

DXB Northern Runway Rehabilitation 2022 **AIRLINE BRIEFING**

Dubai Airports & ACL
28th April 2022



- Project Summary
- Project Programme
- DXB Runway Capacity and Utilisation
- DWC PTB Capacity Update and Utilisation
- DXB Terminal Capacity and Utilisation
- Coordination Update
- Surface Access Provisions
- Diversion Policy
- Slot Adherence Requirements and Importance / Disruption Planning

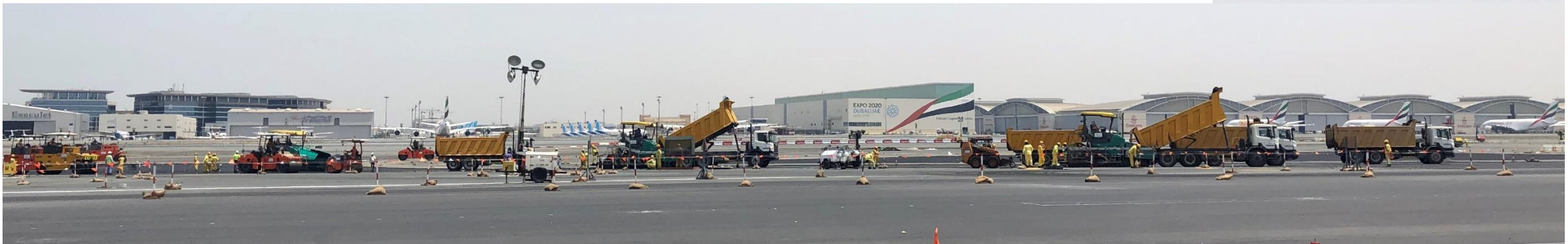
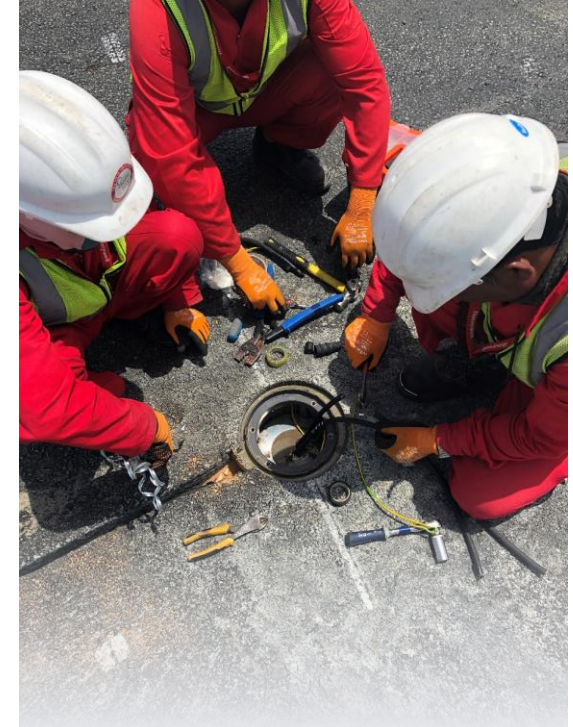
Background

- 24/7 airport with limited runway capacity makes rehabilitation challenging
- Sustained closures required to facilitate significant works
- Southern runway was rehabilitated in 2019
- The Northern runway was last rehabilitated in 2014
- An opportunity to undertake the Northern Runway Rehabilitation ahead of the end of life date (2024/25)
 - Slower than expected recovery
 - Benefit of minimising longer term traffic loss
 - Mitigation of significant future works until after 2030
- Programme for NRR2 on track
 - Closure as planned from Monday 9th May to Wednesday 22nd June 2022
- DWC will open for Departures on 0000 hours 9th May. Live arrivals permitted from 1830 hours LT on the 8th May.

NRR Scope of Works

NRR scope of works include:

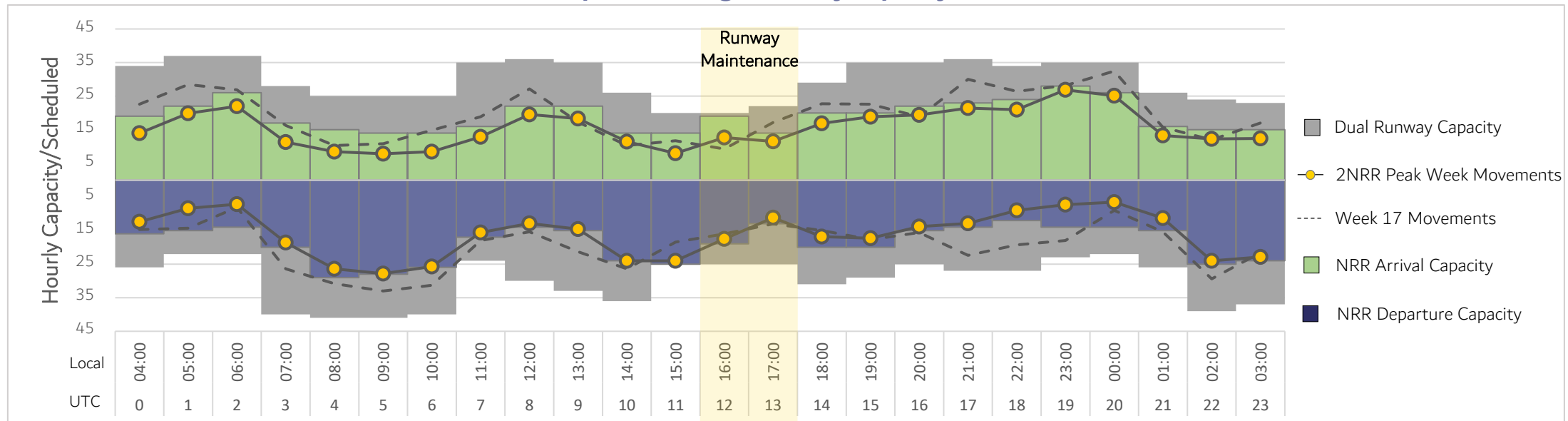
- Milling of existing runway surface, approx. 24,000m³ or 60,000 tons
- Subgrade works complete prior to closure 239,900m²
- Subgrade pavement and grading during closure 124,500m²
- Strengthening of the wider runway strip, total concrete works 29,800m³
- Asphalt works prior to closure 24,400 tons, Closure asphalting works 128,300 tons
- Aeronautical Ground Lighting (AGL), 3,630 units, dismantle, test, reinstall (repair/replace) and Taxiway Guidance Signs (TGS) replacement
- Secondary cabling replacement 264km. Replacement of 5,530 connectors
- Repair of drainage infrastructure
- Relocation and replacement of 12L and 30R ILS, including Localisers & Glide Path antenna and masts, near and far field monitors, shelters and DME
- Relocation and replacement of Meteorological systems, including RVRs, AWOS, visibility sensors and Ceilometers



DXB Capacity During NRR – Runway and Terminals

- Runway Rehabilitation projects have largely been impacted purely by runway capacity
- Temporary terminal scheduling limits have been in place, but are now largely removed
- Runway capacity changes illustrated below
- Coordination largely complete, some delays in hand backs, however slot allocation now largely complete
- All DXB airport capacity is now reactivated, EKSC have relocated to DWC and DWC PTB will open on 09th May 2022.

Dual Compared to Single Runway Capacity Profile



Peak hourly ARR capacity is reduced from 37 to 28

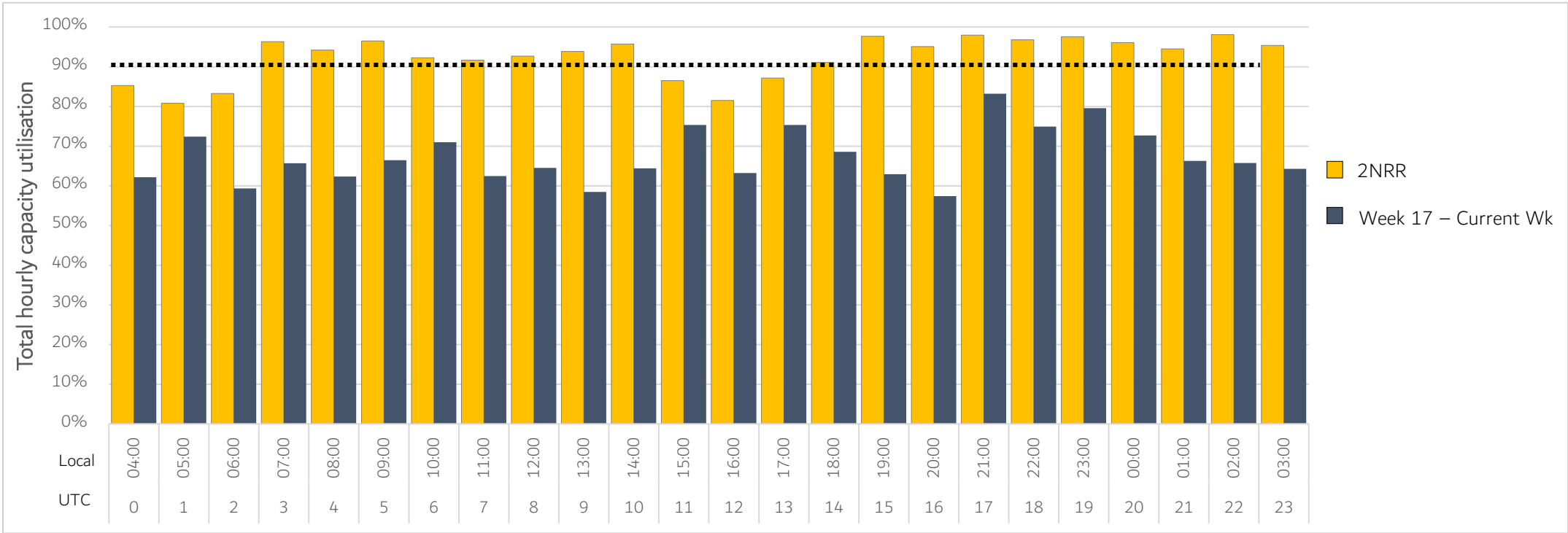
Peak hourly DEP capacity is reduced from 41 to 29

Rwy Maintenance will be every Sunday from 12-14 UTC

DXB Runway Capacity Utilisation Comparison

- The below chart shows the current utilisation of runway capacity
 - Week commencing 25th April (Wk 17) is the utilisation of the current two runway system
 - NRR utilisation is based on peak week considering currently filed demand
- Note, average utilisation over 90% will require punctual operations during the NRR project to avoid significant delays.

