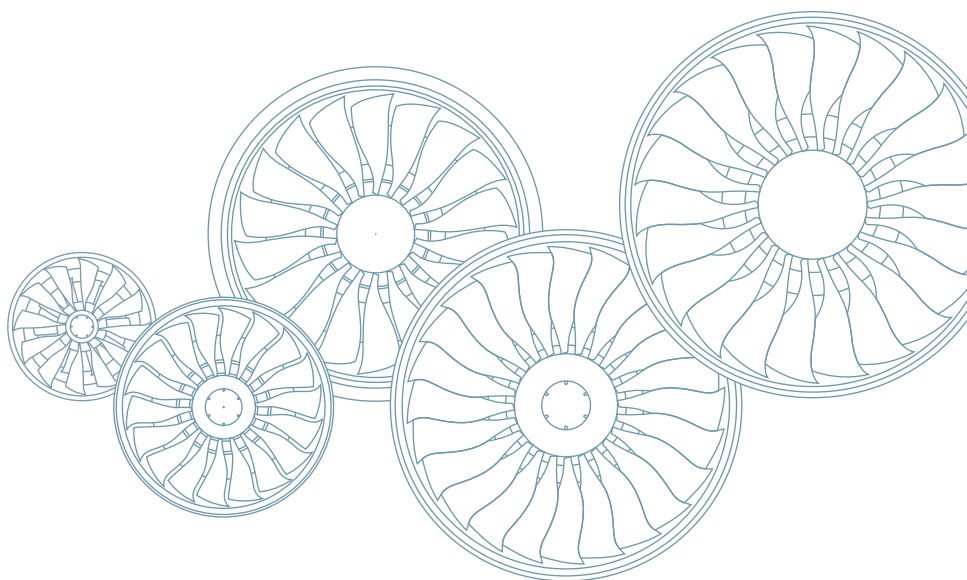




We help shape the future of aviation
Sustainability Report 2011





Board of Management of MTU Aero Engines Holding AG (from left to right):
Reiner Winkler, Chief Financial Officer and Director of Labor Relations; Dr. Rainer Martens, Chief Operating Officer
and Environmental Protection Officer; Dr. Stefan Weingartner, President Commercial Maintenance; and Egon Behle,
Chief Executive Officer.

Dear reader,

The lifetime of an engine program spans many decades. Only after ten to fifteen years do initial development costs begin to pay off. Consequently, sustainability is a fundamental concern for companies in the aircraft engine industry.

This is the first time MTU has drawn up a sustainability report in the almost 80 years of the company's history. Maybe the reason for this is that sustainability has always been a self-evident part of what we do. We certainly have no shortage of things to report about, such as the lasting values we have created with our products and services, or the measures we have adopted for environmental protection and health and safety, or the company's robust and improving financial indicators, or innovative new technologies and programs designed to make flying ever more efficient in the future.

"We help shape the future of aviation"...

...is the motto of our Principles, which we set ourselves in 2009. The concept of sustainability is already contained within this phrase. After all, how we continually reduce environmental pollution will be crucial to the future especially of commercial aviation, which is growing by around five percent year on year.

In 2011—the year covered by this report—the number of firm orders for new aircraft worldwide totaled 8,257. This represents the number of passenger and cargo aircraft that will be delivered to customers over the next ten years. However, in reality demand is much higher. In its Global Market Forecast 2011-2022, Airbus predicts a total of almost 28,000 new aircraft by 2022. These aircraft will be using our airspace, consuming fuel, and producing CO₂, NO_x and other emissions. Noise reduction and the protection of valuable resources needed for production are further important topics. As an engine manufacturer, therefore, our most pressing obligation is to reduce the fuel consumption and emissions of our products as well as the amount of material that goes into manufacturing them.

One way in which MTU is contributing towards the realization of these objectives is by developing and manufacturing new technologies, many of which are already entering service, such as in the PurePower™ engine family from MTU's partner Pratt & Whitney, which will be powering scheduled flights from 2014 equipped with a high-speed low-pressure turbine and sections of the high-pressure compressor supplied by MTU. Another way in which MTU is making a contribution is by developing original repair techniques that extend the service life of valuable engine parts. And MTU is also making a contribution by backing and striving to retain its workforce and implementing resource-efficient, environmentally-friendly production methods at its manufacturing locations.

In our first sustainability report, we will be looking at MTU's German locations, which make up around 90 percent of the company in terms of its workforce. The report refers to our production sites, i.e. to what goes on inside the grounds of the production plants and which we have direct influence over. With our products and constant improvements in the value-added chain, however, our business extends well beyond these perimeters.

We hope you find this report interesting and informative.



Egon Behle
Chief Executive Officer



Reiner Winkler
Chief Financial Officer and Director
of Labor Relations



Dr. Rainer Martens
Chief Operating Officer and
Environmental Protection Officer



Dr. Stefan Weingartner
President Commercial Maintenance

Reporting principles

Sustainability Report 2011 by MTU Aero Engines

This Sustainability Report 2011 is the first report by MTU Aero Engines that is devoted to explaining MTU's corporate responsibility strategy and its implementation in the company. It supplements the company's existing reports, such as its annual report, human resources report and the environmental impact statements for individual locations. The sustainability report is to appear regularly in future. We based the structure of this first edition on the MTU Principles, which supply important information on all areas of our corporate responsibility activities.

In compliance with GRI

The Sustainability Report 2011 was drawn up in compliance with the Global Reporting Initiative guidelines (GRI G3.1). The structure of chapters and key figures is based on the GRI guidelines. For the first report, we concentrated on selected key indicators from all areas that illustrate the main activities of MTU in the sphere of sustainability. The report satisfies the requirements for Application Level B.

Scope of validity

The reporting period is the 2011 calendar year (January 1 through December 31, 2011). For reasons of completeness or of comprehension, sometimes activities from the previous year are also cited and explained. The first report covers MTU's German locations, as they make up the bulk of the company (e.g. they accounted for around 86 percent of the total workforce in 2011). The three German locations are MTU Aero Engines headquarters in Munich, MTU Maintenance Hannover in Langenhagen, and MTU Maintenance Berlin-Brandenburg in Ludwigsfelde near Berlin. In future, the scope of reporting is to be expanded in stages. Other subsidiaries and joint ventures are based abroad and are therefore not the object of the report.



MTU Aero Engines headquarters in Munich.

Data collection and calculation methods

All data and information was ascertained by the responsible departments using representative methods for the reporting period. Environmental key figures were collected on a decentralized basis via the environmental management systems at the individual locations and then consolidated centrally according to agreed criteria. The HR key figures were collected and evaluated centrally at the company headquarters in Munich using an electronic HR management system. All other data was requested from the responsible individuals in the relevant departments and compiled centrally.

External validation of the report

CR reporting is not currently subject to external auditing or validation. The majority of corporate processes that form the basis of data collection for CR reporting are certified. An overview of the certifications possessed by MTU Aero Engines is published online:

<http://www.mtu.de/en/company/quality/certification/index.html>

Further information

The report cannot detail all MTU's sustainability-related activities. You can find supplementary information and more detailed analyses online:

<http://www.mtu.de/en/company/sustainability/index.html>

http://www.mtu.de/en/technologies/future_technologies/index.html

http://www.mtu.de/en/career/career_at_mtu/index.html

Forward-looking statements

This report contains forward-looking statements. These statements reflect the current understanding, expectations and assumptions of MTU Aero Engines and are based on the information available to management at the present time.

Forward-looking statements provide no guarantee that certain results and developments will actually occur in future, and they are associated with risk and uncertainty. Consequently, the actual future results of MTU Aero Engines and developments concerning MTU Aero Engines may deviate substantially from the expectations and assumptions expressed here due to a variety of factors. MTU Aero Engines assumes no obligation to update the statements contained in this communication.



The main building at MTU Maintenance Hannover.



Administration building at MTU Maintenance Berlin-Brandenburg.

Company profile

MTU Aero Engines

MTU Aero Engines is Germany's leading aero engine manufacturer and, in terms of revenue, one of the main global players in the industry. The company develops, manufactures and sells commercial and military engine modules and components, which are used in airplanes, helicopters and stationary industrial gas turbines. The second major area of business for MTU is the maintenance of commercial engines, where the company is the largest independent service provider in the world in terms of revenue.

All thrust and power classes are represented in MTU's commercial aviation products. Its commercial product range stretches all the way from widebody aircraft like the new Airbus A380 or the Boeing 747 to large passenger aircraft like the Airbus A320 family to short-haul aircraft and business jets. In the military sector, MTU is a key player on the national stage as lead industrial partner to the German armed forces for almost all aero engines. In addition, the company contributes important components and systems to all major European military programs, including the engines for the Tornado, the Eurofighter/Typhoon and the A400M military transport aircraft.

MTU's cutting-edge technologies make the company a pacesetter for the entire aviation industry: low-pressure turbines and high-pressure compressors bearing the "made by MTU" stamp are amongst the most technologically advanced in their class. MTU plays a significant role in a range of important European technology programs. On the international stage, the German industry leader cooperates with all the major engine manufacturers in the world and has gained a reputation as an indispensable partner.

Together with its subsidiaries, MTU Aero Engines is represented in all major markets and regions across the globe. The company's headquarters and largest location is Munich.

The largest plant for maintenance is MTU Maintenance Hannover, which looks after mid-sized and large commercial engines as well as providing services such as customer training and a 24-hour service. MTU Maintenance Berlin-Brandenburg, on the other hand, is specialized in small engines and industrial gas turbines.

In the fast-growing Asian market, MTU has teamed up with joint venture partners in two different countries: MTU Maintenance



Zhuhai is a joint venture with China Southern Airlines, the country's largest airline. Airfoil Services in Malaysia is a joint venture with Lufthansa Technik and repairs low-pressure turbine blades and high-pressure compressor blades.

MTU has three affiliates in North America, the world's biggest engine market: MTU Aero Engines North America in Rocky Hill, Connecticut develops components, modules, and maintenance techniques. MTU

Maintenance Canada operates from the west coast of Canada. And MTU's third American subsidiary, Vericor Power Systems, markets, sells and maintains marine and industrial gas turbines from its base in Atlanta, Georgia.

MTU Aero Engines Polska is MTU's youngest subsidiary. Workers at its location in Rzeszów in southeast Poland have been busy developing, manufacturing and repairing engine parts since April 2009.



Facts and key figures at a glance (Valid as of December 31, 2011)

Legal form and ownership structure	MTU Aero Engines Holding AG Stock corporation (Aktiengesellschaft, AG) organized under German law The company is listed in the MDAX stock index. As of December 31, 2011, MTU held 6.1 percent treasury stock. Consequently, the free float (as defined by the German Stock Exchange) accounted for 93.9 % of MTU shareholdings. Institutional investors held about 87 % of the shares, while some 7 % were held by retail investors. All voting right notifications as required under §25 Para. 1 German Securities Trading Act (WpHG) are available at: http://www.mtu.de/de/investorrelations/mtu_share/shareholder_structure
Headquarters	Munich/Germany
Board of Management	Egon W. Behle (Chief Executive Officer) Reiner Winkler (Chief Financial Officer and Director of Labor Relations) Dr. Rainer Martens (Chief Operating Officer) Dr. Stefan Weingartner (President Commercial Maintenance)
Supervisory Board	The Supervisory Board consists of six shareholder representatives and six employee representatives presided over by Klaus Eberhardt. The Supervisory Board oversees the work of the Board of Management and provides advisory support.
Employees	8,202
Revenue	EUR 2,932.1 million
Total assets	EUR 3,738.6 million
Equity	EUR 906,1 million



MTU Principles



Values, priorities and corporate culture

Any company that wants long-term, sustainable success needs a strategy with a realizable vision and clear goals. Such a strategy forms the basis for the company's activities—for every employee, every day. Yet it is not only the destination that is important but the journey there, i.e. how the goals are achieved. And it is equally important that everyone should be aware of and have internalized the company's strategy and priorities—every last man and woman of MTU's roughly 8,000 employees worldwide. In light of this importance, MTU drew up Principles that would be binding throughout the company in 2009. The Principles convey the values that characterize the company, while also making clear what it stands for as an

employer, client, contractor, taxpayer and corporate citizen and what behaviour it expects from its employees. They govern the company's business dealings and its interactions with society at large. They provide guidance for everyone—employees, managers and the Board of Management alike. They create a universal corporate culture that is characterized by responsibility, a spirit of open and trustful cooperation, mutual respect and appreciation, diversity, and fairness.

The MTU Principles are not fixed and unchanging. Just as MTU is constantly developing, adapting to new economic and environmental requirements, and seeking out challenges in its competitive environment, all in order to be best prepared for the future, so too must the Principles change

and adapt. And MTU did precisely this when it expanded, updated and thoroughly revised the Principles. "Working to shape the future of aviation" is the common vision behind the Principles. Thanks to its innovative, eco-efficient and reliable products, MTU is a technological leader and driving force in the aviation industry. So that MTU continues to stand for unmatched high-tech excellence, we are constantly improving and striving to find the best solutions and brightest talents.

