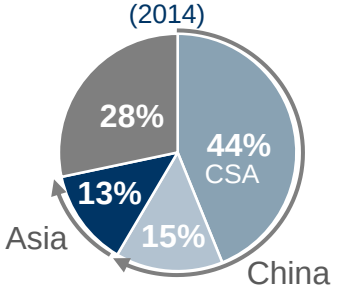
Partner China Southern

- **3rd largest airline worldwide**
- 100 million passengers in 2014
- Over 600 aircraft in operations with **~1,000 engines in JV portfolio**
- 24 A320neo orders with PW1100G

Competitiveness

- **#1 provider in China**
- Close to 1,800 shop visits
- **US$ revenues doubled within 5 years** (2010-15)
- Over 800 m$ contract wins in 2015

Shop visits
(2014)



MTU's Diversified Approach Ensures a Broad Market Coverage

1 Independent

- Remain #1 provider with customer focus
- Provide integrated lifecycle services

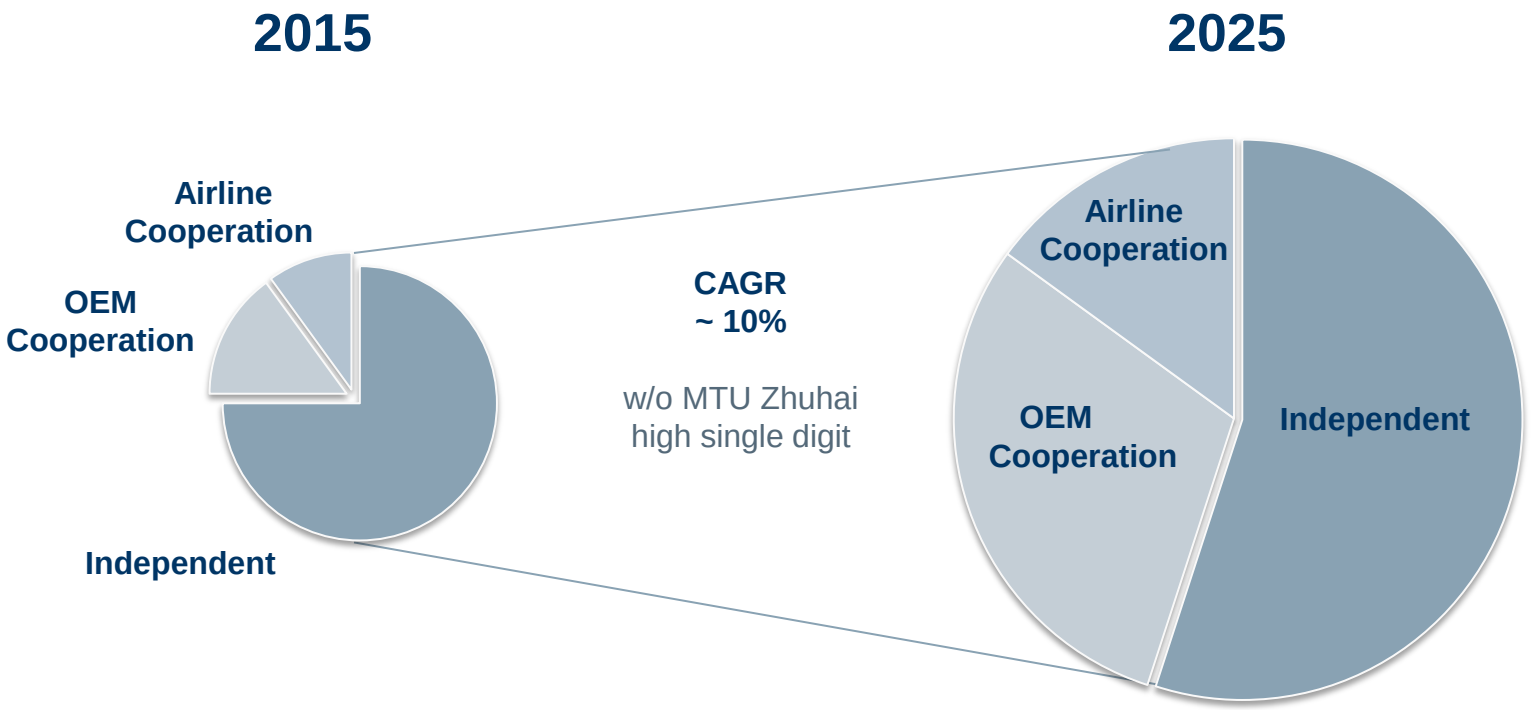
2 OEM cooperation

- Provide cost efficient industrialized MRO
- Leverage OEM network

3 Airline cooperation

- Develop current cooperation
- Investigate future cooperation potential

Outlook



- All market channels contribute to strong MRO revenue increase – with **OEM cooperation** growing fastest
- **Independent** segment remains the biggest contributor in 10 years time

% of USD revenue volume incl. MTU Zhuhai 100%, Airline Coop. only CSA; 3rd party customers MTU Zhuhai included in independent