Total Hourly Runway Capacity Utilisation



Peak hourly ARR capacity is reduced from 37 to 28

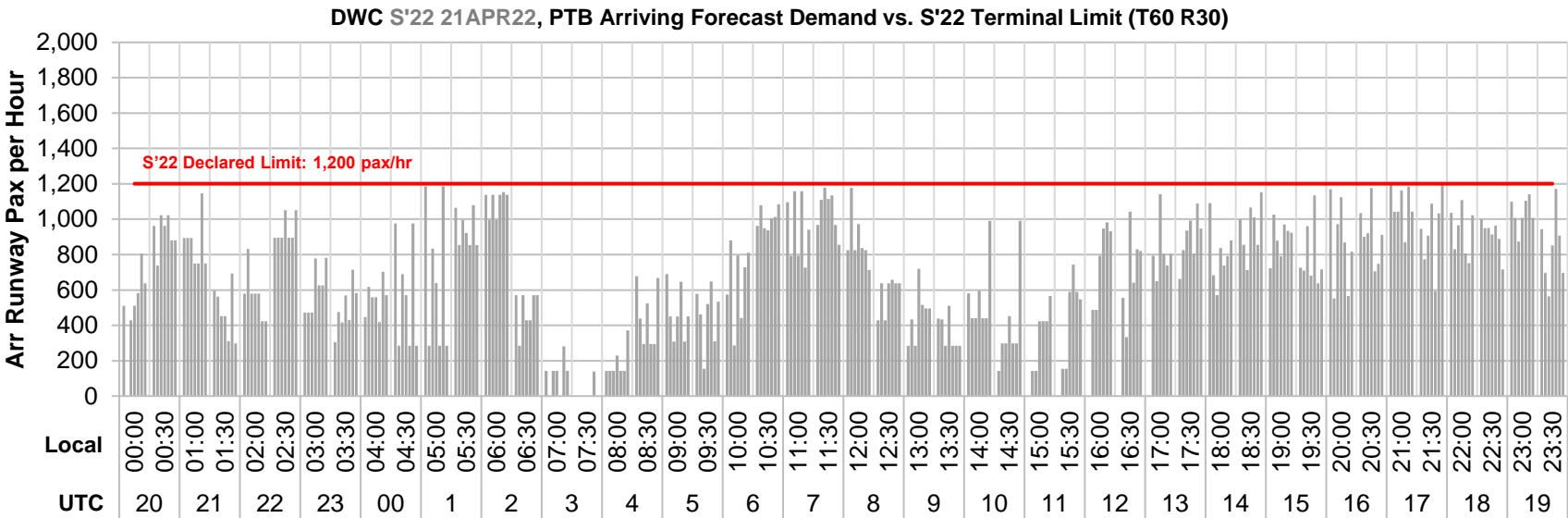
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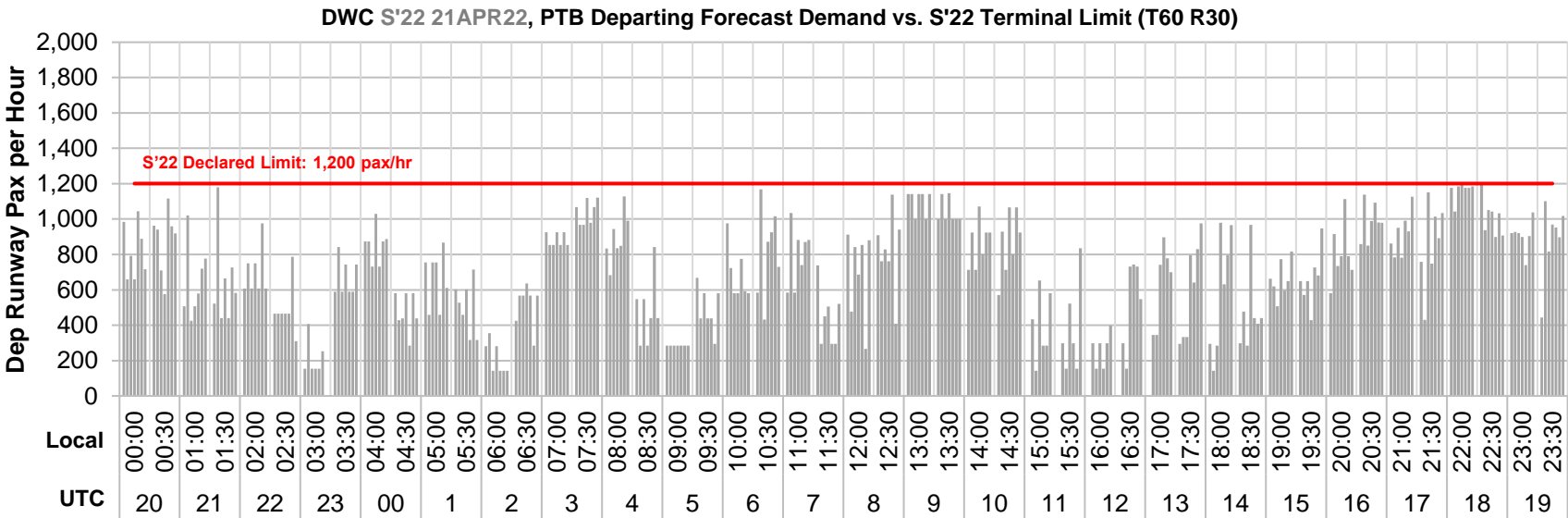
DWC Terminal Capacity Utilisation



DWC Coordinated Peak Week During 2NRR



- The histogram opposite shows the **coordinated** Arriving passenger demand in DWC during a peak week of operations in 2NRR period.
- The histogram is based on the **cleared times** and declared load factors have been applied on seats.
- Arriving demand is plotted against the against the S'22 declared arrival limit of 1,200pax/hr.

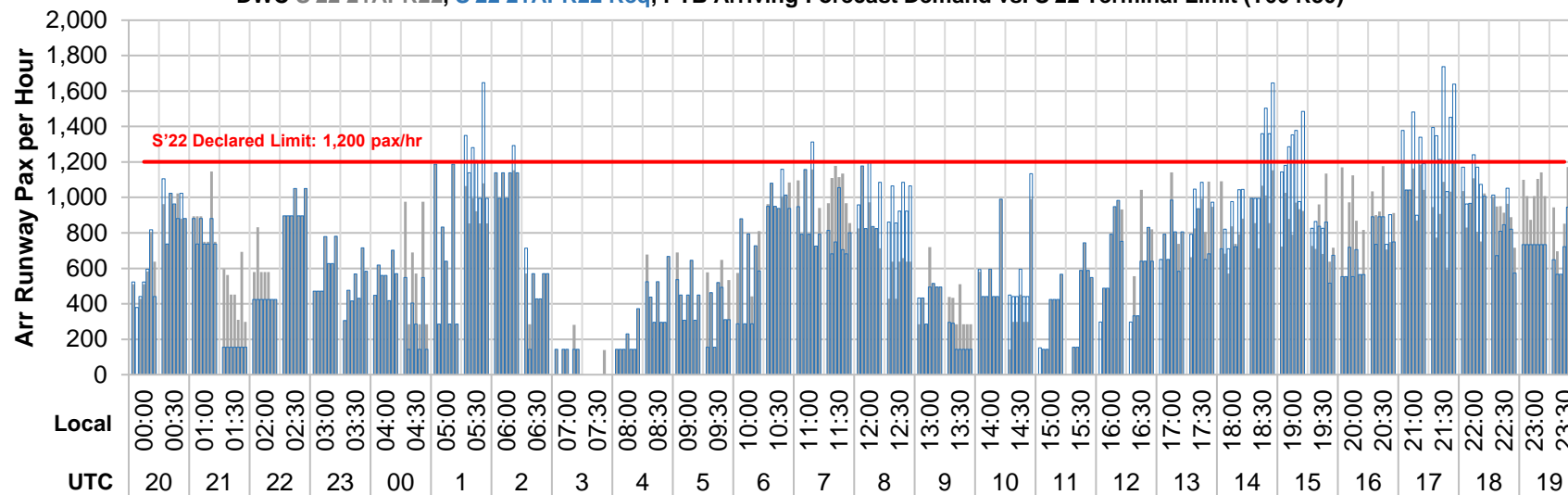


- The histogram opposite shows the **coordinated** Departing passenger demand in DWC during a peak week of operations in 2NRR period.
- The histogram is based on the **cleared times** and declared load factors have been applied on seats.
- Departing demand is plotted against the against the S'22 declared arrival limit of 1,200pax/hr.

Source: OCS Schedule as of 21APR22,
peak week selected 13/06/22 – 19/06/22

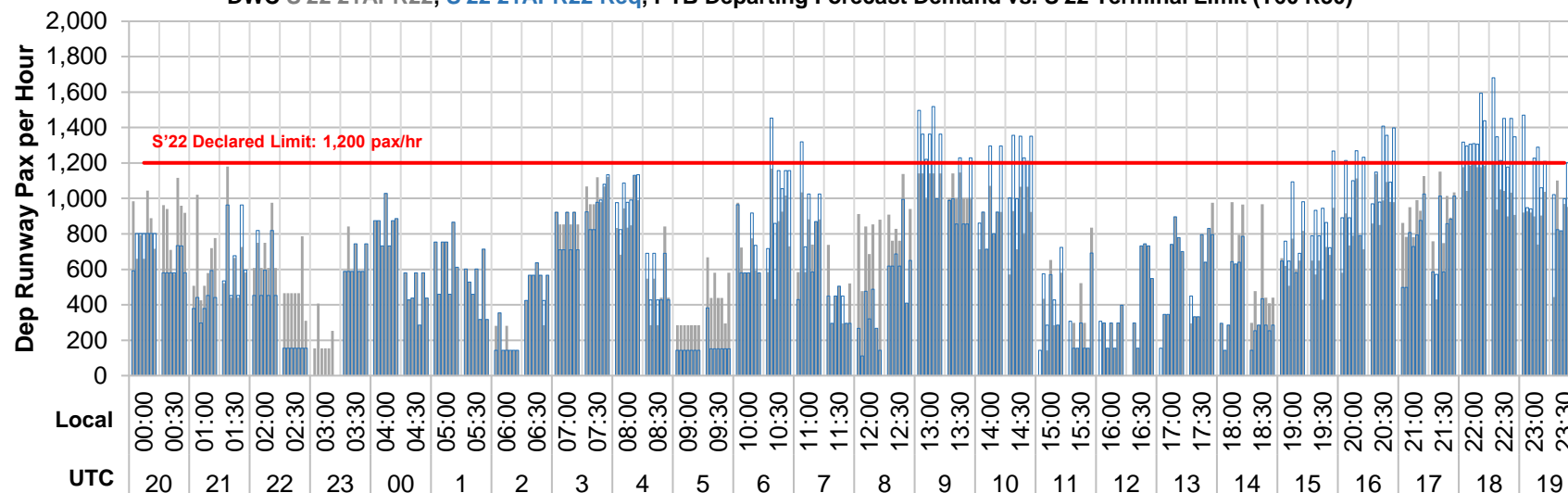
DWC Requested Peak Week During 2NRR

DWC S'22 21APR22, S'22 21APR22 Req, PTB Arriving Forecast Demand vs. S'22 Terminal Limit (T60 R30)



- The histogram opposite shows in **blue** the arriving passenger demand in DWC during a peak week of operations in 2NRR period, using the **requested times** for each slot.
- The declared load factor has been applied on seats.
- Arriving demand is plotted against the against the S'22 declared arrival limit of 1,200pax/hr.

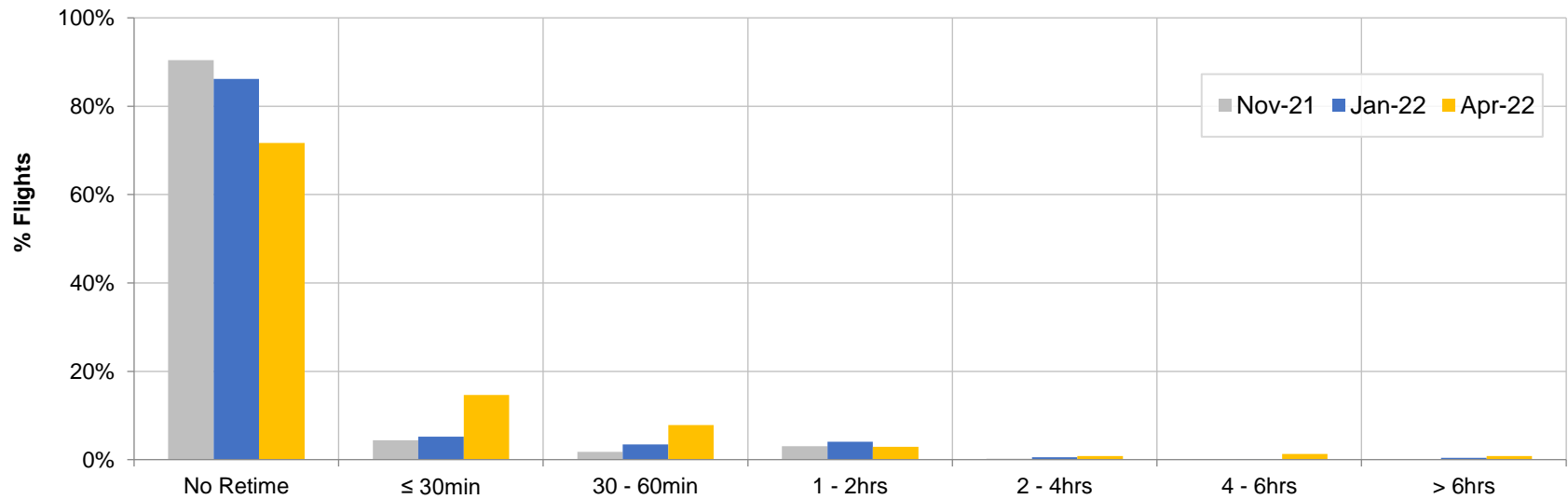
DWC S'22 21APR22, S'22 21APR22 Req, PTB Departing Forecast Demand vs. S'22 Terminal Limit (T60 R30)



- The histogram opposite shows in **blue** the departing passenger demand in DWC during a peak week of operations in 2NRR period, using the **requested times** for each slot.
- The declared load factor has been applied on seats.
- Departing demand is plotted against the against the S'22 declared departure limit of 1,200pax/hr.

