

/Facts and Figures

Munich Airport in brief

Living ideas – Connecting lives

M



Munich Airport is a success story.

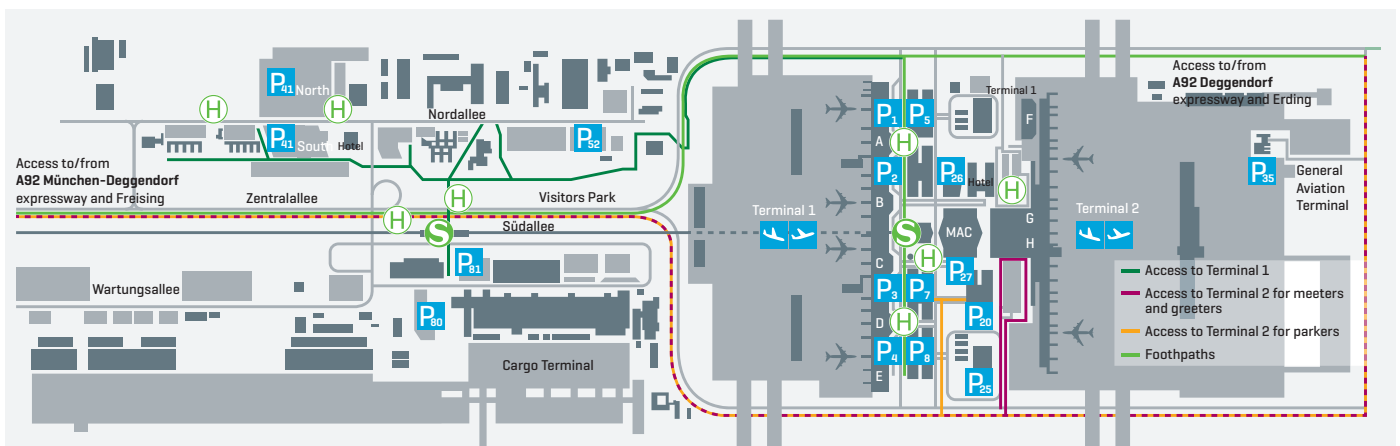
Since Munich Airport was opened at its new location in 1992, it has developed in the space of a few years into one of the airports with the largest number of passengers in Europe thanks to above-proportionate growth. As a hub it offers connections to all over the world and, integrated in an international network, creates the foundation for global mobility. As a result, Munich Airport generates growth and value added in the region. As the airport's operator, we strive to achieve a successful balance between economic, ecological and social objectives. That is our mission – to be an attractive, efficient and sustainable airport that creates value for our customers, employees, owners and the region.



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Overview plan of the airport campus



/Munich Airport at a glance

Start of operations at Munich-Riem Airport

October 25, 1939

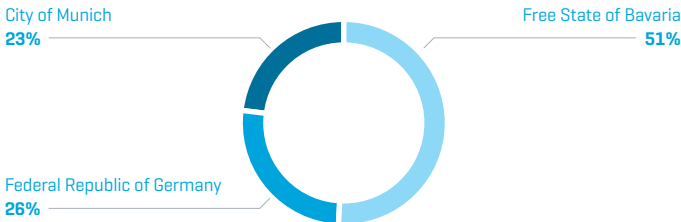
Start of operations at the new location in Erdinger Moos

May 17, 1992

Airport operator

Flughafen München GmbH (FMG)

Shareholders of Flughafen München GmbH



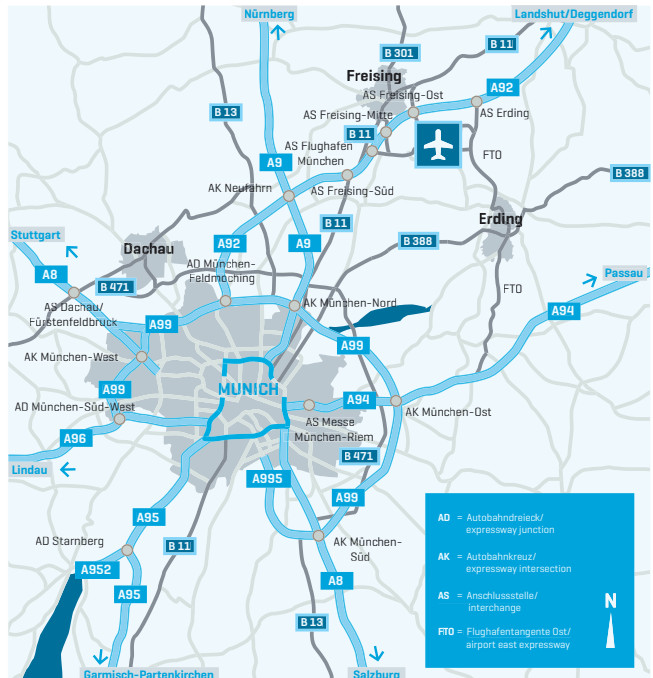
Subsidiaries and associated companies of FMG

