

<b>Subject:</b> Capacity Declaration for Winter Season 2024 (W24)	<b>Date:</b> 14 <sup>th</sup> May 2024
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**Introduction:**

The concept of Level of Service (LoS) is an aggregated framework for the design and expansion of facilities as well as for the monitoring of existing facilities. For processing facilities both waiting time and Space requirements must be considered together to provide a balanced LoS.

LoS is used to help determine facility requirements for a given design demand. Plans developed forecast busy hour will provide facilities that operate according to an optimum LoS aligned to an agreed future throughput.

Until the airport reaches that forecast level of activity, the facilities will function at a higher LoS, failing in the Over-Design. Furthermore, because demand varies over time, the LoS will also vary. Planners should, therefore, consider targeting an optimum LoS in the knowledge that, during the busiest/peak traffic periods, the optimum LoS may not be achieved. Balancing investment decisions with LoS is a complex management and policy decision.

Level of Service (LoS)	Space	Time
<b>Over-Design</b>	Excessive or empty space.	Overprovision of resources.
<b>Optimum</b>	Sufficient space to accommodate the necessary functions in a comfortable environment.	Acceptable waiting times.
<b>Sub-Optimum</b>	Crowded and uncomfortable.	Unacceptable waiting times.

**Table No. 1: Level of Service Parameters**

LoS Guidelines		SPACE GUIDELINES (sqm/PAX)			MAXIMUM WAITING TIME GUIDELINES Economy Class (minutes)			MAXIMUM WAITING TIME GUIDELINES Business Class / First Class / Fast Track (minutes)			OTHER GUIDELINES & REMARKS		
		Over-Design	Optimum	Sub-Optimum	Over-Design	Optimum	Sub-Optimum	Over-Design	Optimum	Sub-Optimum	Over-Design	Optimum	Sub-Optimum
Public Departure Hall		> 2.3	2.0 - 2.3	< 2.0	n/a			n/a			Optimum proportion of seated occupants: 15 - 20%*		
Check-In	Self-Service Kiosk (Boarding Pass / Bag Tagging)	> 1.8	1.3 - 1.8	< 1.3	< 1	1 - 2	> 2	< 1	1 - 2	> 2			
	Bag Drop Desk (queue width: 1.4 - 1.6m)	> 1.8	1.3 - 1.8	< 1.3	< 1	1 - 5	> 5	< 1	1 - 3	> 3			
	Check-in Desk (queue width: 1.4 - 1.6m)	> 1.8	1.3 - 1.8	< 1.3	< 10	10 - 20	> 20	< 3	3 - 5	> 5			
Security Control (queue width: 1.2m)		> 1.8	1.3 - 1.8	< 1.3	< 1	1 - 3	> 3	< 1	Fast Track 1 - 3	> 3			
		> 1.8	1.3 - 1.8	< 1.3	< 1	1 - 3	> 3	< 1	Fast Track 1 - 3	> 3			
Emigration Control (Outbound Passport Control) (queue width: 1.2m)	Staffed Emigration Desk	> 1.2	1.0 - 1.2	< 1.0	< 5	5 - 10	> 10	< 1	Fast Track 1 - 3	> 3			
	Automatic Border Control	> 1.2	1.0 - 1.2	< 1.0	< 1	1 - 5	> 5	n/a					
Gate Holdrooms ***	Seating	> 2.2	1.8 - 2.2	< 1.8	n/a			n/a			Optimum proportion of seated occupants: 50 - 70%*		
	Standing	> 1.5	1.2 - 1.5	< 1.2	n/a			n/a					
Immigration Control (Inbound Passport Control) (queue width: 1.2m)	Staffed Immigration Desk	> 1.2	1.0 - 1.2	< 1.0	< 5	5 - 10	> 10	< 1	Fast Track 1 - 5	> 5			
	Automatic Border Control	> 1.2	1.0 - 1.2	< 1.0	< 1	1 - 5	> 5	n/a					
Baggage Reclaim	Narrow Body Aircraft	> 1.7	1.5 - 1.7	< 1.5	< 0	0 / 15	> 15	< 0	0 / 15	> 15	The first waiting time value relates to "first passenger to first bag", the second waiting time value relates to "last bag on belt" (counting from the first bag delivery).**		
	Wide Body Aircraft	> 1.7	1.5 - 1.7	< 1.5	< 0	0 / 25	> 25	< 0	0 / 15	> 15			
Customs Control		> 1.8	1.3 - 1.8	< 1.3	< 1	1 - 5	> 5	< 1	1 - 3	> 3	Waiting times refer to a procedure when 100% of the passengers are being checked by Customs		
Public Arrival Hall		> 2.3	2.0 - 2.3	< 2.0	n/a			n/a			Optimum proportion of seated occupants: 15 - 20%*		

**Table No.2: LoS Guidelines for Airport Terminal Facilities**

**DACO Objective:**

The overall objective is the provision of **Optimum** terminal facilities, avoiding over-provision or under-provision. Terminal facilities that operate at an **Optimum** service level provide sufficient space to accommodate all the necessary functions in a comfortable environment. They allow stable passenger flows with acceptable processing and waiting times, denote overall good service to passengers while keeping capital expenditures (CAPEX) and operational expenditures (OPEX) at reasonable levels.