The Principles are divided into five pillars:

- Products, Technology and Growth
- Cooperation and Conduct
- Staff and Management
- Partners, Customers and Shareholders
- Environment and Society



For the purpose of communicating the Principles within the company, a drawing was commissioned. We have also used this drawing to illustrate our first sustainability report. The drawing depicts MTU's locations, products, technologies, services, customers, partners and employees. It shows the world of MTU in all its variety and color. The wealth of detail in the picture reflects the diversity of MTU.

Every year we hone in on a specific aspect of the Principles and make it our priority. We then vigorously pursue this goal and implement it throughout the company. For 2011, the focus was on a no-blame culture. Under the "Staff and Management" heading, the Principles have the following to say on the subject of a no-blame culture: "We capitalize on opportunities, assess risks and

deal constructively with mistakes made. Straight-forward feedback is the basis of success achieved in a concerted effort." Every mistake, every error should be identified and reported in the place where it occurred. After all, when the cause of an error is known, then measures can be developed and introduced to correct it and make sure it does not recur in the future. To err is human, but to conceal errors is to harm the company. The no-blame culture elaborated in this way was additionally enshrined in the corporate goals for 2011.

Managers and employees progressively attended comprehensive training courses—in Production first and then in Administration as well. These courses are important because the new concept will only be successful over the long term if everyone in posi-

tions of authority are right behind it and all employees throughout the company practise it. The new no-blame culture has subsequently been extended into other parts of the company and integrated into MTU's training concept for the German locations. Only in an open, understanding environment characterized by mutual trust is it possible to consistently identify and analyze errors, learn from them and avoid them in future.

The five guiding principles for MTU Aero Engines

Partners, Customers and Shareholders

Guiding principle:
MTU creates enduring values for partners, customers and shareholders.

Environment and Society

Guiding principle:
MTU takes its responsibility for the environment and society seriously.

Staff and Management

Guiding principle:
We collectively contribute to the company's bottom line.

Selected GRI indicators:

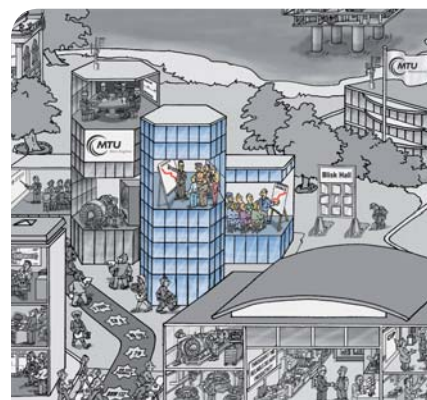
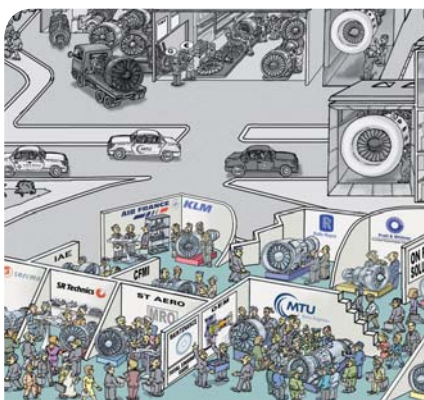
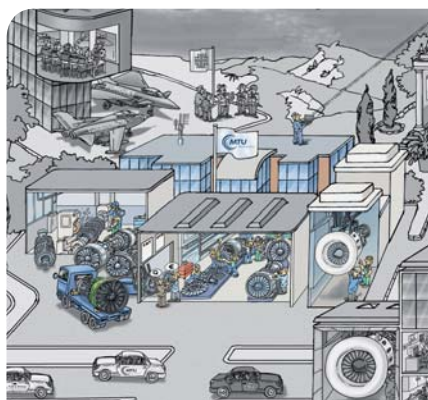
- EC 1:** Direct economic value generated and distributed
- EC 2:** Financial implications of climate change
- EC 7:** Local hiring and proportion of senior management hired from the local community

Selected GRI indicators:

- EN 3:** Direct energy consumption by primary energy source
- EN 4:** Indirect energy consumption by primary source.
- EN 5:** Energy saved due to conservation and efficiency improvements.
- EN 8:** Total water withdrawal by source
- EN 21:** Total water discharge by quality and destination
- EN 22:** Total weight of waste by type and disposal method
- EN 26:** Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation
- SO 9:** Operations with significant potential or actual negative impacts on local communities
- SO 10:** Prevention and mitigation measures implemented

Selected GRI indicators:

- LA 1:** Total workforce by employment type, employment contract, and region
- LA 7:** Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities
- LA 8:** Education, training, counseling, prevention, and risk-control programs in relation to serious diseases
- LA 13:** Diversity of employees and governing bodies



Cooperation and Conduct

Guiding principle:
Our conduct bases on performance
and mutual appreciation.

Products, Technology and Growth

Guiding principle:
MTU grows profitably through the devel-
opment, manufacture and maintenance
of commercial and military engines.

Selected GRI indicators:

HR 4: Total number of incidents of
discrimination and corrective
actions taken

SO 2: Business units analyzed for risks
related to corruption

Selected GRI indicators:

PR 1: Life cycle stages in which health
and safety impacts of products and
services are assessed for improve-
ment

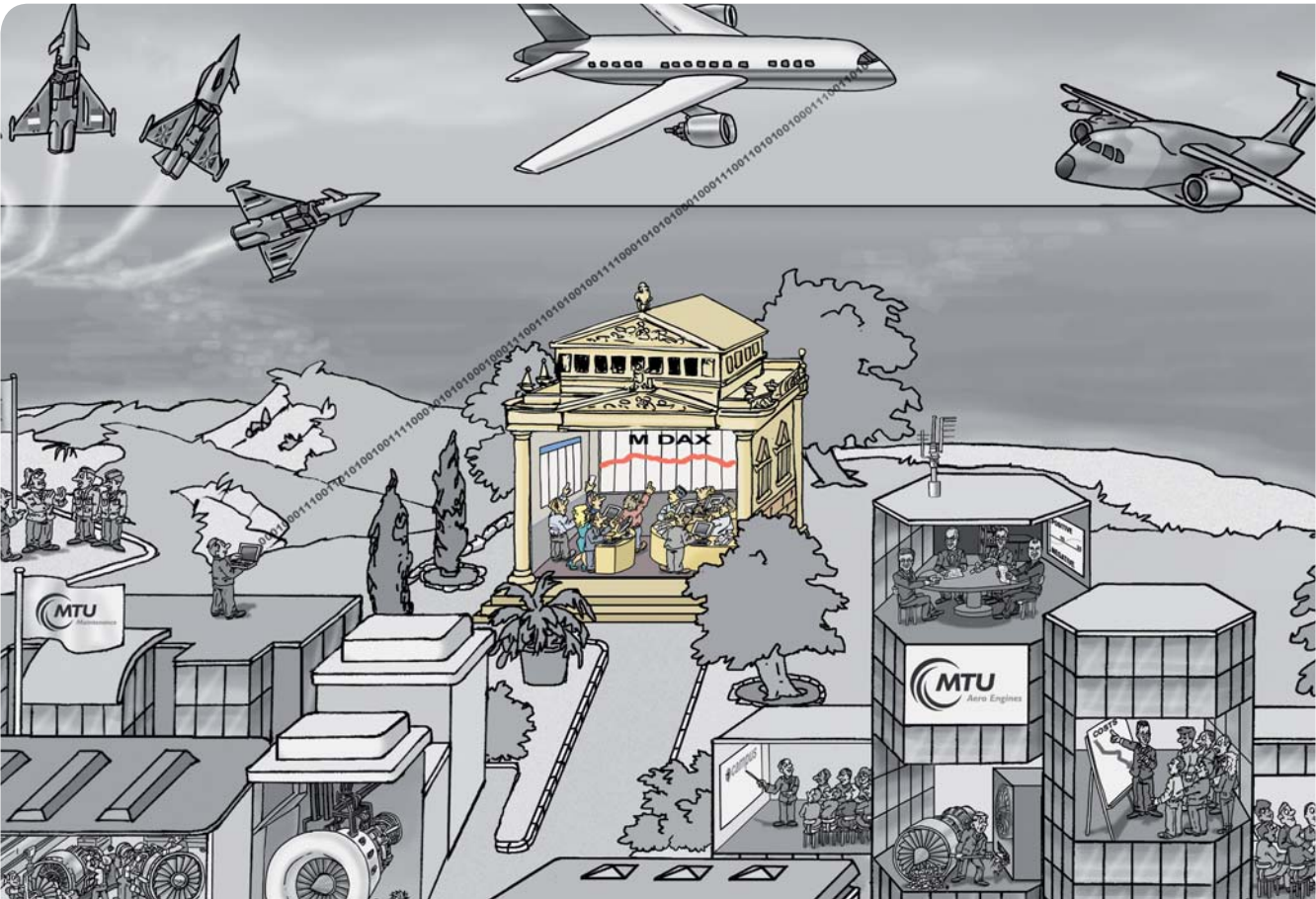
PR 3: Product and service information
required by procedures

PR 9: Significant fines for non-compliance
with laws and regulations con-
cerning the provision and use of
products and services



Sustainable strategy

Guiding principle:
MTU creates enduring values for partners, customers and shareholders.



Our approach

The idea that guides MTU’s actions like no other is sustainability—and this determines how we deal with customers, partners and the capital market. Engine programs can have a lifespan of several decades. Take the CF6, for example, the legendary engine that powers aircraft such as the Boeing 747 and the first commercial engine that MTU was involved in: it was manufactured for the first time in 1968 and is still in service today. The latest 747 version uses the mo-

dern CF6 successor GEnx—again with MTU involvement. MTU is currently involved in no fewer than eight new development programs and is working with national and international partners in technology projects for more economical engines that produce fewer emissions. MTU shareholders have confidence in this strategy and are seeing the benefits: from the company’s flotation in 2005 to the end of 2011, the value of its shares approximately tripled.

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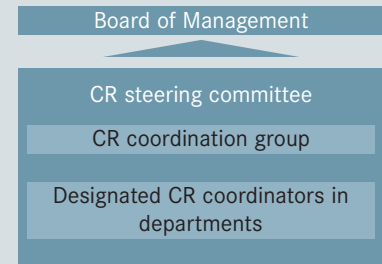
Sustainable business, sustainable strategy

Like all engine manufacturers, MTU operates in a market that is geared toward the long term. Getting involved as a partner in international engine programs requires big upfront outlays in development costs and capital expenditure, which only begin to pay off several years down the line. At the same time, it is MTU's goal to generate regular revenues and attractive returns on investment. A comparison of our value added statements for the years 2009 to 2011 reveals a steady increase in net value added, i.e. the earnings from the company's business activities. A good tenth of income is retained in the company to finance future programs and interests; only a little over two percent has to be given to creditors. The lion's share of almost 70 percent goes to the company's employees.

MTU considers it a significant part of its responsibility toward the capital and other resources it has been entrusted with that it conduct its business in a conservative and safety-oriented manner. Accordingly, this circumspection forms part of its sustainability strategy.

In accordance with the fundamental importance of corporate responsibility (CR) for MTU, the Board of Management determines the sustainability strategy. The chief executive officer bears overall responsibility for CR. Implementation is the responsibility of the CR steering committee, which reports directly to the Board of Management. The

MTU's CR management system



All relevant CR data and information is compiled by the designated CR coordinators and sent to the CR coordination group. An integrated database for collecting, verifying and evaluating key figures and information is currently under development. The goal is to professionalize CR work and improve the monitoring of sustainability performance.

steering committee is composed of the CR coordination group, which consists of the Senior Vice President, Corporate Communications and the CR Coordinator, along with the designated CR coordinators for the various departments (environment, occupational safety, human resources, procurement, quality, technology management, etc). Environmental protection and occupational safety is the responsibility of the Chief Operating Officer; responsibility for employees resides with the Chief Financial Officer and Director of Labor Relations.



"In the financial year 2011, we again had no trouble meeting the requirements of the markets with appropriate MTU products and services. The prime example is the Geared Turbofan™ engine, which we are developing together with our partner Pratt & Whitney. This innovative technology will make a substantial contribution toward reducing fuel consumption, carbon dioxide emissions and noise emissions. Even before the first engine of the PurePower™ PW1000G Geared Turbofan goes into series production, firm orders and options have been placed for over 2,000 units."

Egon Behle
MTU Chief Executive Officer

¹ Geared Turbofan is a trademark application of Pratt & Whitney



Risks and opportunities

To achieve success over the long term and remain competitive in the market, MTU regularly analyzes and evaluates the risks and opportunities arising from its business activities. This work is based on an integrated opportunity and risk management system, which is firmly established throughout MTU and forms part of our value creation strategy. This system ensures that legal requirements are observed, and it is designed around the COSO II framework, the leading international standard for enterprise risk management. Our systematic engagement with the principal risk categories means that we know the risks we face, we are aware of their possible consequences, and we are able to manage them accordingly. We know our strengths and weaknesses and the opportunities that arise from them.

