THALES

THE NEW AIRPORT EXPERIENCE
AFTER THE COVID-19 PANDEMIC

Regaining Passenger Trust to Fly Again

Executive
Summary

The World Health Organization singles out the COVID-19 pandemic as the most significant health crisis of the century. The COVID-19 pandemic has affected every aspect of life worldwide and has dramatically disrupted the aviation industry. As a point of entry, airports have naturally been subject to specific considerations and recommendations, in the same way as mass gatherings, and the pandemic has seen some of the world's busiest airports close.

As a result, air traffic has decreased drastically as have revenues. Given that air travel and tourism contribute, directly and indirectly, to about 10% of global GDP and support 330 million jobs worldwide, the impact of COVID-19 on the global economy is tremendous. However, beside the economic impacts, the pandemic has above all shaken the contract of trust between customers and airports, passengers and airport operators. Therefore, it becomes essential to rebuild this trust in order to incentivise individuals to become travellers and passengers again. At Thales, we believe that this underlying trust can only be regained if airports succeed in proving to passengers that their operators will be able to implement and comply with the forthcoming procedures and regulations in order to guarantee passengers maximum safety and operational efficiency without compromising their time and health.

At Thales, we have a deep understanding of the current situation and are aware that with the ongoing pandemic, it is the fate of airports that is at stake. The upcoming requirements of airports in terms of health/hygienic protocols, safety/security procedures and capacity restrictions highlighted by this pandemic are at the heart of our concerns.

We are also fully aware that an upturn in activity and economic growth will only be possible if airport operators make safety, hygiene and health their new priority and find the perfect balance between the implementation of new procedures, regulations that are supposed to guarantee the safety of all, and the new health, hygiene and social distancing protocols that inevitably reduce airport capacity.

In order to be implemented effectively and prepare airports for long-term sustainability, these new procedures, regulations and social distancing measures need to be supported by first-class technological solutions. Thales is ready to take up the challenge and can deliver a comprehensive and innovative range of solutions deployed in a multi-layered approach: Thales airport solutions and the AiRISE suite. Our solutions leverage our longstanding experience in the air mobility industry, our leadership in biometry and our expertise in the key technologies of the digital revolution.

Whether it's occupancy control with Thales InFlow passenger flow management systems, crowd detection with Thales SafeLand, contactless operations with Thales Fly to Gate or temperature control with Thales Safeland, we believe that Thales airport solutions and the AiRISE suite are the best allies for airport operators to overcome this crisis and once again make airports a safe and comfortable place to be in.

Contents

1.

Make Airports and Flights Safe to Recover Demand

> The COVID-19 pandemic has had a disruptive impact on aviation worldwide and has grounded the vast majority of aircraft pending the ease of restrictions and the implementation of new safety procedures to resume operations.
>
> The new procedures to restart aviation that agencies, countries and stakeholders are discussing will severely affect airports and airlines. Constrained load factors and social distancing will become the "new normal" for aviation until a vaccine is found. Once airports and airlines have defined and implemented new procedures, they must then regain the trust of passengers to initiate the recovery of demand.

Today, air transport stakeholders need to reassure passengers that the concept of safety encompasses first and foremost their health. The safety of airport and airline staff and crews is equally important to maintain business continuity.

Simple, coordinated and effective procedures supported by innovative technologies will deliver the "safety first" concept that will be a determinant factor of the passenger experience, which will henceforth be based on passengers' perception of being in a safe and healthy place. Until a vaccine is made available, a multi-layered approach involving a combination of measures is going to be the most effective. Measures will include thermal scanning, symptom screening, use of PPE (Personal Protection Equipment) and social distancing measures.

In this context, at Thales we are continuously interacting with our airport stakeholder community to contribute to this transition phase with solutions to make airports a safe place to be and use once again, leveraging our digital technologies and experience. Through the collaboration between Governments, Agencies, Institutional Associations, Airlines, Airport Stakeholders and the Airport Industry, airports will have to become a key safe travel infrastructure that will be essential to resuming business and life continuity.

Airports will have to deal with new business constraints, new regulations, difficulties encountered by other impacted stakeholders, the requirement to offer a public service while ensuring the protection of passengers, the protection of staff, the protection of the country, and the protection of the business itself.

Thales airport solutions and its AiRISE suite are going to be key to assist the implementation of these new additional missions in the context of the COVID-19 pandemic:

Protecting Passengers	>	Protecting Staff	>	Ensuring Business Continuity	>	Complying with National and International Regulations

Ensuring safety and health regulations for the infrastructure and for all passenger processes will be key to reassure passengers to travel again and support a quicker return to growth for business operations and relevant returns for the stakeholders.

Protecting staff is key for the above objective and every measure to ensure their safety has to be taken. New SOPs (Standard Operational Procedures) will have to be implemented and new KPIs (Key Performance Indicators) will have to be constantly monitored on both safety aspects, as well as a business continuity perspective, including maintaining assets in operation during a reduced duration of the required running time.

Revised passenger flows and processes to ensure social distancing and contactless operations will pose a great challenge to airport infrastructures and technology will play a major role in these processes.

The airport, as a gateway to other countries, will have even more so than before a role of protecting the country from imported cases, acting as the first screening entity with temperature testing, symptom screening and potentially swab and test. Airports with a central AOCC/APOC crisis management centre that operates integrated solutions can centralise all relevant information to establish the link with airlines and other key stakeholders for improved coordination and management of the transverse impacts of crisis management.

Thales puts automisation, contactless and biometry at the heart of its solutions to support the most effective implementation of the new safety postures and their different layers of implementation, and to streamline operations while ensuring the highest possible level of protection, safety and security.

