MUNICH AIRPORT
Integrated Report 2019

Living ideas – Connecting lives

5 Star Airport

WHAT A DIFFERENCE

What a difference

What a difference

More competent. More efficient. More profitable. More sustainable. The drive to achieve success is invariably linked with the drive to make a difference. Munich Airport is already making a difference in many aspects. To stand out not only within the sector, but also from what has already been achieved – this goal is the basis for the continuing sustainable and successful development of Munich Airport.

MUNICH AIRPORT AT A GLANCE

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ONLINE REPORT

Additional content in the online report:

- Notes to the consolidated financial statements
- Independent auditor's report
- Sustainability indicators
- Sustainability program
- Key topics
- GRI Content Index
- Report profile
- Independent assurance report

The online report is available at:
report2019.munich-airport.com

Key economic figures

RESULTS OF OPERATIONS, NET ASSETS, AND FINANCIAL POSITION

Fig. 01

In € million	2019	2018	2017	Change in % 2019/18
Group revenue	1,568.0	1,508.8	1,468.7	3.9
Of which aviation in %	55	54	54	
Of which non-aviation in %	45	46	46	
EBITDA	554.3	538.1	520.0	3.0
EBIT	345.5	323.5[2]	302.4	6.8
Consolidated earnings after taxes (EAT)	177.8	149.6[2]	158.8	18.9
EBITDA margin in %	35.4	35.7	35.4	
EBITDA/Pax in €	11.6	11.6	11.7	0.0
EBIT margin in %	22.0	21.4	20.6	
ROCE[1] in %	7.6	7.4	6.9	
Cash flow from operating activities	429.1	468.3	381.9	-8.4
Investments	319.4	204.7	136.3	56.1
Free cash flow	109.1	271.7	265.2	-59.8
Equity	2,378.1	2,225.0[2]	2,086.3	6.9
Equity ratio in %	42.9	41.3	39.3	
Net debt	2,108.1	2,079.4	2,221.5	1.4
Net debt/EBITDA	3.8	3.9	4.3	
Net gearing (net debt/equity) in %	89	93	106	

[1] ROCE = EBIT/(equity + net debt + ongoing employee benefits)
[2] Value adjusted

Key environmental figures

CO_2 EMISSIONS

Fig. 02

In tonnes	2019	2018	2017	Change in % 2019/18
Direct emissions Scope 1	88,876	87,341	88,668	1.8
Indirect emissions Scope 2	12,635	15,045	17,237	-16.0
Other indirect emissions Scope 3	46,277	47,719	46,154	-3.0
Total annual CO_2 emissions open to influence	**147,788**	**150,105**	**152,059**	**-1.5**

SPECIFIC CO_2 EMISSIONS

Fig. 03

In kilograms	2019	2018	2017	Change in % 2019/18
CO_2 emissions per passenger	3.08	3.24	3.41	-4.9

DRINKING WATER AND WASTEWATER

Fig. 04

In cubic meters	2019	2018	2017	Change in % 2019/18
Volume of purchased drinking water	1,032,239	986,580	1,016,708	4.6
Drinking water consumption per 1,000 TU[1]	20.2	19.8	21.0	2.0
Total wastewater discharged	2,494,388	2,404,292	2,336,314	3.7
Wastewater per 1,000 TU[1]	48.5	48.2	48.3	0.6

[1] Traffic units

Key social figures

EMPLOYEE STRUCTURE[1]

Fig. 05

Number	2019	2018	2017	Change in % 2019/18
Total	9,806	9,626	9,413	1.9
Women in %	32.55	33.14	33.47	-1.8
Men in %	67.45	66.86	66.53	0.9
Full time in %	75.79	79.75	76.07	-4.9
Part time in %	24.21	20.25	23.93	19.6
< 30 years in %	15.68	15.92	16.11	-1.5
30–50 years in %	51.56	52.17	53.26	-1.2
> 50 years in %	32.76	31.91	30.64	2.7

[1] Reporting date: December 31: Figures exclude apprentices, workers in minor employment, temporary workers, and interns

APPRENTICES

Fig. 06

Number	2019	2018	2017	Change in % 2019/18
Total	303	277	275	9,4

OCCUPATIONAL HEALTH AND SAFETY

Fig. 07

Number	2019	2018[1]	2017	Change in % 2019/18
Reportable occupational accidents	236	231	225	2.2
Resulting days of absence	6,539	7,272	5,761	12.4
Rate per 1,000 workers	27	26.55	26.63	1.7

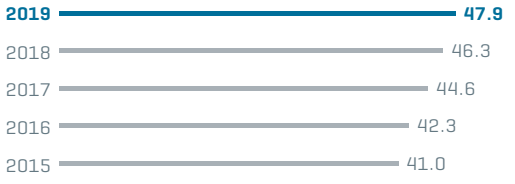
[1] Errors identified whilst our data was being audited have been corrected.

Key operating figures

PASSENGERS

Fig. 08

In millions



- In 2019, the passenger figures rose by just 3.6 percent, to a new peak of 47.9 million.
- Compared with European airports, Munich therefore occupied 9th place.

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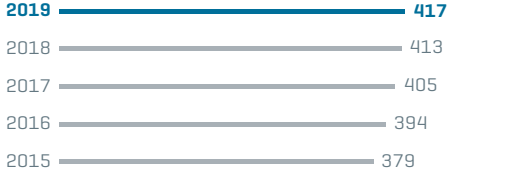
AIRCRAFT MOVEMENTS

Fig. 09

In thousands



- The number of takeoffs and landings increased in 2019 by around one percent to more than 417,000 aircraft movements.
- The airlines in Munich significantly expanded their flight offering in the area of intercontinental traffic in particular.

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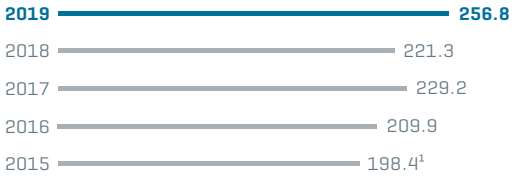
Key management figures

Munich Airport has defined three key performance indicators to measure the development of the company. These key performance indicators are a measure of doing business in a sustainable and integrated manner and influence the variable remuneration components for managers.

CONSOLIDATED EARNINGS BEFORE TAXES (EBT)

Fig. 11

In € million



- The consolidated earnings before taxes (EBT) rose sharply by 15.4% in 2019.
- The anticipated result was thus exceeded.

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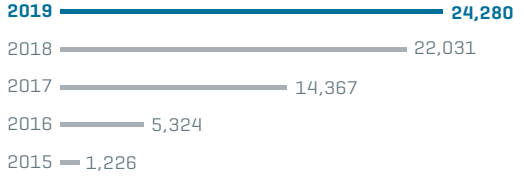
[1] Value adjusted in accordance with IAS 8

CO_2 REDUCTIONS

Fig. 10

In tonnes



- Munich Airport wants to be the first carbon-neutral airport in Germany by 2030.
- With 24,280 tonnes of saved CO_2 emissions from efficiency and special targets, it was possible to meet the target for 2019.

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PASSENGER EXPERIENCE INDEX (PEI)

Fig. 12

In percent

- The PEI is a parameter for measuring customer satisfaction.
- The fall in customer satisfaction is primarily a result of a relocation of traffic portions.

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On January 1, 2020, I took over as President and Chief Executive Officer of Flughafen München GmbH – a firmly established company with excellent growth and development potential. My goal is to deliver excellence in the future also in cooperation with my management colleagues and the workforce of Europe's only five-star airport. This means remaining agile, identifying opportunities and risks, and helping to shape change.

None of us could have anticipated that these precise qualities would be in demand in such an unprecedented way just a few weeks after I took office. The coronavirus has plunged the aviation industry into the worst crisis of the post-war era. While we are not yet in a position to fully assess the consequences, we can build on the value created in former years through the economically successful operation of our airport.

Positive course of business

Passenger volumes increased by 1.7 million or around four percent to a total of 47.9 million in 2019, in a year not yet impacted by the crisis. This makes Munich the airport location with the largest passenger growth in Germany. The number of take-offs and landings rose by around one percent to more than 417,000 aircraft movements.

«The fact that we achieved the best result in the company's history in 2019 will stand us in good stead in 2020 in terms of withstanding the massive loss of earnings as a result of the COVID-19 pandemic.»

THOMAS WEYER

Economically also, Munich Airport was on a successful course in 2019. With revenue of around €1.6 billion, we generated almost four percent more in 2019 than in the previous year. Earnings after taxes rose by 25 million euros to a new high of around 175 million euros.

Together with strict cost and spending restraint, to which our employees also contributed significantly through a reduction in working hours and short-time work, the excellent results from previous years will help us to survive the massive slump in traffic and loss of earnings in 2020 caused by the COVID-19 pandemic.

Sustainable growth

Yet even in a time when we are consumed by the events of the day, we must not lose sight of the longer term. Our climate protection strategy is a particular focus for me in terms of the sustainable development of our company. I will do my part to ensure that Munich Airport makes every effort in future also to reduce CO_2 emissions to the greatest extent possible. Decarbonization is not a far-flung future vision for me, rather a specific goal for which we have to examine and – if technically feasible – implement all possible measures. We want to ensure in this way that we are carbon-neutral by 2030 at the latest. Moreover, Munich Airport is among the first signatories to the Net Zero Carbon Initiative. We want to reduce the CO_2 emissions from operation of our airport, which are open to influence, to net zero by 2050 at the latest.

JOST LAMMERS
President and Chief Executive Officer
and Personnel Industrial Relations Director

ANDREA GEBBEKEN
Chief Commercial
and Security Officer

THOMAS WEYER
Chief Financial Officer
and Chief Infrastructure Officer

Improving the landside access and traffic development of Munich Airport is right at the top of my agenda also. Whether express suburban railway line or ICE station – optimizing the accessibility of Munich Airport is urgently needed and would also be in line with our sustainability ambitions.

«Experience and atmosphere, online availability and local service: The range of services in retail and catering should be more digital, individual, and emotional in order to serve our customers optimally.»

ANDREA GEBBEKEN

Ten years of integrated reporting

This claim is expressed not least in the fact that we have been conducting integrated reporting for ten years now and therefore providing a holistic picture of our company with the presentation of both financial and non-financial contents. Our anniversary report with the motto «What a difference» shows where Munich Airport does just that. We are focusing in this respect on three key challenges for the future: We are expanding our infrastructure sustainably, we are developing solution approaches for the demographic challenge, and we are helping to shape the digital transformation.

Staying connected

To finish, I would like to say a heartfelt thanks – also on behalf of my predecessor Dr. Michael Kerkloh and my colleagues Andrea Gebbeken and Thomas Weyer – to everyone who contributed to the success of the 2019 fiscal year: the airlines, the passengers, our business partners, representatives of authorities, shareholders, and most especially our employees who welcomed me with open arms into the airport family from the very outset. Let us be true to our brand core «Living ideas – Connecting lives» especially in these difficult times and zealously work to ensure that Munich Airport continues to make a difference in many different respects.

Yours sincerely,

JOST LAMMERS

What a difference 10 years of <IR> make

Integrated reporting in practice

This year's integrated report is Munich Airport's tenth. It represents an annual balance sheet of its responsible activities and thus also considers all key aspects of the entire value creation process: finances, employees, expertise, environment, infrastructure, and society. Integrated corporate leadership requires the networking of various divisions – and thus agility and efficiency – within the organization.

Integrated thinking, responsible action

Integrated action as a logical continuation of integrated thinking starts with the identification of key performance indicators that serve as the basis for operational and strategic alignment. Ultimately, higher-quality decisions become evident leading to sustained company success. Munich Airport is investing in the most important resources with the goal of increasing value over the long term. Qualified and motivated employees, high-performance and demand-driven infrastructure, and the successful continuation of the digital transformation are among the key requirements for driving development vigorously in the coming years.

Creating sustainable value

Integrated thinking and action form the basis for integrated reporting. This offers an holistic and farsighted description of the business activity of a company. In terms of its integrated reporting, Munich Airport is guided by the framework concept of the International Integrated Reporting Council (IIRC) and shows the key activities with which it is creating its short-, medium-, and long-term financial and non-financial value.

Revealing interdependencies

As part of its day-to-day business, every company has an impact on a wide array of stakeholders, as well as on internal and external factors. In order to present these qualitative and quantitative interactions of the business model, Munich Airport has defined for itself the six forms of capital of the IIRC, which represent the basis of its business activity. Using the changes in the forms of capital, the airport can demonstrate key cause-and-effect relationships as well as value added or impairment.

TEN YEARS OF INTEGRATED REPORTING AT MUNICH AIRPORT

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HANS-JOACHIM BUES
Senior Vice President
Corporate Communications

Mr. Bues, what function does Munich Airport's annual integrated report fulfill?

We communicate intensively with a number of stakeholders. Munich Airport is not just a commercial enterprise, it is also infrastructure – with corresponding effects on our environment and our communities.

It is therefore greatly advantageous that we can present different facets of our business model in the integrated report: We create transparency from an economic perspective with the financial indicators, but also reveal our strategy, our contribution to society, and the impact on the environment.

Can an integrated report be particularly important as a communication tool?

FMG is a major company in a strong region. Transparency is expected of us in all areas and not only from an economic perspective. That's why we decided in favor of integrated reporting ten years ago, because it allows the different interactions of our business activity to be represented. Readers receive the full picture from us – in one publication.

Where do you see integrated reporting at the airport at present and where should the journey take us?

It is incumbent upon us to take external expectations on board, for example of different social groupings, and to address trends and sentiments. In this way we can help the company to understand what the public or specific stakeholders expect of us. Above all, I am also thinking about our corporate claim: Living ideas – Connecting lives. Integrated reporting fits in here perfectly. And this is something we want to keep working on.

THE HIGHLIGHTS FROM TEN YEARS OF INTEGRATED REPORTING

Four main key performance indicators exemplify the development of Munich airport from an economic, environmental, and social perspective.

Perspectives
2010

By **combining the annual report and sustainability report for the first time** in one format, Flughafen München GmbH (FMG) shows that economic success, social commitment, and environmental protection are inextricably interlinked.

Perspectives – Motivation
2011

The trilogy starts under the generic title **«Perspectives»**: Motivation, markets, message. FMG takes part in a worldwide pilot project of the IIRC to reorganize company reporting.

Perspectives – Message
2013

New brand appearance: **«Living ideas – Connecting lives»** is Munich Airport's claim. The modern brand puts its stamp for the first time on the design of the integrated report also.

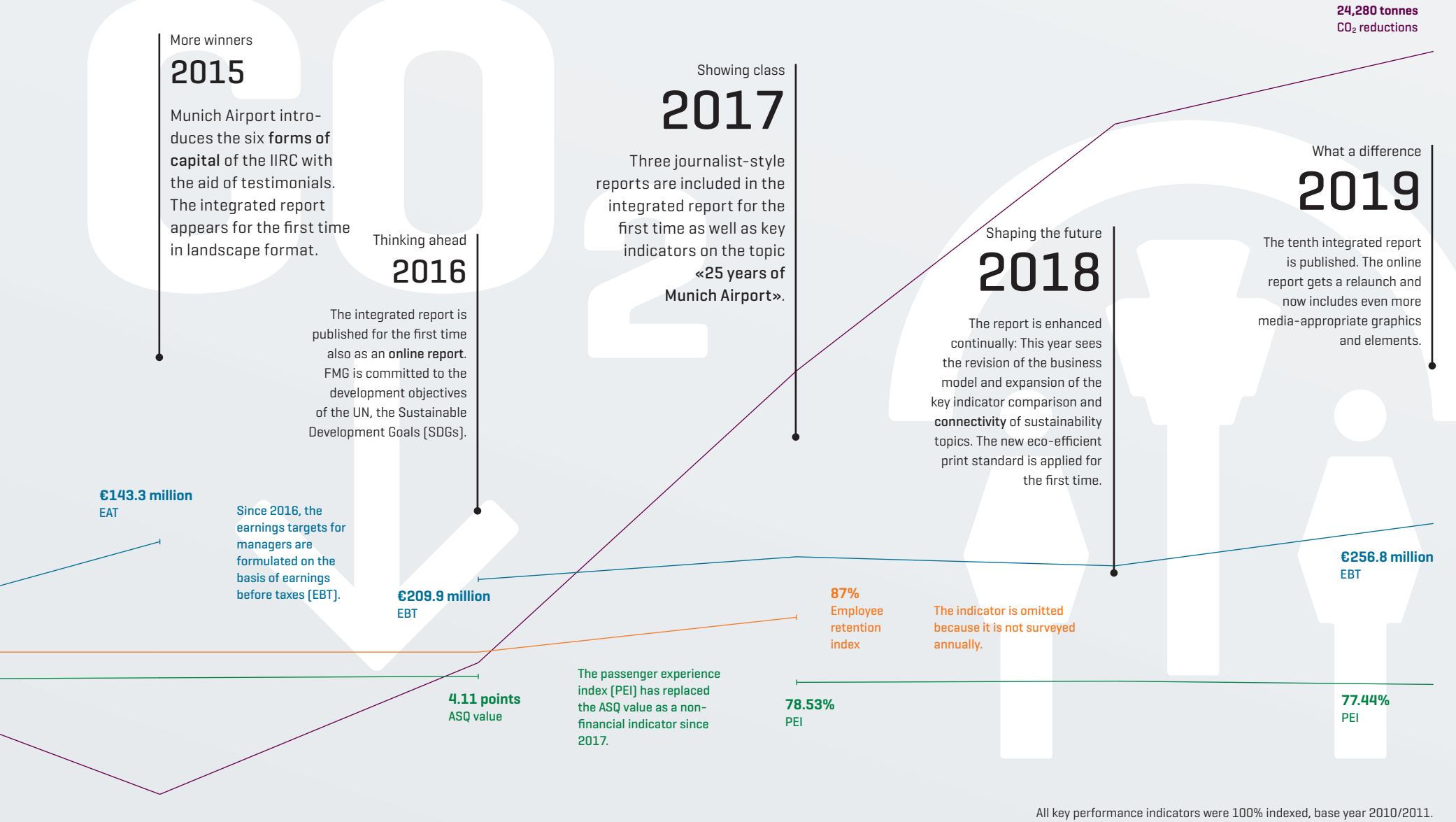
Perspectives – Markets
2012

In the 2012 annual financial statement, FMG converts the accounting from German Commercial Code (HGB) specifications to IFRS standards and introduces three non-financial indicators into the Group management report: CO_2 savings, ASQ value, and employee retention index.

Strengths
2014

Munich Airport uses the G4 standards of the **Global Reporting Initiative** for the first time and allows selected information and key indicators of sustainability performance to be examined.

The EAT for 2010 is not shown owing to a lack of comparability due to special effects.



All key performance indicators were 100% indexed, base year 2010/2011.

BUSINESS MODEL

Different products and services are generated (output) in the four business units. The value creation process is based on six forms of capital (input), which the airport uses to generate new values. This is the basis for the next fiscal year (outcome).

Input

Finances

- Cash and cash equivalents: €221.8 million (of which €12.3 million was freely available funds and €209.5 million was short-term deposits with banks)
- Loan portfolio: €1,911.6 million
- Equity: €2,225.0 million

Infrastructure

- Buildings/spaces: terminals, commercial areas, office/technical building, parking structures, MAC, AirSites, hotels, two runways
- Transport links: autobahn access, two suburban train lines, regional and long-distance bus links (via «Neufahrner Kurve»)

Expertise

- Qualification: in-house professional development center «Airport Academy»
- Off-campus: international management, consultancy and training services
- Quality/innovation: InnovationPilot, passenger feedback

Employees

- Employees: 10,109 employees in the Group (including apprentices)
- Employer: Personnel expenses of €537.2 million in the Group
- Training/HR development: 19 apprenticeships and dual study courses, €3.2 million of an external FMG further training budget

Environment

- Climate protection: carbon-neutral airport by 2030
- Resources: waste management concept, de-icer treatment
- Noise protection: strict night-flight curfew, aircraft noise monitoring at 16 fixed stations, additional voluntary mobile measurements

Society

- Stakeholder: transparent dialog through a wide range of channels, at European, national, and regional level as well as in Munich, membership in associations
- Value added: positive effects for the region
- Community engagement: support for more than 750 projects in the region

Business units

AVIATION

is our traditional core business and covers all services related to the correct handling of air travel at Munich Airport.

COMMERCIAL ACTIVITIES

markets the commercial space in the terminals and in the München Airport Center. The Group subsidiaries Allresto and eurotrade provide the products and culinary offerings as lessees and franchisees.

REAL ESTATE

develops, runs, and markets all real estate on the airport campus, the terminals, public transport facilities, surrounding real estate, and ecological compensation areas.

PARTICIPATIONS, SERVICES & EXTERNAL BUSINESS

deals with landside and airside services related to aircraft, passenger, and freight handling, looks after checks and security services, and provides consultancy and other services.

Output

AVIATION
- Take-off and landing runway system
- Looking after airline customers
- Flight scheduling

COMMERCIAL ACTIVITIES
- Shops
- Parking
- Catering
- Advertising and events

REAL ESTATE
- Real estate development
- Real estate marketing
- Civil engineering and infrastructure
- Landscape design

PARTICIPATIONS, SERVICES & EXTERNAL BUSINESS
- Ground handling
- Aircraft, passenger, and freight handling
- International consultancy

Outcome

- Cash and cash equivalents decreased to a total of €208.3 million
- Loan portfolio reduced to €1,903.2 million
- Equity increased by €153.1 million to €2,378.1 million

- Buildings/spaces: start of construction of the LabCampus innovation center
- Transport links: construction works on the railway tunnel for the Erding ring closure, new campus shuttle service for employees

- Training: 38,000 training days in the TÜV-certified (German Technical Inspection Authority) Airport Academy
- Off-campus: 22 active international projects 2019
- Quality/innovation: 511 submitted ideas, new digital offers for passengers

- Employees: low turnover rate of 3.9 percent in FMG
- Employer: social services, support for women in management positions
- Apprenticeship/HR development: in total 303 apprentices in the Group, 116 new apprentices in 2019, around 20 further training hours per employee

- Climate protection: 46% reduction in CO_2 emissions per passenger since 2005
- Resources: 1,343 tonne drop in waste generation, around 56% recycling rate for de-icer
- Noise protection: 71% of the permitted noise level at night is used

- Stakeholders: 272,000 fans and subscribers on social media
- Value creation: large income tax, local trade tax, and social insurance payments; in 2019, Group procurement stood at around €753 million
- Community engagement: increased acceptance in the region

THE INFRASTRUCTURE CHALLENGE

WHAT A DIFFERENCE 3.8% MAKE

Munich Airport's infrastructure must grow to meet the increased demand for mobility among private and business customers. The Group is pursuing an entire series of pioneering future projects with the expansion of Terminal 1, the development of LabCampus, and the improvement of landside access and traffic links at the airport.

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47.9 million
passengers
in 2019
34.7 million
passengers
in 2010
+3.8%
average annual
growth rate

Strategy and management

Munich Airport is one of the best airports in the world, and the intention is to strengthen and further expand this position as a global leader. Having a business model that conforms to economic, ecological, and social requirements is what makes the difference. The airport strives to create value: for passengers, customers, employees, and the region.

Strategy

Thinking sustainably – acting responsibly

As one of the most powerful air traffic hubs in Europe, Munich Airport combines sustainable economic value creation with ecological and social responsibility. The business activities of Flughafen München GmbH (FMG) have a major impact on many different areas and stakeholders: on Munich, Bavaria, and Germany as business locations, on the region and its population, the airport staff and passengers, as well as on other companies in and around the second-largest German hub, plus other stakeholder groups.

Against the backdrop of discussions on climate change taking place globally, FMG is facing the challenge to play its part. For example, Munich Airport is aiming to be carbon-neutral by the year 2030 at the latest. To ensure the future viability of the company, the business model therefore complies with economic, ecological, and social requirements. FMG is also aware of the negative effects that operating an airport may have and is making every effort, through suitable initiatives and measures, to avoid these, keep them to a minimum, and, where required, compensate for them.

STRATEGY 2025 Fig. 13

Strategic fields of action

AIRSIDE TRAFFIC DEVELOPMENT	LANDSIDE ACCESS AND TRAFFIC DEVELOPMENT	SEAMLESS TRAVEL	EXPANSION OF NON-AVIATION BUSINESS	OFF-CAMPUS GROWTH
• Maintain development as a transport hub • Safeguard the quality of hub operations • Expand infrastructure depending on needs	• Extend range of landside mobility options • Continue to improve rail access • Improve road links	• Contribute to digital standardization within the travel chain • Make greater use of digital communication channels for service, sales, and information • Expand digital partnerships	• Expand customer focus • Enhance the spheres of shopping and experience • Continue to develop Airport City and the real estate location	• Further develop consultancy business • Tap into new sources of revenue and business areas • Continue to expand international exchange

Brand values

RESPONSIBILITY | PARTNERSHIP | INNOVATION | EXPERTISE

↓

Strategic sustainability program

Strategic initiatives

Measures

↗ munich-airport.com/sustainability

Planning the future today

For the future, the company has primarily identified three key challenges:

- Expansion of the infrastructure
- Demographic challenge and culture change
- Digital transformation

Guidelines for the medium-term development of the airport are defined in Strategy 2025. This describes five key fields of action for the successful operation of Munich Airport:

1. Airside traffic development
2. Landside access and traffic development
3. Seamless travel
4. Expansion of non-aviation business
5. Off-campus growth

The fields of action are the result of scenario analyses on the future of aviation and stem from talks with company stakeholders. The initiatives and measures from the sustainability program play a major role in implementing the strategy and thus in bringing about the further development of the airport. FMG measures the success of implementation using defined key performance indicators.

Aviation as a strategic cornerstone

The COVID-19 pandemic represents the greatest crisis in the history of commercial aviation and beyond. Whereas Munich Airport had operated for most of the day at its capacity limits up to the beginning of 2020, traffic figures collapsed to a fraction of the previously recorded volume in April 2020. As a result, the focus of traffic development in the short term now lies on recovering a large portion of the lost connectivity so that Munich Airport can continue to play its role as Bavaria's gateway to the world after the crisis too.

Safeguarding connectivity into the future is also important for the people who live in the area as well as the companies based here. Because of its economic power and year-round attractiveness as an incoming destination, it is to be expected that Bavaria and Southern Germany will continue to develop at an above-average rate. Munich Airport is crucial as a gateway for this region. Long-haul will therefore be an essential cornerstone of the aviation strategy in the medium to long term too. Alongside safeguarding its role lastingly as one of the most important air traffic hubs in Europe, the service portfolio should be rounded off where possible and meaningful with point-to-point connections. To meet these requirements, the quality of the infrastructure must be maintained at a high level and improved successively.

Ground handling for the Airbus A380, the world's largest passenger aircraft

FACTS AND FIGURES

Transport network & destinations

2019 2018

Airlines	Destinations	Countries
101	254	75
106	264	74

Non-aviation as a strategic cornerstone

Business related directly to air traffic is only one aspect that contributes to the success of the Group. Non-aviation business is equally important for the economic development of the airport. The relevant strategies are aimed at enhancing customer orientation and progressively developing the airport as a shopping and travel experience and real estate location.

Commercial Activities

The Commercial Activities business division developed a new 2025 target vision in 2019 and defined a number of different fields of action in this regard with corresponding measures and work packages.

Retail trade and catering at the airport are gearing up for the future.

Optimization of service portfolio

The airport uses new store concepts such as pop-up, concept, or flagship stores to offer an innovative, modern, and emotionally appealing shopping experience. The mix of goods and products in the stores plays an important role in this context. Well-known brands continue to be in high demand. Regional products from Bavaria are also becoming an increasingly important element of the retail trade and catering portfolio in the interests of a sustainable corporate philosophy.

PASSENGER STRUCTURE IN 2019

BUSINESS TRIP
36%

PRIVATE TRIP
64%

TRANSFER PASSENGERS
38%

ORIGINATING PASSENGERS
62%

Experience drive

The customer experience at Munich Airport takes center stage. Customers are sure to be inspired by the enthralling stagings in the terminal areas, live presentations of strong brands, and attractive events in the München Airport Center (MAC) forum. The gastronomic experience at Munich Airport is also expanding.

Digitalization, customer management and sales

Munich Airport's different customer groups are increasingly utilizing digital channels, with further growth predicted in the online retail segment at the expense of the brick-and-mortar retail trade. This also affects the stores at the airport. Retailers have to adjust to new customer demands as well as to changes in customer behavior. In the area of parking too, the percentage of online bookings continues to grow. Munich Airport therefore intends to consistently expand digital platforms within its commercial services portfolio so that it can benefit from these developments. This likewise includes expanding systematic trend and market research so that marketing and communication measures aimed at specific target groups can be developed. The aim is to address customers with specific offers and individual marketing messages in a variety of channels. This is essential if the company is to respond to the demand for a personalized approach. The development will be supported internally by an optimized modern sales organization and by enhancing the flexibility of rental models.

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percent more parking lots were marketed in 2019 via the online booking system.

IN BRIEF

#stayconnected

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The travel restrictions imposed in conjunction with the COVID-19 pandemic and the dramatically reduced range of flights on offer have resulted in a massive decrease in traffic at Munich Airport in 2020. What is important now is to maintain the economic stability of the company, for example through strict reduction of personnel expenses and the cost of materials, or postponement of investment projects. The top priority of all measures is always the health of passengers and staff at Munich Airport. It is not possible to realistically forecast at present when aviation will return to its growth trajectory.

Real Estate

Development of the real estate location is also extremely important for the further expansion of non-aviation business at Munich Airport. The 2025 real estate strategy of the Real Estate business division has four material objectives.

Using real estate as a means of securing the core business of aviation

Aviation is the engine that drives the site's development and ensures stable and sustained growth in customer traffic through the hub structure. The passenger figures at Munich Airport have been increasing for years, and the airport's aim is to continue to offer passengers the best possible quality of stay. In line with the aviation strategy, Munich Airport is therefore investing significantly in new aviation infrastructure. Examples of this are the extension of Terminal 1 or the planned «T-Stiel» building extension for the satellite building. The cost of maintaining the value of real estate assets is rising at the same time, since many buildings date back to the early days of the airport.

The commercial space at the airport should be used optimally.

Making optimal use of space already used for commercial purposes

At the heart of this strategic objective is the München Airport Center (MAC) as the most important commercially used space. Investment is planned in the coming years in the development of the MAC in order to meet the strict requirements for quality of stay in the future also.

Generating substantial contributions to profits by developing real estate

To fulfill this objective, FMG is focusing especially on the LabCampus project, which involves the development and construction of an innovation center in the west of the airport premises. The plan is to relocate, among others, the Airport Academy here in the coming years and to develop a number of new office buildings as well as FMG's future administration building. With the LabCampus and other new revenue streams, FMG wants to further diversify its business interests outside of the existing portfolio.

LABCAMPUS SETS STANDARDS

Cutting-edge technologies allow ultimate sustainability and quality of life to be achieved.

Taking account of regional interests

Considering the dynamic development of Munich Airport and the numerous construction projects, the Real Estate strategy takes account of the interests of the airport region in the best possible way. In addition to intensive dialog with the region, FMG is focusing its real estate strategy on target groups and companies that view proximity to the airport and an international environment as an essential criterion for potentially locating here.

A new bridge is being constructed to the LabCampus over Zentralallee.

Expansion of international business

Munich Airport International GmbH (MAI) coordinates all international activities of Munich Airport for management, consultancy, and training services. Over and above operating airports, MAI's portfolio includes consultancy services throughout the entire life cycle of an airport, as well as training for airport managers and staff. MAI bundles its activities in the North American market in its fully owned subsidiary Munich Airport US Holding LLC (US Holding), which has two of its own subsidiaries at present: EWR Terminal One LLC and the joint venture Reach Airports LLC.

Management contracts are an important element for the successful growth of MAI and strengthen the international presence of Munich Airport.

- EWR Terminal One LLC has been operating Terminal A at Newark Liberty International Airport (EWR) since September 2019. The operation also includes maintenance and franchise management for lessees and users of the terminal building. The US Holding subsidiary will operate the terminal building in the long term following the opening of the new Terminal 1 in 2021.

- Reach Airports LLC, a joint venture of the US Holding and Carlyle Airport Group Holdings (CAG) based in Washington, D.C., combines the strengths of both partners – the experience of CAG in the area of airport investment and the operational management expertise of MAI. The cooperation has jointly taken over what is currently the largest airport infrastructure project in the United States: the development and operation of the new Terminal One at John F. Kennedy Airport in New York City.

In addition to further activities in the US, MAI is planning to increase its presence in promising growth markets. Not only are new sales locations, the acquisition of companies, and additional management contracts planned for 2020, but also potential takeovers of airport-related consultancy firms and new strategic partnerships.

Management

CARBON-NEUTRALITY BY 2030
is one of Munich Airport's strategic objectives.

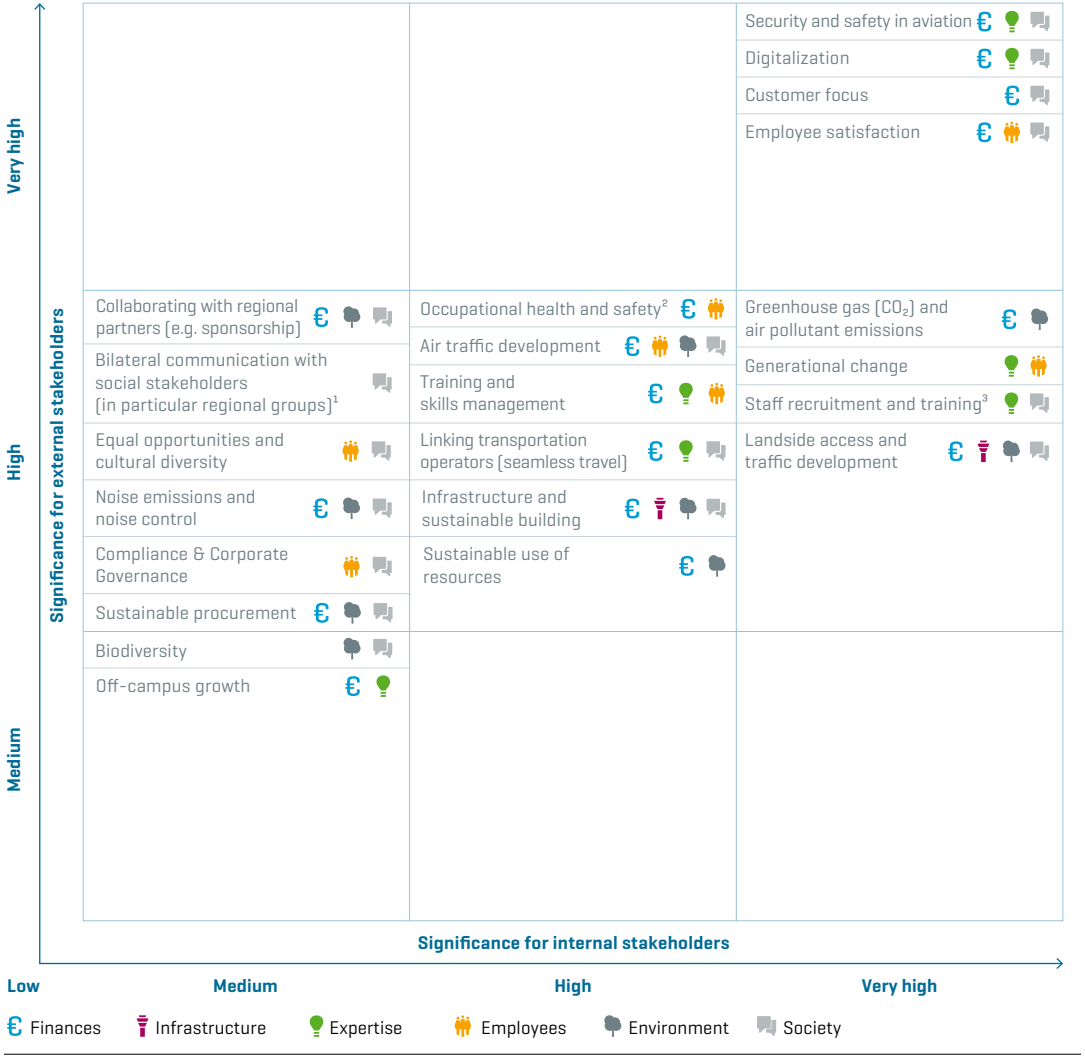
Sustainable corporate governance

Munich Airport is fully committed to its economic, ecological, and social obligations, which are inextricably linked with corporate policy. Sustainable business is therefore an integral part of corporate strategy.

