

Regional Focus



# ANSP performance benchmarking workshop

## Africa

Monday 21 June 2021

14:00 – 15:30 CAT



# Ms. Boni Dibate

Director Africa Affairs

CANSO

# Speaker



**Michelle Bishop**

**Director Programmes**

**CANSO**

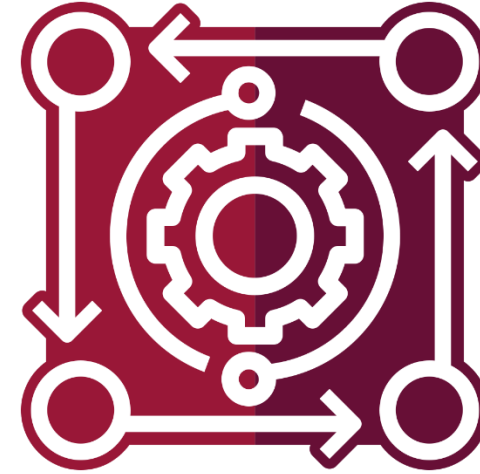
# Work Programmes



Safety



Operations



**Strategy and  
Integration**



Ms. Diána Rohácsné Galgóczi  
Chair CANSO GBWG and Head  
of International Financial Affairs  
Unit  
Hungarocontrol



Henry Ashworth  
Consultant, Aviation  
Egis



Dr. Michael O. Aomo  
Chief SMS Coordinator  
KCAA



Josia Manyakoana  
Senior Manager Operations  
ATNS

# Speaker



**Ms. Diána  
Rohácsné Galgóczi**

**Chair CANSO GBWG and  
Head of International Financial  
Affairs Unit  
Hungarocontrol**

# Agenda

- Introduction to Global Benchmarking Workgroup (GBWG) and our activities
- Key findings latest data trends (2014-2018)
- Benefits of participating and how
- Case studies from current GBWG members
- Q&A
- Closing remarks





# Introduction to Global Benchmarking Workgroup (GBWG) and our activities



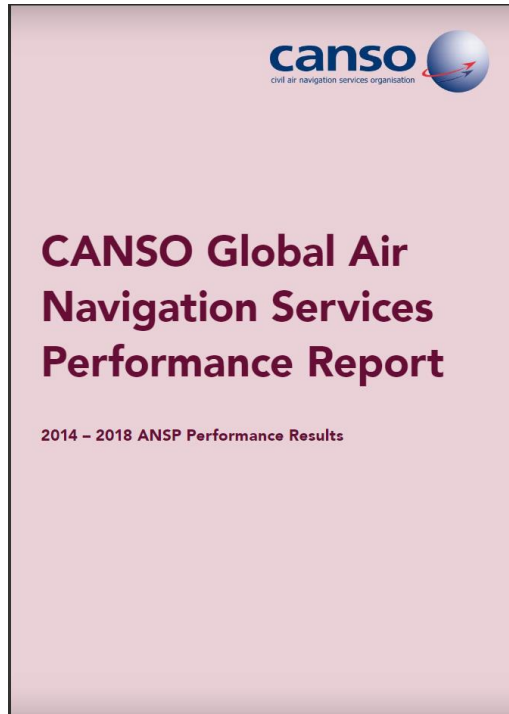


# Global Benchmarking Workgroup (GBWG)

Collaborates in the development of key performance measures, monitors performance in air navigation services provision and identifies industry best practices to support the transformation of global ATM performance.

- Only open to ANSPs
- 46 Full Members
- Egis – data support

# Key activities/outputs



**Benchmarking  
Report**



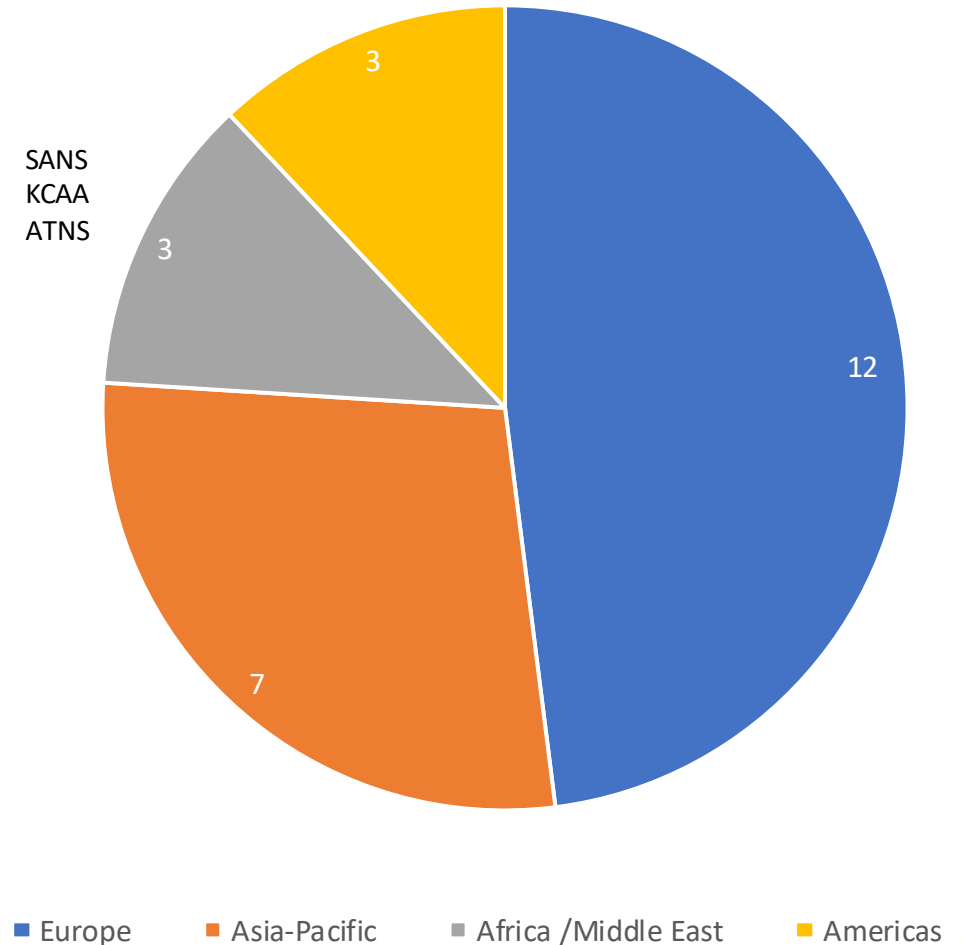
**Biannual  
Personal  
Meetings**



**Data  
Dashboard**

# CANSO Global ANS Performance Report

- Global Air Navigation Services (ANS) Performance Report (2014-2018) is available on the CANSO website - Publications
- The public report presents key findings on ANSP's cost efficiency and productivity, and KPI results
- Includes supporting analysis & thought pieces based on feedback from ANSPs
- Incorporates input from other CANSO WGs on trends in other areas such as safety, operations and human resources
- NEW: Incorporates data for European ANSPs participating in the ATM Cost-Effectiveness (ACE) report (i.e. collected by EUROCONTROL Performance Review Unit (PRU))
- Report covers 57 ANSPs responsible for 65% of global traffic



