



2015 Sustainability Report

MTU Aero Engines AG



Table of contents



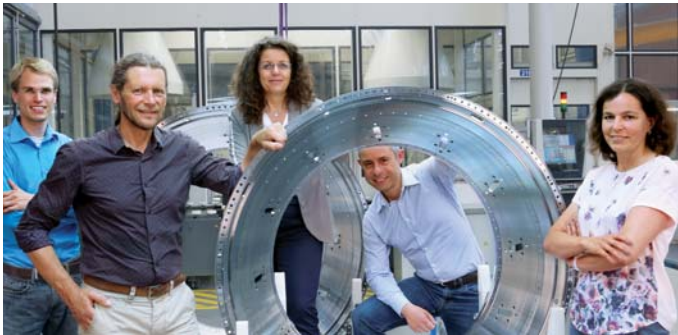
Foreword by the Chief Executive Officer	5
About this report	6
MTU Aero Engines AG	8



1 Strategy	11
1.1 Sustainability strategy	12
1.2 CR management	15
1.3 Ethics and integrity	16
1.4 Human rights	18
1.5 Stakeholder dialog	20



4 Environmental protection	52
4.1 Energy management	56
4.2 Emissions	58
4.3 Water usage	60
4.4 Material efficiency	62



5 Employees	64
5.1 Occupational health and safety	69
5.2 Attractiveness as an employer	72
5.3 Employee development	74
5.4 Diversity and equal opportunities	77



2	Economics	24
2.1	Sustainable added value	26
2.2	Compliance	29
2.3	Supply chain	32

3	Product Responsibility	36
3.1	Innovation management	38
3.2	Fuel efficiency	39
3.3	MTU's climate strategy	41
3.4	Aircraft noise	46
3.5	Product quality and safety	48



6	Society	80
6.1	Corporate citizenship	82
6.2	Donations/Sponsorship	84
	Goals and goal attainment for 2015	86
	GRI-Index	93

Masthead

Publisher
MTU Aero Engines AG
Eckhard Zanger
Senior Vice President Corporate Communications
and Public Affairs

Project management and contact point for questions
regarding content
Ute Schwing
Senior Manager
Corporate Online Services, Internal Communications and CR
corporateresponsibility@mtu.de
www.mtu.de

Photo credits

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Pages 8-9	Bombardier, Jetblue, Airbus, Boeing, MTU Aero Engines, Mitsubishi
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Pages 15-37	MTU Aero Engines
Pages 40-41	Mitsubishi, Bombardier, Airbus, MTU Aero Engines
Pages 44-45	MTU Aero Engines, Bauhaus Luftfahrt
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Foreword by the Chief Executive Officer

Dear readers,

Balancing our experience and expertise of decades with innovations that move us into the future, we create persevering value for our stakeholders by conducting our business in a sustainable and responsible way. The financial year 2015 was an enormously successful one for MTU Aero Engines, in which we once again improved our performance and set new records. We prioritize long-term value creation over short-term profits.

Our focus is on product responsibility. The new generation of geared turbofan engines™ is a shining example of how we combine commercial success with sustainable goals. Since January 2016, the turbofan-equipped A320neo has been in service with Lufthansa and other international airlines, proving itself to be considerably cleaner, quieter and more fuel-efficient. This is but one instance where we have made considerable progress on key sustainability topics and moved forward with our Clean Air Engine agenda: by 2050, we aim to reduce CO₂ emissions by up to 40 percent and decrease noise by as much 65 percent. In times of decarbonization—defined in the goals agreed upon at the 2015 Paris climate conference—as well as resource scarcity and globalization, we are strongly committed to sustainable aviation.



But sustainability goes beyond that. We have integrated mandatory social and environmental standards along the value chain, in manufacturing facilities at our own locations, and in collaboration with our suppliers around the world. We have launched a range of measures to curb our demand for energy and raw materials as well as to reduce our emissions. We aim at manufacturing processes that reduce resources consumption and pollution. In November 2015, the CDP (Carbon Disclosure Project) named MTU as Germany's Best Improver—recognition of the fact that we have increased transparency regarding our environmental impact.

Now in the fifth year of our membership in the UN Global Compact, we are unwaveringly committed to observing and upholding its principles: protecting human rights, promoting fair working conditions, and combating corruption. As an attractive employer for our some 9,000 employees worldwide, we create a fair and safe working environment that is ready for the needs of tomorrow. Yet we also realize that, even as a top employer, MTU cannot afford to rest on its laurels. This is why we continuously hone our HR activities and, for example, address our employees' demand for more flexibility with the mobile working project.

As we look ahead, our plan is to continue developing ourselves further. With this in mind, we have pinned sustainability as a corporate objective for the current financial year 2016, in order to lend it still more weight. Our Munich location is party to the city's climate protection agreement in order to reduce the industry's regional CO₂ footprint even further. We will assume responsibility, now and in the future, for infusing sustainability into all aspects of our business and working life.

We hope you will continue to support us on this path.

Yours sincerely,

A handwritten signature in blue ink that reads "Reiner Winkler".

Reiner Winkler
CEO of MTU Aero Engines AG

About this report

Sustainability Report 2015 for MTU Aero Engines AG

MTU Aero Engines AG has compiled this sustainability report in order to inform its stakeholders about corporate responsibility (CR) within the company. The report provides information about the company's CR strategy, goals, and achievements. It describes the priorities for the various CR spheres of activity in 2015 and the progress made in them, and continues where the previous Sustainability Report for 2013/2014 left off. German and English versions of the report are available on our website as downloadable PDFs.

- [MTU Sustainability Report \(German\)](#)
- [MTU Sustainability Report \(English\)](#)

Questions about the report can be addressed to corporateresponsibility@mtu.de

Reporting in accordance with GRI

The 2015 Sustainability Report was drawn up in compliance with the Global Reporting Initiative guidelines and meets the new GRI G4 standard. In our estimation, the report satisfies the requirements for a "Core" report. Accordingly, we report on all required standard disclosures as well as on management approaches for key aspects and on selected indicators for each aspect (to facilitate comparison, tables and diagrams are cross-referenced to the corresponding indicator). For ease of reference, the GRI Index at the end of the report links the contents with the GRI requirements. A materiality matrix (in the Strategy chapter) presents the topics relevant to sustainability for MTU and how they are weighted from an

internal and external perspective. It serves as the basis for selecting the key aspects and performance indicators for this report.

UN Global Compact— Communication on Progress

This sustainability report incorporates the Communication on Progress according to the ten principles of the UN Global Compact, a measure designed to facilitate stakeholder access to CR-relevant information. In the GRI Index at the end of the report, you will find cross-references to the UN Global Compact's ten principles.

Scope of validity

The reporting period spans the 2015 calendar year (January 1 to December 31), which also corresponds to the 2015 financial year for MTU Aero Engines AG. In order to better organize how information is presented and to provide explanatory context for readers, activities from outside the reporting period are also cited in some cases. The report covers those of MTU's European locations that are treated as fully consolidated in the company's financial reporting. This includes MTU Aero Engines, the company's headquarters in Munich, MTU Maintenance Hannover, MTU Maintenance Berlin-Brandenburg in Ludwigsfelde near Berlin, and MTU Aero Engines Polska in Rzeszów, covering the majority of the MTU Group. (In terms of total workforce, the report applies to 94 percent of employees.)

The joint venture MTU Maintenance Lease Services B.V. in Amsterdam, the Netherlands, is not included in the report, because it has no measurable effect on MTU's sustainability per-



formance. The JV is responsible for leasing aircraft engines, with MTU Maintenance Hannover handling operational implementation of the leasing agreements. The key performance indicators in the report refer to the scope of validity specified above; any deviations from this are indicated.

We plan to expand the scope of our reporting step by step to include all the MTU Group's fully consolidated locations.

Key performance indicators (KPIs)

All data and information was collected by the responsible departments for the reporting period using representative methods. Environmental KPIs were collected via the environmental management systems at the individual locations and then consolidated in the CR database according to agreed criteria. Using an electronic HR management system, the HR KPIs were collected and evaluated centrally at the headquarters in Munich for Germany and at the Rzeszów location for Poland. Once the data was evaluated, it was sent to the CR database. All other data was requested from the CR center coordinators in the relevant departments and compiled centrally in the CR database. Financial KPIs were collected and published in accordance with the International Financial Reporting Standards (IFRS).

External validation of report

The CR reporting for this sustainability report is not subject to external auditing or validation. The majority of corporate processes that underlie data collection for CR reporting are certified.

- [MTU's certifications](#)

Further information

You can find supplementary information, more detailed analyses and older sustainability publications online:

- [Corporate responsibility at MTU](#)
- [Compliance at MTU](#)

In addition, we regularly report on important sustainability topics in central MTU publications and communication channels.

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 the future, and they are associated with risk and uncertainty. Consequently, the actual future results of MTU Aero Engines may deviate substantially from the expectations and assumptions expressed here for a variety of reasons. MTU Aero Engines assumes no obligation to update the statements contained in this communication.

MTU's integrated sustainability report appears annually, and we expect to publish the next report in the spring of 2017.



MTU Aero Engines AG



In the aviation industry, three simple letters stand for top-notch engine technology: MTU. With a workforce of about 9,000 people Germany's leading engine manufacturer has been providing propulsion systems to power aircraft for more than 80 years now, having become an established global player. The company engages in the development, manufacture, marketing and support of commercial and military aircraft engines and industrial gas turbines.

MTU Aero Engines in figures

1934 launched in Munich

9,000 employees (approx.)

14 company locations around the world

4,4 billion euros in sales in fiscal year 2015

As part of its commercial activities, MTU Aero Engines designs, develops and manufactures engine modules and components. Its technological expertise in the field of low-pressure turbines, high-pressure compressors and turbine center frames as well as manufacturing processes and repair techniques have made MTU a leading manufacturer of subsystems and components in the global engine business.

The engine programs of MTU that currently yield the highest sales

V2500 for the A320 family of aircraft

GP7000 for the A380

GE_{nx} for the B787 und B747-8

PW2000 and

CF6-80 for medium- and long-haul aircrafts

Commercial engine business

With its products, MTU has content on engines in all thrust and power categories, from powerplants for small business jets to the world's most powerful jetliners. The company is a risk-and-revenue-sharing partner in the major commercial engine programs. Under the partnership arrangements, MTU assumes full development and production responsibility for the components and modules forming part of its work share. Its cooperation partners are the world's big-league players in the engine industry—Pratt & Whitney, GE Aviation, and Rolls-Royce.

MTU program work shares depending on the valuation of the module

up to 20 %

To gird for the future, MTU has taken stakes in a number of significant engine programs and is well positioned in the marketplace. Among these future programs are the GP7000 for the Airbus A380 megaliner, the GENx engine to power the Boeing 787 Dreamliner and Boeing 747-8 long-range widebody airliner and the GE9x for Boeing's 777X. The advanced geared turbofan™ technology is applied in Pratt & Whitney's PurePower® engine family. To date, five major aircraft manufacturers have selected the PW1000G models to power their latest aircraft. Airbus is offering the PW1100G-JM for the A320neo. Bombardier has chosen the propulsion system as the sole engine choice for its CSeries, as has Mitsubishi for its MRJ regional jet. Irkut will equip its MS-21 with the engine. Last, but not least, Embraer has opted for the PW1000G family as the exclusive powerplant for its second-generation E-Jets. To date, over 70 airlines worldwide have ordered up to 7,000 geared turbofan engines.

In the military arena, the company is the German Armed Forces' major industrial partner for practically all engine types flown by them. MTU provides a full range of services, from maturing enabling technologies through developing and manufacturing engines and engine components, to providing maintenance and comprehensive customer support services.

Commercial engine maintenance

MTU Maintenance, a division of MTU Aero Engines, is one of the top five providers of maintenance services for aircraft engines and industrial gas turbines. With more than 30 engine types, it boasts one of the largest portfolios worldwide, including the bestsellers V2500 and CFM56, and the world's largest engine, the GE90-110/-115B. New engine programs are continuously added to offer customers the most popular variants and to secure the company's position in the aftermarket for next generation engines.

MTU Maintenance in figures

4,000 employees (approx.)

over 16,000 Shop Visits

35 years of company history

Apart from its outstanding technical and engineering know-how, customer proximity is one of MTU's greatest strengths. A network of locations in Europe, Asia and North America as well as representative offices, IGT service centers and joint ventures around the globe ensure that its customers' expectations are fulfilled timely and with the same high standard of quality. These include dedicated centers of excellence, e.g. for parts and accessory repairs. In addition, on-site teams are able to carry out repair jobs at every corner of the world at short notice.

The Munich headquarters

Munich is home to MTU Aero Engines' corporate headquarters. This is from where the group's subsidiaries and most of its research and development activities are controlled and where military and commercial engine components are produced in various shops. With its stake in Pratt & Whitney's geared turbofan engines, MTU's production volumes are growing rapidly: Whereas the company manufactured around 600 blisks a year so far—for various engine programs—the total number produced will exceed 5,000 blisks annually from 2020 on. To cover the demand for titanium compressor blisks, MTU has built a blisk center of excellence that boasts a high degree of automation and an intelligent control and logistics system. The shop on the company's premises in Munich accommodates the most advanced production system of its kind worldwide.

The Munich site in figures

500,000 square meters

4,700 employees (approx.)



1 Strategy

Sustainability is important to us, which is why we incorporate ecological and social aspects into our business activities. With innovative products, we can secure more than just MTU's economic success and its future viability: we can have a positive effect on the environment and on our society.



We generate sustainable added value.

Our focus is the product. As an innovative provider in the aircraft engine sector, we play a role in the move toward more sustainable mobility. Growing passenger numbers, dwindling resources and climate change are challenges that we meet head on.

MTU has always demonstrated a sense of responsibility in everything it does. With our corporate responsibility (CR) management, we have integrated this responsibility into our work and business relationships and guide it according to our sustainability strategy. We want to continue to drive sustainability both internally and externally and in the process take the interests of our stakeholders into account. To ensure the involvement of important stakeholder groups, we rely on various forms of dialog. We use existing resources efficiently, promote sustainable mobility with innovative products, and offer an

outstanding working environment for multitalented specialists and managers at our company. This ensures our long-term success and competitiveness. The basis for our actions is formed by ethical principles that apply to all employees, managers and the Executive Board members. Throughout the whole company, we uphold and protect human rights, which for us provide an important foundation for responsible action.



1.1 Sustainability strategy

We have implemented sustainability in our business practices and pinned it as an overriding principle. In line with our sustainability strategy, we strive to make continuous progress in all areas of CR activity.

We want to generate sustainable added value and achieve this primarily through sustainable products. We are an innovative provider in the aircraft engine sector. Climate change, mobility and scarcity of resources are global challenges facing society, politics and the economy and influence our business. Consequently, we have placed product responsibility at the heart of our sustainability strategy, with which we can make our largest contribution to sustainable development. Our sustainability strategy encompasses all areas at MTU in which the key topics we have identified have measureable effects (see Materiality matrix). Our strategy takes into account upstream added value and downstream use of our products.

Sustainability as a corporate objective

In order to integrate our responsibility even more firmly into MTU's business operations, in 2015 we incorporated it into our corporate goals for the upcoming financial year. It states: "Sustainability drives our actions."

Materiality analysis

Which topics are relevant for MTU and its business, and which are relevant for its stakeholders? We identify important sustainability topics based on a materiality analysis that we carry out each year. In this way, we recognize in good time new challenges for our business or anticipate what is expected of us and then align our activities with that. We take these relevant topics and insert them into a matrix. This materiality matrix weights the topics according to their importance from an internal company perspective and from the point of view of our most important stakeholders. In 2015, we conducted a materiality analysis during an internal workshop with the CR coordinators.

MTU's materiality analysis led to several changes. We have differentiated product responsibility topics more strongly in order to emphasize their importance and increase visibility to stakeholders. This allows us for instance to better illustrate aircraft noise, a very important issue for us and our stakeholders. As a result, the topical issue of environmentally friendly engines has been divided up into fuel efficiency of products, noise emissions of products and exhaust emissions of products. Product quality is the only new individual topic in the matrix and has a high degree of relevance. This topic was previously part of product safety. We want to weight compliance, human rights and responsible sourcing even more heavily, and have ranked them significantly higher within our strategy. Regional dialog will be incorporated into the new topic of stakeholder dialog, which encompasses all MTU stakeholder groups. From now on, joint research

"We take a long-term approach to value creation and link it to MTU's sustainable development. Our responsibility towards the environment and society is an integral part of our business operations."



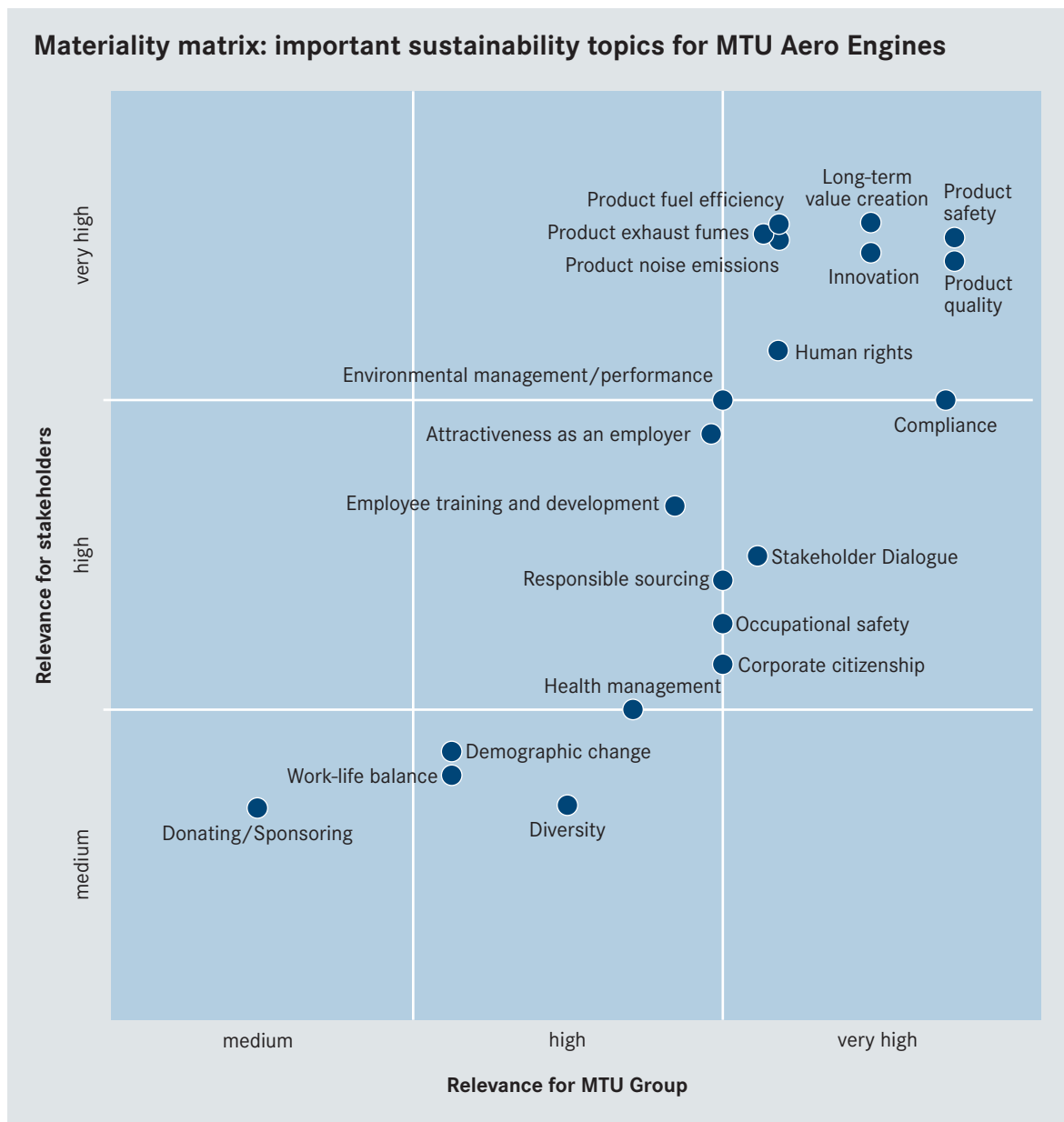
Reiner Winkler
Chief Executive Officer
MTU Aero Engines AG



Dr. Rainer Martens
Chief Operating Officer
MTU Aero Engines AG



Michael Schreyögg
Chief Program Officer
MTU Aero Engines AG



ventures will be included under social commitment and long-term value creation. Following the workshop, we also adjusted our online stakeholder survey to reflect the new matrix. Stakeholders have been able to assess and evaluate the changed topics on our website since the beginning of May 2016.

MTU's CR stakeholder survey:

<http://survey.mtu.de/corporate-responsibility>

We act on stakeholder feedback. In the assessment of important topics for MTU, the results of our survey from 2015 have shown that human rights, occupational safety, employee training and development, corporate citizenship and diversity have increased in relevance. These have been taken into account in the current materiality matrix.



We use a multi-stage technology process to develop the basis for new engine programs. MTU is contributing the turbine center frame to the GE9X for the new Boeing 777X.

Sustainability risks

MTU has established appropriate risk management and risk controlling that incorporates sustainability risks into the evaluation, such as product, environmental or compliance risks. We have reported extensively on the risks and opportunities in the Annual Report 2015 (Risk and opportunity report, pp. 121–133).

For MTU, any risk of possible effects from climate change lies primarily in restrictive environmental protection policy that limits air traffic and could therefore lead to a decline in sales. However, somewhat stricter environmental regulations can provide opportunities because MTU can win additional market share with its eco efficient products.

We continuously analyze risks and opportunities created by climate change, for example through workshops organized by the German Aerospace Industries Association (BDI) or via studies about the long-term future of aviation carried out by Bauhaus Luftfahrt. Internally, we determine and manage our product-related sustainability risks using a defined, multi-level technology process. On the first level, we investigate drivers of future aviation, such as stricter environmental regulations due to climate change or dwindling resources. At the same time, we search for new technological possibilities using a technology radar. For new engine concepts that are to be

ready for the market in the next couple of decades, we define pilot concepts. These are tested, evaluated and prioritized in studies. From these prioritized pilot concepts, we derive the necessary enabling technologies that have to go into development right away. Pilot concepts that already have a specific market are elaborated in further detail to become advance product designs. These ultimately form the basis for actual technology developments and new engine programs.

Further information

- *about sustainability risks: Chapter 1.4 Human rights, 2.2 Compliance, 2.3 Supply chain*

1.2 CR management

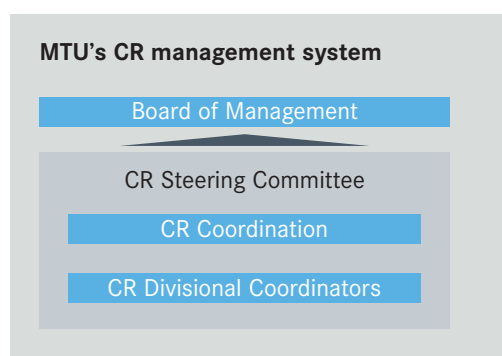
To drive sustainable development both inside and outside of MTU, we have named CR officers in the various areas and functions. They work with a central steering committee and CR coordination team to implement the sustainability strategy and its goals throughout the company.

We govern our sustainability strategy, sustainability performance and sustainability goals by means of a CR management system. The CR steering committee is an MTU-wide body under the supervision of senior management. The steering committee reports once a year directly to the Executive Board, which decides on the next steps in the sustainability strategy. As the highest decision-making body, the Executive Board is responsible for sustainability at MTU. A central CR coordination team supports the implementation of the sustainability strategy in CR activity areas and oversees stakeholder communication regarding CR topics.

The CR specialist coordinators have an important task: they work up CR measures in their areas, implement them, and are responsible for monitoring the defined goals. In this way, they are crucial in designing the strategy and its further development. In the long term, we plan to expand the network of specialist coordinators to include other MTU locations.

Using an integrated database, the CR specialist coordinators report validated key performance indicators and information about commitment to sustainability and progress achieved to the central CR coordination team. Furthermore, the CR bodies meet several times a year to exchange information, coordinate measures and approve goals.

To increase employee awareness about sustainability and to inform stakeholders about our strategy and our goals in a more targeted way, we are launching CR training for selected areas. In fall 2016, we will start training for purchasing employees, among others.



Employees play an important role in helping MTU implement sustainability.

1.3 Ethics and integrity

Ethical principles form the basis of our work and business relationships and are binding for all employees, managers and Executive Board members.



Of fundamental importance to us is the need to safeguard human rights; to observe labor laws; to maintain fair working conditions, business relationships and high health and safety standards at work; to refrain from corruption; and to ensure employees have suitable qualifications. Managers have a particular responsibility and act as role models when it comes to observing laws, regulations and internal guidelines.

Code of Conduct

A Code of Conduct ensures sustainable and responsible behavior throughout the MTU Group, both within the company and in its dealings with the outside world. The principles address:

- Integrity
- Conflicts of interest and insider trading
- Responsibility in industrial relations
- Environmental protection
- Fair business practices

These principles apply to all employees throughout the company. New employees receive a copy of the Code of Conduct when they begin work at MTU and sign a statement that they have understood those rules and pledge to follow them. We also discuss the Code of Conduct during the introductory week for new employees at all European locations. Furthermore, in cooperation with the compliance organization, we regularly train selected areas in the Code of Conduct. In 2015, we trained 2,247 participants on compliance matters over the course of 449 training days at all German locations. Additional training was held for 24 participants at North American locations and subsidiaries.

Behavior that violates laws or regulations is not tolerated by MTU, and any detected violations will be punished. If stakeholders suspect any improper behavior, they can contact an ombudsman confidentially. As in 2014, no violations of the Code of Conduct were reported in 2015.

These internal measures have been supplemented by the Supplier Code of Conduct with the same standards for procurement.

Further information

- *about the Code of Conduct for employees and reporting procedures: Chapter 2.2. Compliance and chapter 5 Social and labor standards*
- *about the Code of Conduct for suppliers and our responsible sourcing approach: Chapter 2.3 Supply chain*

MTU principles

An overarching set of principles under the motto “We help shape the future of aviation” is a major component of MTU’s corporate culture and helps the company to act in a consistent, reliable manner. It describes the company’s direction as well as its basic goals and values.

It is founded on five pillars:

- Products, technology and growth
- Cooperation and conduct
- Employees and management
- Partners, customers and shareholders
- Environment and society

For each of these pillars, principles have been formulated that express the related values and guidelines. These also apply for all employees worldwide. MTU’s world changes constantly—both the company and its surroundings. We incorporate these changes into our principles and revised them to reflect that in 2015. The current MTU principles are communicated to employees using corporate communications media channels and dialog events.



The MTU Principles summarize the company's values and objectives, accompanied by a dialog picture to illustrate the MTU world.

International standards

In the implementation of CR, MTU follows internationally recognized principles. The company joined the UN Global Compact in 2011 and as a member, acknowledges its responsibility for protecting the environment, promoting human rights, upholding labor standards and combating corruption. This pact between international corporations, NGOs and the United Nations was drawn up with the goal of making globalization more socially and ecologically compatible. As an active member, we report annually on our observance of the Compact's ten principles and on the progress we have made. The present Sustainability Report integrates this Communication on Progress. A cross-referencing of the report's contents to the principles of the Global Compact can be found in the GRI Index in the Notes.

We are guided by the following internationally recognized principles

- The ten principles of the UN Global Compact
- The UN's Universal Declaration of Human Rights
- The principles set out in the International Labour Organization's (ILO's) core labor standards
- German Corporate Governance Code

Responsible corporate governance

As the executive body of MTU, the Executive Board's goal is to create sustainable added value, on its own responsibility and in the company's interest, taking into account the interests of its stakeholders. In coordination with the Supervisory Board, the Executive Board decides on the

company's strategic direction, sees that it is implemented and ensures that an appropriate risk management and control system is in place. It reports to the Supervisory Board in a regular and timely manner on existing opportunities and risks and how they are developing.

The Executive Board is also responsible for the measures taken to comply with laws and regulations and the company's own guidelines. In Germany, where the company has its headquarters, the rules for responsible corporate governance are laid down principally in the Stock Corporation Act (AktG), in the Co-Determination Act (MitbG) and in the German Corporate Governance Code (the Code). MTU complies with all recommendations of the German Federal Ministry of Justice's Corporate Governance Code (version dated May 5, 2015) with one exception regarding subsequent changes to the remuneration for the Executive Board, because a new system was implemented on January 1, 2016. Pursuant to recommendations of the German Corporate Governance Code, we have aligned Executive Board remuneration with the long-term success of the company.

Further information

- *about corporate governance: Annual Report 2015, page 32 et seq.*
- *about management board compensation: Annual Report 2015, page 38 et seq.*

1.4 Human rights

MTU respects the internationally proclaimed human rights set out in the United Nations' Universal Declaration of Human Rights and ensures that they are safeguarded within the company. We also require all of our suppliers to support these fundamental human rights.

