

# Sustainability indicators 2019<sup>1</sup>



Thinking for the long term, acting responsibly,  
creating transparency in communications: Munich Airport prepares a report on its efforts  
in the field of sustainability in accordance with the highest standards.

<sup>1</sup> As from 2017, all personnel figures include AeroGround Berlin, HSD, and MAI, and from 2018 LabCampus and MUCreal, unless specified otherwise. amd.sigma, a subsidiary of MAI since 2019, is not included in the personnel figures.

### VALUE GENERATED / GRI 201-1

Group in € million	2019	2018	2017
Revenue	1,568.0	1,508.8	1,468.7
+ Other income	43.2	44.9	44.1
Total revenue	1,611.1	1,553.7	1,512.8
+ Income from investments	1.4	1.8	2.1
./. Non-personnel expenses	-519.6	-507.9	-510.7
./. Depreciation and amortization	-208.8	-214.6	-217.6
<b>= Value generated</b>	<b>884.1</b>	<b>833.0</b>	<b>786.6</b>

### VALUE DISTRIBUTED / GRI 201-1

Group in € million	2019	2018	2017
Employees	537.2	507.7	482.1
Lenders (netted)	90.0	102.7	75.3
Public sector	79.0	72.9	70.4
Munich Airport Group	177.8	149.6	158.8
<b>= Value generated</b>	<b>884.1</b>	<b>833.0</b>	<b>786.6</b>

The value generated calculation represents the difference between the service provided by the Company and the value of the advance services required.

The distribution statement shows the proportions distributed to those involved in the value creation process – employees, the public sector, and lenders. Payments provided by FMG to the public sector include taxes. The interest on the loans to shareholders is included under the «Lenders» recipient group. The income from investments includes income from companies valued using the equity method and income from the transfer of profit from non-consolidated entities. The non-personnel expenses include the cost of materials and other expenses.

### AIR TRAFFIC INDICATORS / GRI A01, GRI A02, GRI A03 ✓

	2019	2018	2017
<b>Total passenger volume</b>	<b>47,959,885</b>	<b>46,271,504</b>	<b>44,594,516</b>
Total commercial traffic <sup>1</sup>	47,941,348	46,253,623	44,577,241
Scheduled and charter traffic	47,915,966	46,231,009	44,556,053
Other commercial traffic <sup>1</sup>	25,382	22,614	21,188
Non-commercial traffic <sup>1</sup>	18,537	17,881	17,275
<b>Total aircraft movements</b>	<b>417,138</b>	<b>413,469</b>	<b>404,505</b>
Total commercial traffic <sup>1</sup>	407,612	403,691	395,047
Scheduled and charter traffic	395,951	392,238	383,934
Other commercial traffic <sup>1</sup>	11,661	11,453	11,113
General air traffic (non-commercial traffic) <sup>1</sup>	9,526	9,778	9,458
<b>Seating capacity utilization in %</b>	<b>77.2</b>	<b>77.5</b>	<b>76.5</b>
<b>Cargo throughput (cargo and airmail carried in t)</b>	<b>350,058</b>	<b>368,377</b>	<b>378,803</b>
<b>Traffic units (TU) of commercial traffic</b>	<b>51,406,376</b>	<b>49,906,283</b>	<b>48,334,296</b>

<sup>1</sup> For term definitions see the Annual Statistics Report 2019, p. 28/29.

→ [munich-airport.com/statistics](https://munich-airport.com/statistics)

→ Glossary

## PASSENGER INDICATORS (COMMERCIAL TRAFFIC ONLY) / GRI A01 ✓

	2019			2018			2017		
	Total	Domestic	International	Total	Domestic	International	Total	Domestic	International
<b>Total commercial traffic</b>	<b>47,941,348</b>	<b>9,620,427</b>	<b>38,320,921</b>	<b>46,253,623</b>	<b>9,707,044</b>	<b>36,546,579</b>	<b>44,577,241</b>	<b>9,841,103</b>	<b>34,736,138</b>
Arrivals	24,039,970	4,797,621	19,242,349	23,183,728	4,844,837	18,338,891	22,340,548	4,917,320	17,423,228
Departures	23,865,826	4,814,088	19,051,738	23,038,785	4,850,214	18,188,571	22,205,715	4,916,814	17,288,901
Transit passengers <sup>1</sup>	35,552	8,718	26,834	31,110	11,993	19,117	30,978	6,969	24,009
O&D passengers <sup>2</sup> in millions	29.3			28.8			28.3		
Transfer passengers in millions	18.5			17.4			16.2		
Transfer passengers <sup>3</sup> in %	39			37			36		

<sup>1</sup> Transit passengers are passengers who fly into the airport and continue their trip on the same aircraft. Transit passengers are only counted on landing.

<sup>2</sup> Origin & destination passengers are passengers who start or end their trip at the airport.

<sup>3</sup> The proportion of transfer passengers is based on departure passenger surveys.

AIRCRAFT MOVEMENTS<sup>1</sup> / GRI A02 ✓

	2019			2018			2017		
	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures
<b>Passenger flights, scheduled/charter</b>	<b>392,328</b>	<b>196,019</b>	<b>196,309</b>	<b>388,431</b>	<b>194,073</b>	<b>194,358</b>	<b>380,119</b>	<b>189,996</b>	<b>190,123</b>
Domestic	95,209	47,572	47,637	91,024	45,503	45,521	87,977	43,965	44,012
International	297,119	148,447	148,672	297,407	148,570	148,837	292,142	146,031	146,111
<b>Cargo flights, scheduled/charter</b>	<b>3,441</b>	<b>1,716</b>	<b>1,725</b>	<b>3,576</b>	<b>1,758</b>	<b>1,818</b>	<b>3,619</b>	<b>1,795</b>	<b>1,824</b>
Domestic	1,482	796	686	1,471	769	702	1,518	800	718
International	1,959	920	1,039	2,105	989	1,116	2,101	995	1,106
<b>Airmail flights, scheduled/charter</b>	<b>182</b>	<b>91</b>	<b>91</b>	<b>231</b>	<b>114</b>	<b>117</b>	<b>196</b>	<b>98</b>	<b>98</b>
Domestic	182	91	91	231	114	117	196	98	98
International	0	0	0	0	0	0	0	0	0
<b>General air traffic</b>	<b>21,187</b>	<b>10,748</b>	<b>10,439</b>	<b>21,231</b>	<b>10,788</b>	<b>10,443</b>	<b>20,571</b>	<b>10,363</b>	<b>10,208</b>
Domestic	8,869	4,583	4,286	8,833	4,589	4,244	8,454	4,355	4,099
International	12,318	6,165	6,153	12,398	6,199	6,199	12,117	6,008	6,109
<b>Total</b>	<b>417,138</b>	<b>208,574</b>	<b>208,564</b>	<b>413,469</b>	<b>206,733</b>	<b>206,736</b>	<b>404,505</b>	<b>202,252</b>	<b>202,253</b>

<sup>1</sup> Military flights are not included.

