veovo

Five ways to enhance airport safety and passenger confidence in a post Covid-19 world

Introduction

With the rapid spread of COVID-19, airport terminals have gone from bustling hubs of activity to eerily empty spaces.

But as the infection peaks seem to be passing, governments are turning their thoughts to getting the economy kicking back into gear. The air transport industry's ability to demonstrate that it can support reasonable social-distancing will be a critical factor in the pace at which travel restrictions will be lifted.

As economic activity returns, travellers will want to take to the skies again. But confidence will need to be earned. With social distancing being our primary weapon against COVID-19 for the foreseeable future, operators face new-found challenges in keeping people apart and preventing terminals from becoming potential virus breeding grounds.

Success will, in part, come down to the airport's ability to predict and measure passenger movement and densities – when they arrive, where they dwell and how they choose to congregate - and using that knowledge to manage people flow and distribution.

Timely communication will be essential for building community trust. With their health and safety potentially on the line, passengers will want reassurance that airports are taking the right measures.

How long are the checkpoint queues? When were surfaces last sanitised? Which are the least crowded areas in which to wait? And many will want the answers before putting a foot inside the terminal.

Here are five ways airport operators can support safe travel, build confidence and minimise risk in the new normal.

—— 1 - Predict and pre-empt crowding, terminal wide

—— 2 - Safer, smaller queues

—— 3 - Empower passengers

—— 4 - Integrate context into operational decision making

—— 5 - Plan for a new world

When travel restrictions are lifted, building passenger confidence will be key to the steady recovery of air travel.

41%
of travellers plan to reduce leisure travel for six months after international travel bans open

62%
of them cite wanting to avoid crowds at airports and on flights as the main reason for travel deferral

Source M1nd-set April 2020

1 - Predict and pre-empt crowding, terminal wide

Safe passenger separation will rely on the ability of operators to not only measure passenger density across the airport in real-time but to take pre-emptive action, to ensure distancing can be maintained.

By understanding crowd density and how people move and dwell, operators can also improve the responsiveness of sanitation and disinfection processes, and move from a scheduled cleaning plan to a needs-based one.

There are several ways airports can do this, combining the best mix of data capture technology, analytics and decision metrics to support their layout, budget and operational priorities.

Sensors for counting people and tracking movement
For smaller areas like queues, concessionaire stores and restaurants, 3D cameras provide unparalleled levels of people counting and dwell accuracy, although there are sometimes blind spots in their coverage as people move.

For passenger flow understanding, WiFi/BLE sensors provide unmatched tracking capabilities.

The most reliable and cost-effective way to gain occupancy and flow insight across the terminal is to combine the data from these multiple sensors into one analytics platform.

Analytics for capturing live crowding
Passenger density analytics capture the degree of crowding in real-time. The risk is assessed, based on social distancing limits, crowd movement patterns, and the size of the area being monitored.

Alerts and automated action can be triggered if density thresholds are exceeded.

Metrics for data-driven decisions
Armed with information about crowd density and movement, operators can take proactive decisions to limit the number of people congregating such as - redirecting flow with digital messages, lane balancing, adjusting call to gate times or spreading gate and baggage belt allocations.
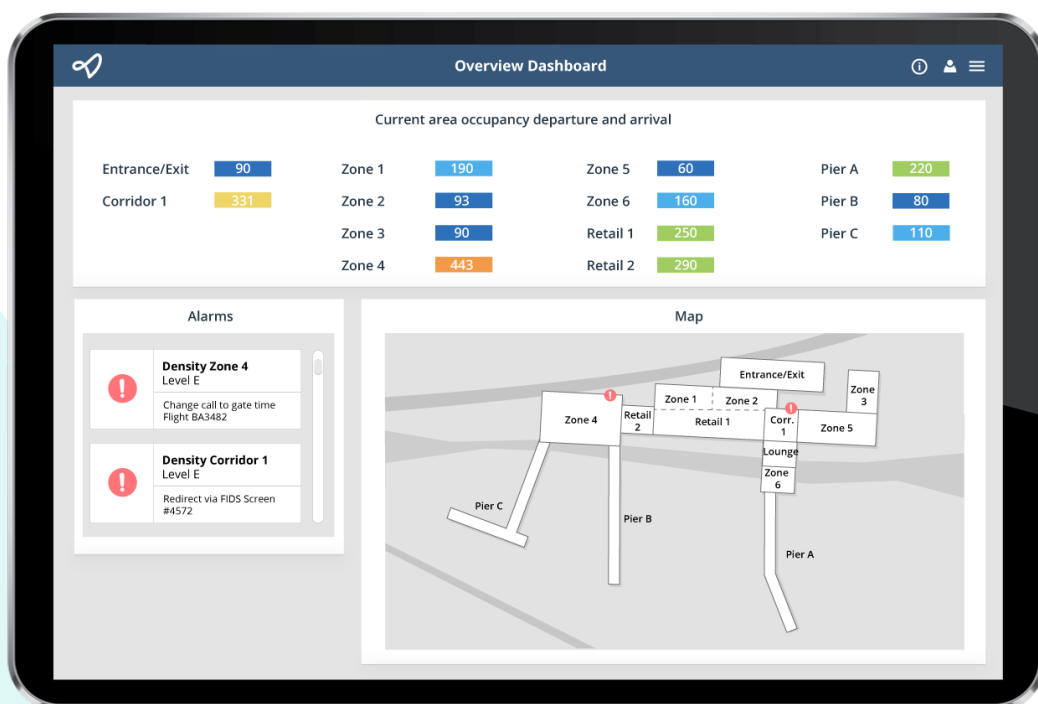
2 - Safer, smaller queues