Successful risk management is only possible when a suitable control environment is in place. We therefore consider the following to be of critical importance:

- Management style and philosophy
- Integrity and ethical values
- Staff training and development

Under the "Cooperation and Conduct" heading, the MTU Principles formulate the company's aspiration to see a no-blame culture take root. Implementing a no-blame culture was singled out as the priority objective from the Principles for 2011. The goal of continuous improvement is supported by the company's CIP (Continuous Improvement Program), which aims to encourage employees to deal openly with weak points and create a culture that provides the basis for successful risk management. 2011 also saw MTU subject its risk management system to a benchmark analysis with comparable companies, which showed that MTU's system had already attained a high level.

Amongst the risk factors identified by MTU are key CR areas such as product responsibility, the environment and compliance. MTU is conscious of its responsibility toward the environment and deals with the resulting risks. The company is subject to numerous environmental laws and regulations. Any tightening of the applicable environmental requirements in connection with the use of chemicals in manufacturing and test rig emissions may give rise to additional investment costs. MTU requires special certification for certain production facilities, and the associated regulations and documentation obligations must be strictly observed. An environmental management system certified to DIN EN ISO 14001 minimizes the risks in this regard.

Climate protection as an opportunity

We are countering the risks of the aviation industry with a long-term business model, a balanced product mix with investments in different market segments and thrust classes, and a technological edge over the competition. Furthermore, MTU regularly analyzes the opportunities and risks presented by climate change, for instance through its participation in the German Aerospace Industries Association (BDLI) workshop "Long-term outlook for the German aerospace industry". The risks for MTU reside primarily in air transport restrictions due to a high environmental impact. On the other hand, the tightening of environmental regulations for aviation presents opportunities for MTU and its products, which help to reduce emissions, fuel consumption and noise. We see sustainability as an important driver of innovation in our market. With the Geared Turbofan™, a brand new engine technology, we are making a long-term commitment to eco-efficient engines. High investment in research and development and strategic collaborations with leading scientific institutions with the same technical focus form the basis for our technological endeavors to bring about an environmentally sustainable and resource-conserving aviation of the future.



At a glance

Cultural diversity
at German locations in 2011:
Proportion of employees who
are not German: 6 percent
Proportion of management who
are not German: 6.7 percent

Rooted diversity

MTU also pursues a policy of sustainability in its human resources management. A total of 226 apprentices were employed at MTU's German locations in 2011. This corresponds to an apprenticeship quota of 4.5 percent. All graduates are offered a permanent employment contract. MTU also supports budding scientists through its cooperation with several universities and institutes—such as the Technische Universität München, the Technische Universität Braunschweig and the Technical University of Applied Sciences Wildau—many of which are close to MTU's German locations.

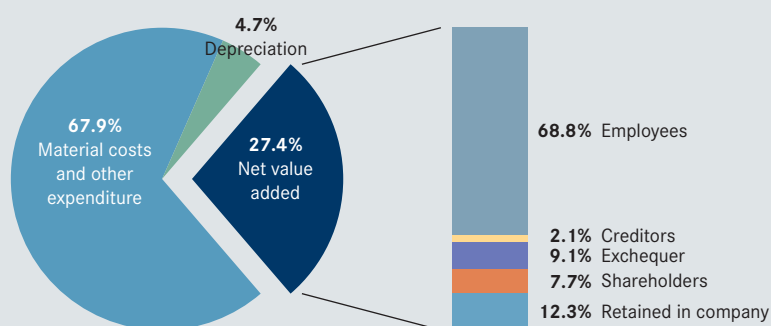
MTU has no coordinated policy that favors the hiring of local people. We believe that people with a diversity of backgrounds and experience are important for our success. However, our promotion of apprenticeships is a mark of our commitment to creating and maintaining jobs at the locations.

Furthermore, MTU is involved in a variety of initiatives aimed at awakening a passion for technology in children and teenagers and steering them towards technical careers. For example, the company has been participating in the Germany-wide Girls' Day initiative for over ten years, it has organized Nature and Technology Days and educational info stands at partnering schools in the vicinity of the locations, and it has taken part in the "Ideen-Expo" science exhibition in Hannover, which is designed to get young people interested in technical careers, and in the "Forscherinnen-Camp" science camp for women researchers promoted by the Bavarian State Ministry of Education and Culture.

Financial indicators/Value added statement 2011 (in EUR million)

Comparison	2011		2010		2009	
Net value added	792.8	27.4%	786.1	29.4%	739.2	28.4%
Material costs and other expenditure	1.962.7	67.9%	1.759.3	65.7%	1.731.5	66.3%
Depreciation	135.4	4.7%	130.9	4.9%	126.4	4.8%
Other expenditure	0.0	0.0%	0.0	0.0%	13.6	0.5%
	2.890.0	100.0%	2.676.3	100.0%	2.610.7	100.0%
Employees	545.6	68.8%	539.0	68.6%	516	69.8%
Creditors	16.4	2.1%	19.9	2.5%	15.7	2.1%
Exchequer	72.6	9.1%	85.0	10.8%	66.5	9.0%
Shareholders	60.8	7.7%	53.6	6.8%	45.5	6.2%
Retained in company	97.4	12.3%	88.8	11.3%	95.5	12.9%
	792.8	100.0%	786.1	100.0%	739.2	100.0%

Value added in 2011 expressed as a percentage



Environment and Society

Guiding principle:
MTU takes its responsibility for the environment and society seriously.



Our approach

We attach great importance to protecting the environment, making it a cornerstone of the MTU philosophy. It is addressed in both the MTU Principles and the corporate goals. We operate a policy of active and comprehensive environmental protection in order to preserve the common basis for our existence—both locally and globally—and also out of a sense of responsibility toward current and future generations and as the foundation of our business activity in the future. We create aviation products that consume less fuel, produce less noise and emit less toxic emissions. Our long-term goal in technology development is for every new engine to be more fuel efficient—i.e.

economical—and quieter and to produce less toxic emissions than the model that went before it. We have a resource-conserving approach to energy and raw and intermediate materials. When manufacturing and repairing our products, we keep pollution from emissions and toxic substances as low as possible. Our disposal concept is based on the principle of avoiding waste in the first place, but when it does arise, utilizing the materials or energy it contains. This has resulted in MTU achieving a consistently high recycling rate of over 84% at our German locations (Munich: 88.9%, Hannover: 87.1%, Berlin: 78.0%).

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Environmental management that bears a seal of approval

At MTU we see environmental protection as a management task. The Board of Management regularly monitors and evaluates the goals and progress. At the same time, we expect our managers and employees to act in an environmentally conscious manner and promote such behavior. At an operational level, MTU implements environmental protection through management systems. All three German locations are certified to ISO 14001: 2004. The Hannover and Munich locations are additionally registered in accordance with Regulation (EC) No. 1221/2009 (EMAS III). The management systems are there to ensure that environmental protection is implemented in MTU so as to satisfy all applicable legislation. Independent external auditors and environmental consultants regularly check that the relevant environmental protection requirements are being observed. Internal inspections and audits supplement this monitoring. The internal standards derived from laws, regulations, permits, and other legal requirements are binding for the German MTU locations and sometimes go beyond the legal requirements. Our strict environmental protection criteria apply to all areas of the company and all processes and procedures from the development all the way to the manufacture and repair of an engine. This ensures that environmental protection is coordinated, transparent and consistent, with universally high standards throughout the company.



"In our efforts to make the company ever more sustainable, we go beyond merely observing and implementing environmental regulations. Convinced as we are that committed environmental management also contributes to the economic success of our company, management has been promoting and calling for location-specific environmental protection measures for many years now."

Dr. Rainer Martens,
Chief Operating Officer and
Environmental Protection Officer
at MTU Aero Engines

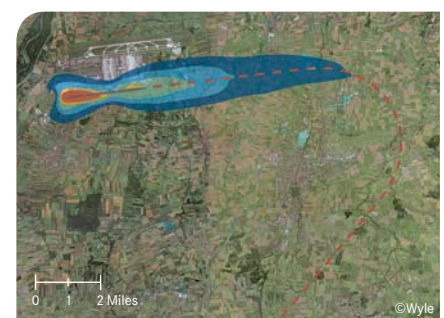
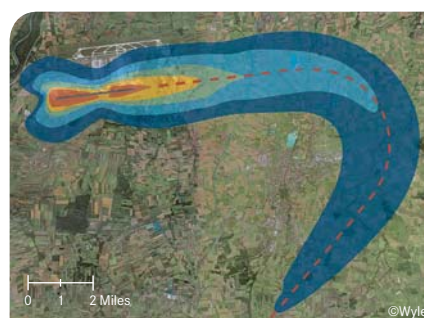
to be upward. The increasing mobility of ever wider sections of the population is resulting in rising passenger numbers, including in air transport. Travelling by airplane is becoming increasingly popular around the globe. Experts anticipate a growth in passenger volume of four to five percent a year. Whereas 2.7 billion passengers worldwide flew by airplane in 2011, this figure is estimated to rise by 40 percent to 3.7 billion passengers by 2020. This will entail a corresponding rise in the global fleet of commercial aircraft—from 19,800 airplanes in 2011 to 27,700 in 2020. Flying must become more sustainable in both ecological and economic terms over the long term in order to conserve resources and reduce its impact on climate change despite increasing air traffic.

The European aviation industry has therefore signed up to attaining concrete objectives under ACARE 2020 (targets of the Advisory Council for Aeronautical Research in Europe), a challenge MTU has also taken on: the targets to be achieved by 2020 are for airplanes to consume 50 percent less fuel, emit 50 percent less CO₂ and 80 percent less NO_x, and to reduce perceived noise by 50 percent. The bulk of this challenge falls on the engine. The targets for the next generation of engines are as follows: CO₂ emissions are to fall by 20 percent, NO_x by 80 percent and noise by 50 percent. In addition to ACARE 2020, the International Air Transport Association (IATA) has also set the ambitious targets of achieving carbon neutral growth for air transport from 2020 and halving carbon emissions from aviation by 2050 compared to 2005 levels. And the European Council has set the bar even higher with its new Flightpath 2050 program, with targets of reducing aircraft CO₂ emissions by 75 percent, NO_x emissions by 90 percent and noise by 65 percent by 2050.

Sustainable growth: challenges for aviation

Aviation has been an impressive success story: over the past few decades, the airplane has become a means of mass transportation. And the growth trend continues

Significant reduction in 75 decibel noise footprint with Geared Turbofan™ engines (Munich Airport)



Current aircraft
SEL footprint (dB)
75 80 85 90 95
— Runway — Flight path

Next generation with geared turbofan engines

MTU delivers a boost to sustainable aviation

Modern turbofan engines function according to the principle of combustion engines and therefore emit pollutants, primarily nitric oxide (NO_x). In addition, the combustion process results in the production of carbon dioxide (CO₂) and water. The climate effect of airplanes consists largely in CO₂ emissions and the formation of vapor trails and cirrus clouds in the air. The impact of vapor trails and cirrus clouds on climate has not yet been sufficiently clarified by scientific research. In any case, it is possible to prevent them forming by means of flight path selection or flying lower. Flight noise is caused primarily by jet noise and the engine fan. During the landing approach, the turbines and the airframe—particularly the landing gear and flaps—also contribute to the total noise. As an illustration of the progress that has been made, the flight noise on take-off has gone down by 75 percent since the 1960s. The aircraft from back then just about meet the ICAO noise class 2 requirements. The current generation of airplanes meets the strictest class 4 requirements—even the giant Airbus A380 with its four GP7000 engines.

An aircraft's pollutant emissions are dependent on the quality of combustion and engine efficiency. If an engine is more economical during flight, not only does it have a better energy footprint, it emits less toxic emissions too. Since the dawn of the jet age in early 1960, the efficiency of aircraft engines (measured by specific consumption, i.e. fuel consumption in relation to thrust) has been improved by 50 percent.

MTU's components have made a significant contribution to this progress. Engines with MTU involvement have always been in the top bracket as regards specific fuel consumption. Through its core areas of expertise in low-pressure turbines and high-pressure compressors, MTU is continuously driving forward technological advances in aircraft engines. MTU's efforts here are focused on achieving higher pressure ratios, greater component efficiency and lighter designs. For the future, MTU is targeting efficiency levels well above 90 percent for high-pressure compressors and even higher than 93 percent for low-pressure turbines.

Highlight

A380 with GP7000

At the start of the 1990s, average fuel consumption per 100 passenger kilometers was approximately 6 liters. A380 already manages 2.9 liters. And MTU's contribution is significant here, as it supplies the low-pressure turbine for the GP7000 engine—the first low-pressure turbine with an efficiency level in excess of 93 percent.

