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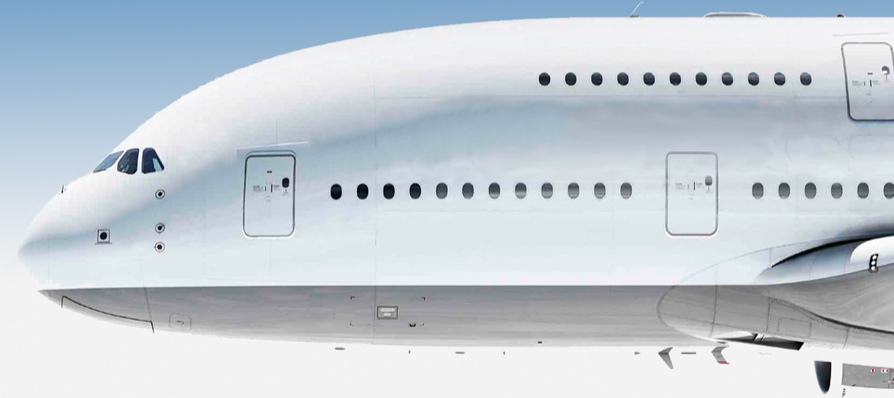
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MID AIR NAVIGATION REPORT - KPI

GANP & NANP WORKSHOP
Cairo, Egypt, 5-8 March 2023

ICAO MID Office





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Outline

- ❑ Introduction for ICAO MID selected Key Performance Indicators
- ❑ KPI 01 National and Regional status
- ❑ KPI 14 National and Regional status
- ❑ KPI 02 National and Regional status
- ❑ KPI 13 National and Regional status





Introduction for ICAO MID selected KPIs

MIDANPIRG CONCLUSION 18/11: ANS PERFORMANCE MONITORING

For the **first time**, an initial list of Key Performance Indicators (**KPIs**) to be used for the monitoring of the air navigation system performance.

The meeting agreed that for the MID Air Navigation **Report – 2021**, the month of **June and July** 2021 will be used for the collection of required data for measuring the selected KPIs.



Introduction for ICAO MID selected KPIs

MIDANPIRG CONCLUSION 19/6: MID REGION ANR 2022

For the **second year**, an initial list of **KPIs** to be used for the monitoring of the air navigation system performance.

MIDANPIRG 19 meeting agreed that for the MID Air Navigation **Report – 2022**, the month of **June and July** 2022 will be used for the collection of required data for measuring the selected KPIs

KPI (KPA _s)	Title / Definition	Measurement Units	Variants	Data Requirement	Formula / Algorithm	Data collection Timeframe
KPI 01 (predictability)	Departure punctuality Percentage of flights departing from the gate on-time (compared to schedule).	% of flights	Variant 2A – % of departures within ± 15 minutes of scheduled time of departure	For each departing scheduled flight: - List of all IFR scheduled departure for each international aerodrome - Scheduled time of departure (STD) or Scheduled off-block time (SOBT) - Actual off-block time (AOBT)	At the level of individual flights: 1. Exclude non-scheduled departures 2. Categorize each scheduled departure as on-time or not At aggregated/National level: 3. Compute the KPI: number of on-time departures divided by total number of IFR scheduled departures	1 month {June 2021}
KPI 02 (Efficiency, Environmental Impact)	Taxi-out additional time Actual taxi-out time compared to an unimpeded/reference taxi-out time.	Excess taxi-out time in Minutes/flight	Variant 1 – basic (computed without departure gate and runway data)	For each departing flight: -List of all IFR departures for each international aerodrome - Actual off-block time (AOBT) - Actual take-off time (ATOT)	At the level of individual flights: 1. Select departing flights, exclude helicopters 2. Compute actual taxi-out duration: ATOT minus AOBT 3. Compute additional taxi-out time: actual taxi-out duration minus unimpeded/reference taxi-out time At aggregated/National level: 4. Compute the KPI: sum of additional taxi-out times divided by number of IFR departures	1 month (June 2021)
KPI 13 (Efficiency, Environmental Impact)	Taxi-in additional time Actual taxi-in time compared to an unimpeded/reference taxi-in time	Excess taxi-in time in Minutes/flight	Variant 1 – basic (computed without landing runway and arrival gate data)	For each arriving flight: - List of all IFR scheduled Arrivals for each international aerodrome - Actual landing time (ALDT) - Actual in-block time (AIBT)	At the level of individual flights: 1. Select arriving flights, exclude helicopters 2. Compute actual taxi-in duration: AIBT minus ALDT 3. Compute additional taxi-in time: actual taxi-in duration minus unimpeded/reference taxi-in time At aggregated/National level: 4. Compute the KPI: sum of additional taxi-in times divided by number of IFR arrivals	1 month (July 2021)
KPI 14 (predictability)	Arrival punctuality Percentage of flights arriving at the gate on-time (compared to schedule)	% of flights	Variant 2A – % of arrivals within ± 15 minutes of scheduled time of arrival	For each arriving scheduled flight: - List of all IFR scheduled arrival for each international aerodrome - Scheduled time of arrival (STA) or Scheduled in-block time (SIBT) - Actual in-block time (AIBT)	At the level of individual flights: 1. Exclude non-scheduled arrivals 2. Categorize each scheduled arrival as on-time or not At aggregated/National level: 3. Compute the KPI: number of on-time arrivals divided by total number of scheduled arrivals	1 month (July 2021)