➤ Detailed information on night-time aircraft movements can be found in the monthly impact reports: [munich-airport.com/impacts](https://munich-airport.com/impacts)

➤ Detailed information on the night-flight curfew can be found at: [munich-airport.com/night-flight](https://munich-airport.com/night-flight)

**CARGO TONNAGE [COMMERCIAL HANDLING] / GRI A03** ✓

In t	2019			2018			2017		
	Cargo handled	Incoming cargo	Outgoing cargo	Cargo handled	Incoming cargo	Outgoing cargo	Cargo handled	Incoming cargo	Outgoing cargo
Cargo-only flights	46,024	16,750	29,274	57,889	21,421	36,468	52,011	16,875	35,136
Belly-hold cargo on passenger flights	285,590	122,900	162,690	293,658	129,618	164,040	310,820	136,641	174,179
<b>Total on all flights</b>	<b>331,614</b>	<b>139,650</b>	<b>191,964</b>	<b>351,547</b>	<b>151,039</b>	<b>200,508</b>	<b>362,831</b>	<b>153,516</b>	<b>209,315</b>

**DIALOG MANAGEMENT:  
DEALING WITH FEEDBACK PROFESSIONALLY  
GRI 102-43, GRI 102-44**

The central dialog management team quickly responds to, categorizes, and analyzes all customer feedback on a case-by-case basis. This office deals with constructive criticism and positive feedback, in addition to complaints. In order to elaborate optimal process solutions for passengers and, if required, to develop improvements, the divisions, authorities, and system partners active all along the passenger experience chain are closely networked with one another.

Dialog management recorded a total of 3,137 complaints in 2019, a year-on-year reduction of approximately 14 percent. The reduction is due to the exceptionally high number of complaints that were received in 2018 in relation to the evacuation of Terminal 2 in summer 2018. In 2019, Munich Airport recorded a relative complaint rate of 65 complaints per one million passengers handled. The increase in complaints in the «Airport facility» category was due to an emergency exit door being inadvertently opened by a passenger in Terminal 2 and the resulting temporary closure of the building for security reasons. Complaints in relation to classic issues, such as baggage collection, are showing a positive trend, with a reduction of 34 percent recorded. In terms of parking, the number of complaints received increased by 38 percent. This is a result of the change in the free parking time on the terminal access road [reduced from ten minutes to five minutes].

**DIALOG MANAGEMENT / GRI 102-43, GRI 102-44** ✓

Number of entries	2019			2018			2017		
	2019	2018	2017	2019	2018	2017	2019	2018	2017
<b>Total complaints</b>	<b>3,137</b>	<b>3,660</b>	<b>2,467</b>						
<b>Number of complaints on key issues</b>									
Airline	177	181	191						
Airport facility	640	533	761						
Baggage collection	449	678	232						
Parking	156	113	82						
Passport control	298	279	258						
Security checks	497	1,092	350						
Other	920	784	593						

**FIREFIGHTING SERVICE DEPLOYMENTS / GRI 417-1**

	2019			2018			2017		
	2019	2018	2017	2019	2018	2017	2019	2018	2017
<b>Total alarms</b>	<b>3,391</b>	<b>3,717</b>	<b>3,555</b>						
False alarms	676	670	737						
<b>Number of deployments</b>	<b>2,715</b>	<b>3,047</b>	<b>2,818</b>						
Technical support jobs	1,891	1,903	1,846						
Security monitoring jobs <sup>1</sup>	561	864	833						
Firefighting jobs	263	280	139						
<b>Rescue service deployments, total</b>	<b>1,706</b>	<b>1,701</b>	<b>1,474</b>						
First responder deployments <sup>2</sup>	94	123	164						
Rescue vehicle deployments	1,612	1,578	1,310						

<sup>1</sup> On-call service where the Airport Rescue and Firefighting service attends certain situations with particularly high risk levels in order to provide immediate support should a risk occur.

<sup>2</sup> First aid until the arrival of the public rescue service.

**DONATIONS AND SPONSORSHIP<sup>1</sup> / GRI 413-1**

Proportion of total budget in %	2019			2018			2017		
	2019	2018	2017	2019	2018	2017	2019	2018	2017
Sport	46	42	39						
Social welfare	21	29	30						
Education	11	9	12						
Culture	18	19	16						
Environment	4	1	3						

<sup>1</sup> The annual sponsorship budget is linked to FMG's external sales.

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**EMPLOYEES COVERED BY COLLECTIVE BARGAINING AGREEMENTS /  
GRI 102-41, GRI 202-01** ✓

	2019		2018		2017	
	Group	FMG	Group	FMG	Group	FMG
Total number of employees covered by collective bargaining agreements	10,152	4,601	9,986	4,407	9,874	4,370
Proportion of total employees in % <sup>1</sup>	96.24	99.55	95.95	96.67	95.93	96.94

<sup>1</sup> All percentages are based on the total number of employees including apprentices, workers in minor employment, temporary workers, and interns.

**MANAGERS / GRI 405-1** ✓

Group	2019		2018		2017	
	Proportion in %	Proportion in %	Proportion in %	Proportion in %	Proportion in %	Proportion in %
<b>Total managers</b>	<b>690</b>	<b>7.01<sup>1,2</sup></b>	<b>732</b>	<b>7.60<sup>1</sup></b>	<b>744</b>	<b>7.90<sup>1</sup></b>
Women	156	1.58 <sup>1,2</sup>	174	1.81 <sup>1</sup>	190	2.02 <sup>1</sup>
Men	534	5.43 <sup>1,2</sup>	558	5.80 <sup>1</sup>	554	5.89 <sup>1</sup>
<b>Age structure of managers</b>						
Under 30 years	15	2.17 <sup>1,2</sup>	31	4.23 <sup>2</sup>	42	5.65 <sup>2</sup>
30 to 50 years	364	52.75 <sup>1,2</sup>	373	50.96 <sup>2</sup>	408	54.84 <sup>2</sup>
Over 50 years	311	45.07 <sup>1,2</sup>	328	44.81 <sup>2</sup>	294	39.52 <sup>2</sup>
<b>FMG</b>						
	<b>2019</b>	<b>2018</b>	<b>2017</b>			
	<b>Proportion in %</b>	<b>Proportion in %</b>	<b>Proportion in %</b>			
<b>Total managers</b>	<b>420</b>	<b>9.57<sup>1,2</sup></b>	<b>412</b>	<b>9.48<sup>1</sup></b>	<b>406</b>	<b>9.46<sup>1</sup></b>
Women	66	1.50 <sup>1,2</sup>	61	1.40 <sup>1</sup>	62	1.44 <sup>1</sup>
Men	354	8.07 <sup>1,2</sup>	351	8.08 <sup>1</sup>	344	8.01 <sup>1</sup>
<b>Age structure of managers</b>						
Under 30 years	7	1.67 <sup>1,2</sup>	5	1.21 <sup>2</sup>	5	1.23 <sup>2</sup>
30 to 50 years	175	41.67 <sup>1,2</sup>	161	39.08 <sup>2</sup>	187	46.06 <sup>2</sup>
Over 50 years	238	56.67 <sup>1,2</sup>	246	59.71 <sup>2</sup>	214	52.71 <sup>2</sup>

<sup>1</sup> Reporting date: December 31: Proportion of managers relative to the total number of employees.