Subsidiary/Company	FMG's stake
aerogate München Gesellschaft für Luftverkehrsabfertigungen mbH	100%
AeroGround Flughafen München GmbH	100%
Allresto Flughafen München Hotel und Gaststätten GmbH	100%
CAP Flughafen München Sicherheits-GmbH	100%
Cargogate Flughafen München Gesellschaft für Luftverkehrsabfertigungen mbH	100%
eurotrade Flughafen München Handels-GmbH	100%
FMV – Flughafen München	100%
Versicherungsvermittlungsgesellschaft mbH	100%
InfoGate Information Systems GmbH	100%
Munich Airport International Beteiligungs-GmbH	100%
MAC Grundstücksgesellschaft mbH & Co. KG	95%
Flughafen München Baugesellschaft mbH	60%
Terminal 2 Gesellschaft mbH & Co oHG	60%
MediCare Flughafen München Medizinisches Zentrum GmbH	51%
EFM – Gesellschaft für Enteisen und Flugzeugschleppen am Flughafen München mbH	49%

Location

28.5 kilometers north-east of the center of the Bavarian capital of Munich

Transport links



Rail:

Rapid transit rail lines S1 and S8 between the airport and Munich Central Station/Ostbahnhof/Pasing, from where there are connections to long-distance and regional trains of Deutsche Bahn.

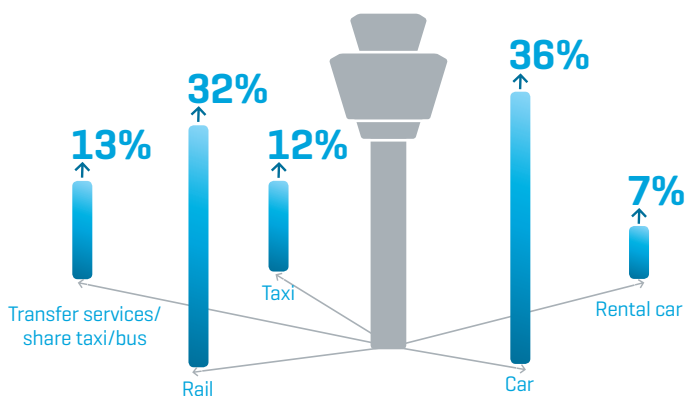
Road:

- A 92 expressway [München-Deggendorf]
- Airport east expressway

Buses and transfer services from the whole catchment area [southern Germany, parts of Austria, northern Italy and the Czech Republic], hotel shuttle, taxis in front of the terminals, car rental center



Passengers' airport access modes



Number 3 worldwide

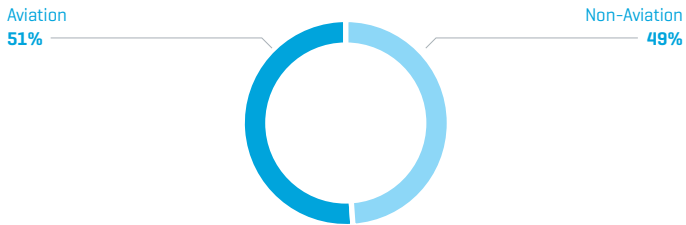
Munich was voted Europe's best airport in the World Airport Awards 2014. For the first time, it captured third spot in the global ranking. That is the result of the latest survey by the independent London-based aviation research institute Skytrax, in which almost 13 million passengers worldwide took part.



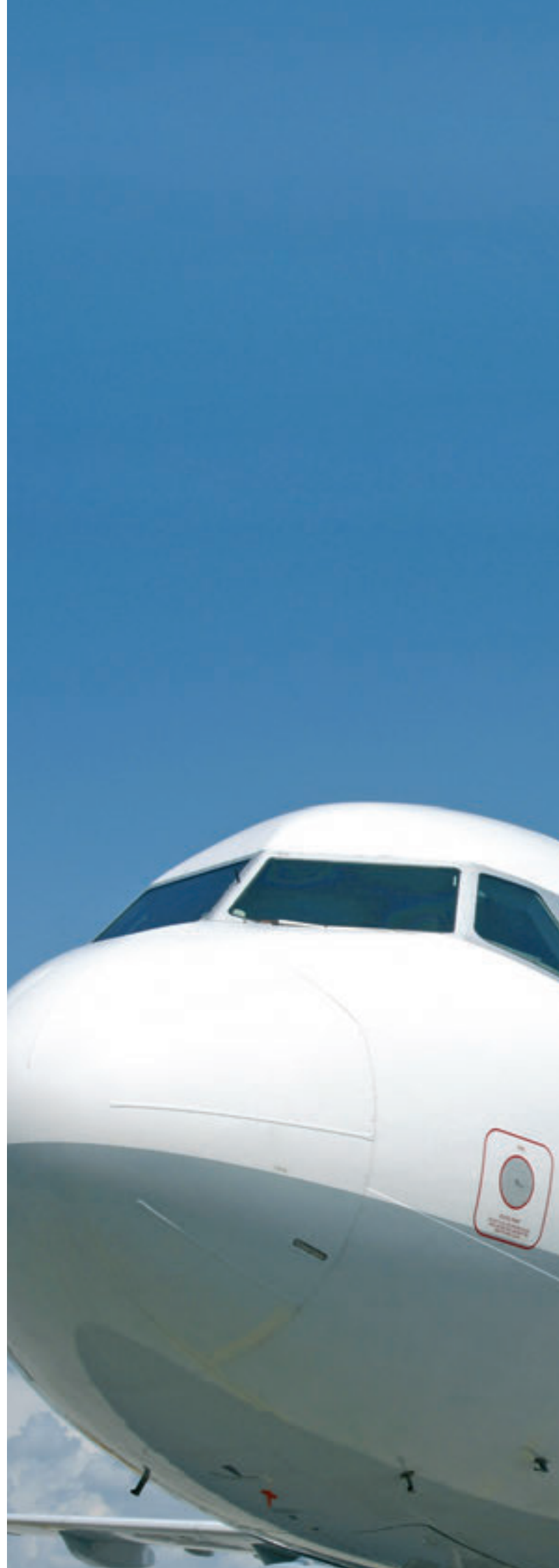
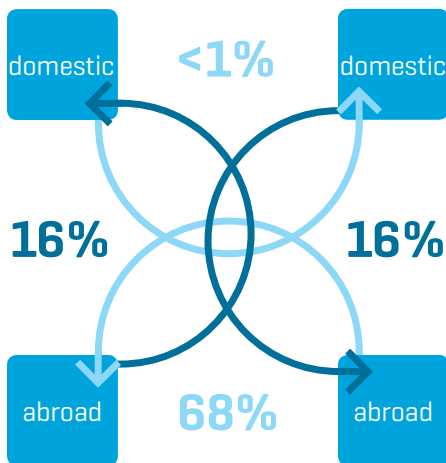
Brochures to download
munich-airport.de → Passengers
 and Visitors → Publications

