

Delivering the Real Time Airport

Connecting terminal and airside operations to enhance true collaborative decision making

With passenger numbers forecast to grow in excess of 5% in each of the next 3 years according to ACI data, global passenger numbers are set to pass 3.5bn.

This load volume will put increasing pressure on capacity and resource constrained airports, in addition to all key stakeholder organisations such as airlines, ANSPs, immigration, security providers, ground handling and retailers.

Despite this forecast of continued growth, airport operators are under increasing pressure to drive greater value from existing assets.

This can only be achieved by focusing on improving the passenger experience via a combination of increased operational efficiency and enhanced strategic planning and capacity management - both within terminal and airside operations.



"The Service Delivery Measurement project will help us maintain high service levels and further enhance the airport experience as we grow by providing real-time visibility of the entire passenger process."

Chris Garton, Senior Vice President of Airport Operations, Dubai Airports

Why Create the Real Time Airport?

In the dynamic airport environment, even the most robust plans can be discarded in light of adverse events. Something as small as an air bridge breaking or the onset of winter conditions can have varying impacts on an airport's operational performance.

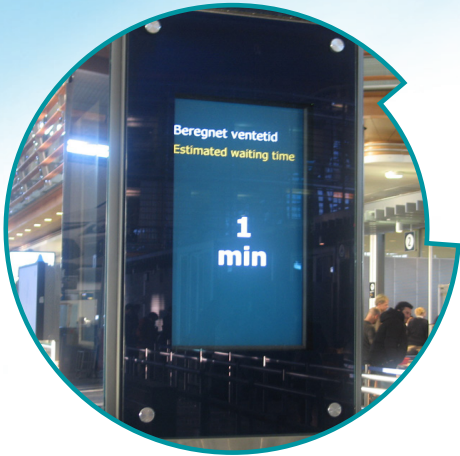
Couple this with the need to optimise limited capacity and the requirement for enhanced real time tactical decision making becomes critical to success.

The world's best and most efficient airports are now adopting a true collaborative decision making model to drive a proactive operational management culture that delivers an excellent passenger experience and enhanced value to all airport stakeholders.

By embracing the Real Time Airport, airports can establish and monitor airport-wide service levels to drive an increase in performance across the operation. Both airside and within the terminal, the multi-stakeholder environment relies on the facilitation of effective and consistent data sharing.

The European CDM initiative goes some way to addressing this problem, although primarily focused on airside operations. Airport operators should be taking a proactive approach that transcends airside and terminal operations to ensure critical passenger processes and related data are the central focus for collaborative decision making and measurement.

In an ideal situation, passenger processing and progression through terminal processes should continue to run efficiently and effectively regardless of peak demand. Likewise, aircraft should not be forced in to holding patterns and extensive taxiing due to poor stand and takeoff allocations.



This ideal can only be achieved if an airport has an accurate measurement of passenger and aircraft movements at all stages of their journey. Key pinch points across the terminal can only be eliminated as a result of proper planning and effective operation, particularly at peak times. This can often have an adverse affect on the remainder of the key passenger facilitation and aircraft pushback process, impacting on the efficiency of the entire airport operation.

Achieving the Real Time Airport

Effective passenger processing, terminal and airside management can only be implemented if stakeholders have access to in-depth operational data that can help shape strategic operational and tactical planning.

As is demonstrated in many process-based industries, the role of technology is critical to this efficiency realisation. Passenger facilitation requires passengers to progress through multiple processes including check-in, security and transfer compounds. These pinch points are inherently linked, compounding any queuing issues throughout each aspect of the journey.

In order to fully realise the potential operational efficiency improvements, airports must consider a passenger measurement ecosystem based on the unique dynamics between terminal and airside operations, whilst not losing sight of their specific passenger profile. As no single technology solution exists that can satisfy the requirements of all airports, it is essential that all stakeholders embrace a holistic view of service measurement.

A range of passenger-centric technology solutions exist that can add immediate value to airport operations. These include Bluetooth mobile device tracking, video analytics, thermal imaging and infra-red beam break devices. When combined with existing systems such as AODB, ANPR, car park management, AMDs, boarding gates, baggage and building management these devices can provide enhanced service delivery data to multiple stakeholders.

By adopting a specifically assembled technology ecosystem to measure the critical passenger processes, airports and the relevant stakeholder organisations can utilise the resultant data to deliver both short and long-term service improvements as a key component of ongoing operational effectiveness.

Experience dictates that only with a comprehensive process of measurement, management and ongoing review an airport can truly consider themselves to be delivering the Real Time Airport.

The benefits of the Real Time Airport are numerous and include detailed decision support, operational efficiency savings and the ability to accurately plan for and deliver sustainable growth

Key Benefits

- Establish and monitor airport-wide service levels to drive an increase in internal and external service metrics such as ACI ASQ
- Facilitate joined up terminal and airside collaborative decision making and information sharing
- Identify, collect and analyse increased analytical data on passenger flows to feed terminal simulation and planning tools
- Provide real time information and visibility on passenger process bottlenecks facilitating superior tactical terminal management and resource deployment
- Enhanced data sharing between key stakeholders resulting in across the board service improvements at all key pinch points in airport operation
- Aids in identifying priority and critical improvement areas whilst underlining pockets of existing best practice
- Resultant improvement in passenger satisfaction, equating to increased retail spend and higher likelihood of repeated travel via airport
- Improved adherence to airline or regulatory SLAs on queue wait times, transfer times etc
- Resultant efficiency savings can be translated in to more attractive commercial arrangements for airlines, retailers and passengers



The Real Time Airport In Action

Dubai Airports: Aviation's Largest Service Delivery Measurement Initiative

Based on current pace of growth, Dubai International (DXB) will become the world's busiest airport for international passenger traffic as early as 2015, when passenger numbers are expected to exceed 75 million. With such rapid expansion, it is hugely important to Dubai Airports to deliver a premier customer experience that contributes positively to the overall perception of Dubai.

The airport has embarked on the world's largest real time service delivery measurement project, monitoring critical passenger processes across the airport with the aim of driving innovation, operational efficiency and, ultimately, delivering an enhanced airport experience for passengers through a customer-centric approach.

Critical to the success of the project and central in achieving the best return on investment for is engagement with all key stakeholders. Alongside organisations such as the police, security, immigration, airlines, baggage handlers and retailers; Dubai Airports relies on situational awareness to ensure their airport is run in the most efficient, passenger-focused manner.

Facilitating the enhancement of processes at over 100 key passenger touch points is a complex requirement for an airport that will soon become the largest in the world. Four KPIs will be measured at each touch point, utilising a multitude of technology including Bluetooth passenger tracking, thermal imaging and infra-red passenger counters, video analytics and ANPR.

The outcome will be a consolidated, real-time data source that will be made available to all stakeholders. This will provide in-depth historical, current and forecasted operational data that will generate significant value for hub operations at the airport by allowing enhanced strategic and tactical operational management for Dubai Airports and all partner organisations.

Widespread data sharing and performance measurement will be enhanced by the distribution of customised automated alerts via email and SMS, alongside mobile deployment of all key data.

With such a diverse project, engagement with 3 key internal and external stakeholders is central to ensuring the project remains on course to transform Dubai into the world's leading airport.

The success of the SDM project will be clearly benchmarked using both internal KPIs and service levels and, perhaps more importantly, be represented via improvements in Dubai International's annual ACI Airport Service Quality scores.