MTU is committed to respecting the individuality and dignity of all, maintaining equality of opportunity in recruitment and preventing discrimination. The company promotes employment diversity and the integration of employees with disabilities. As the employer of some 9,000 people worldwide, we create fair working conditions based on legally binding employment contracts. This includes the right to unionize and to adopt collective agreements. As such, it is built into our Code of Conduct for employees. Furthermore, as members of the UN Global Compact, we have pledged to uphold human rights.

In the materiality matrix, human rights are high on the agenda for the company as well as for our stakeholders. We see a link between the topic of human rights and the employees at our locations and also at our subsidiaries. MTU addresses the issue of human rights in the supply chain through a responsible sourcing policy. We also expect our business partners to uphold human rights as a basis for long-term cooperation. The key instrument is our suppliers' commitment to MTU to protect human rights in their own area of responsibility and to not be complicit in human rights abuses. This is enshrined in all MTU procurement contracts as a matter of course.

Risk management and assessment

MTU considers the risk of human rights violations occurring in the company's business operations at its European locations (Munich, Hannover, Berlin and Rzeszów) to be low, because they are governed by the provisions of German and Polish law, which vouchsafe human rights. In the reporting period, there were no complaints relating to a human rights infringement via internal reporting channels and no information about violations at suppliers. MTU has taken steps specifically to increase transparency in the supply chain to prevent conflict minerals from getting into MTU products. In addition, no business activity

containing a risk of compulsory or forced labor could be detected during the reporting period.

An essential preventative measure is employee training, especially the training of focus groups on the MTU Code of Conduct.

Further information

- *about human rights aspects in responsible sourcing: Chapter 2.3 Supply chain*
- *about Code of Conduct: Chapter 1.3 Ethics and integrity*
- *about training: Chapter 2.2 Compliance*



1.5 Stakeholder dialog

We aim for a proactive stakeholder dialog and are in continuous discussion with our stakeholders about sustainability topics. We act on suggestions, expectations and criticism and respond in an open dialog based on mutual trust. In our stakeholder dialog, we can also elicit new topics and challenges in a timely fashion.

Stakeholders are individuals, groups or organizations that have a reciprocal relationship with MTU. Our key stakeholders include employees, customers, business partners, suppliers and shareholders. We are also in regular contact with representatives from science and research, analysts, journalists, politicians, industry associations, employee representatives, our neighbors and local government authorities.

An important instrument for MTU as it seeks to determine the expectations and demands placed on the company regarding relevant CR topics is an ongoing, open and international stakeholder survey. With it, we present our sustainability strategy and open it up to discussion and evaluation. In the reporting period, we have revised the survey to reflect the results of our internal materiality analysis.

MTU's CR stakeholder survey:
<http://survey.mtu.de/corporate-responsibility>

Conversely, assessments and opinions from the survey are incorporated into the materiality matrix on the stakeholder axis. With the new survey, we expect to better identify measures and improvements in the CR areas of activity from an










external point of view. Furthermore, to involve the stakeholders more closely and gather feedback, we have established communication channels and forms of dialog specific to the various stakeholder groups.

We take up and investigate topics that came to our attention in 2015 through the CR stakeholder survey or other communication platforms. These topics were primarily concerned with eco-efficient engines in product responsibility, compliance, MTU as an attractive employer and corporate citizenship as a regional responsibility for locations.

We want to intensify our dialog even further in the future through CR training courses for employees in roles that involve direct contact with relevant stakeholder groups. We also wish to intensify our dialog with employees at MTU about CR; to that end, we are planning a sustainability action day at MTU's Munich location for next year so we can better inform employees about responsible behavior and encourage it.



In our stakeholder dialog, we engage with the expectations and demands of our stakeholders.

Stakeholder dialog		GRI G4-24, 26
Stakeholder	Topics	Forms of dialog
Employees 	<ul style="list-style-type: none"> • Health and safety • Career and advanced training opportunities • Compensation and Benefits • Work-Life-Balance • Diversity & Equality of opportunities • Co-determination 	<ul style="list-style-type: none"> • Internal media • Employee surveys • HR services • Dialog and information events • Company suggestion scheme
Business partners and customers 	<ul style="list-style-type: none"> • Product quality and safety • Sustainable technologies • Product fuel efficiency • Human Rights • Compliance 	<ul style="list-style-type: none"> • Voice of the Customer • Trade fairs • Corporate communications media channels
Suppliers 	<ul style="list-style-type: none"> • Product quality and safety • Sustainable technologies • Product fuel efficiency • Human Rights • Compliance 	<ul style="list-style-type: none"> • Voice of the customer • Trade fairs • Corporate communications media channels
Capital market 	<ul style="list-style-type: none"> • Product innovation/eco-efficiency • Responsible corporate governance • Human rights • Compliance • Environmental protection • Risk management • Supplier management 	<ul style="list-style-type: none"> • Annual General Meeting • Conferences and roadshows • Investor discussions • Trade fairs • Ratings • Financial communications
Science and research 	<ul style="list-style-type: none"> • Developing new technologies • Promoting research and teaching • Networking between industry and research • Study of engineering and scientific disciplines • Recruiting 	<ul style="list-style-type: none"> • Joint research projects • Work in MTU centers of excellence • Trade fairs • Visits from university student groups • Presentations/discussions at universities
Media 	<ul style="list-style-type: none"> • Innovation and technologies • Aviation sector/eco-efficiency • MTU as employer • Financial • Site development • Compliance 	<ul style="list-style-type: none"> • Press releases • Press conferences and briefings • Plant tours • Internet/Social Media • Trade fairs
Region 	<ul style="list-style-type: none"> • Social commitment • Environmental protection • MTU as employer • Site development • Compliance 	<ul style="list-style-type: none"> • Museum open house days • Community partnerships • Internet/Social media
Politics, public agencies 	<ul style="list-style-type: none"> • Developing and promoting technology • Environmental protection, eco-efficiency • Political frameworks and regulations • Mobility concepts • Site development • Demographic change • Globalization • Compliance 	<ul style="list-style-type: none"> • Parliamentary evening • Plant visits • Trade fairs • Political discussions • Background talks • Visits by political delegations
Associations and organizations 	<ul style="list-style-type: none"> • Eco-efficiency • Promoting innovation and technology • Economic and labor policies 	<ul style="list-style-type: none"> • Meetings and committees • Participation in forums and events



Political dialog

The German aviation industry is greatly affected by political decisions at the national, European and international levels—more so than many other sectors. To stay informed about developments in the political administration sphere that are relevant to MTU, we regularly meet with legislators and decision-makers in ministries at the EU, federal and state levels as well as in subordinate government agencies and the German armed forces. Topics include innovation, technology development and promotion, environmental protection, noise reduction, the social relevance of air transport, site development, economic and labor market policies, and support for exports. We represent industry-specific interests through membership in associations, including the German Aerospace Industries Association (BDLI) and the Vereinigung der Bayerischen Wirtschaft e.V. (Bavarian business association).

All activities are subject to the applicable laws and guidelines and the MTU Code of Conduct. We do not make any financial donations to political parties; all donations are subject to approval from the Executive Board. To ensure these requirements are met, MTU's office in Berlin organizes and advocates a dialog with political and administrative bodies.

Organizations of which MTU is a member

Through numerous memberships, we contribute our expertise to a range of specific issues.

Selected list:

- Association of German Engineers (VDI)
- Aviation Initiative for Renewable Energy in Germany e.V. (aireg)
- Bauhaus Luftfahrt e.V.
- bavAIRia e.V.
- Chamber of Commerce and Industry for Munich and Upper Bavaria (IHK)
- Deutsches Verkehrsforum e.V. (industry association for all modes of transport)
- Employers' Associations for the Bavarian Metalworking and Electrical Industries (bayme and vbm)
- Enterprise for Health
- European Aerospace Quality Group
- Federation of German Security & Defence Industries (BDSV)
- Forum Luft- und Raumfahrt e.V. (forum for the aerospace industry)
- Friends and Sponsors of the Deutsches Museum
- German Aerospace Center (DLR)
- German Aerospace Industries Association (BDLI)
- German Association of Environmental Management e.V.
- German Society for Aeronautics and Astronautics (DGLR)
- IATA Strategic Partnerships
- Münchener Bildungsforum gem. n.e.V. (Munich-based network for employee training and HR development)
- Stifterverband für die Deutsche Wissenschaft (sponsors' association for German science)
- Trace International, Inc.
- UN Global Compact
- Vereinigung der Bayerischen Wirtschaft e.V. (Bavarian business association)



2 Economics

Sustainability is the watchword in all of our activities. It relies on the observance of the applicable laws and our own internal guidelines and is also a major reason why our company has been so successful. As a globally active and commercially successful company, we create value for our stakeholders and stand up to our responsibilities even beyond the factory gates.



We involve the supply chain.

MTU's purchasing department manages a total of 4,582 suppliers worldwide and ensures that MTU's sustainability standards are upheld in the supply chain as well. By pursuing an approach of responsible sourcing, MTU confronts the challenges of a complex and globalized system of value creation.

Our economic performance has a positive impact on many levels, both inside and outside the company and in local and global markets. MTU drives progress in innovation, the employment market and industry in general. We provide attractive jobs in high-tech professions for a global workforce of around 9,000 employees and offer numerous training programs for young professionals. We have built up a supply chain in which we cooperate with more than 4,000 suppliers around the world. And we promote sustainable mobility through our innovative product technologies.

The main elements that define our interpretation of sustainable business practices are:

- Sustainable added value
- Compliance
- Responsible sourcing

Sustainable added value is a very important topic of wide-ranging interest to MTU and to its stakeholders, because sustainable, profitable growth has a positive impact on other areas of corporate responsibility (job creation, social change). Compliance, in the sense of observing legal requirements and internal guidelines, is also very important to MTU and applies to all business units. And, finally, responsible sourcing means taking responsibility for the supply chain by means of CR-oriented supplier management.



2.1 Sustainable added value

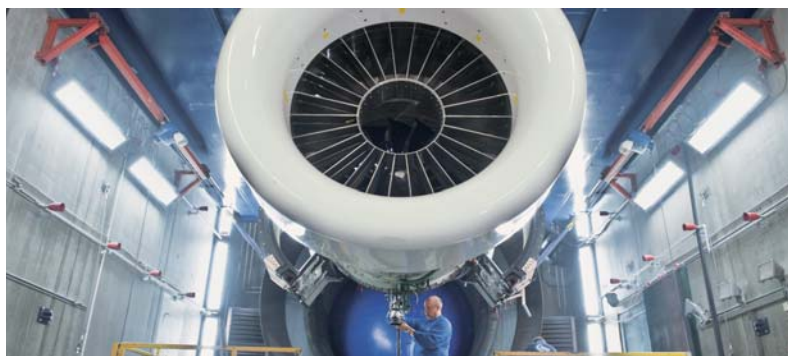
As a listed company, it is our duty to increase the value of our business on a long-term basis. By implementing a business strategy that supports profitable growth, we can be sure of maintaining strong earnings, remaining competitive, and securing our financial assets well into the future.

MTU aims to generate sustainable added value for its stakeholders in the broadest sense, including employees, business partners, customers, suppliers, shareholders, researchers, trade and industry associations, government organizations, the media and society in general. Our overriding goal is to achieve profitable growth across all business units based on a long-term strategy designed to consolidate and expand the company's market position in each sector in which we operate. The resources that underpin this strategy are a future-oriented product portfolio, stable and long-established customer relationships, skilled and motivated employees, and a global presence in growth markets. To implement this strategy, we apply a three-pillar approach: building on our already outstanding technological position, acquiring stakes in new engine programs with growth perspectives, and improving our competitiveness by promoting a culture of continuous improvement. This in turn makes MTU an indispensable partner to OEMs (original equipment manufacturers) such as Pratt & Whitney or GE Aviation, who develop and manufacture their engines in international cooperative networks. Another positive effect of sustainable added value is that it increases the financial resources available to MTU to hire the best employees and subcontractors, invest in local industry and support outreach projects.

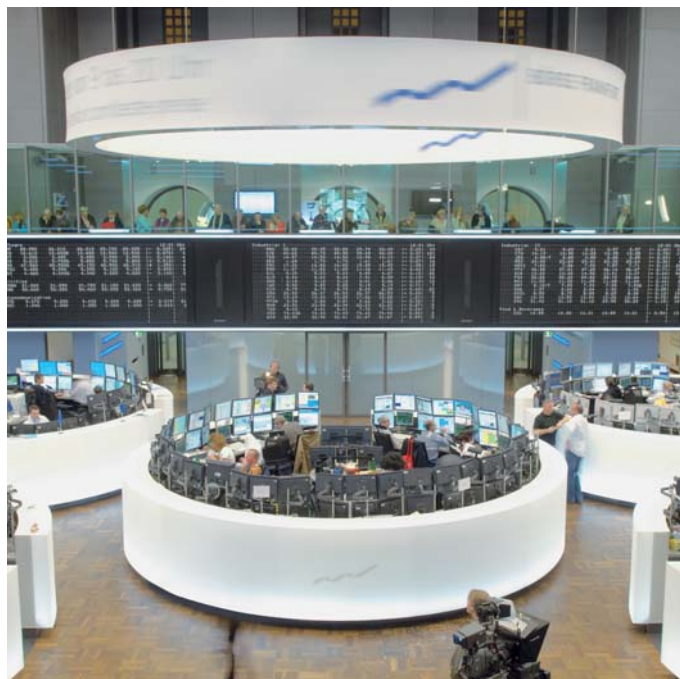
The geared turbofan illustrates the widespread impact of this policy geared toward sustainable

added value. MTU has stepped up its capital expenditure to build up capacity for this new type of engine, which is a resounding market success. The construction of a new high-tech blisk production center in Munich and the expansion of MTU's plant in Poland have enabled the company to safeguard jobs in Germany and create additional jobs abroad. The improvements made possible by the innovative geared turbofan technology (fuel savings and lower CO₂, NO_x and noise emissions) benefit our airline customers both financially and in terms of environmental impact as well as providing ecological benefits by reducing the effect of aviation on climate change. Society in general also benefits because these engines reduce noise nuisance. In other words, our corporate strategy not only creates added value for our customers and partners but also helps to make the global aviation industry more ecologically acceptable and promotes sustainable mobility.

MTU's policy of long-term value creation benefits the company's stakeholders in other ways too. For shareholders, the MTU share is an attractive capital investment offering an increasing dividend. For local communities in the neighborhood of our locations, MTU brings benefits in the form of attractive jobs and social commitment, for instance in the domain of science and education, where MTU participates in research projects that help to strengthen ties between universities and industry.



The geared turbofan is extremely successful on the market and it is much cleaner and quieter, too.



MTU was first listed on the MDAX in 2005, and since then has firmly established its position there.

Economic performance

The key indicators of MTU's economic performance have followed a distinctly upward trend over the past five years. The company's results have increased steadily from year to year. 2015 was yet another outstandingly successful financial year, in which MTU achieved new records for revenues, operating profit and earnings after tax. Revenues increased by 13.3 percent to 4,435.3 million euros. Adjusted earnings were also higher than in any previous year. The company's order backlog amounted to 12.5 billion euros at the end of 2015 (2014: 11.2 billion euros), which corresponds to a production span of nearly three years. It is an advantage for MTU that the engine programs in which it is a partner are precisely those relating to types of aircraft for which the airframe manufacturer also has a high order backlog. Consequently, MTU has once again increased its earnings forecast for 2016.

For MTU, successful operating results go hand in hand with higher dividend payments. Given the excellent results achieved in the financial year 2015, MTU increased the dividend paid to shareholders to 1.70 euros per share, an increase of 17 percent compared with the previous year. In total, MTU paid out 86.9 million euros to its shareholders, in keeping with the company's established, earnings-related dividend policy.

Key financial data (in million euros)

GRI G4-EC1

Capital expenditure on property, plant and equipment and intangible assets

2011*		204.1
2012*		696.7
2013		251.2
2014		395.5
2015		309.7

Revenue

2011*		2,821.7
2012*		3,242.7
2013		3,574.1
2014		3,913.9
2015		4,435.3

Operating profit (EBIT)**

2011*		290.2
2012*		295.4
2013		317.3
2014		333.5
2015		385.6

Income taxes**

2011*		73.2
2012*		93.7
2013		107.1
2014		83.3
2015		103.2

Earnings after tax**

2011*		161.8
2012*		174.6
2013		166.3
2014		195.4
2015		217.6

* Data from 2011 to 2012 have been retroactively adjusted to reflect new reporting standards but have not been reexamined by an external auditor.

** as indicated in the Annual Report

The net value added created by MTU has remained at a consistently high level over the years, and increased to 985.6 million euros in 2015. At 66 percent, the biggest share of this amount was distributed to employees in the form of wages, salaries and other benefits. Payments to lenders and other creditors accounted for 1.4 percent, and a further 10.5 percent was utilized to pay taxes levied by public authorities. The amount reserved to pay a dividend to shareholders amounted to 8.8 percent. After deduction of these amounts, remaining profit of 130.7 million euros was retained by the company to finance future business activities. Profitable growth depends on having adequate financial resources to invest in the future. This strategy enables us to keep the MTU group on a stable trajectory.

Sustainable investment

MTU's performance is also regularly assessed by capital-market analysts and independent experts with regard to non-financial indicators. In the reporting period, MTU was included in the following sustainability indexes and rankings:

- STOXX ESG Leadership 2015/2016
- oekom prime status
- CDP ranking: in 2015, MTU was awarded the status of Germany's Best Improver.

MTU's inclusion in these indexes is further proof of our excellent standing with regard to environmental protection, social commitment and responsible corporate management.



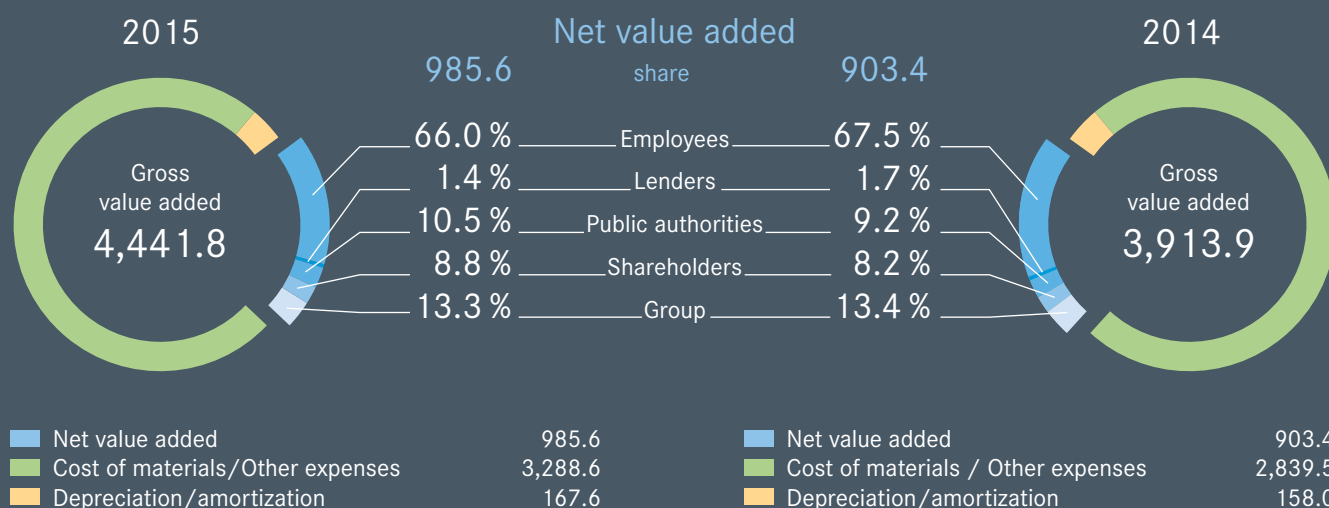
In November 2015, MTU was a CDP award winner in climate change reporting (Best Improver Germany's).

More information

- on all ratings and awards granted to MTU: www.mtu.de

Value-added components, 2015 and 2014 (in million euros)

GRI G4-EC1



2.2 Compliance

The long-term success of any business is founded on compliance with the prevailing laws and regulations and the company's own internal guidelines. We expect all employees, partners and suppliers to act in accordance with these requirements.

The company acts as a fair employer, business partner and client, and advocates transparent competition where all parties are on an equal footing. Integrity and responsible behavior are key values in our corporate culture and are embedded in our Code of Conduct, which is binding for all employees from the boardroom to the shop floor. Compliance strengthens the confidence of our stakeholders and bolsters MTU's good international reputation. As a signatory to the UN Global Compact, we are committed to punishing corrupt behavior within the company and advocating fair, social and transparent business practices with our 8,700 or so partners around the world.

MTU condemns corruption of any kind and all other forms of white-collar crime. It conducts its business within the applicable legal framework, paying special attention to the rules of fair competition, antitrust laws and commercial legislation, and consumer and data protection laws.

Export compliance

We systematically verify all transactions involving the purchase or sale of engine components from or by our suppliers and customers in the OEM segment (sanction list screening in the SAP Global Trade Services (GTS) application). Our military customers include the defense ministries of countries whose armed forces deploy aircraft powered by our engines, and companies that work under contract to these ministries. For every product that we deliver to a military customer, we require an export license issued by the German Federal Office for Economic Affairs and Export Control (BAFA). MTU does not deliver or export any military engines or components of such engines without the express approval of the competent authorities. As a second-tier supplier working under contract to OEMs, MTU is not exposed to the risk of corruption arising from reciprocal deals.

Compliance structures

MTU has established an enterprise-wide set of compliance rules to ensure that behavioral guidelines and statutory requirements are observed throughout the company. As the final decision-making authority, the CEO is responsible for the company's business ethics and anti-corruption

policy. The key instrument for rooting compliance in organizational practices is a superordinate Compliance Board, which was created many years ago and adjudicates on compliance issues throughout the group. It is made up of the heads of the legal, internal auditing and corporate security departments. The Compliance Board holds both regular and ad hoc meetings, and reports directly to the Executive Board and the Audit Committee of the Supervisory Board



"Compliance is the basis for our conduct and our success. We are consistent in observing statutory provisions and internal guidelines. To ensure this remains true in the future, we rely primarily on preventive action, such as employee training and raising awareness."

Reiner Winkler
Chief Executive Officer
MTU Aero Engines AG

every quarter. The group has also appointed special officers to deal with issues such as data security, environmental protection and IT security.

We have set up a confidential global whistleblower system that allows employees and external stakeholders to report suspected cases of corruption or illegal activities or violations of the code of conduct to an ombudsman. The ombudsman can be contacted by email from anywhere in the world or a personal meeting can be arranged. Information for employees on the reporting channels open to them is provided through the in-house media. The identity of the whistleblower and the information he or she imparts are treated in strict confidentiality—even if the suspicion turns out to be unfounded. It goes without saying that whistleblowers acting in good faith are not penalized by the company in any way. In addition, employees can confide in their superiors, the legal department or the appointed security officer. Whenever violations are proven, we always duly punish them. MTU applies the principle of zero tolerance in matters of compliance and accepts no excuses for infringements of the law or of the company's internal guidelines.

Compliance and anti-corruption training

An important area of the Compliance Board's duties is to take preventive measures by raising employees' awareness of possible forms of misconduct. It does so first and foremost by organizing compliance and anti-corruption training courses for all employees and special seminars for managers and employees who hold positions of trust. These courses are offered repeatedly at regular intervals. In the reporting period, employees of selected business units in Germany and North America were invited to take part in such training courses, at which attendance is compulsory. Further courses will be offered in 2016. The selection process was revised in 2015 and the criteria used to identify sensitive functions and the areas of the company of specific relevance to compliance management were redefined. Such changes ensure that we continue to provide adequate training in the areas where it is most needed. The Compliance Board also provides individual advice to employees and members of the Executive Board who request its assistance in urgent cases.

Assessment of compliance risks

Compliance risks arise when managers or employees of the company fail to comply with laws and regulations or fail to observe internal guidelines. These risks can arise in all areas of the company. The Compliance Board carries out regular assessments of all business units with a view to identifying potential risks or suspected contraventions of the law. The appointed officers at group level are responsible for ensuring that specific legal requirements are complied with and that corresponding, uniform standards are established on a company-wide basis. Additionally, MTU's internal auditors conduct regular compliance audits, in which business processes and procedures are inspected for conformity to legal requirements and adherence to internal guidelines. Corruption risks are regularly assessed within the corporate risk management system and additional compliance rules are recommended where necessary. Moreover, MTU is regularly evaluated by Transparency International, a non-governmental organization that promotes transparency and the fighting of corruption. In its latest evaluation, in 2015, MTU was rated B (good evidence) on a scale that extends from A (extensive evidence) to F (almost no evidence). In other words, Transparency International finds that MTU has provided solid evidence of acting in accordance with an anti-corruption program based on ethical values.



No violations of MTU's code of conduct were identified in the reporting period and as in previous years no suspected cases of corruption were notified. Furthermore, no significant charges subject to fines or criminal prosecution were filed against MTU, nor were any such proceedings pending.

Respecting legal and ethical rules and principles is crucial at MTU.

Business partners and compliance

To ensure that business relationships are sound and dependable, the Compliance Board inspects consulting contracts for possible corruption risks before they are signed or extended. The potential consultants are reviewed by TRACE International, an independent provider of due diligence services. For a new or extended contract to be valid, it must be approved by the CEO. Such approval is granted only if the Compliance Board has issued a positive recommendation. In 2015, the Compliance Board reviewed all contracts with sales partners prior to signing, the majority of which were also double-checked by the due diligence experts at TRACE.

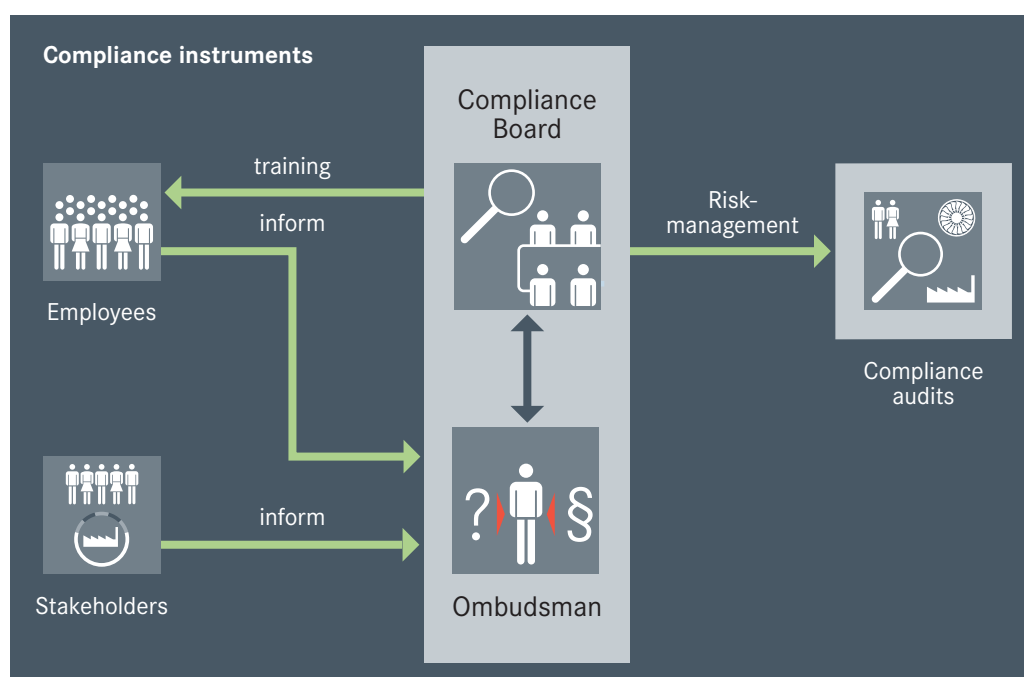
Compliance management along the supply chain is based on responsible sourcing.

More information

- on risk management at MTU: *Annual Report 2015*, pp. 121-133
- on MTU's ranking by Transparency International <http://companies.defenceindex.org>
- on TRACE International www.traceinternational.org
- on responsible sourcing at MTU: *Section 2.3 Supply chain*

Membership in anti-corruption initiatives

- Aerospace and Defense Industries Association of Europe
- UN Global Compact
- TRACE International



2.3 Supply chain

To underpin our responsibility as an engine manufacturer, we aim to apply the principles of sustainable management throughout our supply chain. Responsible sourcing is our answer to the challenges of managing a complex, global supply chain.

