Departure Manager

Greener operations with increased predictability

The Frequentis Departure Manager (DMAN) provides consistent optimised planning of the outbound traffic at airports. DMAN maximises runway capacity utilisation, minimises fuel burn and provides significant improvements in outbound traffic predictability even during adverse conditions.

Key features

Departure management synchronised with PDS

In addition to supplying all functions of an A-CDM pre-departure sequencer (PDS), DMAN provides a high degree of optimisation of the departure sequence and takes into account both a great number of constraints, and complexity in constraints, including complex contentions to de-conflict push-backs from adjacent stands and user priorities. This greatly eases the tasks of clearance delivery and ground movement control/ planning adjacent stands, standard instrument departure (SID) dependencies, and user priorities.

Close to the airport operation

DMAN considers specific airport processes such as push & hold, on-stand and remote de-icing in its planning and thus makes the controllers' tasks easier.

Integration with AMAN and SMAN

For runways operated in mixed mode or dependent runways, DMAN can be integrated with the arrival manager (AMAN) to efficiently balance arriving and departing flights. Integrated AMAN/DMAN improves the coordination between tower and approach controllers and ensures efficient management and optimal use of the runways.

Integrating DMAN with the surface manager (SMAN), which providers updates on remaining taxi durations, achieves the ICAO ASBU level 3 standard and allows DMAN to refine and adapt the departure sequence during taxi-out and thus further enhance the accuracy of departure planning.

DMAN at a glance

- Optimises TTOT and TSAT to reduce airport queues and improve on-time performance
- Provides user preferences that enable maximum runway throughput
- Offers more predictability and stability for airline and air traffic control (ATC) network operations
- Supports operations like Minimum Departure Intervals (MDIs), on-stand and remote de-icing, and push & hold
- Can be integrated with Arrival Manager (AMAN) and Surface Manager (SMAN)
- Limits fuel consumption and CO2 emissions due to less taxiing and runway waiting time
- User-friendly, customizable user interface that makes controllers' tasks easier

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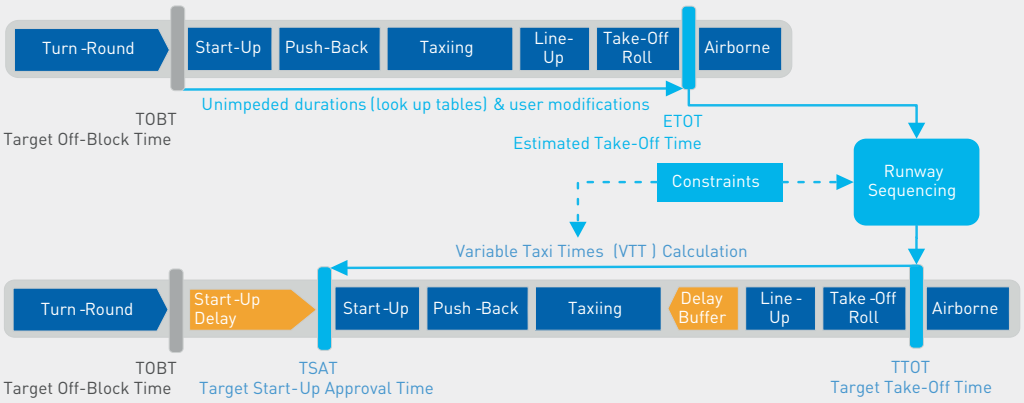

Benefits

Benefits for airports

The solution enables better on-time performance, increased slot capacity, faster recovery after capacity reduction, and more efficient utilisation of airport resources such as ground support equipment (GSE), surface and de-icing. These benefits drive improvements both in the quality of service offered to airlines and in the passenger experience. Equally, the reduction in noise emissions benefits local communities.

Benefits for ANSPs

Through increased network predictability, efficient tower workflows and better pre-tactical planning, the solution supports enhanced departure time accuracy and improved ATFM slot compliance. The solution enables better utilisation of airspace sectors, improving the overall efficiency of air traffic management and enabling ANSPs to support higher volumes with existing resources.

Benefits for airlines

The solution provides more stability in airline network operation and contributes to reductions in both delays and cancellations. The combination of better on-time performance with reductions in taxi durations and stop/go helps drive down greenhouse gas and noise emissions, enhancing airlines' green credentials and improving the quality of life for communities living under flight paths.

Compliance with standardisation

DMAN is compliant with a number of standards issued by the industry's lead organisations. It follows ICAO's Aviation System Block Upgrades (ASBU) of Runway Sequencing Level 0-3 and is aligned to the EU's implementation of the Common Project One (CP1) regulation with the integration of AMAN/DMAN in high-density terminal manoeuvring areas. Our DMAN is also aligned to ACI and IATA recommendations on departure sequencing in the context of A-CDM.

Performance metrics

	With DMAN	Without DMAN
Efficiency	1-minute average reduction in taxi time per flight	Average taxi time with delay absorbed at runway holding area
Predictability	58–80%	40–50%
Flexibility	Best planned – best served, taking into consideration airline intentions and preferences	First come – first served
Greener Operations	Considerable reduction of fuel burn and reduction of CO_2 emissions & noise	No reduction

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