<sup>2</sup> Proportion of managers relative to the total number of managers.

**AGE STRUCTURE OF EMPLOYEES / GRI 405-1** ✓

Group	2019						2018		2017	
	Women	Proportion in % <sup>2</sup>	Men	Proportion in % <sup>2</sup>	Total	Proportion in % <sup>2</sup>	Total	Proportion in % <sup>2</sup>	Total	Proportion in % <sup>2</sup>
<b>Age structure of employees<sup>1</sup></b>										
Under 30 years	627	6.39	911	9.29	1,538	15.68	1,532	15.92	1,516	16.11
30 to 50 years	1,719	17.53	3,337	34.03	5,056	51.56	5,022	52.17	5,013	53.26
Over 50 years	846	8.63	2,366	24.13	3,212	32.76	3,072	31.91	2,884	30.64
<b>Total</b>	<b>3,192</b>	<b>32.55</b>	<b>6,614</b>	<b>67.45</b>	<b>9,806</b>	<b>100.00</b>	<b>9,626</b>	<b>100.00</b>	<b>9,413</b>	<b>100.00</b>
<b>FMG</b>										
	<b>2019</b>	<b>2018</b>	<b>2017</b>							
	<b>Proportion in %</b>	<b>Proportion in %</b>	<b>Proportion in %</b>							
<b>Age structure of employees<sup>1</sup></b>										
Under 30 years	233	5.31	249	5.67	482	10.98	471	10.84	447	10.41
30 to 50 years	563	12.83	1,431	32.60	1,994	45.43	2,041	46.97	2,126	49.53
Over 50 years	273	6.22	1,640	37.37	1,913	43.59	1,833	42.19	1,719	40.05
<b>Total</b>	<b>1,069</b>	<b>24.36</b>	<b>3,320</b>	<b>75.64</b>	<b>4,389</b>	<b>100.00</b>	<b>4,345</b>	<b>100.00</b>	<b>4,292</b>	<b>100.00</b>

<sup>1</sup> Reporting date: December 31: Figures exclude apprentices, workers in minor employment, temporary workers, and interns.

<sup>2</sup> All percentages are based on the total number of employees as per<sup>1</sup>.

PARENTAL LEAVE TAKEN<sup>1</sup> / GRI 401-3 ✓

Group	2019			2018 Total	2017 Total <sup>2</sup>	FMG	2019			2018 Total	2017 Total
	Women	Men	Total				Women	Men	Total		
Parental leave taken	137	195	332	288	243	Parental leave taken	55	96	151	123	138
Part-time parental leave taken	11	4	15	30	44	Part-time parental leave taken	4	3	7	20	36

<sup>1</sup> Number of employees who have taken parental leave in the year under review. Figures exclude apprentices, workers in minor employment, temporary workers, and interns.

<sup>2</sup> Without HSD.

Due to the significant expense of evaluating the various parental leave models manually (duration of parental leave, split of parental leave), the number of individuals returning from parental leave, along with the number of resignations following parental leave, have not been recorded.

EMPLOYEE TURNOVER: STARTERS AND LEAVERS<sup>1</sup> / GRI 401-1 ✓

Group	2019				2018		2017		FMG	2019				2018		2017	
	Starters	Proportion in % <sup>2</sup>	Leavers	Proportion in % <sup>2</sup>	Starters	Leavers	Starters	Leavers		Starters	Proportion in % <sup>2</sup>	Leavers	Proportion in % <sup>2</sup>	Starters	Leavers	Starters	Leavers
<b>Starters and leavers by age group</b>									<b>Starters and leavers by age group</b>								
Under 30 years	707	47.71	458	38.20	664	473	861	513	Under 30 years	147	51.40	52	30.06	129	36	133	41
30 to 50 years	626	42.24	491	40.95	673	494	1,077	515	30 to 50 years	117	40.91	38	21.97	96	53	122	90
Over 50 years	149	10.05	250	20.85	184	228	267	240	Over 50 years	22	7.69	83	47.98	28	78	13	89
<b>Total</b>	<b>1,482</b>	<b>100.00</b>	<b>1,199</b>	<b>100.00</b>	<b>1,521</b>	<b>1,195</b>	<b>2,205</b>	<b>1,268</b>	<b>Total</b>	<b>286</b>	<b>100.00</b>	<b>173</b>	<b>100.00</b>	<b>253</b>	<b>167</b>	<b>268</b>	<b>220</b>
<b>Starters and leavers by gender</b>									<b>Starters and leavers by gender</b>								
Male	982	66.26	723	60.30	1,020	729	1,384	779	Male	191	66.78	127	73.41	163	123	163	158
Female	500	33.74	476	39.70	501	466	821	489	Female	95	33.22	46	26.59	90	44	105	62

<sup>1</sup> Including apprentices, excluding workers in minor employment, temporary workers, and interns.

<sup>2</sup> All percentages are based on the total number of starters/leavers among the employees as per <sup>1</sup>.

TURNOVER RATE<sup>1</sup> / GRI 401-1 ✓

In %	2019		2018		2017	
	Group	FMG	Group	FMG	Group	FMG
Turnover rate	11.93	3.86	12.32	3.77	13.37	5.01

<sup>1</sup> The turnover rate reflects the ratio of leavers to the number of employees (as an annual average including apprentices and excluding workers in minor employment, temporary workers, and interns).

AVERAGE HOURS OF TRAINING<sup>1</sup> / GRI 404-1 ✓

Average hours of training per employee	2019		2018		2017	
	Group <sup>2</sup>	FMG	Group <sup>3</sup>	FMG	Group <sup>4</sup>	FMG
Average hours of training per employee	20.3	10.1	15.9	9.2	18.91	13.35
Per male employee	20.8	10.7	16.6	9.6	20.43	14.51
Per female employee	19.2	8.2	14.3	7.9	15.95	9.41
Per manager <sup>5</sup>	16.2	10.5	16.1	12.6	17.37	13.12
Per employee (without managerial responsibilities)	20.6	10.1	15.9	8.9	21.00	16.95

<sup>1</sup> Average number of hours spent on professional development, training, and seminars that are recorded in a time-management system (excluding aviation security courses) per employee (excluding apprentices, employees in minor employment, temporary workers, and interns) as at the reporting date, December 31.

<sup>2</sup> Excluding MAI US, MAI EWR, MUCreal, LabCampus, and InfoGate.