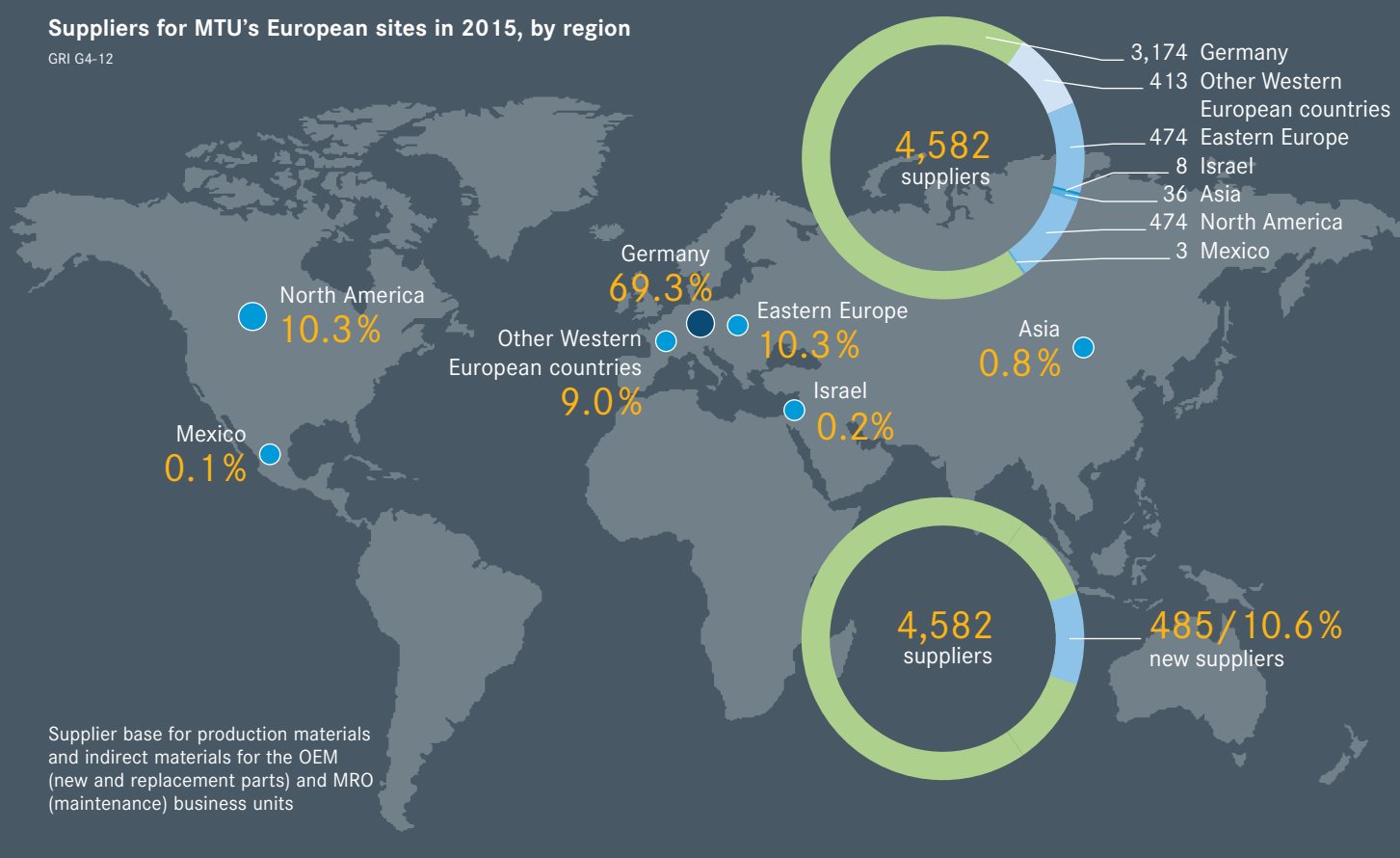
Suppliers represent an important link in our value chain and play a dominant role in our value creation strategy. For this reason, we have established environmental and social standards for members of our supply chain as part of our responsible sourcing policy. We work together with a large number of suppliers and subcontractors. The complexity of present-day supply chains obliges us to concentrate our efforts with respect to sustainability on the elements directly upstream from MTU.

In 2015, we procured goods and services from a total of 4,582 different suppliers. The total cost of these production and indirect materials for the OEM (manufacturing and spare parts) business

and for the MRO (maintenance) business amounted to around 1.86 billion euros. Of this total amount, 45.3 percent was not subject to any purchasing restrictions, unlike the remaining 54.7 percent, where the OEMs impose strict conditions, especially in the maintenance business. The main regions of the world from which the aircraft industry obtains its supplies, from raw materials to finished components, are Western Europe and North America. All cast and welded parts are sourced externally, as are special parts for which MTU doesn't possess the necessary manufacturing expertise, such as electronic control systems. Wherever possible, we source our supplies directly from the producer of raw materials or manufacturer of finished parts. MTU

Suppliers for MTU's European sites in 2015, by region

GRI G4-12



procures only a minor proportion of its raw materials directly. On average, approximately 75 percent of the parts required for commercial engine programs are outsourced.

MTU does not have any business policy that explicitly defines a purchasing quota giving preference to local suppliers. MTU procures materials and services from vendors all over the world. It is nonetheless in MTU's interests to cultivate a strong relationship with German industry and intensify these ties where necessary. Local content, both in Germany and in Poland, is of particular importance when it comes to procuring indirect materials and services, which are only indirectly related to our products. This category covers a wide variety of different goods and services.



In 2015, MTU Maintenance procured commercial maintenance materials from a total of 416 suppliers worldwide.

Purchasing volume in 2015 (in million euros), by region

GRI G4-12



Purchasing volume of production materials and indirect materials by the OEM (new and replacement parts) and MRO (maintenance) business units at the European locations

Sustainability in the supply chain

We have established a binding Code of Conduct for Suppliers that forms the basis of all contracts with our suppliers. It defines the social and environmental standards we require them to observe, which are identical to those we apply ourselves. They include respecting human rights as laid down in international accords, complying with workplace standards, protecting the environment and warding off corruption. The Code of Conduct for Suppliers is based on the ten principles of the UN Global Compact and is a fixed element of all contracts. Each contract signed by a supplier includes the commitment to abide by these principles. The Code of Conduct for Suppliers plays an important role in integrating sustainability issues in the procurement process. We expect our suppliers to communicate MTU's standards to their own supply chains and take measures to ensure that they are complied with.

Suspicious that the Code of Conduct may have been breached can be reported to MTU's ombudsman (ombudsmann@mtu.de). Should a supplier be implicated in charges of corruption, extortion, embezzlement or the utilization of child labor in the execution of a contract for MTU, the collaboration agreement will be terminated without notice. If other principles of the code are violated, the supplier must demonstrate that suitable corrective measures have been initiated and implemented and must guarantee this in writing. No accusations of possible breaches of the Code of Conduct were reported during the period under review. MTU reserves the right to carry out on-the-spot audits to verify compliance with the Code of Conduct.

More information

- on the content of the Code of Conduct for Suppliers: www.mtu.de

Risk management and assessment

MTU prefers to build on long-term relationships with its suppliers. Around 85 percent of the materials it procures are based on contracts with a term of two or more years. All suppliers are vetted before being accepted as a member of MTU's supply chain. In the course of this approval process, the supplier is required to voluntarily provide relevant information and officially agree to comply with the code of conduct. To cover the environmental aspects, we demand proof of certification to standards such as ISO 14001. The guidelines concerning the approval of suppliers are currently being revised with a view to placing greater emphasis on verification of compliance with environmental requirements. Existing contracts with suppliers are regularly

audited on a recurrent basis concerning quality and reliability. In 2015, MTU's purchasing and quality control teams carried out a total of 344 audits on the main suppliers to the company's European sites, including local inspections and surveys. In the reporting period, no transactions with suppliers were identified that represent a significant risk to MTU. Risk assessments are carried out by the company's purchasing experts. If any such risks should be discovered, the approval of the supplier in question may be withdrawn. In 2015, no business relationships were terminated on the grounds of non-compliance with sustainability or similar requirements.

Transparency in the supply chain

MTU's commitment to sustainability includes a transparent value chain that excludes the use of conflict minerals. We never deliberately purchase conflict minerals, but they do find their way into our products due to the complex links at the various levels of our global supply chain. Such minerals include tantalum, tin and tungsten, which can be found in certain components of engines manufactured by MTU. Conflict minerals can cause problems for a company with a responsible procurement policy because many of them are mined in countries of Central Africa where the profits of the government-controlled mining industry are used to finance armed conflicts in which human rights are not respected. According to the provisions of the Dodd-Frank Act applicable to companies listed on stock exchanges in the United States, MTU's American partners have the right to demand that MTU reveals the origin of conflict minerals used in the manufacture of the modules and components it supplies as a subcontractor, and limits its



From a new logistics center at the Munich location, purchasers are able to manage incoming and outgoing goods from a central hub.



A large part of the added value comes from suppliers. Collaboration has led to the implementation of sustainability standards.

sources to mining companies and primary-alloy producers included in the CFS Compliant Smelter List.

In turn, MTU demands that its suppliers should reveal the origin of any conflict minerals they might use, in order to ensure that the value chain contains only conflict-free raw materials beyond the direct supply stage. MTU's procurement guidelines require suppliers to provide information of the source of minerals in accordance with the EICC/GeSi Conflict Minerals Reporting Standard. To date, no infractions have come to the knowledge of MTU that infringe on the principles of the Dodd-Frank Act. The Code of Conduct for Suppliers moreover prohibits the use of child labor. MTU reserves the right to terminate any contract with a supplier using child labor to manufacture products supplied to MTU, without prior notice. In the reporting period, no suppliers were identified as presenting a risk with respect to the use of forced or child labor.

For the first time in 2016, our purchasing staff will be offered training in the compliance aspects of supplier management. In this way, we aim to increase their awareness of the possible risks associated with the supply chain and help them to minimize such risks.

More information

- on the Compliant Smelter List: www.conflictreesourcing.org
- on the Dodd-Frank Act: www.gpo.gov



On average, some 75 percent of commercial engine components are outsourced.

3 Product Responsibility

In a time of limited resources, globalization and climate change, we are committed to sustainable mobility. For us that means developing engines that are more efficient, quieter and safer while producing fewer emissions. Because this represents the greatest contribution we can make to the sustainable growth of the economy and society at large, product responsibility is one of our most important objectives within corporate responsibility.



We develop sustainable products.

Developers from the various engineering disciplines at MTU were involved in designing the high-speed low-pressure turbine. The turbine is a key component of the geared turbofan, an engine that makes takeoff considerably quieter, cleaner and more fuel-efficient.

We understand our product responsibility in the broadest sense, encompassing development, manufacture and repairs in all applications, processes and systems. Through responsible sourcing, we can also monitor the upstream value chain. The material aspects in our vision of product responsibility are

- Product quality
- Product safety
- Fuel efficiency of products
- Exhaust emissions of products
- Noise emissions of products
- Innovations



These areas of focus are of the utmost importance in the materiality matrix, which represents relevant sustainability topics for MTU and its stakeholders, together with long-term value creation. In addition, eco-efficiency is enshrined in the MTU Principles as the principle of sustainable product development, including reduced fuel consumption, noise emissions and pollutants. These Principles also put forth our high expectations for quality. Innovations are strategically important to MTU as a recognized technology leader in its core competencies of low-pressure turbines, high-pressure compressors, repair processes and production methods.

The company embraces environmental aspects of product responsibility as part of its overarching Clean Air Engine agenda, which includes a climate strategy for achieving tiered climate protection goals by 2050. Clean Air Engine also embodies the company's objectives for reducing fuel consumption and engine noise. We use a comprehensive innovation and technology management system to ensure that research work is highly focused and continuously aligned with corporate objectives. At the center of our efforts is the geared turbofan, an engine concept that we co-developed. Having spent the last few decades preparing it for market launch, we intend to use it as a platform to achieve our sustainable product goals. Flawless quality and safe operation of MTU products over the entire life-cycle are the cornerstones for business operations in product development, manufacture and repair. Using a quality management system, MTU ensures compliance with all statutory regulations and relevant standards within the aviation industry.

More information

- about the materiality matrix: Chapter 1.1 Sustainability strategy
- about Clean Air Engine: 3.1 Innovation management, 3.3 Climate strategy, 3.4 Aircraft noise

3.1 Innovation management

MTU's technologies distinguish themselves by being highly innovative. In our role as a global high-tech firm and technology leader within the aviation industry, innovations are essential for our business success, and so form a pillar of corporate strategy.

At MTU, we conduct exhaustive research. We are involved in roughly 150 technology projects, which we methodically align with our objectives. The needs of current and planned engine programs determine the short- to medium-term technology developments while all long-term technology developments are dictated by the Clean Air Engine agenda. In 2015, 210 million euros were spent on research and development, which represented 4.7 percent of revenues. MTU has maintained that level for years.

Our system of intellectual property management ensures that we protect our technological expertise. We file more than 400 patents each year. At the end of 2015, the MTU patent portfolio encompassed 2,947 property rights, primarily in the technology areas of manufacturing, compressors and turbines. Approximately 1,000 employees work directly in engineering worldwide. The company maintains its own research department, which works hand in hand with product development.

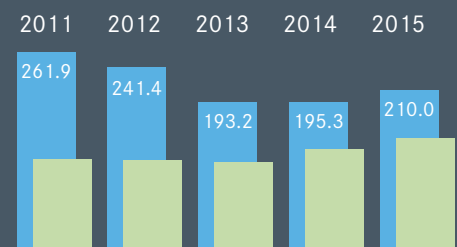
Long-term technology developments come before product developments and are generally the result of national or European research projects. In addition, MTU operates a national network in Germany comprising joint research ventures with select universities on certain topics. We have implemented a defined technology process to develop innovative products and methods.

Environmentally friendly materials

One example of MTU's highly innovative work is the new material titanium aluminide (TiAl), which MTU experts developed with its partners as a lightweight material for blades that can withstand high temperatures. Titanium aluminide combines the properties of metals and ceramics, reducing blade weight by half while maintaining the same reliability and service life. A lighter engine directly impacts fuel efficiency and, by extension, CO₂ emissions. The new material is used in the geared turbofan's high-speed low-pressure turbine, which is subject to high temperatures and pressures. Materials engineers are currently working on further applications and improvements to titanium aluminide, which has been part of series production since 2015 in the PW1100G-JM for the Airbus A320neo.

Investment in product and technology development (in EUR m)

GRI G4-EN31



■ Total research and development costs

■ Research and development costs relating to eco-efficiency goals

The majority of MTU's investment in the development of new technologies and engines goes toward saving fuel and reducing weight. This directly improves the environmental performance of new MTU products, as it reduces emissions of CO₂ and other pollutants. Special technology programs and developments focus on reducing noise.

One important research project during the reporting period was Clean Sky. MTU played a major role in the European Commission's largest-ever aviation research program. Over 600 partners are collaborating on new technologies to improve the industry's environmental performance. With SAGE 4 (Sustainable And Green Engines), MTU has taken on responsibility for one of five Clean Sky engine demonstrators, which was tested at the company at the end of 2015. Previously, aviation experts had developed new innovative drive technologies and incorporated them into the demonstrator. The goal is to show that weight-saving construction methods, designs and materials are at an advanced stage. In 2016, MTU will provide a detailed analysis of the test results before Clean Sky 1 comes to an end at the close of the year. At the same time, MTU is preparing for its successor program, Clean Sky 2, in which demonstrators will again be tested by 2020 for the purpose of trying out new technologies.

MTU's participation in EU research programs (selection)

- Clean Sky, Clean Sky2
- Enoval
- Lemcotec
- E-Break
- ULTIMATE (new)

More information

- about MTU's technology programs and joint research ventures: www.mtu.de
- about joint ventures between MTU and universities/centers of excellence: Chapter 6.1 Science & education

3.2 Fuel efficiency

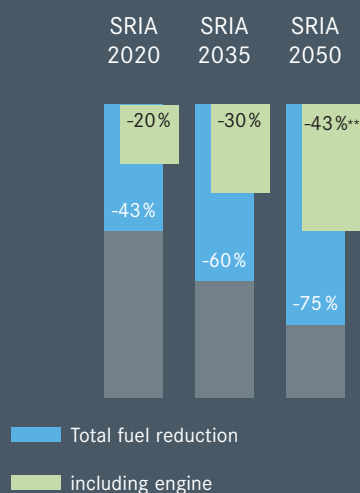
Climate change and scarcity of resources mean that aircraft engines have to use less energy. To reduce fuel consumption, further improvements can be made to the aircraft gas turbine design. MTU is actively engaged in several efforts to do so. The technical foundation is the geared turbofan.

Aircraft engine development focuses mostly on energy efficiency—in other words, reducing fuel consumption in flight. Saving fuel not only minimizes the use of limited resources, but also significantly reduces the operating costs of airlines. Kerosene fuel accounts for around 30 percent of these costs. In addition, energy efficiency is also crucial to the aviation industry's environmental performance because fuel consumption and CO₂ emissions are directly proportional to each other. When less kerosene is burned in flight, the airplane has less impact on the environment. This allows the airlines to accommodate their passengers' growing environmental awareness.

The efficiency of aircraft engines has improved by 45 percent since the 1960s, and additional efficiency increases are in the works. By adopting the new Strategic Research and Innovation Agenda (SRIA), European firms and research institutions are striving to reduce air-traffic fuel consumption, goals which MTU is vigorously supporting as part of its Clean Air Engine agenda.

Energy-efficiency objectives* of the Strategic Research and Innovation Agenda (SRIA)

GRI G4-EN7



* Changes compared to 2000, per passenger kilometer

** While also improving airplane and engine

Orders for airplanes and engines are based on a service life of 20 years, so the current low price of oil will have no impact on how engine manufacturers develop their products or on what long-term decisions airlines will make for their fleets. Investments in new, eco-efficient airplanes continue to be an economical course of action for customers.

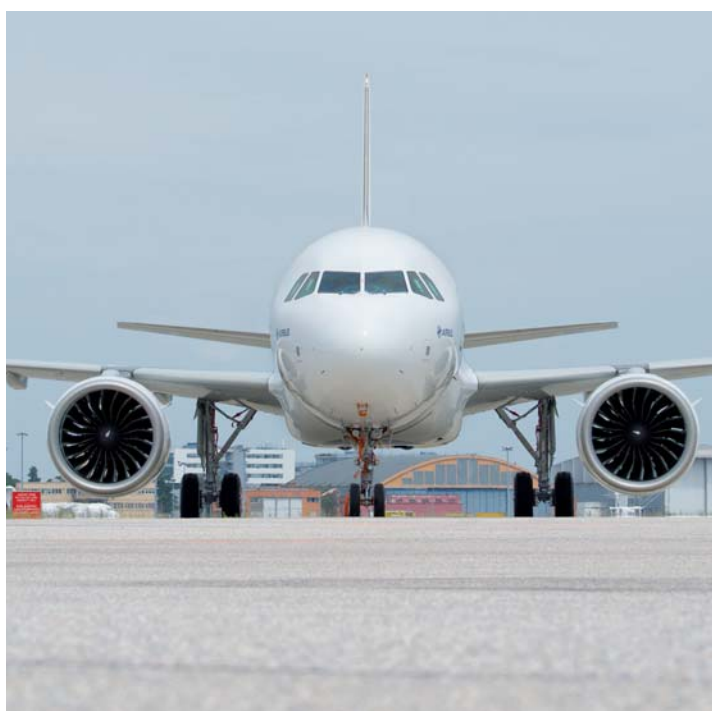
Greater thrust efficiency, higher thermal efficiency, and improvements to component efficiency—all of which MTU is currently working on—can result in greater energy efficiency for the engine. The new generation of geared turbofans already features 15 percent less fuel consumption than the previous model. By putting a transmission between the turbofan and low-pressure turbine, engineers have created high bypass ratios for high thrust efficiency. This allows both components to operate at an optimal rotational speed with greater efficiency, reducing the number of low-pressure turbine stages and, by extension, weight. Having developed this new concept together with Pratt & Whitney, MTU is now delivering the high-speed low-pressure turbine and front section of the high-pressure compressor as core components. In 2015, we achieved the following milestones on the path to industrial-scale production:

- Successful maiden flight of the Mitsubishi Regional Jet using the PW1200G
- Approval of the Airbus A320neo with PW1100G-JM by aviation authorities in Europe (EASA) and the United States (FAA)
- Approval of the Bombardier CSeries with the PW1500G by the Canadian aviation authority

Engine manufacturers are also making upgrades to products already in service. The improved version of the V2500 for short-haul and medium-haul aircraft, the V2500SelectOne, consumes 1 percent less fuel while the V2500SelectTwo consumes 1.5 percent less. Both have a 20 percent longer operating time on the wing.

More information

- about Clean Air Engine: Chapter 3.3 MTU's climate strategy
- about the PW1000G geared turbofan engine family: www.mtu.de



Geared turbofan technology has been selected to power the new Mitsubishi Regional Jet, A320neo and CSeries (clockwise).

3.3 MTU's climate strategy

As a transportation company, we are working on solutions to combat climate change. We have adopted a climate strategy in which we are actively collaborating on reducing the carbon footprint of air traffic. Our products put us in an optimum position to make a difference, because the lion's share of CO₂ emissions is produced during the service life of aircraft engines, which can last several decades. In addition, we plan to improve the net CO₂ impact in production by taking appropriate actions.

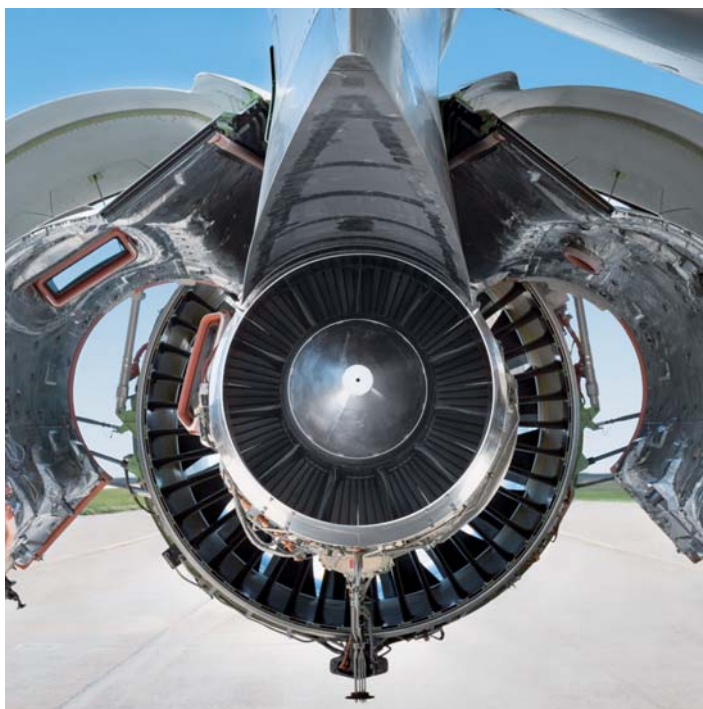
Climate change is one of the greatest global challenges of our time. It is generally accepted that CO₂ emissions caused by human activity are largely responsible for global warming, and that the increasing mobility of the human population is a contributing factor. Global air traffic also contributes to CO₂ emissions. In light of the fact that industry analysts predict that the aviation sector will grow by 5 percent each year until at least 2020, the aviation industry has set specific targets to reduce its impact on the environment. MTU is committed to these targets and aims to meet them by designing engine components that in the medium term will help the aviation industry to grow without increasing its CO₂ emissions, and reduce them in the long term. Our responsibility to protect the planet is anchored in our MTU Principles, where we state our commitment to reducing emissions and limiting consumption of natural resources and energy. These Principles apply in equal measure to our products and our production process.

More information

- about climate protection measures in production: Chapter 4.1 Energy management, 4.2 Emissions

Our climate change strategy will enable us to gain a decisive edge over our competitors. This is because engines with a smaller carbon footprint consume less fuel and thus help reduce customers' costs. The proof that our assessment is correct comes in the form of our new product, the geared turbofan: it is already a success story. More than 7,000 orders and options were in hand by the end of 2015, right before market launch.

In addition, the strategy will help us meet the CO₂ requirements defined by the International Civil Aviation Organization ICAO, which will become mandatory in 2020.

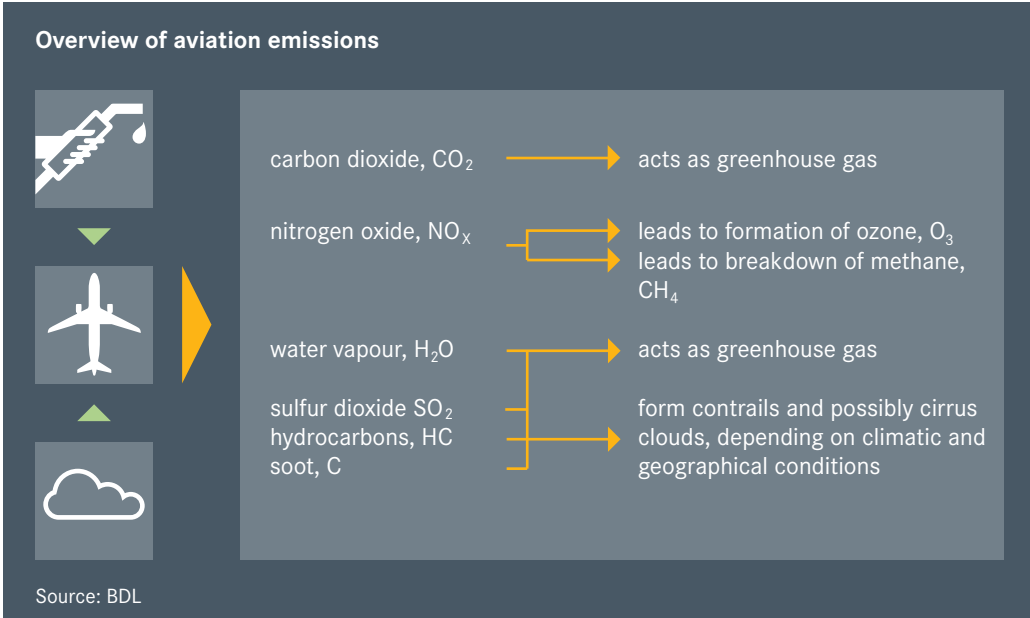


The PW1000G in flight testing: Geared turbofan technology is the technological underpinning of our product climate strategy.



"When it comes to climate protection, we want to be the forerunner. That's why we have set ourselves an ambitious goal: aircraft engines that emit 40 percent less CO₂ by 2050."

Michael Schreyögg
Member of the Executive Board
Chief Program Officer



Aviation changes our climate by generating carbon dioxide (CO₂) and nitrogen oxide (NO_x) emissions and producing cirrus clouds and contrails. CO₂ emissions have the greatest impact on climate while NO_x emissions are the biggest pollutant in a group that also includes carbon monoxide (CO), unburned hydrocarbons and soot.

- **CO₂ emissions** have already fallen by 70 percent per passenger kilometer over the past 50 years. Higher bypass and overall pressure ratios in engines have been the greatest factor at roughly 45 percent.
- **Pollutants** are produced when kerosene is burned in the combustion chamber. But new designs can reduce this. Emissions of these pollutants are subject to the ICAO's legally binding specifications for engines.

- **Contrails/cirrus clouds** are created at high altitudes under certain meteorological conditions. Modifying flight routes or flying at a lower altitude can have an impact, but that is a job for air traffic management.

The main leverage point for MTU consists in reducing CO₂ emissions through eco-efficient compressors and turbines. As the combustion chamber is not part of the company's standard product portfolio, emissions of NO_x, CO, hydrocarbons and soot during flight lie outside MTU's sphere of influence.

Climate targets* of the Strategic Research and Innovation Agenda (SRIA)				
	ACARE 2020**	SRIA 2020	SRIA 2035	SRIA 2050
CO ₂ -emissions, air traffic	-50%	-43%	-60%	-75%
CO ₂ -emissions, engine	-20%	-20%	-30%	-43%***
NO _x -emissions, mostly engine	-80%	—	-84%	-90%

* Changes compared to 2000, per passenger kilometer
** By way of comparison: original ACARE 2020 targets
*** While also improving airplane and engine

Climate protection goals

By adopting the Strategic Research and Innovation Agenda (SRIA), the European aviation industry and research community has committed itself to ambitious savings targets for air traffic.

The International Air Transport Association (IATA), the world's leading airline representative body, has formulated equally demanding targets.

Clean Air Engine 2050

Our climate strategy reflects the voluntary commitment under SRIA, and we consider its targets to be binding. Through Clean Air Engine, MTU has initiated an ambitious three-stage model for climate protection in which engines for future passenger aircraft will produce 40 percent fewer CO₂ emissions by 2050.

Stage 1: 2015

In the first stage, a geared turbofan will reduce CO₂ emissions by about 15 percent. The new engine design, incorporated in the Airbus A320neo (neo stands for new engine option), was brought to market in early 2016. Stage 1 was therefore completed on schedule. The geared turbofan has also been chosen to appear in other new aircraft models, which will be rolled out in phases for volume production by 2020.

Stage 2: 2030





Stage 2 of Clean Air Engine will involve refining the geared turbofan. Engineers want to increase the bypass ratio even more and improve thermal efficiency of the core engine by means of higher

pressure ratios and temperatures. Such actions are intended to reduce the carbon footprint by 25 percent. To that end, MTU will improve its high-speed low-pressure turbine using new technologies such as lightweight high-temperature and ceramic materials. Technologies for high-pressure compressors with an extremely high pressure ratio are necessary for the high total pressure ratio. The engine is expected around 2030 in time for the next generation of aircraft. As part of its preliminary design work, MTU is working on these projects over a broad range of research activities and initiatives like Clean Sky.

