

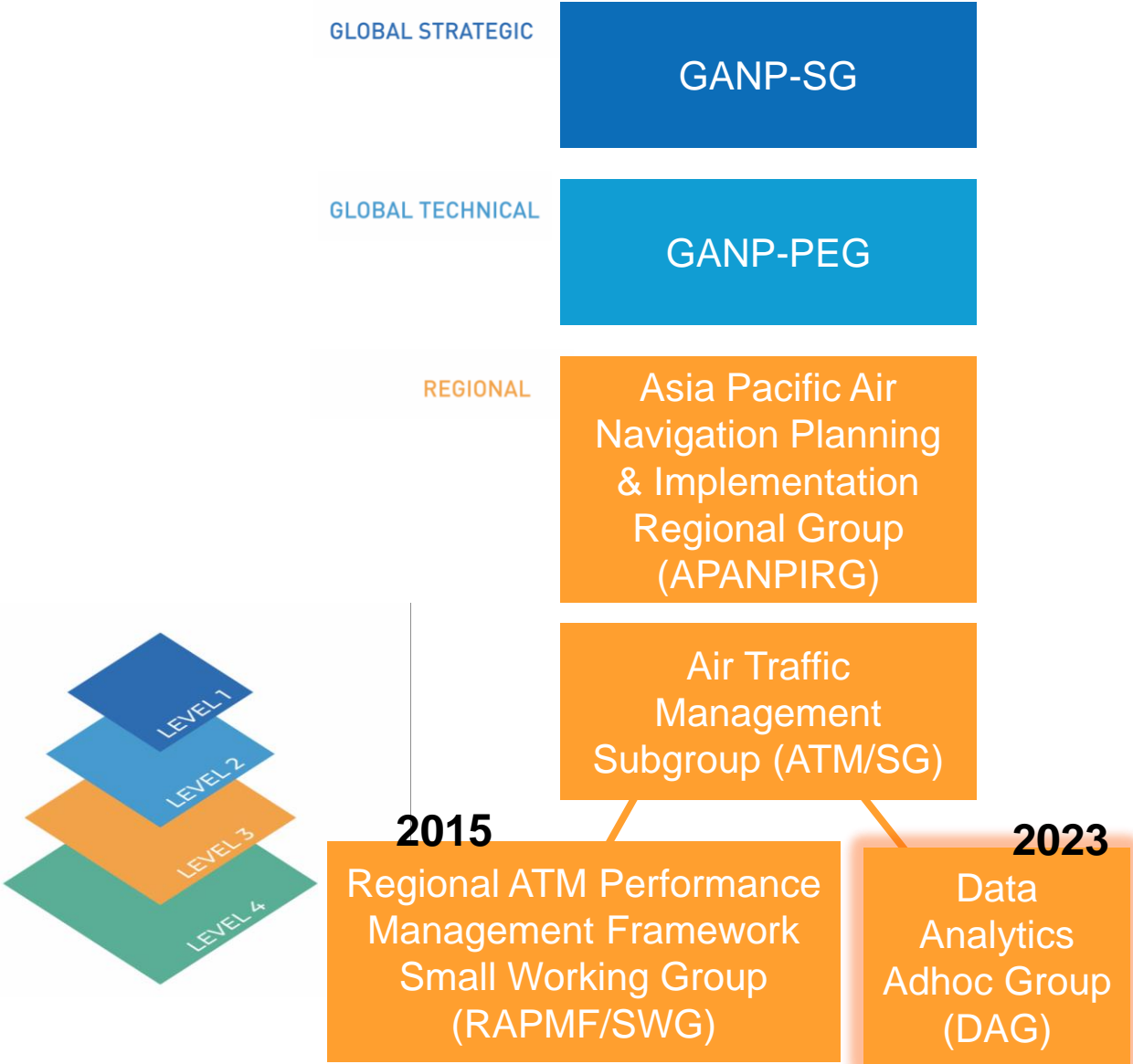
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PROGRESS OF APAC DATA ANALYTICS AD HOC GROUP

ATM/SG/12

23 – 27 Sep 2024

Background: Formation of Data Analytics Ad-hoc Group (DAG) under the ambit of ATM/SG, reporting to APANPIRG