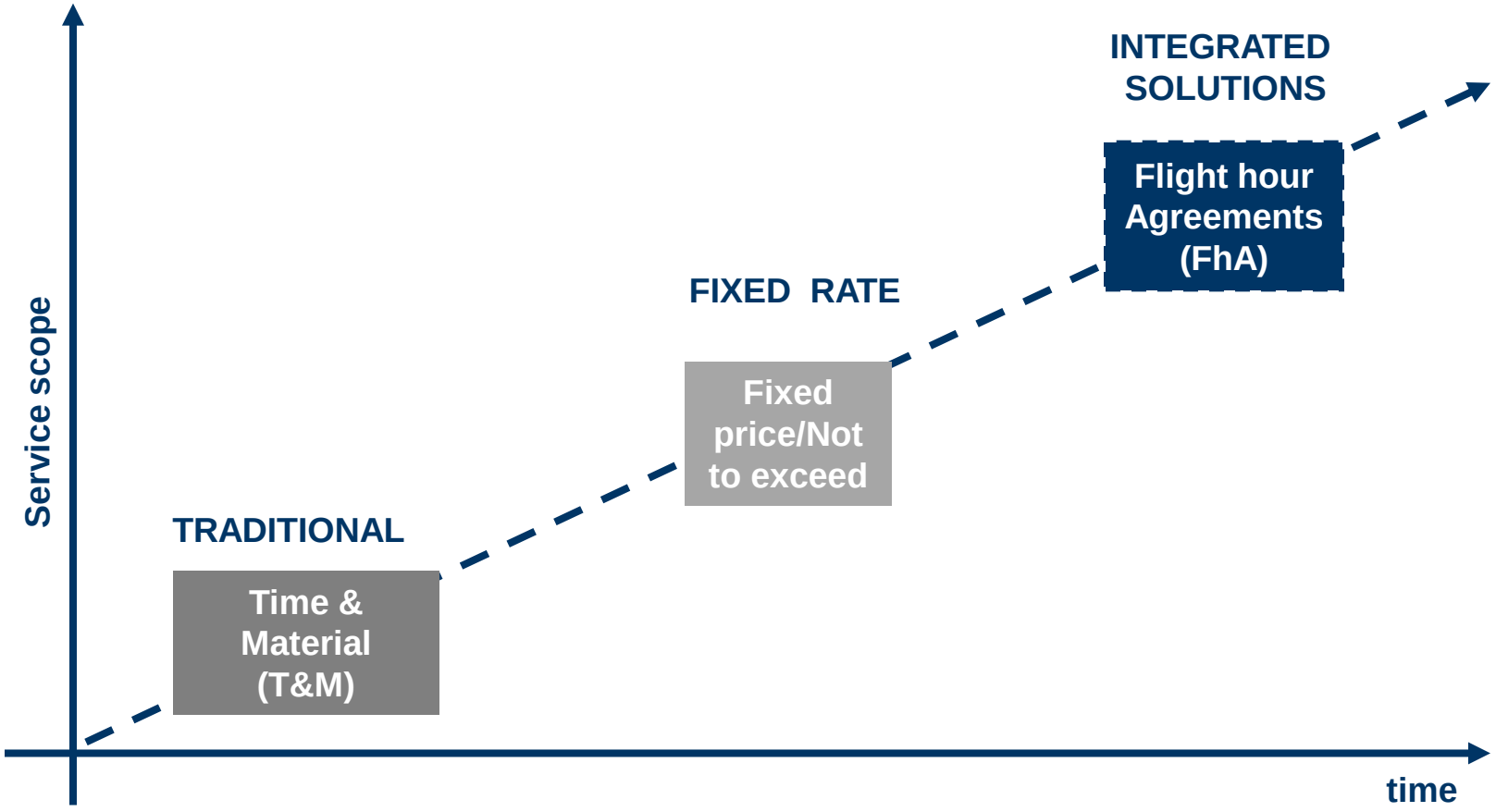
Thank you for your attention!

Questions & Answers

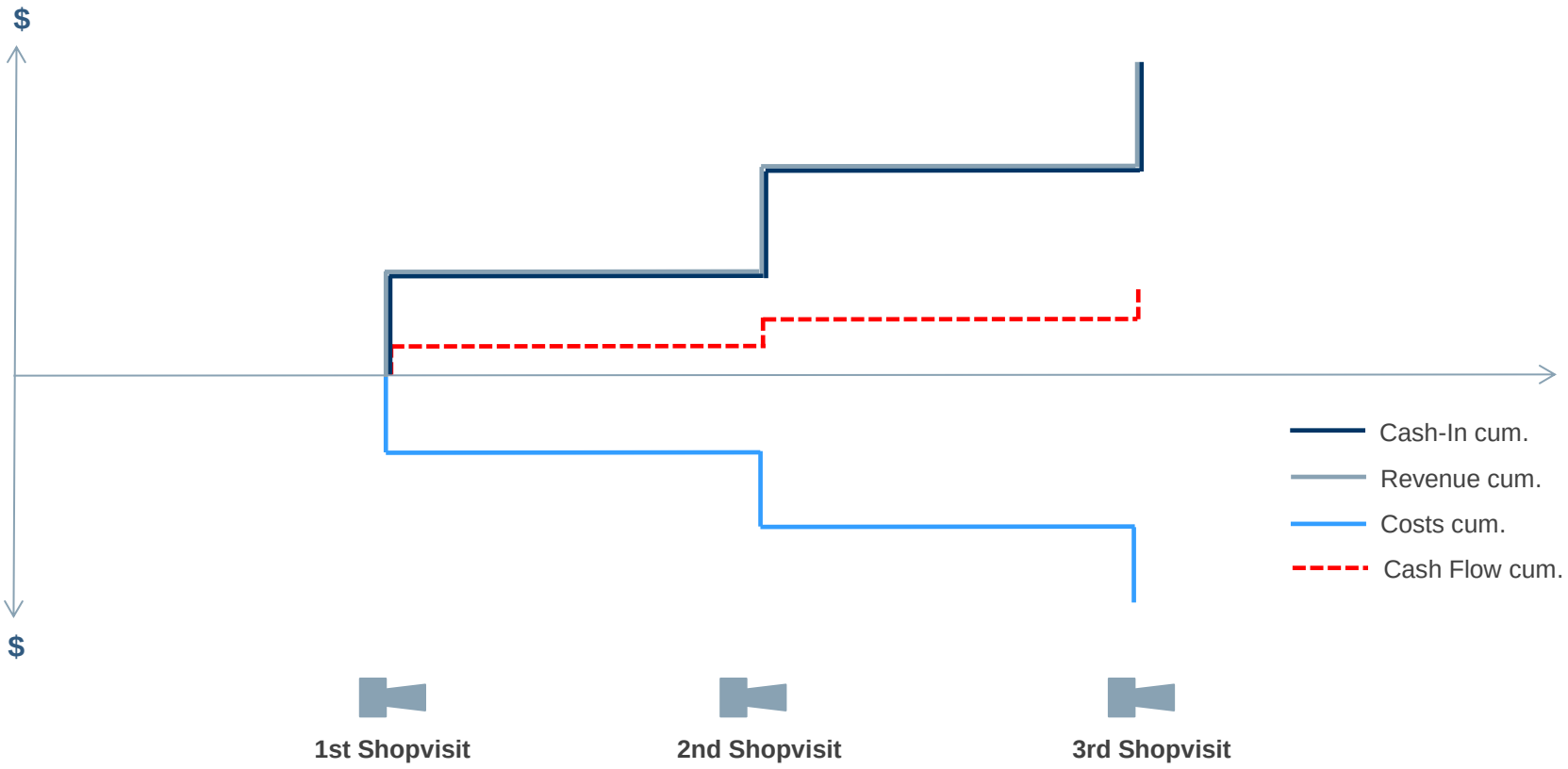
Flight hour Agreements – Beneficial for the Operator and MRO Provider