Stage 3: 2050

In the third and final stage of Clean Air Engine, entirely new concepts will be put into practice, such as integrated and distributed fans to increase thrust efficiency or highly efficient heat engines. The latter combine gas turbines with piston engines for extremely high pressures and temperatures, or recuperate energy from exhaust gas using heat exchangers. The goal is to enable a 40 percent CO₂ reduction. We have already begun initial studies to examine these concepts, and they should be ready for mass production by 2050.

As an integral part of our research activities, we regularly compile interim reports in which we compare our progress to our objectives and measure our goal attainment. We are currently on schedule with all Clean Air Engine agenda projects and already have achieved set goals.

Clean Air Engine (Claire)				
GRI G4-EN27				
	Entry into Service	Propulsion component	Core engine	
Stage 1 Geared Turbofan	2015	Geared turbofan bypass ratio ~ 12	Gas turbine overall pressure ratio ~ 50	 -15%
Stage 2 Ultra-High Bypass Ratio Engine	2030	Geared turbofan bypass ratio 15-20	Gas turbine overall pressure ratio up to 70	 -25%
Stage 3 Integrated Ultra Efficient Engine	2050	Integrated engine low specific thrust	Highly efficient heat exchanger	 -40%
				 CO ₂ emissions

Alternative fuels

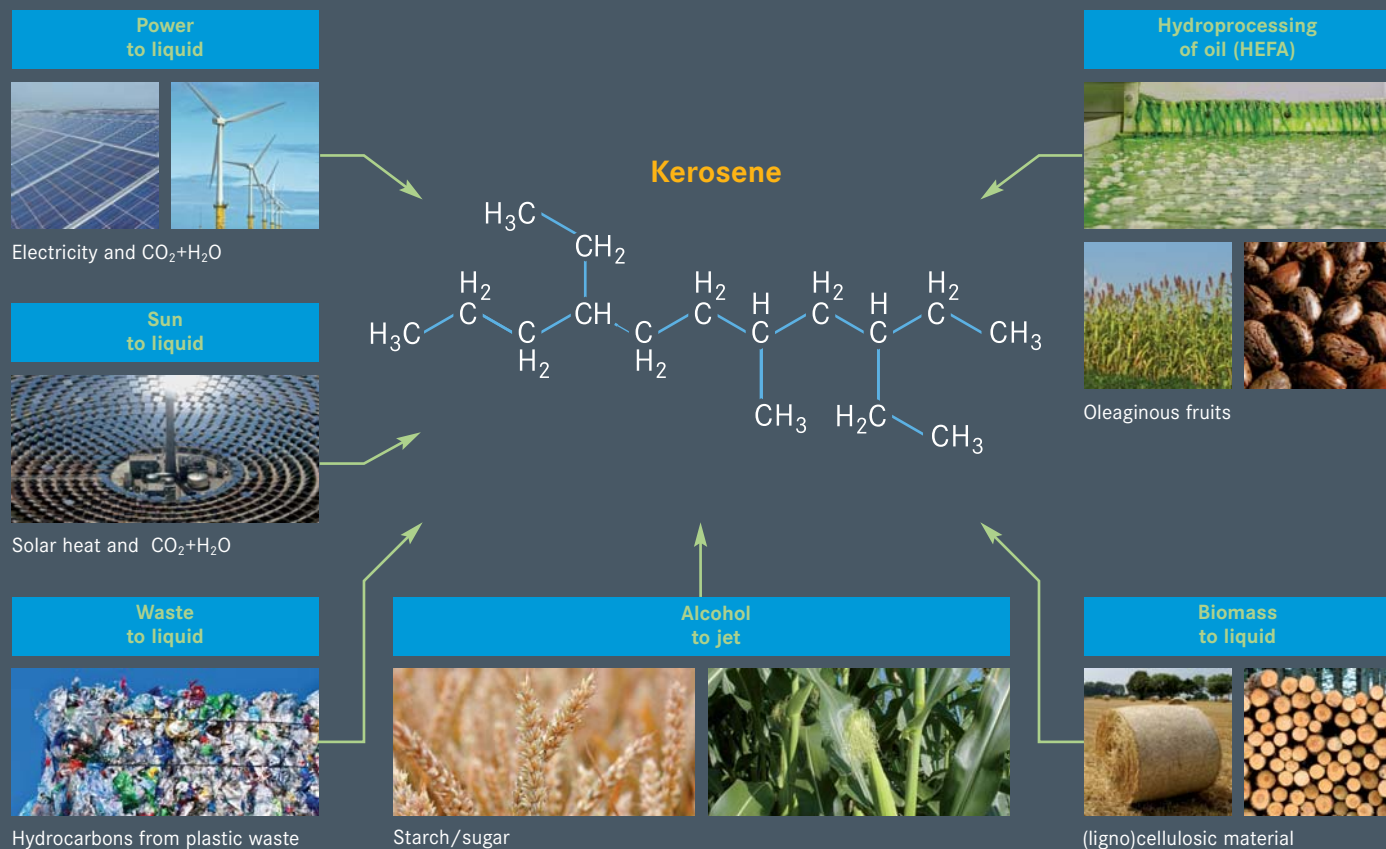
Sustainably sourced fuels constitute another important approach in efforts to reduce aviation-induced CO₂ emissions. Compared to ground traffic, however, their use in aviation is heavily restricted: to factor in range, they must have a very high energy density, a low freezing point—temperatures of -50°C at cruising altitude are typical—and for safety reasons, a high flashpoint.

The decisive factors determining CO₂ reduction are the base substances and the manufacturing processes used to produce these fuels. Bio-based fuels absorb the same amount of CO₂ from the atmosphere while the biomass is growing as they release again during combustion, permitting significant CO₂ reductions compared to conventional kerosene. However, the crops involved must not have a negative impact on food production or compromise biodiversity. Such problems can be addressed by selecting suitable species.

MTU actively promotes efforts to spread the use of biofuels, e.g. through Bauhaus Luftfahrt, field tests, or the Aviation Initiative for Renewable Energy in Germany (aireg e.V.). The latter was established by MTU along with airlines, manufacturers and research organizations to bring together all relevant activities and technical expertise in Germany. In 2015, MTU experts met with important stakeholder groups at an aireg conference to discuss the use of alternative fuels.

Researchers are still at the beginning stages in their effort to develop an economical way to change aviation energy policy. Several second-generation biofuels have currently been approved for flight operations, so-called drop-in fuels having the same properties as conventional kerosene. They can be used in all aircraft and at all airports.

Sustainable alternative fuels (drop-in fuels): Base substances and manufacturing processes



Source: Bauhaus Luftfahrt



One futuristic aircraft concept is the Claire Liner (to be seen here a model of its engine, the Clean Air Engine-Claire)-developed by Bauhaus Luftfahrt, a think tank in which MTU is involved.

Synthetic fuels represent a long-term alternative to biofuels. MTU is part of the SolarJet project, which is in the process of establishing the principles for making solar kerosene. This would allow the production of aviation fuel directly from solar energy in desert areas—without competing with the food supply. The project was awarded the first aireg award for innovative energy technologies in aviation in 2015.

In the InnoTreib project, established by the German Federal Ministry for Economic Affairs and Energy and supported by MTU, researchers are trying to develop “designer” fuels that are better than today’s kerosene: higher energy densities for greater range or reduced emissions by means of a lower percentage of aromatic compounds. For these “near-drop-in” fuels, the combustion chamber and the fuel system of the engine must also generally be overhauled.

MTU is also closely following the issue of electric flight. We believe that current technical capabilities are still several decades away from being able to support electric flight on the scale of a

passenger airplane like the A320. Fundamental advances in the efficiency of batteries and electric engines are still needed to achieve this. Electric drive systems with battery and electric engine are now available for motor gliders and small aircraft. If batteries continue to advance at the same pace, short-range regional aircraft might be possible in 30 years. But at present there are no known battery concepts that would be appropriate for medium-haul and long-haul aircraft. Hybrid drive concepts consisting of a gas turbine with a generator and electric fans, by contrast, are opening up completely new possibilities for lowering aircraft resistance. MTU is now testing these drive concepts as an integral part of the Clean Air Engine stage 3 technology agenda.

More information

- www.bauhaus-luftfahrt.net
- www.aireg.de
- www.solar-jet.aero

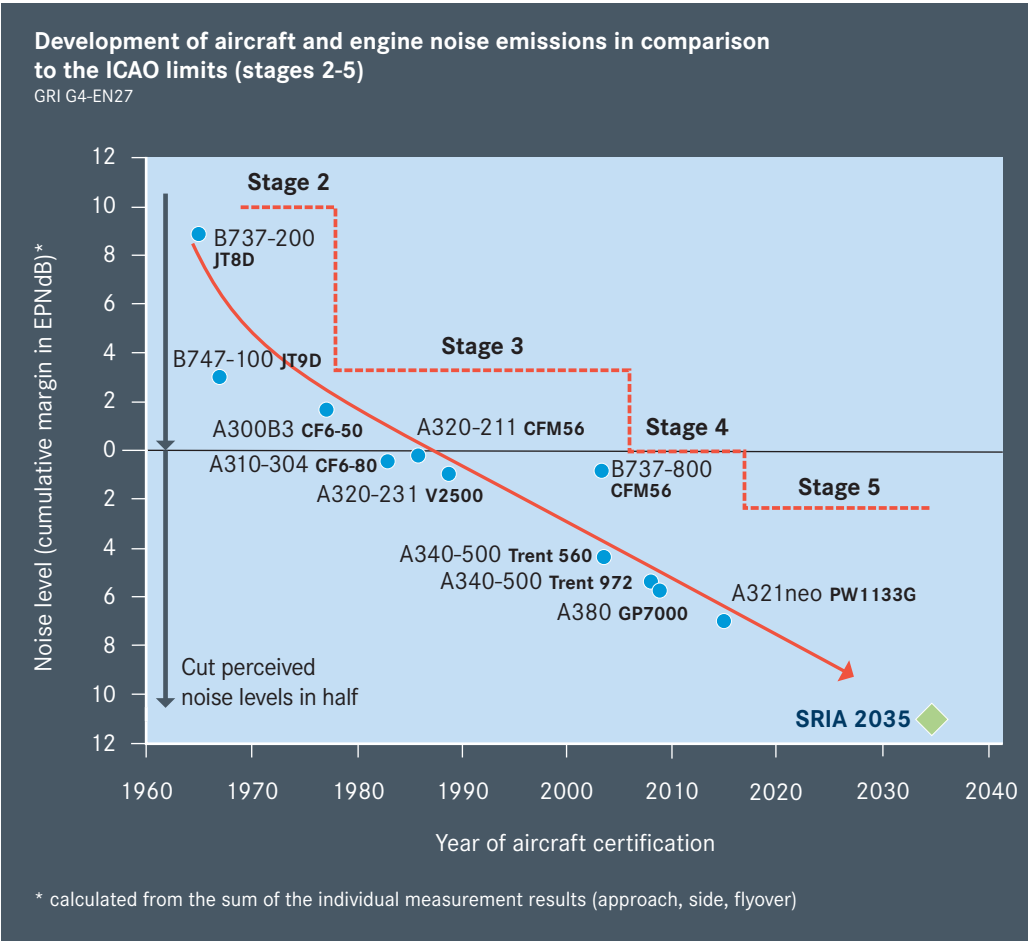
3.4 Aircraft noise

Aircraft noise plays a key role in society’s acceptance of air traffic. Because the engine is one source of aircraft noise, we are using new technologies to reduce the noise emissions from our components.

The noise that aircraft produce also contributes to the environmental impact. Engines produce the most noise during takeoff, and most of this comes from the fan and airflow. The aircraft itself is also a noticeable source of noise because of turbulence generated at the fuselage, wings and landing gear. Since the 1960s, aircraft noise has been reduced by about 17 EPNdB (Effective Perceived Noise Decibels); that is equivalent to around 70 percent. The main reason for this is engines with ever higher bypass ratios. Aircraft and their engines must meet the noise emissions limits set down by the International Civil Aviation Organization (ICAO) as part of the certification process. A new noise standard (stage 5) is currently in preparation and will come into effect in

2018. The new standard will be 7 EPNdB (cumulatively) below the current stage 4. Furthermore, at almost every airport in the world, the fees charged for landing and takeoff are dependent on the noise generated by the aircraft. These policies are putting more and more restrictions on the operation of noisy planes.

Engines in which MTU is involved are always among the quietest on the market, coming in significantly below the legally prescribed limits. Noise reduction is an active goal for MTU engineering. Every time MTU redesigns or optimizes an engine, it incorporates measures designed to reduce noise. Our team of acoustics experts is involved in every stage of product design. The





Engines from the MTU product portfolio: even on their entry into service, the V2500 (left) and CF6-80 (middle) came in beneath the limit imposed by the Chapter 4 noise standard, which was in force at the time.

V2500 for the A320 family and the GP7000 for the A380 represented significant advances when they came onto the market. Both the V2500 and the GP7000 are below stage 4 while the four-engine A380 is even below the upcoming stage 5. The brand-new geared turbofan engine PW1000G in particular significantly reduces noise compared to its predecessor (40 percent), putting it well below stage 5. Because the fan is large and decoupled and rotates slowly, the geared turbofan becomes much quieter. MTU's high-speed low-pressure turbine turns three times faster than a conventional turbine. As a result it does not generate the low-frequency noise that is so poorly absorbed in the atmosphere. The geared turbofan's noise footprint (the distribution of aircraft noise in the area surrounding an airport) is reduced by 70 percent.

Thus the Clean Air Engine agenda is already a major success for us in just the first stage. And future generations of the geared turbofan will be quieter still: our goal is to cut noise by up to 50 percent by 2030 and 65 percent by 2050. Through Clean Air Engine, we are supporting the SRIA goals of reducing aviation noise by 55 percent by 2035 and by 65 percent by 2050 (most goals are intended for the engine).

3.5 Product quality and safety

Quality and safety are the utmost priority in aviation. The law requires safe flight operations. As one of the world's largest subsystem providers in the aircraft engine market, we guarantee fault-free quality and fail-safe operation over the entire lifecycle of our products.

We examine our engine modules for their impact on health and safety throughout the entire life-cycle-development, production and operation. Accordingly, we cover all major stages of a product's service life 100 percent. MTU's experts incorporate all safety and environmental requirements for aviation products as legally mandated by the industry's regulatory authorities. Such regulatory requirements must be met in the early stages of planning new engines for later use, followed by testing to document compliance. This includes being able to guarantee safe operation during a bird strike or hailstorm and complying with strict limits on pollutants and noise emissions. MTU components frequently exceed aviation authority requirements. In addition, the manufacture of engine parts and modules in production halls meets all required standards concerning occupational safety and environmental protection.

Each and every part in the engine must be approved. Our principle is that "Safety takes priority in what we do," which is why we use only approved, fault-free and clearly identifiable components. This refers to parts that have been approved by the appropriate aviation authority, are based on approved development documentation and have been produced or overhauled in compliance with aviation regulatory processes by a certified company. Moreover, the aviation sector has strict rules governing documentation in order to verify the airworthiness of components and engines. There must be no gaps in documentation, which means that the entire product lifecycle must be traceable. We adhere to this principle at each stage of the production process. We have adopted internal policies on the handling and storing of documents, data and records in order to meet the requirements of regulatory authorities, partners and customers.

Engine safety

One way to measure the reliability and safety of aircraft engines is the in-flight shutdown rate (IFSD). This figure indicates how often the engine was forced to switch off per flight hour. Engines nowadays achieve a 5×10^{-6} IFSD rate per flight hour, meaning that an engine has to have been switched off once for every 200,000 flight hours. In other words, the pilot of a two-engine airplane has to switch off an engine once in the span of a hundred years. The reliability of aircraft engines has improved by a factor of 10.

Certifications

MTU has all the requisite approvals and certifications from national aviation authorities to develop, manufacture and maintain flight-ready engine parts and modules. An integrated management system (IMS) certified under EN9100 guarantees compliance with laws and regulations and clear assignment of responsibilities within the company. Corporate Quality is a separate department directly subordinate to the Chief Operating Officer (COO) and reporting quarterly to the Executive Board.

More information

- about MTU's certifications www.mtu.de



In the aviation sector, the entire product lifecycle must be seamlessly documented to provide transparency.

Monitoring

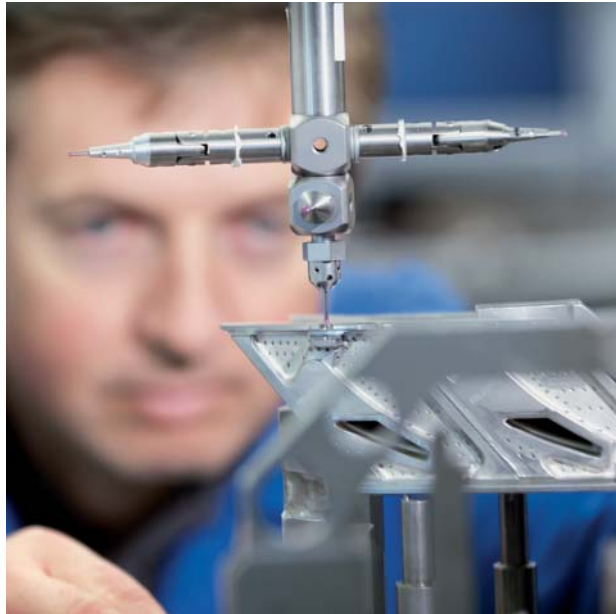
We have implemented comprehensive monitoring and testing processes to ensure compliance with quality and safety requirements. Monitoring takes place throughout the entire value chain. Stringent audit, review and gating procedures are well established across all product phases. In addition, the airplane manufacturer and the airlines conduct field tests on all specifications independent of the manufacturer's own data.

Safety-critical components (engine components are categorized into various safety classes) are subjected to particularly rigorous testing, for example using non-destructive ultrasound and x-ray examination methods. Each component goes through different testing stations during the course of the production process to check that it is being manufactured in precise accordance with set tolerances and to release it for more added value. Manufacturing to the highest quality standards is not merely enormously important for safety reasons, but also for economic ones. Engine components increase in value throughout the course of their production, which means a lot of capital is tied up.

Strict requirements also apply to materials. Fail-safe materials are a basic prerequisite for aviation safety. We employ a comprehensive testing program involving test builds and series tests to verify safe flight operation. All engine components, including all materials we use, must be approved by the aviation authorities.

We comply with our customers' requirements, regulations and laws as well as internal standards throughout the entire production process. Aviation authorities conduct compliance audits to strictly monitor any engine we manufacture, and the customer routinely performs both internal and external audits. Audits at all MTU sites ensure that our standards are upheld worldwide. In 2015, we carried out 468 audits containing quality aspects at the Munich, Hannover, Berlin and Rzeszów locations. In addition, we passed 92 audits conducted by customers and certification bodies. In 2015, there were also no breaches of statutory regulations in connection with the purchase or operation of our products, nor were any fines imposed on MTU.

We have equally high expectations of the quality provided by our suppliers and their vendor-supplied parts. As soon as any finished or unfinished parts arrive they must pass through our goods



MTU employs high-tech testing techniques to guarantee the quality and safety of its components.

inspection department, where we examine them using a wide variety of technical methods before releasing them for further processing. Each supplier must be approved by MTU and is routinely audited by MTU's quality controllers.

More information

- *about supplier management:*
Chapter 2.3 Supply chain



"We guarantee high quality and safety in all our engine programs. Thanks to innovative technologies, we can constantly work on making our products more efficient, cleaner and quieter."

Dr. Rainer Martens
Member of the Executive Board
Chief Operating Officer

Sustainable product lifecycle

During development, production, use and disposal, we test and evaluate the environmental and safety impact over the entire lifecycle of an aircraft engine. Development is the most important thing. Our mission in any collaboration is to design every new engine so that it is more fuel-efficient, less polluting, and quieter than its predecessor.

Development:

Aircraft engines can spend up to 30 years in service. This extremely long service life is a design specification, meaning that during product development, the service life of each component is made to match that of the engine. By developing new technologies and materials, MTU has extended—in some cases, doubled—the service life of these life-limited parts. MTU’s ERCoat^{eco} erosion protection for compressor blades and vanes also extends service life in desert regions while cutting fuel consumption by making these blades wear-resistant. In 2015, MTU introduced a new method to provide corrosion protection for combustion chambers. The patented thermal layer lasts twice as long.

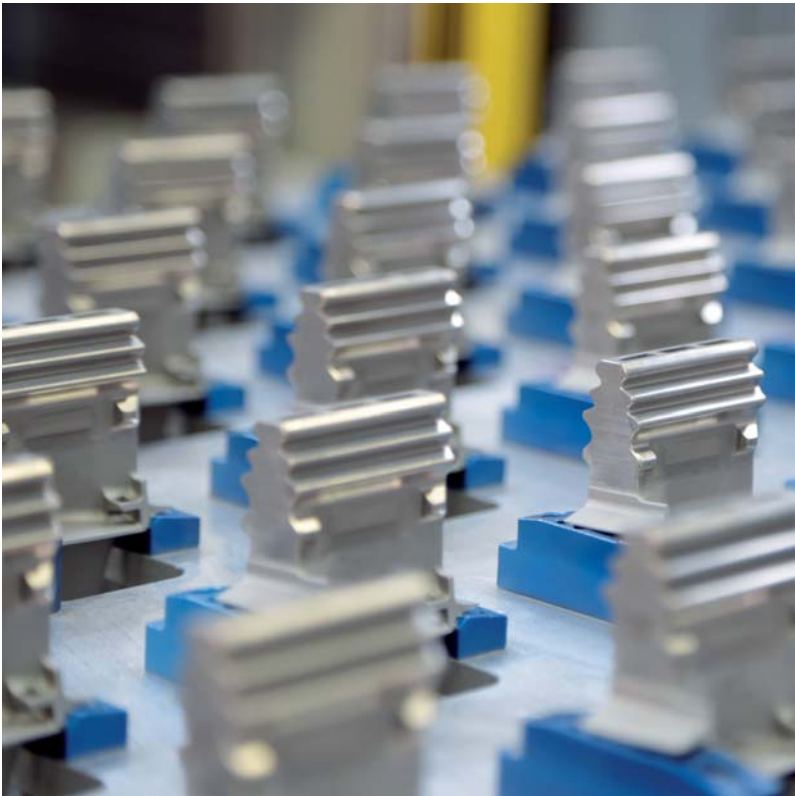
Service life:

Generally, an engine will complete between 20,000 and 30,000 flight hours before it is taken off the wing and has to be given its first overhaul. MTU Maintenance has developed its own innovative repair processes, which gives it capabilities that are unique worldwide. This translates into increased material efficiency and resources saved. MTU is continually expanding this repair capability by developing the special processes required for it. MTU offers MTU^{Plus} Engine Trend Monitoring for efficient and therefore eco-friendly and safe operation in flight.

As a result of non-stop in-flight monitoring of operating parameters, the system can warn of any malfunctions or drop in engine performance so that appropriate repair work can be undertaken at an earlier stage. This reduces damage to materials.

Recycling:

High prices for titanium and nickel, plus some alloying elements such as platinum and rhenium, make engines very valuable, so that they are almost fully reused in different ways at the end of their service life. Components that have not yet reached the end of their maximum service life are reused as spare parts. Certain materials can also be directly employed in non-aviation



Special surface treatments, such as plating, protect against wear and extend service life.

Sustainable lifecycle	
Lifecycle	Actions
Development	• Clean Air Engine
Production	• Environmental management
	• Additive manufacturing
	• Sustainability standards for suppliers
Service life	• MTU ^{Plus} Engine Trend Monitoring
	• MTU ^{Plus} Repairs
Recycling	• MTU ^{Plus} Mature Engine Solutions

applications. Recyclers melt down the remaining materials, for instance, and alloy manufacturers put them back into circulation as metals. As a vendor, MTU has no direct influence over the scrapping of engines, which is carried out by specialist companies. For older engines, we offer our customers tailored solutions for disassembling and recycling components.



Customer orders in Hannover will now be processed with even more speed and flexibility.

Customer satisfaction

Customer satisfaction is a key metric for product quality. It is also important to a company's long-term success. In our new engines and spare parts business (OEM segment), we achieved an on-time delivery rate of 93 percent. In 2016, we expect to increase this rate to 96 percent. We also hope to be recognized again in 2016 with the Supplier Gold Award from our OEM partner Pratt & Whitney, which is given every two years.

MTU Maintenance offers maintenance and additional services for aircraft engines and industrial gas turbines. Most of its customers are airlines, leasing companies and energy producers. To deliver customer care, MTU Maintenance uses a customer relationship management system. One important component of the system is the "voice of the customer" survey, which measures current customer satisfaction. The survey takes place once a quarter for all important sites and products. Through voice of the customer, each customer has the option of providing regular feedback about product quality, service, logistics and

pricing. In turn, we use the feedback to further improve our performance and to position ourselves even more closely in line with our customers' wishes. Thanks to the voice of the customer survey, we can identify areas where there is room for improvement and take suitable action. Our goal is to constantly increase levels of customer satisfaction so that we can remain competitive. Adopting the slogan "Customer first—better every day!" we initiated forward-looking discussions as part of the Response program at the Hannover location in 2015. This will allow us to handle customer orders even faster and more flexibly than ever by implementing greater standardization across the entire engine product range.

4 Environmental protection

Climate change and the scarcity of resources are global challenges we must meet as a manufacturing company. Our response is based around energy-efficient production that minimizes emissions and raw material consumption so that we can make our ecological footprint as small as possible.



We employ sustainable manufacturing. MTU's manufacturing experts have successfully implemented additive manufacturing techniques in industrial engine manufacture. The advantage of 3D printing is its high level of material efficiency that conserves resources.

Environmental protection is an important principle guiding our corporate behavior and, as such, is implemented in our business processes. It is enshrined in our Code of Conduct and in the MTU Principles, and it is established in our annual corporate goals and in a dedicated program of environmental measures.

Our sense of environmental responsibility encompasses product development, manufacturing and repair. For MTU, the following are key elements of our environmental management approach for manufacturing and repairs:

- Energy demand
- Emissions
- Water/waste water
- Waste/recycling
- Material efficiency



The most significant way we can help protect the environment is by means of ecologically efficient products. Through our climate strategy, we are reducing the amount of climate-affecting CO₂ emissions produced during the service life of our products.

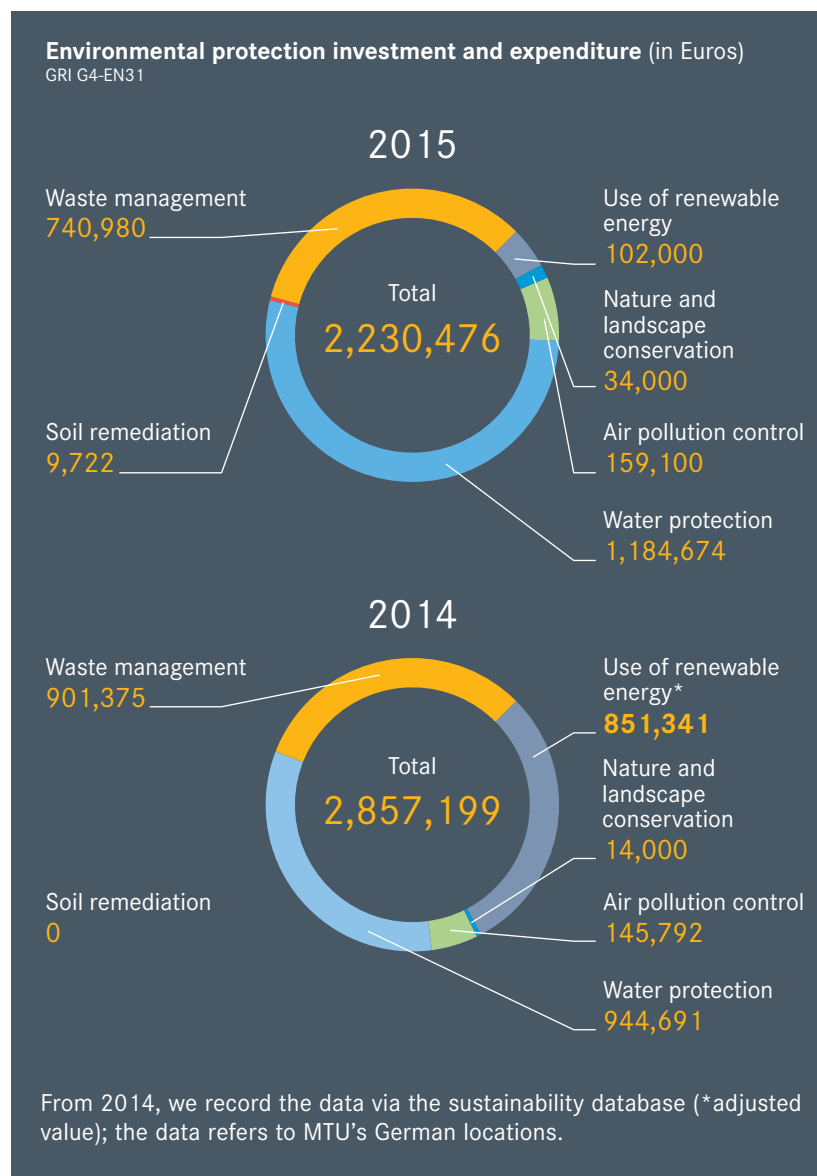
More information

- *about product climate protection:*
Chapter 3.3 MTU's climate strategy

MTU's energy-efficient approach to manufacturing and maintenance minimizes emissions and the consumption of raw materials. Our minimum standard is the observance of statutory regulations and the requirements of machinery and installation licenses. We ensure this by means of regular measurements and calculations. Also, we keep neighborhood noise pollution from the operation of our engine test rigs below the officially prescribed limits. The test rigs are fitted with sophisticated soundproofing equipment. We use resources such as raw materials, energy and water sparingly. This also has the effect of reducing our energy costs. We are aware that the use of resources—and therefore emissions and consumption—are dependent on production capacity utilization. As numerous new engine programs ramp up, we are seeing an increase in manufacturing volumes. In spite of this, we are working to ensure that energy consumption, and therefore emissions, do not rise proportionately. We treat waste and discharge waste water properly and in accordance with legal requirements.

