



ICAO

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North American, Central American and Caribbean Office

WORKING PAPER

NACC/WG/8 — WP/12
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Eighth North American, Central American and Caribbean Working Group Meeting (NACC/WG/8)
Mexico City, 29 August - 1 September 2023

- Agenda Item 3: Follow-up of NACC/WG 2022-2023 Action Plan**
3.6 NACC/WG progress in operations: AO, Air Traffic Management (ATM), Search and Rescue (SAR), ATFM and Aerodromes and Ground Aids (AGA)

DEFINE REGIONAL PERFORMANCE INDICATORS (KPI) FOR REGIONAL OPERATIONS

(Presented by the ATFM Rapporteur)

EXECUTIVE SUMMARY	
This working paper follows up on WP02 from the Rapporteurs meeting that occurred at the end of March 2023 in Mexico City. That working paper evaluated the Key Performance Indicators (KPI's) under the new Global Air Navigation Plan (GANP) Seventh Edition that was approved in October 2022 at the 41 st ICAO Assembly. This working paper outlines a method for determining the KPIs that are currently gathered by the States/ANSPs, ensuring that these KPIs are harmonized, and are measuring like metrics. These metrics should be warehoused in a manner that is easily accessible and understandable.	
<i>Suggested Action:</i>	Suggested actions are presented in Section 5.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none">• Safety• Air Navigation Capacity and Efficiency• Economic Development of Air Transport• Environmental Protection
<i>References:</i>	<ul style="list-style-type: none">• Global Air Navigation Plan, seventh version: https://www4.icao.int/ganportal/

1. Introduction

1.1 KPIs are quantitative means of measuring current/past performance, expected future performance as well as actual progress in achieving performance objectives. For Air Navigation Services, they provide information to be reviewed by States on service performance and support decision-making for operational improvements.

1.2 KPIs are key fundamentals that provide information regarding actions taken, systems implemented, and so on. An action allows objective measurement of performance over time for a specific objective.

1.3 With the new version of the Global Air Navigation Plan (GANP), 23 different KPIs were defined, which are listed in Appendix A of this working paper and can also be found in this link: <https://www4.icao.int/ganportal/ASBU/KPI>

2. KPIs currently gathered

2.1 Many States/ANSPs are currently gathering metrics that fulfil the KPI requirements. Which States/ANSPs and what KPIs.

2.2 Identify the Data Source (Data Providers)- Determine where the necessary data for each KPI will come from.

2.3 Data collection methods- Choose the appropriate methods for collecting data. It could be automated through software systems, manual data entry, sensors, surveys, or a combination of these.

2.4 Data Validation-Implement data validation checks to ensure the accuracy and consistency of collected data.

2.5 Define Metadata-Establish and agree the Metadata tables.

3. Develop System for maintaining data

3.1 **Data integration**- Integrate data from different sources into a centralized system or database. This ensures consistency and allows for easier analysis.

3.2 **Data quality assurance**- Regularly audit and validate the data collection process to identify and address any issues promptly.

3.3 **Automate Collection**: Automate data collection where possible to reduce manual errors and ensure data is collected consistently over time.

3.4 **Define Data Collection Schedule**: Set a clear schedule for data collection, specifying how often and when data will be collected.

3.5 **Training and Awareness**: Train personnel responsible for data collection on the importance of accurate and consistent data. Make them aware of the KPI definitions and the proper data collection process.

3.6 **Monitor and Review**: Continuously monitor the data collection process. Regularly review the collected data to identify trends, anomalies, and potential improvements.

3.7 **Feedback Loop**: Establish a feedback loop where issues with data collection can be reported and addressed promptly.

3.8 **Reporting and Visualization**: Use tools and systems to visualize and report KPI data in a clear and understandable format for stakeholders.

3.9 **Benchmarking**: Compare collected KPIs against industry benchmarks or internal targets to assess performance.

3.10 **Continuous Improvement**: Regularly refine the data collection process based on lessons learned and feedback. Continuously improve the accuracy and efficiency of data collection.

3.11 **Data Security and Privacy:** Ensure that data collection adheres to relevant data security and privacy regulations.

3.12 **Stakeholder Communication:** Communicate KPI progress and results to relevant stakeholders, fostering transparency and accountability.

4. **Conclusions and Recommendations**

4.1 We are called to provide metrics on KPI's that have a large influence on our operations. We must determine those KPI's that are most important and begin collecting them.

4.2 A group must be created to investigate and resolve these questions.

5. **Suggested actions**

5.1 The Meeting is invited to:

- a) review the KPI's listed in the **Appendix**;
- b) support the recommendations included in Section 4;
- c) determine the KPIs that are currently being gathered;
- d) each NACC/WG Task Force according to their own evaluation, provide their contribution to the establishment of the regional KPIs; and
- e) jointly set up the pilot programme (draft) as a regional project of the NACC/WG to establish regional KPIs.

APPENDIX

Key Performance Indicators (KPIs)

1. KPI01: Departure punctuality
2. KPI02: Taxi-out additional time
3. KPI03: ATFM slot adherence
4. KPI04: Filed flight plan en-route extension
5. KPI05: Actual en-route extension
6. KPI06: En-route airspace capacity
7. KPI07: En-route ATFM delay
8. KPI08: Additional time in terminal airspace
9. KPI09: Airport peak capacity
10. KPI10: Airport peak throughput
11. KPI11: Airport throughput efficiency
12. KPI12: Airport/Terminal ATFM delay
13. KPI13: Taxi-in additional time
14. KPI14: Arrival punctuality
15. KPI15: Flight time variability
16. KPI16: Additional fuel burn
17. KPI17: Level-off during climb
18. KPI18: Level capping during cruise
19. KPI19: Level-off during descent
20. KPI20: Number of aircraft accidents
21. KPI21: Number of runway incursions
22. KPI22: Number of runway excursions
23. KPI23: Number of airprox/TCAS alert/loss of separation/near midair collisions/midair collisions (MAC)

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