

ADVANCED PROCESSING

Increasing use of digital identity management, automation and robotics

There remains great potential to further improve customer experience, bring greater operational efficiency and increase safety and security with greater use of existing technology. The opportunities for automation and robotics are numerous given the repetitive nature of many processes. Travel processes will be updated to use new technologies, reflecting and enhancing the way of our daily lives. This will create attractive experiences for all users, passengers and staff alike. This is not simply a matter of using new technology to optimize legacy process but rethinking what actions are truly needed or desired.

IDENTITY MANAGEMENT

Establishing the identity of a person, bag, shipment, vehicle or other at a touchpoint shall be streamlined and friction-free. This requires the technology to capture identity data and robust identity management systems to authenticate the data captured. Data connectivity will enable the relevant array of factors to be used to determine the next step. Factors could include context data (time and location), risk assessments, travel authorizations, customs controls and the customers' order details are used to determine the next step.

Preferably, identity will be established at the time of booking to enable the off-airport processes and eliminate the need for paper documents during the journey: Biometric technology is the likely tool for passenger identity. Baggage may be identified with similar biometric technology using a 3D image capture of the baggage metrics or smart tags embedded in the bag at the time of manufacture. Smart tags or sensors will be attached to cargo shipments which will enable piece-level identification.

AUTOMATION & ROBOTICS

Passenger experience has undergone significant improvements with automation at the core of this change. Digital automation has made check-in functions invisible for many passenger. Self-service equipment automates several other touchpoints at the airport. The interface with passengers shall continue to reflect the level of automation in daily life so that the experience feels exciting but convenient.

Non-customer facing operations on the airport ramp and for cargo operations, which have remained broadly the same for decades, will advance with automation. Numerous repetitive tasks that need high levels of synchronization will

be optimized in conjunction with other tasks. Deploying autonomous vehicles and equipment offers levels of efficiency that are otherwise unachievable. Process innovation will optimize the coordination of turnaround for baggage, cargo, fuel, catering and de-icing. In some cases more research and validation is required so it's not simply automation for the sake of it.

SECURITY

Developments in threat detection equipment will make security screening less intrusive and quicker. Advanced algorithms will eliminate the need for physical separation of specific higher risk elements (such as laptops and liquids) and will be able to examine high density cargo or baggage. These algorithms can be dynamically adjusted as necessary and capable of screening for customs concerns as well as security threats. Screening checks may occur off-airport at an earlier stage in the journey. The passenger, baggage or cargo's subsequent travel to the airport will be via a secured route to avert the need for further screening. All the relevant authorities may use the screening images or outcome to inform their risk assessment of the passenger, their baggage or a cargo shipment. This will trigger additional checks at the departure or destination solely for those that pose a risk. Others could bypass secondary checks and continue on their journey.