

# Madrid T4 Airport Simulation Report

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## Overall Statistics

Total Passengers	33072
Processed Passengers	33072
Average Total Time	9.0 minutes
Maximum Total Time	33.5 minutes
Minimum Total Time	0.2 minutes

## Baggage Statistics

Metric	Value
Total Bags	63952
Passengers with Bags	18258 (55.2%)
Average Bags per Passenger	1.93
Average Bags per Passenger with Bags	3.50
Maximum Bags for a Passenger	13

## Flight & Passenger Distribution Statistics

Total Flights	230
Overbooked Flights	4 (1.7%)
Average Overbooking Factor	1.04x
Average Load Factor	0.92 (target)
Passenger Distribution	Normal distribution
Overbooking Rate	2.0% of flights
Max Overbooking	1.10x capacity

### *Passenger Distribution by Flight*

Metric	Value
Average Passengers per Flight	143.8
Minimum Passengers	71
Maximum Passengers	271
Standard Deviation	36.0

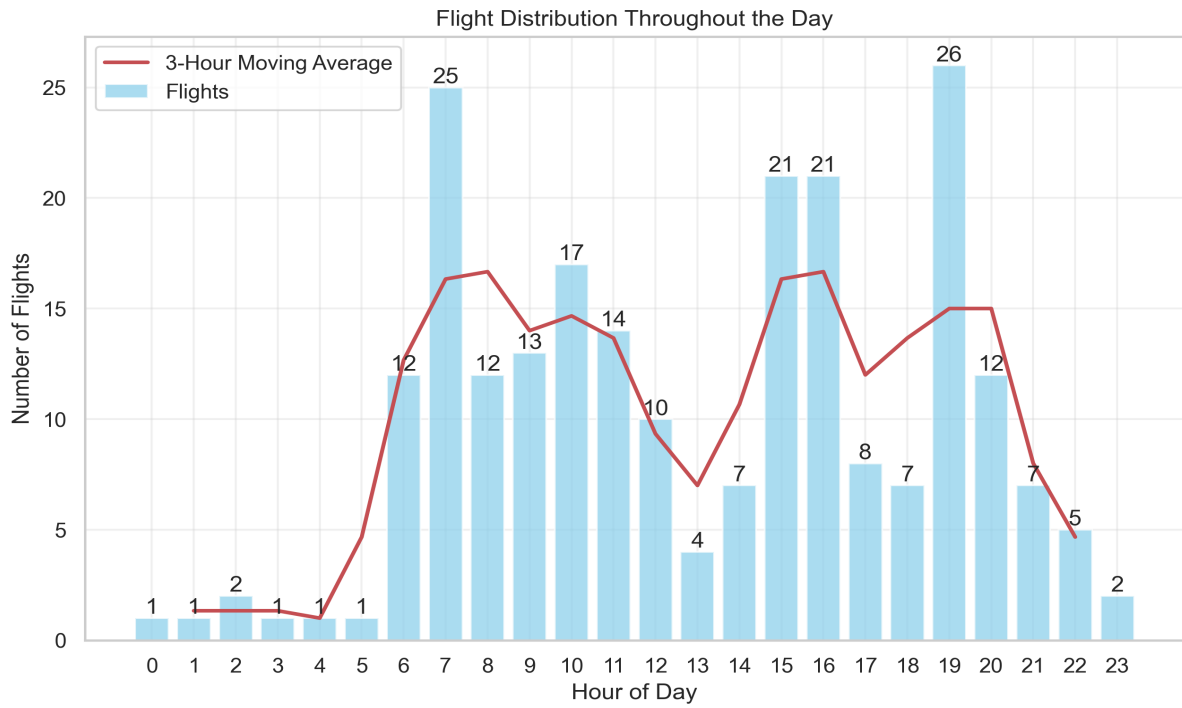
**Station Performance**

Metric	Check-in	Security	Passport	Boarding
Average Wait (min)	2.2	6.2	0.3	1.6
Maximum Wait (min)	12.9	29.2	1.4	6.0
Average Queue Length	16.9	113.8	0.2	31.6
Maximum Queue	216.0	1000.0	8.0	130.0

**Resource Utilization Analysis**

Station	Average	Peak	Minimum
Checkin	13.3%	100.0%	0.0%
Security	43.3%	100.0%	0.0%
Passport	11.0%	100.0%	0.0%
Boarding	54.8%	100.0%	0.0%

**Flight Distribution**



Time Period	Number of Flights
Morning (6-10)	62
Midday (10-14)	45
Afternoon (14-18)	57
Evening (18-22)	52
Night (22-6)	14