State	Airport	2021	2022	State	Airport	2021	2022	State	Airport	2021	2022	State	Airport	2021	2022																													
Bahrain	OBBI			Iraq	ORBI			Saudi Arabia	OEDF			Yemen	OYAA																															
					ORMM				OEJN				OYHD																															
Egypt	HECA				ORER				OEMA				OYRN			OYSN																												
	HEBA				ORSU				OERK				OYTN			OYTZ																												
	HESH				ORNI			HSNN																																				
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	HEMA				OJAQ			OSLK																																				
Iran	OIKB			Kuwait	OKBK			Syria	OSDI			2021	7 States out of 15 represent 46.7%																															
	OIFM			Lebanon	OLBA				OMAA																																			
	OIMM			Libya	HLLB				OMAD																																			
	OISS				HLLS			OMAL																																				
	OITT				HLLT			OMDB																																				
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2021

7 States out of 15 represent 46.7%

2022

8 States out of 15 represent 53.3%

15 Airports out of 57 represent 26.3%

2021

7 States out of 15 represent 46.7%

2022

8 States out of 15 represent 53.3%



KPI 01: Departure punctuality

Departure punctuality: Percentage of flights departing from the gate on-time (compared to schedule).

Variant 2A: % of departures within ± 15 minutes of scheduled time of departure.

Data collection Timeframe: June 2022

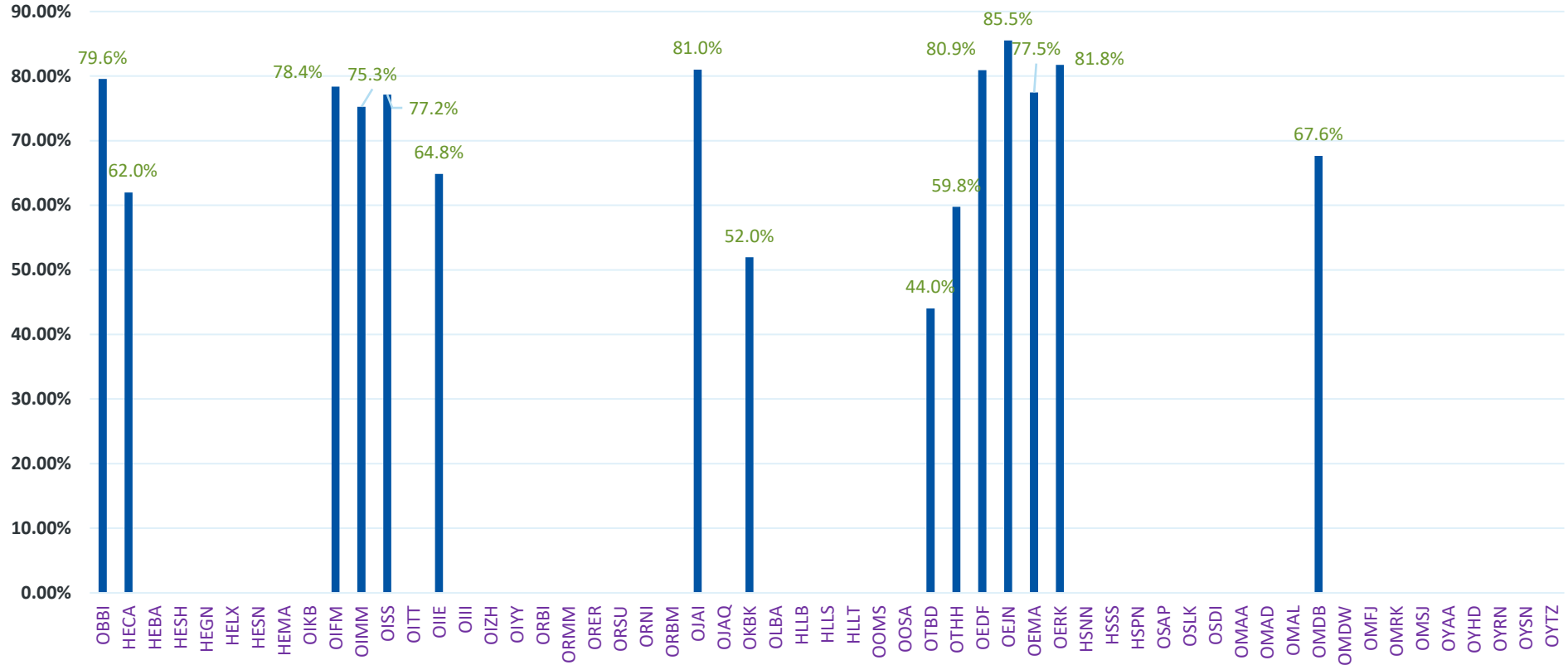
KPI 01 = **Number of on-time departures** (within ± 15 minutes of scheduled time of departure)/**total number of IFR scheduled departures** x **100**