MTU pursues a policy of integrated environmental protection, which consists of:

- Continuous improvements
- Precautionary approach
- Employee involvement
- Restriction of environmental impact
- Careful compliance with statutory limit values and requirements
- Processes that use resources and energy sparingly



We achieve improvements in our energy and carbon footprints through various measures that involve investments. In 2015, MTU invested a total of 2.2 million euros in improving the environmental compatibility of its operating activities (2014: 2.8 million euros).

Certified environmental management

Responsibility for company-wide environmental protection is assumed by the Board of Management. Implementation is carried out through a certified environmental management system with high standards that apply consistently throughout the company. All processes, responsibilities and objectives are defined in the system. Internal standards are binding for MTU's sites; in many

cases, they go further than the legal requirements. The stringent environmental criteria apply to all divisions and processes and are laid down in documented process flows and special standards applying to the company's production units. Dedicated environment departments have been set up at MTU's various sites.

In addition, the European sites have external certifications for environmental management systems in accordance with ISO 14001 or are validated according to the European EMAS regulations. MTU's Berlin site is planning EMAS validation for 2016.

The environmental protection management officer holds a senior position within the company's organizational structure and is responsible for implementing the environmental management system. Individual managers are directly responsible for environmental protection. They are advised and supported in their environmental protection efforts by the relevant specialist departments at their site.

More information

- about certifications: www.mtu.de

Monitoring and assessments

Independent external auditors and environmental consultants conduct annual reviews to confirm implementation of and adherence to the applicable environmental protection requirements. This monitoring is supplemented by internal inspections and audits. MTU's management conducts management reviews to control and steer environmental management in the company and to influence its further development.

In 2015, there were no incidents with a negative environmental impact at MTU's European sites. In such cases, emergency management plans kick in. This includes regular staff drills and instruction on what to do in the event of an emergency. MTU has comprehensive fire protection measures in place that fulfill all legal directives on fire protection. Moreover, no fines for breaches of statutory requirements relating to the environment were levied against the company during the reporting period.

As a principle, MTU acts on a long-term basis in all divisions and areas of the company. With regard to environmental risks, the company takes a precautionary approach. As part of our risk management, we carry out regular analyses of environmental risks at production sites in order to record and avoid them. In our environmental management, we have defined structures and processes and assigned responsibilities. Meanwhile, the company's main production and maintenance locations have a certified environmental management system.

More information

- about risk management: *Annual Report 2015*, p. 121 ff

Discussing environmental impacts and management with stakeholders

We are in a dialog with our stakeholder groups about MTU's environmental impacts. The company involves its employees as important stakeholders in its environmental protection endeav-



On HSE day (Health, Safety and Environment), MTU Maintenance Berlin-Brandenburg also provides information for employees about environmental topics.

ors and promotes environmentally conscious behavior through action days and information campaigns (e.g. Environmental Information Day, Hannover; Trainee Eco Day, Munich; Health, Safety and Environment Day, Berlin). We inform the public annually about our environmental impacts and environmental management through statements issued by MTU for its two largest sites, Munich and Hannover; from 2016, statements will also be issued for Berlin.

In addition, we promote greater environmental protection in industry and business through our membership in initiatives such as the following:

- German Environmental Management Association (B.A.U.M.)
- Bavarian Environmental Pact
- Energy Efficiency Network for Munich and Upper Bavaria
- UN Global Compact
- CDP
- Climate protection agreement among Munich businesses

4.1 Energy management

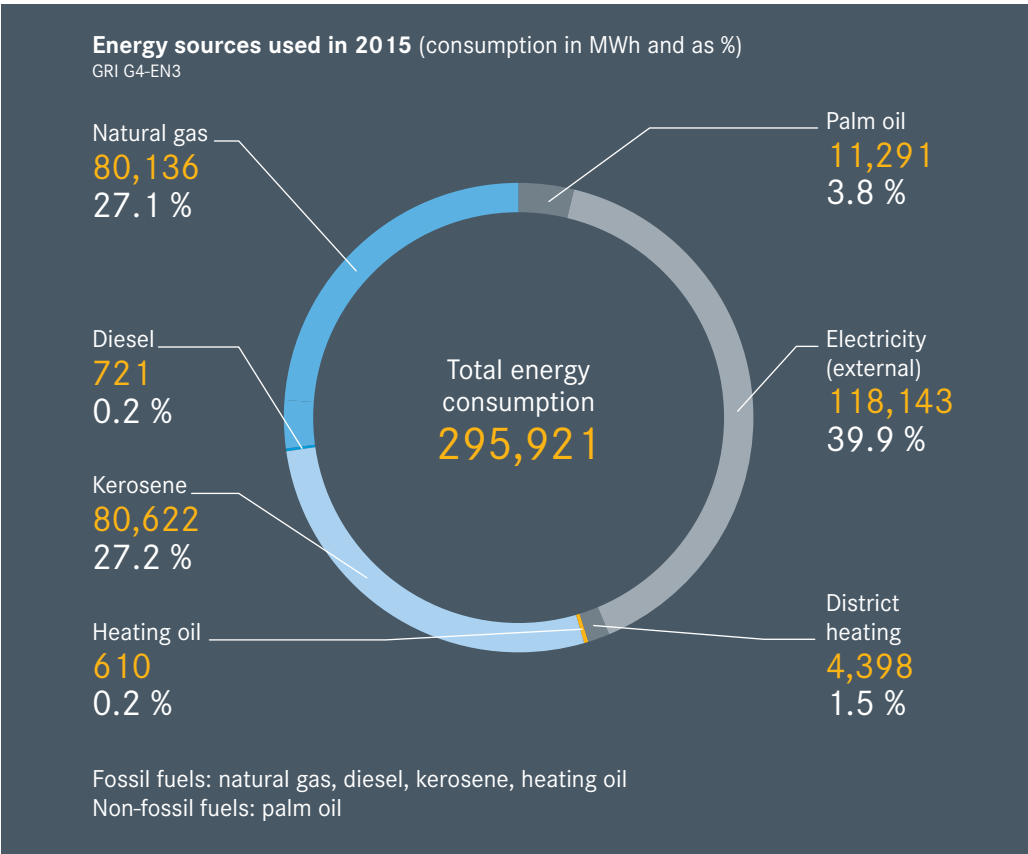
We are committed to the principle of efficient energy supply and, in view of increasing resource scarcity, to limiting the raw materials and energy we need to manufacture and repair our engine products.
















MTU relies on a mix of renewable and non-renewable energy sources and chooses energy resources based on security of supply, cost effectiveness and environmental sustainability. As regards non-renewable primary energy, we use natural gas, the aviation fuel kerosene, diesel, a small amount of heating oil, and an even smaller amount of liquefied gas. We use renewable energy in our cogeneration plant, which runs on vegetable oil. A solar thermal power plant is in operation at the Hannover site. We also achieve greater energy efficiency by using the heat generated during production within a site as thermal energy.

Measures for energy-efficient production

- Using well water for cooling purposes
- Modernizing the district heating network
- Improving thermal insulation
- Using building automation systems
- Using heat recovery systems
- Using renewable energy
- Energy-efficient compressed air supply
- Energy-efficient lighting systems

We have implemented a comprehensive energy management system, with which we manage and control above all the consumption of our main energy sources electricity and natural gas. Because of the new geared turbofan programs (PW1000G engine family), MTU is currently ramping up production, which resulted in higher



Energy supply (in MWh) GRI G4-EN3	2011	2012	2013	2014	2015
Fossil fuels (natural gas, diesel, heating oil, kerosene)					
	120,815	125,667	143,929	124,539	162,089
Non-fossil fuels (vegetable oil)					
	9,811	13,631	9,812	10,134	11,291
Electricity, district heating (external)					
	108,356	107,570	108,362	108,150	118,143
Includes site in Rzeszów, Poland from 2013 onward					

energy demand in 2015 compared to previous years. Kerosene is used as a fuel for engine tests on test benches. The consumption of aviation fuel fluctuates very strongly and depends on the scope of the test run and the size of the engine. For example, the consumption of kerosene at MTU's main site in Munich tripled from 12,000 MWh in 2014 to 46,000 MWh in 2015 on account of a long endurance test on the powerful GP7000 engine for the A380.

MTU has no influence on the type and duration of test runs. By using state-of-the-art computer-aided simulation techniques, we are trying to minimize engine development testing. However, all research and development processes still result in a prototype that is tested under real conditions on a test bench. For reasons of know-how and cost effectiveness, MTU strives to carry out as many of these test runs on its own test benches as possible.

Our use of green electricity is determined by the extent to which our suppliers either procure or themselves produce electricity from renewable sources. The proportion of green electricity lies between 29 and 50 percent per site in Germany and 13,5 percent for Rzeszów/Poland.

Progress in energy management in 2015

GRI G4-EN6

- Green IT: server virtualization for greater energy efficiency in data processing (approx. 4.3%); server room moved to outside area for effective cooling
- Use of waste heat from compressed air generation for heating
- Green building: use of energy-saving LED illumination
- Reduction of air pressure leaks through use of ultrasound technology



We want to make production processes as energy efficient as possible.

4.2 Emissions

As a manufacturing company, we are committed to energy-efficient processes and climate protection. We want to continuously reduce the airborne emissions produced by manufacturing and repair work in our plants.

We measure emissions at our production sites in accordance with the international standard of the Greenhouse Gas (GHG) Protocol. MTU emits greenhouse gases that have an effect on the climate as defined by the Kyoto Protocol. The following gases come under this definition: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), partially fluorinated hydrocarbons, perfluorinated hydrocarbons and sulfur hexafluoride (SF₆). The only one of these relevant to MTU's emissions is CO₂. Our carbon footprint is made up of direct greenhouse gas emissions (Scope 1) that come from sources owned by the company and of indirect greenhouse gas emissions (Scope 2) that come from the consumption of bought-in electricity and district heating.

In 2015, electricity accounted for the lion's share of CO₂ emissions with 61.7 % (2014: 63 %), followed by aviation fuel, which is used for aircraft engine test runs, with 19% (2014: 15 %). Natural gas was responsible for 18.5 % (2014: 21 %) of

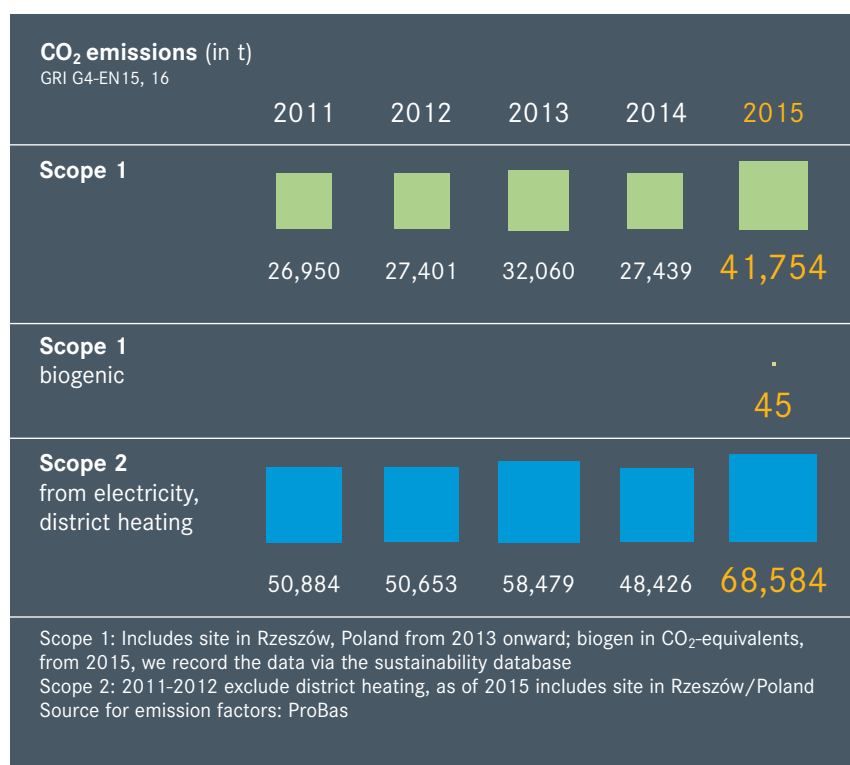
total CO₂ emissions. Demand for electricity and natural gas, which is dependent on production utilization capacity, increased during the reporting period. The rise in CO₂ emissions from aviation fuel was caused by the GP7000 endurance test.

The Clean Air Industrial Site (CLAIR-IS) program operates at MTU's headquarters in Munich. With the help of this program, we are engaged in reducing the CO₂ emissions at the company's largest plant by 25 percent by 2020 (baseline year: 1990). In total, we have already saved 101,000 tons of CO₂. The program also serves as an example of best practice for other MTU sites. In addition, we participate in the new climate protection initiative organized by the city of Munich, whereby large companies undertake to collectively save at least 40,000 tons of CO₂ emissions by 2017. The initiative starts in 2016.

Examples of progress in CO₂ emissions in 2015 (Scope 1)

GRI G4-EN19

- Use of well water for cooling purposes: roughly 2,115 tons of CO₂
- Climate-neutral cogeneration plant through use of renewable energy: roughly 7,400 tons of CO₂
- Energy-efficient lighting systems in manufacturing halls: roughly 138 tons of CO₂
- Switching off machinery during longer interruptions to operations: roughly 945 tons of CO₂
- Switching off ventilation systems: roughly 31 tons of CO₂
- Electric cars in fleet: 330 tons of CO₂
- Conversion of lighting to LED technology: 17.1 tons of CO₂ emissions (equivalent)
- Optimization of ventilation for offices in the interior of buildings (mixture of fresh and recirculated air)
- Renovation of window fronts and switch to high-speed gates (reducing the amount of heat loss)



Through various measures to increase energy efficiency, we achieved total savings of roughly 11,000 tons of CO₂ emissions across all European sites in 2015.






















In 2015 we took part once again in the CDP rating to increase the transparency of companies' climate data. The international organization, which collects and evaluates company data that is relevant to climate protection, recognized MTU's efforts in 2015 with a Best Improver in Germany award.

Transport and logistics

We also involve our transport and logistics chain in climate protection. Measures include optimizing logistics routes for in-plant transportation and using vehicles with better environmental performance. In 2015, we switched our internal mail delivery system in Munich to electric, replacing two conventional diesel cars with e-Golfs. Furthermore, MTU promotes sustainable commuting practices among its workforce. Since 2015, we have offered our Munich employees a special discounted "job ticket" for the local public transport network. This offer was already available to staff at our Hannover site, where since 2016 we have also been developing a concept to promote e-mobility among employees.

Airborne emissions

In addition to CO₂ emissions, the use of energy is responsible for further airborne emissions. Kerosene, natural gas, electricity and district heating from fossil fuels cause the emission of carbon monoxide, nitric oxide, sulfur dioxide and dust. Once again, the rise in these emissions in 2015 is attributable to the production ramp-up and the GP7000 endurance test. For the year 2015, we also began recording our emission of volatile organic compounds (VOC), which are produced primarily during electroplating processes. As part of our environmental protection, we also want to minimize these emissions.

Airborne emissions (in t), Scope 1 and 2 GRI G4-EN21					
	2011	2012	2013	2014	2015
Carbon monoxide CO	 33	 37	 38	 35	 57
Nitric oxide NO_x	 124	 118	 131	 103	 155
Sulfur dioxide SO₂	 23	 23	 24	 21	 115
Fine particles	 2	 2	 2	 2	 7
Volatile organic compounds VOC*					 1.8
Includes site in Rzeszów, Poland from 2013 onward; *not all sites recorded Source for emission factors: ProBas					



Our emissions in the air and use of resources depend on the type and duration of the engine tests.

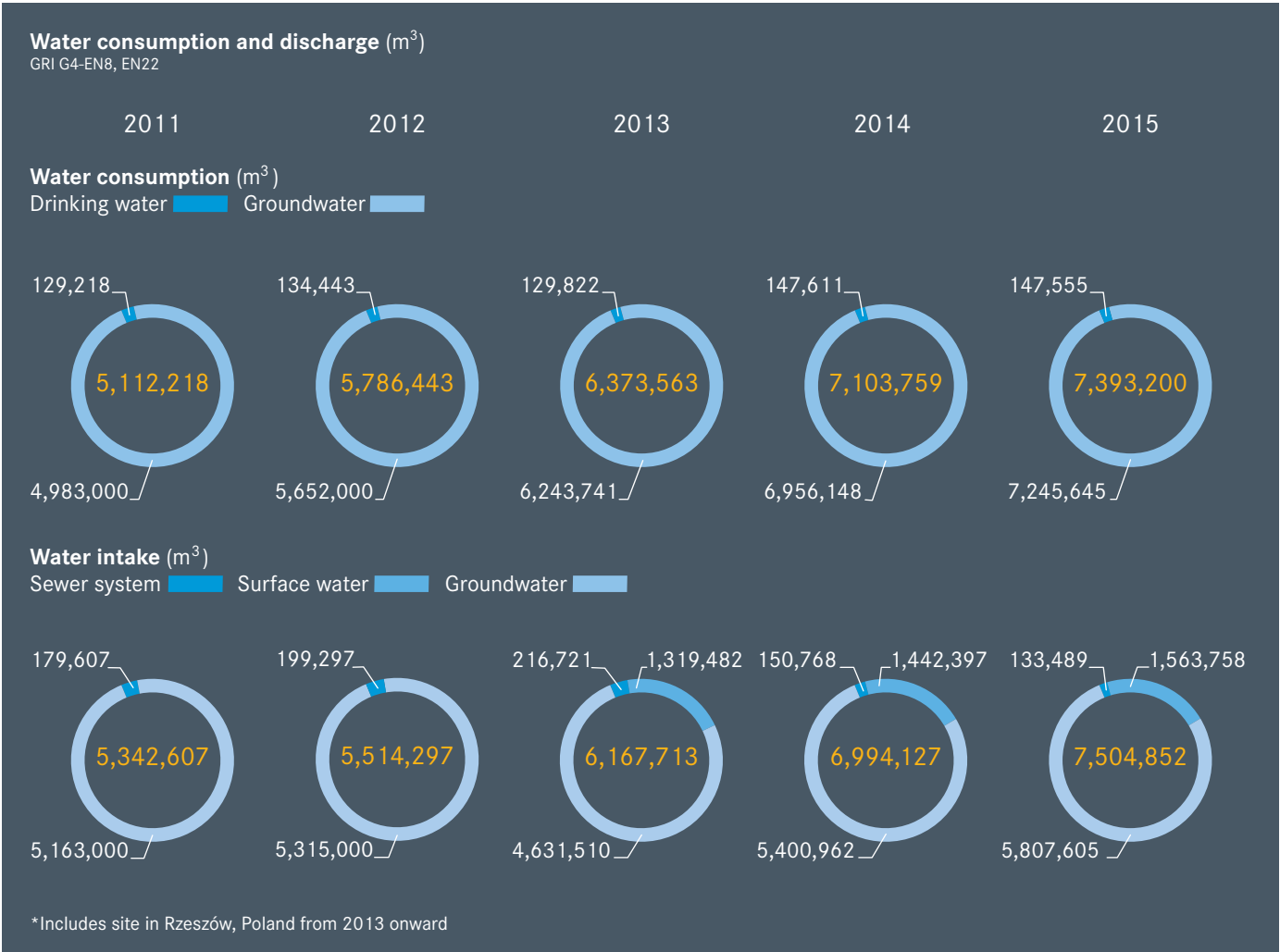
4.3 Water usage

Water is a vital natural resource for industry and society in general. Accordingly, we protect water sources and use water efficiently in the manufacture and repair of our products. We also strive to minimize our consumption of water.

We use water for manufacturing and maintenance processes and consume drinking water in sanitary facilities and cafeterias and to a small extent in production. To reduce our consumption of drinking water, we use well water for cooling processes as well as various water-saving techniques and process water recirculation. In 2015, we consumed a total of 7.4 million cubic meters of water. Of this, almost 2 percent was drinking water compared to 98 percent groundwater. At our Munich headquarters, MTU increasingly uses quarternary groundwater extracted from its own

on-site wells. We covered our slightly increased water demand in 2015 by extracting more well water.

Effective water management systems are in place at all European sites. The company's plants in Europe are not located in water-stressed regions. We use recirculated water as much as possible in chemical process baths for applying protective coatings to blades and also for the process water in installations for testing component damage. In this way, we are able to reuse large volumes of





MTU uses water in its production processes and has implemented an effective water management system at all its European locations.

water and have to treat only a small amount of waste water before discharging it into the municipal sewers. Our sustainable water management also includes the systematic inspection and renovation of the well water and sewer duct networks.

We want to progressively reduce the discharge of waste water into bodies of water and municipal sewers. In 2015, the proportion of water discharged into public sewers decreased from 2.2 percent to 1.8 percent.

Water quality

MTU treats waste water in suitable sewage systems according to the type and extent of pollution. The quality of the discharged waste water complies with the official permits issued for the respective location. Strict monitoring ensures that legal limit values are observed. Water sources are not negatively impacted by our operating activities.

4.4 Material efficiency

MTU uses raw materials and other materials sparingly in production and maintenance. In our manufacturing and repair methods, we pay attention to efficiency and seek to avoid waste.

MTU uses manufacturing and repair methods—some of which have been developed within the company – that are characterized by their high material efficiency. They include:

- Removing coatings by means of water jet
- Laser and electron beam melting
- Inductive high-frequency pressure welding

Additive manufacturing

Additive manufacturing permits the rapid 3D production of very complex components. MTU uses the new additive techniques in its engine manufacturing. Components are laser-melted directly from a powder bed according to CAD data, which significantly reduces the amounts of material used. MTU is already manufacturing its first mass-produced components using additive

methods and is continuously refining its methods. As part of the Clean Sky technology program, for example, MTU worked on an additively manufactured seal carrier for high-pressure compressors in 2015.

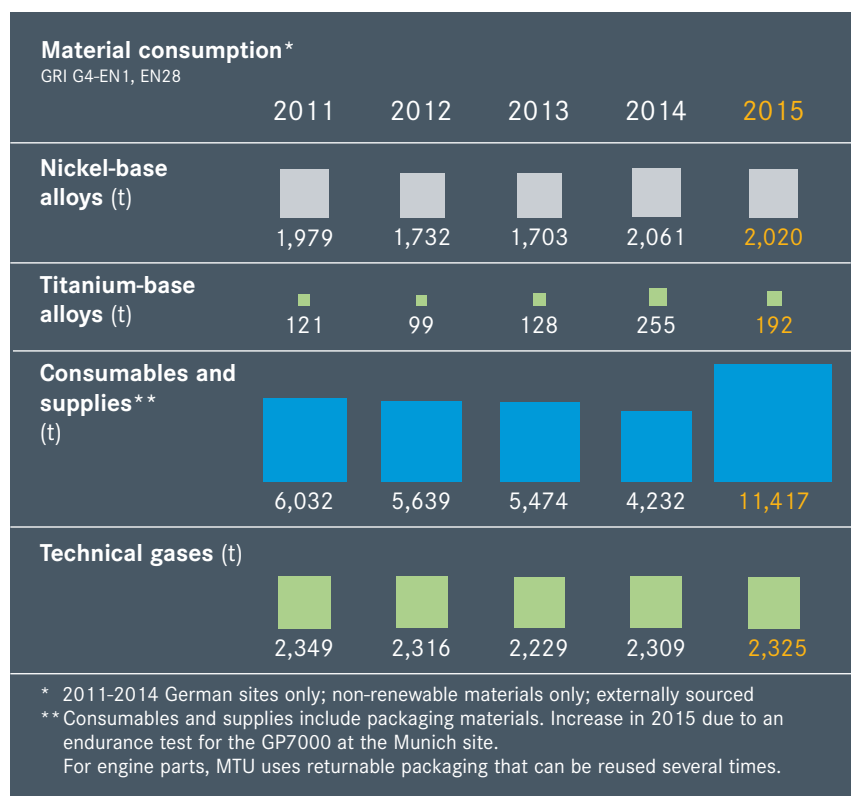
With 104 patents relating to additive manufacturing, MTU is among the top 10 patent holders worldwide in this field.

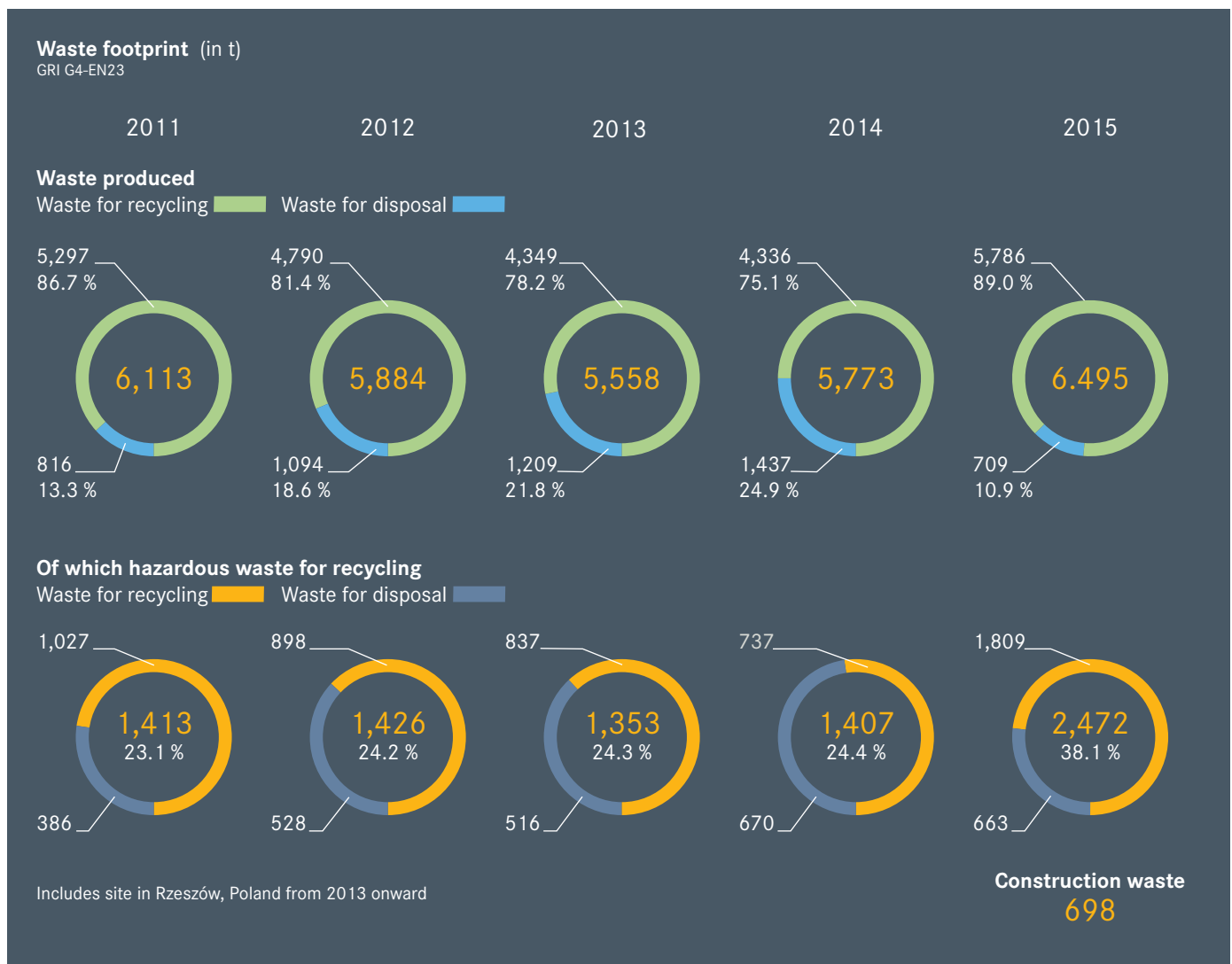
REACH

Wherever possible, we avoid using environmentally hazardous materials in our manufacturing processes and products. According to the European REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) regulation, certain substances of very high concern (SVHCs) containing chromium₆₊ are subject to authorization from September 2017. Chromium trioxide, ammonium dichromate, sodium dichromate and potassium chromate are the substances used in MTU manufacturing processes that are affected by the regulation. For these substances, MTU punctually submitted an authorization application to the European Chemicals Agency (ECHA), and a decision is currently pending. In a project to implement the REACH regulation, we are pushing ahead with the long-term elimination of these and further SVHCs that will require authorization after 2017, insofar as possible, either by replacing them or rejecting new authorizations. MTU is punctually implementing all provisions of the EU regulation for protecting employees and the environment.