**Data submitted direct to CANSO by  
GBWG members**  
2014-18 report released in Sep 2020

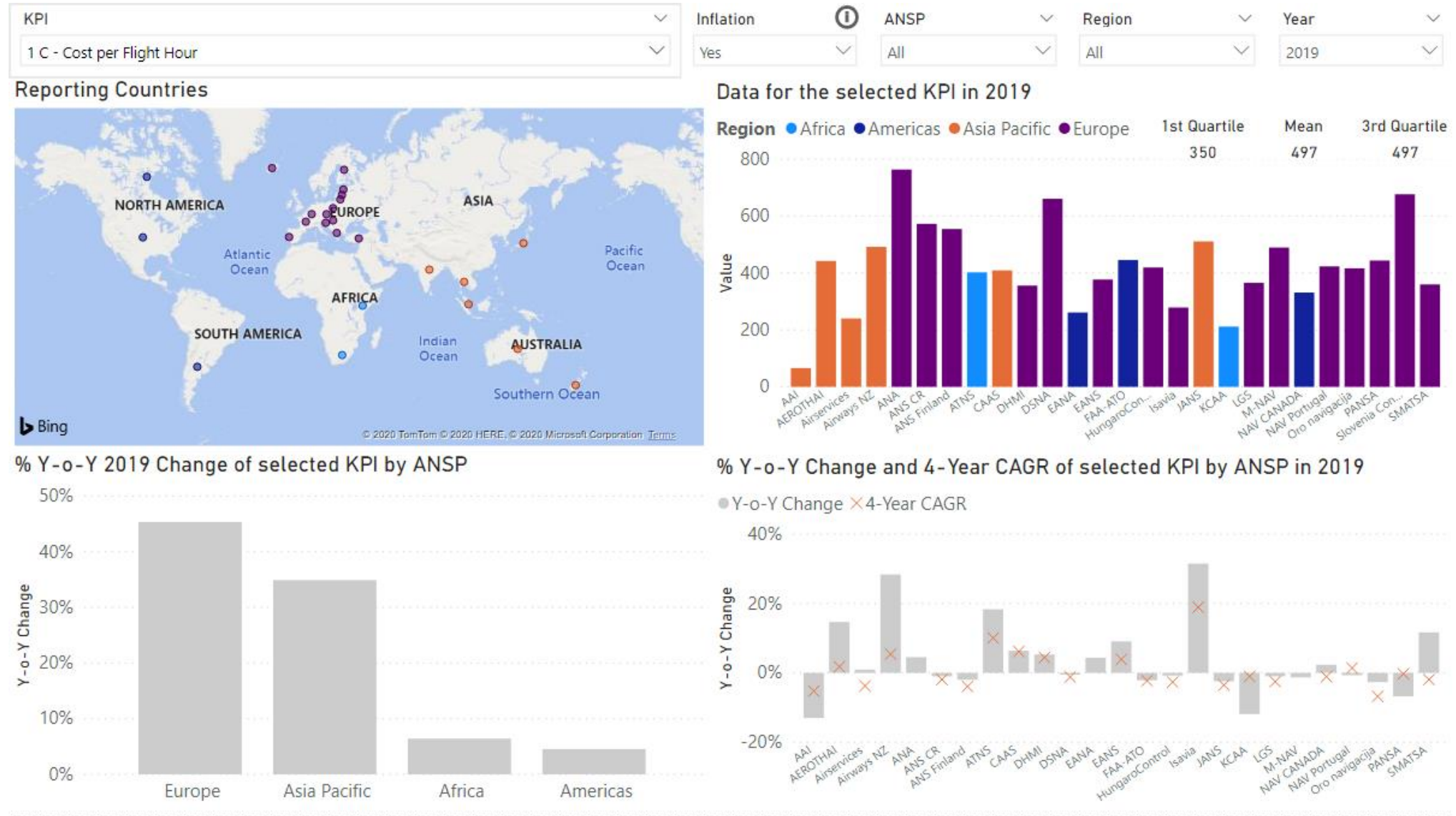
# Data dashboard

GBWG  
participants  
only

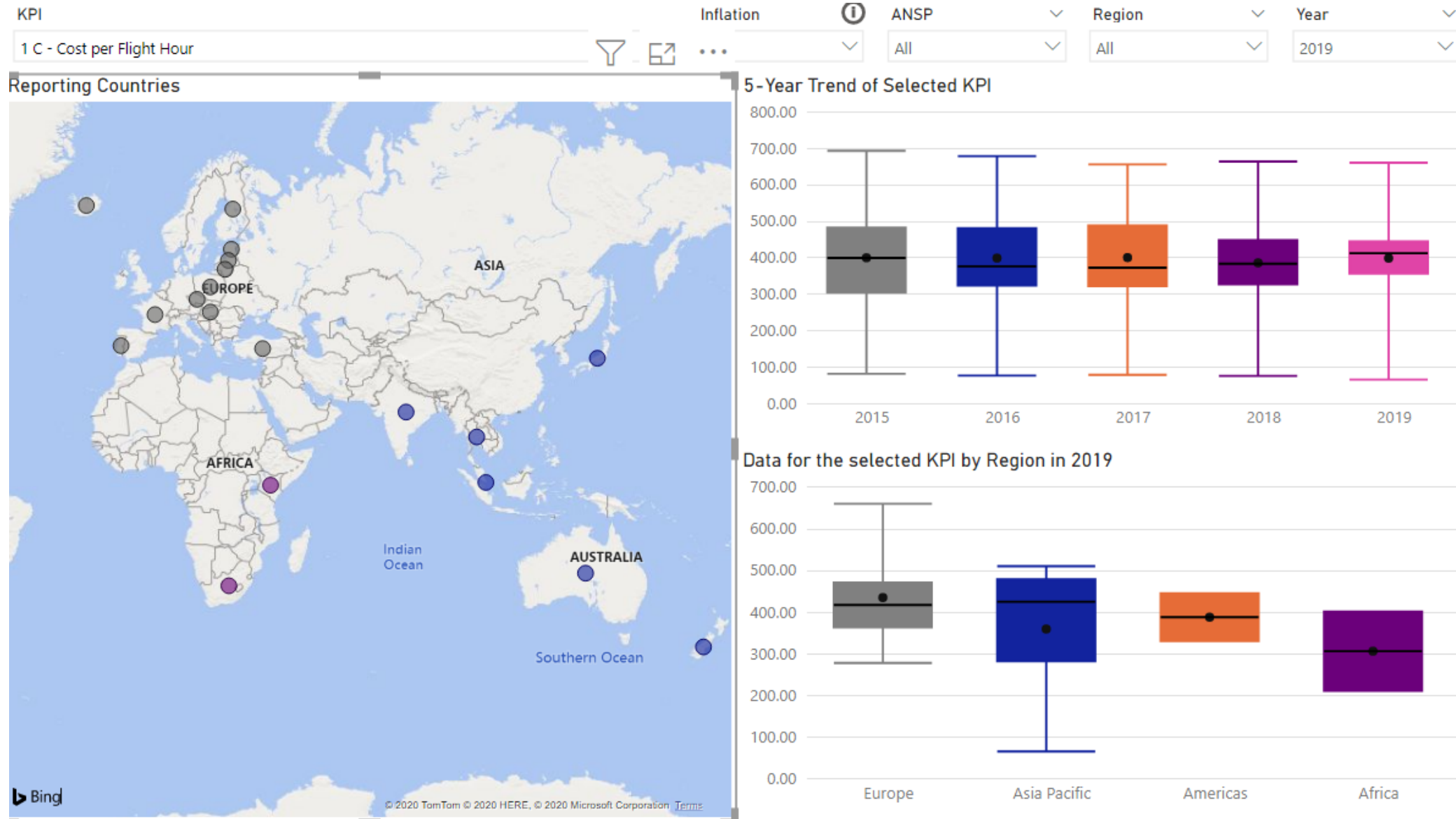
- An interactive tool (based in Power BI) to investigate KPI trends
- Incorporates both continental and oceanic ANS data
- Provides statistics that help ANSPs determine organization goals
- Released in December following reference year (6-9 months before public report released)



# Data dashboard



# Data dashboard







# GBWG meetings

- Monitor & review report drafts and provide feedback on data collection process
- Discuss trends identified in report/dashboard in more depth via interactive sessions
- Explore new benchmarking opportunities by trialing additional KPIs
- Share experience and practices in improving performance



Regional Focus