**Infographic No.1: IATA Optimum Level of Service**

Therefore, the capacity declaration has been developed for Winter Season 2024 (W24) to meet the Optimum Level of Service, taking the below facts in considerations:

- The maximum waiting time taken at each touch point is according to IATA **Optimum** Level of Service.
- Space guidelines taken in this calculation are according to IATA **Optimum** Level of Service.

**Capacity Declaration:**

**King Fahd International Airport, Dammam (DMM)**

Capacity numbers are calculated based on the capacity of each touch point per hour. So, according to the below summary table, it shows that the international departure is limited by the immigration area capacity limit, while the domestic departure is limited by the security screening area. On the other hand, international arrival is limited by the capacity of the customs, and domestic arrival is assumed to be as the capacity of the departure.

T60/Departure					T60/Arrival			
Departure	Touch Point	Check - in	E-Gates	Departure Immigration	Security Screening	Arrival	Arrival Immigration	Customs
	Domestic	1336 Pax/H	3600 Pax/H	N/A	1125 Pax/H		1125 Pax/H (As Dep)	
	International	2160 Pax/H	4800 Pax/H	1440 Pax/H	1875 Pax/H		1920 Pax/H	1800 Pax/H
	<b>Total</b>	<b>3754 Pax/H</b>	<b>8400 Pax/H</b>	<b>1440 Pax/H</b>	<b>3000 Pax/H</b>		<b>1920 Pax/H</b>	<b>1800 Pax/H</b>
Assumptions		Processing Time: 1.5 min DOM 2 min INT 92 counters 20 counters DOM 72 counters INT	Processing Time: 6 sec 6 Gates DOM 8 Gates INT	Processing Time: 1 min 24 counters	Processing Time: 10 sec 3 lanes DOM 5 lanes INT	Processing Time: 1 min 32 Counters	Processing Time: 6 Sec. 3 lanes	

The Following Conditions Shall be Applied:

- Although DACO has declared this capacity, ACL must inform DACO in case of any additional slots request beyond this capacity limits. Only DACO has the right to accept or reject additional requests.
- General Aviation requests, diverted flights, slots requests during weekends, holidays or within less 24 hours shall be managed and approved by DACO.
- ICAO Code **F** aircraft to be referred to DACO by ACL.
- Check-in counters: a total of **92** check-in counters shall be distributed as follows: **20** counters for Domestic flights and **72** counters for international flights.
- Check-in Counters allocations: For Wide body aircraft, (**4**) counters will be allocated. For Narrow Body aircraft, (**3**) Counters will be allocated.
- International flights open 180 minutes before STD, close 60 minutes before STD.
- Domestic flights open 180 minutes before STD, close 60 minutes before STD.

- **Runways:** Two (2) Runways 24H Operations.

R60 Slot Capacity Limit			
Hours (UTC)	Arrival	Departure	Total
0000-2359	14	23*	<b>37</b>

\*Runway 16L/34R will be used only for departure due to Oxford Academy operations.

**Terminal:** One Passenger Terminal Building Available (Mixed International & Domestic)

<b>Domestic</b>		
<b>T60 Terminal Capacity Limit</b>		
<b>Hours (UTC)</b>	<b>Arrival</b>	<b>Departure</b>
0000-2359	1125	1125
Load Factor: 90%		
<b>International</b>		
<b>T60 Terminal Capacity Limit</b>		
<b>Hours (UTC)</b>	<b>Arrival</b>	<b>Departure</b>
0000-2359	1800	1440
Load Factor: 80%		

- **Apron Parking:**

Total of **42** Aircrafts parking can be utilized as the following table:

<b>Apron Parking</b>				
<b>ICAO Aircraft Size</b>	<b>Code C</b>	<b>Code D</b>	<b>Code E</b>	<b>Code F</b>
No.	42	39	31	3



**Al-Ahsa International Airport (HOF)**

Capacity numbers are calculated based on the capacity of each touch point per hour. So, according to the below summary table, it shows that the domestic and international departure is limited by the check-in area capacity limit, On the other hand, international arrival is limited by the capacity of the Immigration area, and the domestic arrival is assumed to be as the capacity of the departure.