Product recycling

With its “repair beats replacement” philosophy, MTU Maintenance achieves a truly impressive depth in aircraft engine repair. Using special techniques the company has developed in-house, we repair engine components that in other maintenance shops would have to be replaced with new parts. As a result, we achieve high levels of material efficiency and conserve resources. Around 70 percent of all engine blades can be reused two, three or even four times. We are constantly adding new product recycling techniques to our repertoire.





Waste management/recycling

MTU practices sustainable waste management with the safe disposal of waste sorted according to waste type and recycling process. As our chief priority, we try to avoid waste in the first place. Leftover materials are reused, while waste is used either for its materials or as energy; if recycling is not possible, waste is properly disposed of. In this way, we seek to minimize material consumption and waste disposal volumes. For years now, we have reached high recycling rates averaging of 83.9 percent. In 2015, the total amount of waste produced was 6,495 tons. Of this, we recycled 89 percent and disposed of 11 percent. The amount of waste produced and recycling routes are dependent on production capacity utilization and on building activities. In 2015, an increased production volume at the site in Poland led to a higher amount of hazardous waste.

5 Employees

Our employees are a key factor in our success. As a high-tech company, we depend on their ability, experience and performance. We are eager to attract new talent and retain expertise within the company. To remain attractive as an employer, we create a work environment at MTU that is safe, fair, and sustainable. We support our employees in their continuing professional development, and we are committed to a cooperative leadership culture.



We cultivate talent.

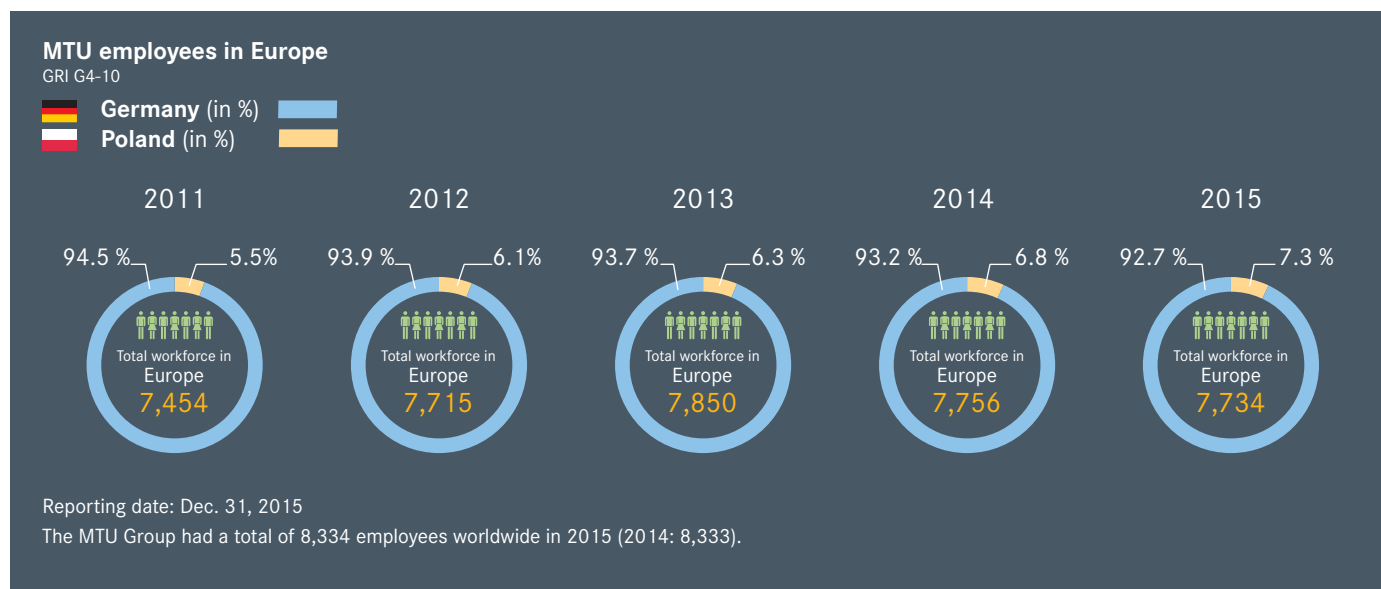
Managers lead by example and shoulder responsibility. We support them in this by providing special training initiatives. MTU offers all of its employees a wide range of opportunities and the chance for personal development.

MTU has a global workforce of some 9 000 employees. Their motivation and skill are extremely important for the successful development of the Group. We combine a corporate culture focused on development and performance with a high degree of social responsibility. As far as we are concerned, essential sustainability issues in the area of employment are:

- Attractiveness as an employer
- Human rights
- Occupational safety
- Health management
- Diversity
- Work-life balance
- Demographic change
- Employee training and development

Both the company and the stakeholders attach the greatest weight to human rights, occupational safety, employee training and development, and attractiveness as an employer.





The responsibility for employment issues resides with the Executive Board: the CEO is also the Director of Labor Relations. The human resources center sets policy that is in line with the annual and long-term growth targets laid down in our corporate strategy – and helps to achieve these targets. The full Executive Board receives regular reports about human resources policy. Responsibility for successful implementation lies with local human resources departments and the respective specialist departments and managers. We regularly review the measures and offers we have in place—and develop these further, as necessary. Important drivers in this respect are the need to adapt to new statutory regulations, the expectations of stakeholders, and social challenges that have an impact on MTU's work environment. In addition, secondary benefits undergo external certification.

The company gets important insights as to how it can develop further from its employee survey, which took place at our German sites in 2015—so taking in 86.7 percent of the total workforce. The survey offers employees the opportunity to play an active part in helping to shape the corporate and working environment. Large numbers of employees took advantage of this opportunity: the response rate was around 79 percent. The results reveal a high level of overall satisfaction, good communication about customers' needs, confidence in future viability, a very high level of knowledge about corporate goals, and lots of freedom for employees to make decisions concerning their own work. The optimization of decision-making processes and the ability to adapt

are issues that need to be addressed—and in 2016 we will work to improve that situation with workshops and measures developed from these. The next employee survey in Germany will take place in 2018. In Poland we conduct a survey every two or three years, the last one having taken place in 2015. Here too, the participation of employees was high with a response rate of 80 percent. The great majority of employees (88 percent) declared that they were very happy with MTU Aero Engines Polska as an employer. All aspects of working life were consistently evaluated on a high level. From the employees' point of view, we only need to address the issues of communication and flow of information as well as staff appreciation for further development.

Additional opportunities for feedback are available via tools such as Leadership Feedback and the Team Barometer, which gauges the mood within a team and helps to develop the way managers and their teams work together.



94 percent of the workforce is located in Europe.

Employee structure (as percentage of the total workforce)

GRI G4-10, LA13

	2011	2012	2013	2014	2015
Core workforce	86.7	85.8	86.3	86.4	87.2
White-collar worker					43.8
Blue-collar worker					43.3
Employees on temporary contracts	3.3	3.5	3.6	3.1	2.7
Apprentices	4.6	4.5	4.4	4.9	4.7
Students on work experience/holiday staff	2.1	2.5	2.2	2.1	2.6
Interns, degree candidates and doctoral candidates	2.9	3.4	3.2	3.1	2.8
Employees on parental leave					3.2
Employees returning from parental leave 2015					2.4
Employees returning from parental leave 2014 working in 2015					2.1
Marginal workers	0	0	0	0	0.1
Part-time workers	5.5	6.2	6.1	6.4	7.0
Attached staff acting under instruction					4.3

These figures reflect the position at year end and from 2013 include the site at Rzeszów (Poland). The total workforce does not include temporary agency workers, external employees or members of the German armed forces under cooperative model assignment. Temporary agency workers and personnel under the cooperative model are counted as attached staff acting under instruction. We have been using the sustainability database since 2015 to gather data on parental leave and attached staff acting under instruction.

Social and labor standards

MTU creates fair working conditions throughout the organization by laying down clear standards. Our Code of Conduct is binding throughout the Group, and in it we have defined the following benchmarks of our responsibility as employers:

- Observance of human rights
- Equal opportunities in the workplace
- No discrimination in industrial relations
- Constructive cooperation with employees, employee representatives and labor unions
- Entitlement to equitable pay
- Protection of health and safety at work
- Employee training and development

Above all else, we believe that fair working conditions include the absolute rejection of forced or child labor and the protection of human rights. We are a participant in the UN Global Compact, and we have committed ourselves to observe its principles of respect for human rights and the implementation of fair working conditions in accordance with the International Labor Organization's (ILO's) core labor standards.

More information

- *about human rights: Chapter 1.4 Human rights*

In Germany, the General Act on Equal Treatment (Allgemeines Gleichbehandlungsgesetz) prohibits discrimination against employees. In line with the provisions of this Act, every site has a designated contact person who is appropriately trained. For employees in Germany there are also internal guidelines on cooperative and fair conduct that are designed to prevent bullying, sexual harassment and discrimination. In these guidelines, MTU undertakes to punish violations with appropriate measures. Defined processes have been established to deal with reported breaches of the Code of Conduct, the General Act on Equal Treatment, or internal guidelines. Employees who suspect illegal activities can contact an ombudsman confidentially. Managers, works councils, and contact people from the human resources department can also be contacted when violations occur. We use internal communications to give information about reporting procedures. New employees will be informed in writing at the start of their employment about the regulations laid down in the Code of Conduct and in the General Act on Equal Treatment—and they will undertake to keep these standards. In addition, we provide regular training at all levels of the company on the Code of Conduct.

Once again, in 2015 there were no complaints under the General Act on Equal Treatment and no breaches of the Code of Conduct. There were also no cases of discrimination reported at our Polish subsidiary MTU Aero Engines Polska during the reporting period.

We are committed to respecting employees' rights and safeguarding their freedom of association. When drafting employment contracts, we observe statutory requirements as well as internal company agreements and notice periods as laid down by law. It is the responsibility of managers to ensure that company agreements are properly observed on a day-to-day basis in their areas of responsibility. MTU's business is influenced by long market and development cycles, and this is reflected in its employment structure. We place our trust in long-term, secure employment relationships. Almost 70 percent of the core workforce in Germany has worked at MTU for more than ten years, and the average period of employment is 19.2 years. The site in Poland only came into operation in 2009, and so the average period of employment is correspondingly lower.

In dialog with our employees

We respect the interests of our employees, and we give them a voice. In accordance with the German Works Constitution Act (Betriebsverfassungsgesetz), MTU's sites in Germany have works councils that maintain regular, open and trust-based dialogue with MTU's management. In Poland, elected employee representatives look after the interests of the workforce in dealings with management. The German sites have a Group Works Council as a co-determination body. In addition, the interests of employees are represented on the supervisory board, where seats are filled on the basis of parity.

Furthermore, there are well-established forums for promoting employee involvement—such as special information events for managers or employees not covered by collective agreements. An ideas management system takes up suggestions for improvement made by the workforce and coordinates the evaluation and implementation of these suggestions.

5.1 Occupational health and safety

We have comprehensive measures in place to promote occupational safety and employee health, and as a result we help to maintain the long-term productivity of our employees in a time of demographic change.

Worldwide, we place very great importance on the safety and health of our employees. Occupational safety and employee health are enshrined in our Code of Conduct, the MTU Principles, and our business processes. We have also made high standards in occupational safety a corporate goal across the whole Group. Compliance with national statutory regulations on occupational safety is a mandatory minimum standard for all international MTU subsidiaries. Occupational safety officers at management level are appointed for each of the company's European sites. Local specialist departments take action on occupational safety issues at each site. Occupational safety systems are regularly reviewed and improved—and in part they are certified externally in accordance with international standards such as OHSAS 18001 (Occupational Health and Safety Assessment Series).

Our occupational safety systems include advising and supporting managers and employees, safety training, first aid training, workplace risk assessment, and the provision of safety equipment in the workplace.

We aim to permanently reduce the number of accidents and reach a level of prevention that seeks to eliminate any and all accidents (zero-accident vision). The accident rate per 1,000 employees was 4.7 across all our European sites—a figure that takes into account 94 percent of all MTU employees. All accidents were recorded, evaluated and investigated. Our analysis did not reveal any accident hotspots. In addition, there is a system in place for recording near-misses.

More information

- about certification: www.mtu.de



MTU upholds high standards of occupational safety. Employee protection is an integral part of working life.



Our occupational safety systems are regularly reviewed and fine-tuned.

Occupational safety GRI G4-LA6					
	2011	2012	2013	2014	2015
Reportable workplace accidents					
Munich	14	14	11	22	21
Hannover	1	6	2	2	6
Berlin	6	4	0	2	4
Rzeszów	—	—	0	1	1
Fatal industrial accidents per site					
	0	0	0	0	0
Days lost as a result of reportable accident					
Munich	529	481	240	483	351
Hannover	16	286	32	35	166
Berlin	127	40	1	24	34
Rzeszów	—	—	0	21	22
Accident rate per 1,000 employees					
Munich	3	2.9	2.4	4.7	4.3
Hannover	0.6	3.3	1.1	1	3.8
Berlin	9.6	5.1	0	2.8	7.1
Rzeszów	—	—	0	2	1.8
Workplace accidents do not include any commuting accidents, accidents that entail more than three days lost (not counting the day of the accident)					

In addition, we are continually carrying out prevention work. The local specialist departments give information and run consciousness-raising campaigns on various aspects of occupational safety.

Prevention initiatives in the reporting period

- Health, Safety and Environment (HSE) Day, Ludwigsfelde
- Case of the month, Munich

Health management

Effective employees are important for the productivity of a company. In addition, good health has a positive effect on motivation and creativity. An aging workforce such as we have at MTU also makes it a matter of strategic importance for us to promote health in the workplace. We operate a health management program across all of our locations, and we aim to create uniform standards—by means of a cross-learning network, for instance. In 2015 we developed company control metrics to maintain effectiveness and employability. These early indicators are designed to help us develop health promotion projects and tools in good time. The indicators reflect job satisfaction, social relations and leadership, job demands, and also influence and development opportunities. We included these in the employee

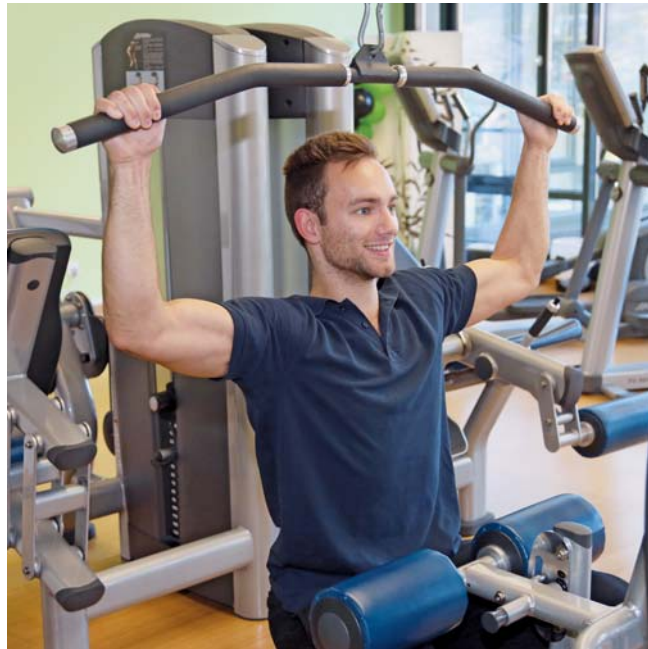
survey at the end of 2015 so that we could understand the important factors relevant to the current work situation of our employees. The results enable us to produce an MTU-specific Workability Index, which gives information about how well employees can handle their workload and to what extent a team's working situation is conducive to health. The first index produced is in the medium to good range. Alongside the Workability Index, we have also developed the "Health-Oriented Leadership" training program to support managers.

Special offers to prevent health problems and various campaigns to promote healthy lifestyles are already part of the company's health management program. One focus of these efforts is healthy nutrition.

Health services cover occupational and emergency medicine as well as general preventive medicine. Counseling services offer employees support with work- and performance-related issues as well as with questions concerning mental health. Among the additional benefits MTU offers are its own on-site health club at its headquarters in Munich and special deals with gyms at other locations, physiotherapy, tips on ergonomic sitting in the workplace, and department-specific Health Days—which were supplemented in 2015 by a day on resilience for improving personal stamina and managing stress. Each of our German locations has a team of occupational physicians, social counselors and other health practitioners, either in-house or external.

In Germany there is a legal requirement for Workplace Reintegration Management (Betriebliches Eingliederungsmanagement, BEM), and we embrace this with the aim of continuously overcoming any disabilities employees might have and saving their jobs. At our Hannover location, we reached a supplementary agreement in 2015 that builds on our existing Group-wide works agreement. This supplementary agreement lays down a new approach to BEM, giving primary responsibility for the reintegration process to an employee's manager. Over the course of 2016 we'll be gathering experience in a pilot project at our Munich location, with the focus placed on systemic ergonomics management. An independent contractor that specializes in such projects will be providing individual support.

At the moment we are conducting pilot projects in the Munich production shop to test the use of new information technologies to support employees in the workplace.

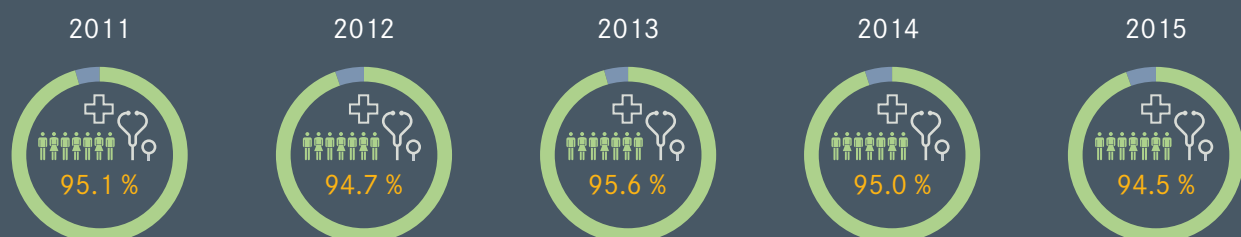


At the headquarters in Munich, MTU runs a fitness studio with trainers operated by an external service provider.

Health-related initiatives and training in the reporting period

- Healthy back and wrist, Rzeszów
- Flu vaccinations, all locations
- Back coaching, Hannover, Munich
- Vibration training, Munich
- Extended risk assessment, Hannover, Munich
- “Ergonomic Stress Analysis” pilot project using the key indicator method, Hannover
- “Check in Card” for sustainable behavior that will promote health, Hannover

Health rate GRI G4-LA6



We consider our work health management program to be successful if we are able to keep our health rate constant despite an aging workforce.

5.2 Attractiveness as an employer

As an attractive employer for both existing and potential employees, we safeguard MTU's productivity and capacity for innovation. We have a variety of offers designed to help our employees achieve a healthy work-life balance, and we are responding to their changed expectations about having personal control over the way their work is structured.



MTU has positioned itself as an attractive employer. Internal employee surveys and external rankings confirm that this is true. We see external evaluations and comparisons with other employers as important indicators. In comparative analyses with other companies, MTU receives consistently positive ratings. In the reporting period, the company once again performed very well in the TOP Employer Germany and TOP Employer Poland evaluations. There was special praise in the categories of talent strategy, career & succession planning, and compensation & benefits. In Poland, MTU particularly won out in the areas of talent strategy, personnel planning, and career & succession planning. Using the rankings, we are able to compare our human resources policies to the current needs of employees, managers and new recruits—and readjust what we offer, if required.

In the study of “Best Employers in 2015” conducted by the German business magazine Focus and the careers website XING, MTU was ranked thirteenth in the industry with 7,014 out of a possible 10,000 points (the best company earned 8,600 points). MTU employees of all ages and levels of seniority were surveyed in the study. We also achieved a good result in the evaluation carried out by consulting firm Universum Communications and the German business magazine Wirtschaftswoche—coming in at place 30, which put us in the top third.

We rated well, too, in the employer ranking produced by the trendence Institute in Berlin among engineering students nearing graduation in 2015.

Certifications and rankings

- TOP Employer Germany
- TOP Employer Poland
- trendence Graduate Barometer - Engineering
- Universum ranking
- Chief Learning Officer award
- Top Company on Kununu

Compensation and additional benefits

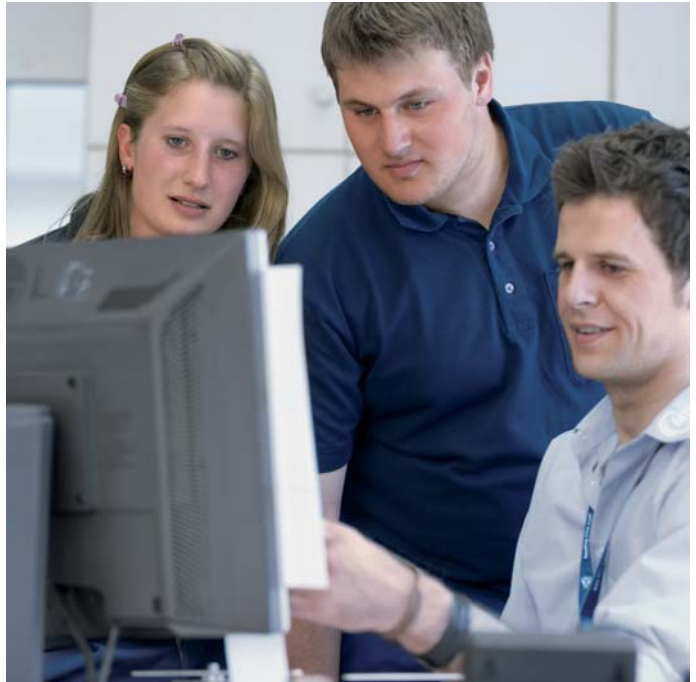
The right to appropriate remuneration is one of the pillars of MTU's social policy, as enshrined in the Code of Conduct. A standardized, transparent compensation structure ensures that employees receive competitive remuneration that reflects their performance. The remuneration of pay-scale employees is based on collective bargaining agreements. Compensation for senior managers is tied to the company's long-term performance. There is a consistent methodology for evaluating performance at all levels of the hierarchy. The performance criteria are based on company, center or department objectives and measure how employees and managers contribute to reaching these goals. All managers undergo performance reviews based on achievement of their personal targets.

MTU offers a broad spectrum of additional compensation components ranging from the company pension scheme, accident insurance and profit-sharing through to family-related benefits and mobility offers. The company pension scheme covers all employees. The scope of the social provisions results from MTU's own range of employment benefits in addition to statutory obligations. For employees in Germany, this includes entitlement to parental leave in accordance with legal requirements. In the fiscal year 2015, social contributions for the whole company amounted to 104.8 million euros.

MTU enables its employees to participate in the company's success through various profit-sharing programs, which are available to the workforce as a whole and defined in special rules for each employment group. At our locations in Germany we offer an employee stock option program. In 2015, the take-up rate was 20.1 percent – and 8.9 million euros were invested. At our site in Poland we offer a long-term bonus program to all employees after one year of employment. The program lasts for a period of five years.



MTU does well in ratings and evaluations of top employers.



Using external rankings, we are able to compare our human resources policies to the current needs.

Work-life balance

MTU has a variety of offers designed to help its employees achieve a healthy work-life balance and is increasingly focused on responding to their different life phases and particular needs. These offers include:

- Flexible working hours and flextime accounts
- Part-time employment in over 50 models
- Educational leave
- Teleworking
- Sabbaticals
- Part-time work for older employees
- Parental leave
- Job sharing
- Services that assist families (e.g. childcare, nursing services)
- Mobile working

We are continually expanding our offers so that we can create flexible working conditions. One example of this is the opportunity we offer employees to take educational leave. In addition, we concluded a works agreement in 2015 on mobile

working for selected job categories at the Munich location. We took this step in order to lay an important foundation for greater autonomy and personal responsibility within MTU's working environment. A pilot project of the new model for the creation of greater flexibility regarding when and where employees work is due to be concluded in 2016. After that, we shall use the experience gained in order to extend the offers available.

5.3 Employee development

Qualified and motivated employees are indispensable in our technically demanding engine business. That's why we make it a priority to offer our employees a wide range of opportunities and avenues for personal development as well as giving them comprehensive support. This begins with the training of our own recruits.

In 2015 we complied with our principle of corporate social responsibility that we should train employees appropriately for the job they do. In the reporting period, MTU invested 2.8 million euros in the training of employees at its European locations. The director of human resources is responsible for the training and development of employees Group-wide, and the director reports straight to the CEO. Our corporate strategy is based on having qualified and motivated employees. That is why we promote high-quality training and development opportunities throughout an employee's whole career as part of a framework of lifelong learning.

Our "campus" training scheme provides a solid framework for the provision of employee training and career programs. Employees can access the campus course schedule using the central platform of the intranet. All MTU employees throughout Europe regularly receive an evaluation of their performance. To this end, management is required to conduct an interview with every single employee once a year about their training development.

Leadership

Excellent leadership is an essential prerequisite for working together with employees to successfully overcome the challenges that face MTU.

Leadership style is governed by the leadership guidelines laid down in the MTU Competences, which are derived from the MTU Principles. We support managers through a variety of management training programs and communication forums. We also make use of targeted measures to reinforce a shared understanding of leadership and improve its effectiveness even further. In 2015 we have held events to continue our new educational and cultural initiative, "MTU Business Challenge". The objective is to establish a shared understanding of leadership in the context of prevailing financial constraints and the demands of the capital market. More than 750 managers have already taken part. In 2016 we will start the "MTU Business Challenge II Leadership" initiative, which will focus on the further development of a common understanding of leadership within MTU and on the quality of leadership at all locations worldwide. Business Challenge II Leadership is a training program for all levels of management and is designed to promote the feedback and dialog culture as well as to boost leadership effectiveness.

In 2015, we started a long-term development program for managers at our site in Poland. They have already undertaken two training courses as part of the "MTU Management Growth" leadership program.

Employee qualification

GRI G4-LA9

	2011	2012	2013	2014	2015
Training days total	21,141	23,801	21,507	20,012	18,889
Training days per employee	3.0	3.4	2.7	2.5	2.3
Proportion of men on training schemes*					85 %
Proportion of women on training schemes*					15 %
Investment in training (EUR million)	3.9	4.2	3.3	2.4	2.8

Investment in training excluding travel costs; from 2013 including the Rzeszów site in Poland.

MTU assumes the costs of continued training measure. The total number of training days is dropping because shorter, more focused event formats are increasing.

* Employees who have taken part in training schemes (with multiple counting), data only for locations in Germany, compiled from 2015 using the sustainability database

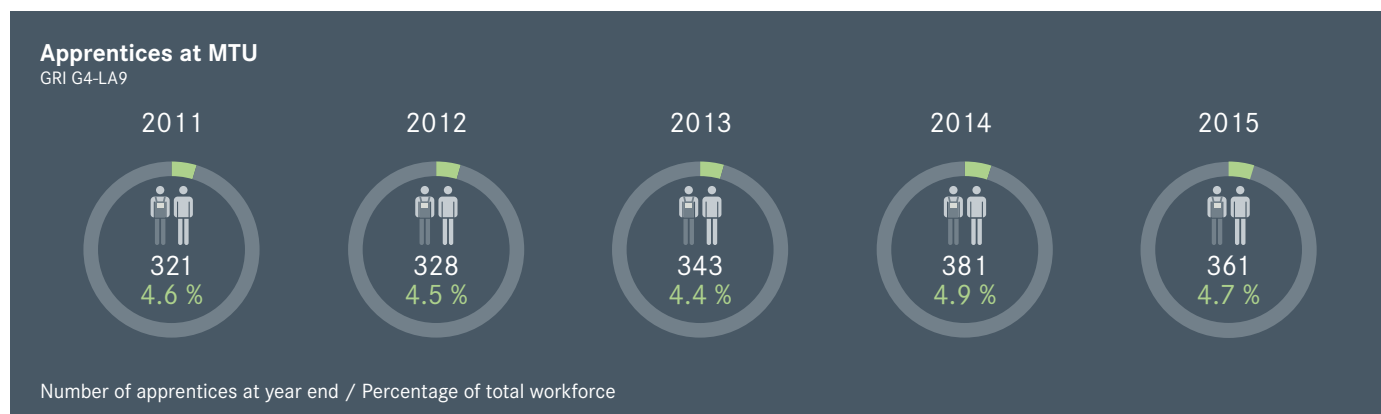


Lifelong learning is a principle we apply by providing our employees with high-quality opportunities for education and further development.