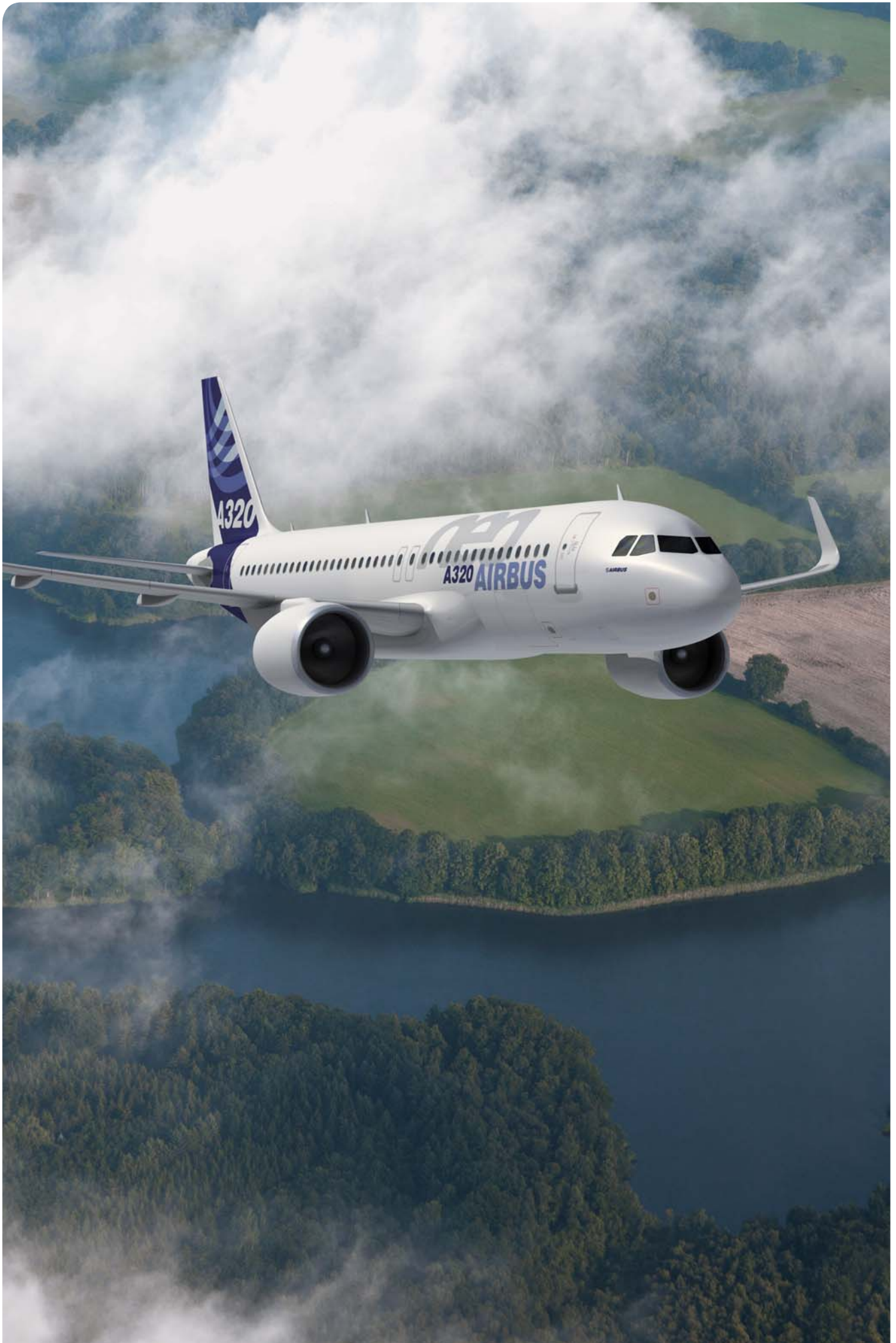


Highlight

Boeing B787 Dreamliner with GENx

Compared to its predecessor, the GENx engine for the new B787 Dreamliner is designed to consume 15 percent less fuel and emit 15 percent less CO₂, as well as being half the weight. MTU develops and manufactures the turbine center frame, a major structural component of the engine. State-of-the-art materials and manufacturing processes have resulted in an especially lightweight component.





The Geared Turbofan™: eco-efficient engine on the path to success

MTU plays a major role in developing and launching new engine concepts. The Geared Turbofan (GTF) engine, which MTU is developing in cooperation with partners, is based on completely new engine architecture and forms the basis for attaining the ambitious goals MTU has set itself with the Clean Air Engine (Claire) technology program. The star feature of the GTF engine is that in contrast to conventional turbofans, where the fan and the low-pressure turbine run on one shaft at the same speed, in the geared turbofan these components are decoupled by virtue of a gearbox fitted between them. This allows the large fan to be operated at a slower speed and the low-pressure turbine at a faster speed. This improves the efficiency of the fan and the low-pressure turbine, reduces the noise level and permits up to 50 percent fewer stages in the turbine, which makes for a lighter engine and leaner, lower-cost maintenance. One of the components for which MTU is responsible is the crucial high-speed low-pressure turbine. The Geared Turbofan engine will enable clear reductions in CO₂ emissions and noise. Compared to today's turbofan the geared turbofan engine consumes 15 percent less fuel and emits around 15 percent less CO₂ and 55 percent less NO_x. Furthermore, it is only half as loud. All of this makes it a quantum leap forward in engine development.

The first generation of Geared Turbofan engines, the PW1000G, is currently at the flight and ground testing stage. In June 2011, the program reached an important milestone on the road to series production: the PW1524G, the version for the new



medium-haul aircraft from the Bombardier CSeries, successfully completed its first flight in the flying testbed of a specially modified Boeing 747. The PW1000G has been chosen as the engine for a variety of aircraft types in addition to the CSeries, such as the Mitsubishi Regional Jet, the Irkut MS21 and, last but certainly not least, the A320neo from Airbus. The new engine has been thoroughly successful on the market and in demand from airlines: by the end of 2011, a total of around 2,000 orders had been placed for the the PW1000G engines (including options and replacement engines).

The first engine from the new Geared Turbofan engine family is due to enter regular flight operations from 2014. Important tests for obtaining the requisite certifications (endurance test, stress test, spin tests and load tests) are taking place on MTU's test rigs in Munich from 2011 to 2014. In 2011, MTU increased its interest in the PW1000G program. The company's investment in Geared Turbofan technology shows its commitment to eco-efficient flying.

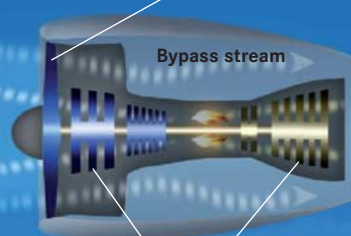
Highlight

A320neo with PW1000G Geared Turbofan™ engines

An A320neo aircraft with PW1000G engines will produce around 3,300 metric tons less CO₂ a year than a conventionally powered A320 model. That is equivalent to the amount emitted by 1,100 compact cars.

Conventional turbofan engine

Fan throttles rotational speed from low-pressure compressor and turbine

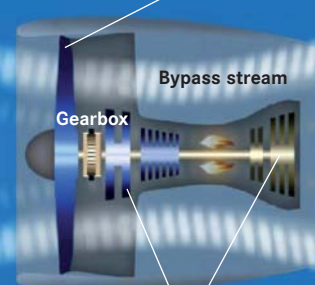


Low-pressure compressor and turbine rotate at unfavorably low speed

Gradual improvement

PurePower™ Geared Turbofan engine

Optimized low-speed fan



Optimized low-pressure compressor and turbine

Rapid improvement

Fuel

Maintenance

Noise

Clean Air Engine technology program: cleaner, quieter and more efficient

MTU has gathered together its research and development activities for sustainable aviation under an umbrella technology program called Clean Air Engine (Claire) and linked them to specific goals to be accomplished in three stages by 2035: namely, 15, 20 and 30 percent less CO₂ emissions for the engines of passenger aircraft. The ACARE goals stipulate that engines must emit 20 percent less CO₂ by 2020.



The first step has already been taken: with the Geared Turbofan™ engine, in which MTU plays a central role, a groundbreaking technology for eco-efficient flying is available on the market. MTU engineers are already at work refining and improving this engine. The second step of Claire will see the engine receive a more advanced type of fan in order to obtain greater propulsion efficiency. The third generation of engines is to be even more fuel-efficient and produce even lower emissions. This is to be achieved by means of an improved core engine with greater thermal efficiency, for example by using a heat exchanger that takes the thermal energy from the exhaust jet and makes it usable in the engine.

Researching the aviation of tomorrow

MTU is also involved as an engine expert in various initiatives and research programs aimed at contributing towards environmentally friendly and resource-conserving air transport. In the framework of the German Aerospace Industries Association (BDLI), of which MTU is a member, the company initiated the “Eco-Efficient Flying” beacon program, which set itself the goal of establishing the general conditions required to achieve largely emissions-neutral flying by 2050. With the project, MTU is also supporting the goals of the International Air Transport Association (IATA) for growth in air transport to be achieved without additional CO₂ emissions from 2020 and for the CO₂ emissions from aviation to be halved by 2050 compared to 2005 levels. Achieving these targets requires not only more efficient engines but also a switch to renewable and emissions-neutral fuels. In light of this reality, in 2011 MTU teamed up with 20 other aviation companies, bio-energy producers and universities and research institutes to found the Aviation Initiative for Renewable Energy in Germany (aireg e.V.), whose purpose is to promote the introduction of alternative fuels, instigate the necessary technology programmes and function as an information platform for politics and society at large.

In addition, MTU is involved in the Future Aircraft Research (FAIR) project of the German Federal Ministry of Economics and Technology, in the framework of which Lufthansa trialled the use of biofuel in regular flight operations for the first time on its Hamburg-Frankfurt route from July to December 2011. The six-month long-term test was the world's first to research the

Highlight

Protecting the environment as well as the component

Our future products will contribute to reducing environmental pollution as a result of our determination to avoid using environmentally hazardous materials in components, joints and coatings. In 2011, we completed the development of an environmentally friendly anti-corrosion paint which does not contain the hazardous substance known as hexavalent chromium (chromium VI).

Highlight

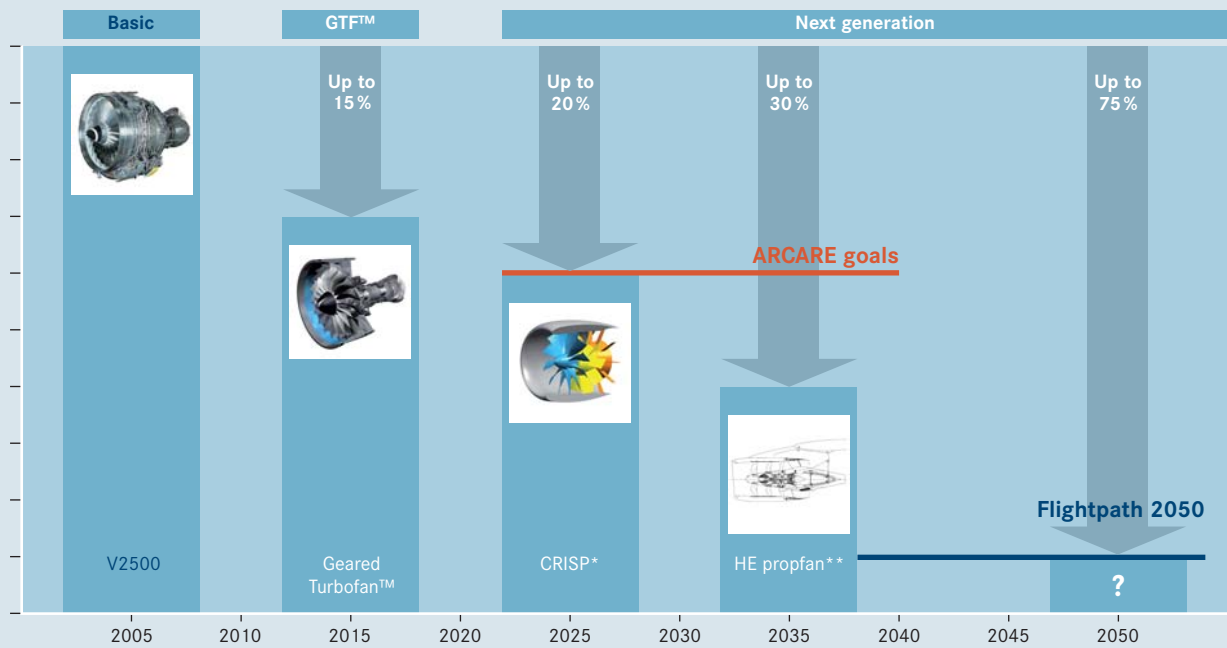
EU research programs

MTU has repeatedly played a major role in European Union research programs. In 2011, it was participating in the following programs:

- Clean Sky
- Lemcotec
- Dream
- NEWAC



Planned reduction in CO₂ emissions through the Claire technology program from MTU Aero Engines



* Counter-Rotating Integrated Shrouded Propfan
 ** Heat exchanger propfan

use of biofuel for a scheduled airline service. MTU monitored and analyzed engine behavior in flight using a special monitoring system developed in-house. Moreover, MTU commissioned the Bauhaus Luftfahrt research institute to carry out studies on alternative fuels. This internationally oriented think tank is a joint undertaking of MTU, EADS, Liebherr Aerospace, IABG and the Free State of Bavaria. It develops innovative solutions and approaches for the air transport systems of the future. MTU also con-

tributes its engine expertise as a reliable partner in numerous EU technology programs, such as the SolarJet project launched in 2011 which aims to produce synthetic aviation fuel from CO₂, water and solar energy without diverting farmland from food production.