Key financial indicators

	2013	2012/2013
EBITDA [€ m.]	467.7	- 9.0%
Consolidated income after taxes [€ m.]	98.6	+ 3.4%
Capital spending [€ m.]	284.6	+ 20.7%
Equity ratio	34.1%	+ 1.5PP

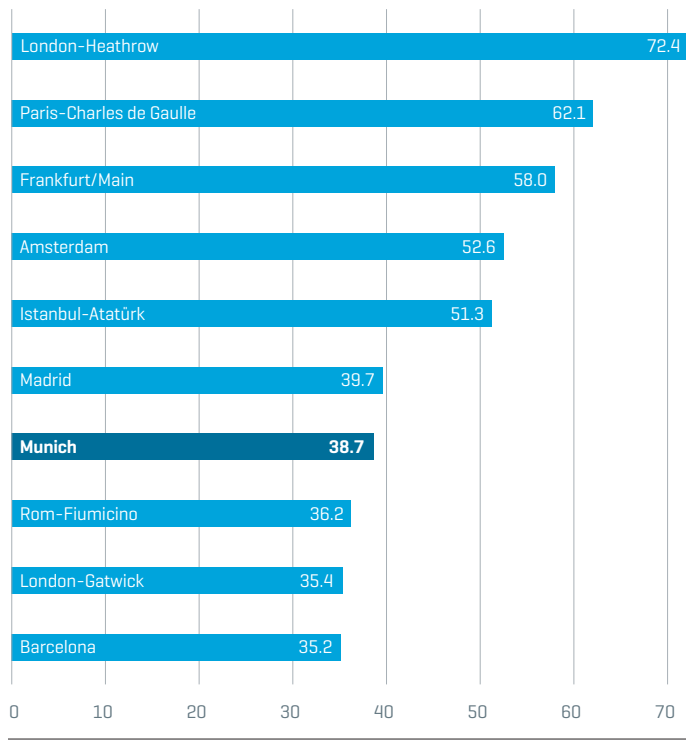
Share of consolidated sales**Transit passengers**

Munich Airport has long been established successfully as a hub in European and international aviation. That means more and more passengers land at Munich Airport to transfer to flights to all over the world. The share of transit passengers in the total volume of passengers in 2013 was 39 percent.

Transit passenger flows in 2013

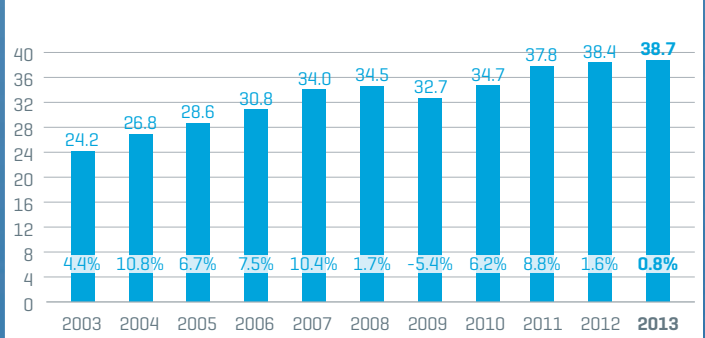
Munich on an European scale in 2013

Passenger numbers in millions



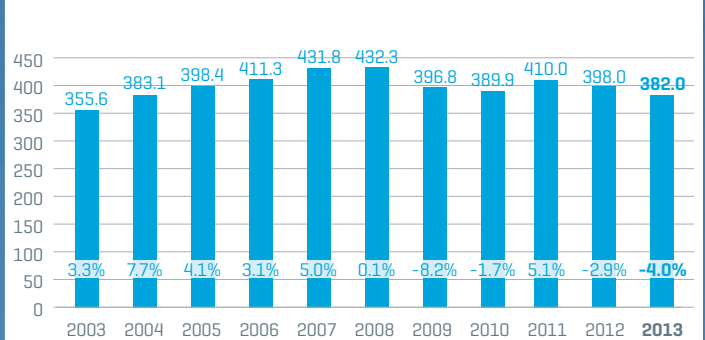
Commercial passenger movements 2003-2013