<sup>3</sup> Excluding LabCampus, MUCreal, FM Bau, and InfoGate.

<sup>4</sup> Excluding HSD, InfoGate, and FM Bau.

<sup>5</sup> First- to fourth-tier managers excluding the Executive Board of FMG.

## OCCUPATIONAL HEALTH AND SAFETY / GRI 403-9 ✓

Group <sup>1</sup>	2019	2018 <sup>6</sup>	2017
<b>Accident statistics<sup>2</sup></b>			
Reportable occupational accidents	236	231	225
Number of resulting days of absence <sup>3</sup>	6,539	7,272	5,761
Fatal occupational accidents	0	0 <sup>7</sup>	0
Rate per 1,000 workers <sup>4</sup>	27.00	26.55	26.63
<b>FMG<sup>1</sup></b>	<b>2019</b>	<b>2018</b>	<b>2017</b>
<b>Accident statistics<sup>2</sup></b>			
Reportable occupational accidents	62	84	76
Number of resulting days of absence <sup>3</sup>	1,732	2,464	1,985
Fatal occupational accidents	0	0	0
Rate per 1,000 workers <sup>4</sup>	15.36	20.95	19.02

<sup>1</sup> Including apprentices, workers in minor employment, temporary workers, and interns.

<sup>2</sup> Injuries requiring first aid are recorded when employees attend Munich Airport's medical center.

<sup>3</sup> These are calendar days and are counted from the day following the occupational accident.

<sup>4</sup> Reportable occupational accidents x 1,000 / annual average actual employee capacity [EC].

<sup>5</sup> Ground handling employees working for FMG and employees and temporary workers at AeroGround.

<sup>6</sup> Excluding HSD.

<sup>7</sup> In 2018, a fatal work accident occurred at Munich Airport. As the person in question was an employee of a third company, the accident is not included in these statistics.

<sup>8</sup> Errors identified whilst our data was being audited have been corrected.

Workers in ground handling in Munich <sup>5</sup>	2019	2018	2017
<b>Accident statistics<sup>2</sup></b>			
Reportable occupational accidents	111	101	112
Number of resulting days of absence <sup>3</sup>	1,734	2,900	2,964
Fatal occupational accidents	0	0	0
Rate per 1,000 workers <sup>4</sup>	68.27	49.49	56.60
<b>Workers in ground handling in Berlin</b>	<b>2019</b>	<b>2018<sup>6</sup></b>	<b>2017<sup>6</sup></b>
<b>Accident statistics<sup>2</sup></b>			
Reportable occupational accidents	23	26	29
Number of resulting days of absence <sup>3</sup>	1,679	2,193	820
Fatal occupational accidents	0	0	0
Rate per 1,000 workers <sup>4</sup>	52.16	55.13	66.87

Aircraft handling is a critical area for occupational health and safety measures at Munich Airport. This is why FMG publishes additional accident statistics for employees who work in this area.

SICK LEAVE<sup>1</sup> / GRI 403-10 ✓

Group	2019			2018	2017
	Women	Men	Total <sup>4</sup>		
In %				Total <sup>3</sup>	Total <sup>4</sup>
Illness rate <sup>2</sup>	8.01	9.30	8.91	7.98	7.88
<b>FMG</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>		
In %				Total	Total
Illness rate <sup>2</sup>	6.02	9.31	8.59	7.3	7.94

<sup>1</sup> Including apprentices, excluding workers in minor employment, temporary workers, and interns.

<sup>2</sup> Hours off sick in relation to planned working hours, including rehabilitation, therapy programs, treatment, and so on; pertaining to the total number of employees as per <sup>1</sup>.

<sup>3</sup> Excluding InfoGate, LabCampus, MAI, and MUCreal.

<sup>4</sup> Excluding InfoGate, HSD, and FM Bau.

OCCUPATIONAL ILLNESSES<sup>1</sup> / GRI 403-10 ✓

In %	2019		2018		2017 <sup>4</sup>	
	Group	FMG	Group <sup>2</sup>	FMG	Group <sup>3</sup>	FMG
Reported occupational illnesses	7	7	4	4	2	2

<sup>1</sup> Including apprentices, excluding workers in minor employment, temporary workers, and interns.

<sup>2</sup> Excluding eurotrade.

<sup>3</sup> Excluding HSD.

<sup>4</sup> Errors identified while the data was being audited have been corrected.

## EMPLOYEES WITH DISABILITIES / GRI 405-1 ✓

Group	2019	2018	2017	FMG	2019	2018	2017
Number of employees with limiting disabilities <sup>1</sup>	698	698	677	Number of employees with limiting disabilities <sup>1</sup>	477	488	484
Employees with severe disabilities in % <sup>2</sup>	6.82	6.99	7.25	Employees with severe disabilities in % <sup>2</sup>	10.56	10.94	10.95

<sup>1</sup> Degree of disability of at least 30 within the meaning of equality under Book IX of the Social Security Code.

<sup>2</sup> Proportion of employees with disabilities as per <sup>1</sup> based on the average total employees, including apprentices and workers in minor employment and excluding temporary workers and interns. 2017 without HSD. From 2018 excluding MAI, InfoGate, LabCampus, and MUCreal.



NATIONALITIES<sup>1</sup> / GRI 405-1 ✓

Group	2019				2018		2017		FMG	2019				2018		2017	
	Women	Men	Total	Proportion in % <sup>2</sup>	Total	Proportion in % <sup>2</sup>	Total	Proportion in % <sup>2</sup>		Women	Men	Total	Proportion in % <sup>2</sup>	Total	Proportion in % <sup>2</sup>	Total	Proportion in % <sup>2</sup>
<b>Employee nationalities, overall picture</b>	<b>3,342</b>	<b>6,767</b>	<b>10,109</b>		<b>9,903</b>		<b>9,688</b>		<b>Employee nationalities, overall picture</b>	<b>1,142</b>	<b>3,422</b>	<b>4,564</b>		<b>4,499</b>		<b>4,446</b>	
German nationals	2,643	4,952	7,595	75.13	7,513	75.87	7,491	77.32	German nationals	1,087	3,042	4,129	90.47	4,030	89.58	3,974	89.38
Foreign nationals	699	1,815	2,514	24.87	2,390	24.13	2,197	22.68	Foreign nationals	55	380	435	9.53	469	10.42	472	10.62
<b>Most represented groups of foreign nationals</b>									<b>Most represented groups of foreign nationals</b>								
Turkey	68	473	541	5.35	547	5.52	528	5.45	Turkey	2	243	245	5.37	268	5.96	272	6.12
Croatia	36	219	255	2.52	206	2.08	117	1.21	Austria [additional as of 2018]	11	23	34	0.74	35	0.78	-	-
Hungary	16	174	190	1.88	198	2.00	183	1.89	Italy	5	18	23	0.50	26	0.58	28	0.63
Romania	74	112	186	1.84	170	1.72	126	1.30	Greece	3	16	19	0.42	20	0.44	18	0.40
Italy	31	113	144	1.42	139	1.40	132	1.36	Kosovo	1	17	18	0.39	17	0.38	16	0.36

<sup>1</sup> Reporting date: December 31: Total workforce including apprentices, excluding workers in minor employment, temporary workers, and interns.