Climate protection in production and maintenance

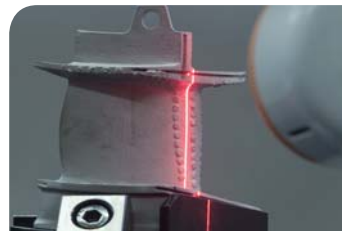
The emphasis we place on environmental protection at MTU is not limited to product development. Production and maintenance processes also have to meet very rigorous environmental requirements. We achieve this by means of comprehensive energy management at the German locations, which helps to conserve resources and save material. At MTU's headquarters in Munich, for example, the Clean Air – Industrial Site (CLAIR-IS) program is a framework for realizing this goal.

The long-term goal is to reduce CO₂ emissions at the Munich location by more than 30 percent by 2020 (compared to 1990 levels) irrespective of continuously rising production rates. The principal methods by means of which this goal is being realized are the increased use of well water for cooling purposes in our production processes, renovation of the heating network, the use of a building control system, and the utilization of fuels from renewable sources in our cogeneration plant. Cooling with well water is very energy-efficient, as using groundwater—which could otherwise not be used as drinking water—for cooling means there is no need to construct and run electricity-operated cooling systems to do the work. That saves around 3,000 tons of CO₂ annually. By expanding the building control system we have already achieved savings of approx. 71,000 tons of CO₂. At the same time, these measures are set to reduce electricity consumption by 25% (based on



turnover in the period from 2010 to 2020). The cogeneration plant at the Munich location, which generates heat and power, runs on vegetable oil.

In the area of engine repair at MTU Aero Engines in Munich and at MTU Maintenance in Hannover and Ludwigsfelde, the company achieves repair depths that are unequalled anywhere in the world through the development of innovative repair methods and technologies. This gives around 70 percent of all engine blades a second, third or even fourth life. Repairing a component means conserving the resources needed to make a new one, easing the pressure on the environment. MTU is investing heavily in expanding the use of these repair methods while constantly adding to the range of methods by developing new solutions in-house. As a result it is now possible to repair, rather than replace, even high-tech components such as blisks.



Good neighbors

MTU is conscious of its role as a corporate citizen in the society and community in which it operates as well as the special responsibility in relation to the common good this entails. For the engine manufacturer and repairer, observing applicable laws and regulations is a matter of course and binding throughout the company. We are serious about our role in the region as a major employer and provider of apprenticeships and career training. As our Principles puts it: "We offer attractive jobs and training opportunities in a highly-challenging high-tech environment. Innovative working conditions are conducive to a healthy work-life balance."

MTU is of the view that protecting the environment in the immediate vicinity of our locations is part and parcel of being a good corporate citizen. We strive to avoid—or failing that, to keep to a minimum—potential environmental impacts on the surrounding area. We carefully operate our state-of-the-art engine test rigs so as to keep the emission of noise and pollutants as low as possible. All test rigs are fitted out with high-quality sound prevention features. The absence of complaints from local residents testifies to the success of these measures. We operate all machinery and equipment used for engine production and repair in



accordance with the requirements laid down in the relevant MTU permits; we observe all statutory limit values. In the case of the groundwater that flows into and out of our locations, we verify that these conditions are met by means of thorough sampling. To take one example: the concentration (per liter) of volatile halocarbons—which are contained in solvents—in the groundwater leaving the Munich location is well below the stipulated limit value. In 2011, we improved our use of cooling lubricants, which are required in manufacturing processes such as turning, milling and grinding, at our Munich location: systematic fluid management has replaced spot checks using test strips, reducing the amount of cooling lubricant that has to be disposed of as well as the consumption and disposal of chemicals.

Energy consumption 2011 (broken down by energy source) in MWh

	Energy consumption	Natural gas	Heating oil	Aviation fuel	Diesel	Biodiesel	Palm oil	Electricity	District heating
Berlin	29,270	12,019.30	0.00	6,998.38	0.00	0.00	0.00	6,338.00	3,914.00
Hannover	56,768	15,898.00	0.00	20,698.56	0.00	0.00	0.00	20,171.00	0.00
Munich	152,945	50,867.00	47.02	13,757.20	474.97	54.56	9,811.45	77,933.00	0.00
Total	238,983	78,784.30	47.02	41,454.14	474.97	54.56	9,811.45	104,442.00	3,914.00

Water management 2011 (volumes in m³)

	Drinking water	Waste water	Groundwater extraction	Groundwater discharge
Berlin	9,997	9,038	0	0
Hannover	44,221	36,569	0	0
Munich	75,000	134,000	4,983,000	5,163,000
Total	129,218	179,607	4,983,000	5,163,000

Waste management 2011 (quantities in t)

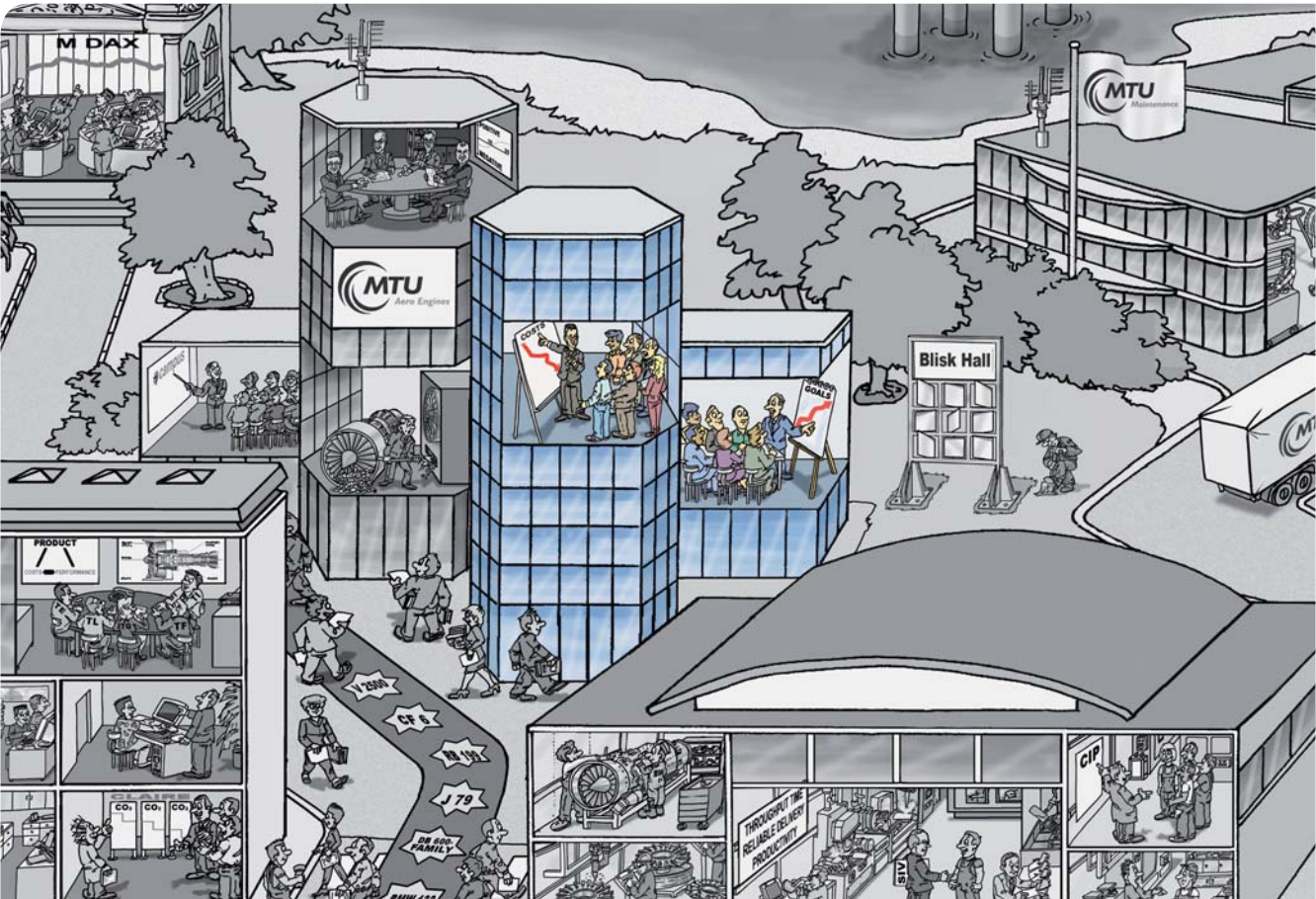
	Non-hazardous waste* for recycling	Hazardous waste* for recycling	Non-hazardous waste* for disposal	Hazardous waste* for disposal	Total non-hazardous waste	Total hazardous waste	Total waste for recycling	Total waste for disposal	Total waste	Non-hazardous building waste for recycling	Recycling rate in %
Berlin	166.50	14.80	1.90	48.00	168.40	62.80	181.30	49.90	231.20	0.00	78.00
Hannover	575.62	512.26	0.00	1.38	568.05	513.64	1,080.31	1.38	1,081.69	7.58	87.10
Munich	2,508.00	500.00	42.00	337.00	2,550.00	837.00	3,008.00	379.00	3,387.00	0.00	88.90
Total	3,250.12	1,027.06	43.90	386.38	3,286.45	1,413.44	4,269.61	430.28	4,699.89	7.58	84.7

* Excluding building waste

The amount of waste produced in MTU depends on capacity over the period in question. Hazardous waste comes primarily from electroplating, waste water treatment, and to a lesser degree other production processes. The quantity of hazardous waste correlates with production quantities. Over 84 percent of the waste generated in MTU's German plants is reutilized for material recycling or energy recovery.

Staff and Management

Guiding principle:
We collectively contribute to the company's bottom line.



Our approach

Every individual employee shapes the future of the company. And together they form a strong team, characterized by their efficiency, enthusiasm, hard work and unique know-how. We are a valued and reliable partner and innovative force in the high-tech aviation industry. And for this we have our highly trained, skilled and motivated employees to

thank, who secure the company's success. Nurturing and developing our employees is therefore a matter of great importance for MTU. We respect the rights of employees and are committed to providing a safe and healthy work environment and fair working conditions as well as to promoting diversity and equal opportunities.

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Diversity and equal opportunities

We are committed to equal opportunities for and equal treatment of our employees with no ifs and buts. By diversity in the company, we mean young and old, women and men, people from a variety of countries and cultures, and people with disabilities all working side by side. We address these aspects of diversity in the company by the following means:

- Flexible working time models
- Programs for combining work and family life
- Targeted staff development
- Comprehensive education and training programs
- Advancement programs for women

MTU has pledged itself to support diversity in the workplace and in 2010 was one of the first signatories of the "Corporate Charter of Diversity for Germany", an initiative sponsored by the German government to promote diversity in society. Respect, fairness, tolerance and appreciation are binding values for the company and are firmly anchored in the MTU Principles. A diversity of cultures and age groups enhances innovation at MTU and helps to secure a future supply of qualified workers in the current times of demographic change that are transforming the German labor market. Mixed teams are demonstrably more creative, effective and successful. People from almost 100 different countries work happily together at MTU in Germany. Older, more experienced employees are paired up with younger up-and-coming ones in order to ensure that know-how is passed on to the next generation.



"Thinking in terms of cycles of product generations determines how MTU operates. The future viability of our company is therefore founded to a special degree on the capability of our workforce. Only when our employees stay healthy for as long as possible can we benefit as a company from their specialist knowledge built up over many years and so strengthen the productivity and competitiveness of MTU."

Reiner Winkler,
Chief Financial Officer and
Director of Labor Relations
MTU Aero Engines

More women in management positions

A special part of our efforts to promote diversity and equal opportunities is devoted to removing possible barriers to women's careers and ensuring that women have opportunities for promotion. Along with 13 other companies, MTU has signed the Munich Memorandum for Women in Management. In 2011, we set ourselves specific targets that set out to double the proportion of women in management roles by 2015 from their current levels of 7.8 percent (Germany-wide) and 8 percent (at our Munich headquarters). MTU developed a concept in 2011 based on an in-depth situation analysis. We are driving forward implementation from 2012 by means of targeted measures. The Board of Management actively supports this objective and promotes it within the company in order to obtain the required high level of acceptance and support. In addition, MTU is involved in numerous programs and initiatives designed to support women in their careers, such as the Cross Mentoring program run by the City of Munich and the MTU endowment for assisting young women who are pursuing studies in science and technology disciplines.

The Supervisory Board is also set to become more female: within the next two periods of office, the number of women on the board will increase to two members or more, with at least one female supervisory board member to be appointed by employees and at least one by stockholders. This will realign the board to reflect the percentage of women in the company as a whole. At present, there is one female member on MTU's Supervisory Board. In addition, the Supervisory Board undertakes to ensure equality of opportunity in the composition of the Board of Management and attain an appropriate proportion of women on the board over the long term.



Highly trained and educated: investment in the future workforce

Education is an important and highly valued commodity at MTU. Education fosters equality of opportunity, prevents discrimination and opens the way to professional and public life. With trainees making up around five percent of the workforce, MTU is investing heavily in the next generation of workers. We also see investing in the next generation as a means of securing the future of MTU, because as a high-tech company the key to success is to have qualified, motivated and responsible employees. Consequently, vocational training at MTU is not just a question of providing professional qualifications. Rather, the training courses place equal value on social and environmental components. We are especially concerned with developing the character of employees and attuning them to environmental protection issues. We convey and practice MTU corporate culture from the very first day of training on.

