



ICAO MID

Seamless Operation Program

RANP/NANP Meeting

ICAO Middle East (MID) Regional Office
April, 2026



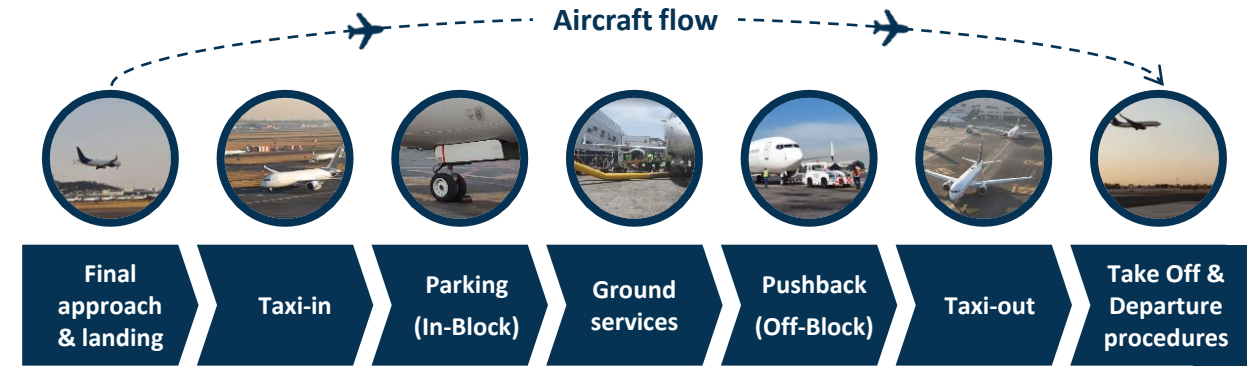


Due to the increasing operational challenges at KKIA and KAIA, in 2022 HE GACA President & HE Saudia DG mandated thorough assessment of the inefficiencies at both airports and identifying the way forward to solve them

The operational assessment:

- Aimed at achieving **harmonized, smooth** and **unimpeded** airports **operations**; channeling efforts towards **meeting the stakeholders' expectations and improving customer satisfaction** in two aerodromes; Jeddah International Airport (OEJN), and Riyadh International Airport (OERK).
- The assessment was extended in 2024 to cover Dammam International Airport (OEDF) and Madinah International Airport (OEMA)

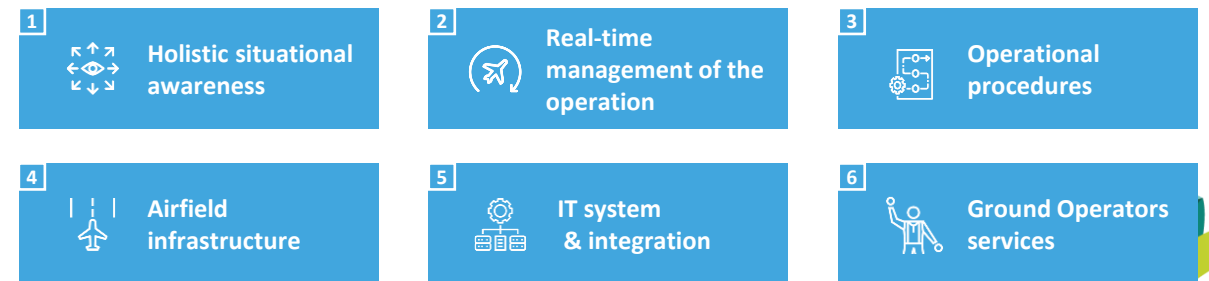
The aircraft flow, from final approach to take off, was analyzed....



A **multi-entities team** was formed and assigned to collaborate in all phases of the Project.



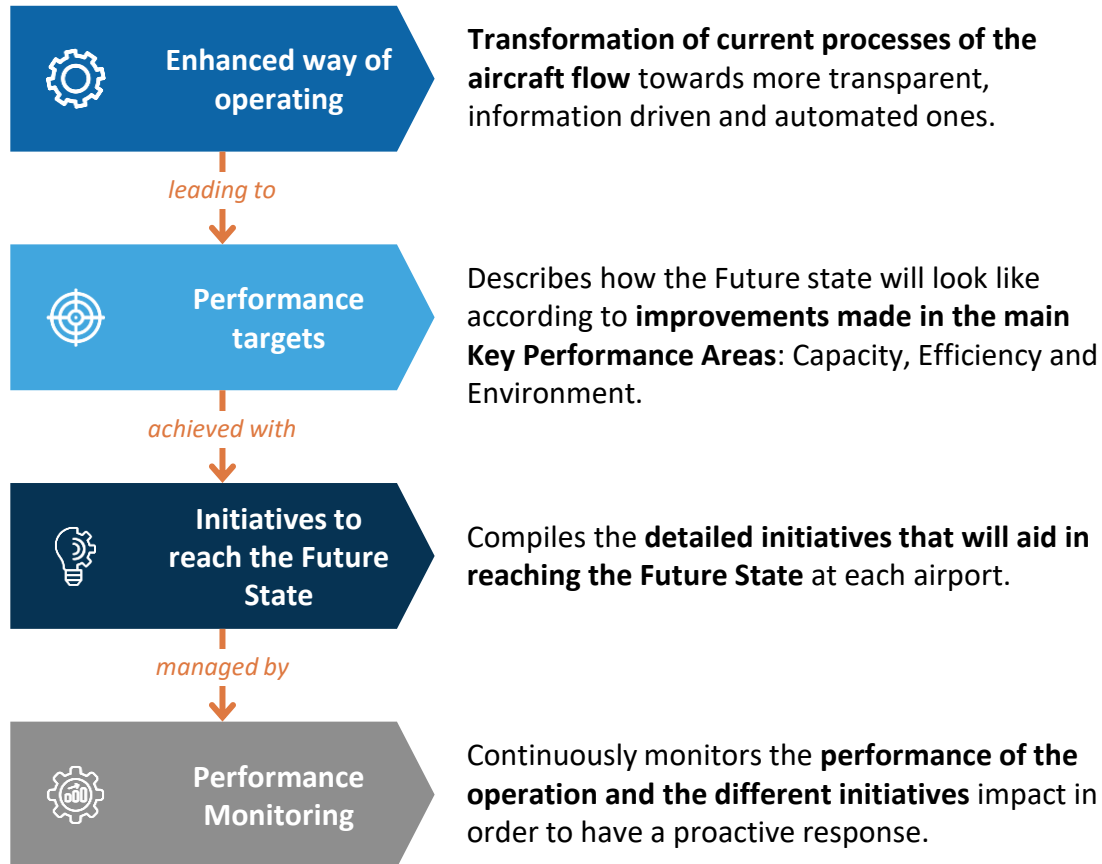
...and resulted in the need to carried out an **operational transformation** in 6 key **areas of improvement**.