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KPI 01 Departure punctuality - Airports





KPI 14: Arrival punctuality

Arrival punctuality: Percentage of flights arriving at the gate on-time (compared to schedule).

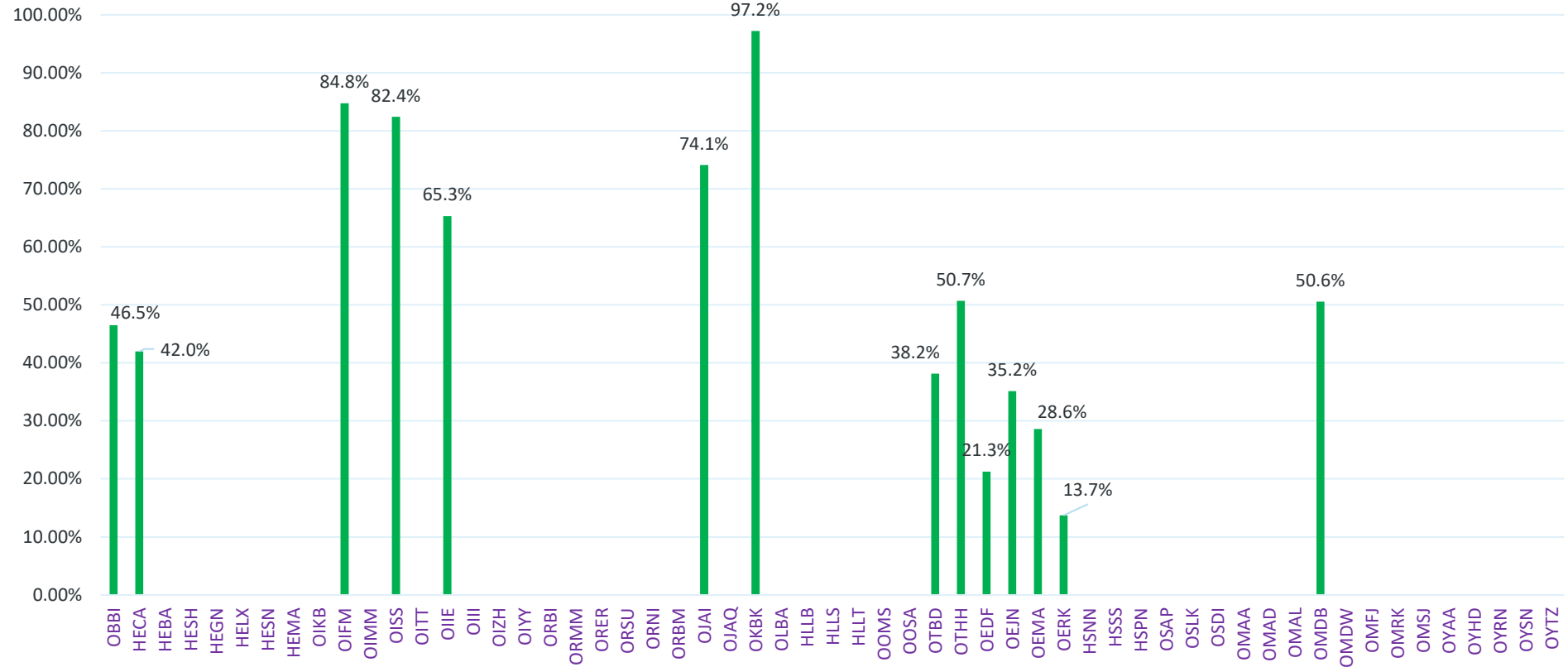
Variant 2A: % of arrivals within \pm 15 minutes of scheduled time of arrival.