# ANSP performance benchmarking workshop

Africa

# Speaker



## Henry Ashworth

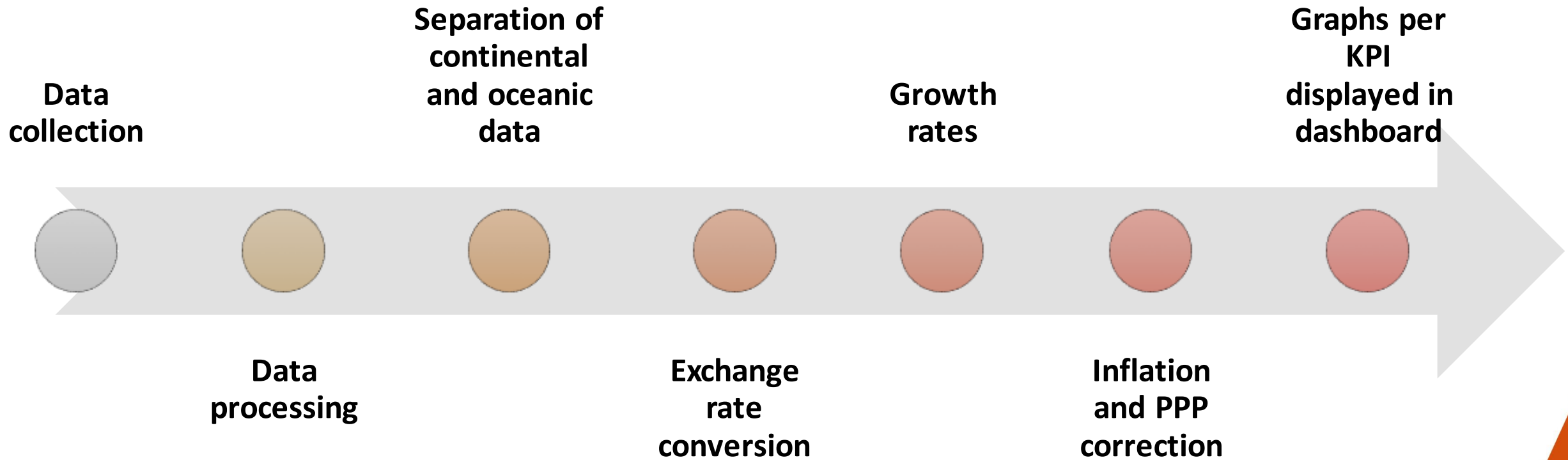
Consultant, Aviation

Egis



# **Key findings latest data trends (2014-2018)**

# Data processing



# 2018 Trends

---



Increases in traffic continue to outweigh increases in costs



Increases in employment costs were consistent with those recorded in 2017



ATCO productivity increases were widespread



Costs excluding 'ATCO in OPS Employment Costs per IFR Flight Hour' reduced for most ANSPs

98%

ANSPs that saw ↑  
IFR flight hours  
2017-18

59%

ANSPs that saw ↓  
continental Total  
Cost per IFR flight  
hours

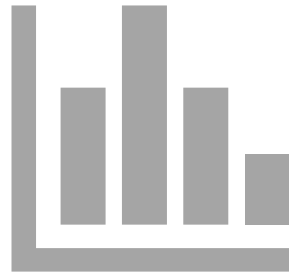
76%

ANSPs that saw ↑  
continental ATCO  
productivity

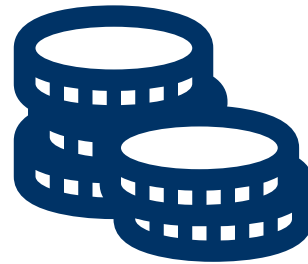
# Assess where you fall



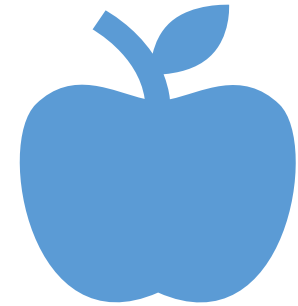
Benchmark your  
performance  
through statistical  
values