Passengers in millions / % = percentage change over previous year



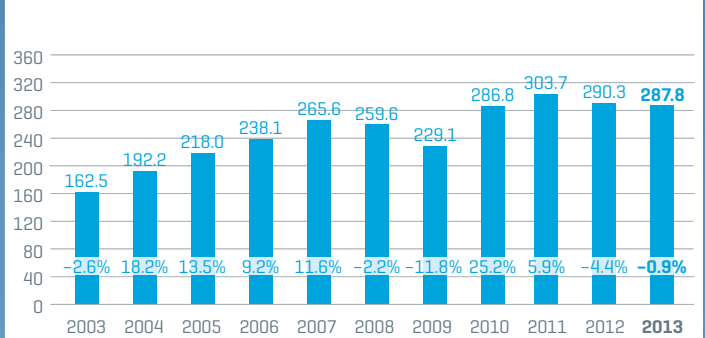
Aircraft movements (total) 2003-2013

Takeoffs and landings in thousands / % = percentage change over previous year



Air cargo (freight & mail) 2003-2013

In thousands of tons / % = percentage change over previous year



/Terminals and the München Airport Center

At the heart of the airport are the two terminals, where a total of 38.7 million passengers were handled in 2013. That is an average of some 105,952 passengers a day. Whereas only Lufthansa and its partner airlines operate in Terminal 2, all other airlines are predominantly represented in Terminal 1. In the two terminals and the München Airport Center (MAC), passengers and airport visitors have a wide choice of retail stores, service outlets, and places where they can eat and drink – more than 200 in all, open 365 days a year.

Terminal 1

Decentralized structure

- Areas A to D for departures and arrivals, approx. 140 check-in counters, ticket counters, checkpoints, waiting areas, baggage claim, around 90 gates
- Area E for arrivals
- All areas at street level, level 04
- Numerous lounges, check-in the evening before, services for special-needs passengers

Length

1,081 meters

Gross floor space

198,000 square meters

Capacity

20 million passengers

Baggage transportation system

Total length: 18 kilometers

Capacity: 19,200 items of luggage an hour

Baggage claim carousels: 14

Terminals: decentralized or centralized

In Terminal 1 with its decentralized structure, the identically designed areas A, B, C and D, each of which has an arrivals and departures area, represent a »small-scale airport« – with facilities such as check-in counters,

Area F

For departures and arrivals of special flights
Approx. 17 check-in counters

Minimum connecting time

35 minutes

Minimum connecting time between the terminals

45 minutes

Terminal 2

Centralized structure

- Level 03 for arrivals (central baggage claim) and check-in
- Central hall (level 04) with around 130 check-in counters, ticket counters
- Areas G (level 04) and H (level 05) for departures and arrivals with checkpoints and waiting rooms, approx. 110 gates
- Area I (level 06) for arrivals
- Numerous lounges, check-in the evening before, services for special-needs passengers

Length

980 meters

Gross floor space

271,400 square meters

Capacity

25 million passengers

Baggage transportation system

Total length: 40 kilometers

Capacity: 14,000 items of luggage an hour

Baggage claim carousels: 14

Minimum connecting time

30 minutes

checkpoints, waiting rooms and baggage claim points. In contrast, passengers in Terminal 2 can find all handling services in a central hall before they go to their gate. The baggage claim is likewise located centrally at arrivals level 03.



München Airport Center (MAC)

Central retail, hospitality and service area and communications center

Level 02: Underground rapid transit train station

Level 03: Around 40 check-in counters (check-in Z) and retail, hospitality and service area

Level 04: Chapel, social work services

Levels 05 to 08: Including offices, the medical center and the »municon« conference center

MAC-Forum

10,000 square meters/approx. 3,500 square meters of usable space: Europe's biggest covered outdoor area for large-scale events with up to 3,200 people, equipped with state-of-the-art media and communications technology and all the necessary utilities



Highlights in the MAC-Forum

The Forum in the München Airport Center is an ideal place for all types of events. The annual highlight in winter is the traditional Winter Market with numerous stalls, a large ice rink and varied program. The highlight in 2013 was again the Surf & Style event, where Munich Airport presented the world's largest standing wave at an airport for the third time.

/The airport as a »city« and world of adventure

Munich Airport essentially has everything you'd expect to find downtown in a city. The retail, hospitality and service space alone runs to more than 35,000 square meters. Plus there are hotels, parking facilities, a rapid transit train station, doctors' offices and conference rooms – all this and more in an engaging cityscape that offers visitors plenty to see and do.

Retailers

More than a hundred stores with an attractive mix, including duty free and travel value shops

Food and drink

Over 50 restaurants, bars and cafés from upmarket cuisine to fast food and snacks, as well as the „Airbräu“ restaurant with its home-brewed beer

Services

As a multifunctional service center, Munich Airport offers many services to make sure passengers have a pleasant stay.