Materiality process: identifying and integrating topics

Munich Airport acts as a «corporate citizen» within society, consciously acting in a responsible manner and always looking to address topics and concerns of importance to its stakeholders. It welcomes dialog as an opportunity to continue developing its corporate policy, focused on sustainability. The company's sustainability management incorporates the concerns of the stakeholders into the strategic planning and operational implementation. Using a materiality process, FMG identifies and prioritizes the topics that are important to external stakeholders and Group employees. Existing in-house processes and methods are linked to the internal strategy process for this purpose. FMG has set itself the goal of continuously improving processes, particularly with respect to the assessment and measurability of internal and external impact.

MATERIALITY MATRIX Fig. 14



[1] Up to 2018: Communicating with social stakeholder groups
[2] Up to 2018: Occupational health and safety and health management
[3] Up to 2018: Employee training and recruitment

The Group-wide materiality analysis is based on the principles of the Global Reporting Initiative (GRI). It is an important tool for strategic sustainability management and provides the basis for the Executive Board to set the central parameters for sustainable development of the Group.

1. **Identification:** FMG conducts an annual survey of its main stakeholder groups and FMG management when it publishes its integrated report.

2. **Prioritization:** The results of this survey are presented in a materiality matrix with two equivalent axes, which represent the importance of the individual topics for internal and external stakeholders. These topics are discussed with experts within the company, and content is allocated to the strategic fields of action. The topics are also incorporated into the targets process.

The survey of stakeholders offers impetus for corporate decisions.

3. **Validation:** Members of the management team discuss the relevant topics as part of the annual strategic target agreement process. The stakeholder survey also provides external feedback on the content of the integrated report. Fields of actions and targets are adapted, expanded, or incorporated for the first time.

4. **Implementation:** Specific initiatives and measures are outlined within the strategic sustainability program for each material topic as well as the progress made implementing these as a means of measuring success. Members of top management take responsibility for the sustainability program initiatives, while members of middle management are responsible for implementing the associated measures. Manager remuneration then contains a variable element calculated according to the success of these initiatives and measures. FMG uses internal reporting to check target achievement on a quarterly basis and ensures on this basis that the strategic objectives are actually implemented in practice.

In addition to the classic materiality matrix, the importance of key topics of sustainable corporate governance were documented in 2019 from a customer's perspective as part of an external study. In addition to topics such as «customer orientation», «aviation safety», and «digitalization», all of which had already been very high up on the agenda the previous year, the importance of the topic of «employee satisfaction» also increased among internal stakeholders in 2019.

→ Glossary

SHOWING CONNECTIVITY

The key topics in the matrix correspond to the six forms of capital.

BRIEF INTERVIEW

The principle of sustainability

DR. MONICA STRECK
Head of Strategic Sustainability Management

Mrs. Streck, the new sustainability strategy of the ACI (Airports Council International) takes an integrated approach. What is new in it for Munich Airport?
Munich Airport has been adopting a holistic sustainability strategy for many years. We identify important issues for sustainable development, incorporate them in the management process, and then implement them. What is new is that the Airports Council International (ACI) is widening the term «sustainability» and focusing on social and economic issues in addition to ecological aspects.

The new sustainability strategy of the ACI also refers to the international SDGs of the UN. How does Munich Airport deal with this then?
Munich Airport's sustainability strategy is also based on the UN objectives for sustainable development. It addresses global topics such as human rights or sustainable supply chains, supports international efforts for a sustainable future in this way, and culminates ultimately in specific measures to promote these goals. The sustainability program is therefore closely linked with fulfilling the twelve SDGs that are regarded relevant for Munich Airport.

↗ sustainabledevelopment.un.org

FACTS AND FIGURES

Sustainable Development Goals (SDGs) of relevance for FMG

Sustainable Development Goals: twelve of 17

Munich Airport supports the Sustainable Development Goals (SDGs) of the United Nations and contributes to their realization. FMG has identified twelve SDGs that are relevant to it and that it can influence, and which it wishes to work on through its strategic projects up to 2030.

Concept for stakeholder engagement

FMG follows a three-stage approach to stakeholder dialog, thereby encouraging transparency and social acceptance. Working with all stakeholders is the only way for the company to tackle upcoming challenges.

↗ facebook.com/flughafenmuenchen
↗ twitter.com/muc_airport
↗ instagram.com/munich_airport

KEY STAKEHOLDER GROUPS IN THE ENVIRONMENT

Media, associations and organizations, politics and authorities, science and research, region

Fig. 15

1 Information on channels for specific target groups

For the information of the various interest groups, the airport has defined customized communication content, which it places in the appropriate channels.

Important instruments

- Press releases and press events
- Website and intranet
- Events and trade fairs
- Regional Liaison Office
- Airport publications
- A role on the political stage

2 Exchanges with stakeholders

The airport includes its stakeholders in discussions and decisions about issues that are important to them, thus creating the basis for trust and long-term acceptance.

Important instruments

- Passenger survey
- Aircraft noise commission and Communities Council
- Specialist committees and association work
- Dialog management
- Social media
- «Mitg'redt Forum» for employees

3 Results of dialog flow into business operations

Munich Airport takes into account stakeholder feedback in its business activities. This allows trends to be identified in good time, external knowledge to be utilized, and conflicts to be defused.

Important instruments

- Employee survey and follow-up process
- Quality management
- Membership of specialist networks
- Ideas platform «InnovationPilot»
- Strategy workshops, KPIs
- Target agreement process at management level

Important subjects in external communication in 2019

- Expansion of the long-haul fleet capacity
- Extension of Terminal 1
- Enhanced development of the LabCampus
- Climate protection and neutrality
- Quality and security
- Landside access and traffic development
- Recruitment, demographic change
- Off-campus business
- Event communication

Airlines, passengers and visitors, suppliers and business partners, employees

KEY STAKEHOLDER GROUPS IN THE VALUE CREATION CHAIN

Quality makes the difference

Munich Airport is particularly well known for the quality of the services it offers. These high standards apply across all areas – in the core business of aviation as much as in the consumer business and internal processes. Maintaining a 5-star standing is a key business objective.

Top class on a global level

Munich Airport is the only 5 star airport in Europe and one of only eleven airports globally allowed to bear this seal of approval. At the annual «World Airport Awards» presented by Skytrax, Munich Airport successfully defended its title of «Best airport in Europe» once more in 2019. In addition, it was again selected as the best airport in the world in the size class of between 40 and 50 million passengers; meanwhile, Terminal 2 was rated third best terminal in the world. The

The «M» is a seal of quality.

hotels on offer are also first class – in 2019 the Hilton Munich Airport came second in the category «Best Airport Hotels in Europe» and fourth in the category «World's Best Airport Hotels». Just under 14 million passengers from more than 100 countries rated 550 international airports and numerous airlines for the survey. They considered criteria such as the friendliness and expertise of airport staff, the range of shopping and leisure outlets, and transfer options. Munich Airport is one of more than 356 airports worldwide that regularly takes part in the survey on service quality initiated by the international airport association ACI (Airports Council International). As a result, it can compare itself to the best hubs in Europe. In 2019, Munich Airport ranked third place once more in the category for central European airports with more than 40 million passengers.

→ Glossary

BRIEF INTERVIEW

The brand «M»

ANDREAS MAUER
Head of Brand Management and Innovation

Mr. Mauer, where does the brand «M» stand in terms of its development?
The brand defines our identity, the values we stand for, and represents a yardstick by which we want to be measured – by our customers too. The Group accordingly focuses on fostering identification, customer orientation, exchange, and cohesion as a key priority.

Where is there still a need for development in your view?
A brand is not a rigid construct, it has to develop with the Group, with the expectations of customers, and with external requirements. What is really important to remember is that this can only be achieved through cooperation, with a clearly defined focus, and only if we work together as a team in the company, if we bring passion and enthusiasm for the airport to life, and make decisions in the best interests of our customers. «Living ideas – Connecting lives», that is the core of our brand.

Passenger Experience Index (PEI): measuring quality and managing measures

Passenger satisfaction is of central importance to Munich Airport. A survey developed in-house provides information on how comfortable passengers feel in the airport and what they think of the quality of the services provided. The PEI has been established as one of the non-financial key performance indicators in the airport's targets system, and it allows FMG to derive fields of action that sustainably improve the passenger experience.

Service and hospitality: maintaining and optimizing standards

Tailor-made training courses and workshops on the subject of service and hospitality raise awareness of customer contact among operational heads and emphasize their role as ambassadors for the service culture. FMG thus encourages an awareness of customer orientation and the role model function within the airport family. This community encompasses not just the Group, but also all partners based on the campus, such as Deutsche Lufthansa AG, and the authorities active at the airport.

→ **Group management report**
See page 101

Certified quality management: creating effective processes

The quality management system launched at Munich Airport on the basis of the DIN EN ISO 9001:2015 international standard establishes structures that support the evaluation and improvement of processes. By optimizing its processes on an ongoing basis, Munich Airport has successfully established itself and its high quality standards on the market.

Emotional highlight: the popular Christmas and winter market

THE GENERATIONAL CHANGE CHALLENGE

WHAT A DIFFERENCE 3 YEARS MAKE

The number of employees on the airport campus has grown on average by three each day since 2015. However, many experienced employees will enter well-earned retirement in the coming years. FMG is meeting this challenge with a strategy that is based on the values of younger generations and promotes structured knowledge transfer.

Read more from page 42

[1] Figures taken from current 2018 employee survey

Three challenges for the future

Three key challenges will have a significant impact in the coming years on whether Munich Airport can continue its success story: expansion of the infrastructure, demographic change in the company, and digital transformation. These major issues mean one thing primarily for the airport: opportunities.

The picture shows the boarding pass checkpoint in T1 at the transition point to the new pier.

Expansion of the infrastructure

Planning and expanding in line with requirements

Munich Airport must grow to match the increased demand for mobility both among private and business customers. FMG is therefore expanding the airport infrastructure in line with requirements, connecting transportation operators, and playing an active role in extending and optimizing landside access and traffic development – focusing at all times on quality and the changing needs of customers. Negative effects on the environment and the area around the airport will be kept to a minimum, for example by applying extensive compensating and noise protection measures. The goal is to minimize the adverse impact of contaminants or resource and energy consumption on the environment by adopting sustainable building concepts, and then afterwards through sustainable operation of the building.

Upgrade for Terminal 1

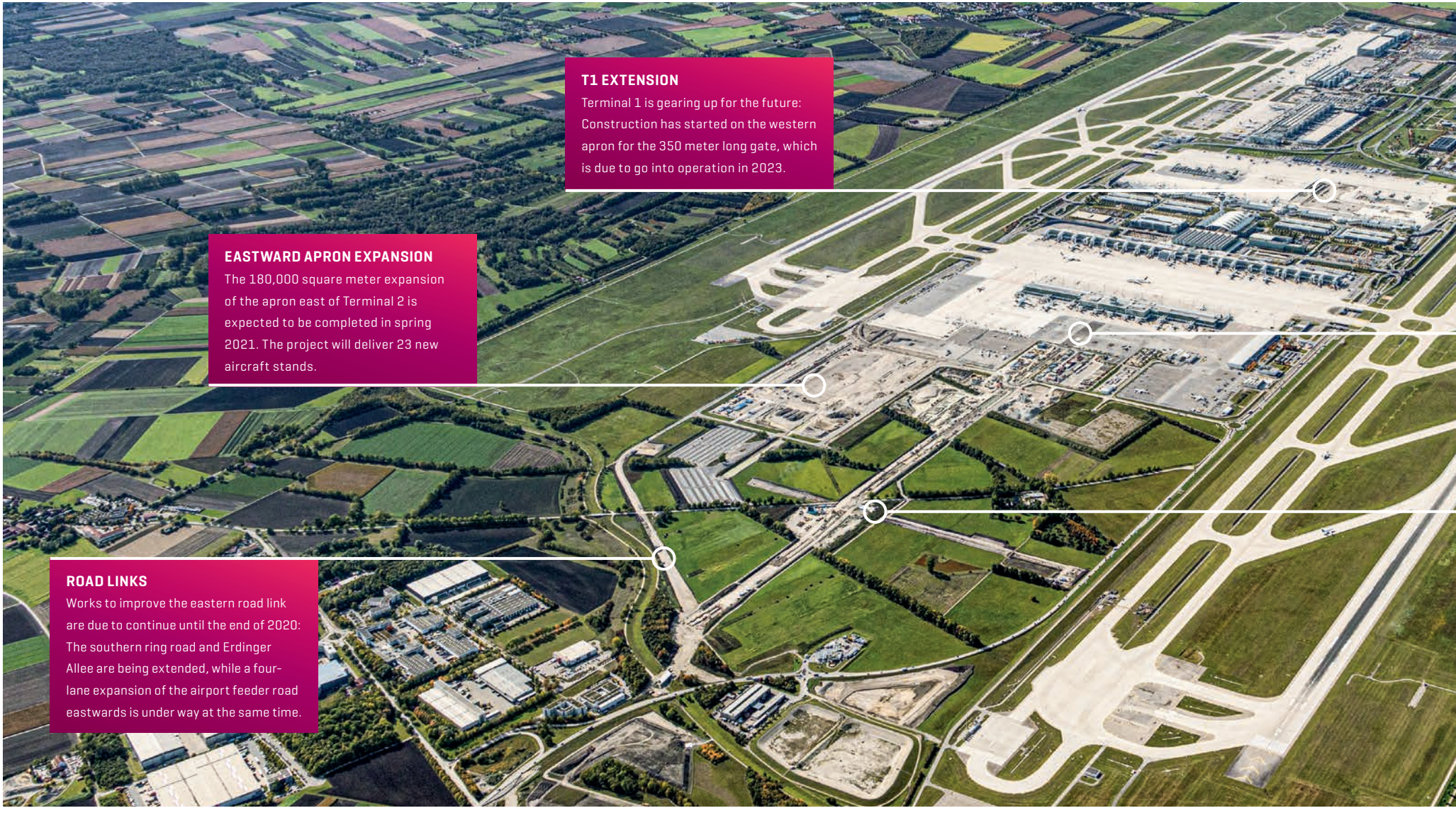
Terminal 1 can no longer fully meet the quality expectations of passengers and the regulatory demands on security checkpoints. The building is therefore being extended to include a new gate with needs-based passenger handling facilities. Docking points for up to twelve aircraft will be available at the 350 meter pier. Covering an area of around 90,000 square meters, this renovation is also creating new retail and catering space as well as two large airline lounges, while simultaneously improving the passenger handling processes through centralized security zones; the intention is to make the area significantly more appealing to passengers and airlines in the non-Schengen zone. The total cost of the expansion plan is estimated to be around €455 million. Work has been under way on the apron since spring 2019: The concrete has been broken open, the aviation fuel line has been moved in sections, and new lines have been drawn. The first preparatory measure for the construction started at the end of 2019 with the excavation of the foundation pit. This new area is scheduled to go into operation in 2023.

→ Glossary

In addition, a series of quality-enhancement measures will ensure that Terminal 1, which was opened in 1992, will be adapted gradually to present-day aviation requirements. There is already a new recreation area for waiting passengers on level 05 in Module D as well as sensory walls for younger guests with mobile play elements. There is also a new security checkpoint here. Meanwhile, construction works have already started for an additional border inspection post in Module B.

TARGET FOR 2020

Certifying selected buildings according to the standards of the German Sustainable Building Council (DGNB)


T1 EXTENSION
Terminal 1 is gearing up for the future: Construction has started on the western apron for the 350 meter long gate, which is due to go into operation in 2023.
EASTWARD APRON EXPANSION
The 180,000 square meter expansion of the apron east of Terminal 2 is expected to be completed in spring 2021. The project will deliver 23 new aircraft stands.
ROAD LINKS
Works to improve the eastern road link are due to continue until the end of 2020: The southern ring road and Erdinger Allee are being extended, while a four-lane expansion of the airport feeder road eastwards is under way at the same time.

«T-Stiel» for the Terminal 2 satellite

Flughafen München GmbH and Deutsche Lufthansa AG plan to intensify and continue their strategic cooperation to sustainably enhance Munich as an air traffic hub. The T2 satellite commissioned in April 2016 marked the first expansion stage of this extremely successful joint venture. The cooperation model that led to the joint development and operation of Terminal 2, which opened its doors in 2003, was hailed as unique throughout Europe. The next step is to extend the satellite building connected with Terminal 2 by a building adjoining at right angles to the east, known as «T-Stiel». As with the satellite building, this building will also comply with FMG's climate objectives. The «T-Stiel» extension will increase the passenger capacity of the Terminal 2 system by up to ten million air passengers per year. This will therefore ensure that the Munich hub airport can meet the increase in passenger demand that is expected again in the long term, while maintaining optimum quality standards for guests.

Additional space on the eastern apron

At peak times, there are frequently no available aircraft stands on the aprons of Munich Airport. This is because of the increased number of flight movements and the use of wide-bodied aircraft like the Airbus A380, which require a lot of space. For this reason, the apron on the eastern side of the airport near the T2 satellite building is to be expanded by around 180,000 square meters with the addition of 23 aircraft stands, six of which will be suitable for wide-bodied aircraft. The new area will then have a modern infrastructure, which will guarantee safe, efficient, and sustainable aircraft handling. For example, the taxiway and apron lighting will be equipped with LED technology, which allows the lighting to be switched on and off in line with the airport timetable. The installation of charging stations

for handling equipment and the stationary ground power supply for aircraft also contribute to a reduction in emissions from aircraft handling. A new storage reservoir for de-icing water is also being developed as part of the construction project. Completion of the apron expansion is planned for spring 2021.

«Connect. Create. Collaborate.»

LabCampus is a cross-sector innovation hub being developed in the northwest of the airport property. Knowledge carriers, global players, start-ups, and creatives working in areas such as mobility, digitalization, and security, will find the workspaces, showrooms, and project and conference spaces here that they need for systematic and networked research and development work. As a meeting point for innovators from the most varied of fields, LabCampus will benefit in particular from the airport's global access, and the constant presence of thousands of international guests. Construction of the first new office building commenced at the end of 2019 and when completed will offer space for offices, showrooms, and prototyping over an area of 29,400 square meters. The new building is due to open at the start of 2022. The design is based on the urban look and development concept of LabCampus. Additional buildings are to be planned and developed successively in line with demand – including a serviced apartment building, which will be available for short or long-term stays and will offer hotel-style amenities. The first LabCampus CONNECT event took place in April 2019, marking the launch of a series of events for future LabCampus users and partners. LabCampus organized an interactive test lab in Terminal 2 in February 2020 in collaboration with Zentrum Digitalisierung Bayern, the Information Security Hub, and the two companies IABG and ComCode. Partners from the greater Munich area exhibited products and solutions here from the field of «digital security»

29,400

square meters of space for offices and showrooms will be offered by the first LabCampus building.

↗ munich-airport.com/labcampus

TARGET FOR 2020

Enhancing the urban development LabCampus concept and implementing construction measures

View from the apron tower in the satellite building to the east over the construction works for the suburban rail tunnel to Erding

Further enhancing access to the airport

Munich Airport is working intensively on improving its connection to public transport. Construction work on the eastward extension of the railway tunnel required for the Erding ring closure is progressing according to schedule. The tunnel itself is to be completed in 2021, and will then be fitted out by DB Netz AG with the required technical equipment for train services. With a view to strengthening feeder traffic to the airport in the long term, a study was commissioned in collaboration with the Bavarian Ministry of Housing, Building, and Transport, to examine options for connecting the airport to cross-regional rail passenger services. The initial results are expected in 2020. Meanwhile, both passengers and airport employees have welcomed the hourly regional trains from Regensburg via Neufahrner Kurve, which went into operation at the end of 2018; gaps in the regular-interval timetable at off-peak times were closed in December 2019 thanks to the timetable change. The planning approval process for the Walperts-kirchener Spange project was initiated in March 2019.

In terms of current road projects, further progress has been made on the construction of the new Freising northeastern bypass as part of the 301 federal highway and the Freising western bypass. The northeastern bypass is due to open in fall 2020, with the western bypass scheduled to follow a year later. Within the airport area, FMG is pushing ahead efficiently with the eastward connection via the southern ring road and Erdinger Allee, which is due for completion by the end of 2020.

Third runway remains a key future project

Politics determines the schedule

The ruling coalition parties, CSU and Freie Wähler, agreed to impose a moratorium on the construction of the third runway up to the end of the current legislation period, with the result that the project is currently suspended. The third runway nonetheless remains a strategically important expansion project for Flughafen München GmbH. The planning permission is still valid as endorsed by highest judicial authority.

Important hub function

This moratorium-induced delay in realizing the expansion project may lead to capacity bottlenecks in the runway system from a long-term perspective. In the worst-case scenario, Munich could lose its status as a high-performance hub airport in the international aviation industry. Without the third runway, a question mark would therefore also hang over the future of the existing range of attractive connections to and from Munich.

↗ gutfuerbayern.de

44

percent of passengers traveled to the airport by public transport in 2019.

Demographic challenge and culture change

A major employer

An airport that makes an impact across the region

With its 10,109 employees,[1] Munich Airport Group is the second-biggest employer at the site after Deutsche Lufthansa AG. Overall more than 38,000 people work at the airport. Statistically speaking, three new jobs are created every day at present at Munich Airport.[2] The neighboring Freising job center region, which also covers the Dachau, Ebersberg, and Erding districts, has one of the lowest levels of unemployment in Germany, at 1.9 percent on average. This corresponds to almost full employment and reflects the huge importance of Munich Airport for the regional labor market. The airport provides one in four of all employment relationships liable for social security contributions in the districts of Freising and Erding. Wage levels at Munich Airport are above the average values in related sectors in the transport or services industry.

518
companies are based at Munich Airport.

Munich Airport is ranked among the top three employers for the first time

FMG was ranked third in a nationwide survey of the 1,000 best German employers. Together with the employer rating platform kununu, Focus Business identifies the best in sector on an annual basis in addition to this overall assessment: FMG came out on top for the fifth time in a row in the category «Traffic, Transport, and Logistics». The employer ratings included both objective criteria, such as salary, social benefits, and training opportunities, as well as subjective assessments on working atmosphere, work-life balance, and other factors.

↗ munich-airport.com/jobgenerator

Three new jobs per day have been created at Munich Airport since 2015.

[1] Including apprentices
[2] Employee survey 2018

Farsighted HR policy

Five fields of action

Munich Airport believes in the importance of an HR policy that focuses both on people and on the company's performance. For this reason, the long-term HR concept is based on current business conditions and the corporate strategy, as well as social megatrends such as demographic change, diversity, digitalization, individualization, mobility, health, and education. The human resources strategy sets out important objectives for HR management, which are reviewed annually and adjusted as required. The major challenges in human resources for the coming years are demographic development, the skills shortage in the highly competitive labor market, as well as digital transformation and the associated culture change required within the Group. FMG has identified five fields of action to meet these challenges:

- Recruitment
- Staff development
- Employee retention and maintaining employability
- Process optimization through digitalization, automation, and standardization
- Examination of the service portfolio in the Group

BRIEF INTERVIEW

Recruitment

DR. ROBERT SCHARPF
Senior Vice President HR and Authorized Representative

Mr. Scharpf, how would you characterize Munich Airport as an employer?
The core of our brand is «Living ideas – Connecting lives». We establish a reliable connection with colleagues and offer exciting challenges and a fascinating workplace in the urban and innovative Airport City.

Because of demographic change, there is an increased demand for new employees. What does the airport demand of potential colleagues?
The airport business is a highly complex matter. The willingness to think and act across departments is essential. In terms of most activities, this requires soft skills such as a change in perspective, communication, and conflict resolution. Team spirit is a decisive success factor in the airport family. Ideally, different employee generations work together and learn from each other.

What expectations do younger generations bring to the interview?
Applicants today are much more self-assured – this is also understandable considering there is almost full employment in the region. Important aspects include flexible working hours, solidarity among colleagues, challenging and varied tasks, and naturally remuneration.

TARGET FOR 2020
Supporting knowledge transfer across generations through duplication of posts

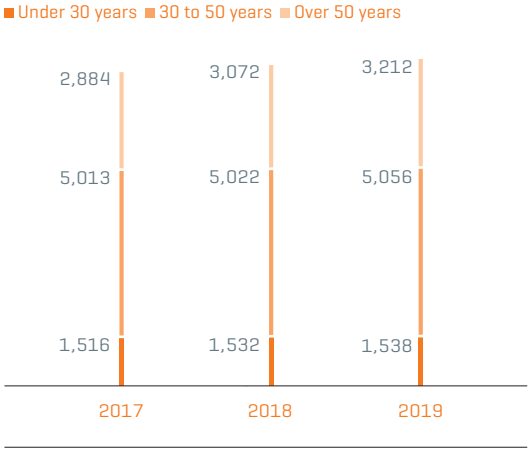
The «demographics future program» offers clarity

Due to retirement-related departures and spontaneous fluctuations, the Group is facing a recruitment demand of more than 13,000 employees by 2030, which seems unlikely to be filled considering the skills shortage in the airport region and in the greater area of Munich. For this reason, FMG has launched its «demographics future program». The program aims to determine the expected demographic change based on age structure and to develop suitable countermeasures – both with special initiatives for areas that are particularly badly hit, and by taking overarching measures whose influence will extend to the entire Group. Solving this challenge involves measures such as recruiting new employees through an excellent employer image and addressing specific target groups on the job market, strengthening the bond of the current workforce to the company through attractive employment conditions,

> The topic of work-life balance has become increasingly prominent in recent years.

or developing the skills of the individual professional groups in the company. Considering the difficult situation on the job market, other activities must also aim to remain efficient and successful, despite the lack of available personnel. The systematic approach adopted in the «demographics future program» illustrates the challenge facing the company in terms of human resources and clarifies the fields of action.

AGE STRUCTURE IN THE GROUP[1] Fig. 16



[1] Figures exclude apprentices, workers in minor employment, temporary workers, and interns

Skills shortage challenges HR policy

The ongoing economic growth of the past years was always addressed by the company by recruiting new staff, and this policy was successful, too. In the long term, however, the company must be able to continue to grow without increasing the workforce at the same time. The skills shortage has become particularly acute in technical and IT professions and on the operational front with passenger and aircraft handling. Major efforts are

FACTS AND FIGURES
Employment costs

€537.2 million
Total Group personnel expenses

of which

€317.0 million
FMG personnel expenses

of which

€253.5 million
wages & salaries[1]

and

€63.5 million
social security contributions, expenditure for retirement provisions, and other benefits

[1] Including subsidies for travel and meals

↗ munich-airport.com/careers
↗ munich-airport.com/auszubildende
↗ kununu.com/flughafen-muenchen
↗ xing.com/company/flughafen-muenchen

BRIEF INTERVIEW

Active knowledge transfer

GERHARD HOLUBA
Head of Training Management

Mr. Holuba, many colleagues will leave their employment at the airport in the coming years for age-related reasons. What are the challenges posed by generational change?
Both practical knowledge and expertise in new technologies and working patterns are extremely important for us. If we do not actively address the transfer of knowledge to the next generation, then all of the experience our employees have accumulated over decades will be gone in an instant as soon as colleagues leave the Group.

How can the company prevent the loss of valuable expertise?
Temporary duplication of posts is one solution in my view. That's why we have launched a pilot project in the training workshop for technical professions: A core team comprising three experienced mechatronic masters familiarize a new instructor over an eighteen month period before a member of the team retires. The instructor undergoes all phases of the apprenticeship year at the same time and attends special courses for instructors, with one or more experienced colleagues on hand at all times. This means that valuable know-how is preserved for the next generation.

needed in recruitment and HR marketing in order to attract new staff. Changing skills requirements also make it necessary to prepare the workforce for the use of new technologies and working methods by introducing innovative HR development concepts. To maintain staff employability, demand-driven preventive and healthcare measures are also necessary. In turn, new generations bring different expectations to the company as regards working patterns, collaboration, and leadership, which must be reflected in HR policy. Apart from their impact on working methods and culture, technology and digitalization can also help to make processes more efficient.

TARGET FOR 2020
Creating further training offers for employees with different digital affinities

Education and training

Commitment to the next generation

The Munich Airport Group is one of the largest training organizations in the region. School leavers have a choice of 19 different apprenticeships and dual fields of study. FMG received 1,279 applications to begin an apprenticeship starting in 2019, which then underwent a multistage selection process. On September 1, 2019, some 116 apprentices embarked upon their professional career at Munich Airport. This meant there were 303 young people taking part in apprenticeships Group-wide as of the reporting date of December 31. At the same time, 48 young people completed their apprenticeships at FMG. Flughafen München GmbH provides training on a needs-driven basis: All graduates are then taken on as employees. An onboarding program allows apprentices to make contacts, gain initial experience of teamwork, and get to know the airport campus right from the start. Another particular feature of the airport as a training organization is the intensive professional and personal support provided by the full-time trainers and the around 250 part-time instructors.

VENTURING OUT INTO THE WORLD WITH FMG
In 2019, 17 apprentices visited partner airports in Athens and Vienna.

FACTS AND FIGURES

Employees

6.82%
employees with disabilities

77%
male managers

23%
female managers

46 years
average age of an FMG employee

67%
male employees

33%
female employees

>80
countries

195
men on parental leave

137
women on parental leave

20.3
average training hours

82%
are very connected to the airport

303 young people are currently completing apprenticeships in the Group.

In 2019, some 93 school-age children and 112 university interns received an insight into the world of airports, producing 12 project-related Bachelor's and Master's dissertations in the process. A twelve-month graduate trainee program prepares university graduates for professional life at the airport. The program includes intensive sharing of expertise and also aims to hone understanding of the complex overall airport system. In addition, a mentoring program helps trainees to establish their own company-wide network. For the eleventh time, Munich Airport hosted Berufsfit in 2019, a regional careers orientation event, which is traditionally organized by

Germany's national working group on schools and business «SchuleWirtschaft». More than 60 different fields of study and in excess of 150 training opportunities were presented.

Award for outstanding training

Business magazine «Focus Money» again awarded Munich Airport the seal of approval as «Germany's best training organization» in the Traffic and Transport segment. Moreover, Munich Airport was distinguished by business magazine «Capital» in 2019 for its excellent training program. The airport received top marks in the areas of support, opportunities for success, in-company learning, training marketing, digitalization, and innovation.

Globally connected

The popular international exchange programs help employees to develop as people, and Munich Airport to progress as a business. In 2019, as part of the European mobility program «Erasmus+», 17 apprentices visited partner airports in Athens or Vienna. In return, five apprentices each from Vienna Airport and the winter maintenance team at Athens Airport visited Munich. Four FMG employees consolidated their know-how at Reykjavík-Keflavík Airport. A select group of 33 specialists and managers had an opportunity to make contact with their expert colleagues during a visit to the airports in Johannesburg and Durban (Airports Company South Africa), Denver, and Beijing-Daxing, which was opened in 2019. In return, delegations from other airports, including Bangkok, Singapore, and Moscow, visited Munich.

Airport Academy: expertise in education and training

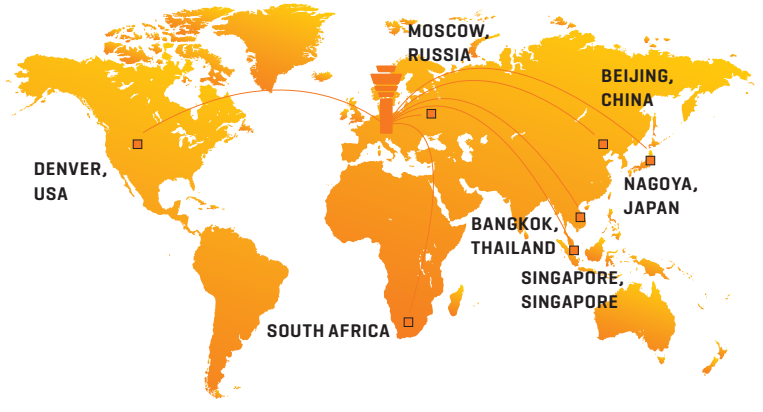
Munich Airport operates a certified, in-house training center with just under 50 employees. On more than 38,000 participant days, 16,000 Group employees and external customers attended seminars there, focused particularly on the areas of human resources, management, aviation, and security. The Airport Academy, moreover, offers training for an international audience, as an accredited training institute of the Airports Council International (ACI) – in cooperation with the international umbrella association of passenger airports. More than 100 external cybersecurity specialists received advanced training in two

↗ munich-airport.com/serviceacademy

→ Glossary

FACTS AND FIGURES

Sister airports



↗ munich-airport.com/sister-airports

↗ **Stories about Sister Airports on Instagram:**
@munich_airport
> Highlights > Sister Airports

different seminar types in the Information Security Hub. The plan is for the Airport Academy to move to the LabCampus premises by the first quarter of 2023. Spacious conference rooms, seminar rooms equipped with cutting-edge technology, and a number of office units are planned over a gross floor area of 14,500 square meters. In addition to flexible catering facilities, a central event area is also scheduled for the first floor, which will cater for up to 500 guests.

Employee satisfaction and codetermination

Employee survey plays its part in change

The follow-up process to the Group-wide 2017 employee survey was rolled out intensively in 2018 and 2019, both decentrally by management in their respective units and centrally in overarching fields of action. The results reflected the employees' connection to, and satisfaction with, the airport – at the same time, the topics of «cross-division cooperation» and «perception of top management» were identified as fields of action. The well attended «Mitg'redt forums», for example, now allow an open exchange of opinions between the workforce and top management. Another new format, the «Ausg'fragt» video series, makes top management more approachable and provides an insight into its everyday working life. Feedback events were also held in 2019 to discuss the results of the employee survey with the FMG Executive Board, at

The next employee survey is planned for 2021.

4

«Mitg'redt forums» in 2019 promoted open discourse between the workforce and top management.

Looking ahead to the future: view of what the new Airport Academy will look like

which all top-level managers were given an opportunity to present their measures and the respective state of implementation as part of the follow-up process.

FMG promotes codetermination

The voice of the employee is a valuable factor in corporate decisions. Employees have numerous opportunities to get involved in committees that are required by law or other working groups, i.e., the Supervisory Board, Youth and Trainees Council, and the Council for Employees with Disabilities. Most of the overarching regulations in the company culminate in works agreements with the FMG works council, which currently has 31 members. The employee representatives have concluded important works agreements with the employer in the last few years, for example on topics such as accommodation for employees in the airport region, occupational integration management, or provision of parking spaces for employees close to the terminal. Even the annual employee appraisal is anchored in the corporate culture in the form of a works agreement.