Assess  
ANSP trends



PPP adjustment  
comparisons for  
total and  
employment costs  
per IFR flight hours



Compare “apples  
to apples”

# Understand the deeper context

- Supported with contextual data to understand individual ANSP performance
- Increasing collaboration between CANSO WGs to identify possible drivers of trends in wider context
  - Safety Intelligence Workgroup (SIWG)
  - Human Resources Workgroup (HRWG)
  - Operational Performance Workgroup (OPWG)
- Aiming to incorporate 'themes' into reports in future to further investigate trends, supported by additional data submitted by ANSPs e.g. impact of COVID-19 on 2020 ANS performance





**Benefits of participating**

**How can you get  
involved?**

# Seven simple measurements

---

Total costs

---

IFR flight hours

---

ATCO hours

---

ATCO employment cost

---

Other costs

---

No. of ATCOs

---

No. of frontline service support staff

---

Detailed definitions  
will be provided  
(avail in French)

Data to be provided  
for continental &  
oceanic

# Seven simple measurements

---

Total costs

---

IFR flight hours

---

ATCO hours

---

ATCO employment cost

---

Other costs

---

No. of ATCOs

---

No. of frontline service support staff

---

Detailed definitions  
will be provided  
(avail in Spanish)

Data to be provided  
for continental &  
oceanic

# Workbook Demo

# Workbook

The screenshot shows an Excel application window with the title bar 'Trial Blank\_WB\_2020- v12 - Excel'. The ribbon is set to 'Home', displaying options for Font, Alignment, Number, Styles, Cells, Editing, and Ideas. The worksheet grid shows columns A through W and rows 1 through 25. A large blue-bordered box contains the following text and links:

Please complete the basic workbook. The advanced workbook is then optional but will enhance analysis and outputs

- 'Basic' data is used to calculate KPIs within the report
- 'Advanced' data is additional data that is used to trial KPIs and perform additional analysis for presentation

To view or update previous years of data click previously submitted

To view outputs click 'Output Sheets'

For further definition of any metrics please refer to the definitions and the KPI framework.

The links are represented by colored boxes:

- Basic Workbook (orange border)
- Advanced Workbook (teal border)
- Previously Submitted (yellow-green border)
- Output Sheets (grey border)
- Definitions (teal border)
- KPI Framework (yellow-green border)

The bottom status bar shows the following tabs: Main Menu, Control, General, Contextual, Input sheet, Basic Previously submitted data, and Ba ... (+). The zoom level is 85%.

# Workbook

The screenshot displays an Excel workbook titled "Trial Blank\_WB\_2020- v12 - Excel". The ribbon is set to the "Home" tab, showing options for Font, Alignment, Number, Styles, Cells, and Editing. The task pane on the right includes "Share" and "Comments" buttons. The worksheet is titled "ANSP Control Sheet" and contains a progress bar labeled "Control - Progress" with a "Main Menu" button. Below the progress bar, there is a section for "Submission characteristics" with input fields for "ANSP Name", "Country", "Current data year" (set to 2019), and "Name for graphics". There is also a section for "Additional information" with a "Comments" field. The bottom of the screen shows a navigation bar with tabs: "Main Menu", "Control", "General", "Contextual", "Input sheet", and "Basic Previously submitted data". The status bar at the bottom right indicates "Display Settings" and a zoom level of 70%.

AutoSave Off Trial Blank\_WB\_2020- v12 - Excel Search Fiona Ribbons FR

File Home Insert Page Layout Formulas Data Review View Help Share Comments

Clipboard Font Alignment Number Styles Cells Editing Ideas

H18

Control - Progress

Main Menu

0% 25% 50% 75% 100%

ANSP Control Sheet

Provide key information about the ANSP. This sheet also contains any additional information that may be required to clarify the input as submitted. Please note that entries on this sheet will NOT automatically be included in the calculation of any Final Data Submission values.

Submission characteristics

ANSP Name

Country

Current data year 2019

Name for graphics

Additional information

Comments

Dates used for obtaining data

Methodology used for calculating

Main Menu Control General Contextual Input sheet Basic Previously submitted data

Display Settings 70%

# Workbook

AutoSave Off

Trial Blank\_WB\_2020- v12 - Excel

Search

Fiona Ribbons FR

Share

Comments

FileHomeInsertPage LayoutFormulasDataReviewViewHelp

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**B***I*U

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8	<div><div>ANSP general information</div><div>This sheet contains general data questions that provide high level information about the ANSP.</div><div><div>Name</div><div>Country</div><div>Region</div></div><div><div>Information supporting report theme</div><div>How are your ATCO in operation overtime hours calculated?</div><div>What capex projects do you have planned and have these plans been subject to any large changes?</div></div></div>							
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Main Menu

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Contextual

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Ba ...

+

Display Settings

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# Workbook

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Clipboard Font Alignment Number Styles Cells Editing Ideas

B12

Input - progress

Main Menu

Continental Oceanic 0% 25% 50% 75% 100%

ANSP Input Sheet

This is the sheet for input of the data that contributes to the KPIs that appear in the report. It also contains definitions for the data fields to aid data submission, please view these by clicking on the definitions button. **Please enter data for the 2019 period**, as specified in the Control sheet.

Data

	Continental	Oceanic
Total Costs		
IFR flight hours		
ATCO in operations hours		
ATCO in operations overtime hours		
Employment cost for ATCOs in operations		
Other costs		
Number of ATCOs in operations		
ANS Revenue		
Example price per 1000 km flight for A320		
Example consolidated price per 250 km flight for ATR72		
Number of Frontline Service Support Staff		
Total ATCO in ops hours allocated to en-route		
En-route IFR hours		

Definitions

Information supporting 2020 report theme

	2019
Total Capital Expenditure	

	2015	2016	2017	2018	2019
Continental ATCO in operations overtime (in hours)					0
Oceanic ATCO in operations overtime (in hours)					0

Financial information

	2019
Exchange rate (national currency/USD)	

Main Menu Control General Contextual Input sheet Basic Previously submitted data Basic Output Basic Output (USD) Basic PPP Out ...