Data collection Timeframe: July 2022

KPI 14 = **Number of on-time arrival** (within \pm 15 minutes of scheduled time of arrival)/**total number of IFR scheduled arrivals** x **100**



KPI 14 Arrival punctuality - Airports





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KPI 02: Taxi-out additional time

Taxi-out additional time: Actual taxi-out time compared to an unimpeded/reference taxi-out time.

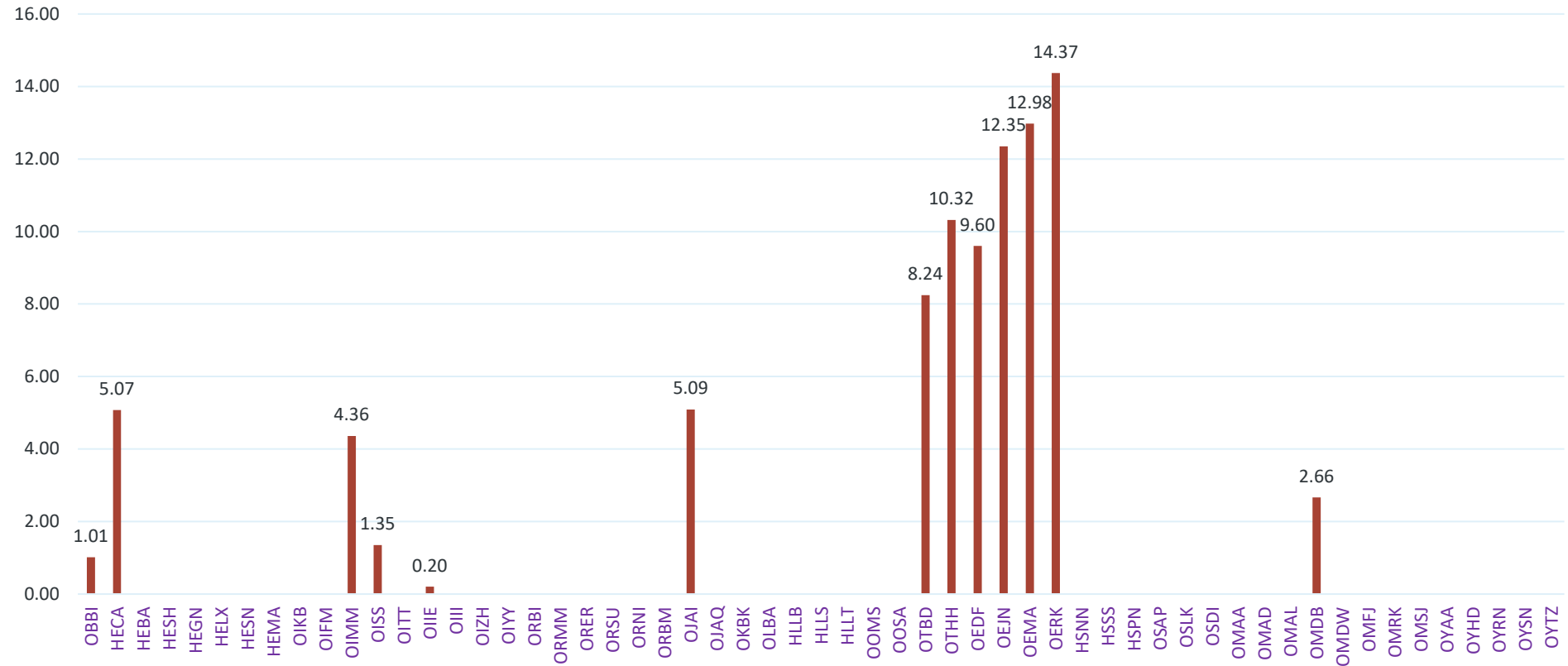
Variant 1: basic (computed without departure gate and runway data)