Reiner Winkler, Chief Executive Officer
Michael Schreyögg, Chief Program Officer
London, 25 November 2015

Evolution of Engine Maintenance Contract Options

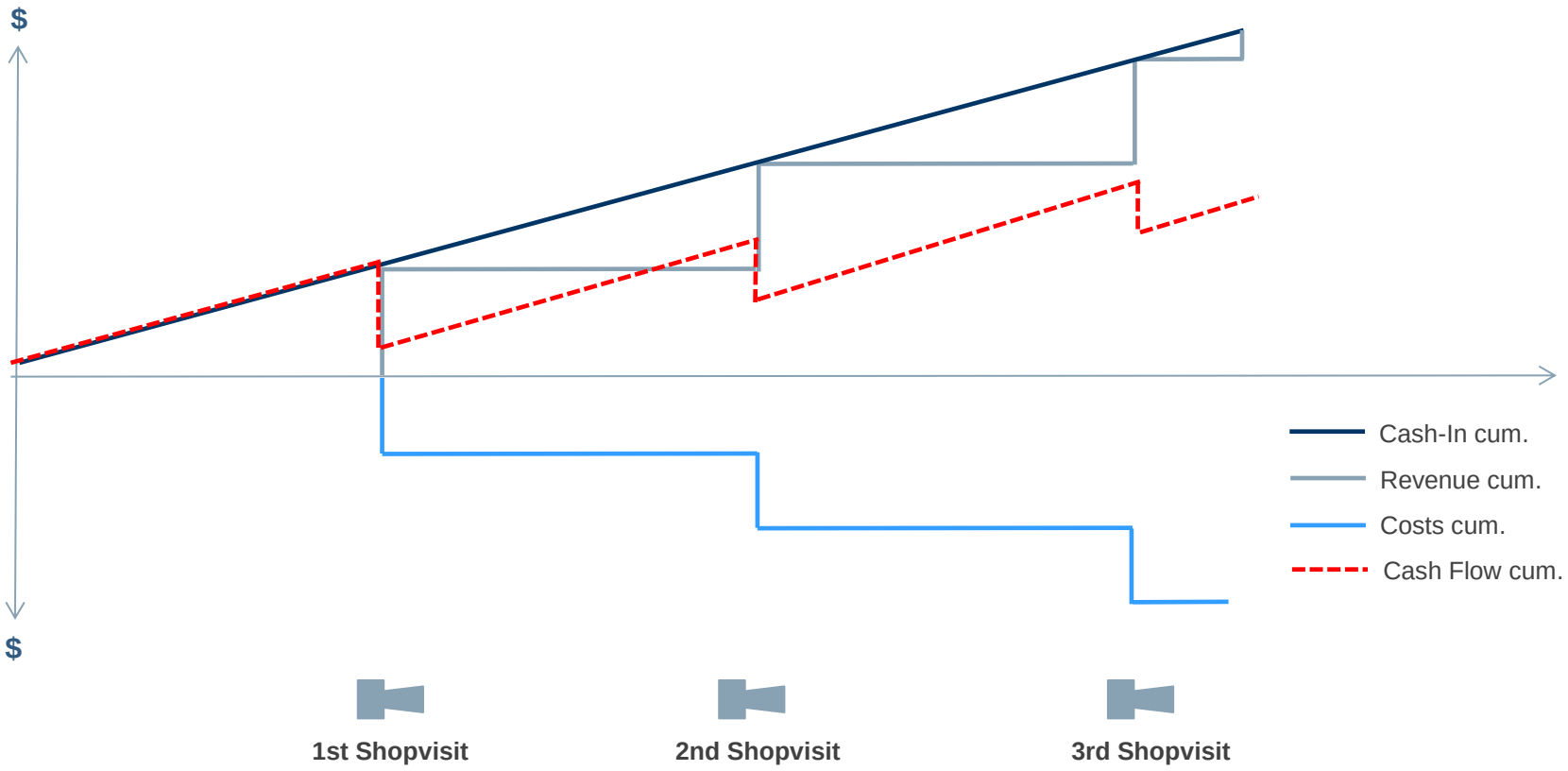


Typical Cash / P&L Profile of an Engine under Time & Material



The traditional T&M model shows a correlation of Sales and Cash flow

Typical Cash / P&L Profile of an Engine under FhA



FhAs lead to an improved Cash Flow profile, P&L recognition remains unchanged

Flight Hour Agreement - Contract Approach Differences

Fixed rate
per flight-h / cycle

Pay as you go (PAYG)	Pay at Shop Visit (PASV)
Fixed rate per h paid regularly when engine is operated	Fixed rate per h paid at time of MRO event
Smoothed cash flow	**Cash flow tied to overhaul Cycle**

Flight Hour Agreements – Benefits

Operator

- MRO cost **predictability and transparency**
- Predictable **cash-flow**
- **Risk transfer** to MRO provider
- **Additional services** and insurance options

MRO provider

- **Exclusive** shop visit volume
- Predictable and steady **cash-flow and workload**
- Possibility to include **service packages** (e.g. unscheduled event coverage, lease engines, training…)
- **Simple invoicing**
- **More flexible inventory management**

Advantages can only be generated with a long term agreement, optimizing the whole fleet instead of single events

What Can be Done in Order to Improve FhA Performance?

