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INTERNATIONAL CIVIL AVIATION ORGANIZATION
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Global Air Navigation Plan (GANP) Seventh Edition

Key Performance Indicators (KPIs)

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Key Performance Indicators (KPI)

- KPIs are the quantitative means to measure the current/past performance, the expected future performance and the real progress in the achievement of the performance objectives.
- KPIs provide information to be reviewed by States on service performance and support the decision making.
- KPIs are key foundations that provide information on actions taken, systems implemented.
- With the new version of the Global Air Navigation Plan (GANP), 23 different KPIs were defined

https://www4.icao.int/ganpportal/ASBU/KPI

PERFORMANCE OBJECTIVES CATALOG

- *These objectives must be "SMART" (specific, measurable, achievable, relevant and timely) and, although they are expressed in qualitative terms, they can include a desired or required trend for a performance indicator without yet expressing the performance objective in numerical terms (this is done as part of a performance goal setting).*

PERFORMANCE OBJECTIVES CATALOG

- *Regional performance objectives help the aviation community to identify relevant and timely improvements (operational improvements) to the air navigation system of a particular region. Additionally, at national level, States can set performance targets for their different operating environments using the list of KPIs, considering the regional performance requirements.*

According to the GANP, Seventh Edition, the performance objectives are:

- Efficiency
- Capacity
- Predictability
- Safety
- Security
- Environment
- Profitability
- Interoperability
- Access and equity
- Participation of the Air Traffic Management (ATM)
- Flexibility

Key Performance Indicators (KPI)

- KPI01: Departure punctuality
- KPI02: Taxi-out additional time
- KPI03: ATFM slot adherence
- KPI04: Filed flight plan en-route extension
- KPI05: Actual en-route extension
- KPI06: En-route airspace capacity
- KPI07: En-route ATFM delay
- KPI08: Additional time in terminal airspace
- KPI09: Airport peak capacity
- KPI10: Airport peak throughput
- KPI11: Airport throughput efficiency
- KPI12: Airport/Terminal ATFM delay

Key Performance Indicators (KPI)

- KPI13: Taxi-in additional time
- KPI14: Arrival punctuality
- KPI15: Flight time variability
- KPI16: Additional fuel burn
- KPI17: KPI17: Level-off during climb
- KPI18: Level capping during cruise
- KPI19: Level-off during descent
- KPI20: Number of aircraft accidents
- KPI21: Number of runway excursions
- KPI22: Number of runway excursions
- KPI23: Number of airprox/TCAS alert/loss of separation/near midair collisions/midair collisions (MAC)

IMPORTANT NOTES ON KPIs

- The System Wide Information Management (SWIM), Digital Aeronautical Information Management (DAIM), Advanced Meteorological Information (AMET), Flight & Flow Information for a Collaborative Environment (FICE), are the information enablers and do not have related KPIs.

- All the modules of technology sub-process are also information enablers, Communications Infrastructure (COMI), ATS Communication Service (COMS), Surveillance System (ASUR) and Navigation Systems (NAVS). They also have no related KPIs.
- All KPIs are related to operational aviation and airport services, supported by information and technology.

- ***In summary, ASBU information and technology modules play an important role in providing information to provide air navigation services, but the performance values are measured through the aeronautical services already in operation.***

REQUIRED INFORMATION TO ESTABLISH KPIs

- To obtain the results of the different KPIs, it is necessary to obtain pre-established data that feeds the algorithm for the calculation of the KPIs. The required information is shown in the following link: https://www4.icao.int/ganpportal/ASBU/KPI

- Data collection involves asking the following questions:
  - What type of data are?
  - What is the source of the data?
  - What is the precision of the data?
  - What is the periodicity with which the data is obtained?
  - What are the data format characteristics?
  - What is the data validation process?
  - Who are the data suppliers?
  - What is the metadata of the data (data type, date, time, system that obtained it, who obtained it, etc.)? A clear and precise definition of the data.

Key Performance Indicators (KPI)

- ✓ Obtaining the information available in the States
- ✓ Standardization of the evaluation criteria of the KPIs in the States and in the region.

EXAMPLE

ASBU ELEMENTS
ELEMENTS READY FOR IMPLEMENTATION
KPIs

No	KPI	Data Requirement	Data Feed Providers
1	KPI02: Taxi-out additional time	For each departing scheduled flight: Scheduled time of departure (STD) or Scheduled off-block time (SOBT) Actual off-block time (AOBT)	Schedule database(s), airports, airlines and/or ANSPs
2	KPI04: Filed flight plan en-route extension	For each flight plan: Departure airport (Point A) Destination airport (Point B) Entry point in the 'Reference area' (Point O) Exit point from the 'Reference area' (Point D) Entry points in the 'Measured areas' (Points N) Exit points from the 'Measured areas' (Points X) Planned distance for each NX portion of the flight	ANSPs
3	KPI05: Actual en-route extension	For each actual flight trajectory: Departure airport (Point A) Destination airport (Point B) Entry point in the 'Reference Area' (Point O) Exit point from the 'Reference Area' (Point D) Entry points in the 'Measured Areas' (Points N) Exit points from the 'Measured Areas' (Point X) Distance flown for each NX portion of the actual flight trajectory, derived from surveillance data (radar, ADS-B...).	ANSPs, ADS-B data providers

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Thank You!

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