Managers in Munich already have access to our Leadership Guide via an internal knowledge database, and in 2016 we shall be introducing the Leadership Guide at our locations in Berlin and Hannover as well.

Management training

- Building on Talent
- International Building on Talent
- International Leadership Program
- Business Challenge
- Leadership Guide
- MTU Management Growth



Apprentice training

We offer young people a solid grounding in eleven trades. In addition to giving them professional qualifications, their training teaches them about methodological, social and environmental issues as well as MTU's corporate values. It is training designed to help them learn to embrace and embody the spirit of our corporate culture. Examples of such activities during the reporting period were the environmental and health days organized for apprentices.

For years, apprentices have always made up a large percentage of MTU's workforce. In 2015 they accounted for approximately 4.7 percent of the total workforce in Europe. As of the end of 2015, 361 apprentices were employed. All apprentices who complete their training can still be sure that they will be offered a permanent contract with MTU.

MTU is actively involved in numerous educational projects and initiatives aimed at appealing early to potential recruits and introducing them to science and technology professions:

- Training Night
- "IdeenExpo" Science Exhibition in Hannover
- Nature and Technology Days
- Long Night of Museums
- Teachers in Industry
- Work placements for high school students, discovery weeks
- Patronage of selected schools
- Special events for future female talent (Girls' Day, etc.)

Our active cooperation with schools and universities acts as a means to promote the give and take between business and education. For instance, MTU has been involved with the newly created MINT-Campus in Dachau since 2015. MINT stands for Mathematics, Information tech-

nology, Natural sciences, and Technology—and the Campus is designed as a research center for high school pupils.

In 2015 we also started to put together a program of beginners' seminars aimed at preparing refugees to integrate into society. It is intended that these seminars will extend over a period of a few weeks.

More information

- on the integration of refugees: Chapter 6.1
Science and education as social engagement

Talent management

MTU's age structure reflects the demographic change in the overall population. In our German locations, the average age of employees was 44.6 years in 2015—with almost 37 percent of employees older than 50. Over the next decade we'll need to be engaged in succession planning for a large number of skilled workers and managers. For that reason, in 2015 we honed our process for identifying and developing potential high performers. With this talent management system we aim to heighten the visibility of high-potential candidates in MTU and take a more tailored approach towards promoting talented individuals. This process will be especially helpful in ensuring succession planning for key positions indispensable to our company's success. We will start to implement the new system in 2016.

In addition, the company has introduced various initiatives designed to preserve valuable expertise and empirical knowledge. These initiatives include:

- a know-how buddy system
- exchange of expertise with the aid of knowledge maps
- part-time positions for older employees
- wikis

5.4 Diversity and equal opportunities

At MTU, we incorporate all employees into the company's working life on the basis of equality of opportunity. We also promote diversity in the workforce in order to maintain or develop our performance and capacity for innovation.

MTU deploys and promotes all employees in accordance with their competences, abilities and performance. Everyone has the same opportunities irrespective of gender, age, ethnic origin, religion, disability, or sexual orientation. To promote further diversity in the workforce, MTU places the greatest emphasis on employees of different generations, genders, cultures and countries all working side by side, including employees with disabilities. Diversity enhances our capacity for innovation and contributes to our competitiveness.

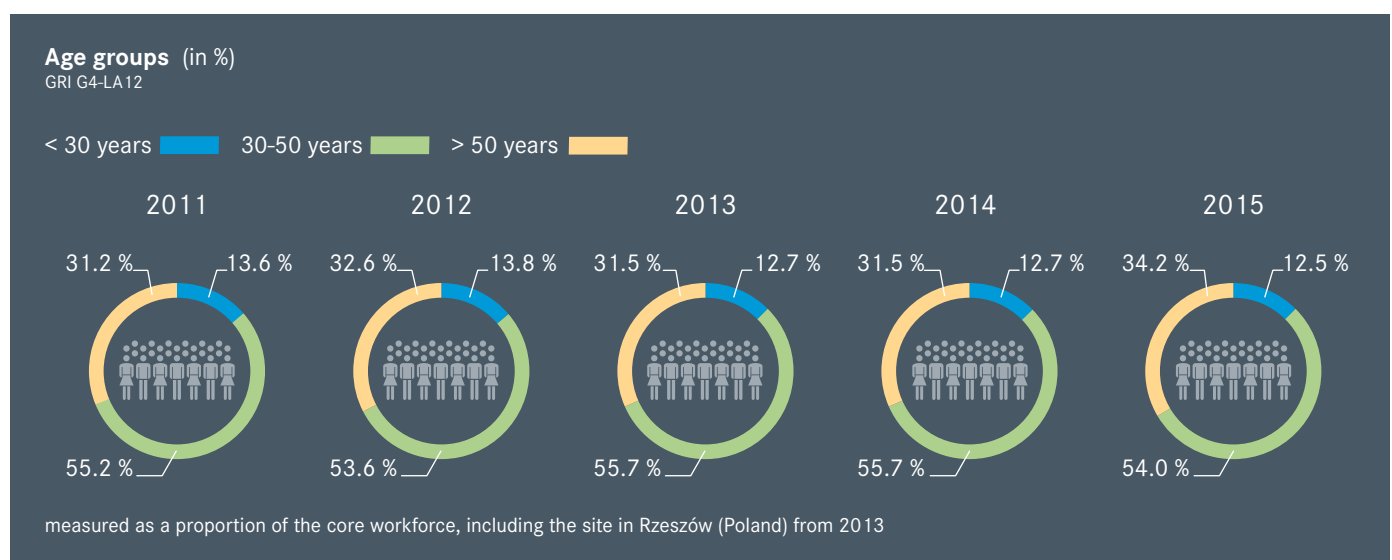
MTU's Code of Conduct explicitly commits the company to equality of opportunity and equal treatment for employees. The promotion of diversity is a major component of our corporate culture and enshrined in our MTU Principles. Moreover, promoting the diversity and international nature of our workforce is one of our corporate goals for the fiscal year 2016.

Managers play a key role in appreciating diversity and incorporating it into everyday working life at MTU. We encourage them to push on with effective changes in their own areas of responsibility—and so to increase and make the most of diversity. In the reporting period, we have given managers in Rzeszów special training in generation diversity for the first time to benefit from diverse teams. We will continue these workshops in 2016.

Against the backdrop of demographic change, individual employability becomes an important issue for us. This includes the integration of employees with disabilities. In 2015, disabled employees made up on average 4.6 % of the workforce at MTU's German locations. In Rzeszów, inclusivity is a major objective for MTU even without statutory requirements.

Our commitments

- Charter of Diversity
- UN Global Compact
- Munich Memorandum for Women in Management



Cultural diversity

For MTU, internationality is not only an expression of diversity: it is typical for the engine business, which is strongly characterized by transnational cooperation. We are working to intensify internationalization through various measures such as the “International Leadership Program” and the “International Building on Talent” initiative. We promote cultural diversity through the recruitment of local personnel at our different locations. From the beginning, the vast majority of employees at our site in Rzeszów (Poland) have come from the surrounding area.

We also offer intercultural training and, as a company that operates worldwide, we encourage employees to spend time working abroad during their training. Apprentices and students on work-study programs have the opportunity to take part in international exchange programs either within MTU or with our customers and partners.

Gender diversity

Equality of opportunity for men and women is something we consider to be self-evident. Remuneration levels and promotion prospects are determined solely by qualifications and the job to be performed, irrespective of an employee's gender. This is subject to regular monitoring. MTU has committed itself to significantly increasing the proportion of female employees, including at management level, so as to make better use of talent and innovation potential in the face of demographic change. The proportion of women employed in the total European workforce has already recorded its first rise: at the end of 2015 it stood at 14.4 percent. In terms

of management positions, 9.1 percent of our managers in Europe were female at the end of 2015 – which also represents a positive development compared against previous years.

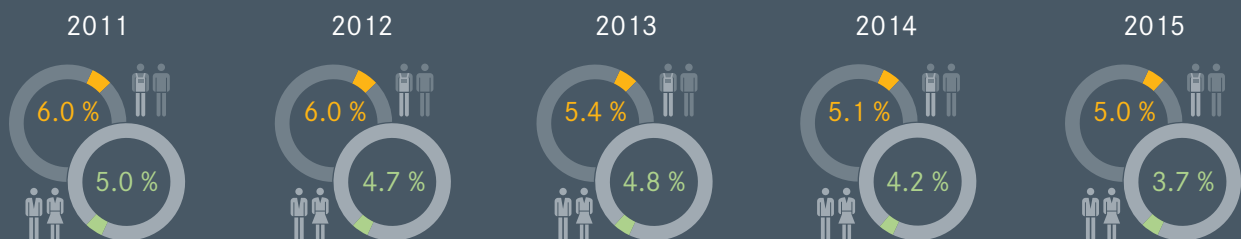
The principal focus of our measures and our employer branding is on securing more female talent for the company and offering female employees better support throughout their career journeys through mentoring programs and career advice. Our talent management system also focuses on women in management. We have introduced two additional measures: an internal



Nationalities (in %)

GRI G4-LA12

Total workforce ■ Managers ■



Proportion of foreign employees at the European locations, including the site in Rzeszów (Poland) from 2013.

mentoring program, and a workshop that looks at unconscious patterns of thought and behavior in selection and recruitment processes.

Our programs and initiatives

- Munich Memorandum for Women in Management
- Cross-Mentoring Munich (a program organized by the city of Munich)
- Internal mentoring program
- Talent Management
- The MTU “Studienstiftung” foundation for female students in scientific and technical fields
- Girls’ Day
- Research Camp for Girls
- Engineers in High Heels
- The Lower Saxony Technical Internship (“Niedersachsen Technikum”)

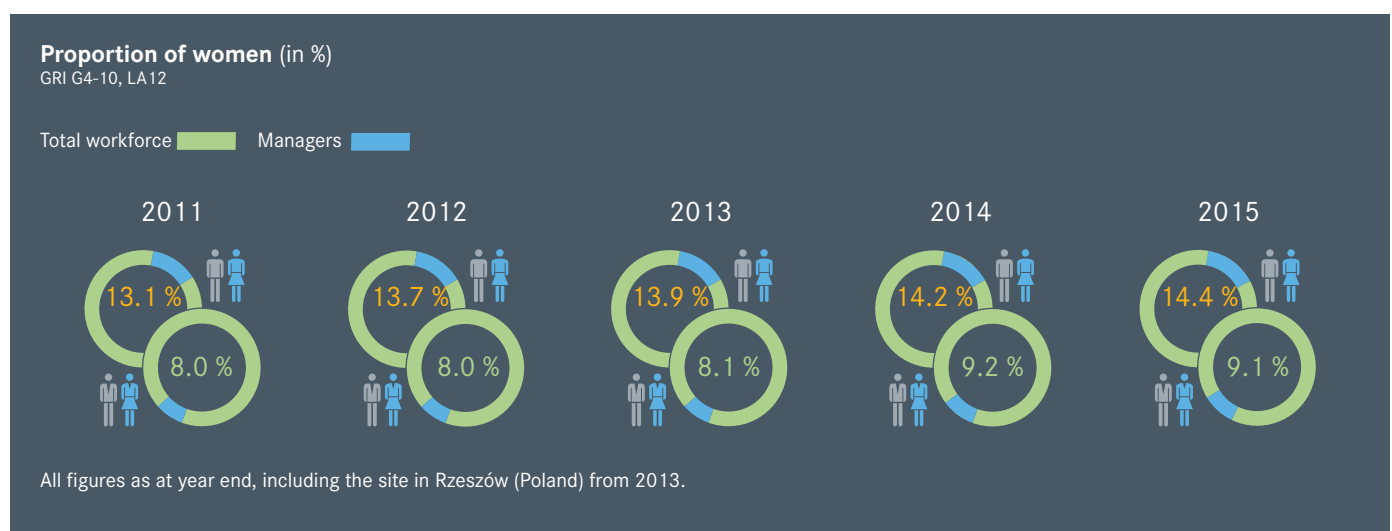
Thanks to our constantly developing range of offers designed to help employees achieve a healthy work-life balance, we are promoting integration of the sexes.

More information

- *about talent management: Chapter 5.3 Employee development*
- *about healthy work-life balance: Chapter 5.2 Attractiveness as an employer*

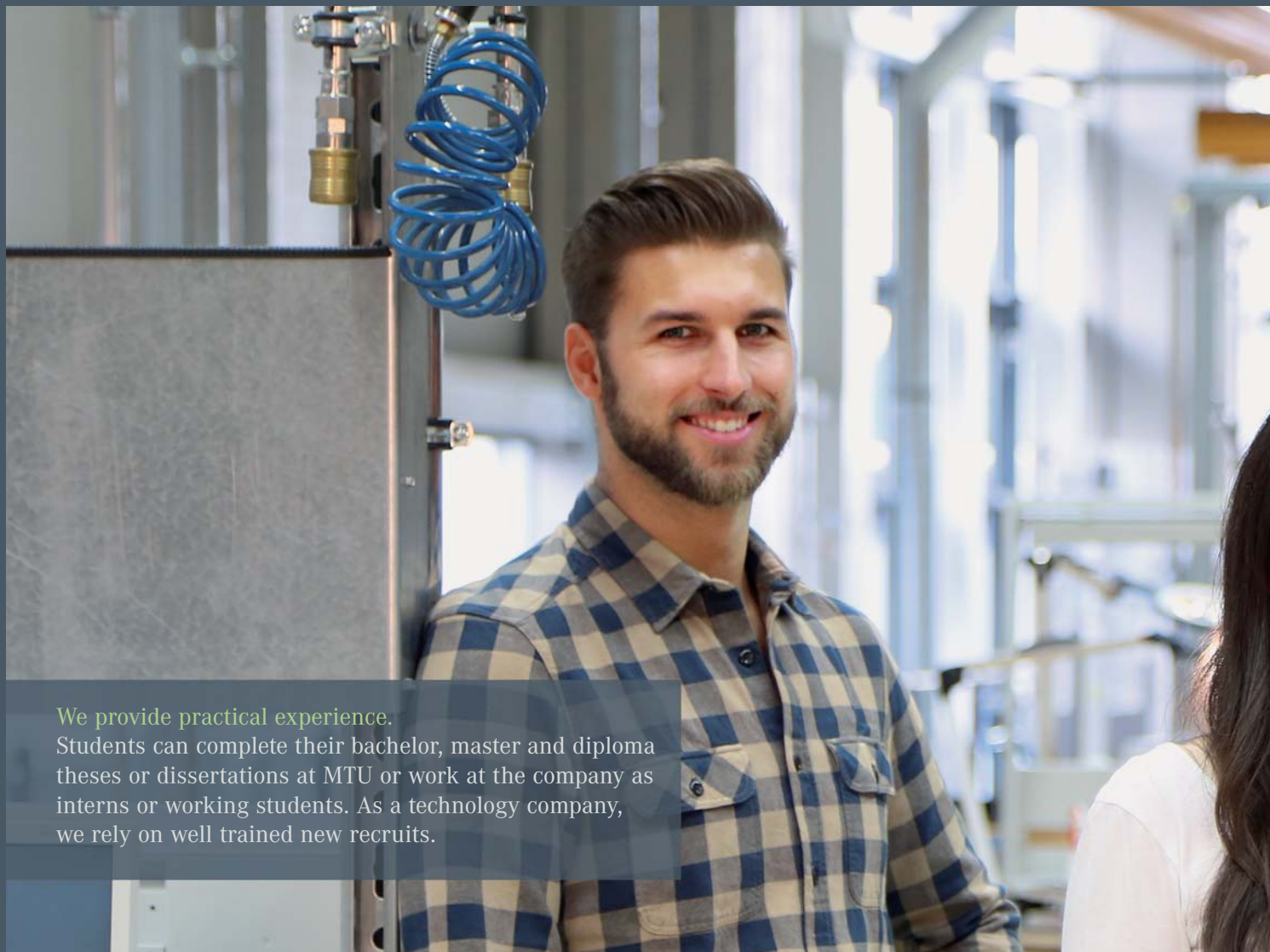


MTU plans to significantly increase the proportion of female employees, which was in Europe 14.4 percent at the end of 2015.



6 Society

We accept responsibility for the common good and strive to contribute sustainable added value to society. Our commitment to society focuses on research, education and training activities; after all, as a driver of aviation technology, we rely on new generations of well-trained employees and an innovation-friendly business environment.



We provide practical experience.

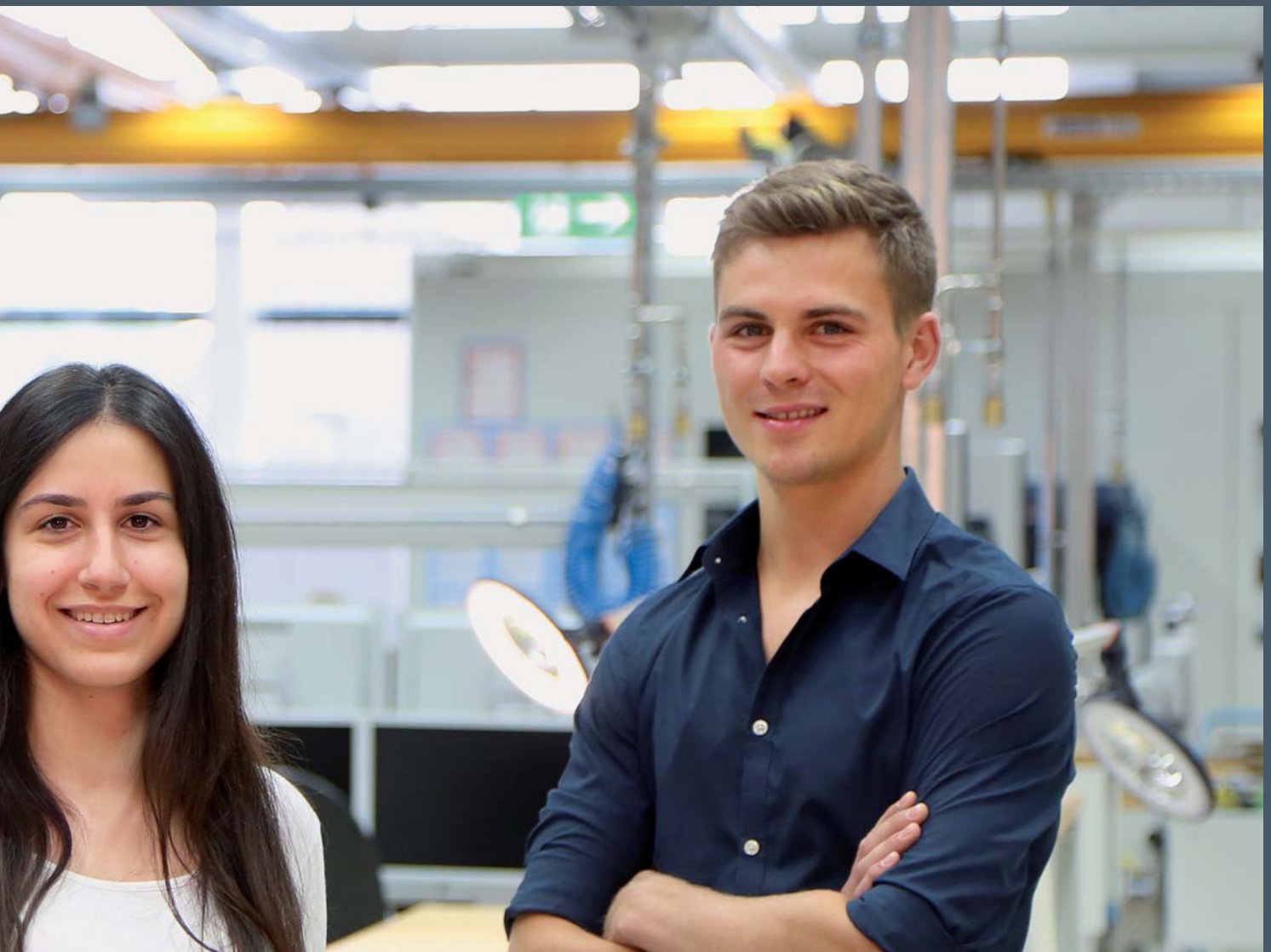
Students can complete their bachelor, master and diploma theses or dissertations at MTU or work at the company as interns or working students. As a technology company, we rely on well trained new recruits.

Social commitment is an integral part of the MTU Principles. We contribute to social development as a major employer and personnel trainer in the region. Offering a wide variety of jobs and apprenticeships in an attractive high-tech environment, we prioritize long-term employment relationships. In addition to educating and further training our employees, we invest in the further development of our plants. In 2015, for example, we commissioned a new logistics center in Munich. Furthermore, our strong innovation capabilities create added value for the wider economy and society outside MTU. To give an example from the reporting period: MTU successfully worked with suppliers from Germany to get the new material titanium aluminide ready for industrial mass production—ultimately creat-

ing a new value chain and jobs. Our main activities benefiting society come under the following headings:

- Corporate citizenship
- Donations/Sponsorship

Of the two, corporate citizenship is the more important category, both for us and for our stakeholders. MTU understands corporate citizenship as its social responsibility for the environment the company operates in, with a focus on education, science and research. In the area of donations/sponsorship, we support local and regional projects near our sites in the role of patron, sponsor and networker.



6.1 Corporate citizenship

As a research-intensive company, our corporate citizenship is focused on science and engineering activities. We seek exchange and collaboration with science and research, and are in dialog with young people and new talent.

Education is very important both for a society's prosperity and its ability to meet the challenges of the future. We are committed to providing open access to training opportunities, which we believe should first and foremost provide our own young employees with a solid grounding in their chosen profession. In 2015, there were 361 young people enrolled in a training course at MTU's European sites. We provide training as needed and invest in a holistic education that includes the acquisition of professional qualifications as well as methodological and social skills guided by MTU's corporate culture. We involve our trainees in all aspects of company and working life, including health, environmental protection, social values and our no blame culture, and we organize events such as special action days. In addition, MTU participates in numerous education projects and initiatives for children and young people, thereby promoting an understanding of technology and sustainability in society at large.

More information

- *about our education initiatives:*
Chapter 5.3 Employee development

Integration of refugees

We want to help with the integration of refugees and have drawn up initial approaches during the reporting period. Since mid-2016, we have been offering professional training to young people from the greater Munich area in the form of a preparatory beginner's seminar in the training workshop. In the project, teenage refugees who possess a good level of previous education and are likely to stay in the country are prepared for an apprenticeship. In addition, we release MTU trainees from work so that they can participate in regular leisure activities with refugees.



We offer young people training in eleven career disciplines.

Cooperation with universities and centers of competence

Centers of competence

RWTH Aachen
Compressor & Manufacturing

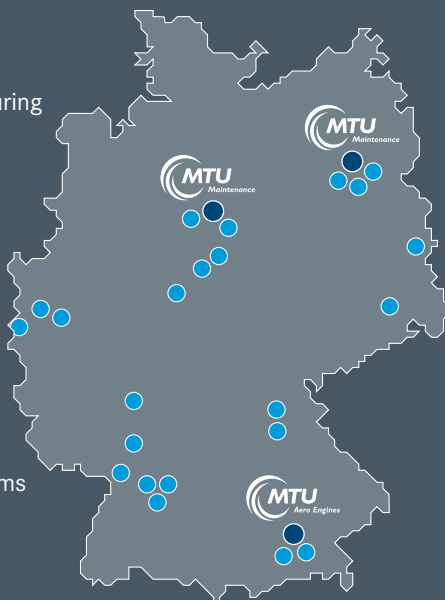
Uni & LZ Hannover
Turbine & Maintenance
Repair and Overhaul

DLR Cologne
Propulsion Systems

TU Munich
Structural Design

UniBW Munich
Military Propulsion Systems

University of Stuttgart
Turbine Testing &
Thermodynamics



Cooperation with universities

BAM Berlin
DLR Berlin
TU Berlin
TU Braunschweig
BTU Cottbus
TU Darmstadt
TU Dresden
Uni Erlangen
FHG Fürth
Uni Göttingen
Uni Hannover
Uni Heidelberg
FZ Jülich
KIT Karlsruhe
Uni Kassel
DLR Stuttgart
MPA Stuttgart

Research collaborations

Collaborating with universities and research institutes is a mainstay of our research and development work and a clear area of priority if we are to fulfill our obligations to society. We create strategic alliances with research partners to foster the links between universities and industry and to safeguard MTU's capacity for innovation. MTU runs six competence centers across Germany, each with its own research focus, in universities across Germany, and in 2005 the company and various partners founded Bauhaus Luftfahrt e.V., a think tank for integrated and interdisciplinary research into the future of air travel.

With a company-affiliated foundation, we support talented young women studying scientific and technical disciplines. In addition to financial grants, the MTU "Studien-Stiftung" foundation offers personal advice and supervision to prepare students for getting started on their careers.

MTU research specialists give regular presentations and guest lectures at universities, and at Cottbus we take care of a significant portion of lectures for the engine technology course. At the University of Stuttgart, MTU has endowed a chair for aircraft engine structural mechanics, which was successfully filled in 2015. We give

national and international university groups an insight into the work at an industrial company. Students can write their bachelor, master or Diplom theses or dissertations at MTU or work in the company as interns or work students. At the end of 2015, there were 418 students working in various capacities in the company.

Every year, the company confers the Wolfgang Heilmann Award, its own science award for outstanding achievements by emerging academic talent in the field of aircraft engines. In addition, we are an industrial sponsor of the prestigious Media Prize for Aerospace Journalism, which is awarded annually to non-specialist journalists for outstanding articles on aerospace trends and topics.

6.2 Donations/Sponsorship

We promote social activities in the places where we operate and support social institutions near our sites.

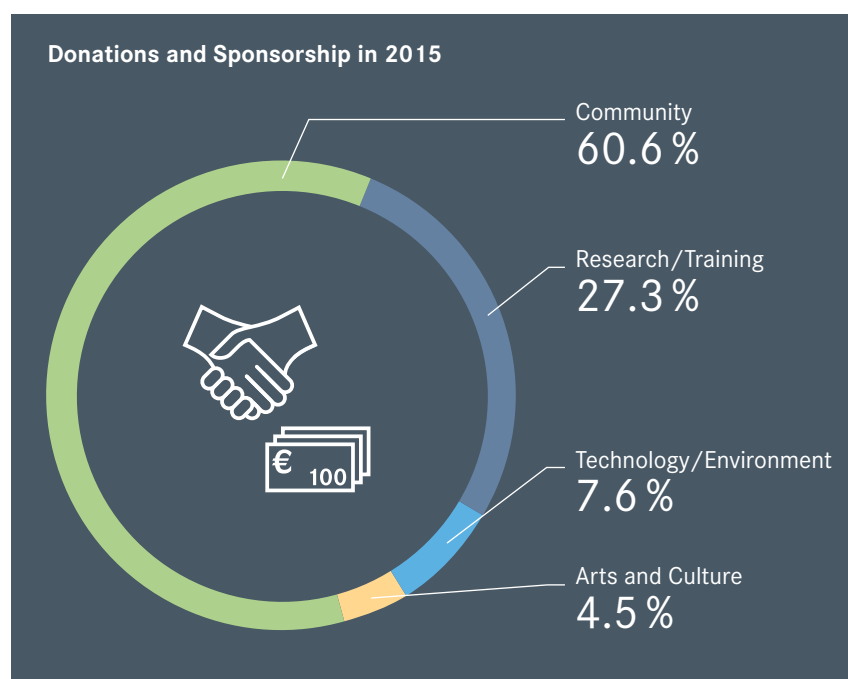
MTU supports various social institutions, generally charity organizations with a social focus. We provide help by donating funds or goods. A decisive factor in choosing the recipients is a local/regional connection or thematic relevance to the company. Specific projects have priority over general institutional funding. After careful research, selection and implementation are carried out independently by the respective organizations. Internal guidelines govern the making of donations and undertaking of sponsorship, with a centrally controlled approval and authorization process ensuring that these rules are observed.

In 2015, we supported around 70 projects and institutions with cash or in-kind donations. In addition, MTU supplies pro bono judges for labor and social courts, for example, or auditors for chambers of industry and commerce.

Examples of our social commitment in 2015

- Funding of the parent-run daycare initiative TurBienchen e.V., Munich
- Sponsorship of childcare during school vacations
- External rescue operations carried out by MTU's on-site fire brigade and company doctor, Munich
- Support for Wings of Help, a project emergency aid for refugees
- Support for Langenhagener Symphoniker, Hannover
- Support for Children's Day, Rzeszów
- Support for charity run, Berlin

We encourage the voluntary social commitment of our employees, such as participation in charity runs. We facilitate volunteering missions for the German Federal Agency for Technical Relief, for example, through paid leave.