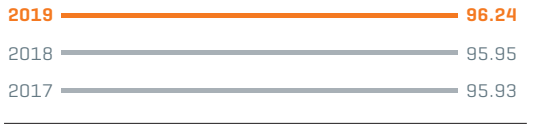
Payments above the general pay scale

Flughafen München GmbH is a member of the regional public employers' association «Kommunaler Arbeitgeberverband Bayern e. V.» and, as such, is bound by the TVöD collective pay scale agreement for public sector employees. FMG employees receive a company retirement provision, which is governed by the pay scale agreement and covered by the Bavarian supplementary pension fund for public sector employers. An average wage increase of 3.09 percent was awarded under the collective agreement in April 2019, and from March 2020, employees will receive on average 1.06 percent more in their pay packets. The current collective agreement is set to end on August 31, 2020. In the competition for skilled labor, the company creates good conditions for its employees. As a modern and family-friendly employer, FMG offers numerous supplementary benefits outside of the general pay scale, such as flexible working hours, home and mobile offices, the company's own daycare center, travel subsidies, accommodation for staff, company retirement provision, a wide selection of sports and healthcare services, as well as diverse advanced training opportunities.

TARGET FOR 2020
Creating competitive employment conditions, for example through bonuses or the provision of accommodation

EMPLOYEES COVERED BY COLLECTIVE BARGAINING AGREEMENTS Fig. 17

Proportion of total employees in %[1]



[1] All percentages are based on the total number of employees including apprentices, workers in minor employment, temporary workers, and interns.

Digital transformation

Digitalization offers new opportunities

Added value for customers and employees

Munich Airport creates added value for customers and employees through its targeted selection and mastery of the new technologies that come with digital transformation. The aim is to use digitalization to ensure operational excellence. This can only succeed by establishing a cultural framework that meets expectations and requirements in times of demographic change.

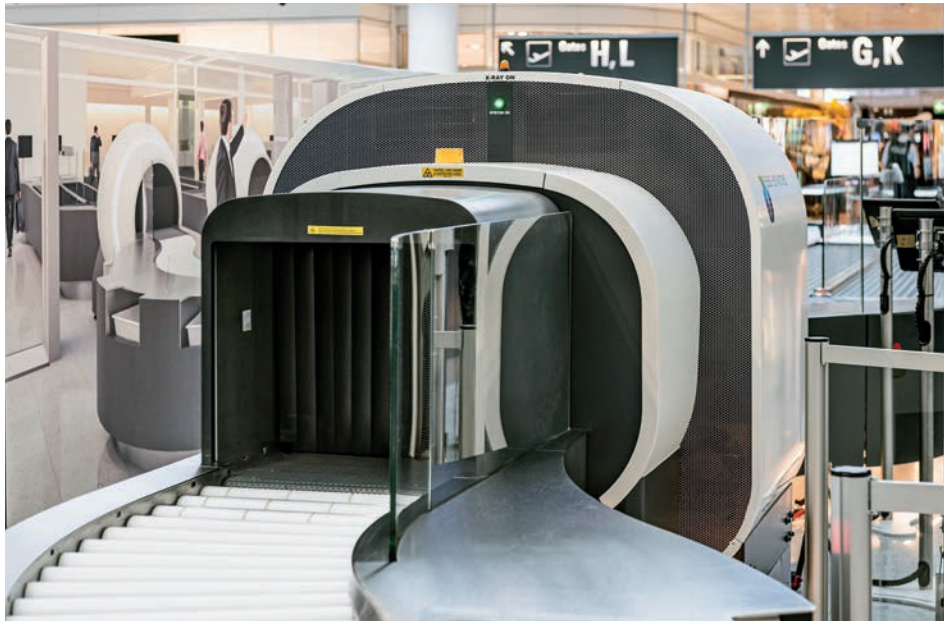
«Seamless Travel»: the ultimate travel experience

Munich Airport is benefiting from digital transformation and will safeguard its business model for the future accordingly. The company is helping to shape technological innovations so that it can offer passengers a variety of digital services to support them on their journey. Digitalization is the key to a seamless customer journey: punctuality of departure and arrival, good orientation and route guidance, as well as appropriate shopping options for passengers. Digital processes and tools therefore facilitate a «Seamless Travel» experience without hindrances or delays, which is enhanced with offers that are individually tailored to the needs of passengers and customers.

TARGET FOR 2020
Developing structures for connected campus mobility

New control technology reduces waiting time

A new technology for security checkpoints was tested at Munich Airport in 2019. Hand luggage is screened using a cutting-edge computer tomograph, which creates 3D images and can automatically detect solid and liquid explosives. This means that there is no need for passengers to unpack laptops, smartphones, and permitted



The stress-free path through security thanks to new technology

80 services are offered at the airport, from parking to luggage storage.

BRIEF INTERVIEW

Digital service

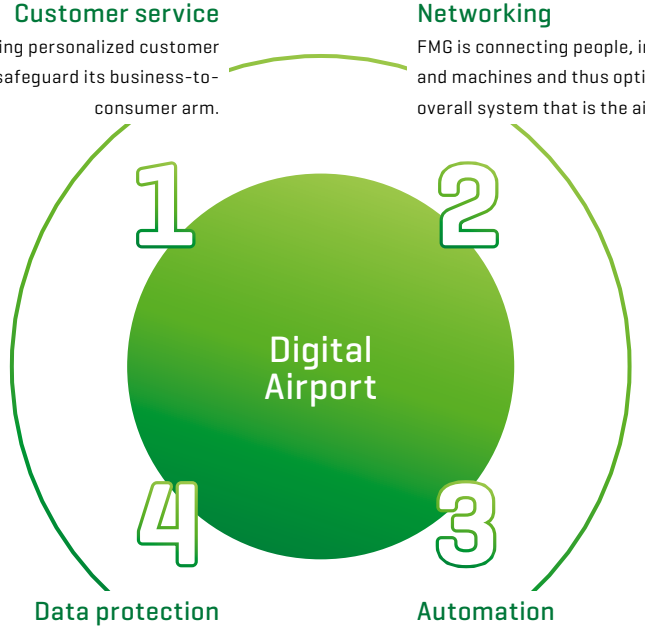
KONRAD BEST
Head of Digital Development

Mr. Best, what objective have you set for yourself and your team?
Our goal is to advance digitalization at the airport to the benefit of the end customer. All of our activities focus on promoting seamless travel and creating a positive customer experience. Or to put it simply: Passengers and other visitors should have a enjoyable stay at the airport by providing them with relevant information and services at the right time. In the digital world, in particular, people like to be addressed personally.

What added value can digitalization offer passengers?
We want to help shape technological innovations in order to make our services available digitally, too. At the same time, we want to develop a new understanding for customers and ensure personalized customer access.

How are your ideas greeted by airport staff?
I am convinced that we first have to create the cultural framework if we are to achieve change in the company. Our «Digital Days» event series has already allowed us to take in a number of different locations over the past three years. This format is already proving how rewarding it can be when employees examine problems and develop solutions themselves in line with design-thinking philosophy.

liquids. While around 100 passengers could previously be security-checked per hour in one screening lane, the new technology can handle up to 260 passengers per hour – an increase of 160 percent per lane. Investment will now take place on a gradual basis: 29 devices and 27 new screening lanes are planned for Terminal 1, and another 32 devices and 21 screening lanes for Terminal 2.



Change demands a new culture

Gearing up for «Airport 4.0»

Through its «Airport 4.0» interdisciplinary working group, the airport is networking the various areas of action in digitalization within the Group. The ongoing projects will create the cultural framework to strengthen the ability to learn and adapt as a basic requirement for the digital transformation and are therefore aimed at the most varied procedural levels of the airport. At the center of all initiatives are the customers and employees of Munich Airport.

Selected projects covered by «Airport 4.0»

Employee mobility

Employee mobility on the campus is being redesigned as part of the Optimized Campus Mobility project. This is being done based on simulations that replicate the mobility requirements of airport employees and are interlinked with future infrastructure developments on the campus. The optimum mobility mix will be identified in this way.

«ShuttleMe»

«ShuttleMe» is a free transport service that all Group employees can order via smartphone app. Three minibuses service more than 40 stops on the airport campus in accordance with demand. Users can track on the app where the shuttle is currently located and how long it will be before it reaches the pick-up or drop-off point. This flexible and convenient mobility service increases efficiency and minimizes negative environmental influences.

Passenger route analysis

Munich Airport is working on solutions to predict passenger volume and capacity levels in the terminal areas. For example, service staff can therefore be deployed optimally on-site, waiting times can be minimized, and the high standard of sojourn and service quality at Munich Airport can be further increased for passengers.

Social intranet

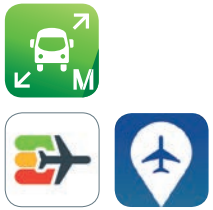
The new Group-wide intranet portal aims to provide a modern communication platform. Employees receive individualized information and can utilize the benefits and new functions of the Social Intranet. Cross-divisional collaboration and efficient knowledge transfer are key objectives behind the development of the platform. Responsive design ensures full use on stationary workstations and mobile devices.

Communicative company headquarters

A modern, sustainably designed office building is to be developed on the western side of the airport campus with a gross floor area of over 30,000 square meters. The agile working environment implemented here with its abundance of communication zones will promote information sharing within the teams and facilitate cross-divisional collaboration at Munich Airport.

«Passngr» app

The «Passngr» app provides passengers along the entire travel chain with individually tailored traffic updates and information on route alternatives, on the availability and prices of parking, on the expected duration of check-in, waiting times at security, and offers from restaurants and shops. «Passngr» was extended in 2019 by a number of features and its user-friendliness enhanced. The airports in Frankfurt, Berlin Schönefeld and Berlin Tegel, as well as Vienna were also incorporated. The plan for 2020 is to extend «Passngr» as a traveling companion that can be used worldwide with the inclusion of new services and flight data for other airports.



A number of internal apps are already simplifying everyday working life. The «Passngr» app is successful externally.

↗ «ShuttleMe»
↗ «Airport Community»
↗ «Passngr»

The «Passngr» app helps to provide guidance at the airport.

«Airport Community» app

Airport employees in operations areas will benefit primarily from the new «Airport Community» app: All real-time information relating to operation of the airport has been available to them in bundled form since 2019, including flight details, current waiting times at security checkpoints, as well as irregularities and disruptions in flight operation. The app also creates a cross-campus communication platform – apart from FMG, the app is also authorized for use by airlines, authorities, service providers, and external companies operating on the campus.

Robotics

Considering the changes in demographics and to protect the health of the workforce, Munich Airport is investing in technologies to reduce the burden of physically demanding activities. Baggage handling is one example of this. A fully automatic loading and unloading system is currently being developed specifically for this area as part of a cross-organizational project in collaboration with the Fraunhofer Institute.

State-of-the-art center to avert cyber risks

As digitalization continues apace, the risks posed for companies must also be considered in addition to its positive effects. The Information Security Hub (ISH) is a center of excellence at Munich Airport developed to help combat the threat of cybercrime. The training opportunities here are broadly diversified and range from warding off simple theft of data through to simulations of risk scenarios. The program includes target group-specific training courses for all career levels and is aimed not only at employees of Munich Airport, but also interested parties from other critical infrastructure facilities and companies for whom IT security is particularly important. The Information Security Hub also includes a fictitious company in which cyber-attacks and their defense can be realistically re-enacted with all stakeholders. The ISH has earned an excellent reputation for itself thanks to intensive collaboration with numerous institutions such as the Airports Council International (ACI).

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THE DIGITAL TRANSFORMATION CHALLENGE

WHAT A DIFFERENCE THE FUTURE MAKES

New technological possibilities are set to change the airport's business model in the coming years in many different respects. Munich Airport is utilizing the opportunities offered by digitalization both publicly and behind the scenes in order to provide air passengers a seamless, uncomplicated, and safe and secure travel experience.

Read more from page 50


HÖHERER KOMFORT
INCREASED COMFORT
EFFIZIENTER
MORE EFFICIENT
VEREINFACHTE GEPÄCKKONTROLLE
SIMPLIFIED LUGGAGE INSPECTION
260
passengers
per hour
100
passengers
per hour
+160%
faster and more efficient
security checkpoints
thanks to new technology

Responsibility

Munich Airport can permanently increase corporate value only through sustainable business in harmony with ecological and social objectives. The Group takes its responsibility very seriously and is aware that it can make a difference by pursuing an ambitious climate protection program and through considerate use of natural resources, broadly diversified community engagement, and sustainable economic activity that creates sustained value.

Ecological responsibility

Climate protection strategy

The commitment: carbon-neutrality by 2030

Climate policy objectives and their effects are evolving at a rapid pace. In the past year especially, aviation has been the focus of much public attention. Munich Airport already adopted its first climate protection strategy in 2009, aimed at achieving carbon-neutral growth. Some seven years later, the company set itself the even more ambitious goal of achieving carbon-neutral operation of the airport from 2030. To achieve this, the Munich Airport Group is reducing the greenhouse gas emissions that can be attributed directly to its operations by at least 60 percent using various technical measures. The remaining 40 percent of emissions are to be balanced out by suitable compensation measures, preferably within the region. To achieve this target, Flughafen München GmbH is planning to invest €150 million by 2030, almost an entire year's net profit.

Munich Airport has set itself ambitious goals for protecting the environment.

↗ **«Our climate, our contribution»** munich-airport.com/publications

↗ munich-airport.com/climate-protection

Go CO_2 neutral

Next step: «Net Zero Carbon»

Airports Council International Europe (ACI Europe) is pursuing a new climate protection goal as part of a comprehensive sustainability strategy. More than 200 European airports have signed up to the Net Zero Carbon Initiative, with Munich Airport being one of the first signatories. The goal is to reduce carbon emissions from operation of the airport, which are open to influence, to net zero by 2050 at the latest. Attention is primarily focused in this respect on measures to prevent emissions from arising in the first place, for example by converting energy supply to renewable energies. In addition, removal methods are to be used to allow the residual unavoidable carbon dioxide emissions to be actively removed again from the atmosphere.

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→ Group management report
See page 101

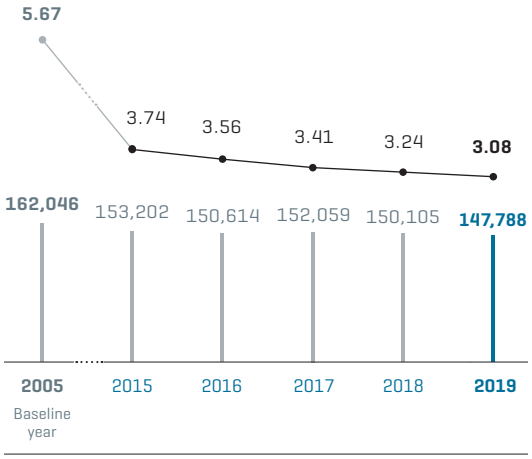
CO_2 emissions per passenger are sinking further

Despite the growth in traffic, FMG has lowered CO_2 emissions from around 162,000 tonnes in the 2005 reference year to around 148,000 tonnes to date. Had the 274 individual measures not been taken, CO_2 emissions at Munich Airport would be higher than they actually are – more than 48,000 tonnes a year higher.

CO_2 EMISSIONS AT MUNICH AIRPORT Fig. 18

Scopes 1, 2, and 3 without the LTO cycle, APUs, and public transport in tonnes per year

Specific carbon emissions per passenger in kilograms



In 2019, Flughafen München GmbH invested around €1.75 million to reduce greenhouse gas emissions by 3,418 tonnes in the long term. The improved energy efficiency is particularly evident in this comparison: While passenger figures at the airport have increased

> CO_2 emissions per passenger have reduced by 46 percent since 2005.

by around 67 percent since 2005 and the building areas have grown by around 16 percent, the CO_2 emissions of buildings, systems, and vehicles have fallen by some nine percent. CO_2 emissions per air passenger in the same period thus fell by 46 percent. These successes make it clear that even the most ambitious of climate goals can be achieved by continuously improving efficiency in existing stock, through sustainable building construction, and through the increased use of renewable energy.

«A-»

FMG achieved «leadership level» once more in 2019 in the non-profit-organization CDP (Carbon Disclosure Project) with a score of «A-» for its especially effective work in the area of climate protection.

↗ www.cdp.net

Footprint: complex math problem

The operation of a piece of international infrastructure involves emissions from the most varied of polluters. They all flow into the accounting of the greenhouse gas emissions of an airport (sorted by descending order of relevance):

- Air traffic in the LTO cycle (landing and take-off cycle): taking-off and landing aircraft up to an altitude of 3,000 feet (914 meters)
- Natural gas and heating oil for the power centers
- Power, district heat, cooling power, fuel, and natural gas supplies to external companies
- Feeder traffic: landside/public vehicle traffic (employees, passengers, visitors, and freight)
- Auxiliary power units (APU) and engine test runs
- Power and district heat purchases for the Group
- Airside/in-house vehicle traffic (such as buses on the apron, luggage transporters, and aircraft tug vehicles), ground power units, and other service and de-icer equipment

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The carbon footprint provides the basis for the reliable recording of all forms of emissions and lends itself to international comparison. It breaks down all greenhouse gas emissions that can be attributed to the airport into three different sources (scopes) according to an international standard, the «Greenhouse Gas Protocol».

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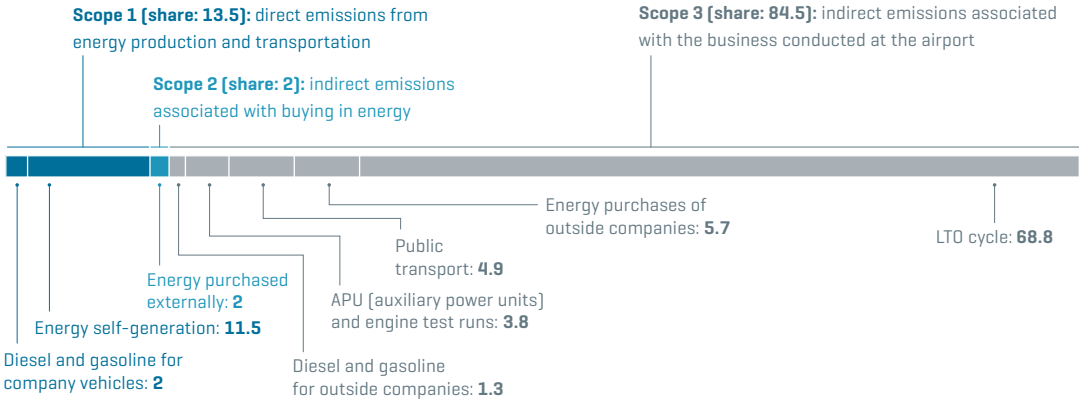
GREENHOUSE GAS EMISSIONS AT MUNICH AIRPORT 2019 Fig. 19

In percent



LEVEL 3 «OPTIMIZATION»

Airports Council International Europe (ACI Europe) honored Munich Airport for the tenth time in a row in 2019 with the «Airport Carbon Accreditation» seal of approval for its CO_2 management. The goal for 2030 is to achieve the highest Level 3+ «Neutrality».

BRIEF INTERVIEW

Trends in CO_2 emissions

DR. ING. KORBINIAN NACHTMANN
Specialist in Energy and CO_2 Management

Mr. Nachtmann, how did emissions at FMG pan out under Scope 1 and 2?
Absolute CO_2 emissions fell by 874 to 101,511 tonnes of CO_2 in 2019. While the emission factor for electricity purchased (Scope 2) decreased and the carbon footprint improved, a colder winter compared to 2018 led to an increased demand for energy. The growth in passenger numbers, new buildings, and the required construction site electricity made a difference of around 1,909 tonnes of CO_2. The measures to cut energy consumption to the tune of 3,418 tonnes of CO_2 were able to compensate fully for this increase.

What is planned for the future?
If we are to reduce the carbon footprint more aggressively than before in the coming years, we have to pursue the sustainable supply of electricity, heating, and cooling energy by expanding the use of renewable energies. 2019 kicked off with the development of a new energy strategy.

↗ www.munich-airport.com/climate-protection

↗ munich-airport.com/certification-awards

↗ klimaschutz-portal.aero

Scope 1 and Scope 2

BLOCK HEAT AND POWER PLANT IS HIGHLY EFFICIENT

With its block heat and power plant, the airport generates over half of its on-site power demand using natural gas. The waste heat generated from this alone covers almost all of its heating and cooling needs, without requiring the use of additional energy. The airport then covers its remaining heating requirements by procuring district heat from Fernwärmeversorgung Freising. In turn, 50 percent of the purchased district heat – i.e., around 14 gigawatt hours (GWh) – comes from a biomass thermal power plant in Zolling, which reduces the CO_2 emissions by a further 3,000 tonnes approximately per year. If the heat and power were generated separately in the mix applied in the Federal Republic of Germany, the amount of CO_2 produced each year would be 40,000 tonnes higher. The remaining power generated by the block heat and power plant is fed to companies on the airport campus, with the result that less than a third of the power used on the airport campus comes from external energy providers. Overall, emissions produced by the external procurement of power and district heat have decreased by around 25 percent since 2005. Looking at the Munich Airport Group alone, this figure has fallen by almost 50 percent. This is down to the new and more efficient engines for cogeneration of heat and power, on one hand, and reductions in power consumption, on the other.

EXCERPT FROM THE POWER SAVINGS PROGRAM PROJECTS COMPLETED IN 2019 (SCOPE 1 AND 2)

Fig. 20

Issue	Measure	CO_2 reductions per year
Lighting	Changeover of mobile bridge light traps	85 t
	Terminal 2: LED optimization of hall roof	755 t
Air-conditioning	Test system for direct drive/multiple-motor technology in the airmail sorting center	19 t
	User-driven optimization of the ventilation in the satellite building in Terminal 2	585 t
Renewable energies	Photovoltaic system on the roof of the P51 parking structure; 2nd construction stage	204 t
Mobility	Increase in efficiency of drives (for example by replacing older models for new ones) and expansion of electromobility (without C.A.R.E. diesel)	107 t

PHOTOVOLTAICS GENERATE RENEWABLE ENERGY

In its drive to achieve a carbon-neutral airport, Munich Airport is also using renewable energy. The first larger-scale system of this type with an installed rated output of around 750 kilowatts was realized in the summer of 2018 on the P51 parking structure. It generates around 730 megawatt hours of renewable electricity per year and thus saves 423 tonnes of CO_2 annually. The rated output was already increased to 1,100 kilowatts in 2019. By 2030, systems with a total output of up to 20 megawatts are planned.

LED CHANGEOVER CONTINUES TO ADVANCE

Munich Airport has already converted the entire apron lighting to energy-saving LED technology. With 185,000 LEDs in around 1,900 luminaires on lamp posts standing up to 34 meters tall, the world's largest LED high-mast system at present can be found here. This allows the airport to save around 16,000 tonnes of CO_2 annually. The external lighting in the public areas of the airport will also be switched to LED technology by 2022. In addition, the entire apron and external lighting of the airport will also be controlled and monitored in future using light management software. This will give rise to further opportunities to reduce energy consumption.

AIRPORT FOCUSES ITS ATTENTION ON ELECTRIC VEHICLES

As part of its climate protection program, Munich Airport uses alternative fuels from renewable energy sources within its vehicle pool:

- 23 cars use biogas.
- 131 cars/mini-transporters and 266 pieces of handling equipment are electrically operated.

The proportion of electric vehicles is rising significantly: By 2030, they should comprise the lion's share of the vehicle pool. In 2019, Munich Airport replaced 30 of its older cars run on gasoline or diesel. Electric vehicles currently comprise more than 20 percent of the existing vehicle fleet. The six-figure, environmentally friendly investment is supported by subsidies from the German Ministry of Transport. Compared to 2018, it proved possible to reduce the local emission of CO_2 by around 107 tonnes.

TARGET FOR 2022

Converting the entire apron lighting and external lighting to LED technology

A large proportion of handling equipment is operated electrically.

Scope 3

The new pre-conditioned air systems (PCA systems) are an important element of the climate protection strategy. Since fall 2016, these systems have been supplying aircraft parked in the parking positions next to the buildings at Terminal 1, Terminal 2, and at the satellite building with pre-conditioned air. As a result, the aircraft no longer need to run their auxiliary power units (APU), which are responsible for high levels of noise, carbon emissions, and other air pollutants.
In 2019, the operating times of the 64 PCA systems increased further, which led to a reduction of 20,851 tonnes of CO_2. In addition, a pilot project was launched in the past year, which will test the implementation of PCA systems at remote positions in trial operation under real-life conditions. Flughafen München GmbH together with the airlines and the companies based at the airport also improved other climate protection measures in 2019, such as the environmentally sound continuous descent operations (CDO) and the optimized taxiing system (ACDM, Airport Collaborative Decision Making), which reduces taxiing times.

→ Glossary

Air quality

Impact of road and air traffic

In the assessment of air quality at the airport and in its environs, nitrogen oxide NO_x, sulfur dioxide SO_2, and the particulate matter fractions PM_{10} and $PM_{2,5}$ play a key role. In terms of air pollutants, as with CO_2, the aircraft cause significantly more emissions than the ground traffic on the aprons, feeder roads, and service roads. It is not possible, however, to differentiate between the immissions metrologically.

→ Glossary

Landing charges are also levied based on nitrogen oxide emissions

Flughafen München GmbH levies emissions-oriented landing charges. This gives engine and aircraft manufacturers a long-term incentive to invest in the development of aircraft that produce less in the way of pollutant emissions. Munich Airport is thus actively contributing to better environmental quality in its environs. With the information on the aircraft types that have landed, the airport can record the contaminants – including CO_2 – for the specific engines, and directly map the technical progress.

Fixed and mobile measuring points

The air quality at Munich Airport is continuously monitored at two measuring points. The measurement stations in the western and eastern areas of the airport record the effect of the sources of pollutant emissions from road traffic, air traffic, and other airport operations – overlaid with the background levels from the Munich metropolitan area and the natural background concentration in the atmosphere. The contaminants ozone, nitrogen monoxide, nitrogen dioxide, sulfur dioxide, carbon monoxide, benzene, toluene, xylene, and the particulate matter fractions PM_{10} and $PM_{2,5}$ are monitored. All statutory limits for the protection of human health were once again met in 2019. For particulate matter PM_{10} and nitrogen dioxide (NO_2), there were no breaches of the statutory 24-hour limit. The 2019 annual averages for the key parameters NO_2 and particulate matter were in fact significantly below the limits, as they have been in previous years.

Biomonitoring
with grass cultures

In 2014, Munich Airport became the first airport in Germany to additionally determine the quality of air using a mobile air quality measurement station. It measures the same substances as the stationary measuring point in the east of the airport in specialist investigations conducted over several months in the surrounding municipalities. The mobile measurements were carried out in 2019 at the Visitors Park at the «Airport Hopser» daycare center. The concentrations measured in the first six months were significantly below the statutory limits.

Ultrafine particles: particulate matter of nanoscale size

Ultrafine particles (UFP) are particles that are smaller than 0.1 micrometers in size. They are created, for example, from the combustion of fossil fuels in cars – but also in air traffic. These particles are therefore primarily the focus of discussion because to a certain extent they can enter the bloodstream directly via the lungs. The health effects of ultrafine particles are still largely undetermined, however, and currently the focus of toxicological and epidemiological studies. There is no standardized procedure at present to measure UFPs, no objective benchmark for their assessment, and also no limit values. Munich Airport is carefully monitoring ongoing projects, however, which address the topic of pollution caused by ultrafine particles in air traffic. Intensive UFP measurements are being carried out at and around Frankfurt airport at the moment, which are expected to reach a conclusion in 2020. FMG is currently not conducting any UFP measurements.

Keeping track of contaminants

Long-lasting contaminants can accumulate in the environment and therefore seep into the food chain. Munich Airport has been monitoring this situation for many years using a variety of methods. In 2019, plant pots containing Italian ryegrass and kale as well as pots for collecting dustfall were set up at eight measuring points around the airport site. 160 grass cultures and 24 kale samples provide around 1,100 measurements per year relating to air pollutants and their impact. Work also continued on the honey monitoring project in 2019.

CONCENTRATION OF CONTAMINANTS AT THE MEASURING POINT ON THE EAST SIDE OF THE AIRPORT PREMISES Fig. 21

Annual averages in µg/m³

NO_2 concentration (nitrogen dioxide)

Threshold	40
2019	**18**
2018	18
2017	22

SO_2 concentration (sulfur dioxide)

Threshold	20
2019	**2**
2018	2
2017	2

PM_{10} concentration (particulate matter)

Threshold	40
2019	**12**
2018	14
2017	16

$PM_{2.5}$ concentration (particulate matter)

Threshold	25
2019	**8**
2018	11
2017	11

↗ **Measurements in real time**
www.munich-airport.com/air-quality-measurements-4910011

↗ munich-airport.com/air-quality-264266

Resource management

Environmental management fulfills strict requirements

↗ «Environmental statement» munich-airport.com/publications

Munich Airport uses natural resources considerately and with a sense of responsibility toward future generations. Respectful exchange with stakeholders is thus of major importance – including in relation to the topic of environmental management. Since 2005, Flughafen München GmbH has operated a certified environmental management system to the international standards of DIN EN ISO 14001 and the requirements of the EU Regulation EMAS (Eco-Management and Audit Scheme); since 2018, also to the more stringent international environmental standard DIN EN ISO 14001:2015. Moreover, FMG supports subsidiaries whose activities have a high environmental relevance through the introduction of a systematic environmental management system. Allresto, aerogate, and Cargogate have all been successfully recertified. AeroGround and eurotrade are planning to implement EMAS and ISO 14001 in 2020.

Airport is committed to 100 percent waste paper

Since 2019, the Group has produced its print materials in accordance with an ecological and optimum quality standard for offset printing. In addition to waste paper, this also includes mineral oil-free printing inks, which separate easily from the paper again during recycling. Business letters and envelopes too are made from 100 percent recycled paper. The Group already switched fully to recycled paper for use in its office printers some years back.

Generating less waste

→ Glossary

→ Glossary

Flughafen München GmbH is authorized to conduct waste management independently on its site in accordance with the German Waste Management and Product Recycling Act. Avoidance of waste is an absolute priority. However, waste and scrap products are generated from the operation of the airport – across the board – and these are then collected where they occur in various separating systems, handed over to certified specialist businesses close to the airport, prepared in sorting plants, and then recycled. The small proportion of residual waste that cannot be recycled is converted by the Munich North power plant into district heat and power.

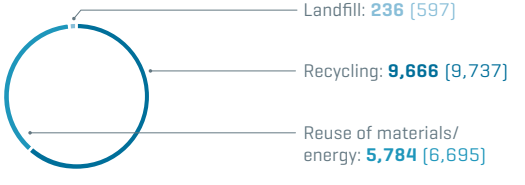
The majority of waste and scrap material is generated by affiliated companies, the companies based at the airport, as well as airlines. A custom disposal concept tailored specifically to the producer of the waste is therefore essential for successful resource conservation: from the actual generation of the waste through to recycling and disposal. FMG therefore provides regular information on current waste topics, gives tips on environmentally friendly conduct, and is on hand to offer advice.

All manner of disposal methods are used at the airport.

The tense situation that currently exists on the waste management and recycling market, caused by the oversupply of recyclables for mixed sorting and the corresponding lack of capacity among recycling firms, presents a new challenge for the waste management industry. While recycling was considered trendsetting in past years, the precursor to «zero waste» is now emerging as a key issue for the future internationally. FMG will adopt new approaches to respond to this goal change and address it from an economic, ecological, and social perspective.

DISPOSAL METHODS FOR WASTE Fig. 22

In tonnes (previous year's figures)



Waste from demolition and building renovation works was a key factor in the reduction of waste by 1,343 tonnes. As in the previous year, the topsoil excavation material arising from expansion, redevelopment, and renaturation works, which is recycled fully, contributes to the recycling rate.

A responsible approach to water

The aim of water management at Munich Airport is to affect the natural water balance as little as possible and arrange the various effects caused by water resource management, drainage, and the provision of drinking and extinguishing water so that they have as little impact as possible. FMG pursues the following goals in this respect:

1. Make sure the condition of the groundwater and bodies of water above ground is not impaired
2. Only use drinking water where drinking water quality is really needed
3. Minimize the volume of wastewater
4. Separate wastewater at the source, and treat and dispose of it separately
5. Keep wastewater away from sealed surfaces so as to prevent peak run-off

A sewage system stretching for around 300 kilometers collects wastewater at Munich Airport. Depending on the level of contamination, the water is pretreated in the airport's own plants, retained, added to bodies of water, or sent to the sewage plant in Eitting.

Process water wells conserve drinking water

Quaternary groundwater close to the surface (process water) from our own wells has been used for many years now for cooling in the power centers, west and east, instead of precious tertiary groundwater (drinking water). This led to a saving on drinking water of around 256,326 cubic meters in 2019, with total savings now amounting to some 2,000,000 cubic meters since the practice of using process water began in 2010. Planning and preparatory building works have started on additional process water wells in a bid to save up to a further 50,000 cubic meters of drinking water a year. A third well is due to go into operation in 2020 and a fourth is at the planning

8

percent represents the year-on-year reduction of waste.

stage. The goal is to use process water increasingly in cases where drinking water quality is not required: for concrete work and building site supplies, for cleaning runways using high-pressure equipment, for use in wet sweeping machines, for sewer rinsing, and for watering green areas, bushes, and trees.

Drinking water consumption at Munich Airport hovered consistently at around one million cubic meters in recent years despite growth in passenger numbers. The specific drinking water consumption remained around the previous year's level in 2019 and amounted to 20.2 liters (previous year: 19.8 liters) per traffic unit (1 TU = 1 passenger or 100 kilograms of air freight). On this basis, Munich Airport will come in under the target set in 2011 for specific drinking water consumption in 2020 of 21.6 liters per traffic unit.

→ Glossary

Ground filters protect groundwater

Ground filters in the area around the heads of the runways prevent de-icer from entering into the groundwater. They are used to retain and clean the collected waste de-icer. Regular examinations of the leachate using a TOC measuring system (TOC = Total Organic Carbon) verify their cleaning efficiency. Depending on the level of residual contamination, the collected water is routed to a body of water or – during harsh winters where lots of de-icer is used – sent straight to the sewage plant. The filters at the heads of the north and south runway to the east and west are already in operation.

Aircraft de-icer cycle

56
percent recycling rate for de-icer

De-icing vehicles keep aircraft free from ice and snow before take-off. The de-icer dripping off the aircraft during this process finds its way via slit drainage gutters and channels into underground basins. It is then mechanically and chemically treated in the airport's own recycling plant, its water content reduced, and then converted back to its original state with the use of additives. The recycling rate for the active glycol component in de-icer was around 56 percent

Special vehicles known as «polar bears» spray the aircraft with de-icer.

for the 2018/2019 season. The average for the last few years has ranged between 41 and a maximum of 59 percent – depending on the weather and taking into account a level of energy consumption suited to the environmental footprint.

Noise protection

Noise protection is comprehensively regulated

The main regulations for the aviation industry are defined on an international level. Under the umbrella organization that is the United Nations, the ICAO (International Civil Aviation Organization) deals with the issue of reducing aircraft noise. The EU pursues similar targets: With «Flightpath 2050», it is aiming for a 65 percent reduction in noise emissions by 2050, taking the figures for 2000 as the starting point. But the airport operator can also help to regulate this area. Loud aircraft without certificates to ICAO Annex 16 are not allowed to take off from or land at Munich Airport. And the regulations at night are even stricter: The night-flight curfew at Munich Airport includes a noise quota, which is based on aircraft types and sizes, and the number of aircraft movements. During 2019, only 71 percent of the permissible noise volume was used at Munich Airport. The mean nighttime continuous sound level at the sanctuary border did not exceed the permitted value of 50 dB (A) in 2019.