DWC Comparison of Slot Compromise by Request Date

DWC Slot Allocation Compromise, Peak Week



Total Peak Week Movements	
Nov -21	1,344
Jan -22	1,426
Apr-22	1,496

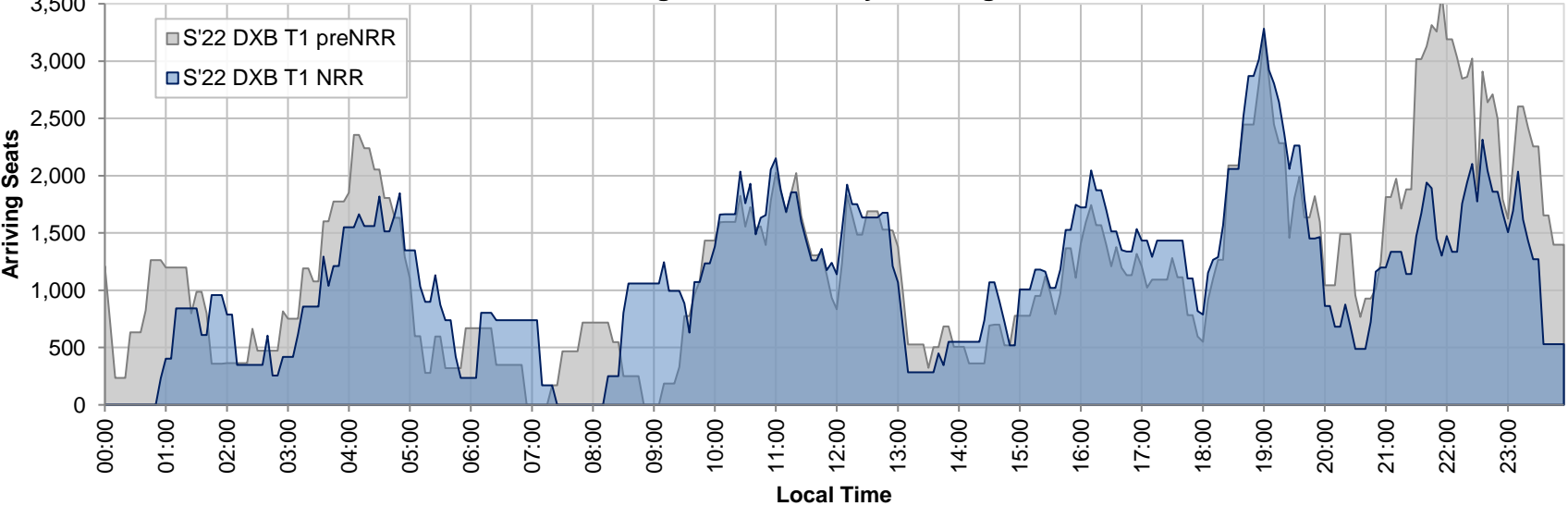
- The graph above shows the proportion of movements across the peak week that have either been allocated at their requested time (no retime), or have been allocated slots at different times than requested ones.
- Post slot conference, in November 2021, more than 90% of allocated slots were cleared at their requested times.
- As the number of slots requests in DWC increased, in January 2022 the number of slots cleared at requested time dropped to 86%.
- Currently, as of 21st April 2022, 72% of slots have been allocated at the requested time, and overall 86% of all slots are either at requested time or within 30min of that.

DXB Terminal Capacity Utilisation



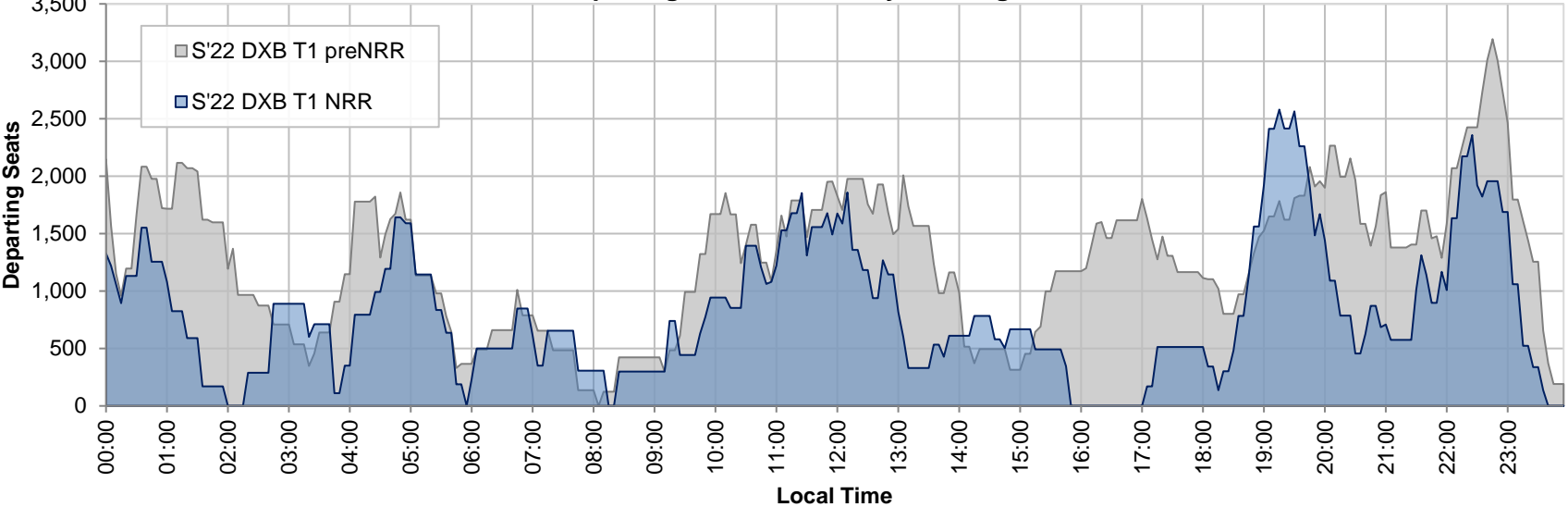
DXB Terminal 1 Peak Day Pre NRR and 2NRR Demand

DXB T1, S'22 Arriving Seats, Peak Day - Rolling 1 Hr Profile



- The chart shows the rolling hourly coordinated seats for arrivals during the peak day prior to 2NRR compared to peak day during 2NRR for Terminal 1.

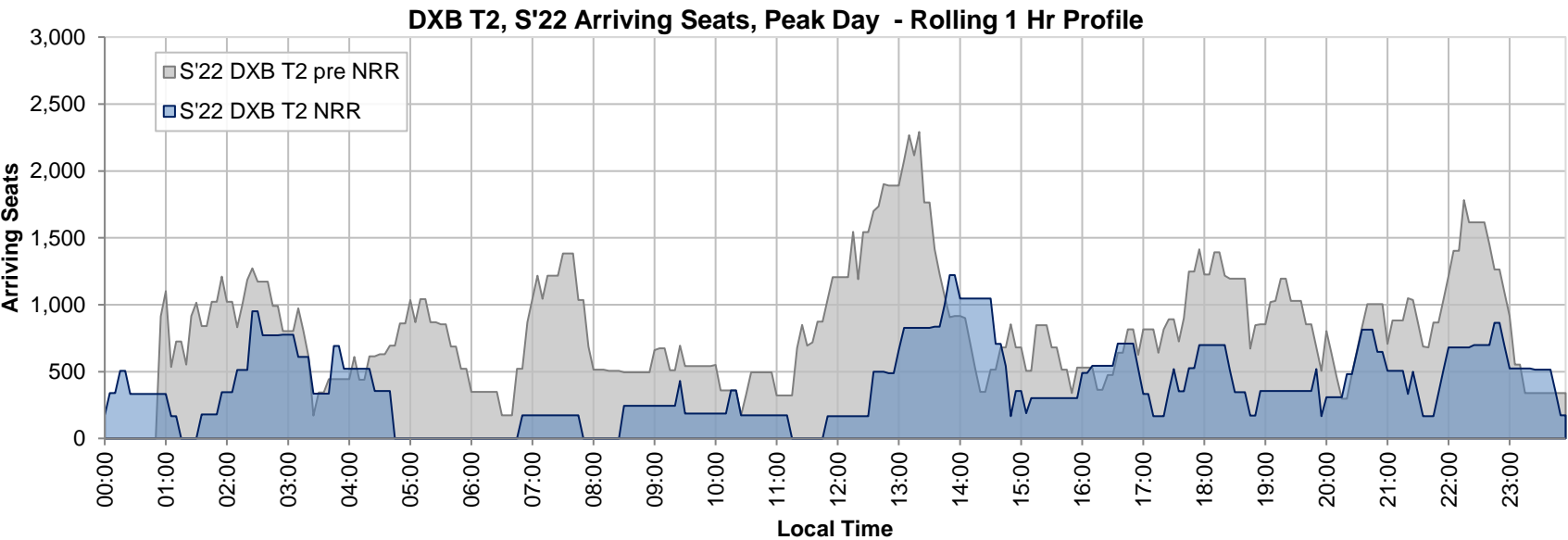
DXB T1, S'22 Departing Seats , Peak Day - Rolling 1 Hr Profile



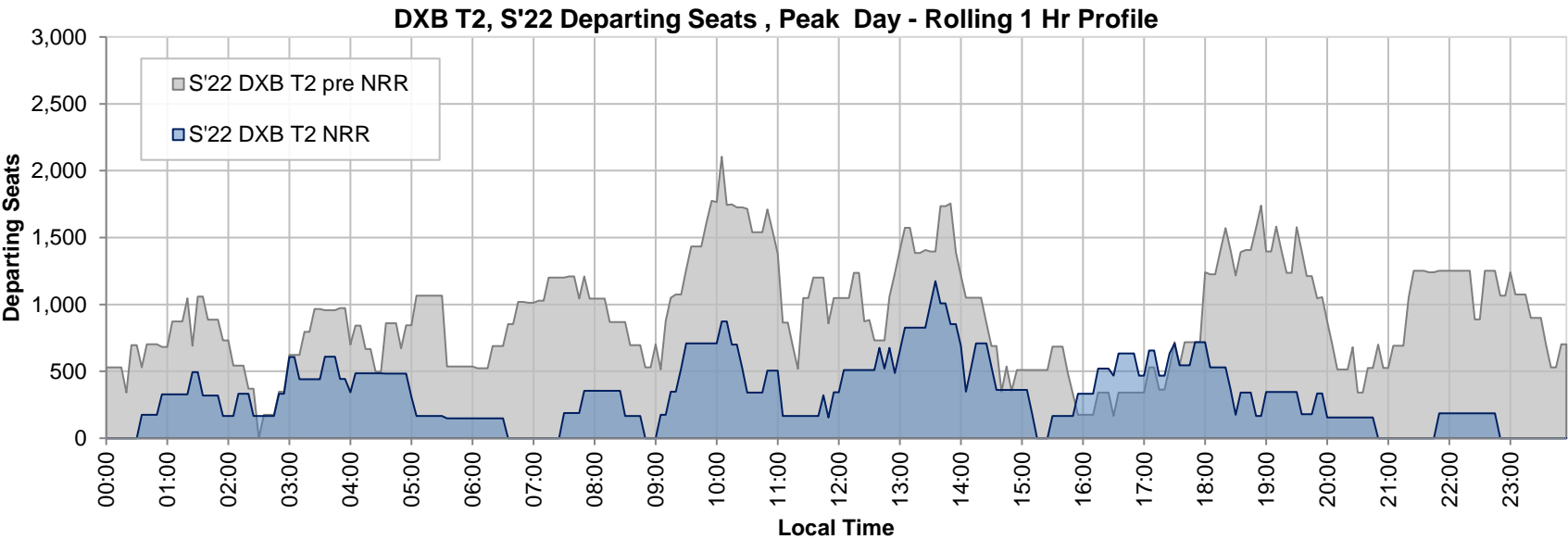
- The chart shows the rolling hourly coordinated seats for departures during the peak day prior to 2NRR compared to peak day during 2NRR for Terminal 1.

Source: OCS Schedule as of 27APR22,
Peak week pre NRR: 02/05/22 – 08/05/22
Peak week during NRR: 30/05/22 – 05/06/22

DXB Terminal 2 Peak Day Pre NRR and 2NRR Demand



- The chart shows the rolling hourly coordinated seats for arrivals during the peak day prior to 2NRR compared to peak day during 2NRR for Terminal 2.



- The chart shows the rolling hourly coordinated seats for departures during the peak day prior to 2NRR compared to peak day during 2NRR for Terminal 2.