- Two service centers with extensive services such as left luggage or lost & found
- Stylish lounges and an exclusive VIP WING
- Medical center/emergency practice, Airport Clinic M with an innovative medical full-service concept for patients from Germany and abroad, healthcare center with around ten specialist disciplines
- Chapel, prayer and reflection room
- Travel market with numerous travel agencies and tour operators
- Digital world: Airport TV, Internet points and WLAN
- »municon« conference center: 32 conference rooms, cutting-edge conference technology, WLAN, conference restaurant
- Hotel Kempinski Airport München*: Five-star hotel, located in the direct vicinity of the terminals, barrier-free, around 400 rooms and suites, cutting-edge conference technology, WLAN, Fit & Fly SPA
- Novotel München Airport: Three-star hotel, barrier-free, 257 rooms, cutting-edge conference technology, WLAN, fitness studio, shuttle to the two terminals and the München Airport Center

The airport as a world of adventure

Visitors Park

- 28 meter high viewing hill looking over Terminal 1, the West Apron and flight operations on both runways
- Aircraft old-timers
- Visitors center with an exhibition, a cinema, a program for small children and a mini golf course
- Airport shop with souvenirs
- Family restaurant »Tante Ju's Speisenwerkstatt«
- Battery replacement and rental station for e-bikes



*from 1st January 2015: Hilton Munich Airport

Visitors terrace

- Viewing platform on level 07 of Terminal 2 with a look over the East Apron and the two runways
- Access via the »Skywalk« [level 05]

Airport tours

- Route: Aprons of Terminals 1 and 2, runways, fire stations, cargo building, maintenance hangars, fuel farm
- Duration of the »Classic« tour: Approx. 50 minutes
- Further highlights: A380 tour, night tours and other special tours

Parking areas

14 multi-storey car parks and numerous parking areas

More than 34,000 lots

Services

- Automatic parking guidance system
- Parking management center at the München Airport Center [open 24 hours]
- Convenient and secure parking
- Last-second parking
- XXL parking on extra-wide lots
- Valet parking: An airport employee parks the car

Car rental center in the München Airport Center

With major rental operators:

Avis, Enterprise Rent-A-Car, Europcar, Hertz, Sixt, Buchbinder/Dollar/Thrifty



Barrier-free travel

munich-airport.de → Press → Media center → Publications



The airport for visitors

munich-airport.de → Passengers and Visitors → Experience the Airport

/Flight operations

More than 380,000 aircraft took off and landed at Munich Airport in 2013, an average of 1,019 a day. 94 airlines regularly served 238 destinations: 17 domestic and 221 foreign destinations in 68 countries.

North and south runways

Location: Parallel, distance of 2,300 meters

Offset: 1,500 meters

Length/breadth: Each 4,000/60 meters

Capacity of the two-runway system: 90 schedulable aircraft movements per hour

The runways can be operated independently of each other. Their length also allows long-haul aircraft to take off without restrictions as to weight and range. Takeoff and landing are possible in both directions.

Aprons

West passenger apron (Terminal 1)

Area: 600,000 square meters

59 aircraft parking positions in total

- 19 stands at Terminal 1 with passenger boarding bridges
- 12 weather-protected boarding stations
- 28 further parking positions

East passenger apron (Terminal 2)

Area: 760,000 square meters

80 aircraft parking positions in total

- 24 stands at Terminal 2 with passenger boarding bridges
- 4 positions close to the building for regional aircraft
- 52 further parking positions

Satellite building (under construction)

Capacity: 11 million passengers

Gross floor space: Approx. 125,800 square meters

Pier with four levels and two basements

- Length: 609 meters
- Breadth: 53 meters
- 27 parking positions close to the building



Destinations served on a regular basis* in 2013

68 Countries regularly flown to from Munich

238 Destinations in total

94 Airlines

Domestic
17Europe EU
118Europe non-EU
36America
24Africa
18Asia
25

*Scheduled and package-tour traffic – countries and destinations on passenger routes only

Third runway already needed

Things are already tight at Munich Airport: The capacity of the existing runway system is already fully utilised at several hours during the day, with the result that no free slots – i.e. time windows for taking off and landing – can be allocated at peak times. The third runway would enable 120 flight movements an hour to be planned.

The satellite is taking shape

Munich Airport needs additional terminal capacities to handle hub traffic in the coming years and ensure it can maintain its high quality of handling operations. To supplement Terminal 2, a satellite is therefore being built – a handling building on the eastern apron that will be linked to Terminal 2 via an underground transport system. Construction of the building is expected to be completed in 2015.

Tower**Height**

78 meters

Construction

Inclination of the glass promontory windows:
15 degrees towards the outside, thus avoiding bothersome reflections

Roof antenna

ASDE [Airport Surface Detection Equipment] antenna for the airport's ground radar

Users

- German Air Traffic Control [DFS]
- Flughafen München GmbH Apron Control
- German Meteorological Service [DWD]

Operations relating to arrivals and departures and on the ground are controlled from the tower.

All-weather operations

Technical equipment and approval for all-weather operations in accordance with category CAT III b

CAT III b

Necessary horizontal view of the runways of at least 75 meters

Requirements

- Instrument landing system [ILS] with a localiser and glide path transmitter, preliminary and main marker beacons
- Licence of the pilot and appropriate equipment of the aircraft



Munich Airport image film
munich-airport.de/lipdub

Aircraft handling

It comprises in particular

- Transportation of passengers and crew in buses or special vehicles
- Loading and unloading of aircraft
- Transportation of freight and mail
- Baggage sorting
- Supply of fresh water
- Cleaning of the aircraft
- Garbage disposal
- Replenishment of the aircraft with food and drink
- Fuelling
- Supply of electricity during the occupancy time

General aviation

Civil, private air traffic with the exception of scheduled/charter services of the airlines