The need for an operational transformation was shaped in a holistic Future State driven by the enhancement of the way of operating and setting achievable performance targets through several initiatives bespoke for each airport

Reaching the Future State



The main drivers:

-  **GACA's 2030 passengers target** as stated in **Vision 2030**
-  **RWYs systems are optimized** to maximize their capacity
-  Enough **operational flexibility** to cover the future demand
-  The **operational complexity is reduced** to the minimum
-  **CAPEX optimization** by the efficient use of resources
-  The **masterplans expansions are not deployed**





The operational transformation required the activation of a Program that guaranteed, not only achieving the goals of the Future State but sustaining them through time

- Due to the **large scope** of the operational improvement, beyond the limits of the initial assessment, it was **needed to create a standalone Program** with a governance model that allowed an **effective implementation of all the initiatives** aimed to reach the future state
- **The Program is a key business priority for all the stakeholders involved**



Purpose	Unifying aviation stakeholders , unlocking their full operational potential .
Vision	To become the global benchmark in airfield operations by instilling seamless operations in a collaborative culture .
Mission	Lead the operational transformation of airports, airlines, ground handlers and air navigation service provider towards efficiency and effectiveness with the implementation and management of a set of initiatives to ensure efficiency, predictability and capacity maximization .



Keep the momentum of change



Live the new way of operating



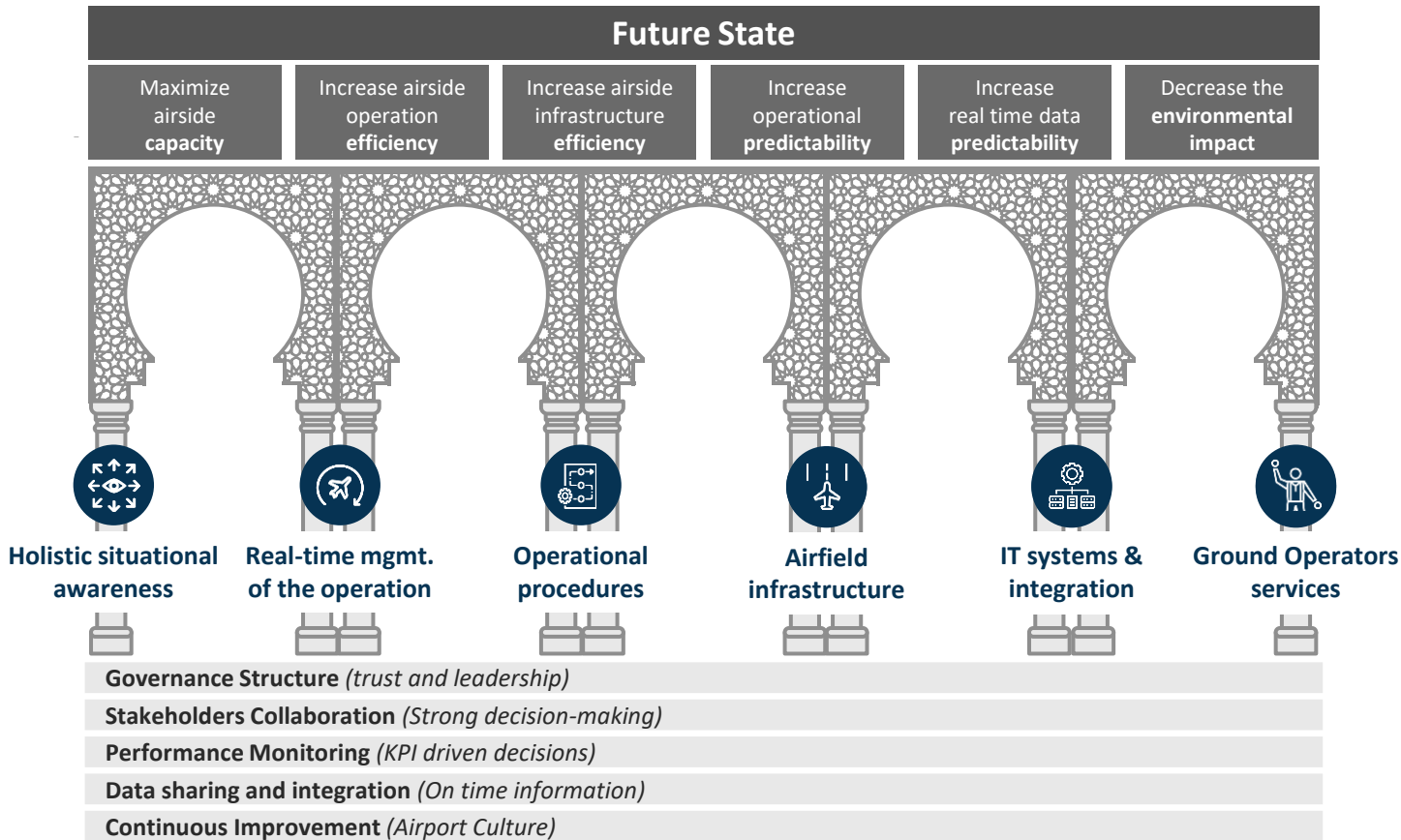
Involve stakeholders along on the journey