Display Settings 100%

# Workbook

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File Home Insert Page Layout Formulas Data Review View Help

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Main Menu

Output sheet

Basic PPP Output

Apply Inflation adjustment

Inflation rates

	2015	2016	2017	2018	2019
	0.00	0.00	0.00	0.00	0.00

Continental

KPIs	2015	2016	2017	2018	2019	2018-2019 AGR	2015-2019 CAGR
1 Unit cost	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Total Costs	-	-	-	-	-	#DIV/0!	#DIV/0!
IFR flight hours	-	-	-	-	-	#DIV/0!	#DIV/0!
2A ATCO employment costs	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
ATCO employment cost	-	-	-	-	-	#DIV/0!	#DIV/0!
ATCO hours	-	-	-	-	-	#DIV/0!	#DIV/0!
2B ATCO productivity	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
IFR flight hours	-	-	-	-	-	#DIV/0!	#DIV/0!
ATCO hours	-	-	-	-	-	#DIV/0!	#DIV/0!
2C Other costs per IFR flight hour	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Other costs	-	-	-	-	-	#DIV/0!	#DIV/0!
IFR flight hours	-	-	-	-	-	#DIV/0!	#DIV/0!
2D Proportion of total costs made up of ATCO	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
ATCO employment cost	-	-	-	-	-	#DIV/0!	#DIV/0!
Total Costs	-	-	-	-	-	#DIV/0!	#DIV/0!
3A Unit ATCO employment costs	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
ATCO employment cost	-	-	-	-	-	#DIV/0!	#DIV/0!
No. of ATCOs	-	-	-	-	-	#DIV/0!	#DIV/0!
3B Annual Working hours per ATCO in OPS	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
ATCO hours	-	-	-	-	-	#DIV/0!	#DIV/0!
No. of ATCOs	-	-	-	-	-	#DIV/0!	#DIV/0!
3C IFR hours per ATCO in OPS	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
IFR flight hours	-	-	-	-	-	#DIV/0!	#DIV/0!
No. of ATCOs	-	-	-	-	-	#DIV/0!	#DIV/0!
3D Ratio of frontline service staff to ATCO in OPS	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Frontline staff	-	-	-	-	-	#DIV/0!	#DIV/0!
No. of ATCOs	-	-	-	-	-	#DIV/0!	#DIV/0!

Main Menu Control General Contextual Input sheet Basic Previously submitted data Basic Output Basic Output (USD) Basic PPP Out ...

Display Settings 90%

# Why join the CANSO GBWG?



Monitor performance internally, globally and compared to peers



Identify areas of challenges and improvements



Gain access to the data dashboard & underlying data from each KPI



Present results to customers and internal stakeholders through the report or interactive dashboard

# Why join the CANSO GBWG?



Share and compare insights with other ANSPs on effective practices



Identify and track key trends affecting the industry and recognise how they are affecting performance



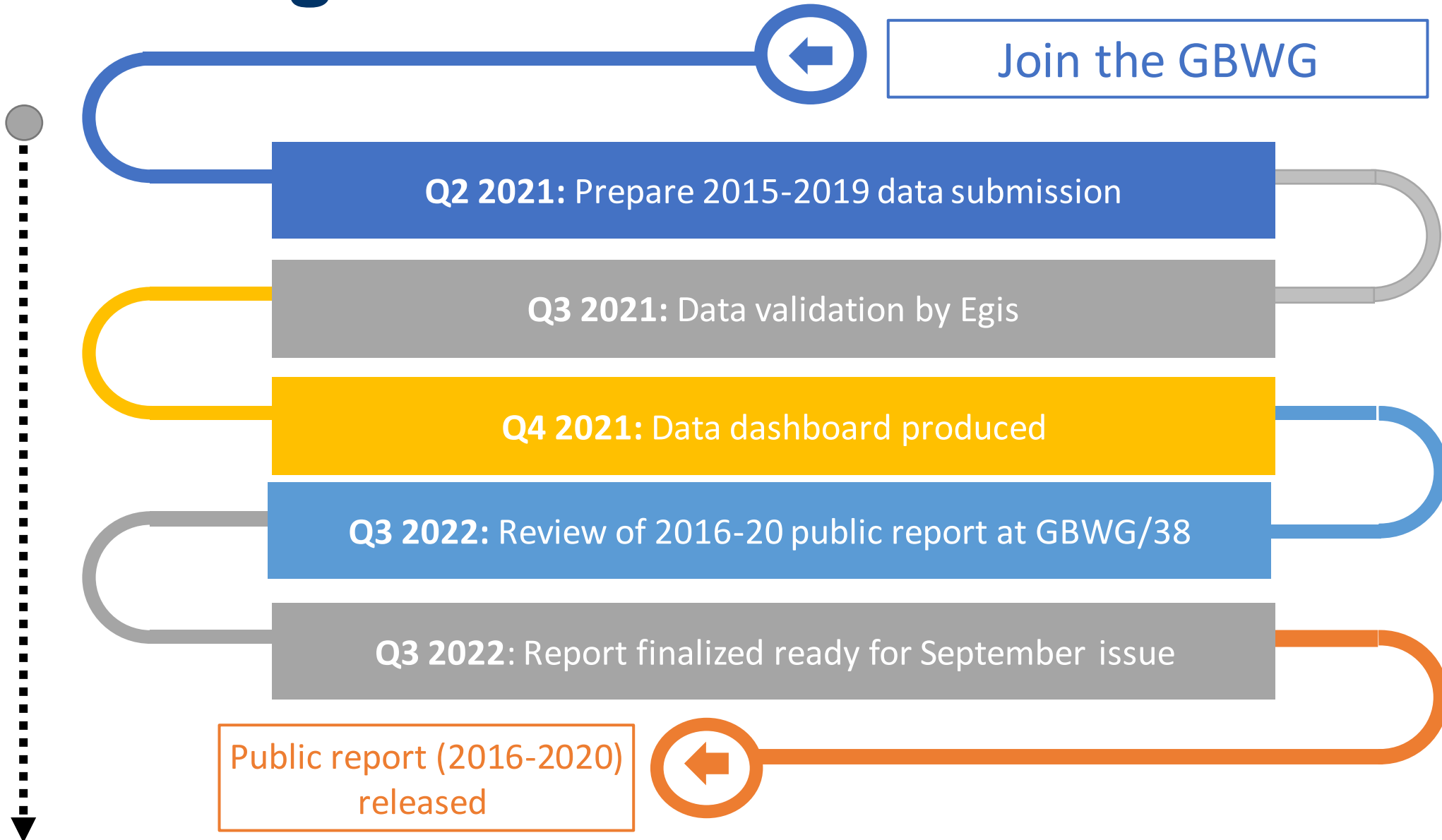
Direct analysis and participate in development of trial KPIs