Approval for aircraft at Munich Airport with a maximum takeoff weight of more than two tons in instrument flight operations

Handling area for general aviation

General Aviation Terminal (GAT) east of Terminal 2

Terminal

4,350 square meters

Users

Customs, Federal Border Police, German Meteorological Service, aviation supervision, aircraft catering, plane and helicopter rental operators, air rescue services, air taxi operators, limousine service

Apron

- 120,000 square meters
- 50 parking positions

Hangar (hangar 10)

10,800 square meters with maintenance facilities



/Cargo operations

Since Munich Airport was opened in 1992, the cargo tonnage transshipped at it has quadrupled to almost 300,000 tons in 2013. Bellyhold freight – the volume of air freight carried on passenger machines – has stabilised at a high level in a difficult economic environment. A further increase in cargo business is also anticipated in the coming years. So as to be able to cater for growing demand in future, Munich Airport is successively expanding its cargo infrastructure and capacities.

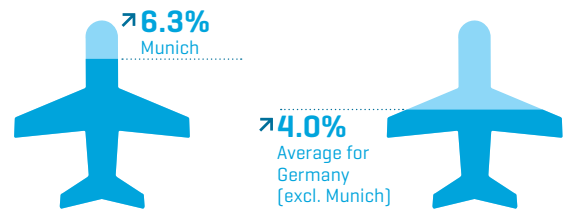
Air Cargo Center

- Networking of airlines, forwarding agents, handling partners, general sales agents, logistics companies, packaging service providers and customs authorities
- Short routes between the apron positions and the Air Cargo Center – to enable particularly fast handling
- Great care for every item of freight: whether live animals, pharmaceutical, perishable, valuable and urgent products or hazardous goods

Cargo terminal

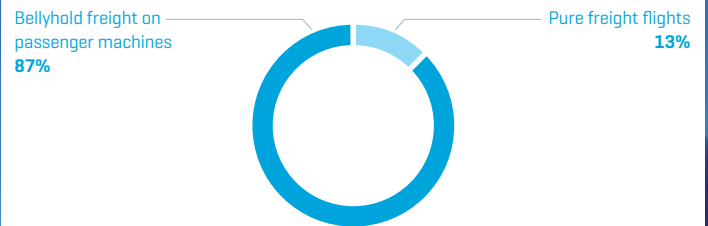
- Nine modules, including a ramp, with an area of 53,000 square meters
- Storage capacity can be expanded to 1,000,000 tons
- Connection between the cargo terminal and forwarding agent buildings via separate roadways for dolly trains and fork-lift trucks
- Can be expanded in a modular manner

Average annual growth rate in air freight 1992–2013



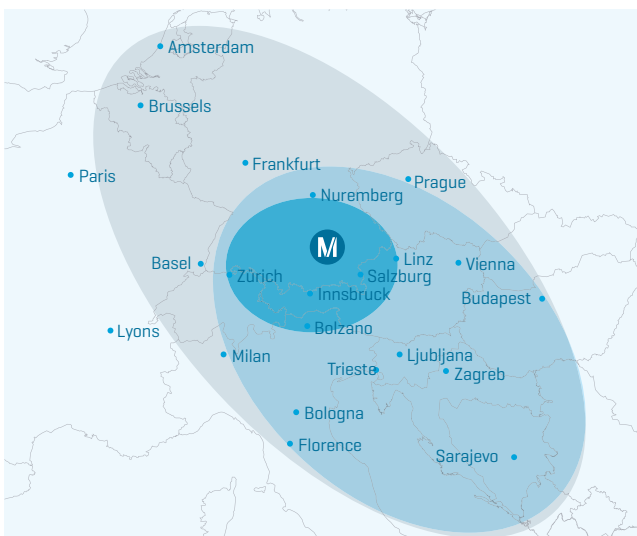
Share of air freight

Commercial transshipments in 2013



Air cargo catchment area

■ Small ■ Medium ■ Large



Forwarding agent buildings, 1st module

- Area of 15,000 square meters
- Transshipment capacity of approx. 150,000 tons a year

Forwarding agent buildings, 2nd module

- Area of 16,000 square meters
- Transshipment capacity of approx. 160,000 tons a year

Cargo apron

- Area of 66,500 square meters
- 14 parking positions for smaller cargo aircraft or
- 7 parking positions for Boeing B747 cargo aircraft

Border control point

- Area of 1,500 square meters
- Separate handling areas for human consumption, non human consumption and live small animals
- Can be expanded into a Perishables Center in a modular manner



Stable growth

Munich Airport has evolved into one of Europe's leading cargo gateways thanks to its good strategic location. The volume of cargo is expected to increase to around 810,000 tons by 2025.

Attractive cargo hub in Europe

The cargo catchment area of Munich Airport covers not only Southern Germany, but also the neighboring countries of Austria, Switzerland, the Czech Republic and Italy. Munich Airport is also becoming an important cargo hub for these regions and South-eastern Europe. The continuously growing catchment area necessitates successive expansion of the infrastructure and cargo facilities at Munich Airport.

/Aviation safety

Safety has top priority in flight operations. It is ensured by, among other things, regular maintenance work in the hangars, test runs of the aircraft engines in a purpose-built hangar, a secure supply of fuel and refined emergency management, in particular for the airport fire service.