However, our investment in the future workforce begins even earlier, inside schools and families. MTU is involved in numerous initiatives aimed at getting children and teenagers interested in technology from an early age and introducing them to technical careers. For example, MTU throws open its factory gates for the annual Girls' Day, a Germany-wide initiative to provide support and guidance to schoolgirls when they are choosing their future careers.



Highlight

MTU rated as an attractive employer

MTU is a top employer for university graduates and young professionals: for the sixth time in a row, the company was ranked amongst "Germany's TOP employers" in 2011. The CRF Institute, which specializes in social research, carries out an annual comparative analysis of more than 100 German employers from different sectors to determine who offers the most to their employees and how well these benefits are implemented. On the basis of detailed questionnaires and interviews with selected employees, managers and relevant HR staff, CRF rated the culture management, training and development, career development, primary benefits, secondary benefits and work-life balance of the various companies. With its broad range of flexible working time models, MTU has repeatedly excelled in the work-life balance category.



Fitness in the workplace: Integrated Health Management

Highlight

Prize-winning health promotion

MTU's targeted health promotion was recognized in 2011 when as a finalist it received the "Top Health Management Award 2011", which is sponsored by the Bavarian State Ministry of Labor and Social Welfare, Family Affairs and Women.

At a glance

Priorities in health management 2011 at German locations:

- *Ergonomics & more: refurbishing workplaces (height-adjustable workbenches and adapted lighting concepts in production areas)*
- *"Success Factor: Health": training managers and increasing their awareness, principles for role definition in relation to "health-oriented leadership"*
- *"Stress Management without Stress": action days for preventing stress-related illnesses*
- *Effective muscle building: vibration training in the workplace (pilot project in production areas)*
- *"Active Break": various exercise programs offered within the working day*

MTU's systematic promotion of our employees' health has contributed to our ability to keep the health rate—measured in terms of attendance—in the company at a constant level in spite of an ageing workforce.

We place great value on the health and wellbeing of our employees and on providing a safe working environment. The Board of Management has initiated the development of Integrated Health Management for all German locations, with the goal of improving the health and performance of employees. In 2011, we started with the launch and implementation of Integrated Health Management. There is an emphasis on the sustainable design of the workplace from an

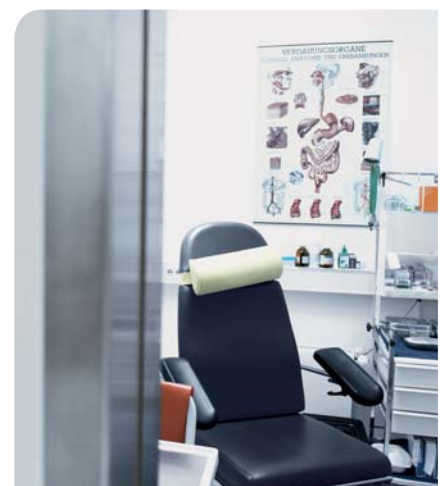
occupational health perspective, in order to prevent impairments to health and any possible resulting harm. We draw up MTU workplace standards that fulfill occupational health requirements, for example in relation to ergonomics. In these standards, we also prescribe workplaces that meet the requirements of employees with health issues.

Analysis of age-appropriate conditions in the workplace started back in 2011. As part of a pilot project, an initial set of workplaces in various locations and in various production areas have been arranged and fitted out accordingly.

Health rate of active workforce German locations Averages for the years 2010 and 2011

		2010	2011
Munich	White collar	96.9%	96.6%
	Blue collar	93.6%	93.4%
	Total	95.6%	95.3%
Hannover	White collar	96.3%	95.9%
	Blue collar	93.8%	93.8%
	Total	94.6%	94.5%
Berlin	White collar	95.7%	97.1%
	Blue collar	95.1%	94.5%
	Total	95.3%	95.5%
Total	White collar	96.8%	96.5%
	Blue collar	93.8%	93.6%
	Total	95.3%	95.1%

The active workforce consists of the core workforce plus temporary employees.



Occupational safety

Occupational safety is one of the pillars of social responsibility at MTU. Observing national regulations is a minimum for us. We are determined to provide a healthy and safe working environment and are therefore continuously working on improvements. A management system defines all objectives, measures and responsibilities and is subject to regular internal and external audits. It is certified to OHSAS 18001 and is reviewed annually in the surveillance audit and recertified every three years. We also bring out a new occupational safety program every three years. In 2011, this action plan was revised for the Munich headquarters. A report detailing the implementation and observance of the provisions is submitted annually to the occupational safety officer at each location—for Munich, MTU's largest location, this is the Chief Operating Officer. This underscores the emphasis MTU places on employee health and occupational safety. Managers bear responsibility for the safety of the employees under their supervision and also act as role models. To this

end, managers from all business units receive training as part of a mandatory course made up of 14 seminars.

We take our duty of care toward our employees seriously. We are committed to accident prevention, with measures such as information campaigns and accident analyses carried out at all German locations. The relevant occupational safety officers are notified of all accidents. The causes of every accident are analyzed, and measures are specified to remove the risk. In the case of reportable accidents that result in an employee missing more than three days of work, the employers' liability insurance association (Berufsgenossenschaft) is asked to get involved. Accidents are recorded and documented statistically in accordance with defined standards. Moreover, a system for recording near-accidents is in place at all German locations. This enables us to keep our accident rate at a constantly low level. In 2011, there were three reportable accidents per 1,000 employees at the Munich headquarters. Our aspiration is to bring the accident rate right down to zero.

At a glance

Qualification rates for 2011:

- 100 percent: TF (production, largest center in MTU)
- 97 percent: TL (purchasing, second-largest center in MTU)

Accidents at German locations

End-of-year figures for 2010 and 2011

		2010	2011
Munich	Accidents/1,000 employees	4.1	3.0
Hannover	Accidents/1,000 employees	0.6	0.6
Berlin	Accidents/1,000 employees	8.0	8.3
Total	Accidents/1,000 employees	4	4

There have been no work-related fatalities in MTU since 2002.

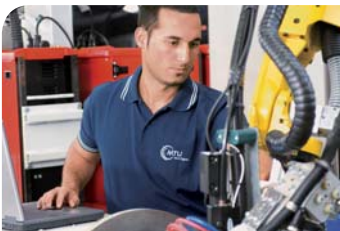


Total MTU workforce (German locations)

broken down by employment type, work contract and region:

Employment type	12/2011	Munich	Hannover	Berlin
Core workforce	86.7%	90.7%	82.5%	71.5%
Temporary employees	3.3%	0.3%	6.5%	13.8%
Trainees	4.6%	3.4%	6.1%	8.4%
Students on work experience/Holiday staff	2.1%	1.9%	2.1%	3.9%
Interns/Graduate students/PhD students	2.9%	3.2%	2.5%	2.3%
Temp. part-time employees on parental leave	0.4%	0.5%	0.3%	0.0%
Marginal employees (mini-jobbers etc.)	0.0%	0.0%	0.1%	0.0%
Total workforce	7,047	4,582	1,728	737
Regional distribution		65%	25%	10%
Proportion of women	13%	14%	10%	15%
Proportion of part-time employees	5%	6%	4%	5%
Proportion of foreign nationals	6%	7%	4%	2%

The total workforce does not contain any agency workers, external workers, or soldiers under the "cooperative model" partnership with the German air force. The figures quoted refer to the German locations (Munich, Hannover and Berlin) as of December 31, 2011.



Composition of governing bodies and breakdown by gender and nationality:

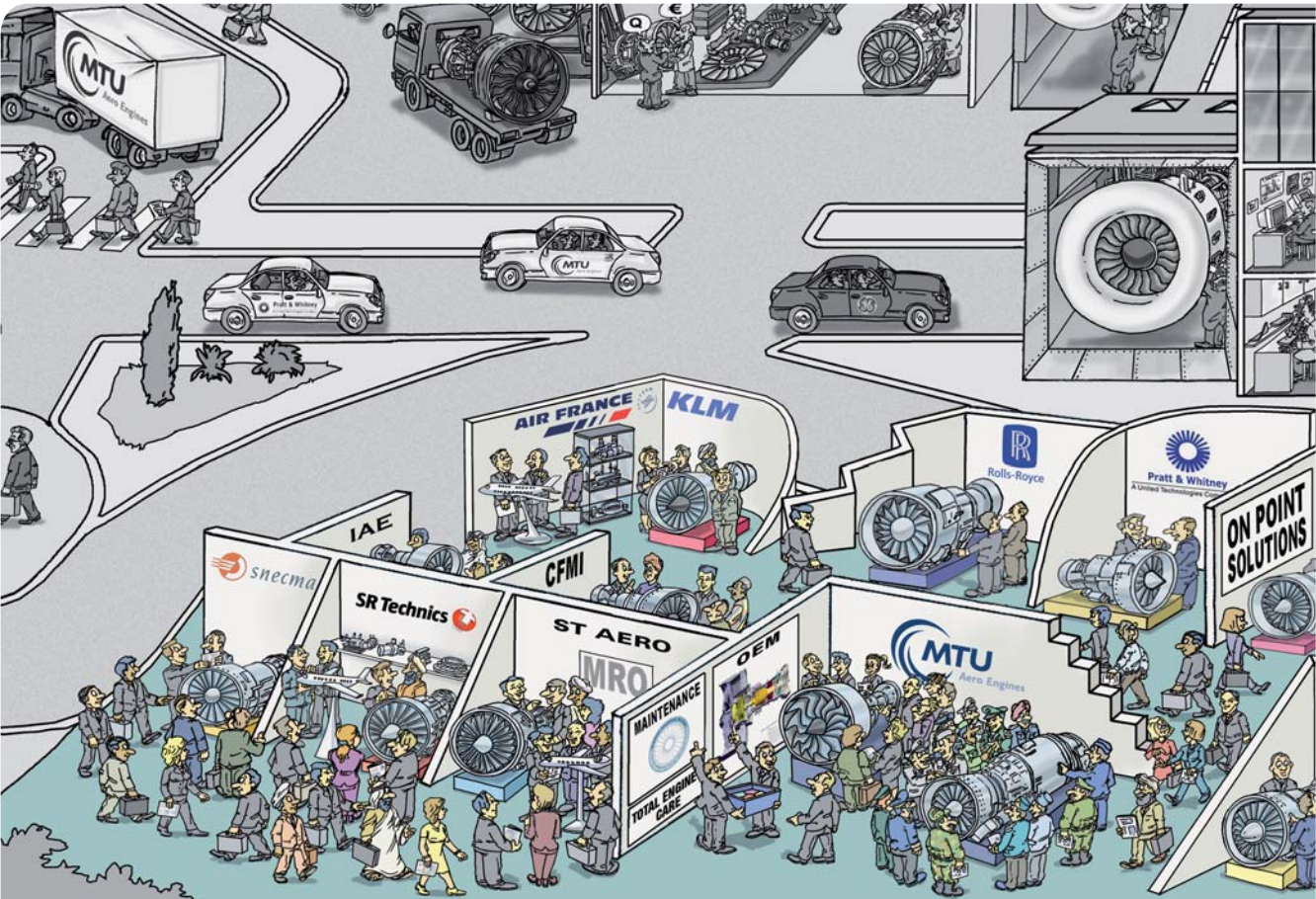
	Munich	Hannover	Berlin	Gesamt
Managers – Total	580	131	44	755
Of which German	96%	90%	100%	95%
Of which foreign	4%	10%	0%	5%
Of which male	92%	92%	89%	92%
Of which female	8%	8%	11%	8%
Supervisors – Total	0%	34%	27%	7%
Of which male	0%	33%	27%	7%
Of which female	0%	1%	0%	0%
Executives as broadly defined	81%	49%	52%	74%
davon männlich	74%	43%	45%	67%
davon weiblich	7%	6%	7%	7%
Führungskreis (FK)	15%	15%	18%	15%
Of which male	14%	15%	14%	14%
Of which female	1%	1%	5%	1%
Senior executives	3%	2%	2%	3%
Of which male	3%	2%	2%	3%
Of which female	0%	0%	0%	0%
Board of Management	1%	0%	0%	1%
Of which male	1%	0%	0%	1%
Of which female	0%	0%	0%	0%

In Munich, supervisors come under the "Executives as broadly defined" category and therefore do not appear under their own category.



Cooperation and Conduct

Guiding principle:
Our conduct bases on performance and mutual appreciation.



Our approach

MTU respects internationally proclaimed human rights and ensures they are observed within the company. MTU is committed to respecting the individuality and dignity of all, maintaining equality of opportunity in recruitment and preventing discrimination. MTU employees must not be treated any differently on account of gender, race, dis-

ability, ethnic origin, religion, age or sexual orientation. All employees are hired and advanced solely on the basis of their expertise, skills and performance. To ensure this, we have drawn up a binding Code of Conduct that applies across the whole organization and which can be supplemented, if required, for individual subsidiaries or departments following consultation.