Data collection Timeframe: June 2022

KPI 02 = **Sum of additional taxi-out times in minutes** (taxi time-out which is more than reference time calculated by state)/**total number of IFR departures**



KPI 02 Taxi-out additional time





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KPI 13: Taxi-in additional time

Taxi-in additional time: Actual taxi-in time compared to an unimpeded/reference taxi-in time.

Variant 1: basic (computed without departure gate and runway data)

Data collection Timeframe: July 2022

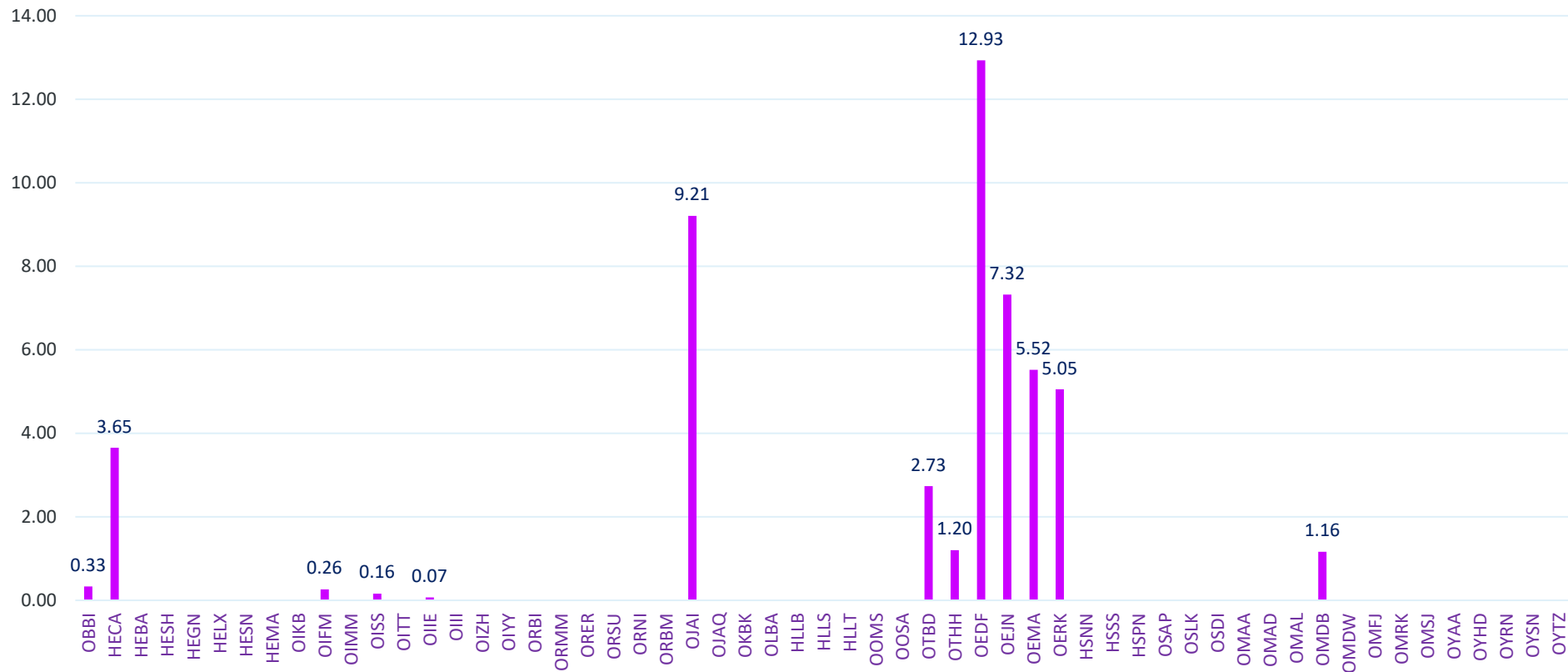
KPI 13 = **Sum of additional taxi-in times in minutes** (taxi time-in which is more than reference time calculated by state)/**total number of IFR arrivals**



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KPI 13 Time-in additional time





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