DATA COLLEGE
SINGAPORE TOURISM BOARD

Data in Action

Thanks to a one-of-a-kind system powered by video analytics, smart sensors and big data, SATS-Creuers Services has improved productivity, resource planning and passenger satisfaction at the Marina Bay Cruise Centre Singapore.

COMPANY PROFILE

MARINA BAY
CRUISE CENTRE SINGAPORE

SATS-Creuers Services Pte Ltd is a joint venture between SATS Ltd. and Creuers del Port de Barcelona S.A. (Creuers). It operates the Marina Bay Cruise Centre Singapore (MBCCS), one of the largest cruise terminals in Asia with a peak of 312 ship calls and a passenger load of over 1.8 million annually in 2019. The centre also boasts CruiseFly, the world's first sea-to-air baggage transfer service established in 2012 for arriving cruise passengers who depart Singapore on the same day.

THE CHALLENGE

Handling cruise operations efficiently with limited manpower had been a perennial challenge, particularly throughout the high-growth years of 2012 to 2018. Without full visibility of operations on the ground, duty managers could not intercept issues quickly. For instance, high passenger volume led to slow flow rates with bottlenecks in the passenger journey, particularly during the peak cruise season. It was also costly to regularly hire an external vendor to survey the passenger experience.

The need to attend to different ship call types and increasing passenger numbers meant that staff needed a smarter and faster way to assess the ground situation, troubleshoot and optimise the customer experience across multiple touchpoints in the terminal.

The team envisioned a centralised dashboard with Artificial Intelligence capabilities to establish operational patterns and predict potential issues such as congestion. However, there was no existing solution in the market that met all the unique needs at MBCCS.

THE SOLUTION

SATS-Creuers Services appointed NCS to develop a Smart Terminal System (STS), a centralised dashboard incorporating video analytics for duty managers to have full real-time visibility of ground operations. This improved efficiency, passenger satisfaction and aided decision making.

A holistic of view terminal operations
Using the STS dashboard, the team was able to obtain a wide range of real-time insights such as passenger flow rates and foot fall sensors which allowed them to manage congestion, intruders at vulnerable security areas, unattended baggage, toilet cleanliness and more. These information are fed into the STS dashboard which allowed MBCCS to obtain wide range of real time insights on passenger flow and take appropriate action when required, as detected via the STS.
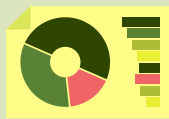
Mobile Access
Duty managers each carry a smart phone installed with the STS system application. The ability to access data on the move allows them to make their way towards choke points to address issues immediately. Concurrently, a duty manager in the control room will alert colleagues in the terminal to problems via walkie-talkies.
The smart phone app is also able to scan passport details of passengers to retrieve details including their name, corresponding cruise line logo and cabin number. Tags will then be printed and prominently attached onto their baggage for easy sorting and dispatch, which is especially helpful for locating owners of unattended baggage.

Predictive analytics
Data from cruise lines may be ingested into the STS for more accurate resource planning. With a centralised data set of ship-call schedules, vessel capacities and passenger profiles, the system can forecast manpower allocation, especially during peak periods.
The number of team members assigned in advance to various areas would differ based on each ship's capacity and passenger profile. For example, for a cruise ship expecting 3,000 passengers for embarkation, SATS-Creuers Services would station two ushers at the taxi stand and five at immigration.
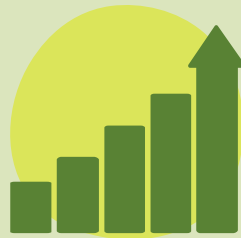
RESULTS

FROM THE PILOT

Passengers have been pleased with better queue management across immigration, baggage collection and security screening. Alerts triggered by ammonia sensors and user feedback have allowed shorter response times for cleaning up dirty washrooms, thereby reducing complaints.

Duty managers can focus on critical touch points based on data reflected in the STS. Elimination of manual tasks for ground staff, such as recording queuing and processing times, allowed them to redirect attention to customer service, reports generation and other administrative tasks.

Without full visibility of the terminal, there could be overallocation or under-allocation of staff in certain areas. Now, managers can place the right number of team members in each section based on need.

50%
INCREASE
IN CHECK-IN
SATISFACTION SCORES

23%
IMPROVEMENT
IN CUSTOMER SERVICE
SCORES YEAR-ON-YEAR

25%
REDUCTION
IN OVERTIME

KEY TAKEAWAYS

Implementing a new and unfamiliar system takes time and team buy-in. To ensure successful implementation, all staff and stakeholders underwent hands-on training by the vendor to get comfortable with the new system.

Valuable feedback was secured from all users, such as cruise operators, the management team and working staff, who would be affected by the new process.

To build a data-driven organization, everyone needs to be aligned with the same vision. Leadership teams must help staff understand how data can raise their productivity and contribution towards the organization's strategic goals.

"Your business can be made much simpler by integrating data analytics effectively into daily operations. This frees up employees' time spent on mundane tasks for more productive jobs."

Lionel Wong
Chief Executive Officer, SATS-Creuers Cruise Services

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