To achieve the Future State it was necessary to have a strong foundation driven by Design Principles and the initiatives to be implemented for each area of improvement

Future State Architecture



Strategic Objectives High-level statements that are main targets of the Seamless Operation Program

The Seamless Operation Program is the first step towards a more collaborative environment where all stakeholders work together towards the same objective and always looking for ways to improve the operation.

Pillars of the Future State Areas covered in the transformation Program that are critical for an efficient and optimized airport operation and have specifics improvements initiatives.


Design Principles All assumptions that must be in place (completely or gradually) during the initiatives deployment and totally active once reached the Future State.



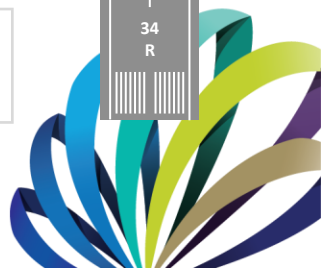


As part of the Program, a Framework was created to oversee the operational improvement of the four main airports in KSA with the aim to achieve a Future State defined by 8 KPIs

Future State (Targeted Performance)

Although the Future State is design to be reached in a span of 5 years, the Program has yearly targets to achieved aligned with the planned implementation of the initiatives. 

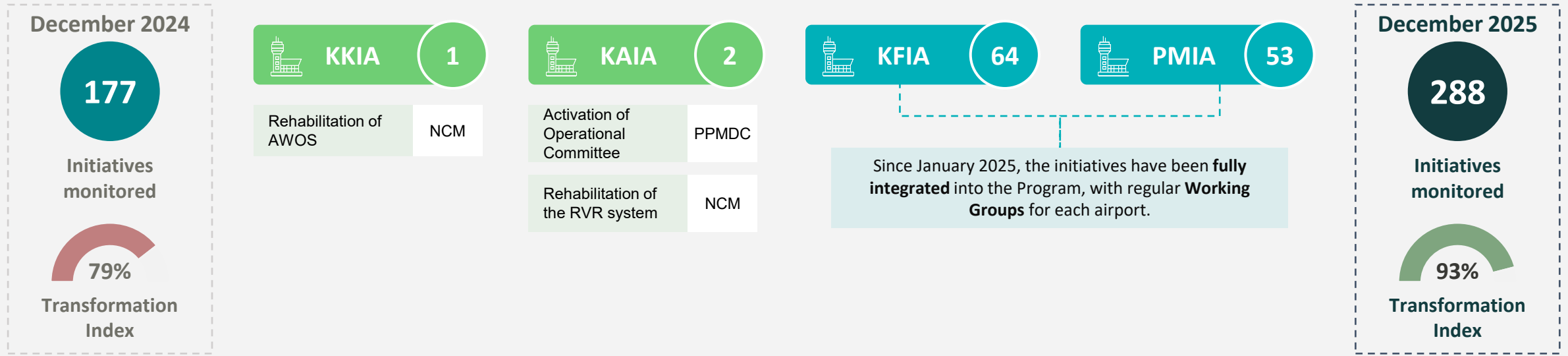
	←..... End of 2027		←..... End of 2029	
	 OERK	 OEJN	 OEDF	 OEMA
RWYs system capacity	84 - 90 ATMs/h	110 - 135 ATMs/h	55 - 60 ATMs/h	35 - 40 ATMs/h
Additional taxi-in time	1 min - 2 min	1 min - 2 min	1 min - 2 min	1 min - 2 min
Additional taxi-out time	4 min - 5 min	2 min - 3 min	3 min - 4 min	3 min - 4 min
Arrival On Time Performance	85% - 90%	85% - 90%	85% - 90%	85% - 90%
Departure On Time Performance	85% - 90%	85% - 90%	85% - 90%	85% - 90%
Schedule turnaround time adherence	85% - 90%	85% - 90%	85% - 90%	85% - 90%
First Door Open On-Time	85% of flights have the first door open within 3 minutes after the aircraft enters the position (AIBT)	85% of flights have the first door open within 3 minutes after the aircraft enters the position (AIBT)	85% of flights have the first door open within 3 minutes after the aircraft enters the position (AIBT)	85% of flights have the first door open within 3 minutes after the aircraft enters the position (AIBT)
Last Door Closed On-Time	85% of flights have the last door closed within 2 minutes before the scheduled departure time (SOBT)	85% of flights have the last door closed within 2 minutes before the scheduled departure time (SOBT)	85% of flights have the last door closed within 2 minutes before the scheduled departure time (SOBT)	85% of flights have the last door closed within 2 minutes before the scheduled departure time (SOBT)