Goals and goal attainment for 2015

(based on reporting period)

Strategy/economy

	Goal	Status/Deadline	Comments
Stakeholder dialog	→ Set up direct e-mail contact for enquiries on sustainability	Ongoing	
	→ Conduct stakeholder survey on sustainability performance and sustainability communication on MTU's website	Ongoing	We regularly adapt the stakeholder survey to include the results of the materiality analysis.
	→ Comply with CR reporting as set out by GRI-G4	Achieved	
	→ Prepare non-financial reporting in accordance with new EU regulations	Starting 2016	Requirement for non-financial reporting begins with the financial year 2017
	→ Intensify dialog with employees about sustainability	2016/2017	Information events for HR and purchasing department employees; Sustainability Action Day at Munich location
	→ Participate in an investor conference with a focus on sustainability	2016	
	→ Participate in a climate protection agreement among Munich businesses	Till 2017	Communication and documentation about involvement of participating large corporations over the course of the project
Compliance	→ Carry out regular compliance audits to ensure business processes comply with laws and guidelines	Ongoing	
	→ Hold employee training courses	Ongoing	Throughout the reporting year, we have carried out corresponding training at our German and North American locations and subsidiaries.
Sustainability management	→ Conduct materiality analysis to determine most important sustainability topics	Yearly	
	→ Launch CR training for employees	2016	
	→ Get listed on the Dow Jones Sustainability Index	Not achieved	We currently do not have all of the relevant data required on record to be included in the index; we will participate again in 2016
	→ Achieve representation in external sustainability ratings	Ongoing	
	→ Expand to include further sites outside of Europe	2016	Preparation beginning in Q4 2016
Supplier management	→ Carry out annual survey of all suppliers regarding compliance with Dodd-Frank Act	Ongoing	
	→ Require new suppliers to commit to the Code of Conduct	Ongoing	
	→ More strongly weight consideration of environmental aspects for supplier approval	2017	

Product responsibility

	Goal	Status/Deadline	Comments
Climate strategy	→ Reduce CO ₂ emissions by 15 % through first geared turbofan generation (relative to the engine from year 2000)	Achieved	First A320neo with geared turbofan delivered to Lufthansa beginning of 2016
	→ Reduce CO ₂ emissions by 20 % through second geared turbofan generation (relative to the engine from year 2000)	2025	
	→ Reduce CO ₂ emissions by 30 % through third geared turbofan generation (relative to the engine from year 2000)	2035	
Aircraft noise	→ Reduce noise emissions by 20 dB (cumulative, relative to the ICAO's chapter 4 noise level) through first geared turbofan generation	Achieved	First A320neo with geared turbo fan delivered to Lufthansa
	→ Reduce noise emissions by 11 dB (per aircraft movement, corresponds to -55 %, relative to the year 2000)	2035	In accordance with the European Strategic Research and Innovation Agenda (SRIA)
	→ Reduce noise emissions by 15 dB (per aircraft movement, corresponds to -65 %, relative to the year 2000)	2050	In accordance with the European Strategic Research and Innovation Agenda (SRIA)
Alternative fuels	→ Support the introduction of sustainable fuels with MTU engine expertise via participation in research projects, studies and practical tests	Ongoing	
Product quality and safety	→ Successfully complete monitoring and recertification audits for quality management systems	Ongoing	

Environmental protection

	Goal	Status/Deadline	Comments
Reduced consumption of energy and resources	→ Reduce CO ₂ emissions by 25 % at Munich plant as part of Clean Air Industrial Site	Ongoing	Compared to 1990 emission levels
	→ Participate in a climate protection agreement among Munich businesses	Ongoing	Reduction of at least 40,000 metric tons in CO ₂ emissions at large companies in Munich by the end of 2017
	→ Promote sustainable mobility	Ongoing	As of 2015, all internal mail at Munich headquarters is now transported by e-Golfs; concept for promoting e-mobility among employees in the pipeline in Hannover
	→ Reduce resource consumption and CO ₂ emissions from business trips through increased use of modern communication technologies such as video and phone conferencing	Ongoing	
Energy conservation measures	→ Reduce the energy needed to run buildings	Ongoing	
	→ Upgrade to LED lighting	Ongoing	
	→ Switch off machines and systems during longer stoppages	Ongoing	
	→ Improve efficiency in compressed air generation	Ongoing	
	→ Use groundwater for cooling	Ongoing	
	→ Carry out employee training courses on sustainable resource consumption and the company's environmental activities	Ongoing	
Material efficiency	→ Introduce sustainable manufacturing concepts: Apply new laser-based additive manufacturing techniques to make mass-produced components directly from a powder bed using CAD data.	Ongoing	Range of parts is continuously being expanded.
	→ Materials development: Improve materials with respect to temperature resistance and weight, leading to less fuel consumption and pollutant emissions.	Ongoing	New material titanium aluminide used in A320neo geared turbofan
Material consumption	→ Implement EU's RECh regulation	2017	We are on target with our proposed schedule.
Environmental certifications	→ Earn certifications to ISO 14001 and achieve EMAS validation	Ongoing	The Hannover and Berlin sites are certified to ISO 14001; the Munich and Hannover sites have EMAS validation.
	→ Expand EMAS validation to all German sites	2016	Berlin plans to achieve EMAS validation for the first time in 2016.
	→ Issue annual environmental statements for the biggest locations, Munich and Hannover, documenting observance of EMAS requirements in accordance with Regulation (EC) No. 1221/2009 of the European Parliament.	Ongoing	

Employees

	Goal	Status/Deadline	Comments
Occupational safety	→ Limit reportable workplace accidents to a maximum of 19 within the MTU Group	Not achieved	Actual figure 2015: 34 reportable workplace accidents; goal not attained due to an unfortunate trend of accidents at the Munich location.
	→ Expand extended risk assessment to all German locations	Partially achieved	Goal has been attained for Hannover and Munich sites. Berlin site has launched a pilot project, expansion is planned for Q4 2016.
	→ Conduct occupational safety campaign with focus topics	Ongoing	
	→ Run monitoring and recertification audits in accordance with OHSAS 18001 in the MTU Group for locations that are already certified	Yearly	
Occupational health	→ Introduce systematic ergonomics management	2016	Pilot project has been completed. Will begin at Munich site in July 2016. In Hannover, a comprehensive analysis of workshop ergonomics is underway using a key indicator method. By the end of 2016, all significant irregularities will be resolved. Pilot project is planned for Q4 2016 at Berlin site.
	→ Promote a healthy diet	Ongoing	
	→ Develop performance indicators for better targeted measures to maintain health and improve performance for all employees	Achieved	First MTU Workability Index and High Performance Index (HiPO) have been derived from the employee survey in Germany.
	→ Expand employee survey to include mental health topics	Achieved	Employee survey took place at the end of 2015 at all German sites.
	→ Further develop occupational reintegration management (BEM) at German sites	2017	Pilot project launched in Hannover in 2016 with managers systematically involved in the process. An internal MTU integration committee including managers has been set up. In-house medical service hours have been expanded for workplace inspections, health consultations and networking with external health professionals.
Attractiveness as an employer	→ Strengthen international focus of employer branding	Ongoing	
	→ Further develop offers to improve work-life balance	Ongoing	
	→ Achieve ranking as Top Employer Germany and Poland	Yearly	
	→ Serve initiatives for company-sponsored childcare during summer vacation	Ongoing	Munich, Hannover

Employees

	Goal	Status/Deadline	Comments
Attractiveness as an employer	→ Provide external advice and placement services for family-related matters	Ongoing	Offers are regularly reviewed and further developed.
	→ Develop new offers for employee mobility	Ongoing	2015: transit tickets for employees in Munich
	→ Successfully complete mobile working pilot project	End of 2016	Project launched in Munich in 2015. Continuation/expansion is currently under discussion.
Diversity	→ Increase the percentage of female employees and women in management positions	Ongoing	
	→ Participate in initiatives designed to promote young female talent, such as Girls' Day or Research Camp for Girls	Ongoing	
Education and training	→ Offer new qualification possibilities for promoting greater internationalization	Partially achieved	Expansion of international joint projects through the International Leadership Program (ILP), which took place in 2015.
	→ Continue with the qualification and cultural initiative Business Challenge	2016	Start of MTU Business Challenge II Leadership
	→ Introduce talent management program	2016	Revision of the follow-up process for positions critical to success in 2015
	→ Long-term employee development	Ongoing	Introduction of Leadership program (MTU Management Growth) and project for individual career plan at MTU Aero Engines Polska (both in 2015)
Employer/employee dialog	→ Employee survey at company locations in Germany, with further developments based on the insights gained from the last survey	Achieved	Employee survey 2015 successfully carried out, evaluation and start of measures to take place in 2016.
	→ Company suggestion system for putting employees' ideas for improvement into practice	Ongoing	
	→ MTU award to honor outstanding employee performance	2017	Every two years

Society

	Goal	Status/Deadline	Comments
Integration of refugees	→ Prepare introductory workshop on vocational training in the training workshop	Starting 2016	At Munich headquarters
Corporate volunteering	→ Support employee volunteer work	Ongoing	Social engagement in the local community is in planning at Munich headquarters.
	→ Setting up Social Day for managers	2017	
Investing in future workforce	→ Sponsor the further education of young scientists after they complete a university degree	Till 2018	MTU has closed three sponsorship contracts at the University of Stuttgart and at the German Aerospace Center
	→ Establish a chair in structural mechanics in aircraft engines at the University of Stuttgart	Ongoing	Appointment successfully filled in 2015, chair vacancy was filled in 2016.
	→ Support the MTU foundation for female students in science and technology courses	Ongoing	
	→ Award the annual Wolfgang Heilmann Prize for young scientists	Yearly	
Sponsoring science journalism	→ Sponsor the Deutscher Journalistenpreis für Luft- und Raumfahrt (German aerospace journalism award)	Yearly	

GRI-Index – General Standard Disclosures

Strategy and Analysis

GRI-Indicator	UNGC-Principle	Reference/Comments
G4-1	Statement from the Board of Management	Foreword by the Chief Executive Office p. 5

Organisationsprofil

GRI-Indicator	UNGC-Principle	Reference/Comments
G4-3	Name of the organization	Company profile p. 8-9
G4-4	Primary brands, products, and services	Company profile p. 8-9
G4-5	Organization's headquarters	Company profile p. 8-9
G4-6	Countries where the organization operates	Annual Report 2015 p. 69
G4-7	Nature of ownership and legal form	Company profile p. 8-9 Annual Report 2015 p. 28
G4-8	Markets served	Annual Report 2015 p. 154
G4-9	Scale of organization	Company profile p. 8-9
G4-10	6	Total workforce Chapter 5 Employees p. 67 <i>Information concerning the percentage of female employees categorized by type of employment and contract is regarded as confidential.</i>
G4-11	3	Percentage of total employees covered by collective bargaining agreements <i>In Germany, works agreements negotiated with employee representatives supplement the statutory foundations in defining working condition. These collective agreements apply to all employee groups with the exception of senior management, who have their own representative body. In 2015, 98.3 % of employees in Germany were covered by collective agreement. In Poland, elected employee representatives look after the interests of the workforce in dealings with management</i>
G4-12	Description of supply chain	Chapter 2 Economics/2.3 Supply chain p. 32-33
G4-13	Significant changes regarding size, structure, ownership	None
G4-14	Precautionary approach	Chapter 2 Economics/2.3 Supply chain p. 34-35 Chapter 3 Product responsibility p. 48-49 Chapter 4 Environmental protection p. 52-55 Chapter 5 Employees/5.1 Occupational health and safety p. 69-71 Annual Report 2015/Risk and opportunity report p. 121-133
G4-15	External charters, principles, or other initiatives	Chapter 1 Strategy/1.5 Stakeholder dialog p. 23 Chapter 2 Economics/2.2 Compliance p. 31 Chapter 4 Environmental protection p. 55 Chapter 5 Employees/5.4 Diversity & equal opportunity p. 77 Chapter 6 Society/6.2 Donating/Sponsorship p. 84
G4-16	Memberships	Chapter 1 Strategy/1.5 Stakeholder-dialog p. 23

Material Aspects and Boundaries

GRI-Indicator	UNGC-Principle	Reference/Comments	
G4-17	Basis of consolidation	About this report/Scope of validity	p. 6-7
G4-18	Process for defining report content	Chapter 1 Strategy/1.1 Sustainability strategy, Materiality analysis	p. 12-13
G4-19	Material aspects identified	Chapter 1 Strategy/1.1 Sustainability strategy, Materiality analysis	p. 12-13
G4-20	Material aspects within the organization	Chapter 1 Strategy/1.1 Sustainability strategy, Materiality matrix (excluding Responsible sourcing for supply chain)	p. 13
G4-21	Material aspects outside the organization	Chapter 1 Strategy/1.5 Stakeholder dialog (see issues of external stakeholder groups)	p. 21
G4-22	Re-statements of information	About this report	p. 6-7
G4-23	Changes from previous reports	About this report	p. 6-7

Stakeholder Engagement

GRI-Indicator	UNGC-Principle	Reference/Comments	
G4-24	Stakeholder groups engaged	Chapter 1 Strategy/1.5 Stakeholder dialog	p. 21
G4-25	Basis for selection of stakeholders	Chapter 1 Strategy/1.5 Stakeholder dialog	p. 20
G4-26	Approaches to stakeholder engagement	Chapter 1 Strategy/1.5 Stakeholder dialog	p. 20
G4-27	Key topics and concerns raised through stakeholder engagement	Chapter 1 Strategy/1.5 Stakeholder dialog	p. 20-21

Reporting Profile

GRI-Indicator	UNGC-Principle	Reference/Comments	
G4-28	Reporting period	About this report	p. 6-7
G4-29	Date of previous report	About this report	p. 6-7
G4-30	Reporting cycle	About this report	p. 6-7
G4-31	Contact point for questions regarding the report	About this report	p. 6-7
G4-32	GRI Content Index and chosen option	About this report	p. 6-7
G4-33	External assurance	About this report	p. 6-7

Governance

GRI-Indicator	UNGC-Principle	Reference/Comments	
G4-34	Governance structure	Annual Report 2015/The Executive Board The Supervisory Board	p. 24-25 p. 64-65

Ethics und Integrity

GRI-Indicator	UNGC-Principle	Reference/Comments	
G4-56	10 Values, principles, codes of conduct	Chapter 1 Strategy/1.3 Ethics and Integrity	p. 16-17

GRI-Index – Specific Standard Disclosures

Economic Performance

GRI-Indicator	UNGC-Principle		Reference/Comments
		Economic Performance Management approach	Chapter 2 Economics p. 24-28
G4-EC1		Economic value generated	Chapter 2 Economics/2.1 Sustainable added value <i>Indicator is not reported by market or region.</i> p. 27-28
G4-EC2	7	Financial implications of climate change	Chapter 1 Strategy/1.1 Sustainability strategy, Sustainability risks p. 14
		Procurement Practices Management approach	Chapter 2 Economics/2.3 Supply chain p. 32-35
G4-EC9		Proportion on spending on local suppliers	Chapter 2 Economics/2.3 Supply chain p. 33

Environment

GRI-Indicator	UNGC-Principle		Reference/Comments
		Materials Management approach	Chapter 4 Environmental protection p. 53
G4-EN1	7, 8	Materials used by weight or volume	4.4 Material efficiency p. 62-63 Chapter 4 Environmental protection p. 62 4.4 Material efficiency
		Energy Management approach	Chapter 4 Environmental protection p. 53
G4-EN3	7, 8	Energy consumption within the organization	4.1 Energy management p. 56-57 Chapter 4 Environmental protection p. 56-57 4.1 Energy management
G4-EN6	8, 9	Reduction of energy consumption	Chapter 4 Environmental protection p. 56-57 4.1 Energy management
G4-EN7	8, 9	Reductions in energy requirements of products and services	Chapter Product responsibility p. 39-40 3.2 Fuel efficiency
		Water Management approach	Chapter 4 Environmental protection p. 53
G4-EN8	7, 8	Total water withdrawal by source	4.3 Water usage p. 60-61 Chapter 4 Environmental protection p. 60 4.3 Water usage
G4-EN9	8	Water sources affected	Chapter 4 Environmental protection p. 61 4.3 Water usage
		Emissions Management approach	Chapter 4 Environmental protection p. 53
G4-EN15	7, 8	Direct greenhouse gas emissions Scope 1	4.2 Emissions p. 58-59 Chapter 4 Environmental protection p. 58 4.2 Emissions
G4-EN16	7, 8	Direct greenhouse gas emissions Scope 2	Chapter 4 Environmental protection p. 58 4.2 Emissions
G4-EN 19	8, 9	Reduction of greenhouse gas emissions	Chapter 4 Environmental protection p. 58-59 4.2 Emissions
G4-EN21	7, 8	Significant air emissions	Chapter 4 Environmental protection p. 59 4.2 Emissions
		Effluents and waste Management approach	Chapter 4 Environmental protection p. 53
G4-EN22	8	Total water discharge by quality and destination	4.4 Material efficiency p. 62-63 Chapter 4 Environmental protection p. 60 4.3 Water usage
G4-EN23	8	Total weight of waste by type and disposal method	Chapter 4 Environmental protection p. 63 4.4 Material efficiency
G4-EN24	8	Significant spills	No incidents of environmental pollution in 2015
		Products and services Management approach	Chapter 3 Product responsibility p. 36-37
G4-EN27	7-9	Extent of impact mitigation of environmental impact of product and services	Chapter 3 Product responsibility p. 41-47 3.3 Climate strategy, 3.4 Aircraft noise
		Compliance Management approach	Chapter 2 Economics/2.2 Compliance p. 29-31
G4-EN29	8	Monetary value or non-monetary sanctions for non-compliance with environmental laws and regulations	Chapter 4 Environmental protection p. 55
		Transport Management approach	Chapter 2 Economics/2.3 Supply chain p. 34 Chapter 4 Environmental protection/4.2 Emissions p. 58-59

Environment

GRI-Indicator	UNGC-Principle		Reference/Comments
G4-EN30		Environmental impacts of transporting products and other goods and materials	Chapter 4 Environmental protection 4.2 Emissions No incidents of environmental pollution in 2015
		Overall Management approach	Chapter 4 Environmental protection S. 52-55
G4-EN31	7-9	Total environmental protection expenditures and investments	Chapter 4 Environmental protection S. 54
		Supplier environmental assessment Management approach	Chapter 2 Economics/2.3 Supply chain S. 34-35
G4-EN33	8	Negative environmental impact in the supply chain	Chapter 2 Economics/2.3 Supply chain S. 34-35
		Environmental grievance mechanism Management approach	Chapter 4 Environmental protection S. 55
G4-EN34	8	Number of grievances about environmental impacts	None

Labor practices and decent work

GRI-Indicator	UNGC-Principle		Reference/Comments
		Employments Management approach	Chapter 5 Employees p. 64-68
G4-LA2		Benefits provided to full-time employees	Chapter 5 Employees p. 69-71 5.1 Occupational health and safety 5.2 Attractiveness as an employer p. 72-73 <i>Our benefits apply to all employees. There is no distinction made between full-time and part-time employees. For part-time employees, the principle of proportionate remuneration is applied.</i>
G4-LA3	6	Return to work after parental leave	Chapter 5 Employees p. 67 <i>In Germany, the right to parental leave applies to the entire workforce and is regulated by federal law. The law ensures that all persons who are gainfully employed in Germany are entitled to take time off work for this reason.</i>
		Labor/Management relations Management approach	Chapter 5 Employees p. 64-68
G4-LA4	3	Minimum notice periods regarding operational changes	Chapter 5/Social and labor standards p. 68 <i>Agreements made between the employer and the works council that are governed by collective agreements can be terminated with three months' notice under Section 77 of the German Works Council Constitution Act (Betriebsverfassungsgesetz, BetrVG). This is generally also the case for the collective agreements. In cases in which the arbitration body's decision overrules an agreement between the works council and employer, the regulations regarding notice remain valid until replaced with others. Notice periods for the assertion of claims by employees or the employer are also firmly laid down in collective agreements. In accordance with Polish law, in Poland this period is two weeks for temporary contracts and one to three months for permanent work contracts, dependent on the length of the term of employment.</i>

GRI-Index – Specific Standard Disclosures

Labor practices and decent work

GRI-Indicator	UNGC-Principle	Reference/Comments
	Occupational health and safety Management approach	Chapter 5 Employees p. 69-71 5.1 Occupational health and safety
G4-LA5	Percentage of total workforce represented in formal joint management-worker health and safety committee	<i>The entire workforce of our sites in Europe is fully represented at the locally organized occupational safety committees, the composition of which reflects the legal requirements in the respective countries.</i>
G4-LA6	Injuries, occupational diseases, lost days and work-related fatalities	Chapter 5 Employees p. 70, 71 5.1 Occupational health and safety <i>In order to protect personal data, no further statistical analysis is carried out concerning accidents and days lost. Further distinctions based on such factors as gender is therefore neither possible nor intended. MTU is not aware of how many applications have been made and accepted that classify an illness as being of occupational origin. Basis of accident statistics is Book VII of the German Social Insurance. Accidents involving temporary workers in 2015: 9</i>
	Training and education Management approach	Chapter 5 Employees p. 74-76 5.3 Employee development
G4-LA9	6 Average hours of training per employee	Chapter 5 Employees p. 74 5.3 Employee development
G4-LA10	Programs for lifelong learning	Chapter 5 Employees p. 74-76 5.3 Employee development
G4-LA11	6 Percentage of employees receiving regular performance and career development reviews	Chapter 5 Employees p. 74 5.3 Employee development
	Diversity and equal opportunity Management approach	Chapter 5 Employees p. 77-79 5.4 Diversity & Equal opportunity
G4-LA12	6 Composition of governance bodies and employees	Chapter 5 Employees p. 77-79 5.4 Diversity & Equal opportunity
	Equal remuneration for women and men Management approach	Chapter 5 Employees p. 72 5.2 Attractiveness as an employer
G4-LA13	6 Ratio of basic salary and remuneration of women to men	Chapter 5 Employees p. 78-79 5.4 Diversity & Equal opportunity 5.2 Attractiveness as an employer 5.4 Diversity & Equal opportunity p. 78
	Supplier assessment for labor practices Management approach	Chapter 2 Economics p. 34-35 2.3 Supply chain
G4-LA15	Negative impacts for labor practices in the supply chain	Chapter 2 Economics p. 34-35 2.3 Supply chain
	Labor practices grievance mechanism Management approach	Chapter 1 Strategy p. 16 1.3 Ethics und Integrity 1.4 Human rights p. 18 Chapter 5 Employees p. 68 Social and labor standards
G4-LA16	Number of grievances about labor practices	Chapter 1 Strategy/ p. 16 1.3 Ethics und Integrity 1.4 Human rights p. 18 Chapter 5 Employees p. 68 Social and labor standards

Human Rights

GRI-Indicator	UNGC-Principle		Reference/Comments	
G4-HR1	2	Investment	Chapter 2 Economics/2.3 Supply chain	p. 34-35
		Significant investment agreements and contracts including human right clauses	Chapter 2 Economics/2.3 Supply chain	p. 34-35
		Non-discrimination Management approach	Chapter 1 Strategy	p. 18
			1.4 Human rights	
G4-HR3	6	Total number of incidents of discrimination	Chapter 5 Employees	p. 77-79
			5.4 Diversity & Equal opportunity	
			Chapter 1 Strategy	p. 18
			1.4 Human rights	
			Chapter 5 Employees	p. 68
			Social and labor standards	
		Freedom of association and collective bargaining Management approach	Chapter 1 Strategy/1.4 Human rights	p. 18
			Chapter 5 Employees	p. 68
G4-HR4	3	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining is violated	Social and labor standards	
			Chapter 1 Strategy/1.4 Human rights	p. 18
			Chapter 5 Employees	p. 68
			Social and labor standards	
			Chapter 2 Economics/2.3 Supply chain	p. 34-35
			Child labor Management approach	
G4-HR5	5	Operations and suppliers with significant risk for incidents of child labor	Chapter 1 Strategy/1.4 Human rights	p. 18
			Chapter 1 Strategy/1.4 Human rights	p. 18
			Chapter 2 Economics/2.3 Supply chain	p. 35
			Forced and compulsory labor Management approach	
G4-HR6	4	Operations and suppliers with significant risk for incidents of forced and compulsory labor	Chapter 1 Strategy/1.4 Human rights	p. 18
			Chapter 2 Economics/2.3 Supply chain	p. 35
			Assessment Management approach	
			Chapter 1 Strategy/1.4 Human rights	p. 18
G4-HR9	1	Operations that have been subject to human rights reviews	Chapter 1 Strategy/1.4 Human rights	p. 18
			Supplier human rights assessment Management approach	
			Chapter 2 Economics/2.3 Supply chain	p. 34-35
G4-HR10	2	Percentage of new suppliers that were screened using human rights criteria	Chapter 1 Strategy/1.4 Human rights	p. 18
			Chapter 2 Economics/2.3 Supply chain	p. 34-35
			<i>All new suppliers are contractually obligated to uphold MTU's Code of Conduct, which makes protection of human rights compulsory.</i>	
		Human rights grievance mechanisms Management approach	Chapter 1 Strategy/1. 3 Ethics and Integrity	p. 16
			1.4 Human rights	p. 18
			Chapter 5 Employees	p. 68
			Social and labor standards	
G4-HR12	1	Number of grievance about human rights	Chapter 1 Strategy/1. 3 Ethics and Integrity	p. 16
			1.4 Human rights	p. 18
			Chapter 5 Employees	p. 68
			Social and labor standards	

GRI-Index – Specific Standard Disclosures

Society

GRI-Indicator	UNGC-Principle		Reference/Comments	
		Anti-corruption Management approach	Chapter 2 Economics/2.2 Compliance	p. 29-31
G4-SO3	10	Operations assessed for risks related to corruption	Chapter 2 Economics/2.2 Compliance	p. 30
G4-SO4	10	Information and training on anti-corruption	Chapter 2 Economics/2.2 Compliance	p. 30
G4-SO5	10	Confirmed incidents of corruption and corrective actions taken	Chapter 2 Economics/2.2 Compliance	p. 30
		Public policy Management approach	Chapter 1 Strategy/1.5 Stakeholder dialog	p. 23
G4-SO6	10	Total value of political contribution	Chapter 1 Strategy/1.5 Stakeholder dialog	p. 23
		Anti-competitive behavior Management approach	Chapter 2 Economics/2.2 Compliance	p. 29
G4-SO7		Legal actions for anti-competitive behavior and anti-trust and monopoly practices	<i>In 2015, MTU and its subsidiaries were not involved in any judicial processes related to anti-competitive behavior, antitrust practices, or forming of monopolies.</i>	
		Compliance Management approach	Chapter 2 Economics/2.2 Compliance	p. 29-31
G4-SO8		Monetary values of significant fines and non-monetary sanctions for non-compliance with laws	Chapter 2 Economics/2.2 Compliance	p. 30
		Supplier assessment for impacts on society Management approach	Chapter 2 Economics/2.3 Supply chain	p. 34-35
G4-SO9		Percentage of new suppliers that were screened using criteria for impacts on society	Chapter 2 Economics/2.3 Supply chain	p. 34-35
			<i>All new suppliers are contractually bound to comply with MTU's Code of Conduct, which is informed by the ten principles of the UN Global Compact.</i>	
G4-SO10		Negative impacts on society in the supply chain	Chapter 2 Economics/2.3 Supply chain	p. 34-35
		Grievance mechanisms for impacts on society Management approach	Chapter 1 Strategy/1.3 Ethics and Integrity	p. 16
			1.4 Human rights	p. 18
			Chapter 2 Economics/2.2 Compliance	p. 29-30
			Chapter 5 Employees	p. 68
G4-SO11		Number of grievances about impacts on society	Chapter 2 Economics/2.2 Compliance	p. 30
			2.3 Supply chain	p. 34
			Chapter 4 Environmental protection	p. 55
			None	

Product Responsibility

GRI-Indicator	UNGC-Principle	Reference/Comments	
	Customer health and safety Management approach	Chapter 3 Product responsibility 3.5 Product quality and safety	p. 48-50
G4-PR1	Products and services for which health and safety impacts are assessed	Chapter 3 Product responsibility 3.5 Product quality and safety	p. 48-50
		Chapter 4 Environmental protection 4.4 Material efficiency, REACH regulation	p. 62
G4-PR2	Number of incidents of non-compliance with regulations concerning health and safety impacts	Chapter 3 Product responsibility/ 3.5 Product quality and safety	p. 49
	Products and service labeling Management approach	Chapter 3 Product responsibility 3.5 Product quality and safety	p. 48-50
G4-PR3	Product and service information required by procedures	Chapter 3 Product responsibility 3.5 Product quality and safety	p. 48-50
G4-PR5	Results of surveys measuring customer satisfaction	Chapter 3 Product responsibility 3.5 Product quality and safety, Customer satisfaction	p. 51
	Compliance Management approach	Chapter 2 Economics/2.2 Compliance	p. 29-31
G4-PR9	Monetary value of significant fines for non-compliance with laws concerning the use of products and services	Chapter 3 Product responsibility 3.5 Product quality and safety	p. 49



MTU Aero Engines AG
Dachauer Straße 665
80995 Munich • Germany
Tel. +49 89 1489-0
Fax +49 89 1489-5500
corporateresponsibility@mtu.de
www.mtu.de