<sup>2</sup> All percentages are based on the total number of employees as per <sup>1</sup>.

DE-ICERS USED<sup>1</sup> / GRI 301-1, GRI 301-2, GRI A06 ✓

	2018/2019	2017/2018	2016/2017
Apron de-icer in t <sup>2</sup>	4,424	4,699	3,502
Aircraft de-icer [Safewing Type I] in m <sup>3</sup>	5,531	5,139	4,071
Aircraft de-icer [Safewing Type IV] in m <sup>3</sup>	1,015	879	787
Recycling rate of Type I de-icer used in %	63	65	61
Number of days of winter operations	62	58	65

<sup>1</sup> Seasonal database/ fluctuations in year-on-year comparisons are linked to winter weather conditions.

<sup>2</sup> Liquid potassium formate and sodium formate granules.

[munich-airport.com/efm](http://munich-airport.com/efm)

The company responsible for de-icing operations at Flughafen München mbH [EFM] uses glycol-based de-icer. The low-viscosity Type I de-icer is mixed with water in the ratio 55:45, heated, and applied to the aircraft at a temperature of 85 degrees Celsius. Type IV de-icer contains thickeners, making it viscous. It is sprayed on cold and undiluted.

EMPLOYEES' AREA OF RESIDENCE<sup>1</sup> / GRI 102-8, GRI 401-1 ✓

Group	2019		2018		2017		2019		2018		2017	
	Total	Proportion in % <sup>2</sup>	Total	Proportion in % <sup>2</sup>	Total	Proportion in % <sup>2</sup>	Total	Proportion in % <sup>2</sup>	Total	Proportion in % <sup>2</sup>	Total	Proportion in % <sup>2</sup>
<b>Administrative districts</b>	<b>10,109</b>	<b>100.00</b>	<b>9,903</b>	<b>9.88</b>	<b>9,688</b>	<b>9.70</b>	<b>4,564</b>	<b>100.00</b>	<b>4,499</b>	<b>9.80</b>	<b>4,446</b>	<b>9.77</b>
Freising	2,598	25.70	2,484	25.07	2,376	24.52	918	20.11	915	20.34	903	20.07
Erding	1,915	18.94	1,920	19.39	1,880	19.40	1,076	23.58	1,067	23.71	1,065	23.44
Munich	1,939	19.18	1,940	19.59	1,866	19.26	820	17.97	790	17.56	776	17.22
Landshut	1,349	13.34	1,312	13.35	1,257	12.97	722	15.82	715	15.91	696	15.35
Pfaffenhofen	170	1.68	170	1.72	147	1.52	96	2.10	97	2.16	92	2.04
Ebersberg	193	1.91	186	1.88	156	1.61	114	2.50	109	2.42	104	2.30
Berlin and surrounding area <sup>3</sup>	180	1.78	106	1.07			1	0.02	2	0.04		
Other districts	1,765	17.46	1,785	18.03	2,006	20.70	817	17.90	804	17.87	810	17.91

<sup>1</sup> Total workforce including apprentices, excluding workers in minor employment, temporary workers, and interns, who lived in each administrative district as at the reporting date of December 31.

<sup>2</sup> All percentages are based on the total number of employees as per <sup>1</sup>.

<sup>3</sup> Survey as of 2018.

ENERGY CONSUMPTION AND EMISSIONS<sup>1</sup> / GRI 301-1, GRI 302-1, GRI 302-2, GRI 302-4, GRI 302-5, GRI 305-1, GRI 305-2, GRI 305-3, GRI 305-5 ✓

	2019			2018			2017		
	GJ	MWh	CO <sub>2</sub> (t)	GJ	MWh	CO <sub>2</sub> (t)	GJ	MWh	CO <sub>2</sub> (t)
<b>Scope 1: Direct energy consumption/emissions</b>									
Natural gas gas/diesel generating sets CHPP	0	0	0	0	0	0	414	115	23
Natural gas gas/gasoline generating sets CHPP	1,303,941	362,206	72,330	1,289,542	358,206	71,570	1,322,438	367,344	73,395
Natural gas boiler plant	20,531	5,703	1,139	18,252	5,070	1,013	18,261	5,073	1,014
Fuel oil gas/diesel generating sets	24,514	6,810	1,817	24,228	6,730	1,795	19,080	5,300	1,414
Fuel oil boiler plant	509	141	38	1,937	538	144	5,855	1,626	434
LPG	115	32	7	1,121	311	73	1,912	531	124
Fuel oil emergency gensets	1,998	555	148	1,721	478	127	1,584	440	117
Natural gas consumption EFM <sup>2</sup>	11,214	3,115	622	10,037	2,788	557	6,681	1,856	371
Diesel and gasoline	173,016	48,060	12,775	164,269	45,630	12,063	159,103	44,195	11,777
<b>Total scope 1</b>	<b>1,535,839</b>	<b>426,622</b>	<b>88,876</b>	<b>1,511,107</b>	<b>419,752</b>	<b>87,341</b>	<b>1,535,329</b>	<b>426,480</b>	<b>88,668</b>
<b>Scope 2: Indirect energy consumption/emissions<sup>3,8,13</sup></b>									
Purchased power <sup>4</sup>	177,932	49,426	25,602	223,259	62,016	33,303	268,075	74,465	43,190
Purchased district heat <sup>5</sup>	108,050	30,014	3,516	100,649	27,958	2,978	124,560	34,600	3,685
Purchased natural gas <sup>6</sup>	67,453	18,737	3,742	64,238	17,844	3,565	60,323	16,756	3,348
Power supplied to outside companies <sup>7</sup>	-203,856	-56,627	-29,333	-200,393	-55,665	-29,892	-185,775	-51,604	-29,930
Heat supplied to outside companies	-86,863	-24,129	-4,621	-86,515	-24,032	-4,576	-102,056	-28,349	-5,340
Cooling supplied to outside companies	-3,466	-963	-100	-3,870	-1,075	-115	-15,540	-4,317	-501
Natural gas supplied to outside companies	-67,453	-18,737	-3,742	-64,238	-17,844	-3,565	-60,323	-16,756	-3,348
Purchased power transmitted <sup>8</sup>	122,110	33,920	17,570	89,476	24,854	13,347	38,063	10,573	6,132
<b>Total scope 2</b>	<b>113,907</b>	<b>31,641</b>	<b>12,635</b>	<b>122,605<sup>9</sup></b>	<b>34,057<sup>9</sup></b>	<b>15,045</b>	<b>127,327<sup>9</sup></b>	<b>35,369<sup>9</sup></b>	<b>17,237</b>
<b>Scope 3: Other indirect energy consumption/emissions (by third parties)<sup>9</sup></b>	<b>10</b>	<b>10</b>		<b>10</b>	<b>10</b>		<b>10</b>	<b>10</b>	
Electrical energy purchases of outside companies	-	-	29,333	-	-	29,892	-	-	29,930
Heat purchases of outside companies	-	-	4,621	-	-	4,576	-	-	5,340
Cooling purchases of outside companies	-	-	100	-	-	115	-	-	501
Natural gas purchases of outside companies	-	-	3,742	-	-	3,565	-	-	3,348
Fuel for outside companies	-	-	8,482	-	-	9,571	-	-	7,036
<b>Subtotal</b>	<b>9</b>	<b>9</b>	<b>46,277</b>	<b>9</b>	<b>9</b>	<b>47,719</b>	<b>9</b>	<b>9</b>	<b>46,154</b>
<b>Total annual CO<sub>2</sub> emissions open to influence<sup>11</sup></b>			<b>147,788</b>			<b>150,105</b>			<b>152,059</b>
Air traffic [LTO cycle] <sup>12</sup>									
Take-off	-	-	58,338	-	-	56,306	-	-	55,792
Climb-out	-	-	101,045	-	-	97,381	-	-	94,765
Idle (taxiing on the apron)	-	-	172,769	-	-	174,565	-	-	165,488
Approach	-	-	119,124	-	-	116,348	-	-	114,575
APU [PCA taken into account] <sup>14</sup>	-	-	24,274	-	-	25,532	-	-	32,359
Engine test runs	-	-	728	-	-	456	-	-	793
Feeder traffic <sup>15</sup>	-	-	32,053	-	-	37,992	-	-	36,661
<b>Total scope 3</b>			<b>554,608</b>			<b>556,299</b>			<b>546,588</b>