Source: OCS Schedule as of 27APR22,
Peak week pre NRR: 02/05/22 – 08/05/22
Peak week during NRR: 30/05/22 – 05/06/22

SCHEDULE COORDINATION UPDATE





NRR EGM Coordinator Pack

Integrity | Together | Own it | Professional | Striving for better

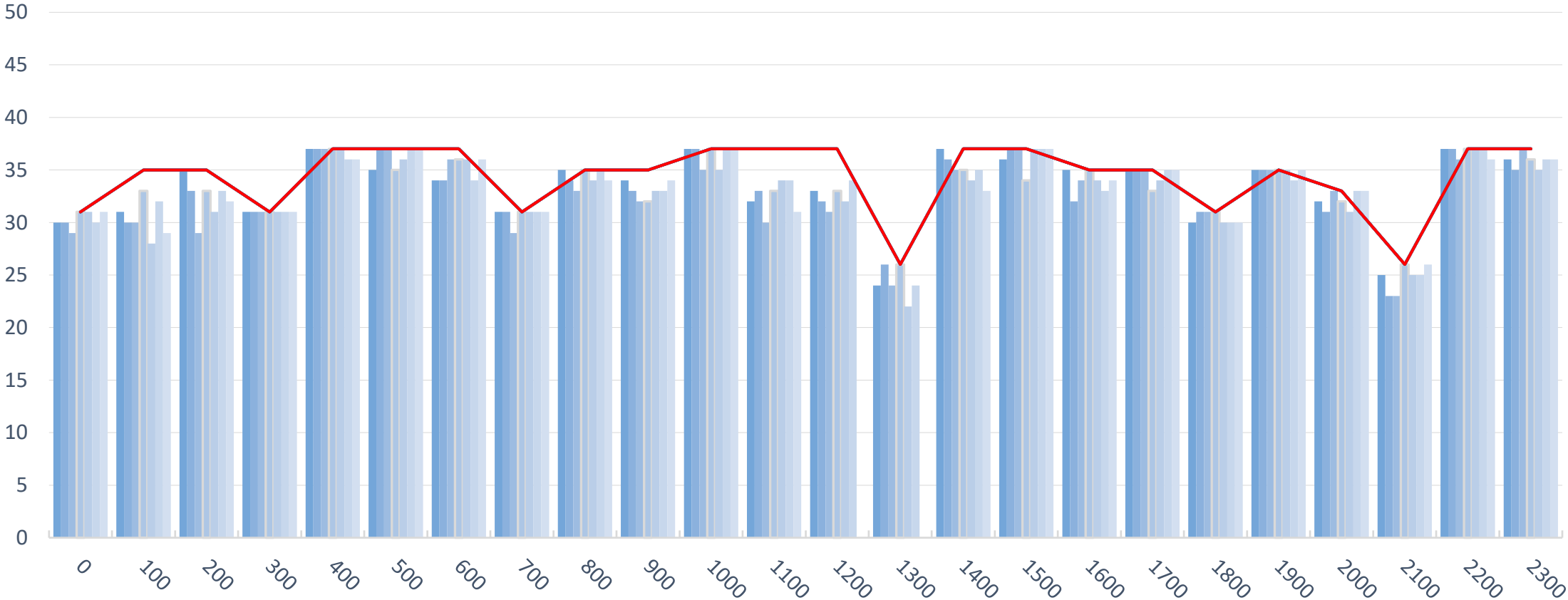


Dubai International (DXB)

Integrity | Together | Own it | Professional | Striving for better

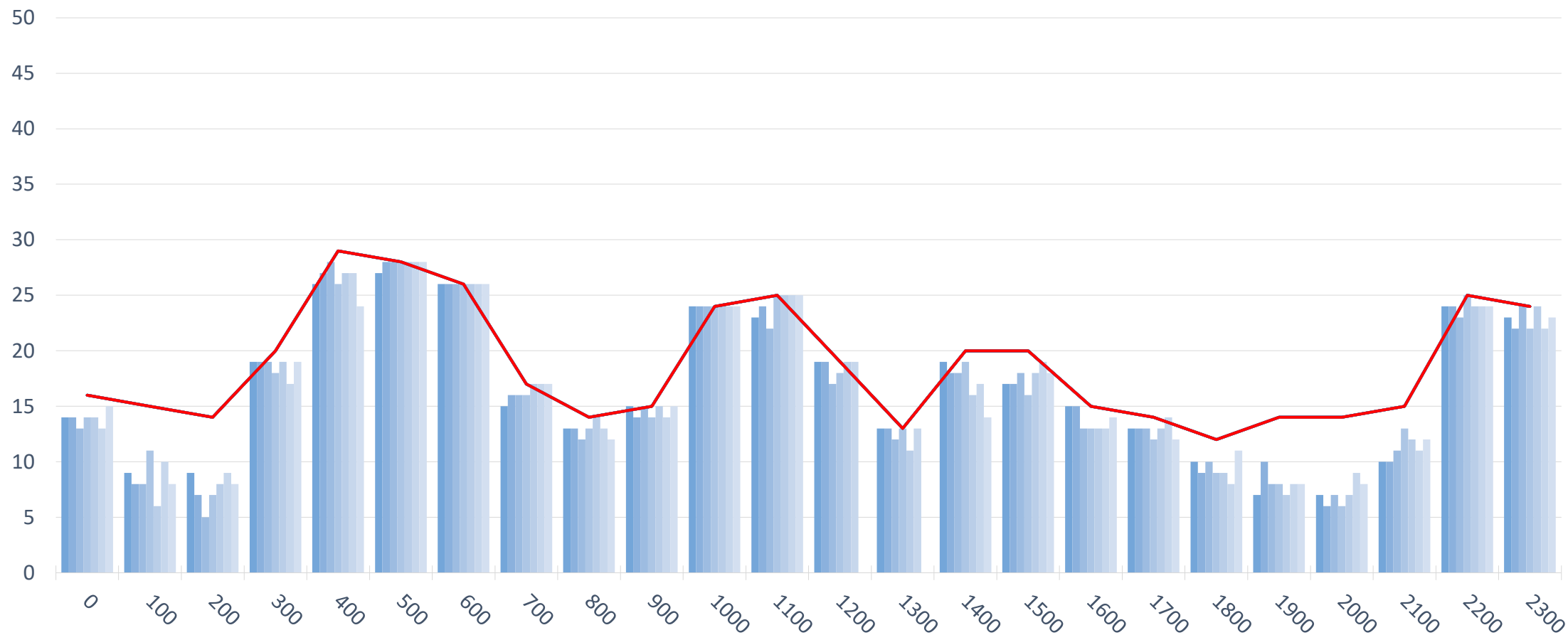
RUNWAY (R60) ALLOCATION - R60 TOTALS - DXB

Peak Week (06-12 June 2022) - All times UTC



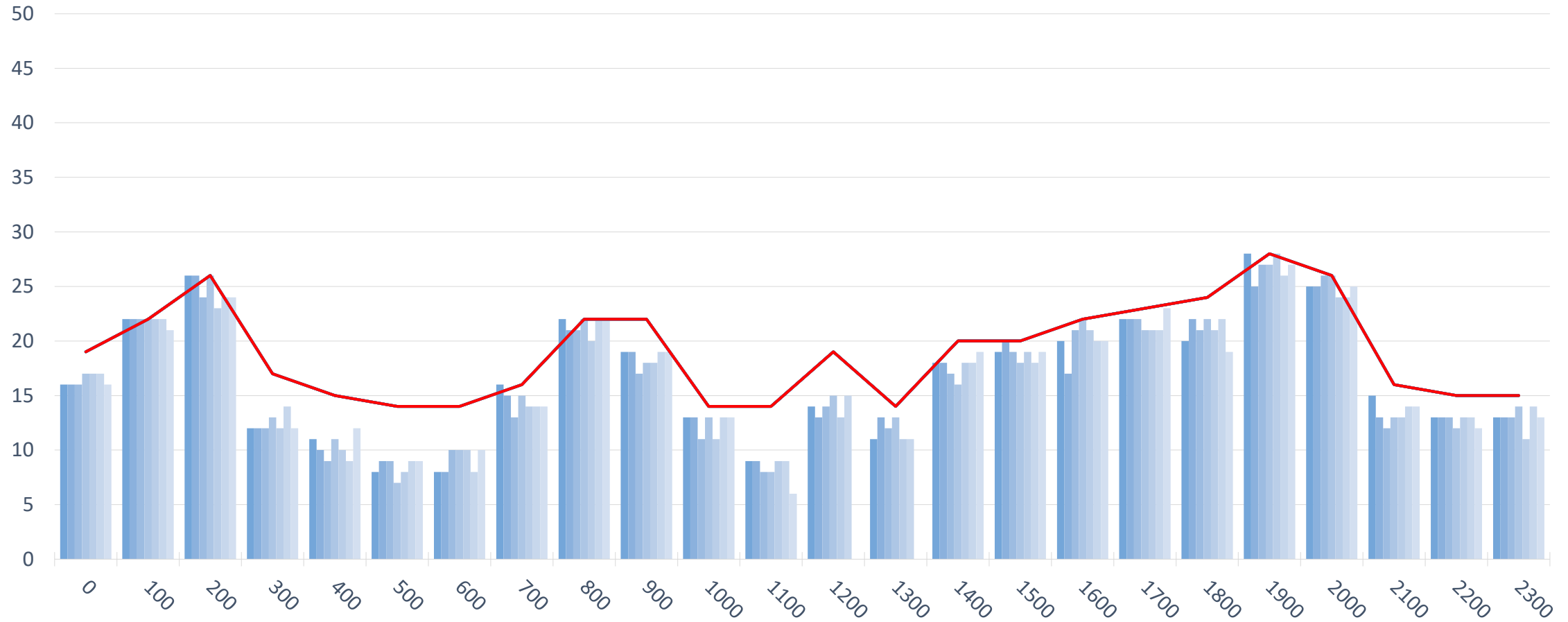
RUNWAY (R60) ALLOCATION - R60 DEPARTURES - DXB

Peak Week (06-12 June 2022) - All times UTC



RUNWAY (R60) ALLOCATION - R60 ARRIVALS – DXB

Peak Week (06-12 June 2022) - All times UTC



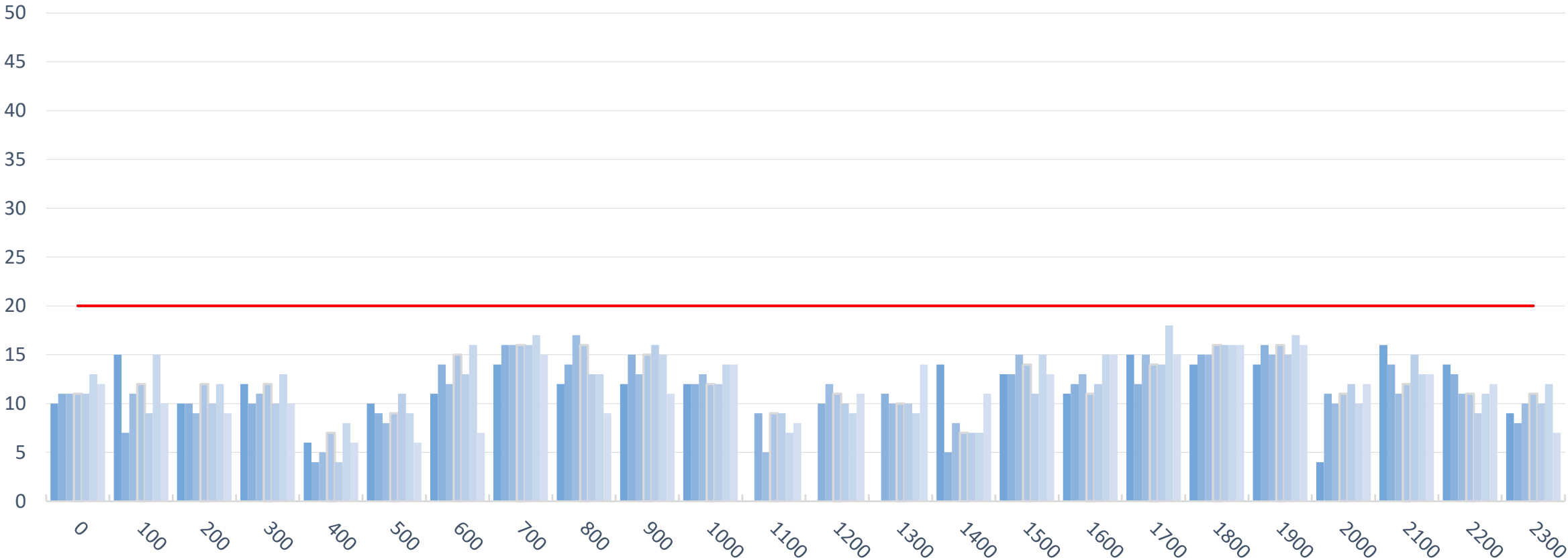


Dubai World Central (DWC)