Noise reduction measures provide relief for residents

Munich Airport aims to keep the impact on residents and employees caused by flight noise as low as possible. It applies a range of steps to achieve this, including operational, technical, and financial measures.

→ Group management report
Night-flight curfew
See page 84

Engines running idle during final approach

Continuous Descent Operations (also known as Continuous Descent Approach, CDA) refer to a flight procedure, during which the aircraft descends with its engines set to minimal power (ideally, they should be idling), thus avoiding, in as far as possible, any horizontal flight phases. This method saves fuel and reduces CO_2 emissions. In some areas, the noise can also be reduced, if required. Numerous airlines apply this procedure at Munich Airport.

→ Glossary

↗ «Aircraft noise and aircraft noise abatement» brochure
munich-airport.com/publications

New engine architecture halves noise levels

The A320neo – the quietest and most efficient aircraft serving short and medium-haul routes at present – also serves Munich Airport; Deutsche Lufthansa currently has six of these machines stationed in Munich. The A320neo features the latest generation of engines, which allow a reduction in fuel consumption of 15 percent, and at the same time a reduction in both carbon dioxide emissions and noise levels. The Airbus A350-900 is the most environmentally friendly long-haul aircraft in the world. Compared to its predecessor, the A340, it creates significantly lower noise levels: up to 7 dB(A) less on start-up and up to 3 dB(A) less on landing. In contrast to the A340 series, the A350-900 series noise contour is around 40 to 50 percent smaller and its noise level does not exceed 85 dB(A) outside

→ Glossary

the airport premises. This results in lower aircraft noise pollution in the airport region. Thanks to its cutting-edge engines and lightweight materials, as well as curved wing tips, the A350-900 series consumes 50 percent less kerosene overall and thus emits 50 percent less CO_2. Lufthansa bases fifteen long-haul aircraft of type A350-900 at its Munich hub.

Landing charges: quiet equals cheap

Munich Airport can influence the type of aircraft used by ensuring its landing charges depend on noise levels. Airlines using quiet aircraft benefit from a charges system based on a broad sliding scale. Noise-based take-off and landing charges may be as much as eight times higher for a loud aircraft type than a quiet one.

Close monitoring of aircraft noise

From 16 fixed measuring points, FMG continuously monitors aircraft noise within a radius of about 20 kilometers around Munich Airport. It also performs mobile measurements as a voluntary service for municipalities that are not covered by the stationary measurement network. In 2019, nine mobile aircraft noise measuring systems recorded values on a total of 307 days, including – for the first time – in Dorfacker in the district of Kranzberg, in Walpertskirchen, and in Berghofen in the district of Eching. Repeat mobile measurements have already been taken in Forstinning, Haimhausen, Poing, Kranzberg, Garching, and Moosburg-Bonau.

↗ munich-airport.com/noise-protection-264207

↗ munich-airport.com/active-noise-protection-264436

BRIEF INTERVIEW

Measuring noise with solar power

DR. FELIX WILL
Head of Noise and Noise Protection

Mr. Will, why is the airport now using solar power to measure noise at the airport?
Our new mobile measuring system helps us to measure aircraft noise in the vicinity of the airport even more effectively and now at practically any location. Thanks to the use of solar power and fuel cells, the system operates independently of the local electricity supply and thus also fits in with the airport's overall carbon strategy.

How often has the system been used to date?
Since it was introduced in 2019, the system has been used at four different locations. In specific terms, it was used over several weeks to record aircraft noise in Haimhausen, Poing, Kranzberg, and Berghofen.

Biodiversity

Landscape design benefits the environment

To integrate Munich Airport into its environment in the best possible way, FMG set about – from the very outset – creating structures that would upgrade the environment in the wider area of Erdinger and Freisinger Moos and link it together. In line with applicable green space planning, a three-zone area was created:

Zone I: Airport premises with runway system, buildings, and roads

Green areas with currently around 5,000 planted trees make up almost two thirds of the airport premises. Specialist care and maintenance has led to a rich variety of vegetation and ecologically valuable habitats especially for rare meadow breeders, particularly inside the security fence, on the green areas between the runways and their infrastructure facilities.

Zone II: Wooded green belt with structural diversity around the airport premises

With its woods, drainage channels, and meadows, this area around the edge of the airport acts as sound protection and as a buffer for settlements and agriculture. For instance, the northern receiving ditch with its near-natural designed course, is home to plants that are worthy of protection such as the pasqueflower, ox-eye, perennial flax, and campanula. On the list of particularly protected species are the marsh gladiolus and fen pondweed.

Zone III: Ecological compensation measures

FMG has meanwhile planned and created approximately 470 hectares of compensation areas. The aim is to offset the interventions in the natural landscape caused by the building projects. The responsible certification bodies have confirmed that sufficient areas have been cultivated and that these are looked after properly. These compensation areas for conservation, with their structural diversity and rich variety of vegetation, make an important contribution to biodiversity in the region. They are distributed in the agricultural land and provide shelter and stepping stones in the biotope network. They are neither fertilized nor treated with pesticides.

The meadows next to the runways are very valuable ecologically.

Bird sanctuary on airport premises

Munich Airport is an inherent part of the 4,525-hectare «Nördliches Erdinger Moos» European bird sanctuary, which is home to 40 species of bird, some highly endangered. The 658 hectares of meadows next to the runways act as a refuge for meadow breeders, rare plants, reptiles, dragonflies, and butterflies, such as creeping marshwort, sand lizards, ornate bluets, and the dusky large blue.

Protected habitat for the most varied species

The project set up in 2016 entitled «Meadow breeder protection in the area around Munich Airport», with specialist support from the Bavarian Ministry of the Environment, has continued to progress: FMG has been continually developing and testing preventive concepts and measures in recent years on around 50 hectares of land currently used for agriculture, such as nest protection, more extensive cultivation, mowing concepts designed to suit meadow breeders, fencing to protect against predators, and the development of ecological lease agreements with corresponding requirements regarding cultivation. A final report will be produced in 2020 to take stock of the progress made.

One of the flagship projects within the Bavarian Environmental Pact is the airport's voluntary commitment to protect rare species of moor-based butterflies on «Freisinger Moos». Scarce heath butterflies, bog fritillaries, dusky large blues, and scarce large blues are the four at-risk species that will enjoy a new, protected habitat in an area in the region covering a total space of five hectares. In 2019 also, these areas were mown in a manner suitable for these species, in order to copperfasten the success of the measures already taken. The conservation project on butterfly protection will run provisionally until 2020, when a final report can also be expected.

In June 2019, FMG was one of the first companies to be distinguished by the Bavarian Ministry of the Environment with the title «Blühender Betrieb» (flourishing company) in recognition of its conservation activities. As part of the «Blühpakt Bayern» (Bavarian flowering pact) initiative, the award confirms that FMG fulfills the following criteria, among others:

- At least 20 percent of open-air space on the company premises is devoted to the creation of near-natural flowered areas
- No extensive use of chemical pesticides

↗ **«Bird life and flight operations»** munich-airport.com/publications

↗ munich-airport.com/bird-sanctuary

↗ munich-airport.com/butterflies

5

Insect hotels at the airport create additional breeding habitats and hiding places for wild bees in particular.

FACTS AND FIGURES

A biotope for a range of different species

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In recent years, FMG created habitats on around five hectares in the west of the airport for species of little ringed plover and gray partridge protected under European law, as well as for the Idas Blue butterfly, which is classified nationally as a critically endangered species. Their needs are diverse: The new habitats for the little ringed plover must be a good distance away from roads and woods and consist of gravelly soil with shallow water bodies and elevated nesting sites. The gray partridge, meanwhile, needs a habitat comprising grassed areas, shrubberies, and extensive arable use where no harvesting is carried out. To encourage settlement of the Idas Blue butterfly, topsoil was carefully lifted, transported, and spread over the compensation areas again. In addition, forage crops were also sown.

Social responsibility

A responsible employer

Diversity in the Group

Munich Airport benefits from the diversity of its employees. The company respects the cultural heritage and sexual orientation of all of its employees, taking into account their diverse interests and needs. About 25 percent of Group employees (total workforce including apprentices, excluding workers in minor employment, temporary workers, and interns) come from more than 80 different countries. Most non-German employees come from Turkey, followed by Croatia and Hungary. The Munich Airport Group has committed itself to successively increasing the proportion of women in management roles. Individual targets were set in this regard in fall 2017, which are revisited every three years. For example, women can participate in the cross-mentoring program when they commence their management duties, in which each participant is assigned a manager from another company as a mentor for a period of one year. The «MStars» network aims to promote continuous exchange between professionally successful women within and outside the company. Attention was focused in 2019 on actively networking «MStars» with women's networks in public authorities and other companies in the Munich region. Among other activities, «MStars» organized a series of panel discussions, which examined the challenges facing female managers in different sectors and working areas, and facilitated knowledge sharing between the many participants.

Housing for employees

FMG takes its responsibility as an employer seriously and is committed to providing housing for employees. From fully furnished apartments – also for temporary use – to residential houses in which individual rooms with communal kitchens and bathrooms can be rented, an array of configurations and price ranges are covered. Munich Airport is easily accessible from all properties. Fully fitted serviced apartments in Hallbergmoos, a neighboring community of the airport, were added to the portfolio by the Group in 2019, in a building that had previously been used exclusively as office space. All 132 residential units in the new «employee hotel» have been ready for occupancy since December 2019. The housing campaign is part of the human resources strategy, where the goal is to meet future staffing needs in the Group by supporting job applicants and employees in searching for accommodation.

TARGET FOR 2025

Providing affordable housing for FMG employees in coordination with the municipalities of the region

«Living ideas – Connecting lives»: Employees from all Group divisions form a large «M» in Terminal 2.

900 employees took part in the company run in 2019.

Focusing on family and health

Group management is convinced that good performance and a family-friendly working environment are mutually dependent. FMG has for many years placed a high priority on being family-friendly and has supported this with numerous offerings. Moreover, much of the airport's work in this area is focused on maintaining or improving the ability of staff to work. The Corporate Health and Social Management division offers a wide array of services, ranging from occupational medicine and employee catering to advice for people living in difficult circumstances. The Munich Airport Group offers a range of supplementary company benefits for a healthy work-life balance. The Group health day was held for the sixth time in 2019 with the motto «Gesund mit allen Sinnen» (Healthy in every sense), while the company run took place for the 16th time with 900 employees taking part.

Back to work with occupational integration management (BEM)

Munich Airport supports all employees in getting back to work after a longer period of illness as part of the occupational integration management (BEM) program. This is a voluntary and confidential process for restoring, supporting, and maintaining working ability and employability. To raise awareness of the topic among management-level employees, the advanced training module «Occupational integration management and health-driven leadership» was established in 2019 as a compulsory event as part of the Leadership Excellence Program for managers.

Inclusion: central feature of corporate philosophy

As of December 31, 2019, the Group employed just under 700 staff members with disabilities or equivalent limitations, corresponding to around seven percent of the total workforce. A number of different measures have been put in place to facilitate as normal an everyday working life as possible. A works agreement was also adopted in 2019, which regulates parking for employees with restricted mobility: Regardless of status as a person with disabilities, employees are allocated a parking space near the workplace in the event of a mobility restriction.

«Health Lounge AeroGround»: training under realistic conditions

The level of strain on the musculoskeletal system is especially high for employees in aircraft handling. The number of missed days recorded by AeroGround in this regard continues to rise. The «Health Lounge AeroGround» model project is a prevention and awareness-raising initiative, which provides a room close to the workplace for strength and mobility training in accordance with sports science standards. A further component of the project is the

integration of the musculoskeletal program «Aufwind», which provides a physiotherapeutic consultation and simulation of workplace-specific movements and loading activities for all Group employees. Employees can learn healthy motion patterns in this way under realistic conditions.

Occupational health and safety: firmly embedded in corporate culture

Creating optimum working conditions

Munich Airport is constantly developing new solution approaches to counteract health hazards and risks in the workplace. Regular information events are held to further cement the issue of occupational health and safety in the corporate culture. The Occupational Health and Safety division has defined indicators for systematically monitoring occupational health and safety, which it monitors and analyzes on an ongoing basis. The aim is to identify fields of action in order to be able to develop the necessary measures. Managers receive reports on a regular basis as of 2019 with the indicators and recommendations for optimum occupational health and safety.

Seminar for knowledge sharing

The second Group-wide workplace safety committee meeting took place in July 2019, focusing on communication and positive error culture. In addition to attending presentations by internal and external speakers, an opportunity was accordingly also provided for a Group-wide exchange of knowledge. Meanwhile, the occupational health and safety conference held in October 2019, which was attended by managers, works councils, specialists from the field of occupational health and safety, along with safety officers from ground transportation companies, centered on shared communication and collaboration on the apron.

Ergonomics project makes strides

Aircraft ground services staff perform challenging physical activities with a demonstrably heightened risk of musculoskeletal disorders. FMG therefore conducted a survey in 2018 in collaboration with the Fraunhofer Institute on the development of a robot-based automatic baggage loading system, which would significantly reduce the physical strain of manual activities on these employees. A concept study was concluded in 2019 with a positive outlook, which among other information contains initial assessments in relation to technological feasibility.

Coordination and control authority established

Some changes to the licensing procedure were introduced when the license for ground handling services was awarded. A new specification documents the developments in relation to occupational health and safety, which seek to improve the safety of all employees on the apron on an ongoing basis. In addition, a coordination and control authority is to examine whether the standards laid down in the specification are being observed. A specially developed auditing process describes the systematic implementation of audits, methods, and practices. The planned audits were concluded fully in 2019.

New works agreement

A works agreement came into effect in July 2019 at FMG to examine psychological stress at the workplace. Precise findings are to be provided by means of a scientifically validated, multi-stage screening process. An employee survey is planned in fall 2020 as an initial step in order to obtain an overview of the stress situation in the company. Measures will then be developed in a second step to reduce psychological stress. The entire process is to be managed by an expert group made up of representatives of the respective parties as well as from occupational medicine and occupational health and safety.

Security

The issue of security is critically important in aviation. Among other duties, Corporate Security is responsible for internal security obligations incumbent on airport operators and for defense against risks and hazards. It also promotes collaboration between the security organizations at the airport: Topics addressed by the Security working group, which is made up of representatives of authorities, FMG, individual subsidiaries, and airlines, include prevention of security-related incidents, as well as other security-critical issues.

↗ **Occupational health and safety annual report**
munich-airport.com/publications

TARGET FOR 2020

Developing a concept for robot-based automation of processes in the ground handling service

Airport Rescue and Firefighting: rapid response on the campus and beyond

As part of Corporate Security, the Airport Rescue and Firefighting service on the premises of the airport in Munich is responsible for fire safety and for technical assistance in the area of fire safety in aircraft and buildings. With qualified rescue service personnel and its own rescue vehicles, it provides 24-hour emergency assistance for passengers, visitors, and employees, and performs safety monitoring for work and events involving a fire hazard. With its two fire stations, the emergency personnel can reach any part of the flight operation areas within 180 seconds and thus fulfill the prescribed rescue periods for aircraft fire protection. The extinguishing capacity for aircraft fire protection meets the strictest requirements (category 10) set out by the International Civil Aviation Organization (ICAO) for every runway. And it is not just within the airport campus that Munich Airport's firefighting service is called into action. Extreme snowfall in the Upper Bavarian district of Traunstein in mid-January 2019 triggered an emergency alert. Eight crew members from Airport Rescue and Firefighting, who were specially trained for working at high altitudes, joined the effort to clear snowdrifts and ice floes from rooftops and edges.

→ Glossary

Airport safety: management system rolled out

Safety is also a tremendously important issue for airports. This involves safe operation of aircraft and the guarantee of technical operational readiness of infrastructure and systems for the safe handling of airport operations. Following adoption of Regulation (EU) No. 139/2014 on the basis of Basic Regulation EU 2018/1139 on aviation safety, common standards are laid down for planning, operating, and maintaining the safety of airports, which FMG must also adhere to bindingly. Munich Airport's operating license is directly dependent on renewal of its EASA (European Aviation Safety Agency) Certificate granted in December 2017. Under this certification, the airport must demonstrate constant compliance with relevant requirements to the responsible supervisory authority, the South Bavarian Aviation Office at the District Government of Upper Bavaria. A new safety management system at FMG ensures compliance with these requirements and ongoing improvement of safety and EASA compliance. The primary objective of this system is to prevent potential accidents, by identifying hazards, assessing risks, and introducing measures to mitigate the risks.

→ Glossary

SESAR project: Munich Airport draws on research findings

Flughafen München GmbH is collaborating with six other major airports as part of the SESAR (Single European Sky ATM Research) project to progressively develop the European airspace system. In 2018, FMG took over at the helm of the airport consortium SEAC2020, which means that it is responsible for managing airport activities as part

A crew member wearing a respiratory mask makes his way along the creepage path in the new firefighting training building.

of the EU Commission-backed SESAR project. The overriding goal of the research activities is to make aviation processes more efficient and safer. The participating airports intend to take on a steering role over and above classic ground processes. FMG's participation in SESAR future projects is now paying off, as FMG can draw on the many findings of the research work to support it in its current rollout of a ground coordinator function at Munich Airport.

Low bird strike rates thanks to sophisticated biotope management

Collisions between aircraft and heavyweight birds or flocks of birds can endanger the safety of flight operations. Using a special biotope management system, Munich Airport protects against possible collisions. These safety measures do not impact negatively on the protection of the birds that have made their home at Munich Airport.

- The green areas around the runways are mown according to a concept that is adjusted to the local conditions.
- The terrain at and around the airport is designed to prevent bird species that pose a critical risk to air traffic from settling there in the first place.
- The drainage channels near the runways are spanned by steel ropes in order to make access difficult, in particular for waterfowl.
- «Wildlife Management» employees monitor the bird population on the airport campus and in relevant biotopes within the vicinity, in order to ward off potential dangers from bird flight movements at an early stage.

FMG works closely with the relevant partners and institutions on the topic of bird strike prevention, in particular with the airlines, German air traffic control, regional and higher-level authorities, and the GBSC (the German Bird Strike Committee). The statistics from the GBSC show that Munich Airport has had a relatively low bird strike rate for many years now. In areas 1 and 2, the average bird strike rates at Munich Airport in 2019 were 49 and 31 percent lower, respectively, than the rates recorded for Germany.

Community engagement

Wide range of measures to promote projects

Munich Airport is very aware of its social responsibility within the region and again in 2019 supported the work of many not-for-profit associations and institutions in the designated support area through the regional sponsorship initiative. Through its sponsorship of around 750 projects in areas such as nature, education, sport, culture, and social affairs, Munich Airport provides long-term planning certainty, for example, for youth development in more than 120 sports clubs in the region. In addition, the initial start-up financing provided has allowed many initiatives to get off the ground, such as the senior citizens network in Freising or the new civic foundation in Erding, of which Munich Airport itself is a founding member. The «NachWuchsWald» (new talent forest) program was continued in 2019: A magnolia sapling was planted in the Kranzberger Forest outside Freising for every new-born child of a Group employee. This initiative helps the company and its employees and their families to put down roots in the region, and to strengthen employee retention in the Group.

46

percent of sponsorship was devoted to sport, followed by social affairs, education, culture, and nature.

FACTS AND FIGURES

Information in passing

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Since August 2019, visitors have been finding out details of the airport's carbon strategy, interesting facts about the bird sanctuary, noise protection, air quality measurements, or honey monitoring virtually in passing. A new environmental cycle path runs for approx. 18 kilometers around a circuit along Nordallee and the aprons as well as the southern runway. Signs with QR codes can be found at 16 stations, which provide a link to more in-depth information on the Internet.

Sponsorship activities in Munich

With FC Bayern Basketball, EHC Red Bull München, the «Klassik am Odeonsplatz» open-air concert series, and Midsummer Night's Dream in the Olympiapark, FMG supported sports clubs and events in 2019 with a reach far beyond the city limits. All told, FMG sponsored 20 institutions and projects in the City of Munich. The Bavarian Philharmonic, the Munich Theater for Children, and the Hellabrunn Zoo were some of the beneficiaries of the airport's sponsorship in the «classical music and Munich institutions» funding area. Under the heading of «sports and mobility», the Generali Munich Marathon received sponsorship, among other events. Meanwhile, in the area of «recreation and leisure», for example, FMG maintained an active partnership with the Olympiapark in Munich, facilitated the holding of the «impark» summer festival, and supported the «Buy Local» initiative. In «media and networking», FMG was involved with the Queer Film Festival, among other.

FMG is a premium partner of FC Bayern Basketball.

Help with care and responsibility

30,000

euros were donated by Munich Airport from its social fund to various organizations in the region.

Munich Airport's charitable association, the «Flughafenverein», bears the «DZI donation seal of approval» and, as well as making a number of anonymous donations and helping sick children's dreams come true, it also supports local young people, senior citizens, and refugees, as well as regularly taking part in projects outside Germany. The relief campaign for Latvia has already become a tradition: For instance, more than 15 tonnes of charitable donations were transported to Jēkabpils in June 2019, for the eleventh time. An aid project near the Turkish coastal town of Ayvalik also continued in 2019. Families and orphans are living there under the most difficult conditions. The Munich Flughafenverein provided assistance on the ground with food and hygiene products, as well as school supplies.

Economic responsibility

Value creation – Munich Airport as an economic factor

Economic benefits

Munich Airport has regional economic impact at a number of different levels. A basic distinction is made between the effects resulting directly from operation of the airport, on one hand, and the effects resulting from its use, on the other hand.

Value-added effects resulting from airport operation

The value-added effects generated by airport operations can be categorized into direct, indirect, and induced effects. In 2018, all of the companies that were based on the airport campus generated direct added value in the amount of €3.78 billion. Around every hundredth euro generated in Bavaria is generated by Munich Airport.

Effects resulting from use of air traffic

Effects resulting from the use of Munich Airport are known as location effects. These include positive economic effects, such as an increase in productivity and investments, plus a high level of employment and innovation. Proximity to the airport is seen as an important criterion for companies deciding to settle in the area, particularly those operating on an international scale. The airport also offers impressive advantages for the tourism industry.

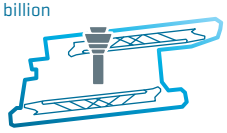
Fig. 23

OVERALL EFFECT IN 2018

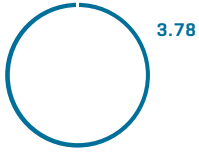
Airport campus

The direct effect of gross value created was 3.78 billion euros on the airport campus.

€ 3.78 billion



In billion euros



■ Direct effect

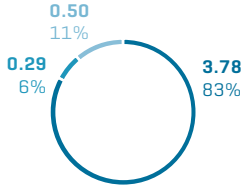
THE SUM OF DIRECT, INDIRECT, AND INDUCED EFFECTS IN 2018

Region around the airport

The overall effect of gross value created was more than 4.5 billion euros for the region around the airport.

€ 4.57 billion

In billion euros of overall effect

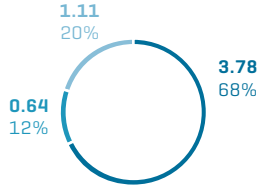


Bavaria

The State of Bavaria recorded an overall effect of more than 5.5 billion euros for the same period.

€ 5.52 billion

In billion euros of overall effect

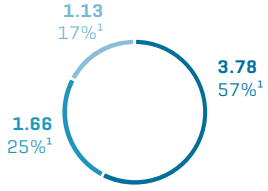


Germany

The direct, indirect, and induced effect of value created across Germany added up to more than 6.5 billion euros.

€ 6.58 billion

In billion euros of overall effect



■ Direct effect ■ Indirect effect ■ Induced effect

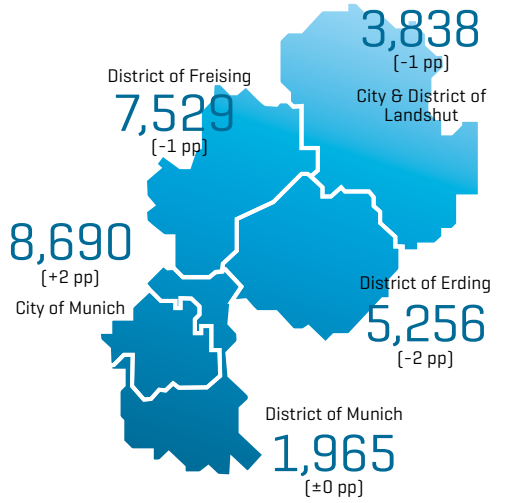
[1] Difference due to rounding to 100 percent

EFFECTS	BRIEF DESCRIPTION
Direct effects	The total value creation achieved by all of Munich Airport's economic activities. The direct value created is used to pay salaries and wages.
Indirect effects	All economic effects that arise from the purchase of goods and services for companies at Munich Airport.
Induced effects	All economic effects generated by spending income from direct and indirect effects.

Source: Expert report «Wertschöpfungseffekte aus der Angebotserstellung des Flughafens München» (Value-added effects from preparation of tenders by Munich Airport)

WHERE AIRPORT STAFF LIVE Fig. 24

Number of persons



Source: Staff Survey 2018, In Brackets: Change of share in percentage points in comparison to 2015

TARGET

Creating transparency in existing supplier and service relationships

Procurement of services: sustainability is becoming increasingly important

Group-wide product management

Munich Airport does not have a conventional supply chain, but procures a wide range of products and services needed to operate and expand an international hub airport. The range of essential products is comparable to the requirements of a small town: The 132 product groups range from things like office supplies and road construction to vehicles and buildings. In 2019, the Munich Airport Group's procurement volume amounted to around €753 million (net). All procurement by specialist departments and subsidiaries is handled by the central Group-wide product group management system. Only the merchandise, food & beverage, and medical equipment product groups are procured directly by subsidiaries.

Legal provisions in respect of procurement

The Munich Airport Group, a sectoral contracting entity, operates in the field of «Ports and Airports». As such, it ensures its procurement policy is consistent with public procurement legislation. Where public contracts are involved, calls for tenders are issued on a Europe-wide basis in keeping with the binding regulations under procurement law. The Group normally puts contracts that are not subject to public procurement legislation to tender based on a formal, company-specific process. A party submitting a tender must confirm it complies with the statutory provisions in order to rule out anything that would prevent it taking part in public procurement or tendering procedures. They must also provide evidence that they comply with the standards relating to quality assurance and environmental management.

Responsibility in the supply chain

Munich Airport awards contracts on the basis of cost-effectiveness and places particular emphasis on the utilization of materials and products that are both durable and use low levels of natural resources. For investment goods, any subsequent costs for servicing and maintenance (life cycle costs) are also considered, where necessary. Munich Airport strives increasingly to design procurement processes as sustainably as possible in all corporate divisions. Sustainable procurement does not just commence with the actual purchase of goods and services.

Consumers in the specialist departments are also increasingly prescribing ecological, economic, and social standards in IT, in building maintenance, or in the construction of new buildings, in the vehicle pool, and in the purchase of promotional material. Thus, for example, the tender documents pertaining to uniforms contained a provision that the contractor must guarantee compliance with ethical obligations (no child labor, environmentally sustainable manufacture and processing of substances and materials, and healthy working conditions in the workplace at the manufacturers). When procuring promotional materials, the origin of the item, resource-friendly production, and recycling capability are important criteria. For vehicles and equipment for the FMG vehicle pool, care is taken to ensure that environmentally friendly vehicles, specifically those with low CO_2 emissions, are procured.

Supplier structure and supplier management

Around 5,600 suppliers work for the Munich Airport Group. The supplier structure during 2019 was relatively consistent with the previous year. About 96 percent of the procurement volume of the airport went to companies headquartered in Germany. Of these, 67 percent are from Bavaria and 40 percent are from Munich and the airport region. Because Munich Airport is supplied primarily by business partners from the region, transportation distances are short and CO_2 emissions are reduced. For example, the subsidiary Allresto purchases mainly seasonal produce worth around €20 million throughout the year – nearly all of which originates from Bavaria, and a good 50 percent of which comes from the area directly around the airport. Flughafen München GmbH assessed its framework agreement partners in 2019 according to the following criteria: the quality of the product or service, reliability of delivery, service and price trends, as well as the company's certification according to quality and environmental standards. In the event of poor outcomes, the suppliers were given the opportunity to eliminate deficiencies in supplier audits.

With procurement also, the airport's attention is on the region.

Verification and documentation of commitment to human rights

The Munich Airport Group's business operations are primarily confined to Germany. Here, human rights are enshrined in law. In calls for tender for international services, it is ensured that national and international laws and agreements are applied. This is documented again when contracts are signed. As part of the national action plan (NAP) for business and human rights, an internal risk analysis was initiated at the end of 2018 in the form of one-on-one discussions. The intention is to establish a process within Flughafen München GmbH in 2020, following conclusion of this analysis and its related evaluation in 2019. Integration of human rights into Munich Airport's general opportunities/risk analyses indicates the importance of the topic in the company.

Strict requirements for precluding child labor

When sourcing product groups where the likelihood of child labor is high, steps are taken in particular to ensure that none is involved. Manufacturers of products in areas known to be high risk in terms of using child labor are required to present independent certification that they do not. Clauses to this effect are integrated in the calls for tenders and awards documentation.

40 PERCENT

Because of the high percentage of products and services it sources in the region, Munich Airport not only creates societal value, it also reduces damage to the environment.

Financial report

INFORMATION ON THE CONSOLIDATED FINANCIAL STATEMENTS AND THE GROUP MANAGEMENT REPORT FOR THE FISCAL YEAR 2019

The online report published in full on the Internet is decisive for the audit of the consolidated financial statements. In addition to the unconditional independent auditor's report, the full consolidated financial statements and the Group management report for the fiscal year from January 1 through December 31, 2019 are generally accessible at: report2019.munich-airport.com. The version published there was audited by KPMG AG Wirtschaftsprüfungsgesellschaft. The present printed Group management report 2019 corresponds to the audited version. The consolidated financial statements are presented in abridged form in the printed report. This includes the consolidated statement of profit or loss, the consolidated statement of comprehensive income, the consolidated statement of financial position, the consolidated statement of changes in equity, and the consolidated statement of cash flow. The Group notes under IFRS are published only in the online report.

GROUP MANAGEMENT REPORT

Situation of the Group

Business model of the Group

Situation

Flughafen München GmbH (FMG) is headquartered in Munich. As the parent company of the Munich Airport Group (Munich Airport), it is the operator of Munich's commercial airport.

Munich Airport is active via the business units Aviation, Commercial Activities, Real Estate, and Participations, Services & External Business. The service profile of the Group covers virtually all the services available on the airport campus – from air travel including passenger and cargo handling through to retailing, hotels, and catering services. This integrated business model and depth of added value sets Munich Airport apart from its European competitors.

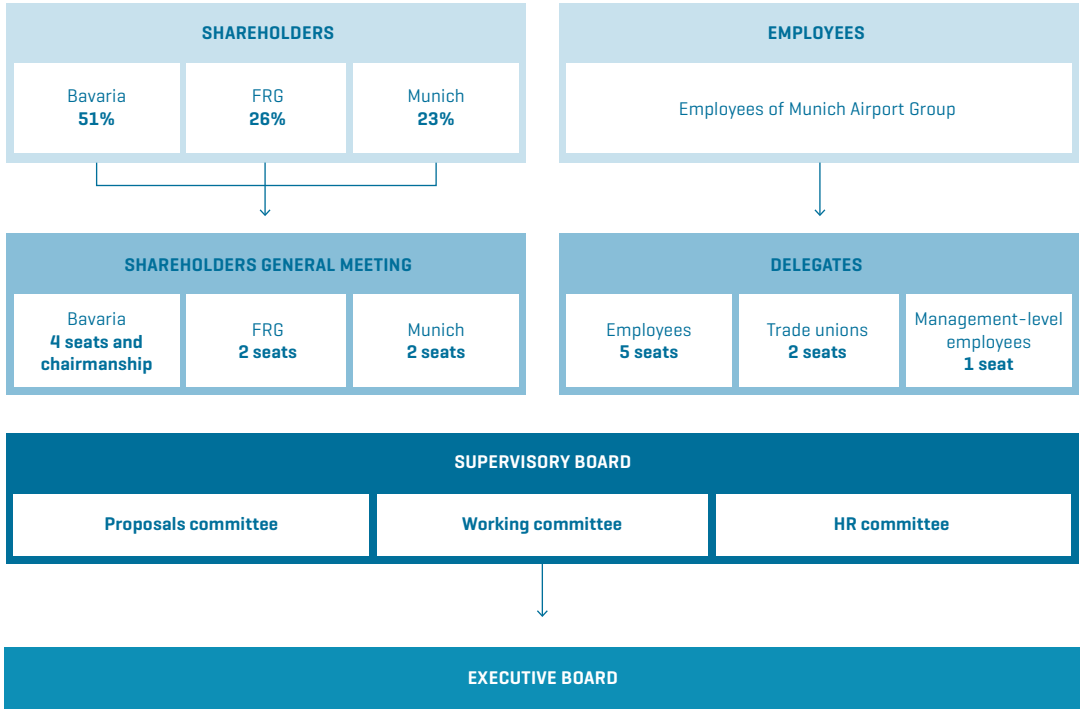
Munich Airport is committed to a corporate policy of sustainability. The orientation toward economic, environmental, and social goals ensures acceptance of the airport and consequently the viability of its business model.

Main features of management and control Fig. 25

The owners of FMG are the Free State of Bavaria with 51.0 percent, the Federal Republic of Germany with 26.0 percent, and the City of Munich with 23.0 percent.

The shareholders' general meeting is the highest monitoring and decision-making body. It decides unanimously on the Group's business fundamentals, including such matters as airport expansion and borrowing. On all other issues, resolutions are adopted by a simple majority.

GOVERNANCE STRUCTURE Fig. 25



Supervisory Board

FMG has a Supervisory Board, as specified in Article 1 (1), (6) of the German Co-Determination Act (Mitbestimmungsgesetz – MitbestG). The Supervisory Board exercises monitoring and co-determination rights. It appoints

members of the Executive Board and determines their remuneration. Transactions exceeding certain thresholds or terms require Supervisory Board approval. The employees' representatives on the Supervisory Board are elected by the Group employees. The shareholders' representatives are elected by the shareholders' general meeting. The term in office of the Supervisory Board members ends with the shareholders' general meeting that resolves on the formal discharge of the members for the fourth fiscal year after the start of the term in office.

The Supervisory Board has appointed a proposals committee, a working committee, and an HR committee. The proposals committee, working committee, and the HR committee were entrusted with the following tasks among others. Fig. 26

Executive Board

The term of office of the members of the Executive Board of FMG is normally five years; reappointment or extension of the term in office is permissible. The Executive Board comprises three members and is responsible for the Group's corporate policy and strategic focus. It determines the budget and monitors business developments.

The executive officers of FMG receive a fixed (salary) and a performance-related remuneration including short and medium-term incentives (bonus). The bonus is primarily linked to the consolidated profit before taxes.

Female quota

In the context of ensuring equal participation of women and men, the Supervisory Board and the Executive Board of the parent company FMG stipulate targets and deadlines for the proportion of women on the Supervisory Board, Executive Board, and on the first two management levels.