- At APANPIRG/30, APAC States/Administrations were urged to consider the ATM/PMF and initiate their own performance measurement practice to support the achievement of the Seamless ATM and regional ATFM goals in the APAC region
- At the APANPIRG/33, an informal group consisting of China, Indonesia, Japan, Malaysia, Singapore, Thailand, and the United States was formed to conduct trial activities on performance management on eight ICAO GANP KPIs
- The group confirmed that several states in the region are ready for performance measurement, and the DAG was officially formed at ATM/SG/11 in 2023

Progress of the APAC DAG

- The DAG had since convened 3 meetings – 2 online and 1 physical to agree on key matters to kickstart performance benchmarking and improve ATM performance in the region
- First physical meeting held on 20-21 May 2024 in Singapore. Over 2 days, the DAG discussed and agreed on the following key matters:
 - Terms of reference and task list
 - Framework for measuring and reporting of KPIs
 - Meeting modality
 - Role assignment

Meeting modality and roles assignment

Meeting modality

- 3 meetings a year; 1 physical and 2 online
- The annual physical meeting would be held during April/May to ensure sufficient lead time to prepare the necessary working papers to update the annual ATM-SG meeting, usually held in September/October. Any ad-hoc meeting could be convened when necessary.

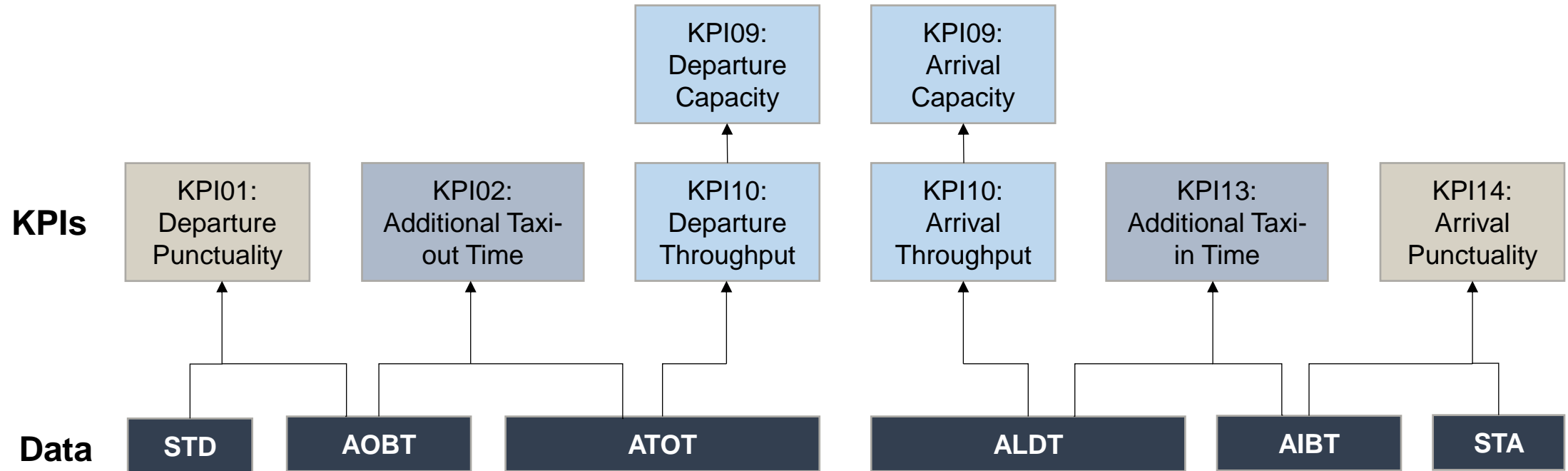
Roles Assignment

- Ms. Carol Teo from Singapore was nominated to lead the DAG as the rapporteur.
- The various work of the DAG would be led by the following countries:
 - Data collation: China
 - Data analysis on Capacity KPIs (KPI09/10): Australia
 - Data analysis on Efficiency KPIs (KPI02/13): China
 - Data analysis on Predictability KPIs (KPI01/14): Singapore
 - Data reporting: United States

All members would support and contribute accordingly.

