AIRPORT OPERATIONS CENTRE SYSTEM

Enhancing Operational Efficiency
for Smart Airports

ST Engineering

Improve Airport Operational Efficiency

Our unique solutioning approach for Airport Operations Centre System (AOCS) provides a single source of truth by unifying multiple data points, incorporated with data analytics, to improve airport stakeholders' decision making and delivers greater airport operational efficiencies, responsiveness and utilisation.

AOCS is an integrated unified platform that meets the increasing demands of air travel and passenger traffic. By optimising operations and resources via a collaborative framework, it helps airport stakeholders to ease capacity crunches, and to deliver smooth and efficient airport services.

Incorporating data analytics and advanced visualisation technologies, the fully integrated solution helps stakeholders harness relevant information, analyse and provide actionable insights to allow users to develop a deeper understanding of situations in the dynamic airport environment.

User Benefits

- **Integrated visualisation dashboard** for dynamic, interactive reporting and airport KPI monitoring based on real-time data streamed from critical airport systems

- **Predictive analytics** for forecasting ground congestions and passenger flows, enabling better resource planning and responses

- **One glance situational awareness** through real-time display of assets on airport map, enabling all stakeholders to have a common operating picture

- **Improved incident management** via automated triggered alerts on impending operational conflicts, coupled with standardised workflow tool for greater consistency

- **Enhanced decision making** with support module to compare trade-offs of actions and provide intelligent recommendations

Key Features

Airport Communication Suite

The system's communication medium, integrated with an airport-wide intranet, features shared calendars, event tracking and instant messaging capabilities, enables more effective resource planning and coordination among stakeholders.

Airport Collaborative Decision Making (A-CDM)

In line with the EUROCONTROL (A-CDM) process, the A-CDM module have rules built into the solution's engine to maintain and share accurate information related to flight arrival and departure timings. This allows airport stakeholders to progress to an anticipatory mode of management and operation, and optimise operational capability.

Airport Operational Database (AODB)

Captures real-time data from airport systems and subsystems such as Air Traffic Control tower, passenger terminals, airlines, ground handlers, flight information system and other airport systems/subsystems to be stored in a single database.

Situational Awareness Picture

Presents the complete picture of airport operations on a map - overall layout from kerbside (public) to airside, show the facilities by categories – CCTV, parking stands, gatehold rooms, by terminal, floor level, etc.

End-to-End Simulation

Combines Airside and Landside Simulation to provide precise forecasting capabilities and holistic operations decision support. Future Air Traffic Management (ATM) concepts can also be comprehensively studied via experimentation.

Course of Action Module

A decision support module to compare trade-offs of actions and provide intelligent recommendations for common pain points such as last minute stand changes and aircraft creeping delays.

Smart Analytics with Insights

Predictive data analytics using big data in aviation from flight plans and weather, to real-time aircrafts and resource tracking. Provides users with anticipatory capability to identify anomalies and alerts for early planning, resolution and rectification. It also triggers Electronic Standard Operating Procedures (E-SOPs) to guide operators and ensure compliance of best practices.

One Glance Visualisation

Enables collaboration and self-synchronisation among users through sharing of timely and accurate information of airport resources such as parking stands, gate hold rooms, and runways.
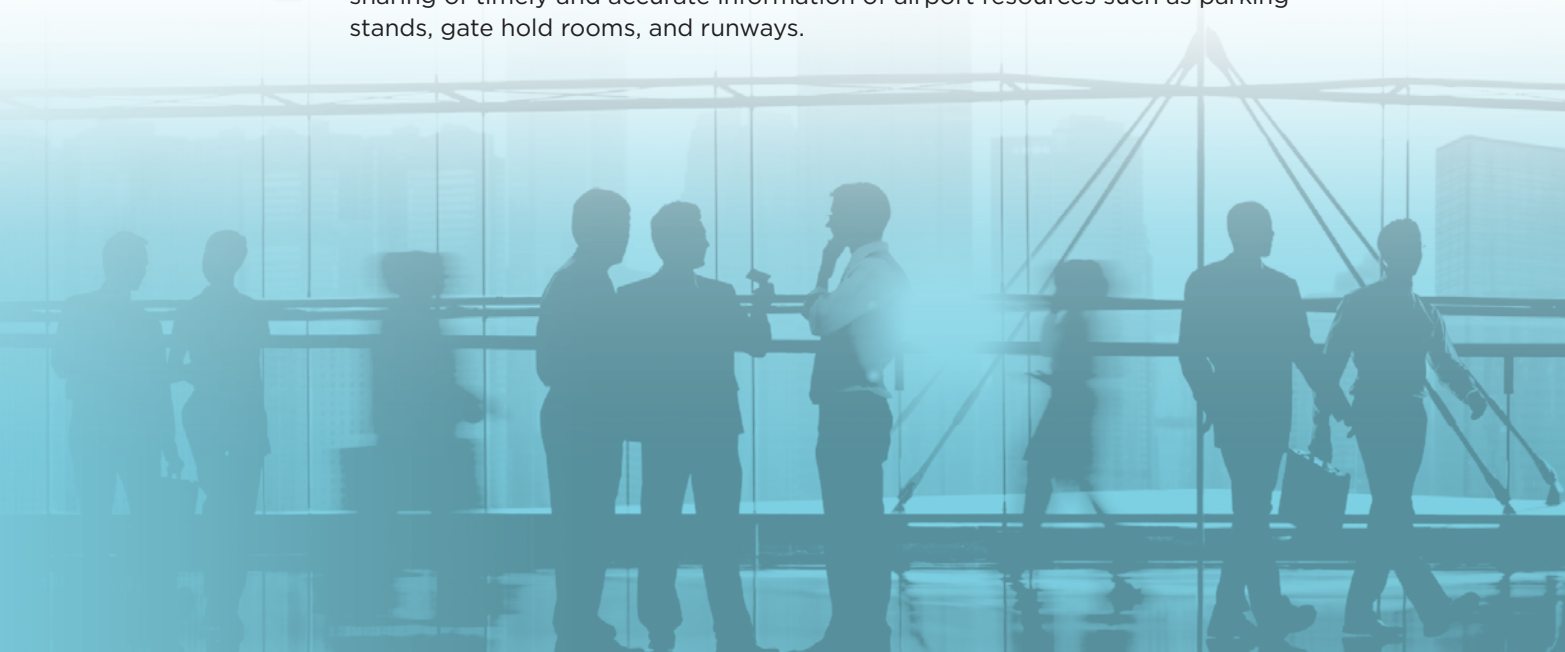
www.stengg.com
digitalsystems@stengg.com

www.stengg.com/cross-domain-operations-centre