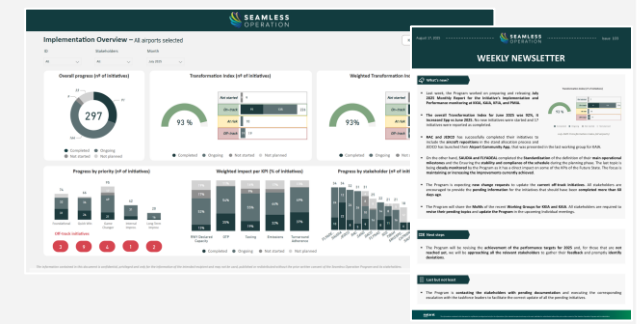
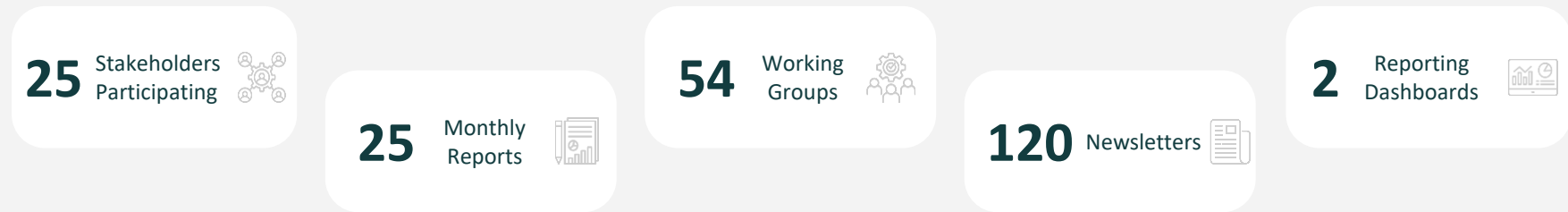


Closing 2025, with 288 initiatives and a 93% Transformation Index, the Program demonstrates strong progress while identifying areas requiring coordination.

Evolution of Program Initiatives



Evolution of Program Initiatives

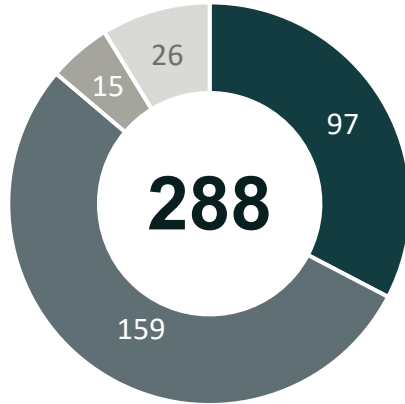




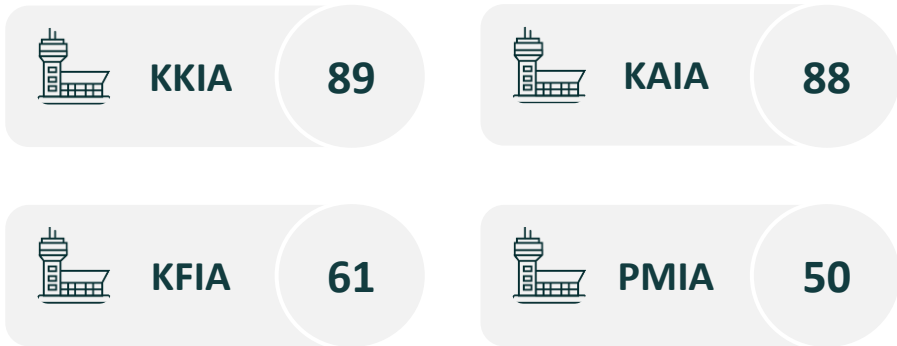
As of today, the Program is delivering tangible progress in operational performance through 288 initiatives, driving the achievement of Future State targets

2025

Overall Initiatives Progress - December 2025



■ Completed
 ■ Ongoing
 ■ Not started
 ■ Not planned



Performance Targets for 2025 End of Year (Progress as of December 2025)

● Target achieved
 ● Target in progress

	KKIA	KAIA	KFIA	PMIA
RWYs system capacity	72 - 80 ATMs/h ●	83 - 90 ATMs/h ●	35 - 45 ATMs/h ●	20 - 25 ATMs/h ●
Additional taxi-in time	2 min - 3 min ●	1 min - 2 min ●	2 min - 3 min ●	2 min - 3 min ●
Additional taxi-out time	5 min - 6 min ●	3 min - 4 min ●	3 min - 4 min ●	4 min - 5 min ●
Arrival On Time Performance	80% - 85% ●	80% - 85% ●	80% - 85% ●	75% - 80% ●
Departure On Time Performance	82% - 87% ●	80% - 85% ●	80% - 85% ●	75% - 80% ●
Schedule turnaround time adherence	75% - 80% ●	75% - 80% ●	80% - 85% ●	75% - 80% ●



The Program is **monitoring** these targets with the **monthly reports** and ongoing stakeholder engagement, while **continuing efforts throughout the year** to achieve the Future State targets.