Integrity | Together | Own it | Professional | Striving for better

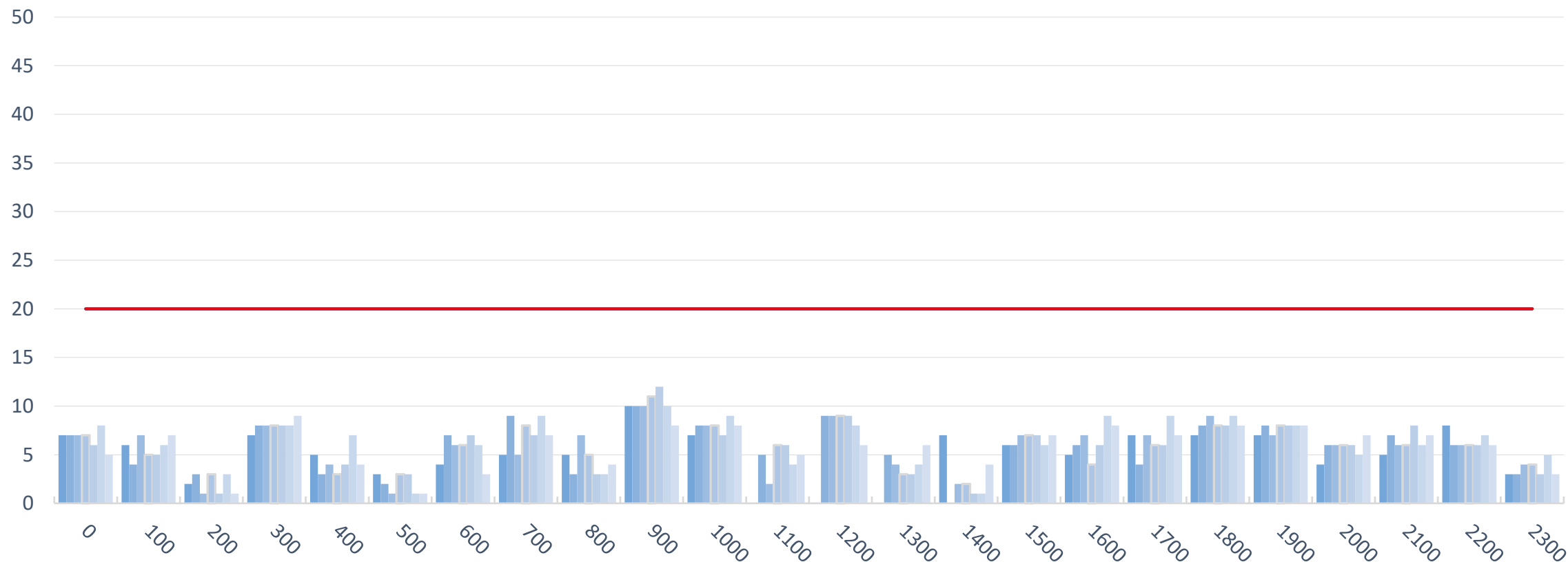
RUNWAY (R60) ALLOCATION - TOTALS - DWC

Peak Week (16-22 May 2022) - All times UTC



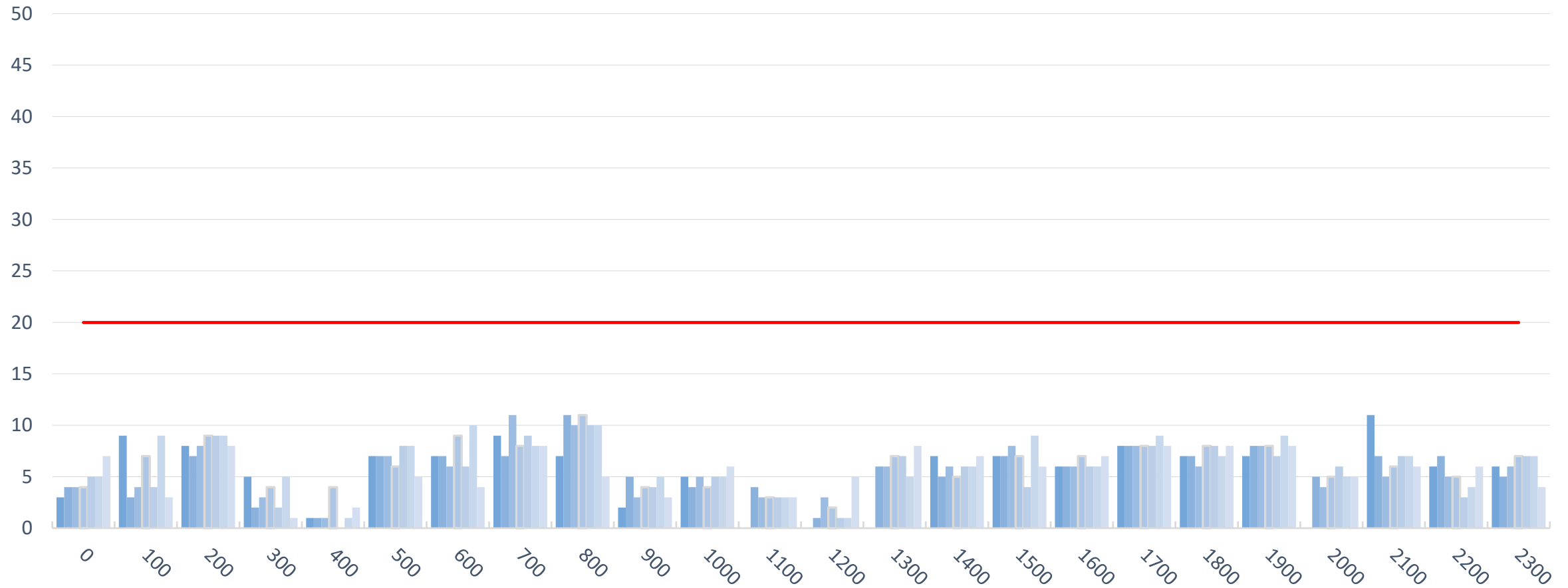
RUNWAY (R60) ALLOCATION - DEPARTURES - DWC

Peak Week (16-22 May 2022) - All times UTC



RUNWAY (R60) ALLOCATION - ARRIVALS - DWC

Peak Week (16-22 May 2022) - All times UTC



Local rules during NRR:

- Operating at times significantly different from the allocated slots (either as one-off or regularly, excluding unforeseen operational delays as detailed in the Conditions of Use).
- Go Shows – Operation without approved slot (except in emergency cases).
- Operation of a slot in a manner other than coordinated (e.g. aircraft type different than approved, even within the same ICAO Code and within the same aircraft family e.g. B738 vs B38M).
- No Shows – Failure to cancel approved slot for reasons that are not beyond the airline's control.

Transport Surface Access



Inter Airport / Terminal Bus Service (DWC/DXB All Terminals)

- Dubai Airports will operate an inter-airport shuttle bus service between DXB terminals and DWC during the NRR2 period for the customers
- The coach route between DXB and DWC will connect all the 4 Dubai Airports Passenger Terminals (DXB Terminal 1, 2, 3 and DWC)
- ***Departure frequency of every 30 minutes – 24 hours per day, seven days per week.***
- The coaches are of following specifications:
 - 50 seat maximum capacity (with application local authority restrictions)
 - HSSE compliant as per the local authorities' guidelines
 - Information system
 - Entertainment system
 - On-board Wi-Fi (free usage)
 - Washroom
 - Refrigerator with cold beverage service
 - Dedicated luggage space

Route Plan



Route Map



DWC Dubai Taxi Services (DTC)

• DWC Taxi Connectivity

- Provision of uninterrupted DTC taxi services from DWC during the NRR2 period
- The product type includes POD vehicles in addition to the standard products

• Waiver of flag fall for trips originating from DWC during the NRR period

- Dubai Taxi Corporation has agreed to waive the flag fall charges for onward journeys from DWC for airport customers. This will provide a cost-effective transport option from DWC

• Fixed zonal tariff at DWC

- DTC has introduced fixed zonal fares, which provides passengers with certainty about trip costs

• Sharing Taxi Services from DWC

- Airport arriving passengers will be able to share taxis travelling to the same zone using sharing transportation services
- In the case of sharing taxi options, the driver will wait for 4 passengers (or respective vehicle capacity) for the particular zone, before the taxi departs. The passenger has the option to buy the other remaining seats if the preference is not to wait. Passengers also have the option to use the regular taxi services (non-sharing options)
- In the case of the sharing transportation services, the passengers will be dropped off at the listed zone location

- On demand transports services from Uber and Careem will also be available.



تسعيرة النقل بالمشاركة
في مطار آل مكتوم الدولي

Sharing transportation pricing
at Al Maktoum International Airport

Locations	Toyota Camry	Toyota Innova / 4 Pax	Toyota Hiace / 4+ Pax
Dubai - Union Metro Bus Station	80 AED	40 AED	30 AED
Dubai - Ghubaiba Bus Station	80 AED	40 AED	30 AED
Dubai - Marina Bus Station	50 AED	30 AED	20 AED
Dubai - Ibn Battuta Metro Station	50 AED	25 AED	20 AED
Dubai - UAE Exchange Metro Station	40 AED	20 AED	15 AED
Dubai International Airport	85 AED	45 AED	30 AED
Sharjah - City Center	90 AED	50 AED	35 AED
Sharjah - Bus Station	95 AED	50 AED	35 AED
Ajman - City Center	105 AED	55 AED	40 AED
Ajman - Bus Station	100 AED	55 AED	40 AED
Abu Dhabi - Bus Station	135 AED	70 AED	50 AED
Hatta	180 AED	95 AED	65 AED



Public Bus Services (RTA Route F55)

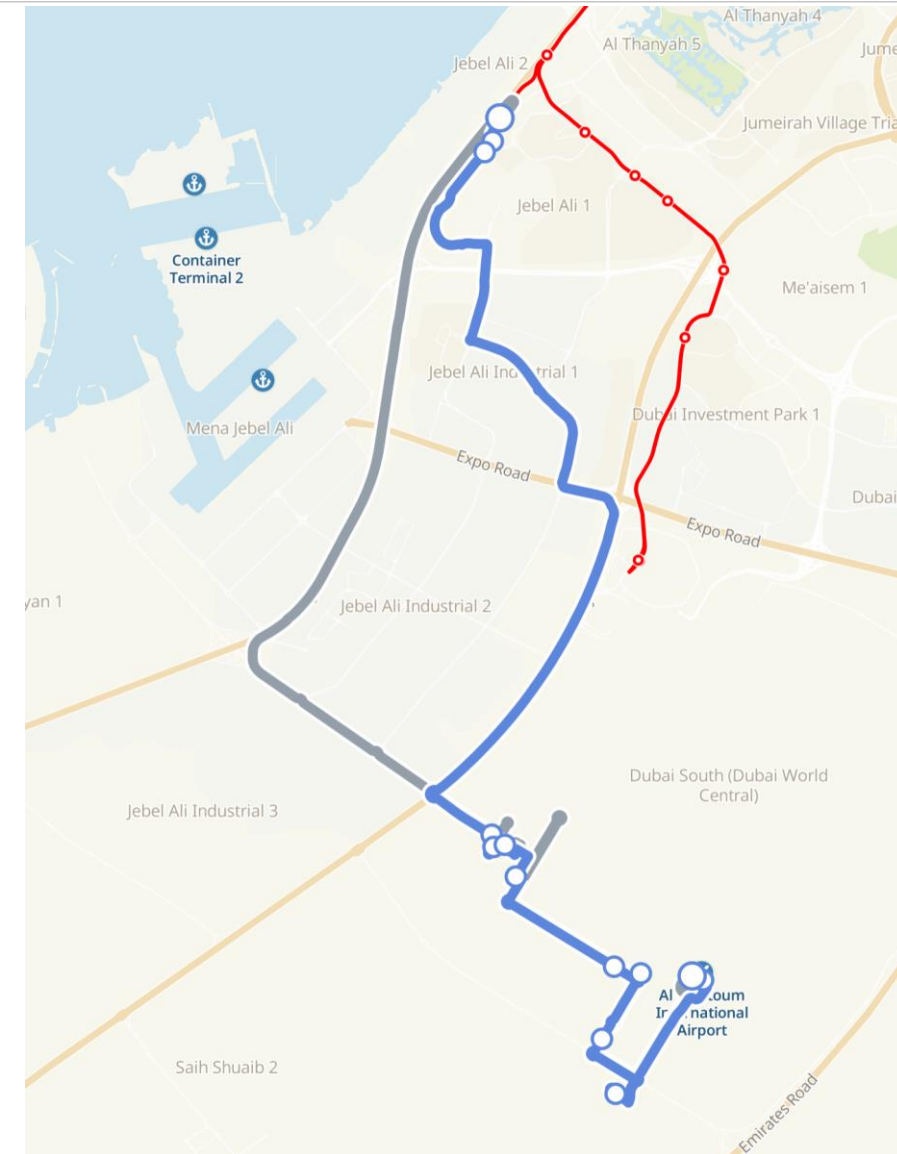
Route F55 (Operational 0545 to 2330 hours)

- Bus Route F55 connects from Ibn Battuta Bus Station – DWC Airport
- End to End journey Times in the range of 35-45 mins
- Timings ~ 05:45 am till 23:30 am
- Frequency ~ every 30 min
- Metro connection (Red line) exist from Ibn Battuta

 F55, DWC to Ibn Battuta Bus Station

 F55, Ibn Battuta Bus Station to DWC

 Metro Red line



Route F55

https://www.rta.ae/wps/PA_JourneyPlanner/DownloadTimetableServlet?lineId=dub:12F55:%20H:y08&lineName=bus%20F55