Maintenance

Hangar 1

Gross space of 36,500 square meters
Room for up to six Boeing 747 jumbos

Hangar 3

Gross space of 29,000 square meters
Room for simultaneous maintenance of five Boeing 757 aircraft and six MD 83 jets

Hangar 4

Gross space of 14,000 square meters

Maintenance apron

Total area: 230,000 square meters

Parking area only: 80,000 square meters

Noise control hangar for engine test runs

Hangar-like steel construction

72 meters wide, 105 meters long, 20 meters high
Ideal sound refraction and proofing

Area

5,300 square meters

Room for aircraft up to the size of a Boeing 747

Safety checks

The second-largest maintenance center of Lufthansa Technik, numbering some 500 employees, is located in Hangar 1 at Munich Airport. Up to 30 aircraft are subjected to intensive inspection there every night. They undergo simple ramp checks, as well as the C check required every 20 to 24 months. The mechanics also replace engines, repair landing gear, wash aircraft or make a wide range of changes to the plane.

Fuel supply

Delivery of kerosene

Via a pipeline or by rail

Fuel farm

Six above-ground tanks with a capacity of 44,000 cubic meters of kerosene

Underground refuelling system

- An underground pipeline network of some 17 kilometers in length
- Around 500 fuel pits on the apron
- With a small and large leak detection system

Deicing

Surface deicing

Over an area of more than four million square meters [runways, taxiways, aprons]



Use of snow ploughs, if necessary also chemical deicing agents based on formates; the waste water from deicing is caught in gutters and fed to the sewage plant in nearby Eitting.

Aircraft deicing

On special areas in the direct vicinity of the heads of the runways

Mobile deicing vehicles, termed »polar bears«, spray the aircraft with water containing glycol. The deicing water that drops off them is caught and treated to obtain deicing agent that can be reused. The recycling rate is around 70 percent.

Deicing operator

EFM – Gesellschaft für Enteisen und Flugzeugschleppen am Flughafen München mbH

Airport fire service

North and south fire stations

Any point on the runways and flight operation areas is to be able to be reached from the fire stations within 180 seconds of an alarm [in accordance with the recommendation by the International Civil Aviation Organisation (ICAO)].

Staff at the airport fire service

Around 200 fire-fighters

Fleet

Approx. 40 special vehicles

Tasks

Technical assistance, firefighting, fire safety guards, help for neighbors



/Working at Munich Airport



The fascination of the airport

The airport has around 32,000 employees in some 550 companies or public authorities, making it the biggest employer in the region, and offers a broad range of interesting jobs with fine future prospects. The unique working environment attracts around 1,000 new employees a year to the airport's region. The airport operating company, Flughafen München GmbH, alone – together with its 14 subsidiaries and associated companies – has around 8,000 employees*.

Diverse vocational prospects

The Munich Airport Group offers varied jobs for people with professional experience, newcomers to a vocation and school-leavers: from posts for engineers, IT specialists, clerks, salespersons, ground handling staff and safety experts to jobs in catering and service. As one of the largest providers of training in the region, Munich Airport also gives around 100 youngsters a year the chance of an apprenticeship in 14 vocations or to take part in four dual courses of study and so get their professional career off to an interesting start.

*excluding interns and loaned workers (status: January 2014)

Chamber of Commerce and Industry training

- Cook
- Hospitality expert
- Information technology clerk
- IT specialist in application development
- IT specialist in system integration
- Mechatronics technician
- Office communication clerk
- Real estate agent
- Restaurant expert
- Retail clerk
- Service clerk in aviation
- System catering expert
- Warehouse logistics expert
- Works fire-fighter