T60/Departure				T60/Arrival			
Departure	Touch Point	Check - in	Departure Immigration	Security Screening	Arrival	Arrival Immigration	Customs
	Domestic	401 Pax/H	N/A			401 Pax/H (As Dep)	
	International	180 Pax/H	480 Pax/H			480 Pax/H	750 Pax/H
	<b>Total</b>	<b>581 Pax/H</b>	<b>480 Pax/H</b>	<b>1125 Pax/H</b>		<b>480 Pax/H</b>	<b>750 Pax/H</b>
Assumptions		Processing Time: 1.5 min DOM 2 min INT 12 counters: 6 Counters DOM 6 Counters INT	Processing Time: 1 min  8 counters	Processing Time: 10 sec  3 X-Ray machines are used for both DOM & INT	Processing Time: 1 min  8 Counters	Processing Time: 10 Sec.  2 lanes	

The Following Conditions Shall be Applied:

- Although DACO has declared this capacity, ACL must inform DACO in case of any additional slots request beyond this capacity limits. Only DACO has the right to accept or reject additional requests.
- General Aviation requests, diverted flights, slots requests during weekends, holidays or within less 24 hours shall be managed and approved by DACO.
- ICAO Code **C** aircraft are only permitted to operate.
- Check-in counters: a total of Twelve (**12**) check-in counters are available, shall be distributed as follows: **6** counters for Domestic flights and **6** counters for International flights.
- Check-in Counters allocations: For Wide body aircraft, (**4**) counters will be allocated. For Narrow Body aircraft, (**3**) Counters will be allocated.
- International flights open 180 minutes before STD, close 60 minutes before STD.
- Domestic flights open 180 minutes before STD, close 60 minutes before STD.

- Runway: One (1) Runway is open 24H

R60 Slot Capacity Limit			
Hours (UTC)	Arrival	Departure	Total
0000-2359	5	5	<b>10</b>

- **Terminal:** One Passenger Terminal Building Available (Mixed International & Domestic)

<b>Domestic</b>		
<b>T60 Terminal Capacity Limit</b>		
<b>Hours (UTC)</b>	<b>Arrival</b>	<b>Departure</b>
0000-2359	401	401
Load Factor: 90%		
<b>International</b>		
<b>T60 Terminal Capacity Limit</b>		
<b>Hours (UTC)</b>	<b>Arrival</b>	<b>Departure</b>
0000-2359	480	180
Load Factor: 80%		

- **Apron Parking:**

Total of 7 Aircrafts parking.

<b>Apron Parking</b>			
<b>ICAO Aircraft Size</b>	<b>Code C</b>	<b>Code D</b>	<b>Code E</b>
No.	7	4	4

**Al-Qaisumah International Airport (AQI)**

Capacity numbers are calculated based on the capacity of each touch point per hour. So, according to the below summary table, it shows that the domestic and international departure is limited by the check-in area capacity limit, On the other hand, international arrival is limited by the capacity of the Immigration area, and the domestic arrival is assumed to be as the capacity of the departure.

T60/Departure				T60/Arrival			
<b>Departure</b>	Touch Point	Check - in	Departure Immigration	Security Screening	<b>Arrival</b>	Arrival Immigration	Customs
	Domestic	267 Pax/H	N/A	375 Pax/H		267 Pax/H (As Dep)	
	International	120 Pax/H	240 Pax/H			300 Pax/H	375 Pax/H
	<b>Total</b>	<b>**</b>	<b>240 Pax/H</b>	<b>375 Pax/H</b>		<b>300 Pax/H</b>	<b>375 Pax/H</b>
<b>Assumptions</b>	Processing Time: 1.5 min DOM 2 min INT 4 counters used for either DOM or INT	Processing Time: 1 min 4 counters	Processing Time: 10 sec 1 X-Ray machines are used for both DOM & INT		Processing Time: 1 min 5 Counters	Processing Time: 10 Sec. 1 lanes	

The Following Conditions Shall be Applied:

- Although DACO has declared this capacity, ACL must inform DACO in case of any additional slots request beyond this capacity limits. Only DACO has the right to accept or reject additional requests.
- General Aviation requests, diverted flights, slots requests during weekends, holidays or within less 24 hours shall be managed and approved by DACO.
- ICAO Code **C** aircraft are only permitted to operate.
- Check-in counters: Four (4) check-in counters.
- Check-in Counters allocations: For Wide body aircraft, (4) counters will be allocated. For Narrow Body aircraft, (3) Counters will be allocated.
- International flights open 180 minutes before STD, close 60 minutes before STD.
- Domestic flights open 180 minutes before STD, close 60 minutes before STD.

- **Runway:** One (1) Runway Opens from: 0400 UTC to 2000 UTC

R60 Slot Capacity Limit			
Hours (UTC)	Arrival	Departure	Total
0400-2000	5	5	<b>10</b>

- **Terminal:** One Passenger Terminal Building Available (Mixed International & Domestic)  
 Only Four (4) counters are available and cannot be used for both DOM and INT at the same time. A separation of Two (2) hours shall be considered between DOM and INT departed flights.

<b>Domestic</b>		
<b>T60Terminal Capacity Limit</b>		
<b>Hours (UTC)</b>	<b>Arrival</b>	<b>Departure</b>
0400-2000	267	267
Load Factor: 90%		
<b>International</b>		
<b>T60Terminal Capacity Limit</b>		
<b>Hours (UTC)</b>	<b>Arrival</b>	<b>Departure</b>
0400-2000	300	120
Load Factor: 80%		

- **Apron Parking:**

Total of 4 Aircrafts parking.

<b>Apron Parking</b>	
<b>ICAO Aircraft Size</b>	<b>Code C</b>
No.	4