*The actual values of the RWY system capacity are obtained from the airports' seasonal capacity declaration available in ACL's website for KKIA, KAIA and KFIA; for PMIA the values are obtained from the airport and SANS.



m The program is monitoring 288 initiatives, which are being implemented by 19 relevant entities, with support and guidance provided by five other entities.

Initiatives to be implemented by stakeholders and their status

Stakeholder	Total	Completed	Ongoing	Not planned	Not started
jedco Jeddah Airports	30	10	20		
مطارات الرياض Riyadh Airports	30	11	19		
FFMDC	1	1			
مطارات الدمام Damman Airports	24		18		6
الهيئة العامة للطيران المدني	17	2	14	1	
مطار الملك سلمان الدولي King Salman International Airport	1		1		
SANS	30	9	10	3	8
Saudia	34	22	12		
طيران آديل flyadeal.com	34	10	24		
طيران ناس flynas	22	8	14		

Stakeholder	Total	Completed	Ongoing	Not planned	Not started
SGS	21	11	8	2	
swissport	18	6		12	
Saudia Cargo	2	2			
Saudia Technic	6		6		
CATRI:ON	6	6			
SAL	5	4	1		
الأولس للطيران Aloula Aviation	5		5		
الأولس للطيران Aloula Aviation	1			1	
أكاديمية أكسفورد للطيران Oxford Saudia Flight Academy	1			1	

There are three stakeholders that, due to their **strategic position in the aviation sector**, are also included in the Program.



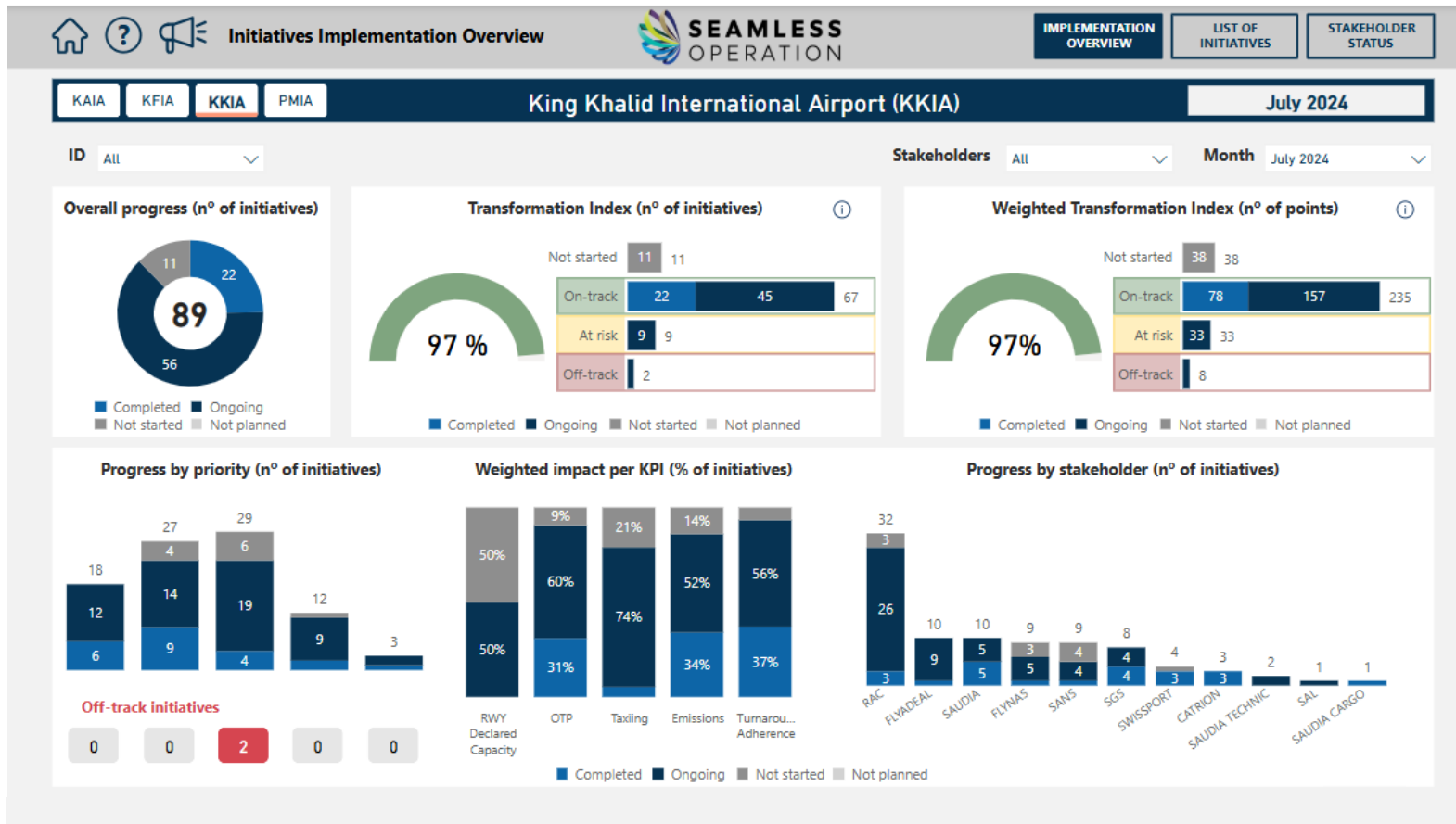
SATS and Riyadh Air are also part of the Program, although no initiatives have been identified for them so far.