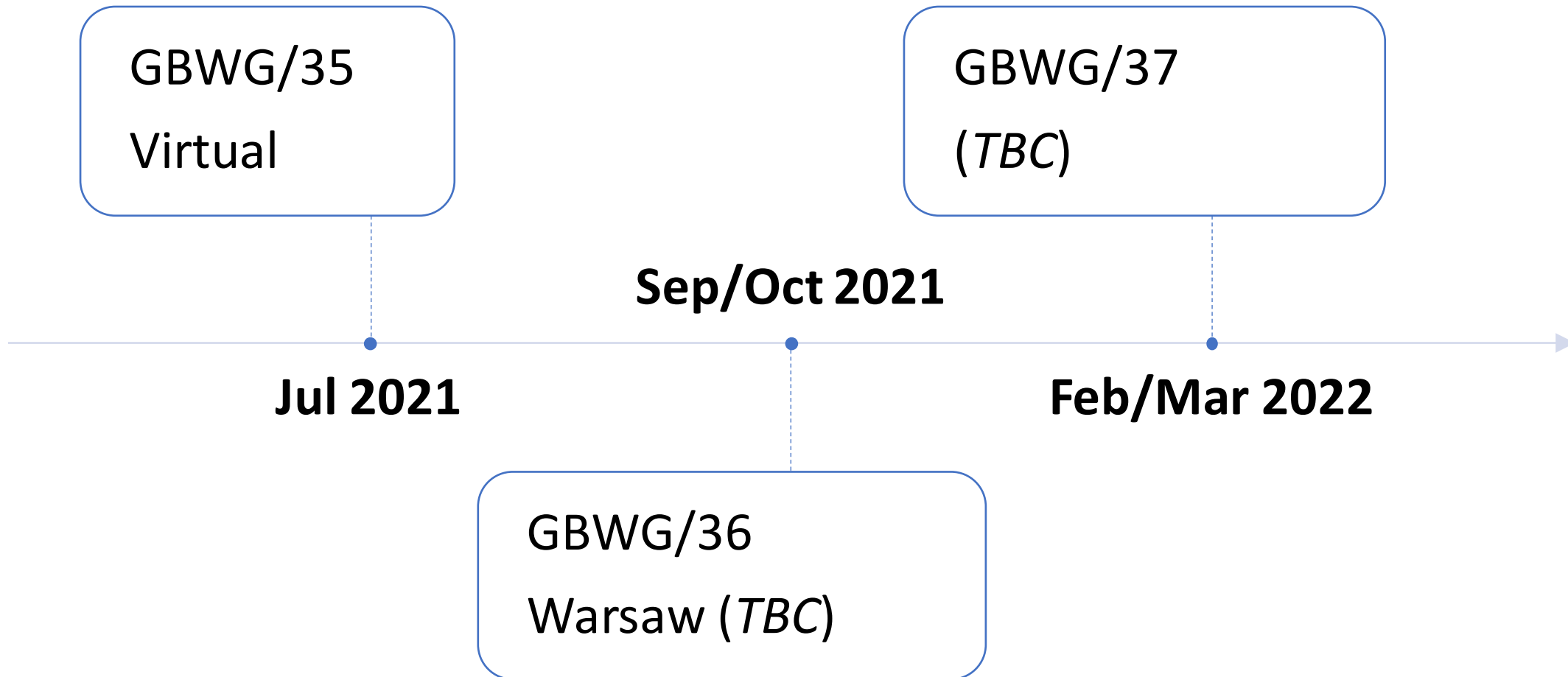
Networking with ANSPs during GBWG meetings

Benefits	Participants Reports	GBWG members	EUROCONTROL	EUROCONTROL Members
Ability to opt-in / opt-out	✓	N/A	N/A	X
Ability to choose CANSO or PRU data ( <i>European ANSPs only</i> )	✓	N/A	N/A	X
<u>Early</u> access to underlying CANSO (basic) data	✓	✓	X	X
<u>Late</u> access to underlying CANSO (basic) data	✓	✓	✓	X
Access to CANSO advanced data	✓	X	X	X
Access to data dashboard (CANSO data)	✓	✓	X	X
Access to data dashboard (CANSO + PRU data)	✓	✓	X	X

# How to get involved



# Upcoming meetings





Regional Focus



# ANSP performance benchmarking workshop

Africa

# Speaker



**Dr. Michael O. Aomo**

**Chief SMS Coordinator  
KCAA**

# **Benefits of ANSPs Operational Performance Benchmarking: A Case of KCAA**

**By**

**Dr. Michael O. Aomo, PhD**  
**Chief SMS Coordinator, KCAA**

## Introduction

- ❖ KCAA has been participating in the CANSO GBWG and its related activities (i.e. Global ANS Performance Report, Data dashboard, Meetings) since 2016.
- ❖ This in line with Kenya Airspace Master Plan 2015-2030 which included the requirement to develop and implement a Data-Driven Operational Performance Management System to aid in decision making.

## Introduction cntd .....

- ❖ By 2019, we noticed that we had a lot of operational data following the utilization of CANSO data dashboard.
- ❖ There was therefore a need to establish an Operational Performance Measurement and Monitoring (OPMM) Framework to systematically manage the process.
- ❖ A 3½-year OPMM implementation plan was consequently developed and subsequently approved by Management in May, 2020.

# How has KCAA Utilized the CANSO KPA/KPI Framework?

1. Owing to many KPAs and KPIs that are available in the CANSO dashboard, we managed to set up a water-tight all-round OPMM implementation plan consisting of:
  - ✓ thirteen (13) higher level Key Performance Areas (KPAs),
  - ✓ one hundred (100) Key Performance Indicators (KPIs), and

# How has KCAA Utilized the CANSO KPA/KPI Framework? cntd.....

- ✓ seven (7) technical performance characteristics (services and procedures; human resources; physical infrastructure; systems and technology; and regulation and standardization).

This would effectively facilitate performance measurement, documentation and monitoring of the trends, and actual benefits of implementing various:

- ✓ Aviation System Block Upgrade (ASBU) modules;

# How has KCAA Utilized the CANSO KPA/KPI Framework? cntd.....

- ✓ Activities listed in the Kenya Airspace Master plan 2015-2030; and,
- ✓ Actual performance benefits brought by GASP and GANP milestones.
- ✓ Identify areas for performance improvement.



## **Benefits of Data-based KPI results/ Graphs in Decision Making cntd ....**

1. We easily secured the Management commitment, approval and support towards the implementation of an OPMS .
2. Outputs from both descriptive and trend analyses have aided in data-driven decision making such as:
  - ✓ Review of SLAs with the Technology/Equipment suppliers

## Benefits of Data-based KPI results/ Graphs in Decision Making cntd....

- ✓ Performance improvement through focusing or setting both generic and instantiated objectives in various Heads of Department/Station managers' PC.
- ✓ Fatigue risk management through adequate staffing/deployment (station-wise, hours of operation etc.)
- ✓ Risk management and mitigations prioritization.
- ✓ Airspace restructuring (i.e. review of SUAs boundaries, PBN procedures etc.)