Increase on-wing time

- On-wing support
- Engine trend monitoring
- Coatings
- Select standard
- Removal strategy
- Modifications

Reduce Shop Visit costs

- Workscoping
- Material management
- Repair development
- Coatings

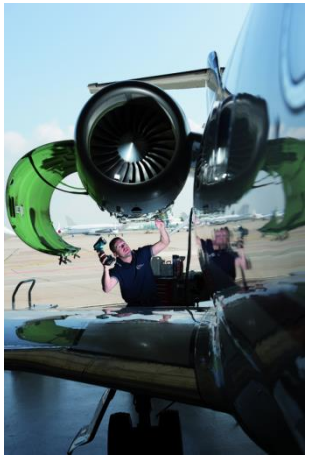
Improving FhA Performance – On-Wing Support

Example 1: Accessory Gear Box (AGB) oil leakage

- AGB oil leakage detected
- AGB removed on-site
- AGB repaired and installed again
- Aircraft back in operation after one weekend
- Shop visit avoided

Example 2: Low Pressure Turbine (LPT) swap

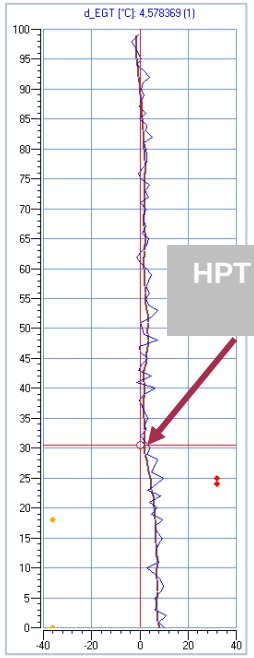
- Fully equipped mobile container to perform LPT module swaps on-site
- LPT module changed
- Shop visit avoided



Improving FhA Performance – Engine Trend Monitoring

Example 1: High Pressure Turbine (HPT) stage 2 blade crack

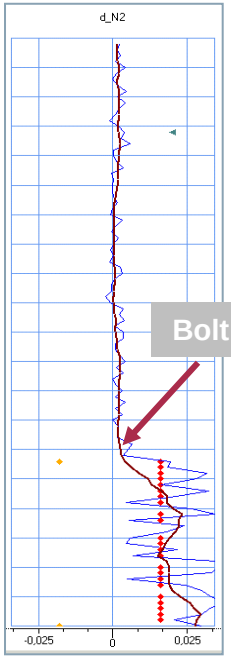
- HPT Boroscope inspection (BSI) stage 1&2
- BSI findings: 1 blade cracked
- Engine removed
- Secondary damage avoided



HPT stage 2 blade crack

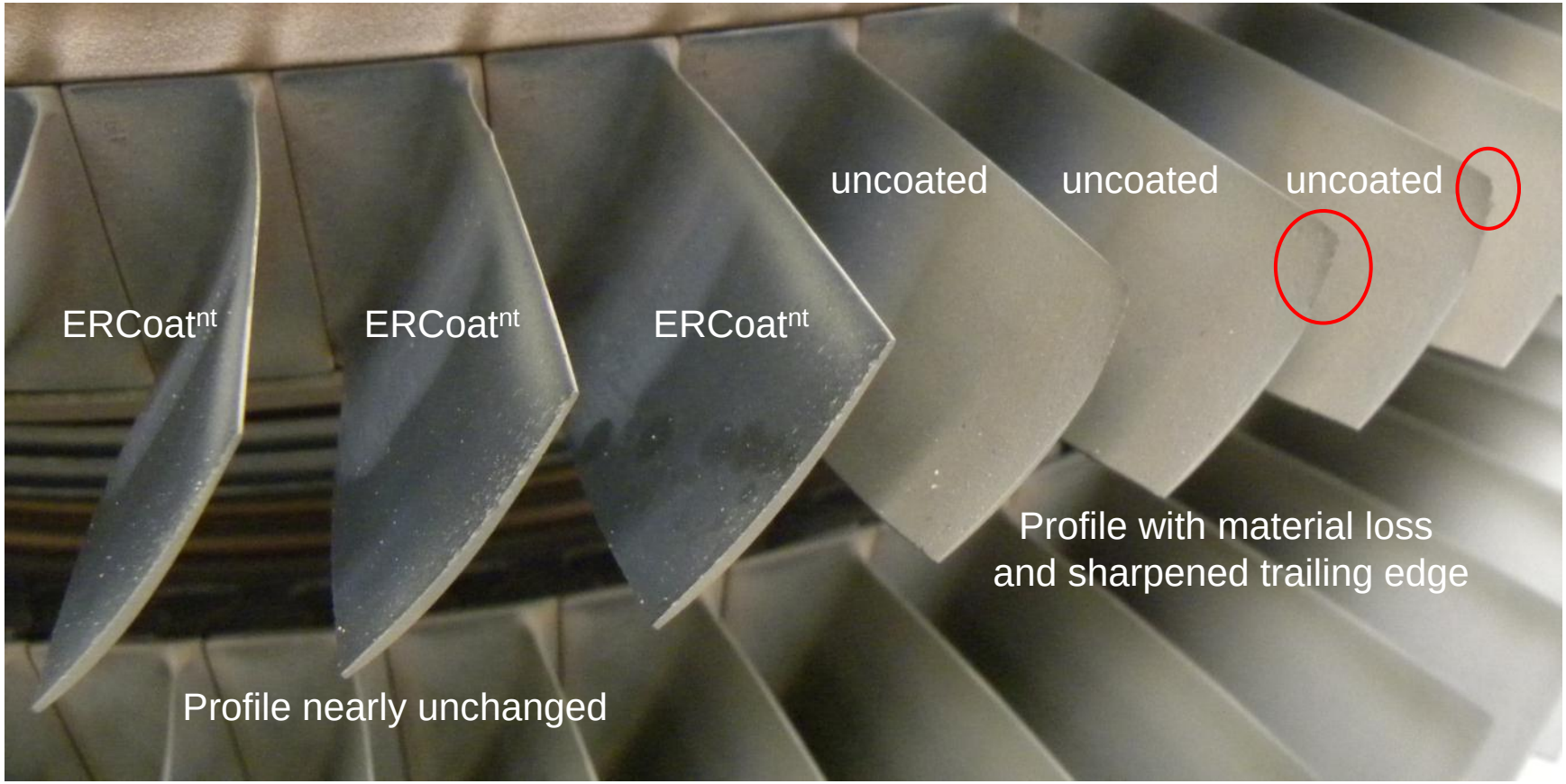
Example 2: Broken Bolt

- Variable Stator Vane Bolt broken
- Engine inspected
- On-site bolt replacement
- Shop visit avoided