Our monthly report has been key to provide visibility to the progress of all stakeholders and the impact of their airports in the airport performance (1/2)

Initiatives implementation Dashboard



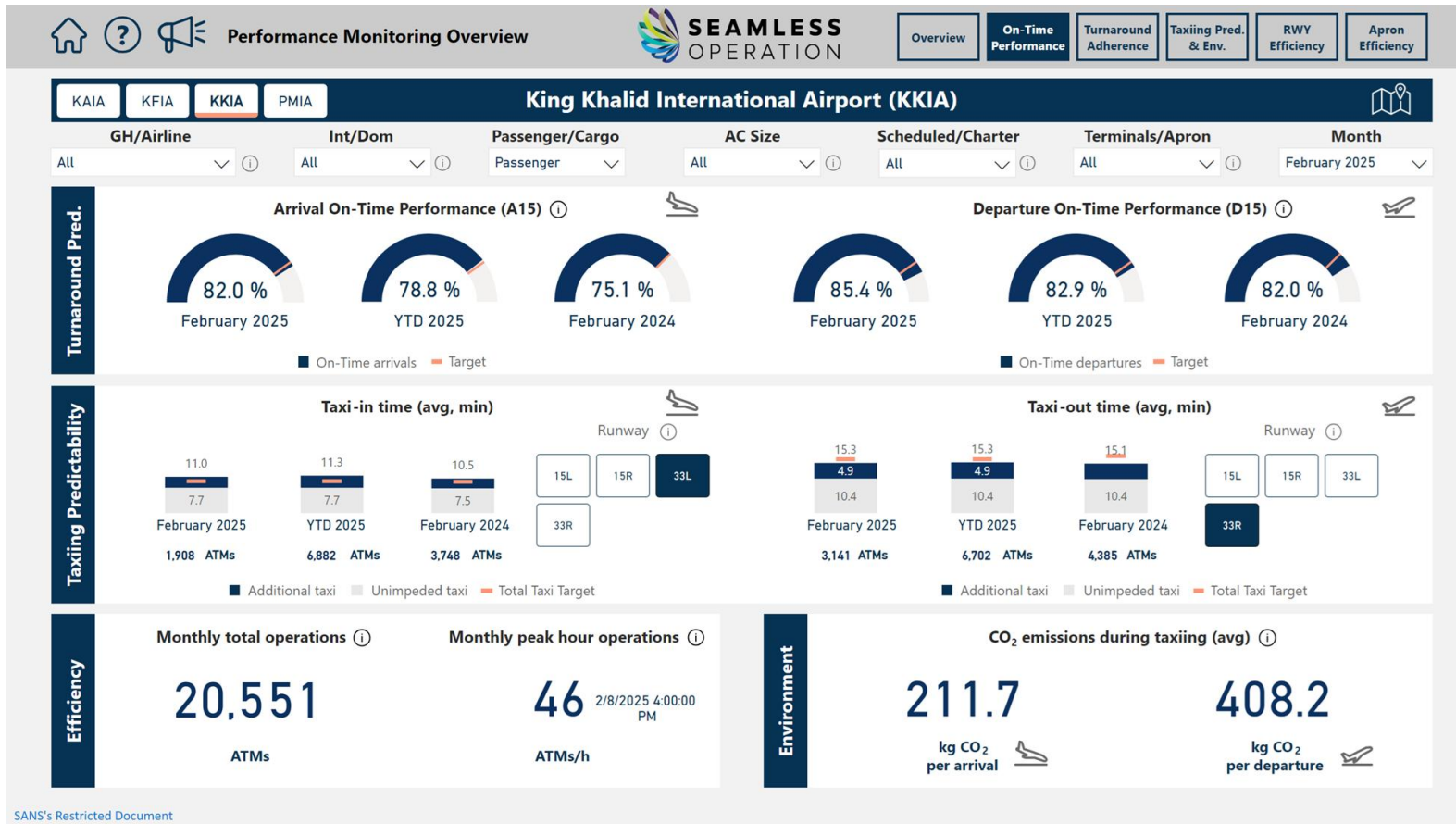
- The monthly report is developed via **2 interactive dashboards** that cover the progress on the **implementation of the initiatives** and the **airports performance**
- The dashboards are **released once a month** and is complemented with a **static version** of the report
- All **stakeholders** participating in the Program have **access to the dashboard**
- The Program also have an **active risk management mechanism** that allows the closer monitoring of the initiatives that are at risk and off-track to apply **corrective actions** and the promptly identification of deviations





Our monthly report has been key to provide visibility to the progress of all stakeholders and the impact of their airports in the airport performance (1/2)