When people take to the air again, queues at departure checkpoints will be inevitable. What's less-known is how airports will enforce social distancing, without creating endless, snaking lines.

One way is to cap entry to checkpoint areas – the fewer people in, the smaller the queue. This can be achieved by linking occupancy measures with airport screens, to advise passengers when lines are of a safe size to enter the area, and which queue they should join.

Another way to streamline arrivals is to adopt virtual queues. Using this technology, passengers can pre-book a time slot for processing, such as for check-in or security. This helps prevent passengers from feeling locked in any area, for any length of time – giving them control over their airport journey.

Time slots can be adjusted in real-time, based on queue wait times, changing arrival patterns, lane productivity and processing capacity. While waiting, passengers have the choice to shop, grab a drink or wait in less-crowded areas.

Not only do virtual queue bookings give passengers greater peace of mind, but they can also provide airports with better forecast data, for more accurate checkpoint planning.

Once in the queue, sensors can measure the average distance between passengers and generate alarms if passenger density thresholds are exceeded, or automatically redirect and redistribute passengers to different lines and checkpoints.
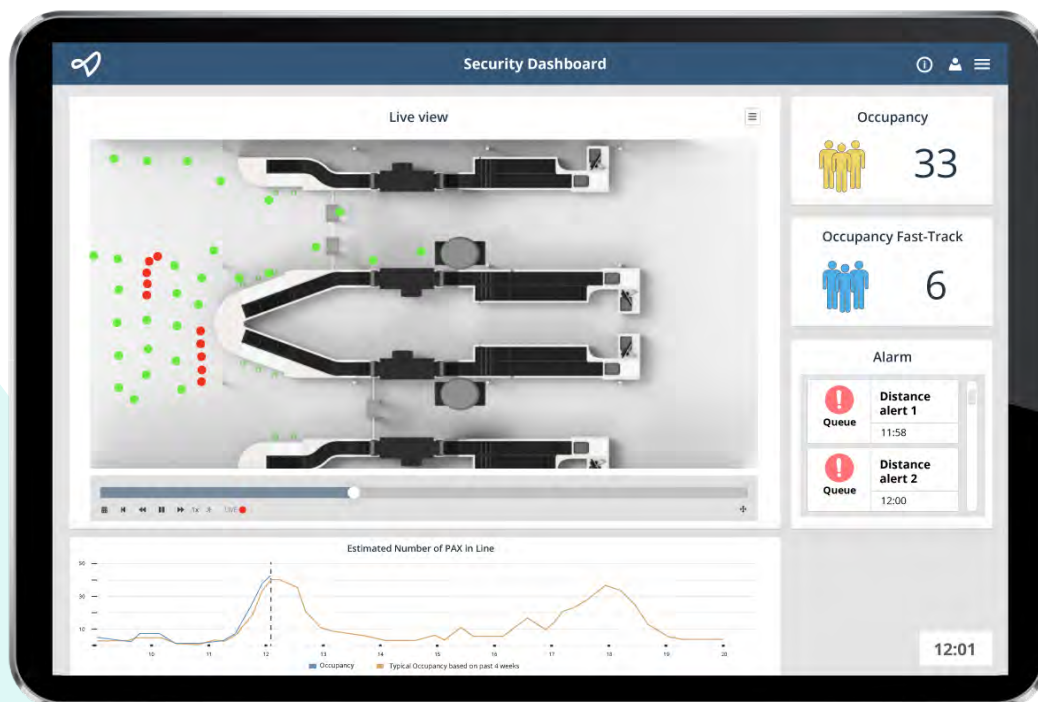
3 - Empower passengers

When restrictions are lifted. building passenger confidence will be key to the steady recovery of air travel.