Bolt broken

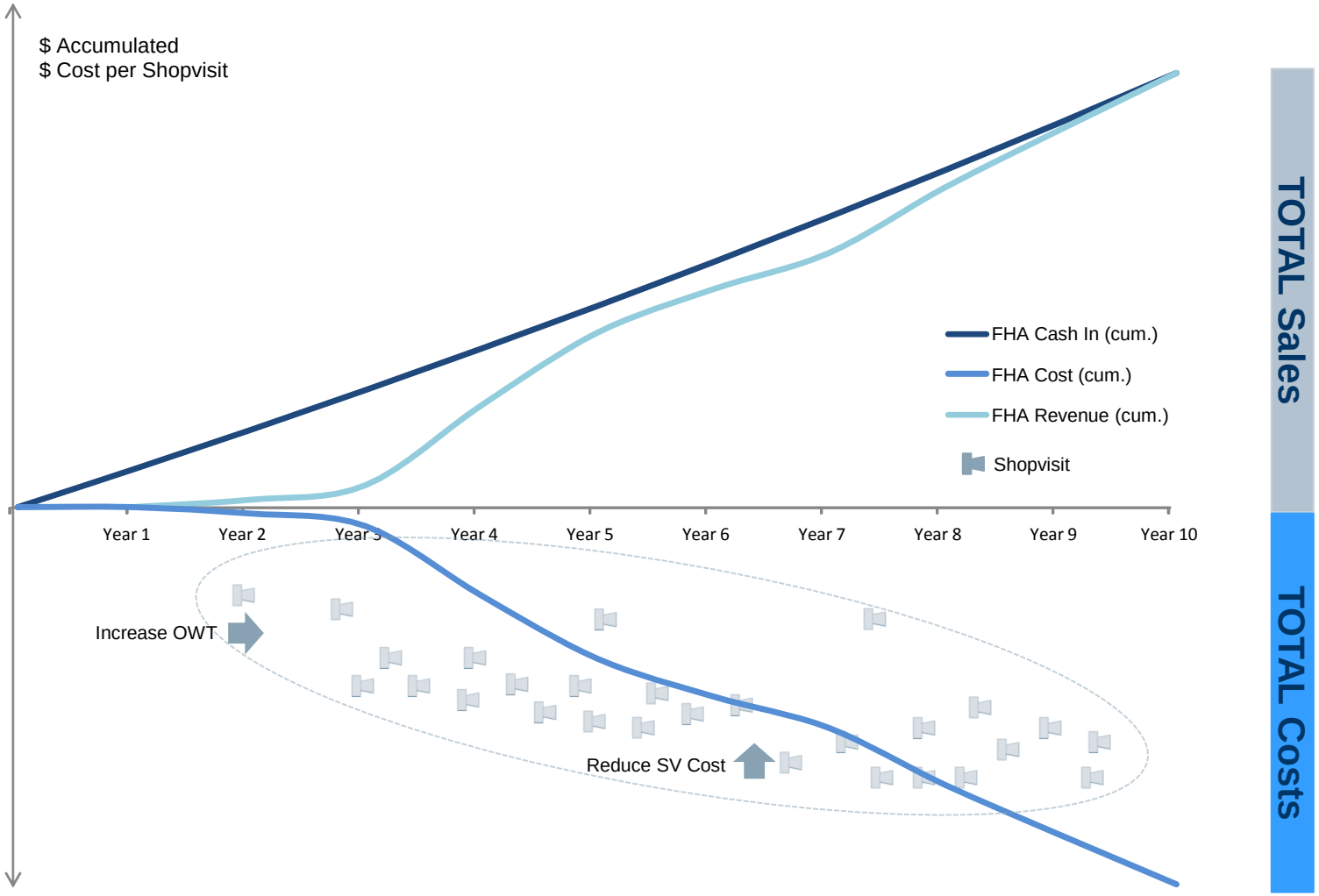
Improving FhA Performance – Erosion Coating (ERCoat^{nt})