COMMITTEES IN THE SUPERVISORY BOARD Fig. 26

Proposals committee	• Right of proposal for the appointment of a member of the Executive Board in the event that voting in the Supervisory Board does not achieve the requisite two-thirds majority for the member of the Executive Board to be appointed in the first ballot
Working committee	• Statement on the resolutions proposed by the Executive Board • Approval of certain legal transactions that exceed set maximum monetary values or terms
HR committee	• Designing the contracts of the Chief Executive Officer (with the exception of remuneration), general representatives, and authorized representatives • Consent to the setting and amendment of the rules governing remuneration in the area of the Group not governed by collective wage agreements, to the setting or amendment of the salary level of certain employees above a set salary level or level of remuneration, as well as to commitments to an occupational pension, including the company pension scheme

A target of 31 percent was stipulated for the proportion of women on the Supervisory Board by June 30, 2020.

The proportion of women on the Executive Board is currently 33 percent, and is to be retained at this level until June 30, 2020.

The Executive Board of FMG has defined a target of 19 percent by June 30, 2020 for the proportion of women at the first management level. For the second management level, the target value of 29 percent is to be retained.

Business activities

Organizational structure

The Group's organizational structure is divided into the business divisions, service divisions, and corporate divisions of FMG. Commercial management and the internal reporting system are handled by the business units. The business units shown in the figure comprise the business and service divisions of FMG and the Group companies integrated in the business units. The business units are explained in the following sections. Fig. 27

There have been no fundamental changes to the legal and organizational structure in the 2019 fiscal year, compared with the previous year. There have been no material increases or reductions in shares. A detailed overview of the ownership structure is included in the Notes to the consolidated statements.

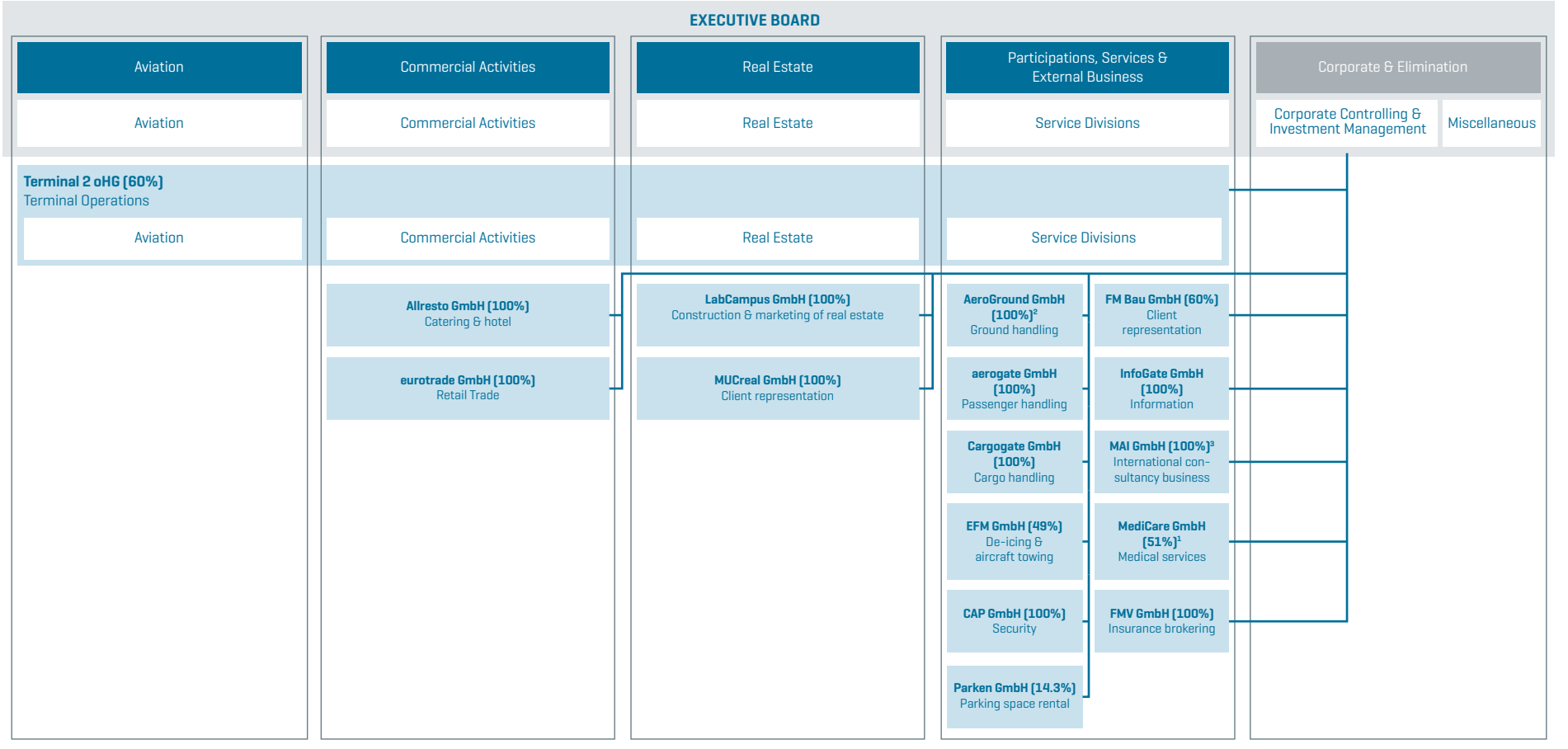
In the 2019 fiscal year, Munich Airport International GmbH (MAI) founded three companies in the USA in order to expand its international business activities.

These are Munich Airport US Holding LLC, Newark/USA (US Holding – founded on January 14, 2019), EWR Terminal One LLC, Newark/USA (EWR – founded on January 15, 2019), and the joint venture Reach Airport LLC, Washington/USA (Reach – founded on March 15, 2019).

In addition, MAI acquired a 60 percent of the shares in amd.sigma strategic airport development GmbH, Berlin, on November 28, 2019.

ORGANIZATIONAL STRUCTURE OF MUNICH AIRPORT

Fig. 27



[As of Dec. 31, 2019]

[1] MediCare Flughafen München Medizinisches Zentrum GmbH has a 100% equity interest in Munich AirportClinic GmbH.

[2] AeroGround Flughafen München GmbH has a 100% equity interest in AeroGround Berlin GmbH.

[3] Munich Airport International GmbH has a 100% equity interest in Munich Airport US Holding LLC and a 60% equity interest in amd.sigma strategic airport development GmbH. Munich Airport US Holding LLC in turn has a 100% equity interest in EWR Terminal One LLC and a 51% equity interest in Reach Airport LLC.

The shares in MAC KG were sold in January/February 2019.

In total, the Group comprises 16 fully consolidated companies, two associates, and four companies that are not consolidated. These are directed by Corporate Controlling and Investment Management in line with the business division strategy assigned in each case.

Business units

Business units

- Infrastructure at the limit of capacity
- Wide variety of first-class services and offerings along passenger routes
- Highly attractive real estate location
- Participations: full service provider for the airlines
- Services: energy and telecommunications for all airport tenants

Aviation business unit

The Aviation business unit covers the operation of Munich Airport's air traffic infrastructure.

The following airport charges are levied for the provision and operation of the air traffic facilities. Fig. 28

AIR TRAFFIC CHARGES Fig. 28

	Assessment basis
Take-off and landing charges	Maximum take-off mass of the aircraft (MTOM) on take-off and landing
Noise charge	Fixed amount per landing depending on the noise category
Emissions charge	Nitrogen oxide equivalent emitted per landing
Passenger charge	Number of passengers on take-off
Cargo charge	Number of workload units on take-off/landing
Parking charge	Maximum take-off mass (for each started period of 24 hours, from the fourth hour)
Security charge	Number of passengers and/or workload units on take-off
Fee for passengers with reduced mobility (person with reduced mobility – PRM fee)	Number of passengers on take-off
De-icing charge	Number of passengers and/or workload units on take-off
Waste disposal charge	Number of passengers on take-off

In fiscal year 2014, Munich Airport concluded a master agreement on charges with uniform terms and conditions for all airlines, which sets the future trend of air traffic charges up to and including 2020, and consequently ensures funding for infrastructure. On average, charges rise nominally by around 2 percent per year.

Currently, Munich Airport has two runways with a maximum capacity of 90 aircraft movements per hour during daytime operations. This capacity is fully utilized over large parts of the day. Market-appropriate traffic development is hardly possible anymore, as many requests from airlines still cannot be satisfied. This fact has been confirmed again by the airport coordinator of the Federal Republic of Germany charged with assigning the landing and take-off times (slots). Between 10:00 p.m. and 6:00 a.m., flights are very limited and confined solely to exceptionally quiet aircraft. Scheduled and charter traffic is restricted to 28 planned aircraft movements per night. The restrictions may also be relaxed for homebase airlines and delayed flights. In the period between 12:00 midnight and 5:00 a.m., only night mail and survey flights by German air traffic control are permitted. Other exceptions to the curfew include, for example, emergency and medical aid flights, landings required for reasons of air safety, as well as flights in justified exception cases that are approved by the Bavarian Ministry of Housing, Building, and Transport as the responsible authority.

Optimization and expansion measures were carried out on an ongoing basis at the terminals over recent years. The construction of the satellite building at Terminal 2 and the extensions to the identity check areas and use of new technologies, in particular, have further enhanced the efficiency of handling. The conversion of Terminal 1 began in 2019. Originally opened in 1992, the building is being extended by a westward pier during ongoing operations in order to meet future requirements for efficient security checks and the terminal infrastructure.

Through its central location in Europe, at the heart of one of the most economically successful regions, Munich Airport is ideally positioned in strategic terms. The region around the airport is distinguished not only by above average economic importance, but also by constant growth in the population and people in employment. This is also why Munich Airport is the airport with the highest proportion of business travelers among the large German hub airports, and is consequently ideal for especially valuable scheduled connections. At the same time, population growth and rising prosperity are also leading to increased demand for private travel from Munich Airport.

Collaborative work with Deutsche Lufthansa AG (Deutsche Lufthansa) has helped Munich Airport to become a major international air traffic hub. Joint extension projects, such as Terminal 2 and the satellite building, form the basis for a sustainable partnership that ensures long-term growth, secures global connections for Munich and Bavaria as business locations, and satisfies the continuous growth in demand for air travel with a high quality offering.

Thanks to its excellent market position and successful cooperation with Deutsche Lufthansa, Munich Airport has one of the densest networks of continental connections in Europe, measured by the number of flight destinations. Highly frequented transfer connections ensure that Bavaria is optimally connected to Europe and the world. The combination of a dense network of German domestic and European links and a strong local demand makes it possible to offer an attractive portfolio of long-haul flights from Munich. Due to the attractiveness of the location as a tourism destination as well as the growing catchment area with an affluent population, Munich Airport is becoming increasingly interesting for point-to-point connections. This is also evidenced, inter alia, by the interest among low-cost airlines in establishing a base in Munich.

The positive growth scenarios for Munich Airport are being impeded by the bottleneck in the runway system. In addition, the continuing lack of traffic rights and still ongoing traffic right negotiations are slowing down the development of traffic, for example to Africa (Ethiopia) and China. The departure of Great Britain from the European Union (Brexit) may also have an impact on the aviation market and the entry requirements. When compared on a global basis, the German aviation tax continues to be an additional obstacle to market-appropriate growth.

Cargo handling too is heavily dependent on the growth of passenger traffic and the capacities of the runway system. This is because the largest share of airfreight at the location – over 80 percent – is transported as bellyhold cargo on normal long-haul flights. Pure freight flights are a little more flexible in terms of their flight times than passenger airlines. Freight airlines are, however, increasingly dependent on night flights, which are only possible in Munich in exceptional situations due to the strict night-flight curfew.

Commercial Activities business unit

The Commercial Activities business unit is responsible for developing, marketing, and managing space throughout Munich Airport that may be used for commercial purposes. This includes both strategic planning of the sector mix with regard to the retailing, service, and catering space, as well as the issue of leases and concessions to third parties and Group companies.

As in the previous year, Munich Airport has around 21,000 square meters of catering space and some 22,800 square meters of space dedicated to retailers and service providers (previous year: 25,600 square meters). The changes compared with the previous year arose due to the closure and reopening of individual units as well as renovations to existing units. FMG's subsidiaries operate their own retail or catering businesses on around 65 percent of the total area.

Commercial Activities is also responsible for the five-star hotel in Munich Airport's central area. It has 551 rooms and 30 conference rooms.

This business unit also develops and markets demand-oriented parking capacity. At present there are around 35,400 parking spaces, of which around 21,700 are close to the terminal.

Commercial Activities markets the advertising media and spaces at Munich Airport as well. The offer of what is known as out-of-home advertising at Munich Airport is characterized by high-profile advertising spaces with little wastage, which are tailored to clients' individual requirements.

The business unit's service portfolio also includes the events business.

Real Estate business unit

The Real Estate business unit develops, operates, and markets all real estate and property owned by Munich Airport, both on- and off-campus. The real estate location is divided into location-specific areas, which are marketed under the AirSite concept.

Munich Airport has a lot to offer as a real estate location: an attractive environment, good road connections, very good parking, and a comprehensive range of goods and services for daily needs. The existing rail traffic access is being extended to the east by the Erdinger Ringschluss (Erding ring closure) to improve access to the airport. In addition, completion of the two additional lanes of the airport feeder road to the east in 2020 should further optimize the road connections. The bridge currently under construction over Zentralallee (traffic node, West 0) is highly significant for the development of AirSite West and the Parking Center West in particular.

In keeping with the high expectations of the entire site, an urban planning concept is being developed, which will provide the basis for excellent leisure amenities and a successful business environment.

Suitable living space in the airport region is in scarce supply. With this in mind, Munich Airport offers fixed-term, furnished apartments and accommodation for long-term use in order to support employees in finding accommodation.

Participations, Services & External Business business unit

The Group's other companies complete the airport's business. The most significant subsidiaries are: Fig. 29

SIGNIFICANT SUBSIDIARIES Fig. 29

AeroGround	The companies provide landside and airside handling services for airline passengers, including ground handling services and passenger care, at the Munich and Berlin locations.
aerogate	The company offers passenger handling services, operation services with ramp supervision, ticketing services, as well as lost & found services with a baggage delivery service and arrivals service at Munich Airport. The range is completed by general aviation services as well as consultancy and training services.
Cargogate	As a regulated agent, the company carries out services in relation to the throughput of airfreight and dealing with the associated customs formalities. The company packs and stores the airfreight in a hall area of approx. 20,000 square meters as well as handling the documents involved. Cargogate also offers handling services for all common special goods, such as hazardous substances, refrigerated goods, and valuable goods. Since September 2018, Cargogate has been the only airfreight handler on the campus certified according to the Pharma Good Distribution Practice (GDP). As a proven specialist, the company operates the border inspection post prescribed by the EU as well as the animal reception center on behalf of FMG.
MAI	In addition to the traditional relocation and commissioning services, the company's portfolio also includes the provision of management and terminal operation services at airports around the world.

Besides the business units and subsidiaries, Munich Airport's service divisions are also involved in external sales. The largest contribution comes from the following service divisions: Fig. 30

SIGNIFICANT SERVICE DIVISIONS Fig. 30

Technology	The service division is responsible for the secure, cost-effective, and technical operation of airport infrastructure. Among other things, this includes the supply of energy and heating/refrigeration, maintenance of buildings and airport-specific equipment, as well as vehicle management for series vehicles and handling equipment. This division also plays a significant role in implementing Munich Airport's carbon strategy as part of its energy management.
IT	The IT service division offers its customers at Munich Airport various services from the fields of media and communications technology, workplace IT equipment, as well as server, database, and storage system technology. The core competencies of the division lie predominantly in the integration of various technical IT platforms and in the creation of tailor-made support services for logistical processes at Munich Airport. Compliance with safety-relevant standards and requirements is becoming increasingly important in this respect.

In total less than 5 percent of the Group's external sales are accounted for by activities in the Participations, Services & External Business business unit (excluding ground handling services). Therefore, the economic development of this business unit is not explained in detail. The developments in handling services within the Group have been included in the passages covering aviation.

Control system and values management

Munich Airport measures the performance of its managers using financial and non-financial indicators. The most important of these are the indicators that measure corporate sustainability and quality. Accordingly, earnings before taxes (EBT) cover the economic and carbon reductions and the ecological perspective of the classic sustainability management. Munich Airport uses the Passenger Experience Index (PEI) to determine whether quality objectives, which provide for increasing customer satisfaction as a strategic approach, have been achieved. FMG surveys internal and external interest groups each year to determine and regularly affirm the relevance of the most important performance indicators for stakeholders.

Earnings before taxes (EBT)

Earnings targets for managers are formulated on the basis of earnings before taxes (EBT). EBT is the input factor for determining profitability. It relates to the consolidated earnings before taxes, calculated by applying the International Accounting Standards in the version adopted into European law by the European Commission.

Carbon reductions

The carbon reductions (in tonnes) indicator not only allows the direct reduction in greenhouse gas emissions to be measured, rather factors such as respectful use of resources or efficient use of energy can also be taken into account. Munich Airport set itself a new climate target at the end of 2016 to achieve carbon-neutral operation of the airport from 2030. At least 60 percent of emissions are to be effectively reduced, with the remainder being offset by high-value compensation measures. Emissions caused directly by Munich Airport itself through energy supply and fuel consumption (Scope 1) and emissions arising from purchased energy (Scope 2) are factored into the calculation.

Passenger Experience Index (PEI)

The PEI is a measurement model for customer satisfaction, which allows Munich Airport to derive location-specific targets adjusted to the needs of target groups, and to assign the fields of action for improving service to existing customer contact points. Responsibility for determining these values lies with an independent external service provider for reasons of objectivity. Using questionnaires, the provider surveys the satisfaction of departing and arriving passengers on a regular basis over the course of the entire year. Munich Airport therefore receives a wealth of detailed information about the satisfaction of its air passengers in eleven categories along the passenger experience chain both on a monthly basis and at the end of the year. The figure for overall satisfaction of departing and arriving passengers derived from the PEI was used as a target value for 2019.

Innovation and ideas management

The objective of Munich Airport's innovation and ideas management is to enhance customer satisfaction and customer experience through new services and products and to systematically promote innovations in the Group.

Munich Airport uses a cross-divisional trendscouting platform, which allows relevant trends to be identified systematically and analyzed together with experts from the relevant departments. An assessment is derived on this basis regarding their impact on the business activity of Munich Airport and their potential for new products and services. Based on this assessment, a decision is then made as to which ideas to implement.

Munich Airport also operates a Group-wide platform known as the «InnovationPilot», via which all employees can submit suggestions for improvement for internal processes as well as ideas for new offers for customers and passengers. Open campaigns and surveys are also initiated via this platform, which address external stakeholders, too. In 2019, Group employees submitted 511 ideas on topics such as employees, spaces and buildings, technical plants, and vehicles.

Specific ideas that address trends of relevance for Munich Airport culminate in innovation projects, which are implemented jointly with the relevant departments and external partners up to the proof-of-concept stage.

Economic report

Economic environment

Economic environment

- Economy develops slower than in the previous year
- German air traffic registers slight growth – but loses ground by international comparison
- Retail trade – profits from strong economy
- Catering and hotel business – upswing continues
- Advertising business – digitalization drives growth
- Parking – dependency on the customer structure
- No final spurt on the stable Munich office market

Macroeconomic environment

Both national and international economic growth are crucial for an international air traffic hub such as Munich Airport.

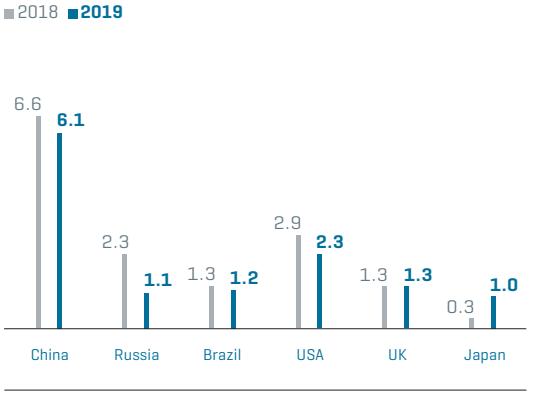
Growth in the global economy in 2019 fell short of expectations of the previous year's forecast and was already adjusted downward in the first quarter of the year. According to figures from the International Monetary Fund (IMF), the increase in global real gross domestic product (GDP) in 2019 totaled 2.9 percent. The growth rate is therefore at its weakest since the global financial crisis in 2008 and 2009.[1]

In the emerging markets, economic growth was weaker than in the previous year. In particular, the anticipated decline in the People's Republic of China contributed to this substantially. In the course of the trade conflict with the USA, two thirds of US imports from China were impacted by special duties since September 2019. The growth rate in China was 6.1 percent and therefore 0.5 percentage points below the previous year's level.

The global effects of the coronavirus were still marginal in 2019. The situation in Turkey remained tense also. GDP growth fell to 0.4 percent from 2.9 percent the previous year due to the sharp rise in consumer prices of 14.9 percent.[2]

In industrialized countries, the economic situation weakened significantly owing to the downward trend in global trade. In the USA, the trade conflict with China led to continuing trade uncertainty, which impacted exports from the US in particular. Private consumption increased sharply again – following a weaker phase at the end of 2018/beginning of 2019 – and was able to counteract the fall in the growth rate. This was accompanied by an upward trend on the labor market, which was characterized, inter alia, by an increase in wages and a low unemployment rate. Growth in Great Britain is being negatively affected as regards export opportunities from a German perspective owing to the continuing uncertainty surrounding the impact of Brexit. This was evident from weak growth in corporate investments. GDP growth in 2019 amounted to just 1.3 percent, the same figure as the previous year. The labor market remained stable with an unemployment rate of 3.8 percent. Investment activity remains weak owing to increased uncertainty and lower growth expectations.[2] Fig. 31

ECONOMIC GROWTH IN SELECTED DESTINATIONS WORLDWIDE Fig. 31

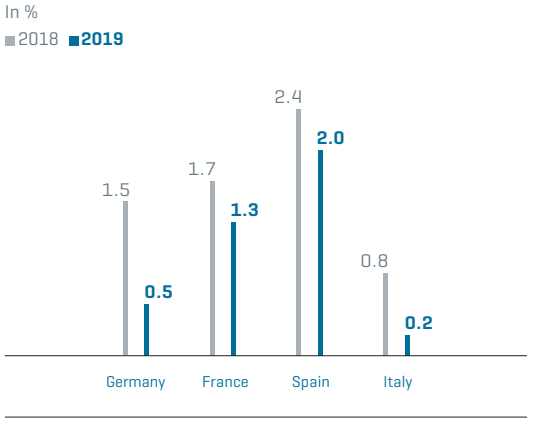


GDP growth in 2018 and 2019[3]

GDP growth in the eurozone was 1.2 percent for the year – a year-on-year decline of 0.7 percentage points. Apart from weaker growth in imports and exports, the trend on the labor market was positive. The ECB's expansionary monetary policy underpinned the growth rate and counteracted the more modest growth generally. The slowdown in economic activity was particularly detrimental for member states that are dependent on the manufacturing sector. In contrast, private and public consumption generated impetus for growth in GDP. The initial fall in the unemployment rate slowed down again somewhat in the second half of 2019. The upturn in exports from the eurozone remained stable at 2.9 percent. Interest rates are at an all-time low owing to the expansionary monetary policy of the ECB.[2] Fig. 32

[1] International Monetary Fund, World Economic Outlook, October 2019 and January 2020
[2] German Council of Economic Experts, Annual Report 2019/20, December 2019; International Monetary Fund, World Economic Outlook, January 2020
[3] International Monetary Fund, World Economic Outlook, January 2020

ECONOMIC GROWTH IN SELECTED DESTINATIONS THROUGHOUT EUROPE Fig. 32



GDP growth in 2018 and 2019[4]

The German economy experienced significantly weaker growth in 2019 overall than in previous years. Growth in GDP amounted to just 0.5 percent. Against the backdrop of increasing global uncertainty, such as Brexit, trade conflicts with the USA, and the cooling down of economic activity internationally, the export-dependent German economy is in a downturn. The downward trend of the previous two years continued in the main in industrial production also. Up to the end of 2019, production in manufacturing industries fell by 3.9 percent on average. Production in the area of energy supply also declined sharply, with the price of European emission certificates increasing significantly in the period under review. Growth in exports was also more restrained than in the previous year (+1.3 percent). In contrast, construction investment increased in 2019, continuing to be driven by the low interest rate (+3.9 percent). Existing capacity bottlenecks will prevent any further expansion. Private consumption also recorded a growth rate of 1.5 percent. This upward trend in consumer spending is being sustained by the favorable situation on the labor market (unemployment rate of 5.0 percent) and rising wage levels.[5]

The oil price (Brent) fluctuated between USD 53 and 76 per barrel. It reached its peak at the end of April 2019, before falling to around USD 67 per barrel at the end of the year.[6]

Economic environment Aviation

According to analyses conducted by the International Air Transport Association (IATA), global air traffic recorded significant growth again in 2019. The number of sold passenger kilometers increased globally by 4.2 percent; this growth rate was below the long-term trend of around 5.5 percent for the first time since the global economic crisis.[7] In contrast, airfreight, measured in freight tonne-kilometers, fell by 3.3 percent. The reasons for this include weak growth and increasing tensions in global trade.[8]

The airports that are members of the German Airports Association (ADV) achieved moderate to declining growth rates on average in 2019. The commercial passenger volume rose overall by 1.5 percent. Aircraft movements came in at the previous year's level (+0.1 percent). In line with global freight development, cargo throughput (total of airmail and freight excluding transit) fell by 3.2 percent. Munich Airport therefore posted above-average growth rates in 2019 in terms of passengers and aircraft movements, while growth in cargo was below the ADV average.[9] Further explanations on this are included in the section «Aviation business».

In a global comparison, measured according to sold passenger kilometers, the Africa region was in first place with growth of 4.9 percent in 2019, followed by Asia/Pacific (+4.8 percent), and Europe (+4.2 percent).

According to information from the German Aviation Association (BDL), the German airlines performed below average compared with the rest of Europe. While the traffic performance of European airlines (measured in sold passenger kilometers) was able to keep pace with the global average (+4.2 percent) with an increase of 4.2 percent, German airlines posted a weaker result of +1.3 percent due to the insolvency of Germania. If it were not for this special effect, German airlines would have reached the European level at around +4 percent. Growth in Europe fell during the course of the year from 7.4 percent to 2.5 percent. The market share of German airlines in their home market reduced from 67 percent in 2012 to 55 percent in 2019. Reasons quoted by BDL in addition to airline insolvencies include the unfavorable cost structures of German airlines as well as the burden of the German air traffic tax.[10]

→ Glossary

[4] International Monetary Fund, World Economic Outlook, January 2020
[5] ifo Institute for Economic Research economic forecast, December 2019; German Council of Economic Experts, Annual Report 2019/20, December 2019
[6] onvista website, January 2020
[7] IATA, Air Passenger Market Analysis, December 2019
[8] IATA, Air Freight Market Analysis, December 2019
[9] ADV, ADV monthly statistics 12/2019, February 2020
[10] BDL, Annual balance sheet 2019, February 2020

Similar to the German airlines, German airports posted slight positive growth overall (+1.5 percent passengers) and therefore came in below the global average of 3.0 percent. Following a positive start in the first half of 2019 (+4.2 percent), growth in passenger numbers declined in the second half of 2019 by 0.7 percent. Domestic traffic was particularly badly hit in this respect, contrary to intercontinental traffic, which remained stable in the plus range. Despite this development, BDL views the basis for domestic traffic as remaining stable in the long term.[11]

Following record delays the previous year, punctuality in European airspace increased by 5.7 percent in 2019 according to the IATA. There was, however, continued criticism of the high infrastructure costs. Fuel price trends were regarded as positive, falling by 10.6 percent.

In its current aviation report, the Federal Ministry of Transport and Digital Infrastructure examined 20 measures to deal with these requirements. It came to the conclusion that the objective of participation in global growth could not be achieved in full, even if all proposals in the portfolio were implemented. Consequently, a further delay in implementing these measures would fundamentally endanger the competitiveness of the German aviation industry. The main problem for German aviation is therefore not a lack of demand, rather not being able to satisfy demand with an appropriate offering.[12]

Economic environment Commercial Activities

Thanks to higher incomes and record employment, German retailers also recorded growth in 2019 according to the Federal Statistical Office, with an increase in sales of 3.2 percent to around € 544 billion. Growth in online retail was significantly steeper (2019: +8.5 percent), though smaller companies in particular are finding it difficult to overcome the challenges posed by digitalization.[13]

According to the German Retail Association (HDE), the retail trade is still doing well despite the deterioration in the overall economic situation. The favorable labor market situation and current wage development are being dampened, however, by the expectations of citizens with respect to the economy. Nonetheless, consumer confidence is still good.[14] This trend is at odds, however, with the ifo Business Climate Index, which fell by 4.7 percentage points in 2019: However, the majority of retail companies surveyed still assessed the business climate for the next six months positively.[15]

According to the German Hotel and Catering Association (DEHOGA), the catering sector recorded a positive performance in 2019, for the tenth time in a row, and thus continued its upward trend. In the area of guest accommodation, too, revenue grew by 2.5 percent, which, when adjusted for price, represents a growth rate of 0.5 percent. With a nominal increase in revenue of 3.3 percent (real 0.6 percent), the restaurant trade also performed well. The catering sector was likewise able to increase revenue by 4.0 percent (real 1.9 percent).[16]

In fiscal year 2019, the gross advertising expenditure of the advertising companies was on a par with the previous year at € 32,593 million. The advertising category used primarily at Munich Airport is out-of-home advertising. The gross advertising expenditures in this area increased by 13.1 percent compared with the previous year.

Shifts in the modal split, which reflects the manner in which passengers who live in the catchment area of Munich Airport travel to the airport, as well as changes in the number of visitors relating to passengers from Germany and abroad, had different impacts on the Parking segment. In particular, the «shared mobility» business (rental cars and car sharing) profited from increased passenger volumes. Displacement effects to other methods of traveling to the airport were offset in terms of sales by a price increase, parking transactions in higher-value product categories, as well as higher revenues from other transportation operators.

Economic environment Real Estate

The City of Munich remains an attractive market for office property despite a 21 percent drop in floor-space turnover. Overall, a floor-space turnover of 770,400 square meters (2018: 979,300 square meters) was achieved in 2019. All of the size categories were impacted by the decline.[17]

[11] BDL, Annual balance sheet 2019, February 2020
[12] Aviation Report of the Federal Ministry of Transport and Digital Infrastructure, May 2017
[13] HDE, press release, November 2019
[14] HDE, press release, September 2019
[15] ifo Institute for Economic Research, Business Climate Index for Germany, December 2019
[16] DEHOGA, Annual balance sheet press release 2019, February 2020
[17] Colliers International, press release, January 2020

Market developments are still shaped by the limited space availability. The vacancy level increased year on year from 410,600 square meters to 489,400 square meters, though this had no impact on the underlying situation regarding the shortage of space. With 218,100 square meters of available space, the City of Munich recorded a vacancy rate of just 1.3 percent.[17]

The average rent for office property in Munich exceeded the € 20 threshold for the first time; at € 20.10/m², this represented an increase of 6 percent. In comparison to this, the average rent in the region around Munich fell by 4 percent to € 12.30/m². Meanwhile, the prime rent also exhibited this upward trend, increasing by 10 percent to € 39.50/m².[17]

In the real estate market, modern office space in prime locations remains in short supply and potential tenants are having difficulties sourcing suitable premises. A continuing increase in rental prices is the logical consequence of this. Of the 415,500 square meters of office space completed in 2019, more than 97 percent was already occupied by the end of the year. In addition, of the around 300,000 square meters due for completion in 2020, around 77 percent has already been rented or is owner-occupied. An increase in the vacancy rate, which would allow a fundamental change in market conditions, is therefore not expected.[17]

Course of business

- Market entry in the USA
- Further milestones reached in the «LabCampus» project
- Further progress regarding infrastructure measures
- Extension of Terminal 1
- Contract awarded for ground handling services at Hamburg airport
- New passenger record and increase in aircraft movements
- Ground handling services in a difficult economic environment
- Retail trade – growth in revenue not in line with passenger figures
- Catering and hotel on the path to success
- Parking – demand increases with passenger volume
- Advertising – a challenging market environment
- Impetus for further location and real estate development

Key events in the past fiscal year

At the start of 2019, the subsidiary Munich Airport International GmbH (MAI) founded three companies in the USA as a further extension of its international business activities. In the USA, MAI now offers consultancy and other services in Terminal A at Newark Liberty Airport, New Jersey/USA. At the end of November 2019, MAI furthermore acquired shares in the consultancy service provider amd. sigma strategic airport development GmbH, Berlin, thus extending the portfolio of the MAI Group.

All companies with the exception of Reach will be included in the scope of consolidation as fully consolidated subsidiaries. Reach is recognized using the equity method.

Course of business

The «LabCampus» project was launched the previous year. With this, Munich Airport plans to create a unique location for innovation and cross-sector cooperation. On the AirSite West area, a future-oriented infrastructure will be created, which will bring together companies and research institutes, start-ups and global players, creatives and investors, in order to drive forward the development of new ideas and products. A general contractor agreement was concluded in this respect in April 2019, covering the planning and construction of the first office building with some 30,000 square meters of space. Completion and start-up of the new building are planned for the start of 2022. In fiscal year 2019, T€ 9,323 was capitalized for this purpose as assets under construction.

A further milestone for the «LabCampus» innovation hub was reached at the end of 2019 with the inking of the general contractor agreement for construction of the new Airport Academy building on an area of around 14,400 square meters. The new building will tie in with a conceptual extension of the training program, and will benefit other LabCampus users also. The building is set to open in the first quarter of 2022.

In terms of improving Munich Airport's railway connection, the official start of the expansion of the railway tunnel on September 5, 2018 was an important event. With this building project, the realization of the Erdinger Ringschluss (Erding ring closure), i.e., the extension of the railway line from Freising via Munich Airport to Erding, is being driven forward.

The costs for the shell of the tunnel extension are being borne by Munich Airport and pre-financed in the form of an interest-bearing repayable subsidy from the Free State of Bavaria. Payment of the investment costs will fall due for Munich Airport when the tunnel extension is commis-

[17] Colliers International, press release, January 2020

sioned. In fiscal year 2019, T€ 54,433 was capitalized in relation to this construction measure as property under construction. The total investment up to December 31, 2019 amounted to T€ 68,067.

Works to improve Munich Airport's eastern road link have been under way since the previous year, involving the construction of the multi-lane extension of the south ring and its eastward extension in the direction of the airport east expressway (FTO). Up to December 31, 2019, a total of T€ 5,190 was invested and capitalized as assets under construction.

The eastern apron in Terminal 2 is currently being extended by a total area of 180,000 square meters. This will add 23 new and urgently needed aircraft stands. In 2019, T€ 30,944 was capitalized for this purpose as assets under construction.

The government of Upper Bavaria issued the planning approval in November 2018 to expand Terminal 1 and add a new gate. The key objectives of this expansion project are to make the non-Schengen area fit for purpose and to enhance the quality of services and quality of stay in Terminal 1. Commissioning of the gate is planned for 2023. The total costs estimated for the expansion project are expected to be paid by Munich Airport from its own funds. Up to the end of 2019, T€ 50,193 was capitalized in relation to this construction measure as assets under construction.