## **Benefits of Data-based KPI results/ Graphs in Decision Making cntd..**

- ✓ In strengthening the QMS requirements in digital or electronic AIM processes.
- ✓ KCAA Board recently resolved that the Directorate of ANS to engage the Aerodrome Operator (KAA) to collectively establish mechanisms and systems aimed at reducing the number of delays that seem to be higher during adverse weather conditions.

## **Benefits of Data-based KPI results/ Graphs in Decision Making cntd..**

2. Further system sensitivity analyses (i.e., correlation, regression and covariance analyses), and system influence models (diagrams) are expected from these KPIs to construct ATM performance models to:
  - ✓ qualitatively and/or quantitatively understand the cause-effect relationships between performance variables;
  - ✓ show how individual performance objectives can be achieved and how they interact (enhance or interfere) with each other.

## Observations and Lessons Learned so far

1. Data collection should be taking place at the most detailed level of granularity that can be afforded. (*N/B: DO NOT be in a hurry to automate the process*)
2. We have noticed that the performance-based approach is never applied in isolation. As a result, constant collaboration and coordination among the wider ATM community is considered key since there is always interaction within a context, consisting of other:

## Observations and Lessons Learned so far cntd....

- ✓ Subject areas,
- ✓ stakeholders,
- ✓ geographical areas,
- ✓ higher or lower aggregation levels, and
- ✓ planning and management activities.

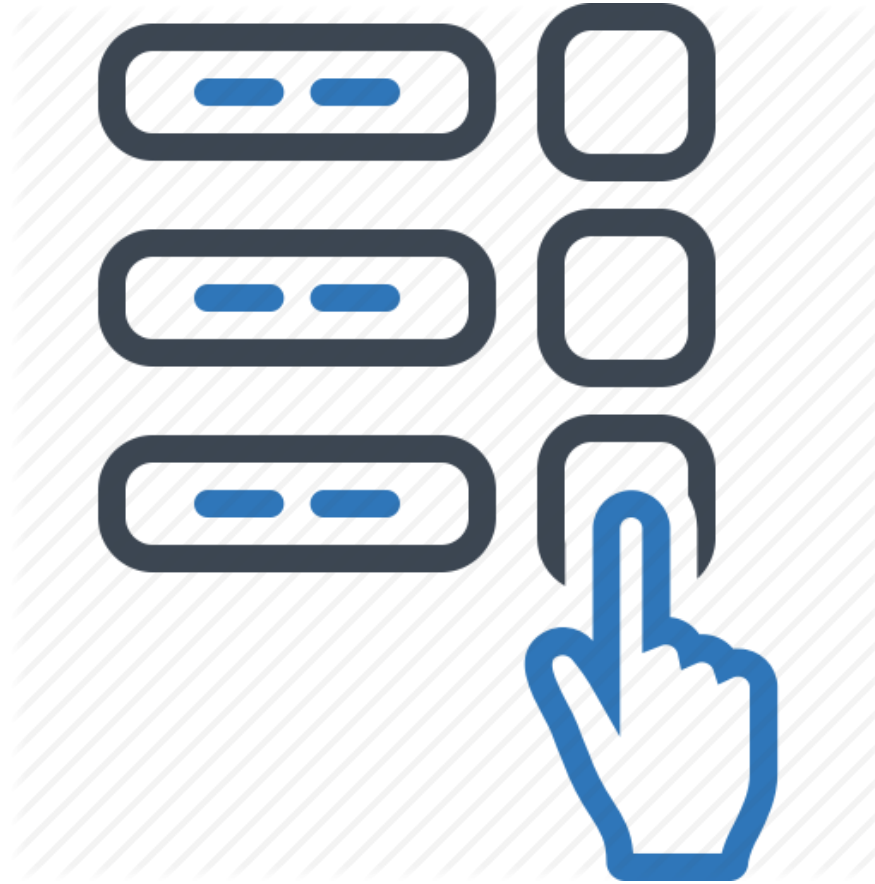
3. Participation from other ATM community members is key in establishing a data reporting chain, data collection and submission and building the performance models.

## **Observations and Lessons Learned cntd...**

4. The willingness to participate will easily be achieved through the establishment of a performance data reporting culture and Management commitment.
5. Data reporting flows that are unnecessarily complex by should be avoided.
6. Data which are strategic- and policy-in nature should be received directly from the heads of Department.

# Poll #1

## Awareness of the GBWG







## **Kenyan Call to all African ANSPs to Join GBWG**

KCAA encourages all African ANSPs to participate in GBWG and its related activities to enhance their performance data reporting & measurement culture since:

1. There is wider objective of being able to benchmark the performance attained with peers in the region and the need for the aggregated feedback from evaluations of performances at State and regional levels to support setting of both regional and global priorities.

## **Kenyan Call to all African ANSPs to Join GBWG cntd.....**

2. Benchmarking at regional level where traffic patterns are homogeneous and procedures are harmonized, enhances quality of decisions made out of such performance evaluations.
3. The identification and monitoring of KPIs especially those associated with ASBU modules already implemented under ASBU block Zero and those factored under APIRG projects is therefore required to facilitate a joint review of the aggregated performances within the AFI region.

# Conclusion

“If you can’t measure it, you can’t manage it”

Regional Focus



# ANSP performance benchmarking workshop

Africa

# Speaker



**Josia Manyakoana**

Senior Manager Operations  
ATNS

# **CANSO GLOBAL BENCHMARKING**

**(THE ATNS EXPERIENCE)**

# THE SCOPE OF PRESENTATION

1. Introduction
2. The ATNS Journey on Benchmarking
3. Benefits of Performance Benchmarking
4. Group activity
5. Conclusion

# INTRODUCTION

The objective of this presentation is to share with the participants The ATNS experiences and views on Global Benchmarking efforts