Performance Monitoring Dashboard



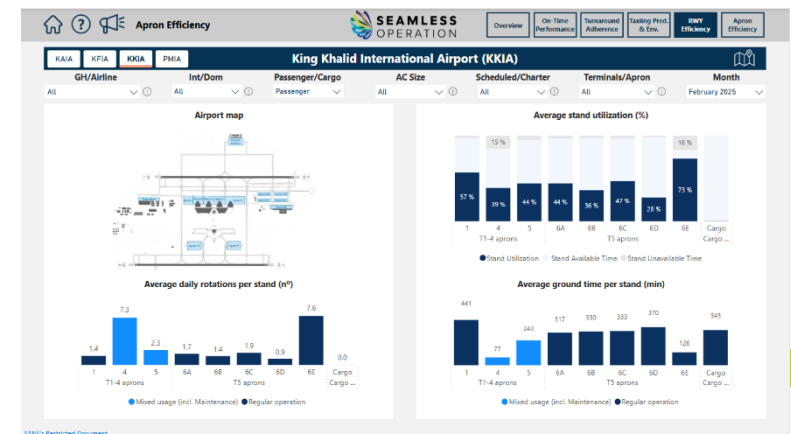
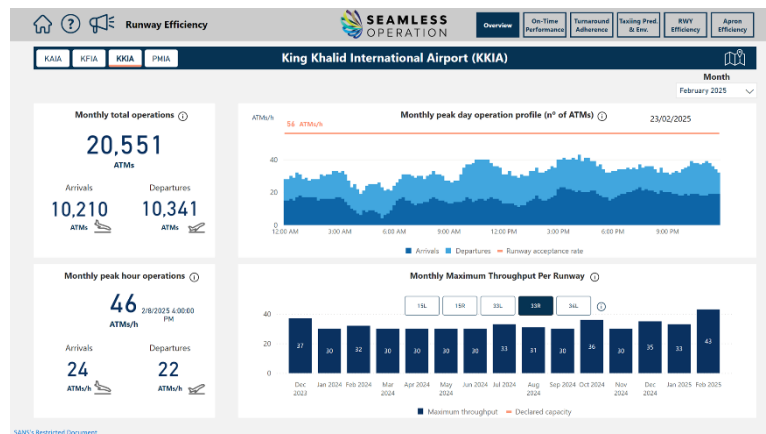
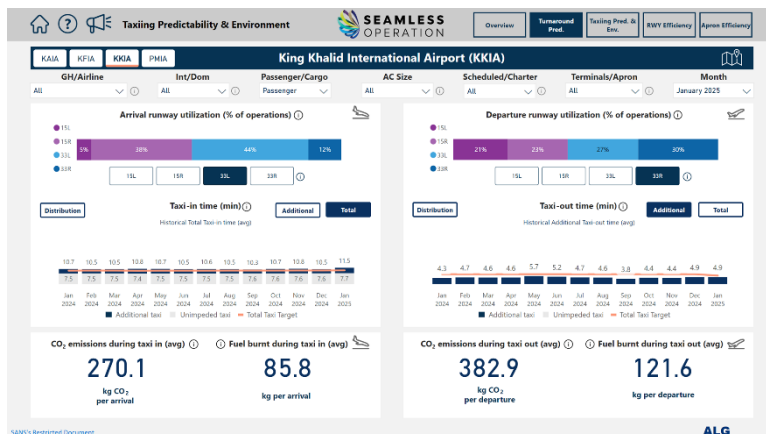
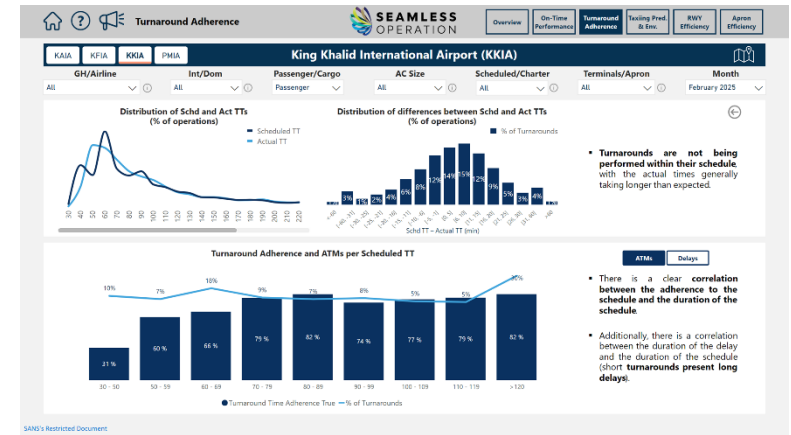
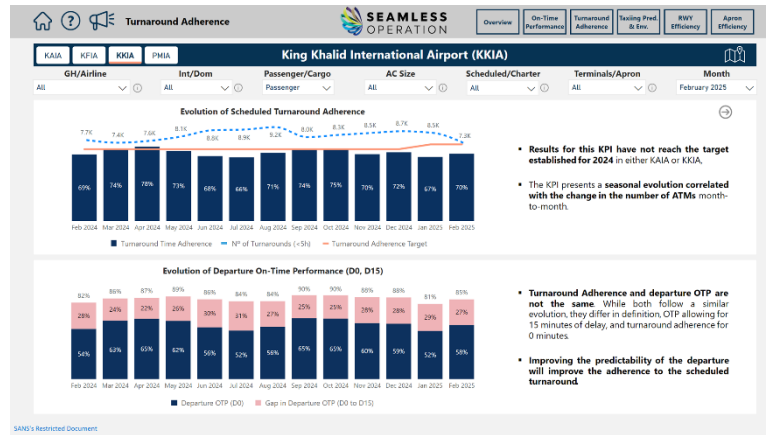
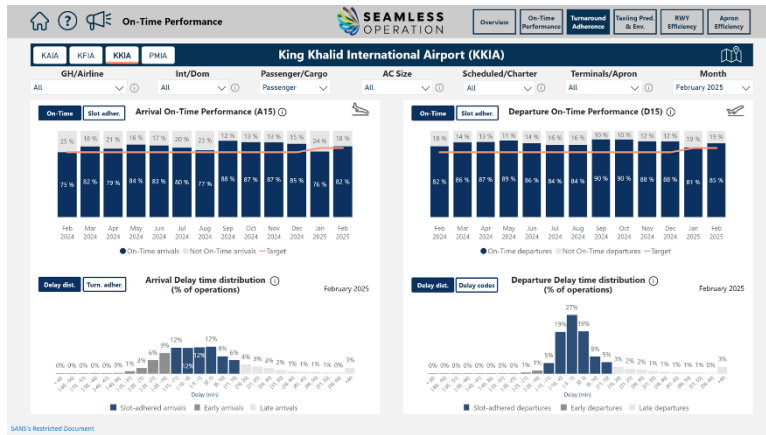
- The performance dashboard is divided by airport and includes, not only the 8 KPIs in the Future state, but the **16 KPIs considered in the Performance Framework** of the Program
- The **8 KPIs of the Future State** are presented with the corresponding target to achieve every year
- The dashboard is a **unique tool in the Kingdom** that combines **several data sources** to provide a **holistic, standardized and measurable view of the airport performance**
- Stakeholder engagement has been key during the **development of the dashboard** to ensure **alignment in the calculations and visualizations**, and that the dashboard is of **interest to all participants**