→ Glossary

In December 2019, AeroGround Flughafen München GmbH awarded the contract for the license to provide ground handling services at Hamburg airport. The license covers the apron-side aviation ground services (BVD) such as aircraft and baggage handling, baggage hall handling, baggage and freight transport, water and toilet services, as well as push-back and bus transport on the apron. The license is set to commence on August 1, 2020 and has a seven-year term.

There were no other events that had a material impact or will have a material impact on the business development of Munich Airport in the fiscal year.

Aviation business

TRAFFIC FIGURES FOR MUNICH AIRPORT[1] Fig. 33

	2019	2018	Increase/decrease Absolute	Relative in %
Aircraft movements	417,138	413,469	3,669	0.9
Passengers (in millions)	48.0	46.3	1.7	3.6
Cargo[2] (in tonnes)	356,970	375,247	-18,277	-4.9

[1] Rounding differences are possible.
[2] For better comparability with other commercial airports, the cargo throughput here is quoted inclusive of freight quantities that remain on board the airplane in transit at Munich Airport. The values may therefore differ if only freight or cargo throughput (without transit) is considered.

With an absolute increase of around 1.7 million passengers, Munich Airport again achieved positive growth and reached a new record result in fiscal year 2019 with a total of 48.0 million passengers (+3.6 percent). An increase was also posted in terms of aircraft movements (+0.9 percent). With a total of 417,138 aircraft movements (take-offs and landings), Munich Airport approached its historic peak in relation to movements and the limits of its capacity. In contrast, the cargo tonnage (result of airfreight and airmail including transit) fell by approximately 4.9 percent year on year to around 356,970 tonnes due to the decline in airfreight. Fig. 33

Traffic growth at Munich Airport in 2019 was characterized by a number of insolvencies in the airline sector. Germania and BMI Regional were impacted in February and Adria Airways in September. The effects of these insolvencies were offset by the growth in demand and associated broadening of the service offering on the part of airlines in the 2019 summer timetable. A trimmed-down 2019/2020 winter timetable led to a decline in aircraft movements during the further course of the year, however, which was exacerbated by the strikes at Deutsche Lufthansa. Alongside the global economic slowdown, the decision by the German government not to abolish the German air traffic tax, rather to even increase it from April 2020, had a dampening effect. Fig. 34

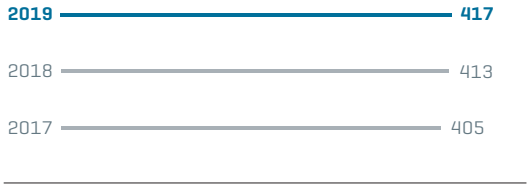
Growth in passenger numbers was driven by the extension of the summer timetable offering; aircraft capacity fell slightly as a result by 0.3 percentage points to 77.2 percent. Following just a slight increase in the previous year, the average number of seats offered in 2019 increased significantly by four to 158 seats per flight. The average maximum take-off mass of the aircraft (MTOM) likewise increased by 3.1 tonnes to 87.5 tonnes. This development was triggered mainly by the withdrawal of BMI Regional, which operated small and light regional aircraft with the Embraer 135/145.

Customers in the premium travel classes represent an important target group in the long-haul sector. Here too, Munich Airport is a world leader, particularly due to the high number of business travelers.

Primary growth drivers included the percentage of transfer passengers, which increased by one percentage point to 38 percent. The number of originating passengers (passengers who do not transfer) remained stable at a high level.

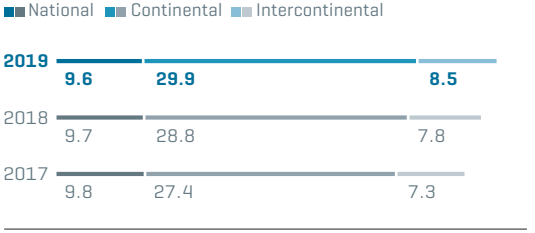
AIRCRAFT MOVEMENTS AT MUNICH AIRPORT Fig. 34

In thousands



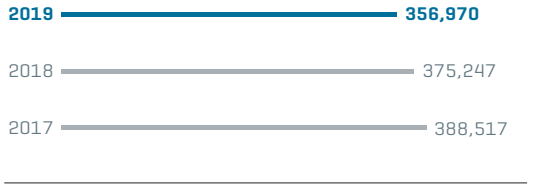
PASSENGER NUMBERS AT MUNICH AIRPORT Fig. 35

In millions



AIRFREIGHT AND AIRMAIL (INCLUDING TRANSIT) AT MUNICH AIRPORT Fig. 36

In tonnes



Demand for German domestic flights was at 9.6 million passengers. This meant a reduction of around 85,000 passengers. In terms of cumulated result, the segment was thus just under the previous year's figure (-0.9 percent). The route to Berlin-Tegel was largely at the previous year's level with a slight decrease of 52,000 passengers; significant negative impacts as a result of the new ICE link between Berlin and Munich were not observed. In contrast, the number of German domestic aircraft movements increased by 4.6 percent to around 95,000 take-offs and landings. The different development of aircraft movements and passengers in German domestic air traffic is due to the start-up difficulties with the marketing of new flights and very mixed development of services over the course of the year, primarily in the low-cost segment on the Berlin-Tegel connection owing to the competitive situation on this route.

Continental traffic posted additional growth: Approximately one million additional passengers (29.9 million in total) were transported compared with the previous year. This equates to an increase of around 3.7 percent. Aircraft movements in this segment fell slightly by about 2,300 (-0.9 percent) to around 263,000 flights. The figures for aircraft movements came under pressure from the insolvencies of Germania, BMI Regional, and Adria Airways, while the high passenger demand was absorbed to an extent by other airlines.

Measured by the number of passengers, the long-haul traffic segment posted the highest growth rates. Just under 8.5 million passengers took intercontinental flights, around 690,000 more than in the previous year (+8.9 percent). The long-haul movements also rose by 6.4 percent to around 34,000 long-haul flights. Fig. 35

In fiscal year 2019, airfreight could not continue the success of the previous years and declined by approximately 5.6 percent to around 338,517 tonnes. Various special effects impacted the growth in freight at Munich Airport: There was a general slump in demand resulting from the economic downturn. In addition, the major provider of all-cargo services, Air Bridge Cargo, ceased its flight operations at Munich completely owing to economic difficulties at its parent company. Moreover, freight capacities declined as in the previous year due to changed aircraft types and load restrictions on the Boeing B787. Even the strong intercontinental growth at Munich Airport could not fully cancel out the effects. Fig. 36

With a share of over 80 percent, the quantity of freight loaded onto and unloaded from passenger aircraft, known as belly-hold cargo, was the most important traffic segment. The belly-hold cargo declined year on year by approximately 2.7 percent to around 286,000 tonnes. The quantity transported on purely freight flights decreased considerably by around 20.5 percent to approximately 46,000 tonnes due to the shutdown of Air Bridge Cargo.

The airmail throughput increased to approximately 18,400 tonnes (+9.6 percent).

Compared with the traffic results of the airports represented in the German Airports Association (ADV), Munich Airport developed extremely positively. Munich Airport performed well above average in terms of comparable airports when it came to aircraft movements and passengers. Cargo throughput fell ADV-wide, though the decline in Munich is slightly above the ADV average owing to different special effects. In a comparison of all ADV locations (with combined growth for Berlin-Tegel and Berlin-Schönefeld), Munich Airport recorded the strongest passenger growth in absolute terms with an increase of around 1.7 million passengers. Fig. 37

→ Glossary

A COMPARISON OF TRAFFIC RESULTS FOR 2019[1] Fig. 37

In %	ADV	Munich
Movements (total traffic)	-0.9	0.9
Passengers (commercial traffic)	1.5	3.6
Cargo (airfreight and airmail including transit)	-3.2	-4.9

[1] ADV monthly statistics 12/2019, February 2020

Despite above-average growth, Munich dropped back to ninth place in the ranking of the busiest European airports by passenger numbers, according to the Airports Council International (ACI) during 2019. In terms of aircraft movements, it was able to claim seventh place.[18]

→ Glossary

[18] Airports Council International
As at: December 2019

There are two ground handling licenses at Munich Airport. One of these is permanently assigned to the subsidiary AeroGround Flughafen München GmbH (AE Munich). AE Munich reported an increase in handling volume of 1.7 percent in 2019. The market share increased by 0.4 percentage points to an annual average of 54.9 percent in 2019. This positive change is largely the result of the sustained growth of Deutsche Lufthansa.

AE Munich lost market share in Terminal 1, due among other reasons to the insolvencies of Germania, Sky Work, and Small Planet, which were borne exclusively by AE Munich. The relocation of Eurowings to Terminal 1 in the second quarter of 2019 likewise played a role.

AeroGround Berlin GmbH (AE Berlin) holds ground handling licenses at both Berlin airports. In fiscal year 2019, the market shares at both locations fell owing to the insolvency of Germania. A market share of 23.0 percent was achieved at Berlin-Tegel (previous year: 24.0 percent) and 14.0 percent at Berlin-Schönefeld (previous year: 17.0 percent). AE Berlin had a share of 20.0 percent for the Berlin market as a whole. Despite the insolvency of Germania, business operations at AE Berlin continued to stabilize in 2019.

Commercial Activities business

Compared with the previous year, revenue in the Commercial Activities business unit put in a positive performance overall. In this regard, the relocation of passengers from Terminal 2 to Terminal 1 and the resultant commercial effects led to partly heterogeneous developments.

Despite rising passenger figures, the retail trade at Munich Airport reported stagnant revenue in fiscal year 2019, with the result that the revenue per passenger did not reach the previous year's level. The relocation of passenger flows from Terminal 2 to Terminal 1 had a huge impact here, as the variety and scope of the retail offer are not as extensive in Terminal 1. Other factors included longer processing times at the security checks and thus a shorter amount of time being spent by potential customers in the non-public area.

As in the previous year, revenue for Russia a sa destination fell significantly despite the increased passenger volume. In contrast, revenue from passenger volumes for the more strongly demanded destinations of China and Hong Kong remained positive, though disproportionately lower with respect to the number of passengers.

Since Great Britain voted to leave the EU in 2016, the British pound sterling has lost considerable value, which has impacted directly on the consumer behavior of passengers from Great Britain. Despite rising passenger figures, revenue from this customer group increased disproportionately less.

The passenger volumes flying to Turkey increased significantly compared with the previous year, however retail revenue for this customer group developed more slowly than average.

In fiscal year 2019, the restaurants and bars were able to profit from the vibrant growth in passenger figures and revenue increased again, both in absolute terms and per passenger. The trend among airlines to offer less food

on board continued and meant that passengers availed more of the offering at Munich Airport, both as eat-in and take-away options. Newly opened or extended units also contributed to the growth of catering-related revenue at Munich Airport.

In the hotel sector, there was strong demand from guests and conference participants for rooms and the conference center. At the Skytrax Awards 2019, the five-star hotel in the central area of Munich Airport was named second best airport hotel in Europe.[19]

The growth in passenger figures in originating traffic had only a limited impact on the parking business. Against the backdrop of a slight growth in demand for parking spaces, it was possible to increase revenue overall from the heavily used parking capacities in the face of changed parking behavior, for example through a further development of product categories, continually optimized yield and capacity management, and the pickup in growth in the «shared mobility» segment (rental cars and car sharing).

Revenue from the «out-of-home» advertising category increased again for the first time in fiscal year 2019. Advertising revenue overall was below the previous year's level, among other reasons this was because of special and/or one-off effects from the previous year. In the two terminals, advertising revenue continued to develop heterogeneously. In Terminal 2 and the satellite building, significant growth was recorded due to the greater appeal of the advertising spaces. In Terminal 1, in particular, the marketing situation remains challenging, however, due to the largely analog advertising options there and divergent customer structures and frequencies.

[19] Skytrax, World's Best Airport Hotels 2019, December 2019

Real Estate business

Munich Airport's real estate business continued to develop marginally at the existing high level. The difficult competitive situation facing airlines, in particular, meant that the Group was unable to increase rental income on existing properties over and above indexing.

The development of the LabCampus future project on the AirSite West area continues to take shape. Following construction approval for the first two buildings, construction of the modern buildings at the innovation center can now commence in 2020.

Extensive development measures are required to improve connections to AirSite West. A bridge structure is being constructed from the western end of Nordallee over Zentralallee (traffic node, West 0) and railway line to connect up with the airport maintenance area. In addition, Munich Airport is continuing to develop the telecommunications link in this area as well as the water supply.

In the eastern area of the airport, Munich Airport continued the tunnel works related to the Erdinger Ringschluss (Erding ring closure) to improve rail access to the airport. The existing tunnel, which currently ends at the level of the satellite building of Terminal 2, will be extended eastwards. The tunnel extension is around 1.5 kilometers long and will be supplemented by a 300 meter long access ramp, via which the trains will return to the surface. Munich Airport plans to have the tunnel shell completed by 2021, after which it will be fitted out by DB Netz AG with the technical equipment required for railway traffic.

Furthermore, works to improve Munich Airport's eastern road link have been under way since the previous year, involving the construction of the multi-lane extension of the south ring and its eastward extension in the direction of the airport feeder road (FTO). These works are expected to be completed by the end of 2020.

Munich Airport is currently at the implementation stage of the major project to construct a new gate in Terminal 1 in order to modernize the terminal and increase capacity. The extension will help to improve the handling of wide-bodied aircraft and non-Schengen passengers, which was urgently needed owing to the changing traffic structure. In addition, because the requirements for security checks have increased constantly since Terminal 1 was opened in 1992, checks on persons and luggage have to be extended. The addition of this new gate is the only way that Munich Airport can restore the former handling quality in Terminal 1 to meet the needs of passengers, airlines, and authorities.

→ Glossary

The overall concept for the extension includes a structure on three levels, comprising a core building adjacent to Terminal 1 and a gate. This will be connected with the existing Modules A and B and extend more than 320 meters into the western apron of Munich Airport. Up to twelve aircraft will then be able to dock at the gate. The total area of the extension, including renovations in the existing arrivals area B, is around 95,000 square meters. In fiscal year 2019, Munich Airport was able to carry out the demolition of the apron, the West hall, and the ramp equipment station 1, and announce planning permission. Construction works started at the end of 2019 with the excavation of the foundation pit.

A variety of different residential properties were rented in the past year to provide suitable accommodation both for existing and new Munich Airport employees. For example, a residential facility is available in

Net assets, financial position, and results of operations

München-Bogenhausen, comprising high-quality furnished apartments, which will be sublet on fixed-term contracts. A number of properties have also been available since the beginning of 2019 in the region surrounding the airport, including terrace houses and apartment blocks where employees with families can also make a permanent home. Apartment buildings owned by the airport have also been renovated and converted into residential facilities. Meanwhile, a modern employee hotel was opened in Hallbergmoos at the end of 2019. The 196-bed facility, where rooms can be rented on a six-month basis, should make it easier for new employees to gain a foothold in the airport region.

The demand for office and logistics space within the Group is continuing to increase. For this reason, a central logistics center has been under construction since the beginning of fiscal year 2019 at AirSite West, which will be operated by the subsidiary eurotrade. A tradesman building is likewise being developed at present to the north of the office building used by the Real Estate business unit, which is earmarked for use by different FMG divisions until the planned completion of the FMG headquarters. Both the logistics center and the tradesman building should be ready to open by 2021.

Net assets, financial position, and results of operations

- Earnings after taxes increased
- Assets – Munich Airport is decreasing liquidity reserves

Results of operations Fig. 38

In fiscal year 2019, Munich Airport's earnings after taxes (EAT) rose by T€ 28,220 to T€ 177,847. The reasons for this increase are explained in detail below.

In fiscal year 2019, the revenue of Munich Airport rose by T€ 59,150 or 3.9 percent to T€ 1,567,967.

In terms of revenue from airport charges (T€ 655,189; 2018: T€ 626,726), the largest contributor to revenue growth was passenger and landing charges.

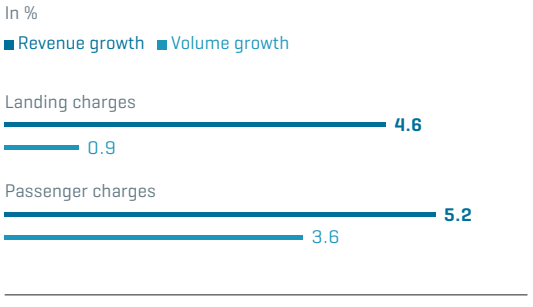
In comparison with growth in MTOM (maximum take-off mass) and passenger figures, revenue from landing and passenger charges increased disproportionately higher, driven by price. Fig. 39

RESULTS OF OPERATIONS Fig. 38

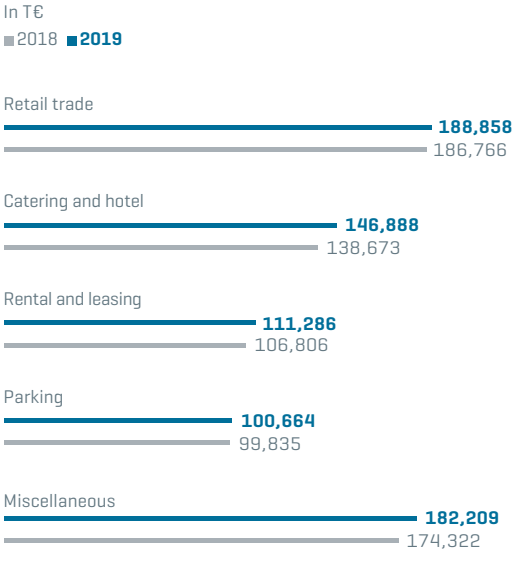
			In-/decrease	
T€	2019	2018	Absolute	Relative in %
Revenue	**1,567,967**	**1,508,817**	**59,150**	**3.9**
Other income	43,165	44,894	-1,729	-3.9
Total income	**1,611,132**	**1,553,711**	**57,421**	**3.7**
Cost of materials	-413,210	-393,602	-19,608	5.0
Personnel expenses	-537,239	-507,713	-29,526	5.8
Other expenses	-106,369	-114,318	7,949	-7.0
EBITDA	**554,314**	**538,078**	**16,236**	**3.0**
Depreciation and amortization	-208,835	-214,578	5,743	-2.7
EBIT	**345,479**	**323,500**	**21,979**	**6.8**
Financial result[1]	-88,657	-100,978	12,321	-12.2
EBT	**256,822**	**222,522**	**34,300**	**15.4**
Income taxes	-78,975	-72,895	-6,080	8.3
EAT	**177,847**	**149,627**	**28,220**	**18.9**

[1] This also includes income from companies valued using the equity method.

REVENUE AND VOLUME GROWTH IN PASSENGER AND LANDING CHARGES Fig. 39



BREAKDOWN OF REVENUE OF OTHER AREAS Fig. 40



The increase in revenue from handling services of T€ 7,184 (+4.1 percent) in total resulted primarily in the area of ground handling services from the sustained growth of Deutsche Lufthansa.

Revenue in the other divisions developed as follows. Fig. 40

After more than 25 years of being in operation, there is an ongoing need to upgrade the buildings from the first stage of expansion at Munich Airport. Consequently, the expenses for refurbishment, optimization, and reconstruction measures are rising constantly. The cost of materials increased overall by T€ 19,608 or 5.0 percent.

Munich Airport's personnel expenses are largely determined by the number of employees and the amount of remuneration paid to employees employed under the collective pay-scale agreement for public sector employees (TVöD). The collective payment under this agreement was increased by 3.09 percent effective April 1, 2019. The Group again created new jobs in the fiscal year. The average number of employees increased from 9,521 to 9,678 year on year. In total, personnel expenses rose by 5.8 percent to T€ 537,239.

The decline in other expenses by 7.0 percent to T€ 106,369 is due primarily to the introduction of IFRS 16 on January 1, 2019. Rental and leasing expenses reduced in this context by T€ 7,403 to T€ 4,139.

As in the previous year, depreciation and amortization expenses (T€ 208,835; 2018: T€ 214,578) include impairment losses of T€ 6,126 (2018: T€ 16,408), which mainly relate to planning services performed and construction period interest for construction projects not executed in this form. Impairment in the previous year resulted primarily from planning services provided, which must presumably be performed again due to the delay in building the third runway, most recently as a result of the postponement of the decision within the scope of the moratorium. Overall, the scheduled depreciation and amortization expenses increased by T€ 4,539 or 2.3 percent primarily due to the introduction of IFRS 16 on January 1, 2019. This gave rise for the first time to scheduled depreciation and amortization expenses of T€ 6,248.

The financial result (including the result from companies measured at equity) improved by T€ 12,321 to T€ -88,657. This was due primarily to the lower non-cash revaluation losses arising from the valuation of financial liabilities from interests in partnerships in «Other financial result», as well as the lower interest expenses from loans and financial liabilities resulting from interests in partnerships.

The tax expense includes current taxes in the amount of T€ 85,258 (previous year: T€ 83,975) and deferred taxes in the amount of T€ 6,283 (previous year: T€ 11,080). The income tax rate fell from 32.8 percent the previous year to 30.8 percent in fiscal year 2019.

Net assets and financial position Fig. 41

FINANCIAL POSITION Fig. 41

T€	Dec. 31, 2019	Dec. 31, 2018	In-/decrease Absolute	In-/decrease Relative in %
Non-current assets	5,151,911	5,010,340	141,571	2.8
Current assets[1]	390,112	357,327	32,785	9.2
thereof cash and cash equivalents	39,576	12,377	27,199	>100.0
Assets	**5,542,023**	**5,367,667**	**174,356**	**3.2**
Equity	2,378,139	2,224,996	153,143	6.9
Other non-current liabilities[2]	2,072,660	2,222,901	-150,241	-6.8
Other current liabilities[2]	1,091,224	919,770	171,454	18.6
Equity and liabilities	**5,542,023**	**5,367,667**	**174,356**	**3.2**

[1] Including assets classified as held for sale
[2] Including financial liabilities resulting from partnerships

The increase in non-current assets (+T€ 141,571) at T€ 130,951 primarily affected property, plant, and equipment for own use. Owing to a large number of construction projects started the previous year, advance payments and assets under construction increased in total by T€ 214,744 to T€ 488,152. In addition, rights of use under leases were capitalized for the first time in accordance with IFRS 16.

Liquidity reserves at Munich Airport decreased from T€ 210,000 to T€ 169,000 in fiscal year 2019, because of numerous investments in construction projects. The cash was held at a number of banks as time deposits and money market transactions with a term of less than one year. They are held under current assets. In contrast, there was an increase in current receivables (+T€ 18,172), other assets (+T€ 26,630), and cash and cash equivalents (+T€ 27,199).

The previous year's consolidated profit (T€ 149,627) was reduced by the distribution of T€ 30,000 to shareholders. The remaining amount was retained in fiscal year 2019.

Further repayments of loans will fall due in fiscal year 2020. This has led to a shift in borrowings from the non-current to the current segment. Overall, other liabilities were only slightly above the previous year's level at 0.7 percent or T€ 21,213. Financial liabilities from leases in the amount of T€ 24,987 are included for the first time in accordance with IFRS 16.

CAPITAL STRUCTURE

Fig. 42

T€	Dec. 31, 2019	Dec. 31, 2018	In-/decrease Absolute	In-/decrease Relative in %
Subscribed capital	306,776	306,776	0	0.0
Reserves	147,490	151,353	-3,863	-2.6
Other equity	1,923,854	1,766,853	157,001	8.9
of which annual profit/loss	177,847	149,627	28,220	18.9
Non-controlling interests	19	14	5	35.7
of which annual profit/loss	5	1	4	>100.0
Equity	**2,378,139**	**2,224,996**	**153,143**	**6.9**
Financial liabilities from interests in partnerships	**354,047**	**346,058**	**7,989**	**2.3**
Shareholder loans	**491,913**	**491,913**	**0**	**0.0**
Fixed-rate loans	722,576	682,314	40,262	5.9
Floating-rate loans	683,616	730,286	-46,670	-6.4
Loans	**1,406,192**	**1,412,600**	**-6,408**	**-0.5**
Derivatives	**28,918**	**40,207**	**-11,289**	**-28.1**
Other liabilities	**882,814**	**851,893**	**30,921**	**3.6**
Financial liabilities	**3,163,884**	**3,142,671**	**21,213**	**0.7**
Equity ratio	43%	41%		

The equity ratio increased primarily due to the income in the fiscal year. Fig. 42

The main terms of Munich Airport's current and non-current financial liabilities can be found in the table below. Fig. 43

The shareholder loans are available indefinitely and interest is charged on the basis of the base rate plus a margin, if the results and anticipated economic development allow this.

The loans bear usual non-financial covenants, including negative pledges and pari passu clauses. In addition, there are other general conventional agreements concerning repayment in the event of changes in shareholder structure. There are no financial covenants.

Munich Airport uses interest rate payer swaps and forward exchange transactions to hedge against risks arising from interest rate and exchange rate fluctuations. Interest rate hedges are accounted for as a valuation unit. Fig. 44

NON-CURRENT LOANS CONDITIONS

Fig. 43

				Interest rate in %	
Method of funding	Currency	Interest rate	Residual debt in T€	from	to
Financial liabilities resulting from interests in partnerships	EUR	Earnings-based	354,047	–	–
Shareholder loans	EUR	Variable/ earnings-based	491,913	Base rate plus margin	
Loans	EUR	Floating rate	686,967	3M and 6M EURIBOR plus margin	
Loans	EUR	Fixed rate	724,292	0.48	3.47

(As at December 31, 2019)

HEDGING TRANSACTION CONDITIONS

Fig. 44

			Fixed rate in %		Forward rate in EUR/USD		
Hedging instruments	Nominal amount	Currency	from	to	from	to	Hedged items
Interest payer swaps	586,000	T€	0.60	2.33	–	–	Syndicated loans
Forward exchange transactions[1]	2,280	T€	–	–	1.14	1.21	Expected transactions

[1] These hedges are not recognized.

Liquidity

Sufficient funds were available from the net cash flow from operating activities in 2019 to ensure the liquidity of the Company in operations. Cash outflows from investing activities mainly arose from investments in construction projects. A negative cash flow arose from financing activities due to distributions to shareholders, repayment of debt, and interest repayments. Fig. 45

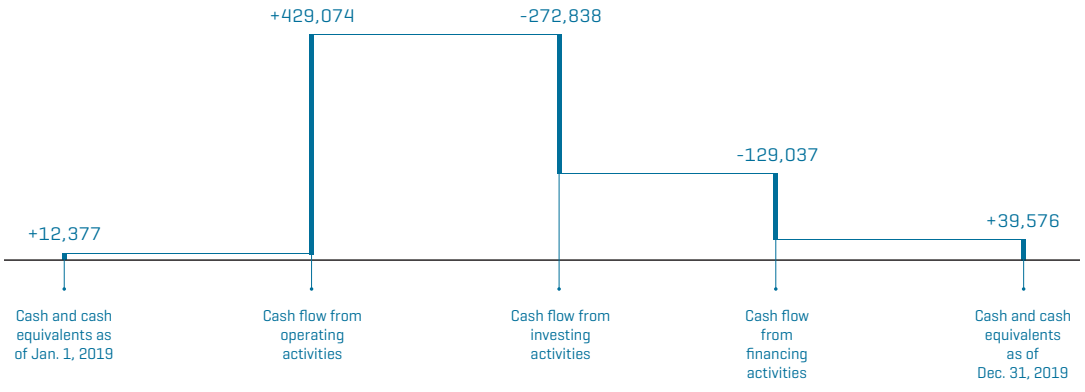
Investments

In fiscal year 2019, investments in property, plant, and equipment for own use at Munich Airport was T€ 306,980 in total. This was offset by planned depreciation and amortization in the amount of T€ 192,851.

These investments primarily comprise costs for construction projects, which were not yet completed in fiscal year 2019. Inter alia, they include investments in relation to the development of AirSite West, the expansion and modernization of Terminal 1, and the extension of the railway tunnel for the Erdinger Ringschluss (Erding ring closure). Further explanations on this are included in the section «Key events in the past fiscal year».

CASH FLOW STATEMENT Fig. 45

In T€



Target achievement and overall assessment

Year on year and in comparison with the forecast development, these performance indicators have trended as follows: Fig. 46

FORECAST/ACTUAL COMPARISON Fig. 46

	2018	2019			2019	
	Actual	Forecast			Actual	
			from	to		
			%	%		
EBT (in T€)	222,522	Increase	11.0	17.0	256,822	Achieved
CO_2 reductions (in tonnes)	22,031	Decrease	-17.8	-12.8	24,280	Exceeded
Passenger Experience Index	82.01	Unchanged	0.0	0.0	81.84	Achieved[1]

[1] The passenger experience values were measured as part of a sample-based survey. The true year-end value of this indicator lies in an interval between 81.65 and 82.03 with 95 percent certainty (significance level = 5 percent). Taking account of this variation, the objective can therefore be regarded as achieved.

Earnings before taxes (EBT)

At T€ 34,300, Munich Airport's EBT for fiscal year 2019 was 15.4 percent higher. The expected result was therefore achieved.

Carbon reductions

To achieve the long-term climate protection goals, binding targets are agreed annually for divisions and subsidiaries of the Group. These include stipulations regarding the implementation and recognition of efficiency measures, and special targets for the development of carbon-reducing technologies. One example of this is the first photovoltaic system operated by Munich Airport on the P51 parking structure that was completed in 2019, which has an output of more than one megawatt peak. With a total amount of 24,280 tonnes of saved CO_2 emissions from efficiency and special targets, it was possible to meet the target for 2019.

Passenger Experience Index (PEI)

In fiscal year 2019, Munich Airport was able to maintain similar satisfaction levels of passengers compared with 2018 measured by PEI. The slight decline in satisfaction resulted primarily from the relocation of significant traffic portions from Terminal 2 to Terminal 1 (due to the relocation of the airline Eurowings, among other reasons), where the passenger satisfaction level is lower owing to the infrastructural conditions from the 90s. Passengers arriving in Munich were primarily responsible for the slightly lower satisfaction level compared with 2018. This prevented an overall increase in the satisfaction level. In contrast, the satisfaction levels of departing and transferring passengers across the campus remained virtually unchanged, as predicted.

Events after the balance sheet date

The increasing spread of the coronavirus has led to a significant reduction in the demand for air travel. Many countries, such as the USA, have imposed entry restrictions on people arriving from Germany. Munich Airport is therefore anticipating a significant reduction in EBT in fiscal year 2020 compared with the previous year owing to the coronavirus crisis. Further explanations on this are included in the sections «Forecast course of business» and «Risks».

Outlook, risks, and opportunities report

Outlook report

Economic and industry-specific conditions

The following explanations concerning the outlook for 2020 take account of the impact of the coronavirus only to the extent that the relevant information or predictions were published at the time the report was drawn up. The effects on the international and German economy are severe, but cannot be predicted accurately as yet based on the current state of knowledge.

In February 2020, the International Monetary Fund (IMF) was still expecting that the global economy would record healthy growth of more than 3 percent with due regard for the coronavirus.[20] However, this optimistic forecast has now been overtaken. To slow down the spread of the coronavirus, many countries around the world began in March 2020 to impose severe restrictions on the freedom of movement and action. A global recession now seems inevitable. Many countries currently expect their respective GDP growth to be at least four or five percentage points lower than originally forecast.[21]

Even when it comes to the leading industrial nations, all economic growth forecasts have been significantly adjusted downward as a result of the coronavirus crisis. According to the International Monetary Fund (IMF), China (+1.2 percent) and India (+1.9 percent) are now the only mayor economies where a recession still seems to be avoidable. In contrast, the USA expects a decline of -5.9 percent. Canada and Japan are reporting similar forecasts. Economic growth in Great Britain has also been adjusted downward to -6.5 percent. These effects related to the coronavirus eclipse all other developments, such as Great Britain's withdrawal negotiations from the European Union (Brexit).[21]

The general economic situation in the eurozone in 2020 will suffer the worst recession since the Great Depression of 1929. The IMF is anticipating an average economic contraction in the eurozone of -7.5 percent. Significant declines are expected for the four most important European economies; -7.0 percent (Federal Republic of Germany), -7.2 percent (France), -9.1 percent (Italy), and -8.0 percent (Spain).[21]

The ifo Institute for Economic Research has calculated a number of different scenarios for the Federal Republic of Germany. According to one estimate, extending the shutdown by just one week translates to a drop in GDP growth of 0.7 to 1.6 percentage points. Whether and how strong the recovery will be in the following year 2021 is still unclear. However, it seems probable that it will take more than one year to achieve the previous GDP level again.[22]

In 2019, the price of oil fluctuated between USD 53 and 76 per barrel.[23] In the first months of 2020, the price collapsed by around 70 percent due to the drop in demand and is now at an historically low level of less than USD 30 per barrel.[24]

The demographic and economic general conditions in Bavaria and especially in the airport catchment area mean that further strong growth in transportation demand can be expected at Munich in the medium to long term despite short-term slumps. According to the results of the regionalized population projection by the Bavarian State Office for Statistics, the number of people living in Bavaria, especially around Munich, will grow in the period up to 2037, and this growth is characterized as strong to very strong. The population of Upper Bavaria will increase by 9 percent, in the district of Munich by 12.1 percent, and in the City of Munich by 11.6 percent.[25] In Prognos Zukunftsatlas 2019, the City of Munich and the district of Munich followed by the region of Ingolstadt head the list of regions with the best future prospects.[26] Driven by growing prosperity and an increasing population, the trend in the volume from Munich Airport's core catchment

[20] International Monetary Fund, World Economic Outlook, January 2020; Manager Magazin, IMF senkt Wachstumsprognose für China (IMF lowers growth forecast for China), February 23, 2020
[21] International Monetary Fund, April 2020: The Great Lockdown: Worst Economic Downturn Since the Great Depression, April 14, 2020
[22] ifo Institute for Economic Research, April 2020: ifo Schnelldienst monthly journal, April 15, 2020
[23] onvista website, January 2020
[24] onvista website, April 2020, as at April 15, 2020
[25] Bavarian State Office for Statistics and Data Management (Bayerisches Landesamt für Statistik), regionalized population projection for Bavaria up to 2037, December 2018
[26] Prognos Zukunftsatlas 2019, July 2019

area was positive in recent years in particular. This trend will continue in future. These statements are supported by the «Teilhabeatlas» study on differences in living conditions conducted by the Berlin Institute and Wüstenrot Stiftung. This study shows Munich as the top location and one of the richest cities in Germany.[27]

The global aviation market is expected to experience the worst crisis to ever hit the sector owing to the impact of the many travel restrictions. Following initial optimism, all industry and advocacy groups have revised their forecasts downward on a weekly basis. Meanwhile, significant double-digit losses in global aviation seem inevitable. In April 2020, for example, the International Air Transport Association (IATA) lowered the average annual growth rate for 2020 for sold passenger kilometers globally from an original figure of 4.1 percent to -48.0 percent. A precise and conclusive assessment is not possible since the actual growth remains unpredictable: how will new infections behave, which countries will lift travel restrictions when, which airlines will survive the extensive grounding, and how severely will the inevitable recession impact travel behavior.[28]

Forecast course of business

The aviation industry is affected more severely and more directly than other sectors by the consequences of the global spread of the coronavirus. The coronavirus has led globally to a number of travel restrictions in companies, to the cancellation of major events, and to considerable uncertainty among consumers. Many countries, such as the USA, have imposed entry restrictions on people arriving from Germany. The impact on demand for air travel and services at Munich Airport is therefore considerable.

Munich Airport expects that the consequences of the crisis will strongly influence the Group's economic performance in 2020 in all business units. Just how long the burden will be felt cannot be estimated at present, since this depends largely on the specific course of the crisis and the supply response and consumer reaction to the spread of the virus. In addition, the impact the crisis will have in subsequent years also cannot be predicted at present.