Interim data analysis exercise was conducted using 3 months of data

- Eight ICAO GANP KPIs were selected to examine its members' readiness for harmonized and regular reporting:

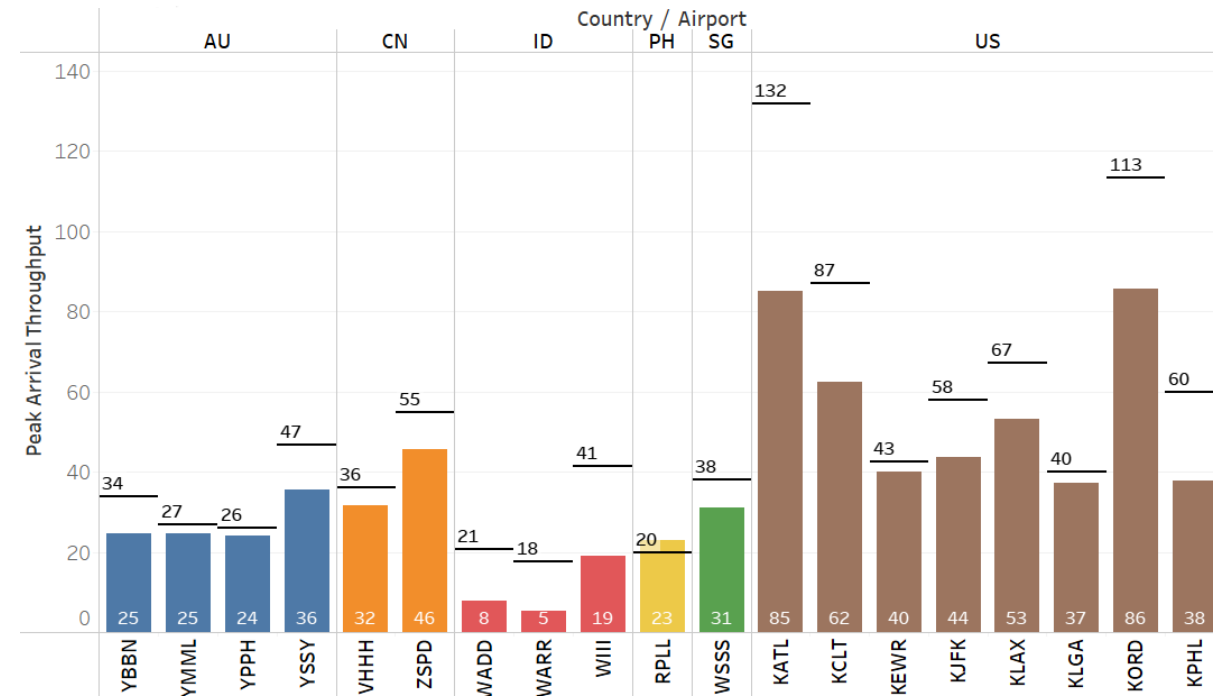


KPA	KPI	GANP variant	GANP KPI Code
Capacity	Airport peak capacity	Departure	KPI09-D
		Arrival	KPI09-A
Capacity	Airport peak throughput	Departure; IFR only	KPI10-1D
		Arrival; IFR only	KPI10-1A
Efficiency	Additional taxi-out time	Advanced	KPI02-2
Efficiency	Additional taxi-in time	Advanced	KPI13-2
Predictability	Departure punctuality	± 15 mins, =< 15 min	KPI01-2A, KPI01-2B
Predictability	Arrival punctuality	± 15 mins, =< 15 min	KPI14-2A, KPI14-2B