<https://2gis.ae/dubai/route/13933616937566298>

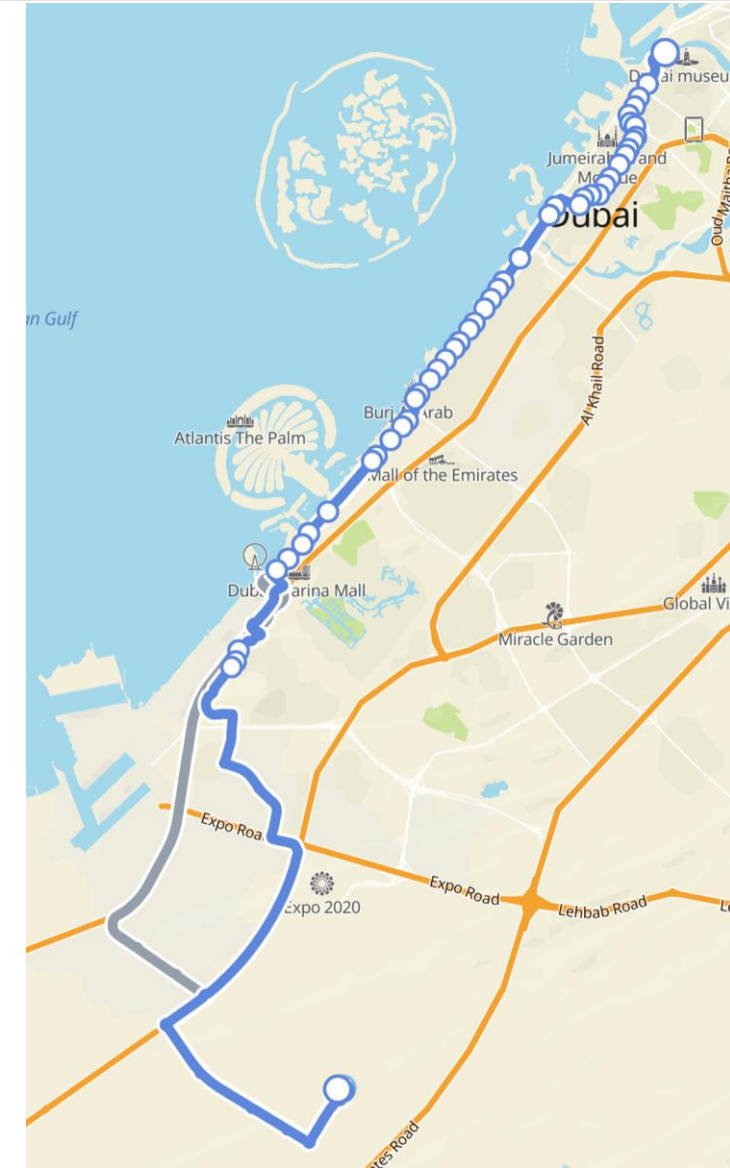
Public Bus Services (RTA Route N55)

Route N55 (Night Route 2145 to 0530 hours)

- Bus Route N55 connects from Al Ghubaiba Bus Station - DWC
- Frequency ~ every 30 min

— N55, DWC to Al Ghubaiba Bus Station

— N55, Al Ghubaiba Bus Station to DWC

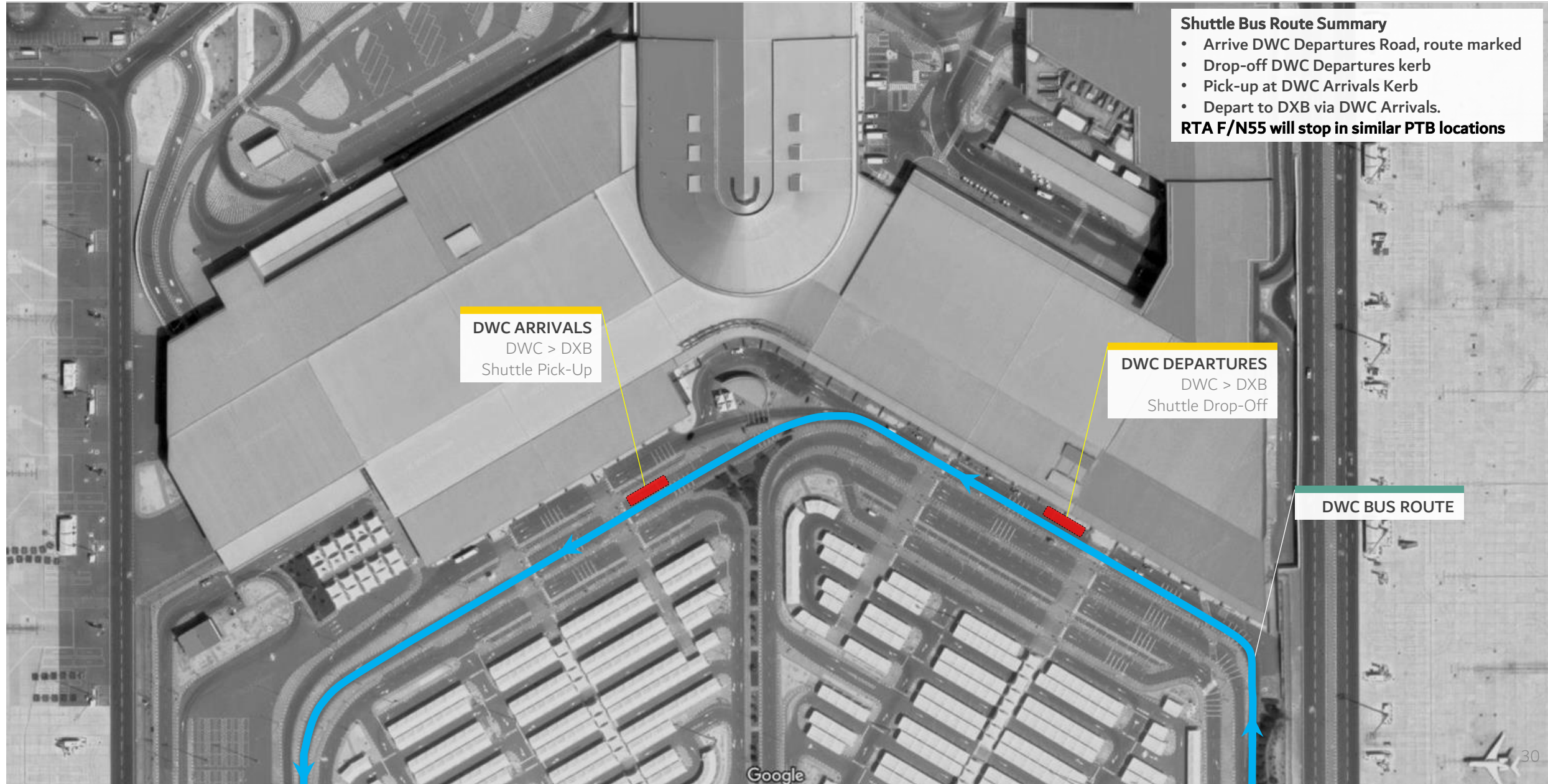


Route N55

https://www.rta.ae/wps/PA_JourneyPlanner/DownloadTimetableServlet?lineId=dub:07N55:%20:H:y08&lineName=bus%20N55

<https://2gis.ae/dubai/route/13933617013944631?m=55.268438%2C25.05861%2F11.02>

DWC Terminal Bus Stop Positions



Shuttle Bus Route Summary

- Arrive DWC Departures Road, route marked
- Drop-off DWC Departures kerb
- Pick-up at DWC Arrivals Kerb
- Depart to DXB via DWC Arrivals.

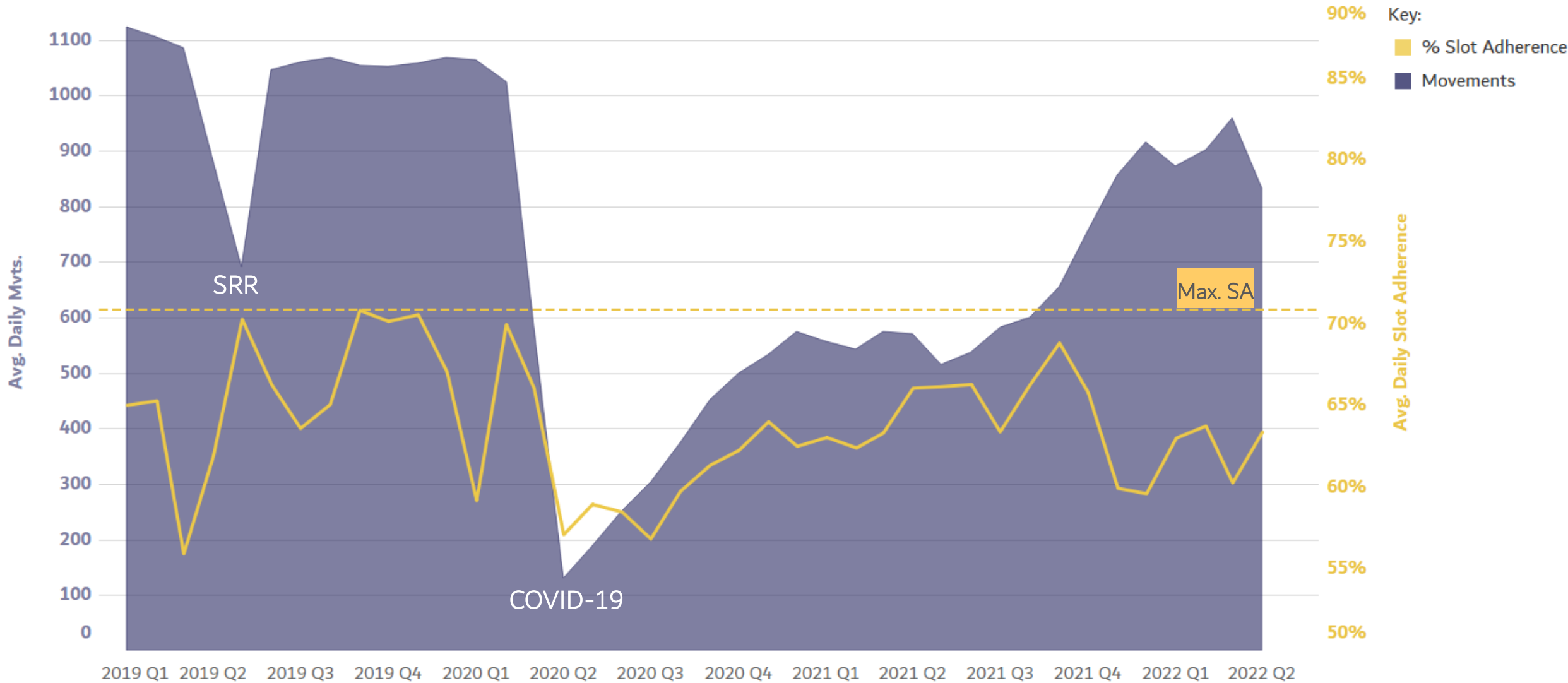
RTA F/N55 will stop in similar PTB locations