<sup>1</sup> Data collected and reported according to the GHG protocol WRI/WBCSD Greenhouse Gas Protocol Corporate Accounting and Reporting Standard. Principle of operational control applied. To the extent that they are subject to emissions trading, conversion parameters, such as heat values and emission factors in particular, are determined according to the provisions of the German Emissions Trading Authority [DEHSt]. The other conversion parameters are based on the latest publications from the German Federal Environment Agency [UBA].

<sup>2</sup> EFM: Gesellschaft für Enteisung und Flugzeugschleppen am Flughafen München [company responsible for de-icing at Munich Airport]; associated company.

<sup>3</sup> Scope 2 emissions reported using the GHG Protocol Scope 2 Guidance [2015] in accordance with the «location-based» method based on emission factors for domestic consumption in Germany, electricity mix, and district heating mix. Net scope 2 emissions with specific emission factors are 0.518 kg/kWh for electricity and 0.213 kg/kWh for district heat from fossil fuels. The total purchased district heat consists of approx. 55 percent district heat from fossil fuels and approx. 45 percent district heat from biomass with a specific emission factor of 0 kg/kWh.

<sup>4</sup> 45.84 percent electricity from renewable energy sources [as at 2017 according to Section 42 of the German Energy Act [EnWG]].

<sup>5</sup> 45 percent of district heat is purchased from biomass directly from the biomass thermal power plant in Zolling.

<sup>6</sup> Solely natural gas purchased [baseline year 2018]; no renewable energy sources.

<sup>7</sup> Including the quantity transmitted to outside companies.

<sup>8</sup> Total power transmitted to outside companies and subsidiaries. The specific emission factor used for purchased power was also used here.

<sup>9</sup> For physical reasons it is not practical to add heat, cooling energy, and electricity in energy units. The sum can only be used to draw very limited conclusions.

<sup>10</sup> No information as values cannot be specified for all items.

<sup>11</sup> Sum of scope 1, scope 2, and the subtotal of scope 3a; this is the comparative value for the reference value taken from the baseline year of 2005 at 162,046 tonnes. The CO<sub>2</sub> reference value must not be exceeded in spite of expansion plans and the expected growth.

<sup>12</sup> Emissions calculated using the LASPORT model for classifying flight operations in accordance with the LTO cycle.

<sup>13</sup> Scope 2 emissions calculated using the GHG Protocol Scope 2 Guidance [2015] in accordance with the «market-based» method results in a figure of 4,200 t of CO<sub>2</sub>. This is based on an emission factor of 0.200 kg/kWhel for the Munich Airport network. The other emission factors stated in footnote 3 remain unchanged.

<sup>14</sup> Calculated from aircraft movements using the LASPORT model, subsequently taking into account the APU emissions avoided by using PCA systems.

<sup>15</sup> Feeder traffic includes the road traffic caused by passengers, visitors, and employees around the airport.

**GENERATED AND PURCHASED POWER /  
GRI 305-1, GRI 305-2, GRI 305-5**

Munich Airport produces around 80 percent of its annual heat energy requirements in the Group's own block heat and power plant. Aside from a tiny amount that is generated in peak load boilers, the airport meets the remainder of its heating needs by purchasing district heat from a public utility company in Freising. Since early 2011, 50 percent of this purchased district heat – roughly 18 gigawatt hours (GWh) – has been generated by a biomass thermal power plant in Zolling. This procurement is secured by a long-term supply option for the coming years. This district heat obtained from biomass is renewable and climate-neutral, and cuts carbon emissions by around 3,000 t per year.

**ENERGY INTENSITY COEFFICIENT<sup>1</sup> / GRI 302-3** ✓

In kWh/passenger	2019	2018	2017
Power consumption	4.88	5.02	5.24

<sup>1</sup> Power consumption is responsible for more than 2/3 of the total CO<sub>2</sub> emissions produced by energy-induced processes in the airport (excluding emissions generated by airlines). Furthermore, it is only very slightly linked to weather conditions. For this reason, the power consumption per passenger is the most meaningful indicator for energy consumption at Munich Airport.

The power consumption is made up of total power consumption of all buildings and installations on the campus, including hosted electricity. It includes power consumption by FMG and its subsidiaries, consumption by external companies, and all losses at the low-voltage level.

**GREENHOUSE GAS EMISSIONS INTENSITY<sup>1</sup> / GRI 305-4** ✓

In kg/passenger	2019	2018	2017
CO <sub>2</sub> emissions	3.08	3.24	3.41

<sup>1</sup> The CO<sub>2</sub> emissions per passenger parameter enables the physically meaningful addition of the various forms of primary and secondary energy used at the airport in relation to passenger figures.

The CO<sub>2</sub> emissions from scope 1 and 2 are added, as well as power, heat, cooling energy, natural gas, and fuel consumption by external companies. The figure therefore includes all emissions that must not exceed the targets for carbon-neutral growth.