Results and analysis from interim data exercise

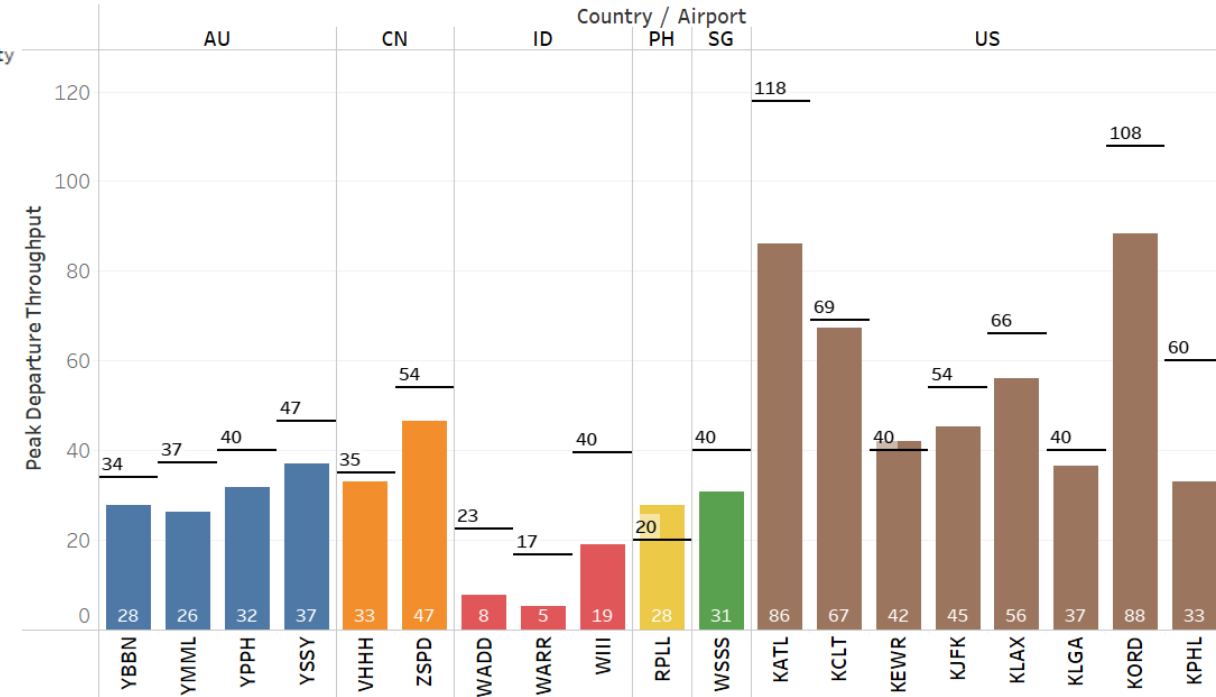
Capacity

Arrival



Arrival capacities and peak arrival throughputs (KPI09-A, KPI10-1A)

Departure

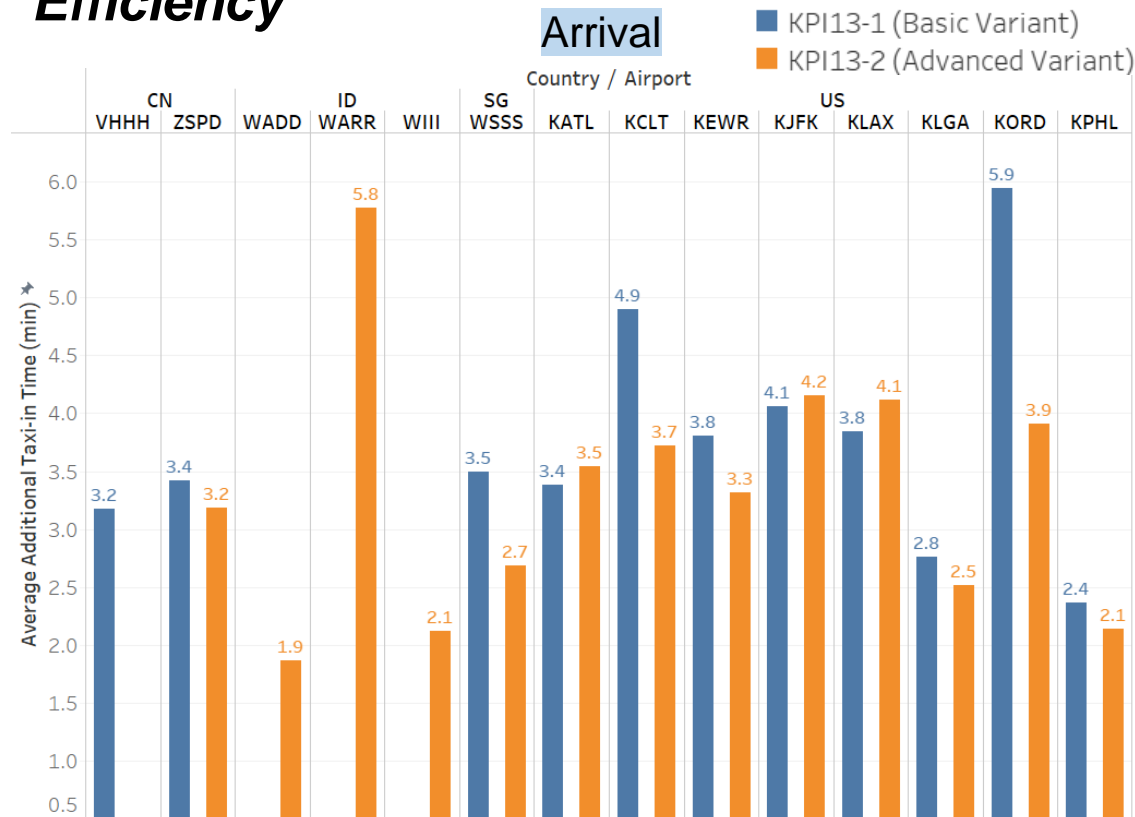


Departure capacities and peak departure throughputs (KPI09-D, KPI10-1D)