SLOT ADHERENCE / ON TIME PERFORMANCE



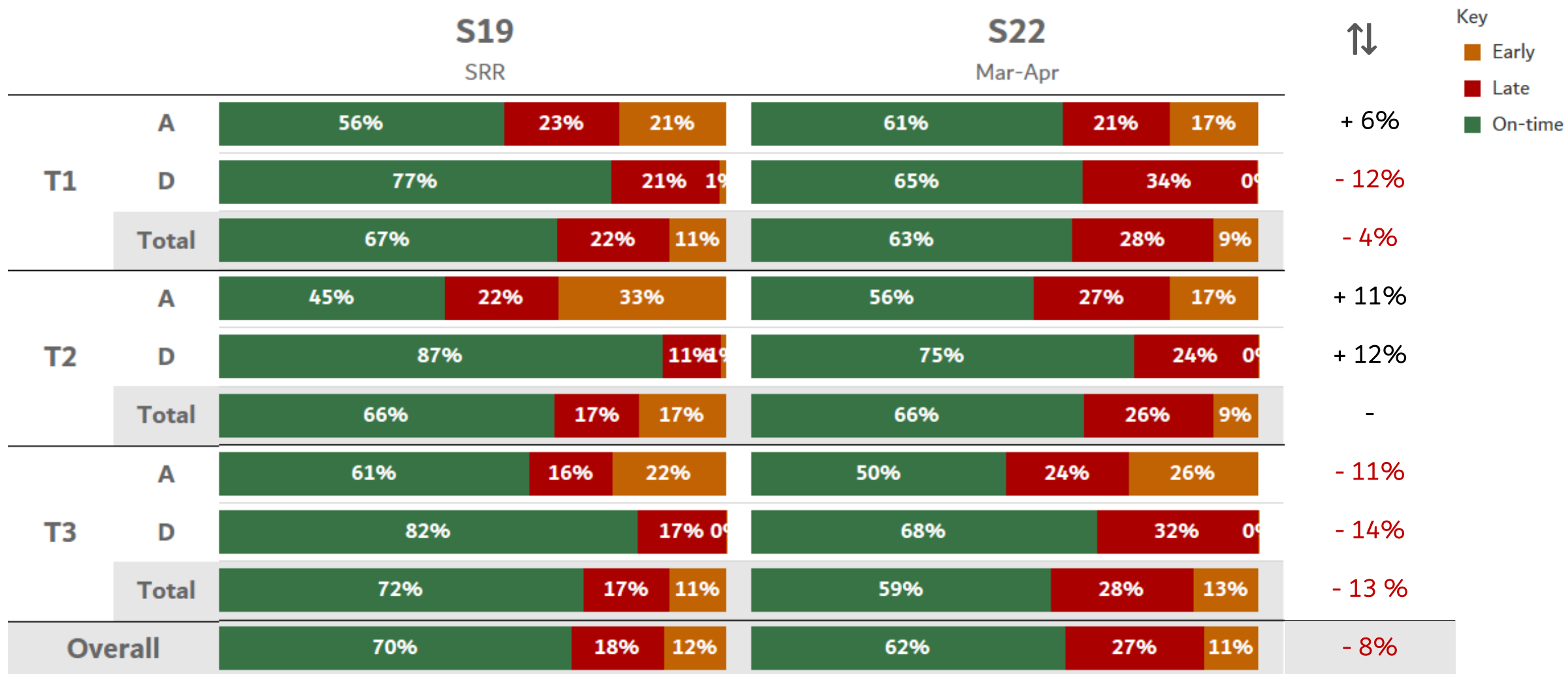
- Slot Adherence is defined as ‘a flight which arrives or departs within 15 minutes or less of the scheduled in-block time (SIBT) or scheduled off-block time (SOBT) for that flight’. AIBT and AOBT within +/- 15 min of SIBT and SOBT.
- Slot adherence is essential to ensure efficient use of scarce runway capacity during the 2NRR. In addition, thorough slot management is essential to provide accurate information to all partners and facilitate accurate and timely decision-making. The following will be considered a misuse of slots:
 - Operating at times significantly different from the allocated slots (either as one-off or regularly, excluding unforeseen operational delays)
 - Go Shows – Operation without approved slot (except in emergency cases)
 - Operation of a slot in a manner other than coordinated (e.g., aircraft type different than approved even within the same ICAO Code and within the same aircraft family e.g. B738 and B38M).
 - No Shows – Failure to cancel approved slot for reasons that are not beyond the airline’s control
- In case of unforeseen operational delays and operating **within 24 hours** of the agreed slot time, delayed DXB flights may operate without re-clearing airport slots, unless advised by AOCC or ACL. Airlines must cancel all slots that will not be operated to give an accurate representation of expected demand.
- If disruption and delays are expected to last more than 24 hours, AOCC or ACL will decide the amount of cancellations required and will inform the airlines of the percentage of slots they need to reduce their schedule. AOCC or ACL will turn OCS automatic messaging capability “off”. A manual process will be activated instead, where following receipt of standard messages, ACL will manually clear slots against a set capacity.

Slot Adherence and Traffic Volumes During Recovery

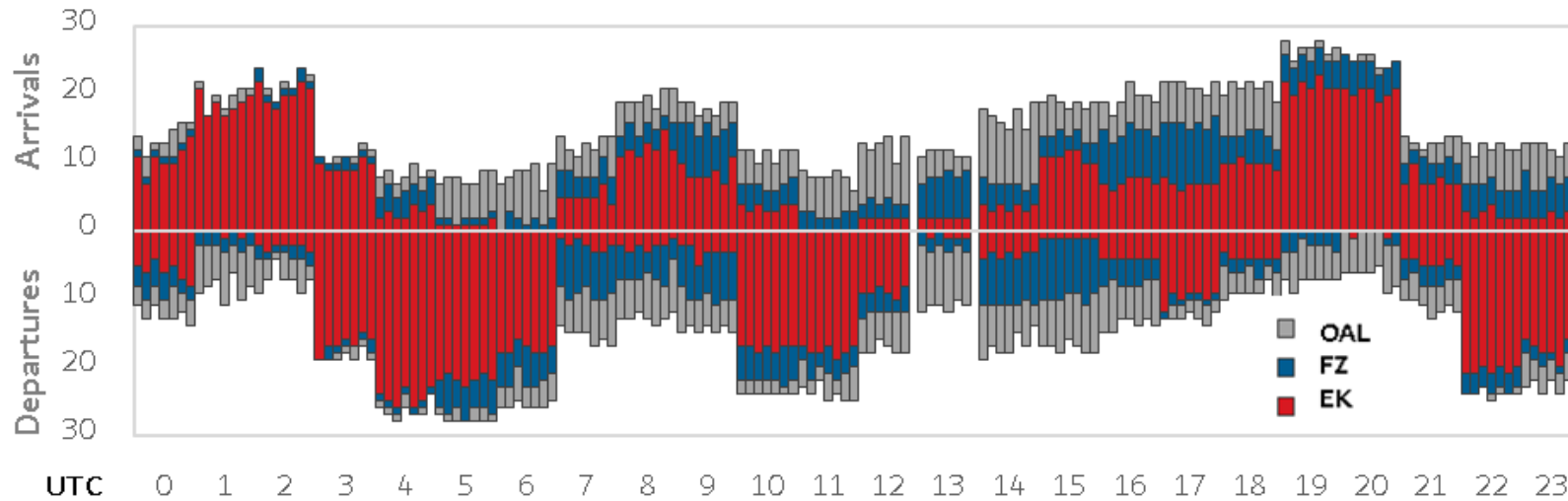


Source: DA AODB (until 12/04/2022) All traffic

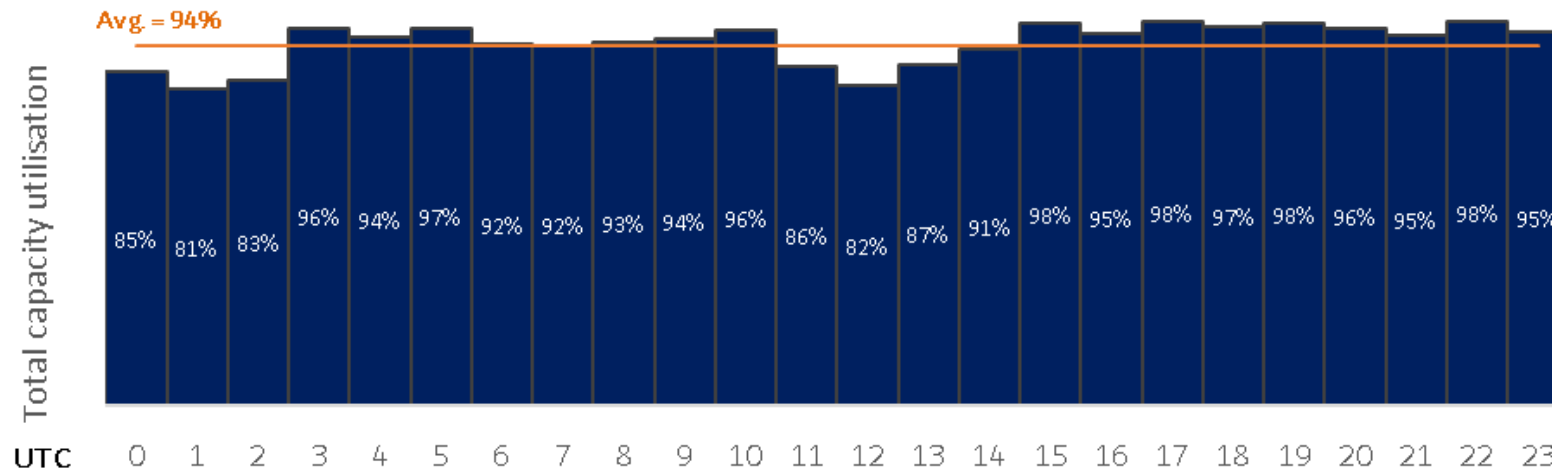
Slot Adherence Comparison – SRR Compared to Current (S22)



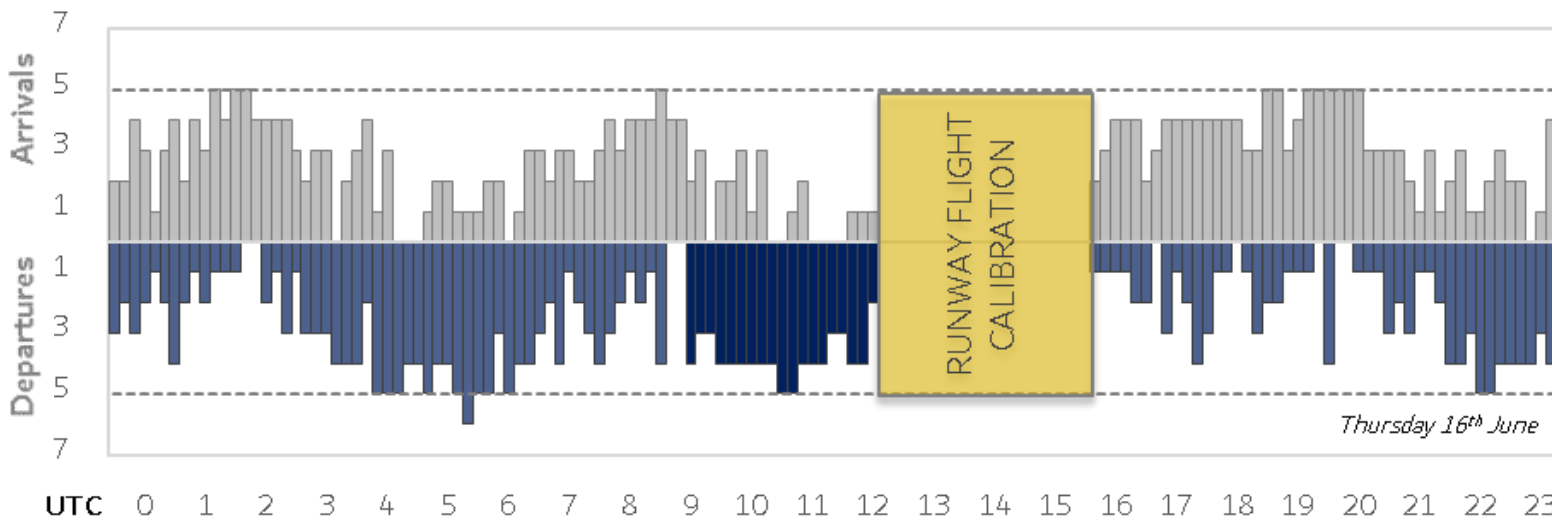
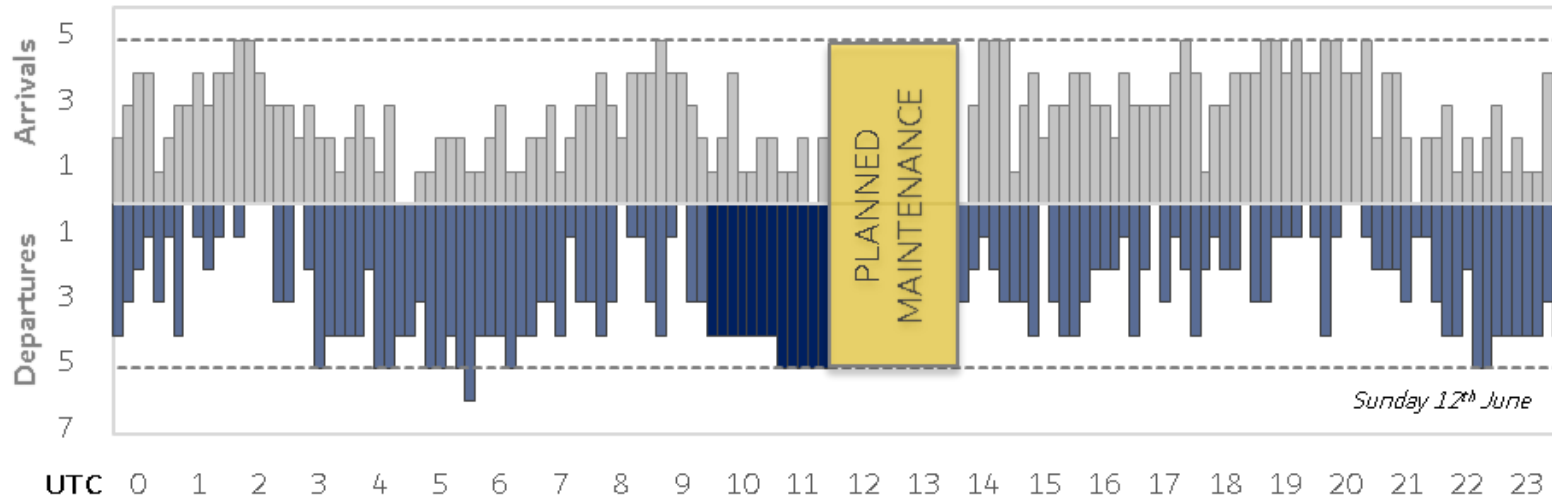
NRR Runway Demand And Capacity Utilisation (94% Utilised)



- On average, 763 movements per day are scheduled during the 2NRR peak week.
- Slot adherence** (as well as minimising runway occupancy times) **will be critical to ensuring efficient single runway operations and preventing cumulative delay impact.**
- Delays are more likely to occur in a single runway system due to the increased challenge of mixing arrival and departure movements on one runway in a safe, orderly and expeditious manner.