**OTHER GREENHOUSE GAS EMISSIONS / GRI 305-3, GRI 305-5, GRI 305-6** ✓

CH <sub>4</sub> , N <sub>2</sub> O, and greenhouse gases containing fluorine in CO <sub>2</sub> equivalent <sup>1</sup> [t]	2019	2018	2017
LTO cycle	4,551	4,483	4,342
Feeder traffic <sup>2,5</sup>	427	328	323
APU <sup>3</sup>	375	370	327
Engine test run <sup>4</sup>	7	5	8
Small appliances in buildings and central cooling plants	112	685	656
Mobile systems (vehicles)	146	174	271

<sup>1</sup> Conversion of emissions into CO<sub>2</sub> equivalents in accordance with the IPCC Fourth Assessment Report.

<sup>2</sup> Feeder traffic includes the traffic caused by passengers, visitors, and commuters in the area around the airport.

<sup>3</sup> Calculated from aircraft movements using the LASPORT model, taking into account the remaining APU period when using PCA.

<sup>4</sup> Estimates.

<sup>5</sup> Higher values in 2019 owing to higher emission factors in the «Handbook Emission Factors for Road Transport [HBEFA]» [HBEFA 4.1].

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**MEASURED POLLUTANT CONCENTRATIONS<sup>1</sup> / GRI 305-7, GRI A05** ✓

In µg/m <sup>3</sup>	Current legal annual limit value	2019	2018	2017
NO <sub>2</sub> concentration (nitrogen dioxide)	40	18	18	22
SO <sub>2</sub> concentration (sulfur dioxide) <sup>2</sup>	20	2	2	2
PM <sub>10</sub> concentration (particulate matter)	40	12	14	16
PM <sub>2.5</sub> concentration	25	8	11	11

<sup>1</sup> As part of the publication of the Integrated Report, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> are recorded. Other pollutant concentrations can be found in the monthly impact reports: [www.munich-airport.com/impact](http://www.munich-airport.com/impact)

<sup>2</sup> Statutory threshold to protect vegetation, only strictly applicable away from urban centers and transport facilities, but complied with here as well as the immission value specified by the administrative regulation TA Luft for protecting human health [50 µg/m<sup>3</sup>].

**TOTAL DRINKING WATER CONSUMPTION<sup>1,2</sup> / GRI 303-3, GRI 303-5**

1 m <sup>3</sup> corresponds to 0.001 mega liters	2019	2018	2017
Water purchased from utility in m <sup>3</sup>	1,032,239	986,580	1,016,708
Water consumption per 1,000 traffic units in m <sup>3</sup>	20.1	19.8	21.0

<sup>1</sup> Includes all companies on the campus.

<sup>2</sup> Values are derived as follows: Water metering in m<sup>3</sup> measured at the drinking water feed points (transfer points at water metering shafts 1 through 4) from the Moosrain water utility company to Munich Airport.

**TOTAL PROCESS WATER EXTRACTION FOR COOLING IN THE POWER CENTERS, WEST AND EAST / GRI 303-1, GRI 303-3, GRI 303-5**

1 m <sup>3</sup> corresponds to 0.001 mega liters	2019	2018	2017
Quantity of the quaternary groundwater extracted in m <sup>3</sup>	256,326	279,881	225,549

**TOTAL WASTEWATER DISCHARGED<sup>1,2</sup> / GRI 303-2, GRI 303-4, GRI 306-1**

1 m <sup>3</sup> corresponds to 0.001 mega liters	2019	2018	2017
Total wastewater discharged from Munich Airport to the sewage plant of the Erdinger Moos wastewater utility company in m <sup>3</sup>	2,494,388	2,404,292	2,336,314
Wastewater consumption per 1,000 traffic units in m <sup>3</sup>	48.5	48.2	48.3

<sup>1</sup> Includes all companies on the campus.

<sup>2</sup> The wastewater discharged to the sewage plant consists of domestic wastewater, industrial wastewater, mixed water, and de-icing waste.

**AIR POLLUTANT EMISSIONS / GRI 305-7, GRI A05** ✓

In t	2019	2018	2017
NO <sub>x</sub> - air traffic (LTO cycle)	1,739.0	1,676.8	1,556.9
NO <sub>x</sub> - feeder traffic <sup>1</sup>	88.0	82.4	83.8
SO <sub>x</sub> - air traffic (LTO cycle)	114.0	112.7	109.2
SO <sub>x</sub> - feeder traffic <sup>1</sup>	0.2	0.2	0.2
PM <sub>10</sub> - air traffic (LTO cycle)	13.5	13.4	13.1
PM <sub>2.5</sub> - feeder traffic <sup>1</sup>	1.0	1.1	1.2

<sup>1</sup> Feeder traffic includes the traffic caused by passengers, visitors, and commuters in the area around the airport.

**WATER SOURCES / GRI 303-1, GRI 303-3**

Munich Airport sources its drinking water from the Moosrain water utility company, which extracts it from the tertiary strata via seven water wells at depths of between 94 and 160 meters. The water wells are located in water protection areas at «Obere Point» [surface area 33 ha] and «Oberdinger-moos» [surface area 36 ha] in the Oberding municipality.

[moosrain.de/verband/daten-fakten](http://moosrain.de/verband/daten-fakten)

**WATER SAMPLES / GRI 303-1, GRI 303-2, GRI A04**

Under the provisions of the planning approval notice, Munich Airport is required to test the water surrounding the airport. Securing evidence regarding the quantity [water level] and quality [water quality] of groundwater is particularly important. FMG measures the water levels of more than 300 groundwater and 17 surface water measurement points on an ongoing basis. Water quality is determined at 18 groundwater and eleven surface water measurement points. All implemented measures are summarized in a report, evaluated, and presented to the water authorities.

[azv-em.de](http://azv-em.de)

**HAZARDOUS GOODS: CHECKS AND TRAINING COURSES /  
GRI 306-4**

Operations at Munich Airport involve a number of substances that are harmful to the environment and water; these must be declared as hazardous goods and transported off the site. The vehicles used for transporting hazardous goods were inspected to verify that they are in proper condition and are certified as roadworthy and safe to operate. Employee training on the handling of hazardous goods is held at regular intervals in accordance with legal regulations. In the 2019 year under review, a total of 196 tonnes of waste (prior year: 251 tonnes) declared as hazardous goods were transported away for disposal.