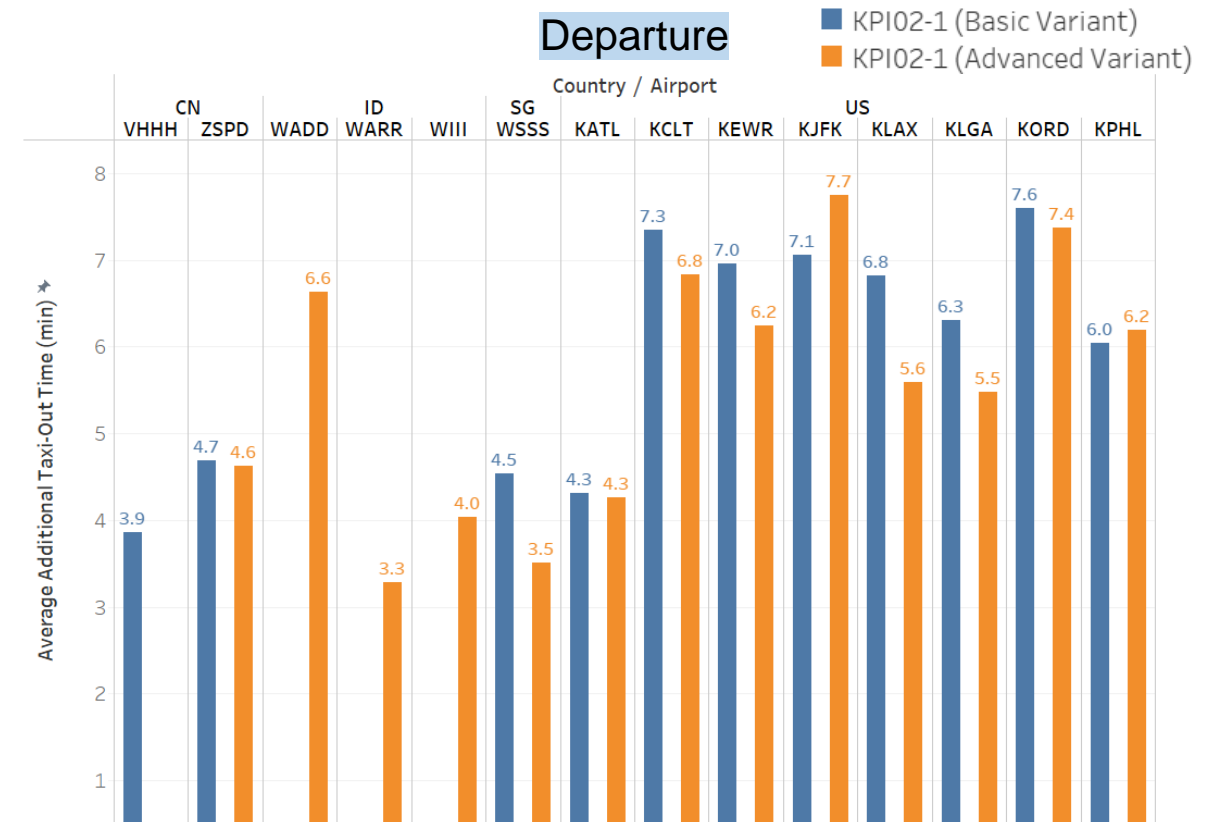
- While majority of airports were operating below their peak capacities, there were a number of airports operating near to the peak capacity
- Such airports are likely candidates for application of ATM measures (e.g. flow measures) to help with smoothing traffic flows and with preventing excessive delays and congestion in their terminal areas or on the surface

Results and analysis from interim data exercise

Efficiency



Additional Taxi-In Time for Basic and Advanced Variants
(KPI13-1, KPI13-2)