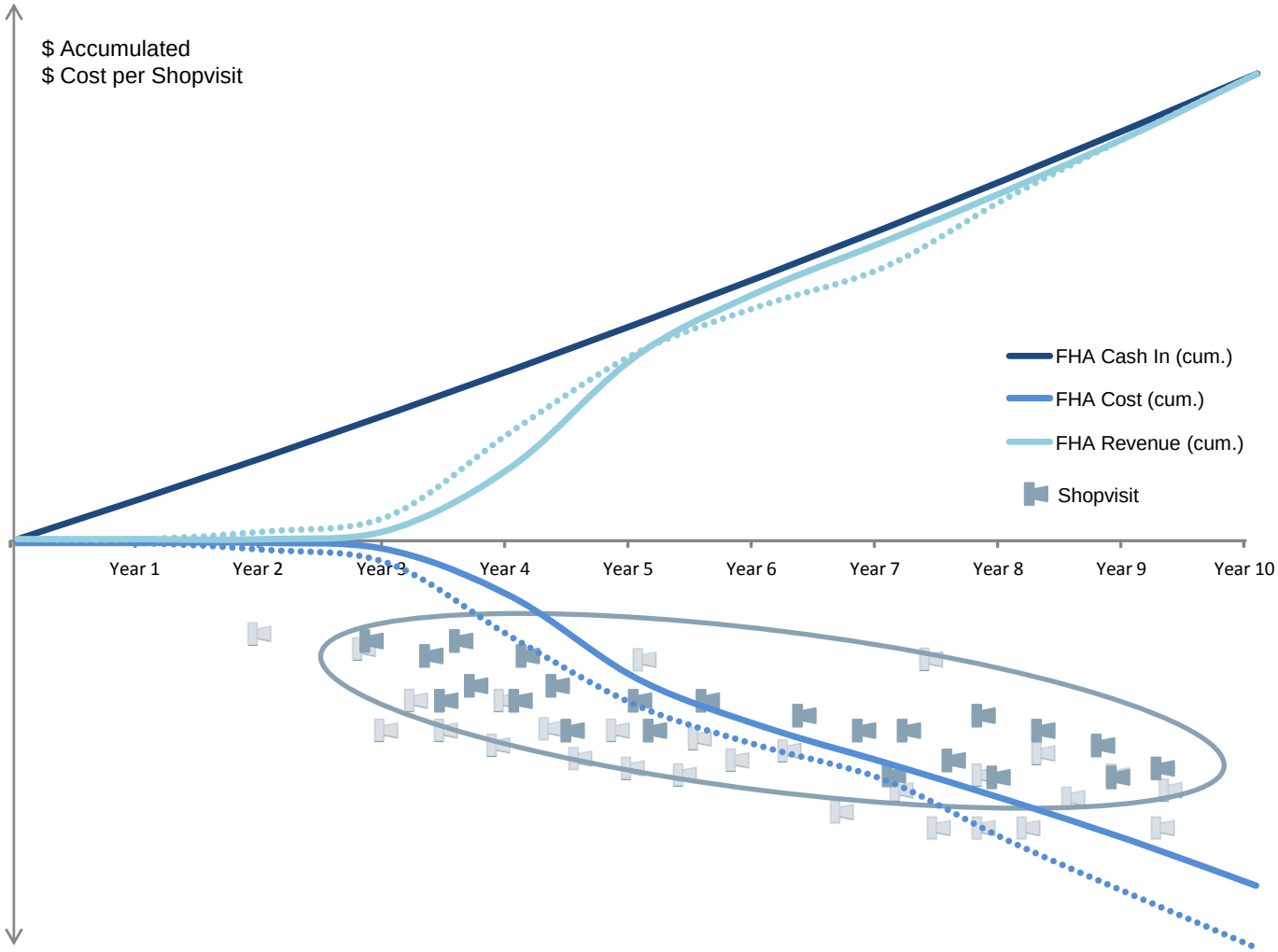
Summary

- Demand for Flight hour Agreements is increasing
- FhAs do not lead to a change in the revenue profile but to a change in the cash flow profile
- The airlines as well as the OEMs benefit from FhAs
- The MRO service cost are improved by an increase in reliability and by lower cost per shop visit

Typical Financial Profile of a 10 Years FhA Contract



Typical Financial Profile of a 10 Years FhA Contract

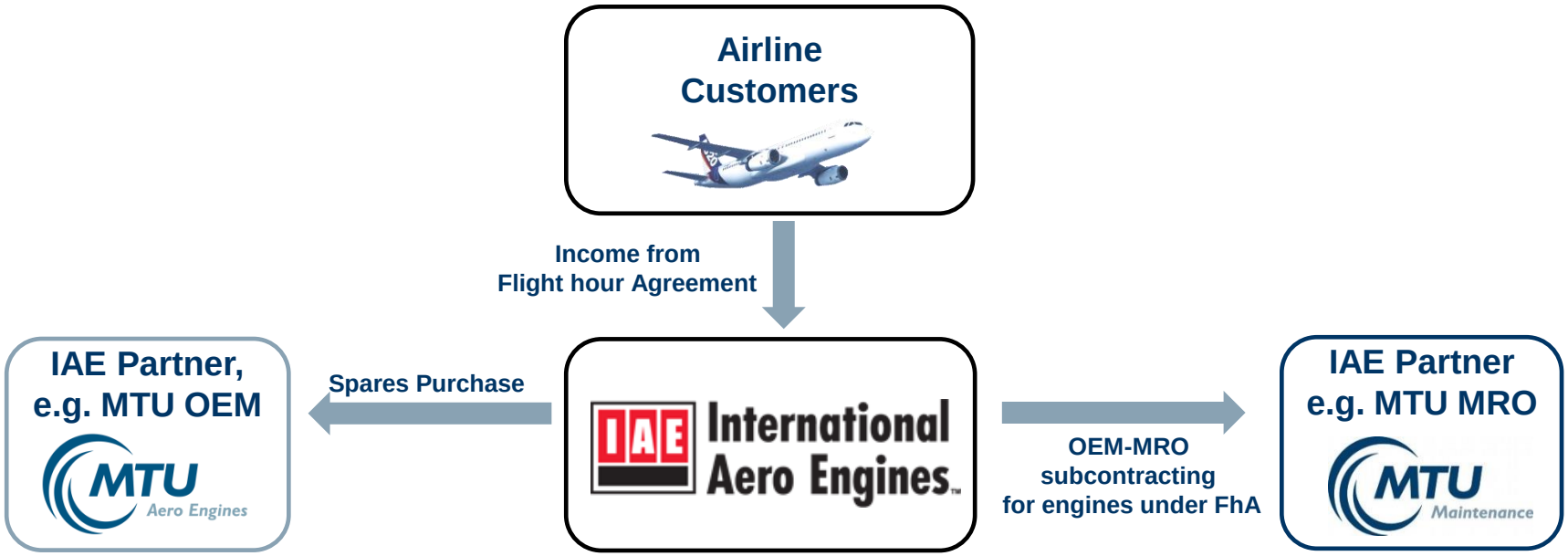


TOTAL Sales

TOTAL Costs

Benefit

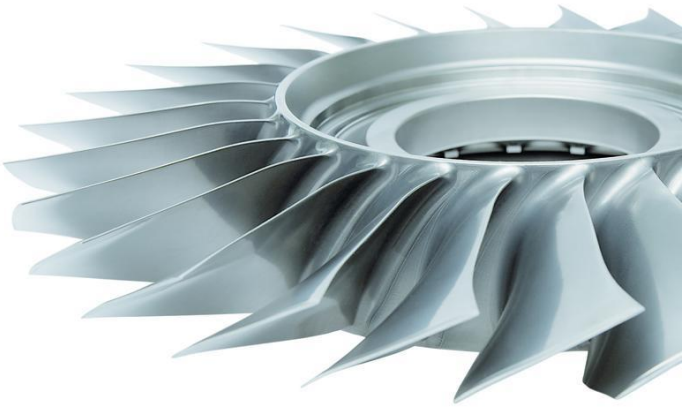
Cash Flow Streams of V2500 IAE FhA Agreements



Roughly 60% of the V2500 fleet is under FhA contract with IAE

Summary

- IAE currently works together with airline customers on several cost reduction initiatives for FhA agreements
- Impacting MTU´s financials via
  - Less shop visits from IAE and therefore less sales for MRO division short term
  - Lower spare parts sales short term, but…
  - Higher EBIT margin on spare parts short term with a higher total EBIT over life of each contract
  - Improvement of Free Cash Flow already short term, as IAE has to pay less for FhA shop visits



Thank you for your attention!