Our monthly report has been key to provide visibility to the progress of all stakeholders and the impact of their airports in the airport performance (2/2)

Performance Monitoring Dashboard





While progress has been made toward the KPI targets, some areas still require additional focus. Ongoing initiatives and collaborative Working Group discussions are driving these efforts, engaging all relevant stakeholders across the ecosystem

Current focus areas and initiatives driving KPI improvement



Runway system capacity

Improving **coordination between SANS and airport operators** to enhance communication and ensure accurate, timely declaration of operational information.


Deployment of ATC sequencing/optimization tool for Arrivals (AMAN)	3.03
Enhancement APP Sectorization	3.05
Discussion and agreement of Intersection Take-off and distances published with GACA.	3.09



On Time Performance

Focusing on **bridge utilization and early arrivals**, with action plans defined to improve slot adherence and coordination between airports and airlines.

Ensure the stability and compliance of the scheduled flight operations in coordination with airport operators.	1.06
Implementation of an Airport Collaborative Decision-Making Model (A-CDM)	2.01
Outlining and enforcing the obligations and responsibilities of airports, airlines and ground handlers in the ground operations	6.07



Additional taxi time

Promoting stronger **data exchange and predictive capabilities** to enhance ground movement efficiency and decision-making.

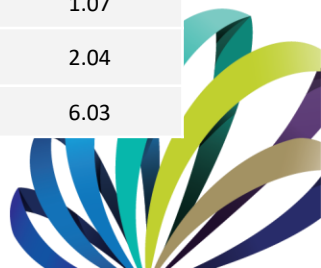
Implementation of a predictive solution of arrival, turnaround, taxiing and departure	2.03
Deployment of ATC sequencing/optimization tool for Departures (DMAN)	3.04
Implementation of ground surveillance systems	5.02



Schedule turnaround time adherence

Advancing **system integration** between airlines and ground handlers to enable more efficient and coordinated on-ground operations.

Standardization of the ground operation milestones and the data gathering process	1.07
Enhancement of the airlines network planning to minimize aircraft changes between piers	2.04
Empowering the leadership of the Turnaround Coordinators	6.03





The Program involves the implementation of initiatives that are a game changer for the aviation industry in KSA and are aligned with other major programs such as the Saudi Air Navigation Plan and the Saudi Future Airspace Concept

Our game changers



A-CDM and Predictive tools for the aircraft flow

The program is advancing A-CDM implementation across four airports while exploring AI-driven tools and ADS-B to improve prediction and situational awareness.



Airspace enhancement

The program has enhanced airspace efficiency by implementing initiatives that improve the runways system capacity, aligned with the **Saudi Air Navigation Plan (SNAP)** and the **Saudi Future Airspace Concept (SFAC)**.



Data digitalization and automation and information sharing

The program is advancing A-CDM implementation across four airports while exploring AI-driven tools and ADS-B to improve prediction and situational awareness.



Operational Committees

Beyond the establishment of the dedicated working groups per airports, the Program has fostered the creation of other forums to **discuss operational planning, airport performance and delays**.





The Program will continue advancing ongoing initiatives, leveraging the success achieved so far to the 4 airports while exploring new workstreams to tackle emerging challenges in Kingdom's aviation sector

What's next for the Seamless Operation Program?



Maintain the operational achievements while aiding the stakeholders with the major airport developments expected in the coming months



Focus on driving the ramp-up of **Dammam and Madinah Airports** to achieve the same successful outcomes as Riyadh and Jeddah Airports.



Evaluate **other workstreams** like cargo operation and baggage flow to **continue the optimization** of the **passenger experience**.

We are confident that the Seamless Operation Program is and will continue to be a **major contributor to boost the Aviation industry in KSA** with the focus on **efficiency and predictability**.

We look forward to **expand our collaboration** by including **RANP/NANP members** and together **shape the future of aviation in the Middle East**.



- ✓ **Encourage ongoing collaboration within the aviation ecosystem** to refine strategies based on operational insights.
- ✓ **Ensure alignment with international aviation standards** and adopt best practices from member states for long-term sustainability.
- ✓ **Promote innovation and best practices** to foster a competitive and efficient aviation sector.





THANK YOU