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Code of Conduct

Openness, tolerance, respect, appreciation, responsibility and trust—these are the fundamental values of our corporate culture. They are reflected in MTU's Code of Conduct, which we have laid down as a binding benchmark of our behavior. These principles on the protection of human rights, the prevention of corruption and improper behavior against competitors and business partners, the observance of labor law and recognized working conditions, health and safety at work, and qualification apply worldwide to all employees, managers and the Board of Management. All employees commit themselves to trustful and open cooperation and to conscientious and honest behavior. We also expect comparable principles from our suppliers as the basis for a lasting business relationship.

The MTU Code of Conduct is published online at:

http://www.mtu.de/en/company/sustainability/code_of_conduct/index.html

In order to promote this corporate culture of openness, tolerance and diversity of opinions in everyday working life, MTU has also introduced a guideline on cooperative and fair conduct, in which the company undertakes to tackle bullying, sexual harassment and discrimination and to take appropriate action against infringements. In 2011, we had an internal complaint under the German General Equal Treatment Act, which we addressed with suitable measures.



"Engaging in corruption—that is, trying to influence business partners or business deals by means of bribes, gifts or other favors—is utterly against MTU's principles, and I expect all MTU employees to refrain from such behavior at all times. MTU is of the conviction that attractive, quality products represent a healthy basis for sustainable business relationships."

Egon Behle
MTU Chief Executive Officer



Combating corruption

It goes without saying that our corporate responsibility also includes respecting the prevailing laws and regulations. We denounce corruption, including bribery and extortion, and all other forms of white-collar crime. And we advocate fair, transparent competition where all parties are on an equal footing. Integrity and responsible behavior are constituent parts of our corporate culture and are enshrined in the Code of Conduct for employees and managers.

MTU has set up a Compliance Board, made up of the heads of the legal department, Corporate Audit and Corporate Security, as the central office for investigating breaches. The Compliance Board is committed to fully clearing up reported suspicions and cases. In 2011, the Compliance Board examined all contracts from sales consultants for possible corruption risks. At the same time, the majority of consultants were assessed by an independent organization for possible signs of illegal activity. All new consultant contracts and those pending renewal were examined by the Compliance Board for risks of corruption. Only when the Compliance Board has delivered a positive recommendation does the Board of Management approve conclusion of the contract. The Compliance Board is also active in a preventive role, organizing various measures to increase awareness of these issues among employees. The focus in 2011 was on compliance training for all employees, with special courses for employees and managers in positions of trust. Working alongside the central Compliance Board are MTU-wide group officers for individual topics, data protection for instance, who ensure that the special rules in a given area are observed

and that uniform standards apply across the whole company on the basis of the applicable statutory regulations. The Board of Management is continuously updated on the work of the Compliance Board and the group officers. The board receives support here from the internal auditors, who carry out compliance audits where they check business processes and procedures for compliance with the law and observance of internal guidelines.

An ombudsman is in place as a confidential contact person for information from managers, suppliers, employees, customers and business partners.

Signing up to high standards of behavior

Since 2011, MTU has been a member of the Aerospace and Defence Industries Association of Europe. By virtue of this membership, MTU recognizes the association's eight standards directed against corruption, bribery and unfair competition. Moreover, MTU signed the UN Global Compact in May 2011, an international initiative whereby companies undertake to realign their strategy and business activity so as to be more sustainable. MTU has committed itself to observing the ten principles of the UN Global Compact for safeguarding human rights, for fair working conditions, for environmental protection and for combating corruption. It pledges to implement and promote these principles within the company. Furthermore, as a member, it will report regularly to the UN Global Compact about the progress it has made.

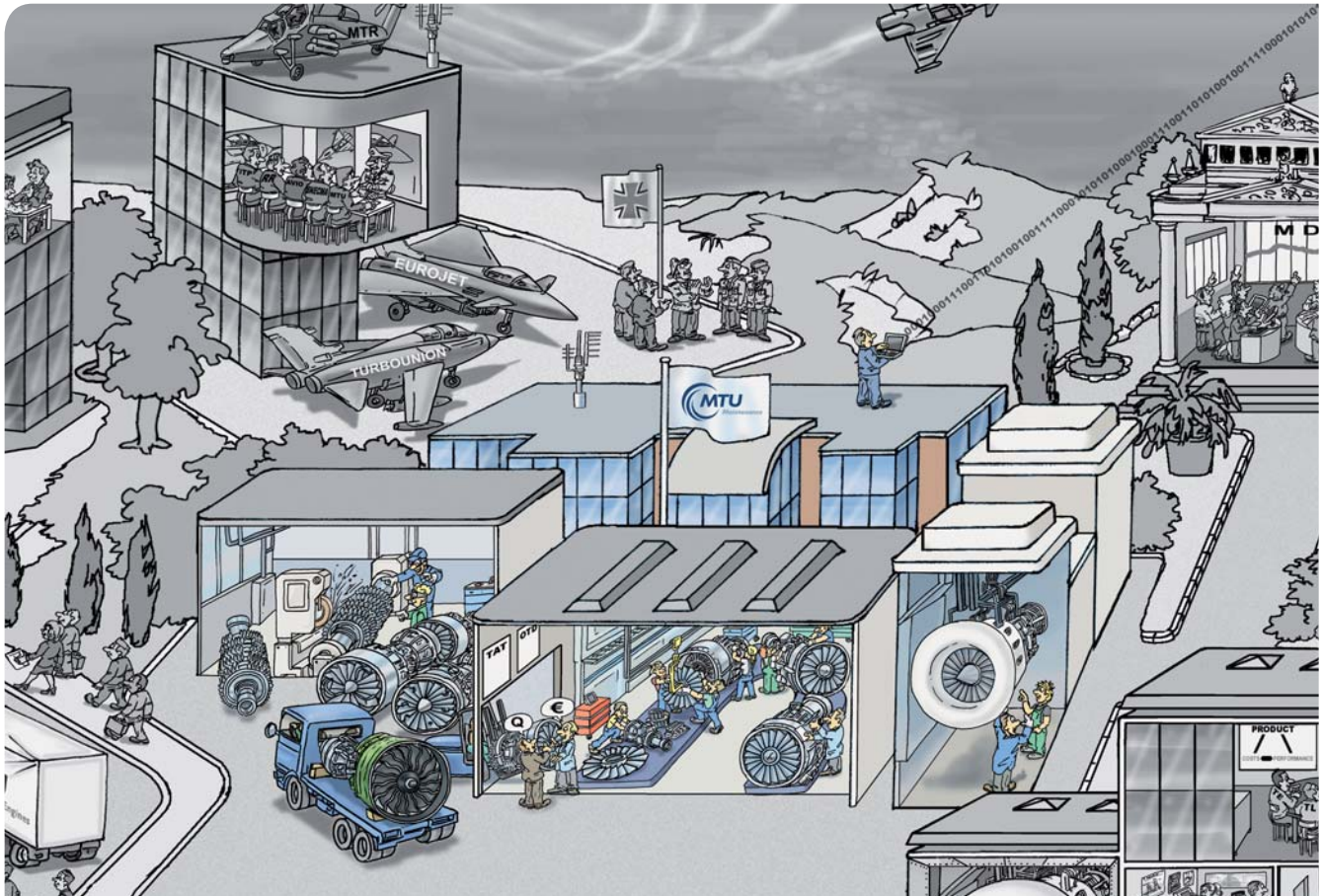




Products, Technology, Growth

Guiding principle:

MTU grows profitably through the development, production and maintenance of commercial and military engines.



Our approach

MTU's products—in particular, low-pressure turbines, high-pressure compressors, manufacturing processes, repair techniques, and maintenance—are highly regarded and much sought after in the industry. They are based on technologies that are state of the art and beyond, such as the high-speed low-pressure turbine for the new Geared Turbofan™. They are developed and manufactured according to tried-and-tested methods and processes and economic criteria. They are validated in accordance with the applicable

standards. We ensure that our products are of impeccable quality by virtue of our sophisticated quality management system. This covers how we observe the requirements of our clients, the applicable regulations and legislation, and our internal requirements. We see this as a task for MTU worldwide along the entire value-added chain. By constantly further developing and improving our products, processes and services, we secure our competitiveness.

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Aviation: safety and quality down to the smallest detail

From the initial blueprint to its final flight before being decommissioned, the life of an engine is very long. Even the period from the first concept studies for a new engine to the finished product lasts several years. Numerous development steps and stages are necessary if an engine is to function reliably and safely and fulfil the contractually guaranteed performance requirements. Every engine and its components undergo an extensive test program both on test rigs on the ground as well as during flight tests in the air. Before an engine prototype is certified by the responsible aviation authority and thereby approved for scheduled airline service, it will have successfully completed several thousand flight cycles and demonstrated its safety and reliability in a variety of tests. The test program is precisely defined and includes bird strike and hail tests; ice, water and sand intake tests; vibration and blade-off tests; and endurance tests that last several thousand hours. MTU carries out a portion of these important certification tests on test rigs at its Munich location.

Such stringent requirements not only apply to the engine as a whole but also to its individual modules as well as new technologies and materials, which must also clearly demonstrate their fitness for service before they may be used in a series product. Absolute safety is imperative in aviation, as the smallest error can have catastrophic results.

Consequently, MTU makes the highest quality demands of its products, services and suppliers. Safety is the number one priority in how we go about our business. The high quality standards are strictly monitored at MTU—at all times, at every stage of production, and by every employee. Our management system ensures that all applicable legislation and regulations are observed and that the responsibilities in the company are clearly defined. This permits us to guarantee our customers identical quality at every MTU location wherever in the world it may be. The observance of quality standards is assessed by the relevant authorities and by means of internal and external audits.



"As the world's largest independent provider of repair services for commercial engines, we see ourselves as a technological pacesetter in the industry. Our high-tech repair techniques are unique worldwide, largely patented and go by the brand name MTUPlus Repairs. They are the perfect example of how business activity can be sustainable and make sound economic sense. The customer saves on material costs for expensive new parts, while we conserve resources and thereby benefit the environment. This comprehensive repair expertise gives MTU Maintenance a competitive edge in the marketplace."

Dr. Stefan Weingartner,
President Commercial Maintenance
MTU Aero Engines



MTU Maintenance: unique repair expertise

Once a new engine has been designed, developed, tested and certified, it can enter regular flight operations. Modern engines have a service life of 100,000 flight hours and upward. Between 20,000 and 30,000 flight hours generally elapse before an engine needs its first trip to a maintenance shop. MTU Maintenance operates a global network with locations around the globe for just such shop visits. Nowadays, maintenance intervals are based on the condition of the engine and no longer on defined cycles. When an engine can no longer be repaired, it is disposed of. However, the materials in an aircraft engine—such as titanium- and nickel-base alloys—are so valuable that they are almost entirely melted down for reuse. When a component cannot be repaired, it is replaced. Because MTU Maintenance masters a series of innovative high-tech repair techniques which it also developed itself, it achieves repair depths that are unequalled anywhere in the world. This saves material and conserves resources, benefiting the environment. MTU keeps on expanding this repair capability with increasing vigor and invests in the research and development of the special techniques required.

Safety first

Before an MTU component is fitted or delivered to a customer, it has to meet comprehensive and elaborate quality requirements. Safety-critical components undergo especially intensive testing and inspections. Every one of these components goes through a range of tests that check it for zero-defect quality by means of a variety of methods, such as eddy-current, X-ray and crack testing. All components that are used in an engine must be certified for such use and have zero defects. In accordance with our principle “Safety has top priority whatever we do”, we only use certified, flawless and clearly identifiable components. These are components that have been approved by the relevant aviation authority; that are based on authorized development documentation; that have been manufactured or repaired by an appropriately licensed company in compliance with the applicable aviation regulations; and that possess the requisite documentation. There are strict rules governing documentation requirements in the aviation sector in order to ensure that the airworthiness of a component or engine can be demonstrated. The documentation must be absolutely complete with no gaps whatsoever. We observe these requirements at every stage of our production processes.



Furthermore, we have exacting quality requirements that our suppliers and their bought-in parts must satisfy. Every supplier must be approved by MTU. Before a supplier is granted MTU approval, we carefully inspect the entire manufacturing process at the supplier's plant, and we also demand high documentation levels. Unfinished and finished parts arriving at incoming goods are inspected and tested using a great variety of technical methods before they are approved for use in production.

Certified quality

Our customers and partners appreciate our efforts to ensure top quality and absolute safety. In 2011, Atlas Air gave its Strategic Supplier Award in the “Innovation, Cost and Risk Management” category to MTU Maintenance Hannover. Atlas Air has entrusted MTU Maintenance with being the exclusive repairer of its CF6-80 engines. 2011 was also the third year in a row in which MTU received the prestigious Supplier Gold Award from Pratt & Whitney's parent company United Technologies Corporation (UTC) for special achievements in quality, delivery reliability and customer satisfaction. Pratt & Whitney is an original equipment manufacturer (OEM) for aero engines and an important cooperation partner for MTU, with the two companies working together on many engine programs, including the new Geared Turbofan™ engine.

MTU has all the required certifications and approvals for the development, manufacture and maintenance of airworthy engine parts and modules. You can find a list online at the following address:

<http://www.mtu.de/en/company/quality/certification/index.html>

In the reporting period 2011, no significant fines were imposed on MTU Aero Engines nor were any penalty proceedings pending due to the company breaching legal requirements in relation to the use of products.