The Executive Board is expecting traffic levels to fall by more than 90 percent in the months of April and May 2020. Successive recovery to around half the level of the previous year is then expected.

Alongside the significantly negative impact of the coronavirus crisis on traffic growth, price reductions in airport charges are estimated for 2020. The reduction in charges is due to the advance final settlement of the master agreement on charges, which has been in force for several years.

All business units are affected by the sharp decreases. Dramatic falls in air traffic charges will result in the Aviation business unit owing to the collapse in passenger volume. The effects are also severe in the Commercial Activities business unit, primarily because of the officially decreed shutdown of the retail units. The negative impact will be less onerous in the Real Estate business unit compared with other business units owing to the typically long-term leases.

Against the backdrop of the traffic situation and consequently the substantial decline in revenue, the Group expects that earnings before taxes (EBT) will shrink considerably in fiscal year 2020 compared with the previous year even following implementation of extensive countermeasures.

Massive efforts are being taken by the Executive Board to ensure liquidity. This is being done through savings on all costs and investments. For example, deferrable construction projects that are not business-critical or of major strategic relevance are being moved to a future date. On the other hand, a broadly based cost-cutting program is being initiated, which also includes measures in the area of HR, including measures to secure liquidity such as short-time work.

The Group is in a position to continue to make investments that are essential and strategically important for operations. Compared with the previous year, the total investment volume will remain at the previous year's level despite the deferral of several construction projects, but will still be significantly below the volume envisaged in the original planning. Munich Airport is in negotiations with its principal banks to address an imminent liquidity gap toward year-end. Talks are set to conclude in the coming weeks concerning the current offers. The traffic, profit, and liquidity forecasts will be updated continually over the course of 2020 and, depending on the further development of the crisis, a decision will be made as to when and to what extent an increase in the existing credit lines will be initiated and, if necessary, new funds raised. This will ensure that the Group can maintain adequate liquidity levels at all times.

[27] Berlin Institute/Wüstenrot Stiftung, Teilhabeatlas Germany, August 2019
[28] IATA, Economics COVID-19, April 14, 2020

The cash burn outlined assumes that the countermeasures in terms of costs and investments, as well as in HR, are implemented, and also that the traffic scenario will start to recover again slowly from June 2020 and, taken for the year as a whole, will equate to approximately half that of the previous year. If these assumptions do not come to pass in the manner outlined, this may lead to an increased liquidity demand and consequently to earlier consumption of the existing liquidity reserves. This possibly higher liquidity demand can be covered by FMG on the banking and capital market.

Forecast of the most important financial and non-financial key performance indicators: Fig. 47

Overall, Munich Airport expects EBT to decrease significantly. The precise extent of the decrease is dependent primarily on the duration of the coronavirus crisis and is difficult to estimate at present.

In relation to carbon reductions, a slight decline in the target value for 2020 is expected compared with the reductions achieved in 2019. The PCA systems (preconditioned air systems) installed at Munich Airport were gradually phased into normal operation. Their usage rate will remain at a high level. Additional savings from efficiency measures of more than 2,300 tonnes of CO_2 are being sought in 2020. The planned measures should primarily reduce the energy requirement for lighting and air-conditioning technology.

Munich Airport will further intensify the continuous improvement measures in the area of passenger satisfaction in 2020. Thus, for example, there are plans to enhance passenger support locally in Terminal 1 by deploying terminal managers. In addition, passenger comfort is to be further improved in the C-West hall and additional border inspection posts are to be constructed in Module B to optimize departures for passengers. A modern security check is also being developed on Level 05 in Module D to offer enhanced comfort for passengers. Optimizations are planned in Terminal 2 for passengers traveling with small children. This is being done, for example, through an extensive trial run to provide free buggies or also through improvements to the Wi-Fi availability in the terminal, something that is very important for passengers. Munich Airport is aspiring to achieve further improvements in relation to baggage arrival times in 2020 to make up for the fall in passenger satisfaction in this area in 2019. In addition, the PAKS (alternative screening lane) that was successfully implemented in 2019 is to be further optimized and extended by a dual lane in collaboration with the government of Upper Bavaria.

FORECAST FINANCIAL AND NON-FINANCIAL KEY PERFORMANCE INDICATORS Fig. 47

	2019	2020		
	Actual	Forecast		
			from	to
			%	%
EBT (in T€)	256,822	Decrease	significant	
CO_2 (reductions in tonnes)	24,280	Decrease	-12.3	-7.3
Passenger experience index total satisfaction	81.84	Unchanged	0.0	0.0

Risks and opportunities report

Risk management system

The Executive Board of FMG and all subsidiaries and affiliated companies is responsible for the early detection and prevention of risks that jeopardize the continuity of Munich Airport and the investments. Group Management has overall responsibility for an effective risk management system and lays the essential foundation for it by communicating and defining corporate strategy and targets. It formulates specifications for the risk management process and the organizational structure of the risk management system.

The goal of the risk management system is to identify events and developments that may have a negative impact on the achievement of strategic and operational targets in good time and develop suitable countermeasures. It takes account of all aspects of entrepreneurial activity – economic as well as environmental and social.

The risk management guideline regulates the general principles of risk management in the Group as well as the tasks and responsibilities of the function holders involved in risk management. This is aligned in accordance with the internationally recognized framework model «COSO ERM» (Committee of Sponsoring Organizations of the Treadway Commission – Enterprise Risk Management).

The Risk Management Committee serves as an additional supporting management, control, and supervisory body within the risk management system. As the highest ranking risk management body, it is directly subordinate to the Executive Board and consists of the Chief Financial and Infrastructure Officer, the heads of the Aviation, Commercial Activities, and Real Estate business units, the heads of corporate divisions Legal, Compliance, Environmental Affairs and Committee Support, Corporate Development, Corporate Controlling and Investment Management, Corporate Security and Corporate Communications, as well as the head of the IT service area, and the Risk Manager. The head of Compliance is involved in the Risk Management Committee as a guest. The task of the Risk Management Committee is to analyze the risks from a Group perspective and to monitor the effectiveness of countermeasures. It provides support for developing the risk management system and for risk identification, assessment, and control. The Risk Management Committee meets quarterly and agrees the risk report, which is subsequently presented to the Executive Board and the shareholders.

The risk management process comprises the following steps. A coordination and communication platform has been established in the system to support this process.

Identification and communication of risks

All divisional managers and Chief Executive Officers of subsidiaries and shareholdings are responsible for the identification and assessment of risks. In the relevant divisions, all risk-relevant information is coordinated, administrated, documented, and passed on by the relevant risk managers. The risk manager checks the divisions' risk reports for plausibility and compliance with the Group-wide standards for risk assessment. The role involves combining the divisions' individual reports in a risk report, taking account of materiality for the Group, and reporting quarterly to the Executive Board and shareholders. Risks that jeopardize the Group's existence that have been identified for the first time must also be reported to the Executive Board on an ad hoc basis.

As a basis for dealing with risks responsibly, each individual employee is involved in managing risks throughout the Company. Employees are individually responsible for eliminating risks in their area and for reporting indications of existing risks to their manager without delay.

Assessment of risks

The systematic risk assessment allows the Company to determine the extent to which individual risks jeopardize the fulfillment of Munich Airport's corporate goals and strategies and which risks may possibly threaten its existence. The «expected loss» and «likelihood of occurrance» are presented in a two-dimensional risk matrix for this purpose. The expected loss describes the impact on profits that can be expected if the loss event occurs. The likelihood of occurrence indicates how reliably the loss event is expected to occur. In the case of events that recur over time, the Company works with the frequency with which they occur. The assessment first takes place without considering measures to limit the risk (gross risks, see the section «Risks»). Subsequently, the risks are assessed after risk-minimizing measures are initiated or implemented (net risks, see section «Risks»).

Dealing with risk

Starting from the risk analysis, appropriate countermeasures for dealing with risk are specified in line with corporate strategy and economic aspects. The strategies for managing risk include: controlling, insuring, minimizing, eliminating, and passing on. The risk managers have the task of specifying and implementing countermeasures to manage risks in the respective division affected.

Risk monitoring

The risk manager monitors the effectiveness of risk management continuously. Risks are also monitored separately by Internal Audit.

Compliance management system

Compliance covers observance with all Munich Airport-related laws, specifications, and regulations, national and international rules and standards, as well as in-house rules and guidelines. Munich Airport has established a Group-wide compliance management system, which encompasses all organizational provisions ensuring compliance with the aforementioned rules.

The Compliance department submits reports on the current status of the compliance management system to the Executive Board on a regular basis and to the Supervisory Board on an annual basis. Compliance risks are also

communicated as part of the risk reporting to the Executive Board and shareholders if internal thresholds are exceeded. Regular dialog takes place between Risk Management and Compliance.

Identifying and minimizing compliance risks

The Compliance department prepares the compliance risk analysis with input from the FMG divisions and combines it with the subsidiaries' compliance risk analyses every year.

Compliance risks are assessed in the same way as the risk management process. Once the compliance risk analysis has been carried out, the Executive Board is notified of the results in a report. The compliance risk analysis was validated in 2018 by an external consultant.

The annual Compliance report to the Supervisory Board of FMG also includes the results of the compliance risk analysis. If there is an elevated loss potential and concomitant high likelihood of occurrence despite all the countermeasures taken, a detailed description is provided in the report.

In respect of 2019, there were no elevated compliance risks after the countermeasures taken were considered.

Preventing corruption

The compliance guidelines and the guidelines covering gifts and invitations support managers and employees in ensuring legally compliant and ethical behavior at the workplace. They are published on the Intranet and are therefore available to all employees. The guidelines also reference other internal regulations with which employees must comply, for example compliance with public procurement law with regard to procurement and contracting processes, data protection, and information security. These ensure that processes and procedures are transparent and traceable, both internally and externally. In contracting and tendering procedures, Munich Airport requires bidders to submit a declaration of commitment stating that they will undertake everything necessary to preclude corruption. Compliance failures are liable to sanctions, such as exclusion from the contracting process.

The position of anti-corruption officer is exercised by the head of the Compliance department. There were no confirmed cases of corruption in the Group in 2019.

Communication and training

A key task of the Compliance department is to train and advise employees, managers, and the FMG Executive Board in compliance matters as a preventative measure to stop compliance breaches from occurring.

Group compliance regularly provides training and publishes information to ensure that all employees and managers are familiar with the guidelines and any updates or amendments to them. Every year they must provide their signature to confirm that they have read the compliance documentation.

In 2019, some 56 managers of the Munich Airport Group took part in the three-hour training module on compliance as part of the Leadership Excellence Program. In addition to the legal fundamentals and the responsibilities of managers, this also covers Munich Airport Group's specific guidelines on compliance and the prevention of corruption. A total of 568 people have received training since the module started at the end of 2013. Participation in compliance training is documented.

The Executive Board and Supervisory Board deal with compliance issues at regular intervals.

Electronic whistleblower system

Through an electronic whistleblower system, the Business Keeper Monitoring System (BKMS®), Group employees, business partners, and customers can report behavior potentially damaging to our organization. People inside the Group and outside can also contact the Compliance department by other means of communication (telephone, e-mail, face-to-face discussions) if they wish to draw attention to compliance infringements and need advice. Tender documents inform potential bidders of the possibility of using the BKMS® should compliance infringements be suspected.

Data protection

Munich Airport has taken extensive measures to comply with the General Data Protection Regulation (GDPR), which came into effect on May 25, 2018, and with the new German Federal Data Protection Act. The Group companies have nominated data protection officers to perform consultancy and supervisory tasks in accordance with the GDPR. FMG's data protection officer is responsible for providing advice and support for the corporate divisions and also performs the role of data protection officer in most subsidiaries. The data protection officer of FMG is assigned organizationally to the Compliance department and reports directly and independently to the Executive Board. Responsibility for compliance with data protection requirements in particular lies decentrally with the individual FMG departments or with the subsidiaries for their respective processing processes.

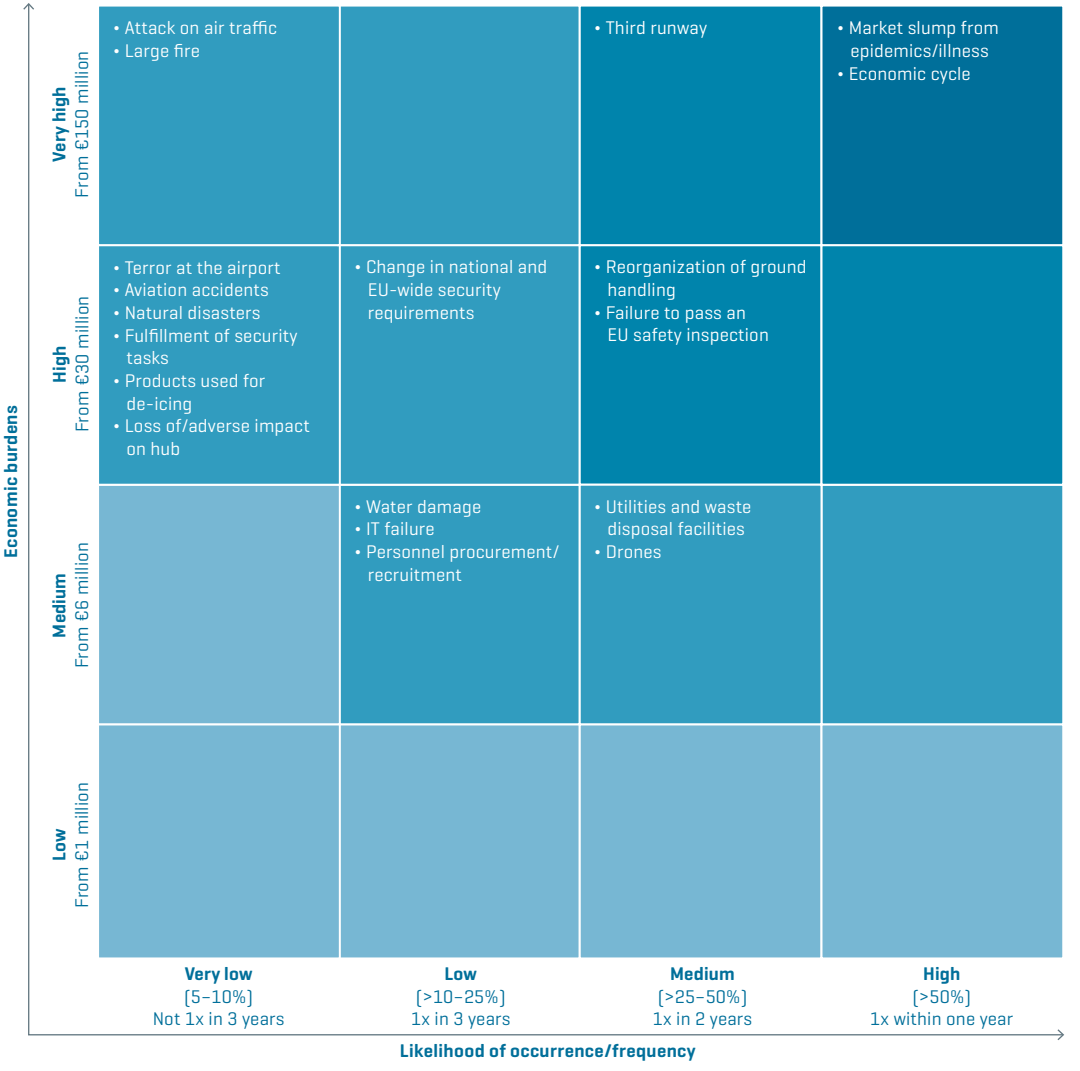
Following the intensive awareness campaign in 2018 involving face-to-face and online training courses, ongoing training measures for Group employees and managers in 2019 also helped to improve awareness of data privacy and data protection. Specialized, individual advice is also available in instances where people are unsure how to comply properly with personal data requirements.

Risks

Risks that could have a material influence on the business activity or on the net assets, financial position, and results of operations, as well as the reputation of Munich Airport, are explained below. In each case, the risks are shown before (overview of gross risks) and after consideration of suitable countermeasures (overview of net risks).

The risk assessment relates to the economic impact in the assessment period quoted. As at December 31, 2019, the following material gross risks were identified for Munich Airport: Fig. 48–52

OVERVIEW OF GROSS RISKS Fig. 48



Munich Airport has depicted the economic consequences of the spread of the coronavirus in the «Economic cycle» and «Market slump from epidemic/illness» risk categories and thus rated both risks following December 31, 2019 as «very high».

RISKS RESULTING FROM FORCE MAJEURE

Fig. 49

Risk	Description and analysis	Countermeasure(s)
Natural disasters	Persistent and intensive rainfall together with melting snow and ground saturation to the south of Munich as far as the Alps could cause flood run-off in the River Isar. A resulting breach of the Isar dams and flood protection dike in Freising could lead to the terminals being flooded.	Gradual upgrading of the Isar dams by the water authority. They have already been partially renovated. In addition, the Free State of Bavaria is planning to shift the flood protection dike further back. Munich Airport also monitors the wastewater discharge situation on a permanent basis and carries out maintenance and repair work. Countermeasures are being intensified at an operational level by means of crisis and risk management procedures at Munich Airport. Insurance to cover earthquakes, storms, hail, and flooding has been arranged.
Attack on air traffic	The risk of terrorist attacks on air traffic remains unchanged. In addition to bodily injury and property damage, this would result, at least temporarily, in a decrease in the number of aircraft movements and passengers.	To avert a terrorist attack, Group security is taking strategic, operative, as well as technical and organizational measures: provision of sufficient and well-trained personnel resources, construction measures to guarantee modern and approved security technology and infrastructure, monitoring of service quality through sustainable quality measures, and constant exchange with the responsible security authorities. Bodily injury and property damage as well as interruptions of operations are insured.
Terror at the airport	Acts of terror on the airport campus give rise to the risk of bodily injury and property damage. A further consequence of such events would be, at least temporarily, a decrease in the number of aircraft movements and passengers.	To avert a terrorist attack, Group security is taking strategic, operative, as well as technical and organizational measures: provision of sufficient and well-trained personnel resources, construction measures to guarantee modern and approved security technology and infrastructure, monitoring of service quality through sustainable quality measures, and constant exchange with the responsible security authorities. Bodily injury and property damage as well as interruptions of operations are insured.
Fulfillment of security tasks	The airline companies are responsible for security tasks in transferred areas. In these areas, airline companies fulfill the same task as airport operators, but are not subject to the same supervisory authority. For Munich Airport, there is a risk that inspections will reveal defects in transferred areas and the airport as a whole will lose its security status as a result. Defective controls could lead to property damage and bodily injury as well as reputational damage.	At present, a subsidiary of FMG is responsible for operational security tasks in the transferred areas; its services rendered are subject to regular monitoring by FMG. Furthermore, a mutual, intensive exchange takes place with the responsible government and supervisory authorities.
Market slump from epidemics/illness	Munich Airport is an arrival, departure, and transfer location for millions of air passengers and therefore a potential source of bacteria and viruses from all over the world. Epidemic/sickness outbreaks can result in market downturns with reduced aircraft movements and passenger numbers. This is what happened with the coronavirus. The economic burden of this for Munich Airport is difficult to estimate reliably at present.	Munich Airport is subject to the Act Implementing the International Health Regulations (IGV-DG) and employs a subsidiary to fulfill the necessary functions. Similarly, the rules prescribed by the European Aviation Safety Agency (EASA) on the topic of «emergency response planning» are also fulfilled. These include the handling of operations management by the medical center and consideration of laws and regulations (e.g. the German Protection against Infection Act (Infektionsschutzgesetz (IfSG)). During the course of the EASA certification acquired in 2016, it was demonstrated that Munich Airport has an emergency response plan and complies with binding requirements. Munich Airport is audited regularly by the supervisory authorities (government of Upper Bavaria) to maintain its certification status.
Large fire	In the event of damage to or destruction of terminals or infrastructure systems caused by a large fire, property damage and bodily injury as well as long-term interruptions of operations are to be expected.	To minimize the risk of a large fire, Munich Airport takes all required preventive and defensive fire protection measures, and has its own Airport Rescue and Firefighting unit. The risk of a large fire is additionally minimized by a fire insurance policy (property and interruption of operations insurance) and public liability insurance (liability claims of third parties). After taking the countermeasures into consideration, the net risk is below the risk tolerance limit.
Aviation accidents	Aviation accidents or damage to aircraft can result in bodily injury and property damage, as well as interruptions of operations and consequential damage.	To minimize the risk, Munich Airport maintains an Airport Rescue and Firefighting service, a medical service, and a counseling team. The risk of aviation accidents is minimized through liability insurance and fully comprehensive insurance. After taking the countermeasures into consideration, the net risk is below the risk tolerance limit.

MARKET RISKS

Fig. 50

Risk	Description and analysis	Countermeasure(s)
Loss of/adverse impact on hub	If Deutsche Lufthansa amends its strategy of operating Munich Airport as a hub, this would result in dramatic falls in the number of passengers and aircraft movements. After Deutsche Lufthansa further expanded its offering of flights in Munich in 2019, it had planned prior to the coronavirus crisis to station two additional Airbus A380 aircraft and one intercontinental aircraft (A340) at Munich Airport in 2020. The hub was therefore set to be further expanded and the quality of Munich Airport as a hub enhanced. Despite the current coronavirus crisis, there has been no interruption in the cooperation between Munich Airport and Deutsche Lufthansa. However, the coronavirus crisis is inevitably leading to serious reductions in both offer (routes, frequencies, aircraft) and demand. The risk of a short-term loss on the hub is therefore regarded by Munich Airport as very low.	Munich Airport's collaboration with Deutsche Lufthansa is based on joint investments and long-term cooperation agreements. A Letter of Intent between the two parties was signed in this regard on December 16, 2019. The shared ambition is to extend capacities in the Terminal 2 system.
Economic cycle	As a consequence of a weak economy, the growth parameters assumed in the planning process cannot be achieved, which has a negative impact on profits. During more significant economic crises, a collapse in loan finance markets may occur. Increasingly protectionist political tendencies could prove a burden to global trade in general, but also to European-US trade and thus to the transatlantic aviation market. This could result in growth-inhibiting effects for Munich Airport. Brexit is fraught with risks for economic development not just in Great Britain but in the EU also, and will continue to be monitored. A disorderly Brexit would also mean the departure of Great Britain from the European Common Aviation Area (ECAA). Due to the changes in aviation rights, this would have profound consequences for the structures in the European aviation market and could temporarily inhibit development in the aviation market. In addition to the remarks above, the outbreak of the coronavirus is placing huge strain on the global economy. The economic burden of this for Munich Airport is difficult to estimate reliably at present.	Reducing expenses through cost monitoring, if necessary reducing staff numbers in a socially responsible manner, short-time work plus a short-term cut in the investment budget in non-critical divisions aim to mitigate the consequences of economic slowdowns. There are revolving credit lines to ensure the Company is solvent. Great Britain formally left the EU on January 31, 2020. An eleven-month transition period now follows to allow negotiations on the future relationships between Great Britain and the EU to take place. There will be no changes to aviation rights until the transition period ends on December 31, 2020, after which a new aviation agreement will come into force.

OPERATING RISKS

Fig. 51

Risk	Description and analysis	Countermeasure(s)
IT failure	Damage to the IT system can result from fire, water ingress, and sabotage. Constant, new technological developments and the increasing risk of cyber attacks worldwide are also leading to risks in relation to the security of IT systems and networks, as well as data security. In the area of cyber criminality, an increasing, abstract risk potential exists that requires constant observation and assessment. Failure of IT for traffic operations can lead to interruptions in operations. This would result in financial losses and reputational damage.	Critical corporate IT systems are fully redundant with systems located in physically separate locations. Property damage and interruptions of operations are insured. To avert a cybercrime attack at Munich Airport, central information security management is in place, which defines and monitors strategic, technical, and organizational measures to defend against cyberattacks. The awareness of cyber risks is increased through training courses for managers and employees. In addition, Munich Airport opened a center of competence to counter cyber criminality in 2019 (Information Security Hub). Here the airport's IT specialists work together with experienced IT security companies under realistic conditions on various risk scenarios and test new methods for combating cyber criminality. In addition, Munich Airport collaborates with German air traffic control and other airports to develop other measures to ward off cyberattacks. The risk is minimized through insurance. After taking the countermeasures into consideration, the net risk is below the risk tolerance limit.

OPERATING RISKS

Fig. 51

Risk	Description and analysis	Countermeasure(s)
Water damage	Water damage caused by a break in the main drinking water or fire extinguishing water pipelines could lead to the failure of infrastructure systems important for air traffic.	Remotely controlled emergency shut-off equipment and additional protective devices in the pipeline connections limit the possible damage. Property damage and interruptions of operations are insured. After taking the countermeasures into consideration, the net risk is below the risk tolerance limit.
Change in national and EU-wide security requirements	Munich Airport is subject to national and EU-wide aviation security requirements, encompassing the topics of airport security, air passenger and hand luggage checks, airfreight, airmail, and goods control, among others. Security requirements are adjusted continuously to the current circumstances. This can give rise to procedural and also infrastructural changes for Munich Airport. Corresponding financial burdens would then follow.	Munich Airport attempts to minimize these consequences through work in associations and on committees. Early information relating to ongoing legislative procedures ensures the timely implementation of security regulations. Additional expenses caused by infrastructural changes are dealt with in the master agreement on charges.
Failure to pass an EU safety inspection	The EU's aviation authorities conduct safety inspections at airports. Should it fail to comply with a safety standard and subsequently fail the follow-up audit, Munich Airport could lose its «Clean» status. The consequences would be a heightening of the safety regulations, considerable obstruction with operational processes, competitive disadvantages, and a loss of image.	Munich Airport conducts thorough and strict quality controls to manage the quality of all safety aspects at the airport.
Utilities and waste disposal facilities	The inadequate availability of substances necessary for operating activities, such as electricity, heat, cooling energy, drinking and extinguishing water, wastewater, and waste, may result in property damage and interruptions of operations.	The service and maintenance programs, network redundancies, and storage reduce the risk of gaps in supply. Property damage and interruptions of operations are insured. After taking the countermeasures into consideration, the net risk is below the risk tolerance limit.
Reorganization of ground handling	The success of the reorganization of the former Ground Handling business unit could be put at risk by the following uncertainties and circumstances: sustained reductions in traffic from existing customers, ground handling losses due to the transfer of part fleets to third parties, aggressive pricing policies of competitors, and an increasing price decline at Munich Airport.	In the negotiations to extend the long-term contract with an important customer of AeroGround, a new contract was concluded at the end of 2016. As a result, associated collective restructuring agreements could be extended. To compensate for declining ground handling volumes, talks with potential new customers are ongoing. In the event of a loss of ground handling, capacities and associated costs will fall. Constant controlling and reporting of the renovation progress or renovation path.
Personnel procurement/recruitment	Personnel procurement is proving increasingly difficult so far in the various professional groups. This was caused, for example, by the overstretched labor market in the region, the high costs of accommodation, the increasing age of the workforce, and the high fluctuation in the area of ground handling services. Against the backdrop of the current coronavirus crisis, the «personnel procurement/recruitment» risk has lost its significance at present.	To respond to potential risks in the area of personnel procurement/recruitment in the long term too, further measures were taken in relation to the intensification of training activities, the promotion of marketing activities at universities, and the presence at trade fairs and job fairs. In 2019, Munich Airport was awarded the distinction of «Top National Employer» in a survey conducted by the Focus Business magazine in collaboration with the online network Xing and the employer rating portal kununu. In addition, projects were implemented in 2019 to acquire affordable housing for Group employees. After taking the countermeasures into consideration, the net risk as of December 31, 2019 is below the risk tolerance limit.
Drones	Arising from the increasing number of drones in the sky, there is a risk that drones can enter into the controlled space of Munich Airport without authorization and endanger or disrupt flight operations. In 2017, with the regulation concerning the operation of unmanned aircraft, the Federal Government adopted tightened rules for the use of drones, including an obligation to register aircraft and a ban on operation within the controlled space of airports. In addition, the EU Commission adopted a provision on May 24, 2019 to make the increasing drone traffic safer for people on the ground and in the sky. Legal responsibility for implementing drone detection, identification, and verification was regulated at national level midway through the year. German air traffic control is responsible for this at all German passenger airports.	Although the national responsibilities and competences in relation to the detection of, and defense against, drones do not lie with the airport operator, an exchange took place between relevant stakeholders in an expert discussion initiated by FMG to determine the current status of detection and defense technology. Together with the airport associations ADV, ACI, and the German Aviation Association (BDL), Munich Airport is working on a harmonized regulation for drone traffic at national and European level. In addition, the Aviation and Group security divisions are working on a study on the topic of drone protection, with the objective of obtaining manufacturer-independent valuations of the technologies available on the market for the selection of drone detection systems. After taking the countermeasures into consideration, the net risk is below the risk tolerance limit.

LEGAL RISKS

Fig. 52

Risk	Description and analysis	Countermeasure(s)
Third runway	As a result of the postponement of the decision to realize the third runway project, all previously incurred planning and land acquisition costs must be checked in respect of their recoverability and depreciated if necessary. The consequences arising from the moratorium were already recognized in the balance sheet in 2018. There could be a significant loss of corporate value unless capacity is expanded through the construction of the third runway. This will be influenced primarily by a stagnation or decline in the traffic volume and the associated lower revenues in the Aviation and Non-Aviation divisions. The expansion project will have to be discussed further after the current legislative period and a decision as to the further procedure will have to be made.	The legal confirmation of the planning approval notice by the Bavarian Higher Administrative Court (BayVGH) of February 19, 2014, and in the following year by the German Federal Administrative Court, were important milestones with respect to the limitation of the legal risks for realizing the project. Further countermeasures planned included the diversification of the product range and expansion of international business. The «LabCampus» project commenced the previous year, with which Munich Airport is planning to create a unique location for innovation and cross-sector cooperation. The expansion into the USA began in 2019 and will continue to be pursued. Despite the moratorium, Munich Airport is holding firm on its future project.
Products used for de-icing	There is a suspicion that the formates currently used for de-icing paved areas and runways accelerate the oxidation of aircraft brakes. Discussions about banning these formate de-icing products are ongoing at the SAE (Society of Automobile Engineers) international standardization committee. As an alternative, there are currently only glycol-based de-icers on the market, the use of which is not permitted at Munich Airport by the Ministry of the Environment. If they were banned, substantial sums would have to be invested in wastewater systems to comply with the requirements of water management legislation.	The German passenger airports within the ADV and BDL associations are jointly opposing the ban on formate-based de-icers. They are also aiming to influence the SAE via ACI Europe. In discussions with the Bavarian water management authorities, ACI Europe, and the responsible SAE working group, it was shown that as little de-icer as possible is used in order to minimize the environmental impact. In addition, the products used for de-icing paved areas and runways at Munich Airport are published in the Notice to Airmen (NOTAM) and followed up. The manufacturers of the de-icer are to be involved in the future in order to find a solution to this problem.
EU General Data Protection Regulation	In addition to the legal risks listed in the risk matrix, there are also risks in connection with the EU General Data Protection Regulation (GDPR), which came into effect in 2018. The GDPR expands the existing obligations arising from the Federal Data Protection Act (BDSG) and increases the legal, operational, and technical/organizational requirements for data protection. An infringement of these rights and obligations could incur high fines, claims for damages, reprimands, and reputational damage. Currently, there are questions being raised at Munich Airport in connection with the use of video surveillance through the CCTV system (closed circuit television).	At Munich Airport, the project to implement the requirements of the GDPR has been successfully completed. As part of this, organizational structures and processes as well as their documentation were adjusted and awareness of data protection was heightened within the Group. In particular, the following measures were taken as countermeasures for data protection risks arising from CCTV: role use concept, new signage indicating the video surveillance, and renegotiation of the works agreement on CCTV. The gross risk here is below the risk tolerance limit set by FMG and is therefore not represented in the risk matrix.

As is customary in the normal course of business, Munich Airport is faced with various legal disputes. These can lead, in particular, to the payment of compensation claims or, in the case of construction projects, to changes in the remuneration of services. Moreover, other legal disputes can be initiated or existing legal disputes can be expanded. Apart from matters for which provisions have already been made in the balance sheet, Munich Airport is not currently anticipating any material negative impacts for the net assets, financial position, and results of operations from other known cases at the present time.

As part of the establishment of foreign subsidiaries in the area of operation and consultancy for other airports and terminals, which took place in 2019, risks can arise from the first-time assumption of operational responsibility abroad. Airport operator projects, in particular, are subject to general economic and company-specific risks, in the same way as at the Munich location itself. To mitigate these risks, Munich Airport cooperates with local partners who have a great deal of experience in relation to the respective country-specific conditions and circumstances. Local companies were established in 2019 in order to counteract liability risks in particular. Risks can arise, in particular, with what are typically long-term airport operator projects, when it comes to assessing future aviation development and consumer behavior on the part of passengers. A potential lack of growth and/or decrease in air traffic could have a significant negative impact on the growth in earnings of the project company, which in turn would entail risks for the invested capital. Risks can likewise arise from unforeseen official interventions in the charges, tax, and tariff structure of the airports to the detriment of the airport operator.

Tax (operational) audits by the tax authorities are also considered a general risk.