Questions & Answers

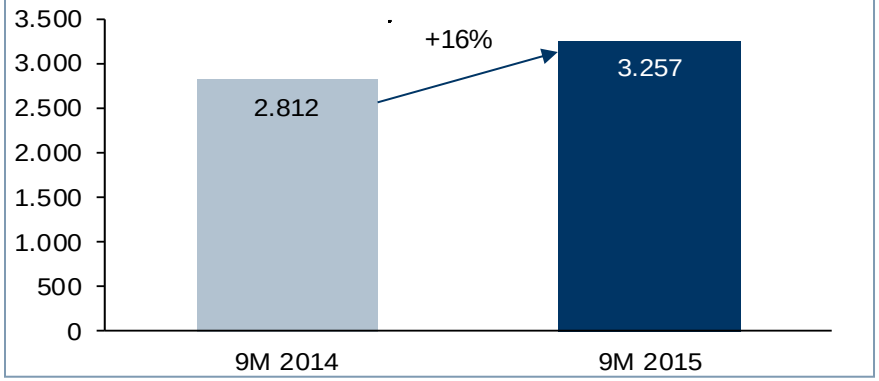


Financials & Outlook

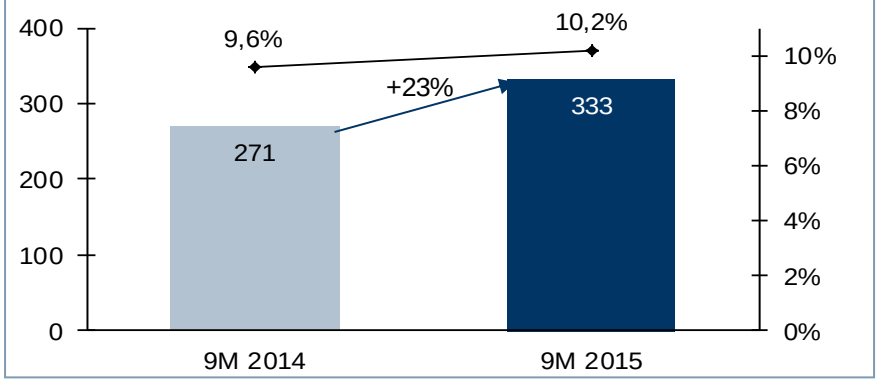
Reiner Winkler, Chief Executive Officer
London, 25 November 2015

Financial Highlights 9M 2015

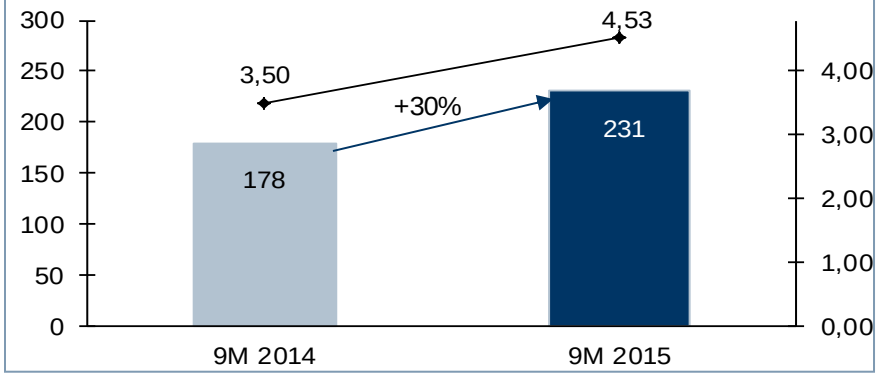
Revenues (m€)



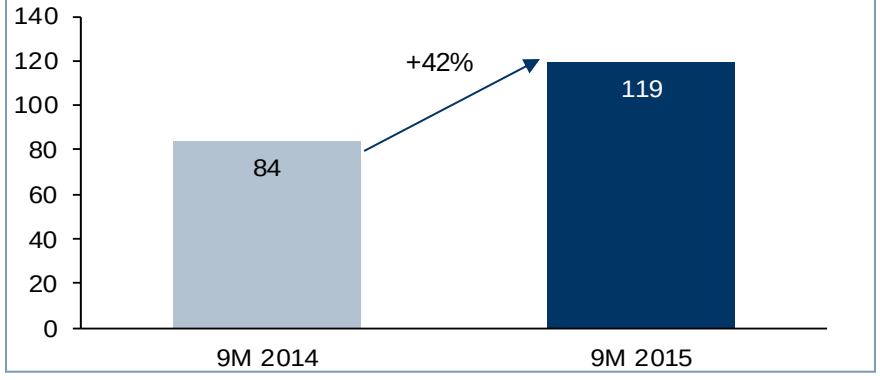
EBIT adj. / EBIT adj. Margin (m€ / %)



Net Income adj. / EPS adj. (m€ / €)*



Free Cash Flow (m€)



* w/o market-to-market valuations of US$, options and others

Guidance 2015

in m€	FY 2014	Guidance 2015
Revenues	3,914	**~ 4,600**
EBIT adj.	383 9.8%	**~ 430**
Net income adj.	253	**~ 295**

- Guidance 2015 based on 1,10 US$/€
- Commercial US$ OE sales up high single digit
- Commercial US$ spare parts sales up low to mid single digit
- Military revenues down 10%
- Commercial MRO US$ sales up low to mid single digit
- R&D (P&L) down by 10 m€
- Tax rate in 2015: 30%
- FCF at high double digit million number

New IFRS 15: Revenues from Contracts with Customers

Background IFRS 15

- IASB and FASB intend to harmonize IFRS and US-GAAP regulation on revenue recognition
- IFRS 15 was issued in May 2014 and will replace previous standards
- IFRS 15 regulates revenue recognition in more detail, by providing a 5-step-model and respective application guidance:
    1) Identify the contract
    2) Identify performance obligations
    3) Determine the transaction price
    4) Allocate transaction price to performance obligations
    5) Recognize revenue when performance obligation is satisfied