Dialog with Stakeholders

MTU strives to be open with its stakeholders. We understand “stakeholder” as referring to all groups that are in regular contact, i.e. are in a relationship, with the company: shareholders, investors, financial analysts, employees, our potential future workforce, works councils, union representatives, customers, suppliers, local residents, environmental organizations, scientists, the representatives of official agencies, politicians, representatives of the regional, national and international press, and trade journalists. Our constant dialog with these parties enables us to identify their expectations of the company and to react accordingly.

Our platforms for dialog

In 2011, we communicated over the Intranet and the Internet, by means of brochures and flyers, via employee and customer magazines—and directly with target groups at events such as trade fairs, exhibitions, open days and in discussion forums.

The Corporate Communications/Public Affairs and Investor Relations departments are in constant communication with media representatives, politicians and capital market operators. Issues can be raised with and questions put to MTU at the annual general meeting, at the Investor and Analyst Day, at conference calls relating to quarterly reporting, and at various road shows.

In regular employee surveys conducted by our HR department, we receive the opinion of our employees on their working environment, on our corporate culture and strategy, and on areas where there is scope for improvement. There is employee representation in place at all German locations, ensuring worker participation.

Our sales and program management activities engage with customers using a variety of tools for communication and dialog, in particular at international industry trade

fairs and conferences. Our supplier management staff are responsible for looking after and expanding relationships with suppliers.

In addition, we opened the doors of our in-house museum as part of The Long Night of the Munich Museums and on other selected days during the year, offering the public an insight into engine technology and the company's history.

The dialog with municipalities and local authorities is conducted directly by the management of the respective location. In order to meet the growing interest of stakeholders in the topic of sustainability, MTU has decided to intensify its sustainability reporting—this sustainability report for 2011 in accordance with the GRI Guidelines is one of the first steps in this regard. Furthermore, we report to the UN Global Compact, of which we have been a member since 2011, about the progress the company has made in observing and implementing the initiative's ten sustainability principles. We publish this Communication on Progress on our website.

Today's MTU Aero Engines is the legal successor to BMW Flugmotorenbau GmbH. The history of this former BMW subsidiary, whose workforce during the Third Reich included forced laborers, is the subject of two historical dissertations and an historical symposium, which were commissioned and funded by MTU and the BMW Group. MTU's company archive is available on request for further academic studies.

MTU is open to feedback and corresponding forms can be found on our website under “Contact”. For queries from stakeholders, the relevant MTU contact persons are also available by phone. The feedback, queries and concerns we receive are analyzed, addressed and incorporated into future reporting.



Some of the organizations of which MTU is a member

- Aviation Initiative for Renewable Energy in Germany e. V. (aireg)
- Bauhaus Luftfahrt e.V. (aviation research institution)
- German Association of Environmental Management
- German Aerospace Industries Association (BDLI)
- German Society for Aeronautics and Astronautics (DGLR)
- Federal Association of the German Security and Defence Industry (BDSV)
- UN Global Compact
- Friends and Sponsors of the Deutsches Museum
- Deutsches Verkehrsforum e.V. (industry association for all modes of transport)
- German Aerospace Center (DLR)
- European Aerospace Quality Group
- Forum Luft- und Raumfahrt e.V. (forum for the aerospace industry)
- IATA Strategic Partnerships
- The Chamber of Commerce and Industry for Munich and Upper Bavaria
- Vereinigung der Bayerischen Wirtschaft e.V. (Bavarian business association)
- Verband der Bayerischen Metall- und Elektroindustrie e.V. (employers' association for the metal and electrical industries in Bavaria—subject to collective agreement; sister organization to the below)
- Bayerischer Unternehmensverband Metall und Elektro e.V. (bayme vbm) (employers' association for the metal and electrical industries in Bavaria—not subject to collective agreement; sister organization to the above)



GRI Content Index • Profile

1. Strategy and Analysis

	Reference*
1.1 Statement from the Board of Management	SR 2011, p. 3
1.2 Description of key impacts, risks, and opportunities	AR 2011, Risk Report p. 113 ff.

2. Organisationsprofil

	Reference*
2.1 Name of the organization	NB 2011, S. 7
2.2 Primary brands, products, and/or services	GB 2011, S. 258
2.3 Operational structure of the organization	GB 2011, S. 64-65
2.4 Organization's headquarters	NB 2011, S. 7
2.5 Countries where the organization operates	NB 2011, S. 6-7
2.6 Nature of ownership and legal form	GB 2011, S. 34
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2.9 Significant changes regarding size, structure, and ownership	keine
2.10 Awards	NB 2011, S. 28, 29, 38

3. Report Parameters

	Reference*
3.1 Reporting period	SR 2011, p. 4
3.2 Date of most recent previous report	SR 2011, p. 4
3.3 Reporting cycle	SR 2011, p. 4
3.4 Contact point for questions regarding the report	SR 2011, p. 44
3.5 Process for defining report content	SR 2011, p. 4
3.6 Boundary of the report	SR 2011, p. 4
3.7 Limitations on scope of the report	SR 2011, p. 4
3.8 Basis for reporting on joint ventures	SR 2011, p. 4
3.9 Data measurement techniques and the bases of calculations	SR 2011, p. 5
3.10 Re-statements of information	SR 2011, p. 4
3.11 Changes from previous reporting periods in the scope, boundary, or measurement methods	SR 2011, pp. 4-5
3.12 GRI Content Index	SR 2011, pp. 42-43
3.13 External assurance for the report	SR 2011, p. 5

4. Governance, Commitments, and Engagement

	Reference*
4.1 Corporate governance/Governance structure	AR 2011, Corporate Governance Report p. 38 ff.
4.2 Independence of Chair of Supervisory Board	AR 2011, p. 40
4.3 Number of members of the highest governance body that are independent	AR 2011, p. 40
4.4 Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body	SR 2011, p. 40
4.5 Linkage between compensation for Board of Management and the organization's sustainability performance	AR 2011, Management Compensation Report p. 43 ff.
4.6 Processes in place to ensure conflicts of interest are avoided	AR 2011, p. 40
4.7 Qualifications of the members of the highest governance body in relation to sustainability topics	SR 2011, p. 13
4.8 Statements of mission or values, codes of conduct, and principles relevant to sustainability	SR 2011, pp. 8-9, 33
4.9 Oversight of sustainability performance and risks by the Board of Management	SR 2011, p. 13
4.10 Evaluating the highest governance body's own performance, particularly with respect to sustainability	AR 2011, Management Compensation Report p. 43 ff.
4.11 Explanation of whether and how the precautionary approach or principle is addressed by the organization	AR 2011, Risk Report p. 113 ff.
4.12 Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses	SR 2011, pp. 14-15, 22-23, 27, 28, 34, 41
4.13 Memberships in associations and advocacy organizations	SR 2011, p. 41
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4.17 How the organization incorporates and addresses queries and concerns on the part of stakeholders	SR 2011, p. 40

GRI Content Index • Indicators

Economic

	Reference*
Management approach	SR 2011, p. 12
EC 1 Direct economic value generated and distributed	SR 2011, p. 12
EC 2 Financial implications of climate change	SR 2011, p. 15
EC 7 Local hiring and proportion of senior management hired from the local community	SR 2011, pp. 14-15

Environmental

	Reference*
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EN 3 Direct energy consumption	SR 2011, p. 25
EN 4 Indirect energy consumption	SR 2011, p. 25
EN 5 Energy saved	SR 2011, p. 24
EN 8 Total water withdrawal	SR 2011, p. 25
EN 21 Total water discharge	SR 2011, p. 25
EN 22 Total weight of waste by type and disposal method	SR 2011, p. 25
EN 26 Initiatives to mitigate environmental impacts of products	SR 2011, pp. 18-24

Labor

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Management approach	SR 2011, p. 26
LA 1 Total workforce by employment type, employment contract, and region	SR 2011, p. 31
LA 7 Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities	SR 2011, p. 30
LA 8 Education, training, counseling, prevention, and risk-control programs in relation to serious diseases	SR 2011, p. 29
LA 13 Diversity of employees and governing bodies	SR 2011, pp. 27, 31

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HR 4 Incidents of discrimination and corrective actions taken	SR 2011, p. 33

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Management approach	SR 2011, p. 32
SO 2 Business units analyzed for risks related to corruption	SR 2011, p. 34
SO 9 Operations with significant potential or actual negative impacts on local communities	SR 2011, pp. 24-25, 34
SO 10 Prevention and mitigation measures implemented	SR 2011, pp. 32-25, 34

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Management approach	SR 2011, p. 36
PR 1 Life cycle stages in which health and safety impacts of products and services are assessed	SR 2011, pp. 37-38
PR 3 Product and service information required by procedures	SR 2011, pp. 37-38
PR 9 Significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	SR 2011, p. 38

*SR 2011 = Sustainability Report 2011

AR 2011 = Annual Report 2011

http://www.mtu.de/en/investorrelations/financial_reports/index.html

(Page numbers refer to the pdf)

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<http://www.mtu.de/en/index.html>

Further information and publications:

<http://www.mtu.de/en/company/sustainability/index.html>

Glossary

<http://www.mtu.de/en/globals/glossary/index.html>

UN Global Compact – Communication on Progress for MTU Aero Engines

<http://www.unglobalcompact.org/COPs/detail/17657>

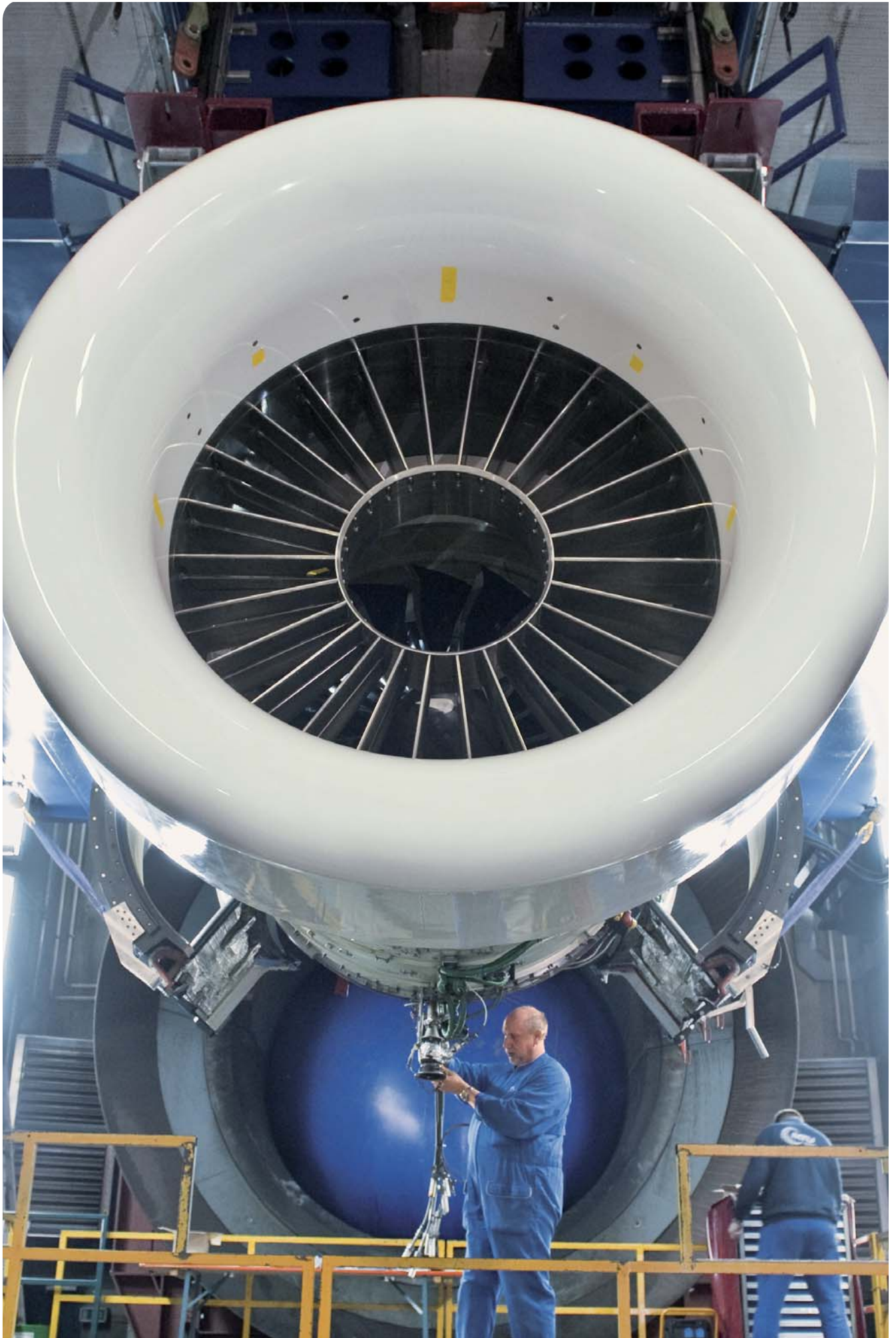
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<https://www.globalreporting.org/Pages/default.aspx>

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