The expected economic burden for the gross financial risks listed below were under the reporting limit as at December 31, 2019. Therefore they were not included in the risk reporting. Fig. 53

FINANCIAL RISKS

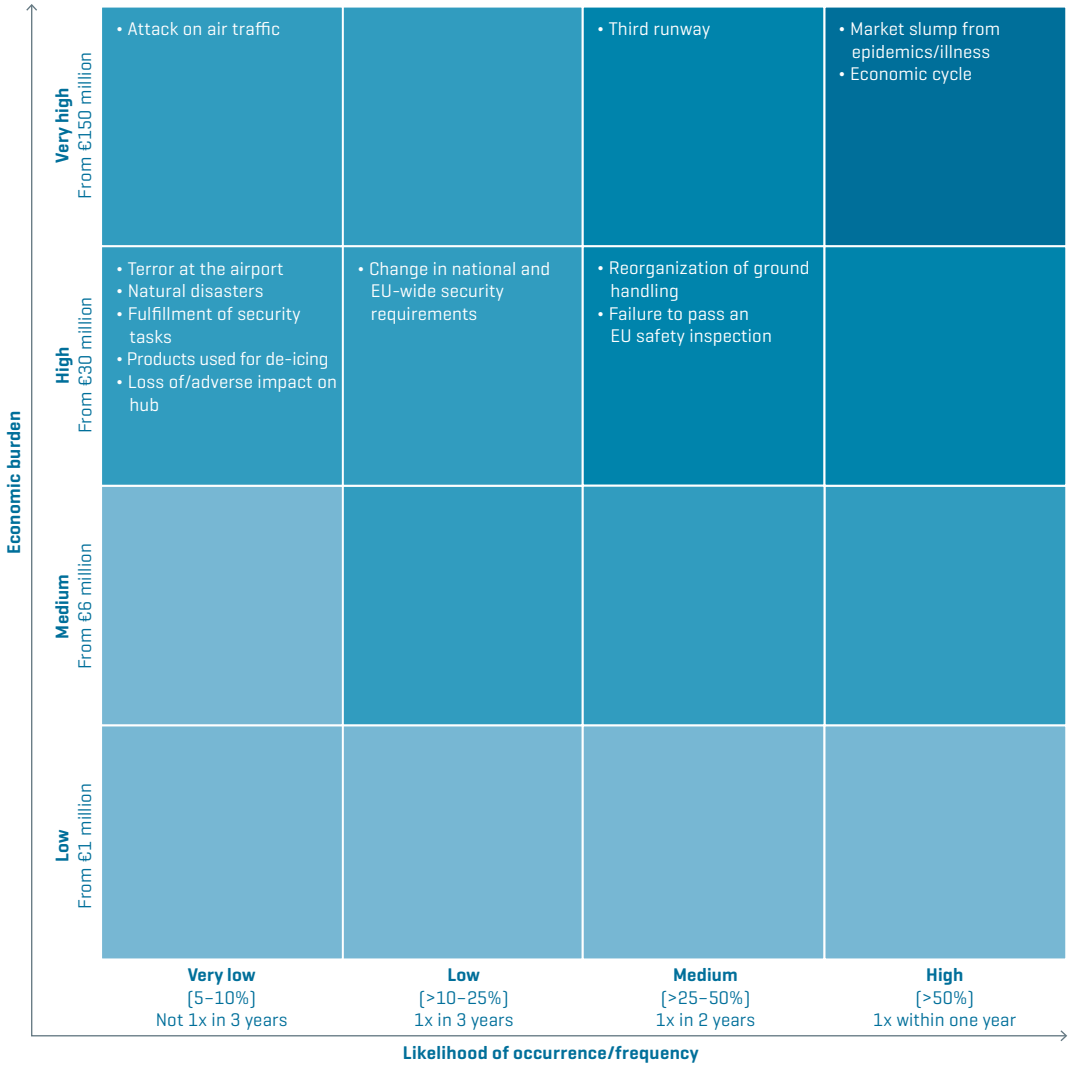
Fig. 53

Risk	Description and analysis	Countermeasure(s)
Currency risks	Currency risks arise insofar as planned sales in foreign currencies are not balanced by any corresponding expenses or outgoings in the same currency.	Munich Airport hedges currency risks using forward exchange transactions.
Credit and reliability risks	Credit and credit rating risks primarily arise from short-term deposits as well as trade receivables.	Deposits are (generally) only made with (German) banks with deposit protection. The management of credit risks includes the constant monitoring of debtors' creditworthiness, overdue invoices, and stringent collections management. Dependent on the credit rating, certain services are only performed against prepayment or provision of collateral in the form of guarantees.
Interest rate risks	Interest rate risks largely arise from floating-rate financial liabilities from loans and financial liabilities to shareholders.	Interest rate risks from floating-rate financial liabilities from loans are countered by Munich Airport by hedging with interest rate payer swaps.

After considering countermeasures, the following net risks remain: Fig. 54

OVERVIEW OF NET RISKS

Fig. 54

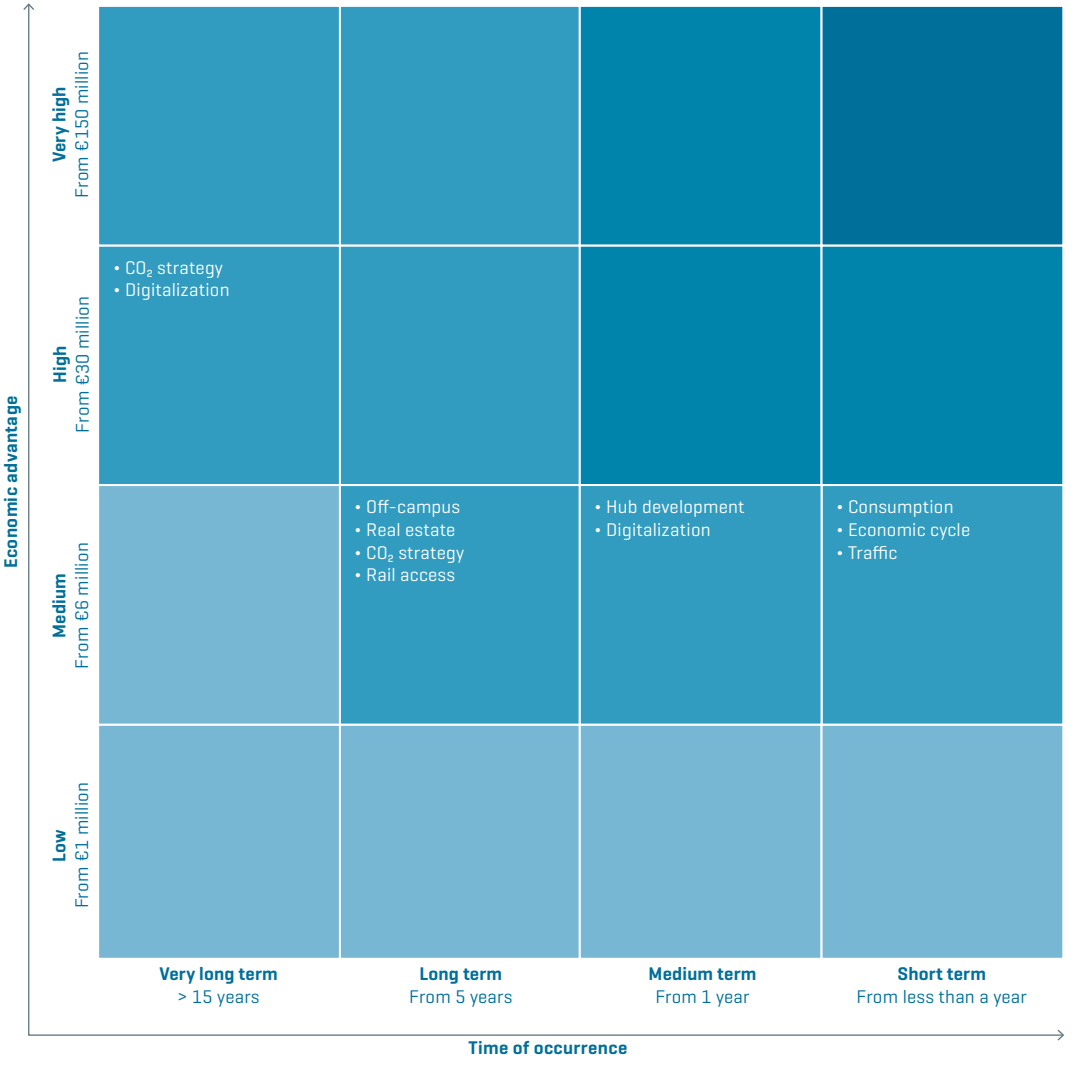


Opportunities

The divisions and investments identify, assess, and manage opportunities on a decentralized basis with support from Corporate Development, Corporate Controlling, and Investment Management.

The developments and events that could lead to a positive deviation from planning are outlined below. The presentation as of December 31, 2019 is based on the risk report with the difference that the horizontal axis shows the time of occurrence – that is the time until opportunities are expected to occur – and not the frequency with which they occur. Opportunities are not mentioned more than once where their influence remains constant in the period of time. In the event of a changed economic advantage, multiple mentions are made. The economic advantage takes effect in the short, medium, long or very long term, and is considered periodically. Fig. 55/56

OVERVIEW OF OPPORTUNITIES Fig. 55



OPPORTUNITIES Fig. 56

Opportunities	Description and analysis
Consumption	Overcoming current geopolitical and economic crises could lead to an increase in the propensity to consume on the part of passengers from regions outside Europe above the planned level.
Economic cycle	Global economic growth above planned levels could boost revenues further.
Traffic	An increase in air traffic growth above the expected level could increase revenues in all corporate divisions.
Hub development	The important partner airline, Deutsche Lufthansa, could strengthen the expansion of the hub at the Munich Airport location on the basis of a further improvement of its market position, which would lead to passenger development exceeding the plans.
Digitalization	Munich Airport is working on the strategy to adjust the airport's business model more closely to the structural change resulting from digitalization. Based on this strategy, medium to very long-term growth effects could occur, which are not completely taken into consideration in the previous plans.
Off-campus	The off-campus business of Munich Airport (services and retail) might develop better than expected, with corresponding growth in the Company results.
Real estate	The innovative real estate concepts being implemented within the framework of LabCampus could lead to a greater demand for real estate in the long terms than assumed in the plan. This would result in an increase in revenue in this and, potentially, in other business units.
Carbon strategy	The continuing increase in efficiency in energy-saving technologies and an associated improvement in the price-performance ratio of low emissions energy generation could lead to the costs of Munich Airport's new carbon strategy being lower than expected.
Rail access	Better than expected improvements to rail access could lead to an expansion in the passenger catchment area and consequently to increased revenue in all business units.

Overall assessment of the opportunities and risk situation

For Munich Airport as the second-largest commercial airport in Germany and one of the largest airports in Europe, it is important to actively exploit any opportunities that arise to improve its position on the market still further through constant growth. However, it is also a key objective of Munich Airport to recognize risks in good time and to counter them systematically.

Accordingly, the currently anticipated impact of possible events and developments is taken into consideration in business planning every year. The reported opportunities and risks are defined as potential deviations going beyond the forecast corporate result. Munich Airport consolidates and aggregates the risks reported by the corporate divisions and Group companies, and reports quarterly to the Executive Board and shareholders. Opportunities are identified and managed with the involvement of the corporate divisions Corporate Development as well as Corporate Controlling and Investment Management.

The spread of the coronavirus and its impact on global air traffic has altered the risk situation of Munich Airport compared with the previous year. With due regard for this current situation, the «Economic cycle» and «Market slump from epidemics/illness» risks were classified as «very high». The Executive Board expects that the economic consequences of the coronavirus will have a significant impact on the result. However, because the continued progress of the coronavirus cannot be foreseen, a final risk assessment is not possible at the present time.

No risks were foreseeable from the Group-wide risk management system or in the assessment of the Executive Board during the current forecast period, which individually or in their entirety could jeopardize the continued existence of Munich Airport.

Munich Airport points out that various known or unknown risks, uncertainties, and other factors may lead to actual events, the financial position, the business development, or the performance of the Company deviating significantly from the estimates provided here.

Munich, April 17, 2020

Jost Lammers **Andrea Gebbeken** **Thomas Weyer**

ABRIDGED CONSOLIDATED FINANCIAL STATEMENTS

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

Fig. 57

T€		Disclosure	2019	2018[1]
+	Revenue	VI.1	1,567,967	1,508,817
+/–	Changes in inventories and work in progress		40	-672
+	Own work capitalized	VI.2	16,689	15,835
+	Other income	VI.3	26,436	29,731
	Total income		**1,611,132**	**1,553,711**
-	Cost of materials	VI.4	-413,210	-393,602
–	Personnel expenses	VI.5	-537,239	-507,713
–	Other expenses[2]	VI.6	-106,369	-114,318
	Earnings before interest, taxes, depreciation, and amortization (EBITDA)		**554,314**	**538,078**
–	Depreciation and amortization	VI.7	-208,835	-214,578
	Operating result (EBIT)		**345,479**	**323,500**
+	Interest result	VI.8	-78,233	-84,338
+/–	Other financial result	VI.8	-11,812	-17,813
	Financial result		**-90,045**	**-102,151**
+	Result from companies accounted for using the equity method	VII.4	1,388	1,173
	Earnings before taxes (EBT)		**256,822**	**222,522**
+/–	Income taxes	VI.9	-78,975	-72,895
	Group profit/loss for the year (EAT)		**177,847**	**149,627**
	of which assignable to owners of the company		177,842	149,626
	of which assignable to non-controlling interests		5	1

[1] Adjusted. More detailed explanations are provided in the Notes to the consolidated financial statements in Section II.3: Changes in accordance with IAS 8.
[2] Due to the application of the cumulated retrospective method as part of the first-time application of IFRS 16, the previous year's figures have not been adjusted.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Fig. 58

T€		Disclosure	2019	2018[1]
	Group profit/loss for the year		**177,847**	**149,627**
+/–	Cash flow hedging	VII.16	11,406	10,742
+/–	Deferred taxes not affecting profit or loss	VII.6	-2,281	-2,149
	Items to be reclassified to the statement of profit or loss		**9,125**	**8,593**
+/–	Actuarial gains/losses	VII.17	-5,351	811
+/–	Deferred taxes not affecting profit or loss	VII.6	1,488	-225
+/–	Effects of foreign currency translation		3	0
	Items not to be reclassified to the statement of profit or loss		**-3,860**	**586**
	Other comprehensive income net of tax		**5,265**	**9,179**
	Total comprehensive income		**183,112**	**158,806**
	of which assignable to owners of the company		183,107	158,805
	of which assignable to non-controlling interests		5	1

[1] Adjusted. More detailed explanations are provided in the Notes to the consolidated financial statements in Section II.3: Changes in accordance with IAS 8.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

Fig. 59

Assets

T€	Disclosure	Dec. 31, 2019	Dec. 31, 2018[1]	Jan. 1, 2018[2]
Intangible assets	VII.1	21,162	19,572	17,477
Property, plant, and equipment[3]	VII.2	4,951,956	4,821,005	4,836,610
Investment property	VII.3	155,358	150,889	151,872
Investments in companies accounted for using the equity method	VII.4	4,138	3,657	4,116
Receivables	VII.5	5,201	3,539	53
Contract assets	VII.23	2,232	0	–
Other financial assets		214	183	290
Deferred tax assets	VII.6	5,497	4,864	4,148
Other assets	VII.9	6,153	6,631	774
Non-current assets		**5,151,911**	**5,010,340**	**5,015,340**
Inventories	VII.7	37,483	39,193	41,567
Receivables	VII.8	94,229	76,057	86,545
Contract assets	VII.23	7,315	4,617	–
Other financial assets	VII.8	1	0	202
Current income tax assets		5,123	4,899	5,496
Other assets	VII.9	35,872	9,243	7,066
Short-term deposits	VII.10	168,767	209,446	158,000
Cash and cash equivalents	VII.10	39,576	12,377	6,625
Current assets		**388,366**	**355,832**	**305,501**
Assets held for sale	VII.11	**1,746**	**1,495**	**1,015**
Assets		**5,542,023**	**5,367,667**	**5,321,856**

[1] Adjusted. More detailed explanations are provided in the Notes to the consolidated financial statements in Section II.3: Changes in accordance with IAS 8.
[2] Adjusted. More detailed explanations are provided in the Notes to the consolidated financial statements in Section II.3: Changes in accordance with IAS 8. The corrected figures as at January 1, 2018 do not include the first-time application of IFRS 15.
[3] Due to the application of the cumulated retrospective method as part of the first-time application of IFRS 16, the previous year's figures have not been adjusted.

Fig. 59

Equity and Liabilities

T€	Disclosure	Dec. 31, 2019	Dec. 31, 2018[1]	Jan. 1, 2018[2]
Subscribed capital	VII.12	306,776	306,776	306,776
Reserves	VII.12	147,490	151,353	150,767
Other equity	VII.12	1,923,854	1,766,853	1,640,269
Non-controlling interests		19	14	13
Equity		**2,378,139**	**2,224,996**	**2,097,825**
Financial liabilities from interests in partnerships	VII.14	**354,047**	**346,058**	**315,375**
Payables	VII.15	14,211	12,365	12,498
Other financial liabilities[3]	VII.15	1,148,779	1,314,692	1,393,047
Employee benefits	VII.17	61,965	50,864	50,163
Other provisions	VII.18	91,984	89,769	91,300
Deferred tax liabilities	VII.6	424,400	429,186	437,608
Other liabilities	VII.20	15,807	16,886	17,305
Non-current liabilities		**1,757,146**	**1,913,762**	**2,001,921**
Payables	VII.19	151,620	162,502	159,303
Contract liabilities	VII.23	2,244	2,045	–
Other financial liabilities[2]	VII.19	813,645	640,442	677,649
Employee benefits	VII.17	47,587	43,485	40,887
Other provisions	VII.18	11,445	14,363	10,074
Current income tax liabilities		8,209	7,339	7,406
Other liabilities	VII.20	17,941	12,675	11,416
Current liabilities		**1,052,691**	**882,851**	**906,735**
Equity and liabilities		**5,542,023**	**5,367,667**	**5,321,856**

[1] Adjusted. More detailed explanations are provided in the Notes to the consolidated financial statements in Section II.3: Changes in accordance with IAS 8.
[2] Adjusted. More detailed explanations are provided in the Notes to the consolidated financial statements in Section II.3: Changes in accordance with IAS 8. The corrected figures as at January 1, 2018 do not include the first-time application of IFRS 15.
[3] Due to the application of the cumulated retrospective method as part of the first-time application of IFRS 16, the previous year's figures have not been adjusted.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

Fig. 60

T€	Disclosure	Subscribed capital	Reserves		Other equity	Non-controlling interests	Equity
			Capital reserve	Revenue reserve			
As of Dec. 31, 2017	VII.12	**306,776**	**102,258**	**48,509**	**1,628,698**	**13**	**2,086,254**
Changes as a result of IAS 8		0	0	0	11,571	0	11,571
As of Jan. 1, 2018 (adjusted)		**306,776**	**102,258**	**48,509**	**1,640,269**	**13**	**2,097,825**
Impact arising from first-time application of IFRS 9		0	0	0	-1,635	0	-1,635
As of Jan. 1, 2018		**306,776**	**102,258**	**48,509**	**1,638,634**	**13**	**2,096,190**
Group profit/loss for the year		0	0	0	149,626	1	149,627
Other comprehensive income		0	0	586	8,593	0	9,179
Total comprehensive income		**0**	**0**	**586**	**158,219**	**1**	**158,806**
Distributions		0	0	0	-30,000	0	-30,000
Transactions with shareholders		**0**	**0**	**0**	**-30,000**	**0**	**-30,000**
As of Dec. 31, 2018[1]	VII.12	**306,776**	**102,258**	**49,095**	**1,766,853**	**14**	**2,224,996**
Group profit/loss for the year		0	0	0	177,842	5	177,847
Other comprehensive income		0	0	-3,863	9,128	0	5,265
Total comprehensive income		**0**	**0**	**-3,863**	**186,970**	**5**	**183,112**
Distributions		0	0	0	-30,000	0	-30,000
Transactions with shareholders		**0**	**0**	**0**	**-30,000**	**0**	**-30,000**
Effects of foreign currency translation		0	0	0	31	0	31
As of Dec. 31, 2019	VII.12	**306,776**	**102,258**	**45,232**	**1,923,854**	**19**	**2,378,139**

[1] Adjusted. More detailed explanations are provided in the Notes to the consolidated financial statements in Section II.3: Changes in accordance with IAS 8.

CONSOLIDATED STATEMENT OF CASH FLOW

Fig. 61

T€	Disclosure	2019	2018[1]
Total comprehensive income		**183,112**	**158,806**
+ Deferred taxes not affecting profit or loss		793	2,374
+ Actuarial gains/losses		5,351	-811
+ Cash flow hedging		-11,406	-10,742
Changes due to foreign currency translation		-3	0
Group profit/loss for the year (EAT)		**177,847**	**149,627**
Result from companies accounted for using the equity method		-1,388	-1,173
Income taxes		78,975	72,895
Financial result		90,045	102,151
Operating result (EBIT)		**345,479**	**323,500**
Depreciation and amortization		208,835	214,578
Gains/losses from disposal of fixed assets		2,481	3,104
Increase/decrease in inventories		1,710	2,374
Increase/decrease in current receivables		-18,172	10,487
Increase/decrease in liabilities		-8,932	3,234
Increase/decrease in employee benefits		9,031	3,393
Increase/decrease in other provisions		-3,573	4,451
Increase/decrease in other assets/liabilities not related to investing and financing activities		-23,243	-12,950
Gross cash flow from operating activities		513,616	552,171
Net income taxes paid/received		-84,542	-83,875
Cash flow from operating activities		**429,074**	**468,296**
Proceeds from sale of owner-occupied property, plant, and equipment		5,138	5,853
Proceeds from sale of intangible assets		707	404
Proceeds from sale of investment property		0	117

Fig. 61

T€	Disclosure	2019	2018[1]
Proceeds of distributions from associated companies		1,173	1,632
Payments for investments in owner-occupied property, plant, and equipment		-306,980	-191,146
Payments for investments in intangible assets		-6,870	-8,328
Payments for investments in investment property		-5,592	-5,174
Payments from acquisition of subsidiaries		-1,200	0
Interest received		382	275
Changes in connection with companies not fully consolidated		-275	96
Changes in short-term deposits		40,679	-52,000
+ **Cash flow from investing activities**		**-272,838**	**-248,271**
Payments for distributions to shareholders	IX	-30,000	-30,000
Proceeds from borrowings	IX	71,111	13,200
Repayments of borrowings from banks	IX	-79,406	-125,713
Repayments of lease liabilities		-4,903	–
Repayments of financial liabilities from interests in partnerships	IX	-36,919	-22,330
Cash flows from Group-wide cash management with associates and shareholdings	IX	-4,460	-572
Interest paid (excluding borrowing costs for qualifying assets)	IX	-39,743	-43,942
Payments for borrowing costs for qualifying assets	IX	-4,717	-4,916
+ **Cash flow from financing activities**	IX	**-129,037**	**-214,273**
Change in cash and cash equivalents		**27,199**	**5,752**
Cash and cash equivalents at the beginning of the year		**12,377**	**6,625**
Cash and cash equivalents at the end of the year		**39,576**	**12,377**

[1] Adjusted. More detailed explanations are provided in the Notes to the consolidated financial statements in Section II.3: Changes in accordance with IAS 8.

NOTE ON THE AUDIT OPINION

Disclosures on the result of the audit of the consolidated financial statements and the Group management report for fiscal year 2019

The notes to the consolidated financial statements are not included in the above, abridged consolidated financial statements for the fiscal year 2019, which are designed to be included in the printed Integrated Report. The full consolidated financial statements – including the notes – and the Group management report for the fiscal year from January 1 through December 31, 2019 were audited by KPMG AG Wirtschaftsprüfungsgesellschaft, who came to the overall conclusion that the audit raised no objections and issued an unqualified independent auditor's report. In addition to the unqualified independent auditor's report, the full consolidated financial statements and the Group management report for the fiscal year from January 1 through December 31, 2019 are generally accessible on the Flughafen München GmbH website.

SUPERVISORY BOARD REPORT

The Supervisory Board was informed regularly and in detail by the Executive Board in written reports and at meetings about the Company's situation, its development, and important business events. In its meetings and the meetings of its committees, the Supervisory Board discussed all major company matters and made such decisions as it was called upon to make in accordance with its statutory responsibilities. The Supervisory Board met for seven meetings during the fiscal year. The working committee held four meetings. The HR committee convened six times.

As at December 31, 2019, the Chief Executive Officer, Dr. Michael Kerkloh, retired from the company after more than seventeen years at the head of the FMG Group. The Supervisory Board thanked Dr. Kerkloh for his invaluable service to Munich Airport. Mr. Jost Lammers has been appointed as his successor. The Supervisory Board wishes him every success in his new role.

The financial statements as at December 31, 2019, and the Management Report of Flughafen München GmbH and of the Group presented by the Executive Board have been audited and issued with an unqualified opinion by KPMG AG Wirtschaftsprüfungsgesellschaft, Munich, the appointed auditor.

Having conducted its own review, the Supervisory Board acknowledges the auditor's findings and raises no objections.

In accordance with Section 52(1) of Germany's Limited Liability Companies Act (GmbHG) and Section 171(2) of Germany's Stock Corporations Act (AktG), the Board approves the financial statements of FMG and the consolidated financial statements. It proposes that the shareholders endorse the financial statements of FMG and approve the consolidated financial statements.

The Supervisory Board wishes to express its gratitude and respect for the work carried out and the successes achieved by the company's Executive Board and employees in fiscal year 2019.

Munich, June 24, 2020

For the Supervisory Board

Minister of State Albert Füracker
Chairman of the Supervisory Board
of Flughafen München GmbH

BOARDS OF THE COMPANY

Executive Board

	Period
Dr. Michael Kerkloh President and Chief Executive Officer, Personnel Industrial Relations Director	September 2002 to the end of 2019
Andrea Gebbeken Chief Commercial and Security Officer	Since October 2016
Thomas Weyer Chief Financial Officer, Chief Infrastructure Officer	Since September 2008

General representatives

	Period
Dr. Robert Scharpf Authorized representative and Senior Vice President HR	Since July 2016
Dr. Josef Schwendner Authorized representative and Senior Vice President Legal Affairs, Committees, Compliance, and Environment	Since July 2016

Supervisory Board

Free State of Bavaria	Additional mandates
Albert Füracker (Chairman) State Minister Bavarian State Ministry of Finance and Regional Identity	• Flughafen Nürnberg GmbH (Chairman of the Supervisory Board) • Messe München GmbH (member of the Supervisory Board) • NürnbergMesse GmbH (Chairman of the Supervisory Board) • Bayerische Landesstiftung (Deputy Chairman of the Foundation Council) • Bayerische Forschungsstiftung (member of the Foundation Council) • Stiftung Bayerische Gedenkstätten (member of the Foundation Council) • Deutsches Museum (member of the Board of Trustees) • Dokumentationsstelle Obersalzberg (member of the Board of Trustees) • Documentation Center Nazi Party Rallying Grounds (Dokumentationszentrum Reichsparteitagsgelände), Nuremberg. (member of the Board of Trustees) • ifo Institute – Leibniz Institute for Economic Research at the University of Munich e.V. (member of the Board of Trustees) • RCI Regensburg Center for Interventional Immunology (member of the Board of Trustees)

Supervisory Board

Free State of Bavaria	Additional mandates
Hubert Aiwanger (since 2/13/2019) State Minister Bavarian State Ministry of Economic Affairs, Energy, and Technology	• LfA Förderbank Bayern (Chairman of the Board of Directors) • Messe München GmbH (member of the Supervisory Board) • Federal Network Agency (Bundesnetzagentur) (member of the Advisory Board) • Bayern Tourismus Marketing GmbH (Chairman of the Supervisory Board) • Bayern Innovativ Gesellschaft für Innovation und Wissenstransfer mbH (Chairman of the Supervisory Board) • Bayerische Landesstiftung (1st Deputy Chairman of the Foundation Council since 7/1/2019, formerly 2nd Deputy Chairman of the Foundation Council) • DZT – Deutsche Zentrale für Tourismus e.V. (Vice President of the Board of Directors since 4/1/2019)
Harald Hübner Head of Department Bavarian State Ministry of Finance and Regional Identity	• Bayerische Landesbank (member of the Supervisory Board) • BayernLB Holding AG (Deputy Chairman of the Supervisory Board) • Wittelsbacher Ausgleichsfonds (State Commissioner)
Helmut Schütz Head of Department Bavarian Ministry of Housing, Construction, and Traffic	• Bayerische Eisenbahngesellschaft mbH (BEG) (Deputy Chairman of the Supervisory Board) • Rhein-Main-Donau Wasserstraßen GmbH (RMD Wasserstraßen GmbH) (member of the Supervisory Board) • Deutsches Museum (member of the Board of Trustees)
Ernst Weidenbusch (up to 1/30/2019) Representative of the Bavarian State Government for State Investments, retired	• Kreissparkasse München Starnberg Ebersberg (member of the Board of Directors) • businessforce AG (member of the Supervisory Board)

Federal Republic of Germany	Additional mandates
Guido Beermann (up to 11/19/2019) Secretary of State Federal Ministry of Transport and Digital Infrastructure	• Deutsche Bahn AG (member of the Supervisory Board)
Christiane Wietgrefe-Peckmann Government Director Federal Ministry of Finance	None

Supervisory Board

City of Munich	Additional mandates
Dieter Reiter Lord Mayor	• Stadtsparkasse München (Chairman of the Board of Directors) • Stadtwerke München GmbH (Chairman of the Supervisory Board) • SWM Services GmbH (Chairman of the Supervisory Board) • Münchner Verkehrsgesellschaft mbH (Chairman of the Supervisory Board) • Münchner Verkehrs- und Tarifverbund GmbH (Chairman of the Group Council and the Annual General Meeting) • GWG Städtische Wohnungsgesellschaft mbH (Chairman of the Supervisory Board) • GEWOFAG Holding GmbH (Chairman of the Supervisory Board) • München Klinik GmbH (Chairman of the Supervisory Board) • Messe München GmbH (Chairman of the Supervisory Board) • Sparkassenverband Bayern, public corporation (representative in the association meeting) • Sparkassen-Bezirksverband Oberbayern, public corporation (representative in the association meeting) • Mathias-Pschorr-Stiftung, Hackerbräu (Chairman of the Foundation Advisory Board) • Planungsverband Äußerer Wirtschaftsraum München, public corporation • (representative in the association meeting and the association committee, 2nd Deputy Chairman) • Master Schools at Ostbahnhof, Zweckverband der LHM and der Handwerkskammer für München und Oberbayern (1st Chairman of the Association) • Regional Planning Association, public corporation (1st Deputy Assembly Chairman) • Zweckverband Freiham (Assembly Chairman) • Europäische Metropolregion München (EMM) (CEO) • FC Bayern München (member of the Board of Directors)
Josef Schmid (up to 2/28/2019) Deputy Mayor, retired	• MGH-Münchner Gewerbehof- und Technologiezentrumsgesellschaft mbH (Chairman of the Supervisory Board) • Internationale Münchner Filmwochen GmbH (Chairman of the Supervisory Board) • Münchner Verkehrs- und Tarifverbund GmbH (member of the Group Council) • Ströer Deutsche Städte Medien GmbH (member of the Advisory Board) • Deutsches Museum (member of the Board of Trustees) • Stiftung Buch-, Medien- und Literaturhaus Munich (Chairman of the Foundation Advisory Board) • Stiftung Lebendige Stadt (member of the Foundation Council) • FC Bayern München (member of the Board of Directors) • ESV Sportfreunde München-Neuaubing (member of the Economic and Administrative Advisory Board) • Stars & Rising Stars (member of the Board of Trustees) • Catholic Council (member) • IG Initiativ-Gruppe (member of the Board of Trustees)

Supervisory Board

City of Munich	Additional mandates
Clemens Baumgärtner (since 3/1/2019) Head of Department of Labor and Economic Development	• MGH-Münchner Gewerbehof- und Technologiezentrumsgesellschaft mbH (Chairman of the Supervisory Board) • München Ticket GmbH (member of the Supervisory Board) • Münchner Verkehrs- und Tarifverbund GmbH (member of the Group Council) • Agentur für Arbeit München (member of the management committee)

Trade unions	Additional mandates
Thomas Bihler (Deputy Chairman since 6/6/2019) Clerical employee	• Stiftung Ambulantes Kinderhospiz München (AKM) (member of the Board of Trustees)
Heinrich Birner (Deputy Chairman, until 6/6/2019) Director of the ver.di labor union Munich region	• Stadtwerke München GmbH (member of the Supervisory Board) • SWM Services GmbH (member of the Supervisory Board) • Stadtsparkasse München (member of the Board of Directors)

Employees (no additional mandates)

Johann Bachmayer (since 6/6/2019) Chief firefighter, full-time chair of the works council	**Hans-Joachim Bues** (up to 6/6/2019) Senior Vice President Corporate Communications, representative of the senior managers	**Irena Castello** (up to 6/6/2019) Clerk, substitute workers' councilor
Orhan Kurtulan Certified aircraft handler, full-time workers' councilor	**Anna Müller** Clerical employee, full-time workers' councilor	**Roy Panten** (since 6/6/2019) Aviation security staff, works council
Bernhard Plath Business economist, full-time workers' councilor	**Renate Siedentopf** (up to 6/6/2019) insurance agent, full-time workers' councilor	

Employees	Additional mandates
Michael Roth (since 6/6/2019) Senior Vice President Corporate Services service division, representative of the senior managers	• Agentur für Arbeit Freising (member of the management committee) • AOK-Direktion Freising (member of the Advisory Board)

GLOSSARY

Airports Council International (ACI)
An international organization, headquartered in Montreal, which represents airport operators. More than 1,900 airports in almost all of the countries in the world are ACI members, including more than 500 airports in 46 European countries.

German Airports Association (ADV)
The umbrella organization of all passenger airports in Germany, Switzerland, and Austria. The organization works to promote Germany as a strong and competitive center of aviation.

Continuous sound level Leq3
Underlying evaluation measurement for the new German Air Traffic Noise Act. It is a measure of the sound energy at the point of observation and is also referred to as the energy-equivalent continuous sound level. Leq3 is measured over 16 hours during the day, from 6 a.m. to 10 p.m. (daytime Leq3), and 8 hours during the night, from 10 p.m. to 6 a.m. (night-time Leq3). The six busiest months of the year are taken as the reference baseline.

DIN EN ISO 14001
DIN EN ISO 14001 stipulates the fundamental structures and requirements for an environmental management system, with which an organization can improve its environmental performance, fulfill its legal and voluntary obligations, and achieve environmental objectives. At the same time, ISO 14001 also acts as the basis for the certification of environmental management systems.

Eco-Management and Audit Scheme (EMAS)
The joint system for voluntary environmental management and audits is an instrument developed by the European Commission for companies that wish to improve their environmental performance. EMAS expands the requirements of DIN EN ISO 14001 more stringently, for example in terms of external environmental audits, the continuous improvement of environmental performance, and transparent communications about environment-related developments.

European Aviation Safety Agency (EASA)
The European Aviation Safety Agency is the European Union's flight safety body for civil aviation and is based in Cologne.

Particulate matter
The variable PM_{10} (particulate matter < 10 µm) describes the proportion of particulate matter with a particle diameter of up to 10 µm. As a subset of PM_{10}, $PM_{2.5}$ contains even smaller particles.

Global Reporting Initiative (GRI)
An independent institution that publishes globally recognized guidelines on sustainability reporting. The GRI standards create a shared language for organizations and stakeholders that can be used to communicate and understand the economic, environmental, and social impacts of organizations. Its aim is to establish a common baseline for communication and to ensure the comparability of sustainability reports.

Greenhouse Gas Protocol (GHG Protocol)
Globally recognized instrument used to quantify and manage greenhouse gas emissions. The GHG Protocol defines requirements governing the calculation of greenhouse gas emissions on an organization-wide scale and the implementation of projects to reduce emissions.

Auxiliary Power Units (APU)
In addition to their two or four main engines, today's commercial aircraft have a smaller auxiliary power unit. The APU is used to start the main engines and to generate electrical power when the plane is on the ground.

International Civil Aviation Organization (ICAO)
Headquartered in Montreal, the International Civil Aviation Organization is an agency of the United Nations. It has a total of 193 contracting states. The goal of the ICAO and its members is to ensure the safe and sustainable development of civil aviation.

Landing and take-off cycle (LTO cycle)
The landing and take-off cycle refers to an aircraft's CO_2 emissions on the ground and during take-off and landing below an altitude of 3,000 feet (914 meters). Up to this internationally defined height, any greenhouse gases associated with aircraft turbines are attributed to the airport concerned and distances from the airport of about 8 kilometers in the case of departing aircraft, depending on the climbout, and 17 kilometers in the case of arriving aircraft.

Schengen/non-Schengen
Departures and arrivals areas for passengers from member states that have signed up to the Schengen Agreement; these passengers have either arrived directly from one of these states or want to travel to one. No border or passport controls are needed. Non-Schengen refers to areas for passengers who have arrived from countries that are not party to the Schengen Agreement. Passports and customs checks are required in this case.

Traffic unit (TU)
A measurement unit used to track all commercial passenger and cargo traffic. One TU is equivalent to one passenger arriving at or departing from an airport with hand luggage (a total of 100 kilograms) or 100 kilograms of airfreight or airmail turned over or a combination of passenger volumes (arrivals and departures) and the local airfreight and airmail volumes (unloaded and loaded).

TABLE OF FIGURES

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