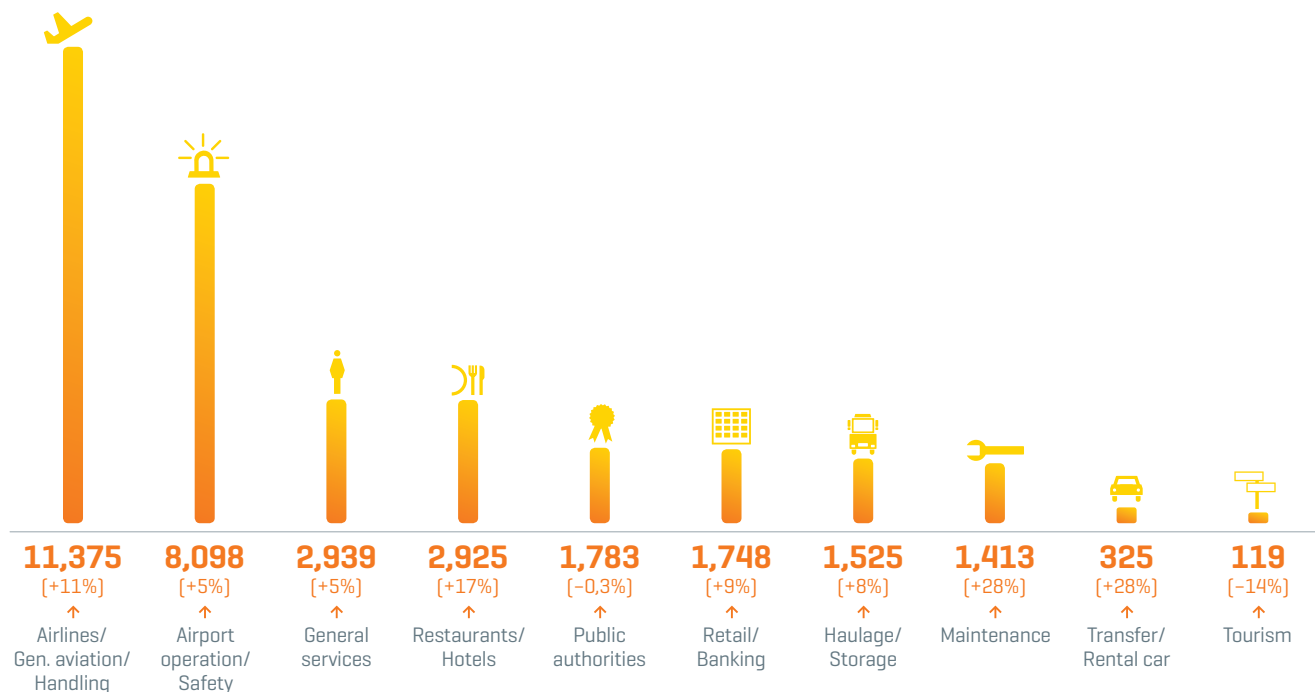
Dual course of study

- Bachelor of Arts – Aviation management
- Bachelor of Arts – Real estate industry
- Bachelor of Science – Business informatics
- Bachelor of Science – Information technology

For students and graduates

- University internships and dissertations
- International Consulting Trainee Programme

Employees at Munich Airport by sector in 2012



/Environment and climate protection

Flughafen München GmbH is aware of its responsibility towards the environment and future generations. That is why it operates with an eye to saving using resources sparingly and pursues the goal of keeping on reducing emissions. FMG is particularly committed in the areas of biodiversity, climate protection and noise abatement and ensures that resources are used optimally. As part of that, it fulfils regulations and environmental requirements in excess of what is demanded by law.

CO₂-neutral growth

One of the main concerns is to grow in a CO₂-neutral manner by 2020. That means: The annual carbon dioxide emissions of around 160,000 tons (relative to the base year 2005) which can be influenced by FMG are not to increase further, despite the expansion plans and anticipated growth in traffic.

Example projects to reduce CO₂ emissions

- Operation of the airport's own cogeneration unit
- Conversion to power-saving LED lighting
- Application of criteria for sustainable building

Air quality

The influence of the airport's operations and air traffic on the situation as regards pollutants in the environs of Munich

Airport is continuously assessed at two measurement points: one to the west and one to the east of the airport campus. The measurements have revealed that the airport only accounts for a small proportion of the pollutants in the surrounding area and that the values for just about all components are in the low to medium range.

Example projects for controlling and improving the local air quality

- Levying of emission-related landing charges
- Air pollution measurements and biomonitoring
- Use of alternative fuels in the vehicle fleet

Monitoring of aircraft noise

Aircraft noise is monitored regularly at Munich Airport. To enable that, Flughafen München GmbH operates 16 fixed measurement points positioned in a radius of approximately 20 kilometers around the airport, as well as three mobile measurement stations for individual use.

Example measures to reduce aircraft noise

- Levying of noise-related takeoff and landing charges
- Observance of the strict rules on night flights
- Active noise prevention

Locations of the fixed measurement points of Flughafen München GmbH



Total airport area

Within the fence: 1,575 hectares



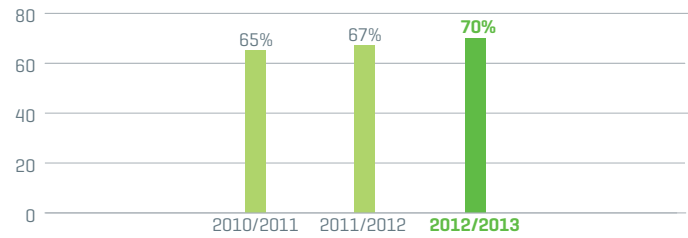
Additional green areas

Outside the fence / total: 728 hectares



Recycling ratio of the deicing agent used

In percent



Aircraft fuel consumption

Liters per passenger and 100 kilometers



Source: German Aviation Association (Bundesverband der Deutschen Luftverkehrswirtschaft)

/International business

Munich Airport is a company with a full range of services and extensive experience in all areas of running an airport. With the smooth move to the new location in May 1992, the experts in Munich gave an impressive demonstration of their know-how and have since been in great demand by airport operators all over the world.

Munich Airport is now a leading international provider of consulting on operational readiness and airport transfer and in projects relating to the construction of new and expansion of existing airports.

Services

- Airport investment
- Airport management
- Operational Readiness and Airport Transfer [ORAT]
- Training in operation and management
- Commercial management and operations
- Air traffic forecasts
- Master plans and capacity planning
- Terminal layout planning and simulation

- Airport Collaborative Decision Making [ACDM]
- Airport process optimization
- Airport security
- Development of air traffic and airline marketing
- Customer-specific support

Competent consulting

- 20 years of experience in handling international projects
- Extensive know-how from its own, far-reaching expansion measures over the past 25 years
- Trusted partner for airport operation, with innovative concepts for optimising processes and workflows
- The consulting focuses on operational efficiency – improving quality and cutting costs
- Full-line service provider that offers all airport companies management from a single source
- Extensive experience in the areas of airport commercialisation and business development



Worldwide activities



/Imprint

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