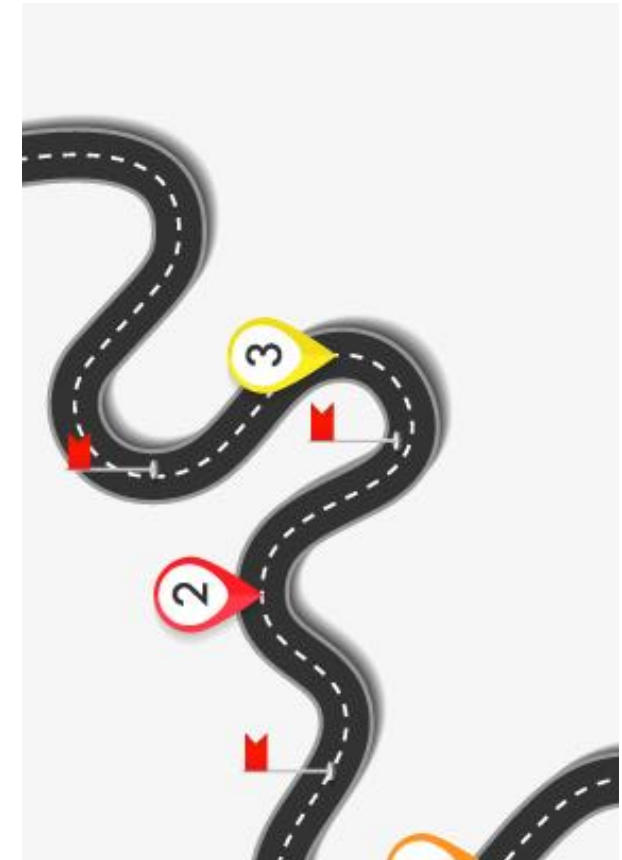


"We've got the Big Data report, we did the competitive analysis, and *nobody* thought to include *cats*?!"



# ATNS JOURNEY ON BENCHMARKING

1. ATNS was established in 1994 as a wholly state owned enterprise, coming from being a section in the Directorate of Civil Aviation.
2. ATNS was co-founder of CANSO in 1996.
3. Since 1994 ATNS participated in Regional Benchmarking
4. Around 2006, ATNS was among various ANSPs which established Global Benchmarking Workgroup, which emanated from regional benchmarking workgroups (ATNS, - ASIA PACIFIC region).
5. ATNS is among the 4 ANSPs members at the start and launch of CANSO Africa Region \*



# BENEFITS OF BENCHMARKING

1. Ever since its establishment (and prior, as government agency), the company benchmarked its business processes, operations and performance with identified ANSPs in order to stay abreast and aligned to global ANS.
2. The Economic Regulating Committee set performance objectives for ATNS.
3. ATNS mandate requires the company to setup Operations Committee to discuss the company's performance with the users.
4. Benchmarking provides a platform for assessing how well the company is performing compared to others.
5. Policy – benchmarking to achieve competitive advantage



# BENEFITS OF BENCHMARKING Cont.

1. Sets the tone for a performance orientated culture within ATNS and enables target setting.
2. Engagements with Labour Unions occurs annually / periodically for substantive negotiations, depending on agreements.
3. Refine our key performance indicators, & metrics especially with Economic Regulator and the Users.
4. Provides an opportunity to reflect on performance gaps and also to identify improvements areas.
5. Provides a network platform – ability to identify same size, peer or high performing ANSPs to benchmark against.
6. ATNS makes use of the dashboard, as it provides a quick view to compare KPI outputs with ANSPs of interest.

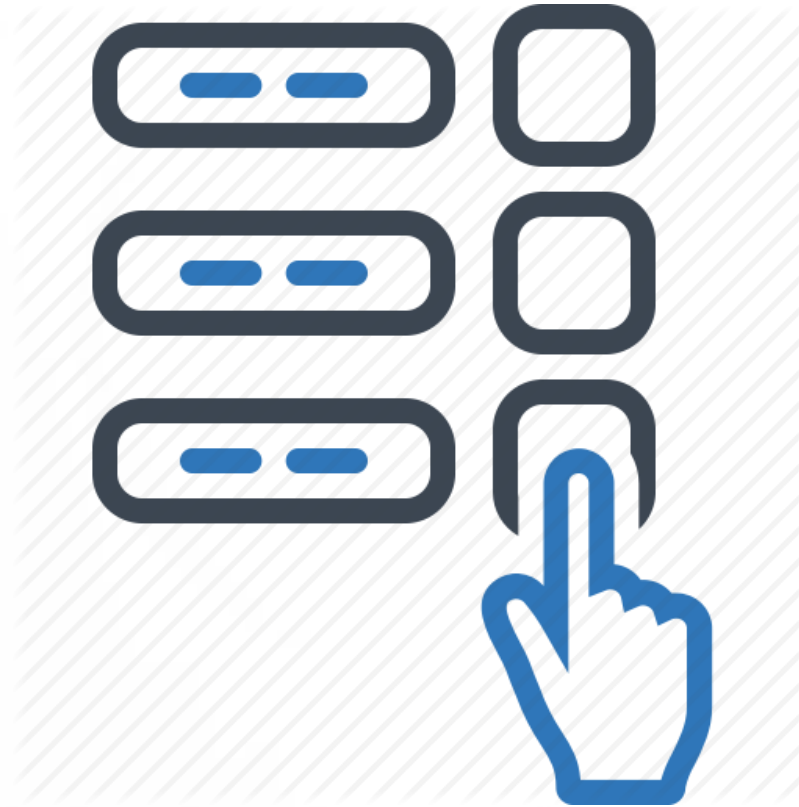




# Benchmarking

A Level & IB Business

# Poll #2- #5



# CONCLUSION

1. No ANSP can survive in a competitive environment or user environment demanding improved safety, capacity and efficiency.
2. ATNS has participated in benchmarking efforts since its inception in 1994 and has seen major benefits in these activities through improvements in business process, performance and operations.
3. Joining CANSO Global Benchmarking has provided an official key platform to enable this effort.
4. CANSO AFRICA REGION has to strengthen its position in global ANS, using Global Benchmarking as one of the key instruments
5. In addition to the official platform of GBWG, ATNS periodically use the network created through GBWG for benchmarking other specific key performance areas or functions with identified members of GBWG.
6. ATNS recognizes that in the new normal created by COVID-19, benchmarking activities are going to be heightened, redefining our journey in Benchmarking business processes and performance.



Regional Focus



# ANSP performance benchmarking workshop

Africa



# Speaker



**Ms. Diána  
Rohácsné Galgóczi**  
Chair CANSO GBWG and  
Head of International Financial  
Affairs Unit  
Hungarocontrol





# Questions and Answers

# Closing Remarks

# How to get in touch



## **Data support**

Henry Ashworth

cansosupport@  
egis-group.com



## **GBWG Chair**

Diána Galgóczi

diana.galgoczi@  
hungarocontrol.hu



## **CANSO**

Michelle Bishop

Michelle.Bishop@  
canso.org

# Thank you

Visit us:  
**canso.org**