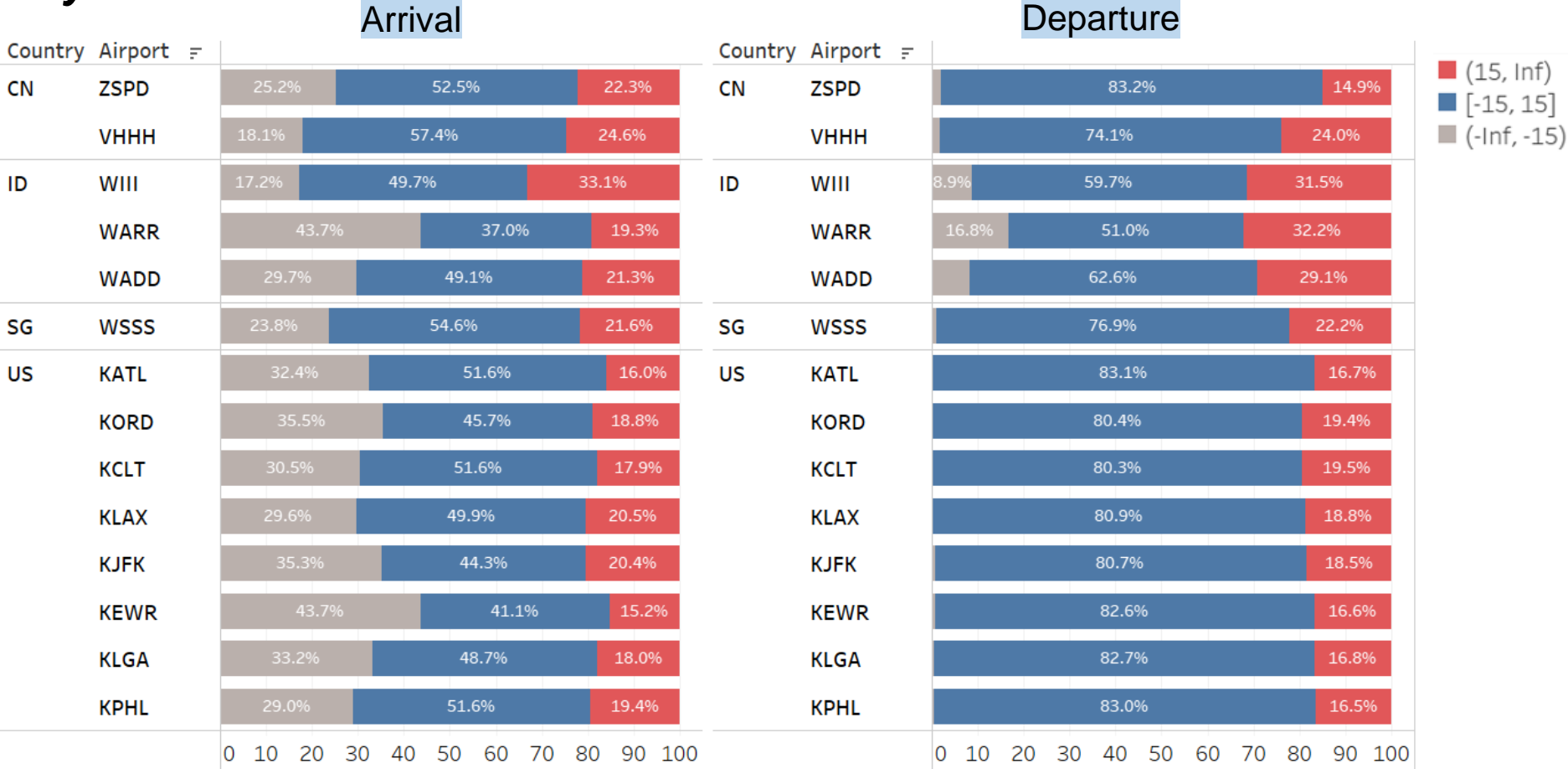


Additional Taxi-Out Time for Basic and Advanced Variants
(KPI02-1, KPI02-2)

- Advanced variant produced a different additional taxi-in and taxi-out time as compared to the basic variant. Airport layout and location of gates relative to runways impact the difference between the basic and the advanced taxi time variants.
- Preference to adopt the advanced variant for this KPI; allow for a fairer comparison of additional taxi time taken for flights located at different gates

Results and analysis from interim data exercise

Predictability



Range of arrival and departure punctuality across airports (KPI14, KPI01)

- Across all airports, arrival on-time performance was observed to be poorer as compared to departures
- Having more arrivals falling out of the +/- 15 min on-time bin indicates poor adherence to slot schedules which may lead to demand-capacity imbalance

Next steps for the DAG and action by meeting

Next steps for DAG

- Kickstart a more in-depth data analysis exercise, collating data for a year

Action by meeting

- Discuss the information contained in this paper;
- Encourage member States who are not currently members to join the DAG; and
- Seek continued support from existing members to actively participate and share data.