**WASTE<sup>1</sup> / GRI 306-2, GRI 306-4**

In t	2019	2018	2017	Point of disposal and reuse
<b>Recycling</b>				
Paper, cardboard, and cartons from aircraft <sup>2</sup>	0	0	0	Sorting facilities, paper factory in Munich/Schrobenhausen (wastepaper recycling)
Paper, cardboard, and cartons from buildings	1,441	1,508	1,574	
Mixed reclaimed materials/waste for recycling from buildings	3,154	3,037	3,026	
Top soil (humus-rich excavation material) <sup>3</sup>	2,650	2,766	0	Sorting facilities, recycling firms in Eitting, Schwaig, Moosburg, and Munich
Mixed glass	228	248	176	
Wood	457	495	357	
Bulk waste	920	852	764	
Scrap metal containing electronic waste	568	626	630	
Other recyclables <sup>4</sup>	248	204	212	
<b>Total recycling</b>	<b>9,666</b>	<b>9,736</b>	<b>6,739</b>	
<b>Other forms of utilization</b>				
<b>Material utilization</b>	<b>3,529</b>	<b>4,560</b>	<b>4,643</b>	
Building site waste (waste from dismantling, conversion, renovation, and maintenance measures)	2,346	3,207	3,127	Recycling/disposal firms (material recycling/pit filling)
Hazardous waste (FMG fraction only, excluding mineral wool and hazardous goods)	59	70	58	Recycling/disposal firms (material recycling) or hazardous waste specialists in Munich and Ebenhausen (secondary fuels)
Of which are subject to ADR (hazardous goods) rules <sup>5</sup>	196	251	199	
Other waste <sup>6</sup>	928	1,032	1,259	
<b>Energy recovery</b>	<b>2,254</b>	<b>2,135</b>	<b>1,951</b>	
Food waste <sup>7</sup>	1,394	1,228	1,123	Biogas plant (energy recovery)
Waste from cleaning of aircraft cabins <sup>8</sup>	0	0	0	Munich North power plant (energy recovery)
Waste for disposal/prohibited liquids (terminal areas)	198	201	195	
Waste for disposal from buildings	662	706	633	
<b>Total utilization</b>	<b>5,783</b>	<b>6,695</b>	<b>6,594</b>	
<b>Landfill waste</b>				
Insulators (mineral wool) <sup>9</sup>	236	597	432	Spitzlberg, Landshut landfill
<b>Total landfill</b>	<b>236</b>	<b>597</b>	<b>432</b>	
<b>Total amount</b>	<b>15,685</b>	<b>17,028</b>	<b>13,765</b>	

<sup>1</sup> All quantities refer exclusively to the disposal processes organized by FMG waste management.

This refers to the total figure reported (2019: 15,685 t).

<sup>2</sup> Disposal is no longer conducted by FMG waste management. Disposal and transport services were outsourced to a disposal company in April 2011.

<sup>3</sup> In 2018, the «disposal» (= recycling) of the «Top soil fraction» was handled by FMG waste management for the first time. The topsoil comes from various construction activities.

<sup>4</sup> Foil, lightweight packaging, for example.

<sup>5</sup> ADR (Accord européen relatif au transport international des marchandises dangereuses par route): European Agreement concerning the International Carriage of Dangerous Goods by Road.

<sup>6</sup> For example runway wear, refuse, old tires, rubber waste.

<sup>7</sup> Food waste disposal from the Allresto catering area in Terminal 2 only.

<sup>8</sup> Waste from the cleaning of aircraft cabins and catering waste is processed by a disposal firm at the Munich North waste incineration plant/ at the power plant in accordance with EC Regulation 1069/2009. Disposal is no longer FMG's responsibility and has been conducted by a specialist contractor working on behalf of the Erding animal carcass disposal association since 2011.

<sup>9</sup> Insulators that are collected at a disposal specialist contracted on behalf of the district of Freising and sent away for proper disposal (landfill). Figure has increased in 2018 due to renovation/roof repair work (mineral wool).

MEASURED NOISE<sup>1</sup> / GRI A07 ✓

In dB(A)	2019		2018		2017	
	Night <sup>2</sup>	Day	Night <sup>2</sup>	Day	Night <sup>2</sup>	Day
Measurement point (nearest municipality)						
Brandstadi (municipality of Hallbergmoos)	51	59	50	58	51	59
Pallhausen (town of Freising)	49	55	48	54	46	56
Reisen (municipality of Eitting)	47	55	49	56	48	55
Viehlaßmoos (municipality of Berglern)	47	55	47	54	44	52

<sup>1</sup> Leq3 continuous sound level in dB(A) for the six busiest months at four aircraft noise measuring stations situated on each of the main flight paths.

<sup>2</sup> Period: 10 p.m. to 6 a.m.

## DISTRIBUTION OF OPERATIONS DIRECTIONS BETWEEN WEST AND EAST

	Westward		Eastward	
	Take-offs	Landings	Take-offs	Landings
Total aircraft movements <sup>1</sup> , absolute	258,886		155,256	
Total aircraft movements <sup>1</sup> , in %	63		37	
North runway	58,566	72,811	38,395	39,763
South runway	70,778	56,731	39,326	37,772

<sup>1</sup> Excluding helicopters

Source: Impact reports from January to December 2019.

The distribution of operations directions, in other words the decision as to whether the aircraft take off and land to the east or west, depends on the wind. Aircraft always take off and land in the opposite direction to the prevailing wind. Furthermore, FMG also tries to ensure that the north and south runways are used equally when organizing the runway system.

## NOISE COMPLAINTS / GRI 102-44 ✓

	2019	2018 <sup>1</sup>	2017
Noise complaints received via telephone	206	185	248
Complainants	99	116	142
Complaints received in writing	87	161	-
Complainants	52	66	-

<sup>1</sup> The increase in written complaints is due to the fact that since 2018, Deutscher Fluglärmdienst e.V. [German aircraft noise service] has listed the e-mail address «info@munich-airport.de» on its website as the address to which complaints should be directed. These complaints were previously received by the government of Upper Bavaria and were not included in these statistics.

➔ Noise measurement points  
[munich-airport.com/  
noise-protection](http://munich-airport.com/noise-protection)

POPULATION GROWTH IN NEIGHBORING COMMUNITIES<sup>1</sup> / GRI A07 ✓

Number of residents	2018	2017	2016
Freising (district of Freising)	48,634	48,318	47,848
Marzling (district of Freising)	3,238	3,231	3,233
Oberding (district of Erding)	6,505	6,325	6,187
Hallbergmoos (district of Freising)	10,953	10,946	10,835
<b>Total residents</b>	<b>69,330</b>	<b>68,820</b>	<b>68,103</b>

<sup>1</sup> The reporting date is December 31 in each case.

Source: Bayerisches Landesamt für Statistik und Datenverarbeitung [Bavarian State Office for Statistics and Data Processing] - Statistikatlas Bayern [statistical atlas of Bavaria]. Figures for 2019 were not available at the time of going to press.

«GREEN SPACES»<sup>1</sup> BELONGING TO THE AIRPORT BUT OUTSIDE THE AIRPORT FENCE / GRI 102-7, 304-3 ✓

In ha	2019	2018	2017
«Green spaces» in total	844	824	751
Compensatory mitigation areas, zone III <sup>2</sup>	470	450	375
Airport periphery, zone II	250	250	250
Ecological land reserve for future expansion measures	124	124	126

<sup>1</sup> Green areas in zone II and III that Flughafen München GmbH is developing or maintains as natural conservation areas [in contrast to rented farmland or other real estate].

<sup>2</sup> From 2018 to 2019, approx. 20 ha of new compensation and replacement zones were created without impacting the ecological land reserve.