New IFRS 15: Revenues from Contracts with Customers

Update November 2015

- IASB rules mandatory application of IFRS 15 from 2018 onwards; postponed by 1 year
- In Europe application of IFRS 15 requires EU endorsement which is now expected for Q1/2016
- MTU has launched an internal project in 2015 with the support of auditor firms to assess implication from IFRS 15
- All active customer contracts are examined w.r.t
  - Classification of performance obligations (i.e. FHA contract related services)
  - Classification/Presentation of sales and cost of sales elements (i.e. concessions)

Head- and Tailwinds 2016

Revenue Growth

Military:	Stable	⇨
New engine Sales (Com. OE):	Stable	⇨
Spare parts Sales (Com. Spares):	Low to mid single digit	⇧
Commercial MRO:	High single digit	⇧⇧

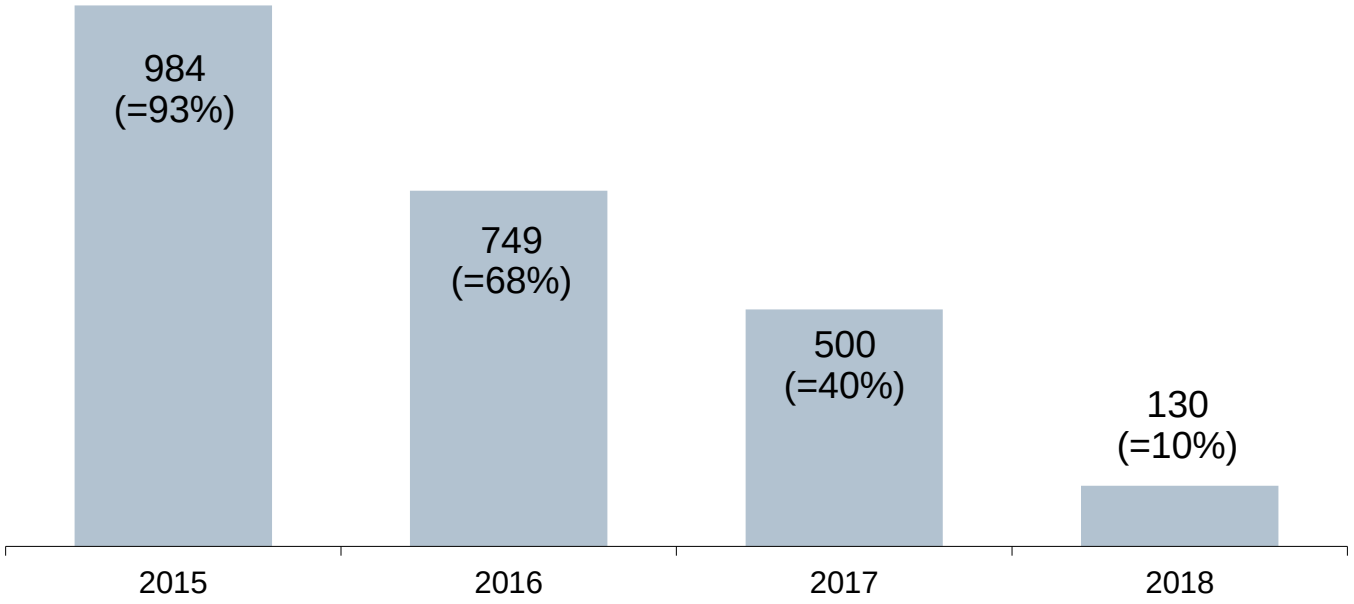
Tailwind from US$ fx-rate due to improved Hedge book

Slight headwind from Com. OE mix and R&D (P&L)

US$ Exchange Rate / Hedge Portfolio

Hedge Book as of November 25, 2015 *(% of net exposure)*

(mUS$)



	2015	2016	2017	2018
Average hedge rate (US$/€):	**1.25**	**1.25**	**1.22**	**1.15**

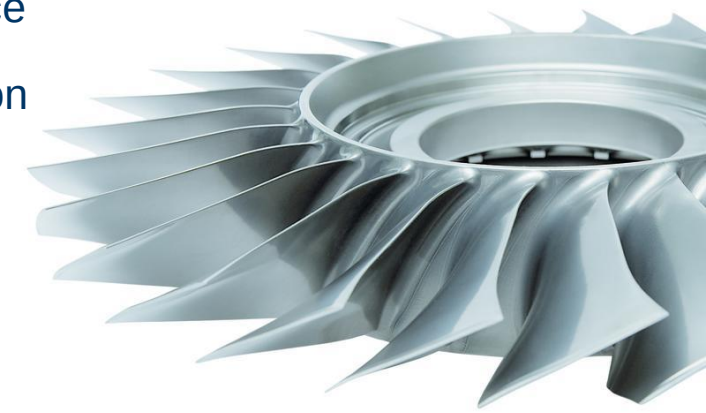
Long Term Outlook 2014 – 2025 - Update

	Investment Phase 2014-2017	Consolidation Phase 2018-2025
Revenues	Military: ⇨ Com. OE: ⇧ Com. Spares: ⇧ Com. MRO: ⇧⇧	Military: ↘ Com. OE: ⇧ Com. Spares: ⇧⇧ Com. MRO: ⇧⇧
EBIT adjusted	**Growth in line with revenues**	**Growth stronger than revenues**
Net Income adj.	Growth stronger than EBIT adj.	Growth in line with EBIT adj.
CCR*	Low double digit %	High double digit %

Updated:	**Less Volume GP7000 OE 2016ff** **FX tailwind**	**Higher growth rate PW1100G-JM (Airbus production rate increase)**

Key Takeaways

- MTU well prepared with its technology roadmap for future engine projects
- Production and supply chain strategy for the ramp up is implemented
- MTU benefits from its broad product portfolio in all business segments
- Risk of slowdown in emerging markets is manageable
- Diversified MRO market access options and product portfolio ensures future growth
- FhAs lead to a win-win situation for both airlines and MRO providers
- Measurements to improve FhA performance are in place
- Internal project launched for the IFRS 15 implementation
- For 2016 MTU is committed to another year with earnings growth





Thank you for your attention!

Questions & Answers

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 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.

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.