NRR Full Closures Require 100% Compliance with Slot Adherence



Sunday Maintenance Closures

2hrs (1200-1359 UTC) + schedule buffers

- Sunday 15th, 22nd, 29th May
- Sunday 5th 12th June

Flight Calibration Activities

3hrs (1300-1559 UTC) + schedule buffers

- Thursday 16th – Saturday 18th June

3hrs (1200-1459 UTC) + schedule buffers

- Sunday 19th June

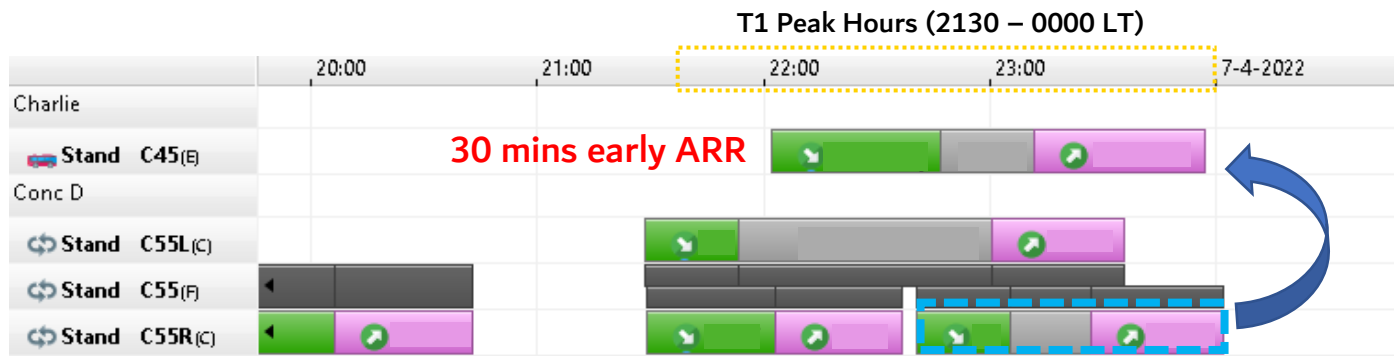
It is essential that operators conform to their scheduled times of departure and arrival both pre- and post- closure (particularly during the shoulder periods) to avoid:

- Significant delays or diversions due to runway unavailability;
- The need for further unplanned closures to compensate for poor punctuality and/or risk of delayed re-entry into service of the northern runway.

Slot Adherence Example on Stands and Remote Operations

➤ Example of Early Arrival (**impact to flight**)

- Day of Ops: 6th April 2022
- Arrived 30 min earlier** than the scheduled time. (SIBT 2235 LT, ALDT 2154 LT, AIBT 2202 LT)
- Originally planned on a **contact stand** and later **it was revised to a remote stand** due to its early arrival during peak hours.

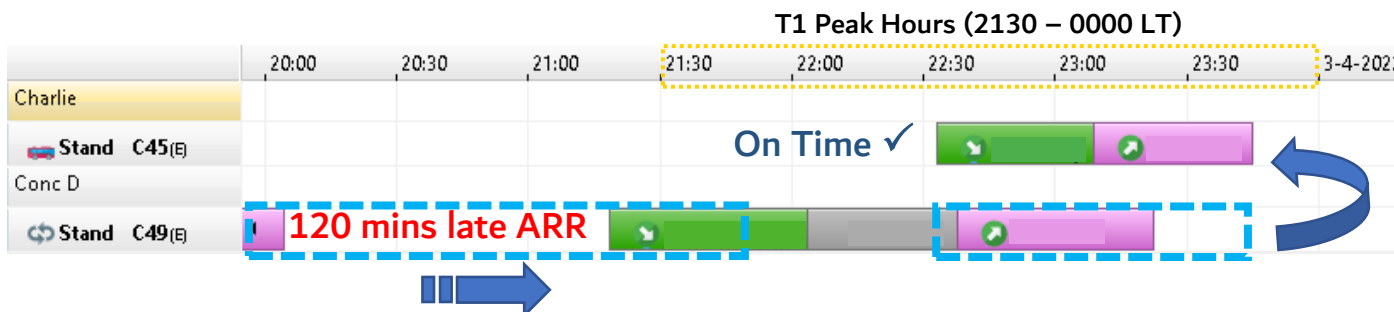


Key:

- Arrival Service
- Staging Interval
- Departure Service
- Originally Planned Allocation
- T1 Peak Hours (Stand Demand)

➤ Example of Late Arrival (**impact to subsequent on-time flight**)

- Day of Ops: 2nd April 2022
- Arrival delay of >2 hours** (SIBT 1855 LT, ALDT 2106 LT, AIBT 2118 LT)
- The **flight subsequently planned on the same contact stand** was revised to a remote stand despite arriving **ON TIME** (SIBT 2220 LT, ALDT 2221 LT, AIBT 2233 LT)



Remote Ops Challenges

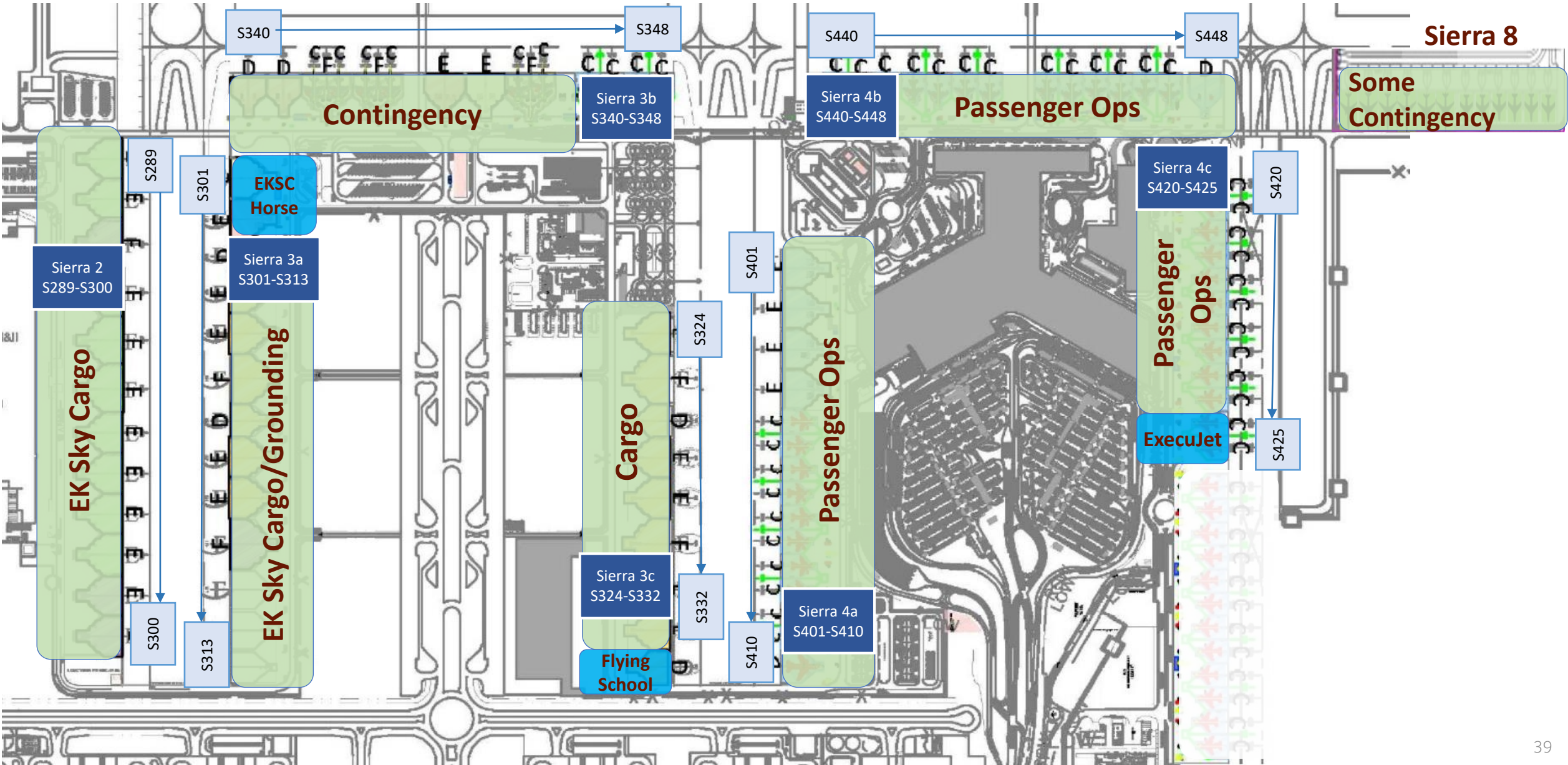
- Airfield congestion due to logistics/vehicles
- High engagement time for ground handling
- Resource availability
- Pax bussing
- Pax experience



Disruption Planning - Recovery Guidelines & Airline Expectations

- Airlines are encouraged to review their internal procedures to mitigate the impact of restrictions at DXB and DWC. Considerations for diversions should include for example:
 - Airlines already operating from other nearby airports
 - Technical limitations of servicing an aircraft
 - Diversion limitations due to regional constraints
 - Tactical management of diversions via respective Network Control Centres (NCC's)
- In the event of a disruption or runway closure of any length of time, extensive disruption and delay should be expected. Airlines launching services to arrive at DXB or DWC following a disruption may experience airborne holding and should carry fuel accordingly.
- As described in the airport's Conditions of Use, Dubai Airports reserves the right to remove any disabled aircraft blocking the runway or an active taxiway and the associated airline shall be held responsible for all costs.
- Recovery may necessitate planned flight cancellations depending on the duration of the disruption.
- In order to relieve capacity pressure on the ground (passengers in concourse and on aircraft) upon resumption of operations after a disruption, consideration will be given to the prioritisation of "committed" departure flights.

DWC Stand Capacity and Indicative Allocation



QUESTIONS AND ANSWERS



Questions and Answers (Page 1 of 2)

Q: Will slots be available for GA operations at DXB?

A: Yes, DXB available slots will be open to GA in the coming days when the main coordination is settled, ACL will be in contact.

Q: Is DWC open on the 9th May for passenger operations only or both pax and Cargo?

A: DWC is already open for non-passenger flights and for passenger departure flights on 9th May 2022, arrivals permitted after 1830 hours (LT) on 8th May 2022.

Q: Slot performance guidelines: Slot range of +/- 15 minutes is the same for shorthaul and longhaul flights?

A: Yes, all slot performance is expected within the above stated margins at all times. During the NRR period non- adherence will result in sanctions. Slot adherence, go show, no show and equipment discrepancies are applicable to all operations, GA, Integrator and Pax.

Q: Is the bus service from DWC to DXB complimentary or chargeable?

A: The DWC to DXB shuttle bus will be complimentary, the RTA F/N55 bus will have a marginal charge, less than AED 10.

Q: How much holding time is recommended for DXB?

A: This is an airline decision, impact of potential delays and diversion alternatives should be considered, OTP could impact the holding time.

Questions and Answers (Page 2 of 2)

Q: Can we divert to DWC if needed?

A: Yes, however please consider that capacity is limited, diversions to alternative airports may be required if disruption impacts significant traffic.

Q: Will the DXB airport pass be valid for DWC?

A: Existing valid DXB Airport Pass holders must request for DWC passes to saud.altamimi@dubaiairports.ae mohammed.alkandi@dubaiairports.ae (attach copy of your existing DXB pass, stating NRR as a reason to request).

Q: Do you expect flight to have longer taxi in DXB with runway closure?

A: Taxi times likely to be comparable, potential less on southside aprons and marginally more on north.

Q: How will be transit of pax from DXB to DWC work without a transit visa?

A: A visa will be required as the transfers are landside and not airside.

Q: In addition to the line in the AIP SUP, do you plan to issue a class 1 NOTAM advising operators to carry/consider additional fuel into DXB?

A: No, the AIP SUP covers more detail than what can be covered via a NOTAM. Please refer to AIP SUP for details.