One way to achieve this is by giving people greater control over managing the space around them by making more informed travel decisions.

Dynamic signage, FIDS displays and mobile apps allow passengers to be guided on new processes, for example, temperature checks, and understand wait times at processing points. Quieter zones of the airport can be highlighted or signage can direct passengers in real-time to the less crowded places to wait, shop or eat.

Passengers will also place greater emphasis on airport cleanliness. By communicating time since the last cleaning, operators can also demonstrate their commitment, to providing a safe and sanitary travel environment, boosting traveller confidence.

Meshing flow predictions and operational data will give airports the context needed to put the right information in front of the customers at the right time — where they are, what information they might need and in what language.

4 - Integrate context into operational decision making

It's not just passenger crowding and flows which will need a different approach. The way the airport allocates gates, baggage carousels and manages turnarounds will require a radically new perspective. Airports will need to be more mindful about how they distribute gate allocations to maximise separation whilst accommodating the flight volume.

Incoming baggage may need to be separated across multiple belts or at the very least, from other flights arriving at the same time. Plane turnarounds will be extended to allow for extended cleaning. These are all piling on operational and economic challenges in an environment which is already stretched prior to Covid-19.

This can be addressed by creating a close integration between the airport's passenger forecasting and density management systems and its Resource Management System. This will allow historic real-time awareness of the situation in the terminal and to allow the operations team to make smarter planning and day of operations decisions to balance operational efficiencies within the airport.

5 - Plan for a new world

Before the pandemic, airports typically relied on experience and historical data to get a sense of when passengers were likely to show up and plan their services according. But with so many new variables to contend with – changing flight schedules, social distancing, additional health screenings, more regular cleaning – arrival and processing guesstimates, based on last year's or even last month's data are no longer relevant.

The only way for airports and their aviation partners to make truly safe and accurate planning decisions will be by basing them on real, up-to-the-minute information.

New models of collaboration between airports and their aviation partners to share data will be critical in meeting the customer service needs, and ensure right-sized resources are available to meet fluctuating demand and evolving processes.

Volatility will also challenge traditional forecasting models and a more dynamic approach will be required. With live forecasting, flight data from the airport operation database, up to date airline passenger data and real-time passenger counts can be used to create accurate passenger show-up forecasts for each processing point. The forecast and capacity plan can then be continually updated to account for live situations, such as a predicted occupancy breach.

Accurate, live forecasts also enable airports to plan how to channel passengers around the concourse to reduce passenger density, minimise crowding at piers and baggage consoles and help inform concessionaire staffing rosters.

Keflavik Airport recently reaped the benefits of live forecasting, as it was grappling with a continually changing flight schedule.

"Dynamic forecasting, linked to the live flight schedule and updated with passenger data, as it became available, gave us an early heads up to expected passenger arrivals. This allowed us to adjust our plans and rosters to reflect the current situation, improving journeys and lowering costs,"

Hanna María Hermannsdóttir,
Specialist in operation research at Isavia.

Embracing the new order

One thing we can be assured of – the aftermath of COVID-19 will see changes to terminal operations on a scale far more significant and long-lasting than after 9-11.

On the upside, there's no need to wait for new technology to be invented to help people maintain healthy distances in terminals. It is already here. With bundled on-demand services, predictive intelligence, and occupancy monitoring systems, airports can be supporting social distancing within weeks of installation.

By connecting airport staff to answers and actions, you not only help get passengers back in the air sooner – you can, at the same time, build a smarter customer experience platform for the future.

Prepare, pivot and protect with Veovo

The world's most innovative airports such as Amsterdam, Auckland, JFK, and Keflavik rely on Veovo to optimise capacity, build resilient operations and deliver brilliant customer experiences.

Our AI-powered platform connects people, systems and sensors across the ecosystem to provide instant situational awareness. With smart automation and intelligent recommendations, the solution perfects the way forward, delivering brilliant outcomes in every situation.

To navigate turbulent times, airports need to be adaptable to evolving guidelines, while creating a new, more efficient future.

Veovo has extended our portfolio to accommodate new social distancing needs and enable safe and proactive operational decisioning, using real, up-to-the-minute data.

From virtual queuing and passenger density analytics to AI-driven forecasting and resource optimisation, Veovo's Intelligent Airport Platform helps operators plan in confidence, adjust quickly to dynamic realities and provide safer, smoother journeys.

Veovo is headquartered in London, UK with our 110+ airport customers supported by teams in the United States, New Zealand and Denmark.

Reach new heights at
www.veovo.com