To face these new challenges, as well as new regulations and new operational needs brought about by the COVID-19 crisis, Thales has developed additional features and modules for our product portfolio, the Thales AiRISE suite. Our solutions are available as stand-alone or integrated into a global system; we propose a modular approach.

This product line is based on 3 complementary families of products responding to the main needs of an airport operator for running its business:

- Thales **SafeLand** for security and safety integrated management and relevant incidents
- Thales **ShareView** for operational monitoring and performance management with KPIs & dashboards
- Thales **InFlow** for passenger management optimizations (flows, queues, volumes)

In this current crisis, a holistic approach covering safety measures, an optimization of the passenger experience and journey, and finally the impact on airport operations will be key.

A multi-layered approach is key to ensure the safety of the air transport industry

THALES

2.

Main Measures to Tackle the Crisis – a Multi-Layered Approach

> To face the challenges of COVID-19, as well as new regulations and new operational needs brought by the crisis, Thales has been concentrating on specific features and modules for our product portfolio.
>
> Thales has an extensive experience and many references at worldwide level for integrated management of airport processes, from security/safety management, to passenger management, including border control systems, and operations performance management, delivered through its AiRISE suite of products.

Thales provides solutions to ensure a real-time global situational awareness of the infrastructure, enabling stakeholders to monitor, detect and respond to security threats and operational Key Performance Indicators. We integrate different technological subsystems within the infrastructure (including IoT devices), which, while monitoring their operational status, collects the alarms or events triggered by the subsystems and provides operators with Standard Operating Procedures (SOP) tailored to each specific event/alarm.

In addition, by collecting and analysing data coming from these subsystems, Thales can provide not only real-time monitoring and management capabilities but also prediction and forecasting tools, thanks to its embedded data analytics capabilities.

Thales can extend these global situational awareness capabilities to respond to the COVID-19 crisis. Our solutions can integrate data coming from systems deployed specifically for the main containment measures to tackle the crisis and we can define and implement, in close cooperation with the end users, specifically designed scenarios and SOPs to respond to safety alarms.

These additional containment measures can be grouped into 3 main areas:

Social Distancing & Occupancy: to avoid over-occupancy and reduce risks for people, while tackling operational inefficiency due to reduced terminal capacity and congestion

- **Occupancy management**, achieved with Thales InFlow Occupancy Control systems, to manage the volume of people in specific areas
- **Social distancing**, achieved with Thales InFlow Wearable devices that will activate alarms in the event of close contact and that can be used for both passengers and staff operations
- **Crowd surveillance**, implemented as video analytics capabilities within Thales Safeland
- **People Tracking**, enabled by Thales's InFlow LiTracking solution to anonymously track passenger behaviour.

Contactless Operations: to reduce risks of contagion and increase the perception of safety, while improving the efficiency of passenger processing

- **Contactless Passenger Processing:** through its state-of-the-art biometric capabilities, Thales Fly to Gate implements a fully contactless passenger operation from check-in to boarding

Health Check Operations: to comply with new guidelines and regulation, and implement new operational posture both landside and airside

- **Temperature check**, with thermal cameras integrated in Thales Safeland, to raise alarms if passengers or staff are found to have a temperature that is above the thresholds
- **Investigation of positive and suspect cases,** with the implementation of safety and health questionnaires with mobile apps that can act as a deterrent for people to travel if they are unsure of their health or recent contacts
- **Risk-based planning,** providing Airport Managers with a holistic view with Thales Shareview that monitors and analyses Key Indicators affecting global infrastructure risks
- **Health check management**, thanks to Thales ShareView BIoT platform that offers IoT capabilities to allow remote operators to detect anomalies and give orders to be conducted by field operators

Measures are based on operational processes and human behaviour but need technology to be applied effectively

3.
Social Distancing & Occupancy

Social distancing is currently the recommendation from the WHO to reduce contagion. Airports are by nature crowded places where procedures are built on people queuing and being in close contact with one another. Retail areas are like big malls that in many countries are considered to be infrastructures with high health risks, but for airports retail is a key contributor to the overall business. Furthermore it is important for passengers that the airport feels safe but also remains a pleasant place where they feel comfortable waiting for their safe flight.

Regulating passenger flow through the infrastructure, ensuring social distancing during operations, avoiding crowds and the over occupancy of areas (check points, boarding, lounges and retail), while still leaving enough time for each passenger at the airport without pressure or risk of crowds, will become a key requirement for airports. Social distancing will hopefully not be a long-term safety measure but in the midterm can help passengers regain trust. Implementation of social distancing by Airport Operators can be drastically eased by using the right technological support.

# 3.1 Occupancy Management - InFlow Occupancy Control

Thales InFlow is able to avoid over occupancy in defined areas of the airport. The principle is that the flow of passengers is regulated by only allowing access to the sterile area to passengers of a specified flight according to the departure slot, the number of flights expected, the forecast number of passengers and the number of boarding passengers.

A machine learning-based algorithm will regulate the flow of passengers to:

- Avoid over occupancy
- Avoid queues at check points
- Ensure reasonable time for amenities (retail, F&B, …) for passengers
- Ensure reasonable room for social distancing at boarding
- Communicate to passengers the best time to arrive at the airport
  through a mobile app to avoid congestion and increase passenger satisfaction

How it works

The application works following the principle of communicating vessels, allowing passengers to move into the sterile area only if the occupancy rate is acceptable. The application accommodates the different needs of the operator through a machine learning-based algorithm and through the integration with the airport system in order to balance prediction and monitoring.
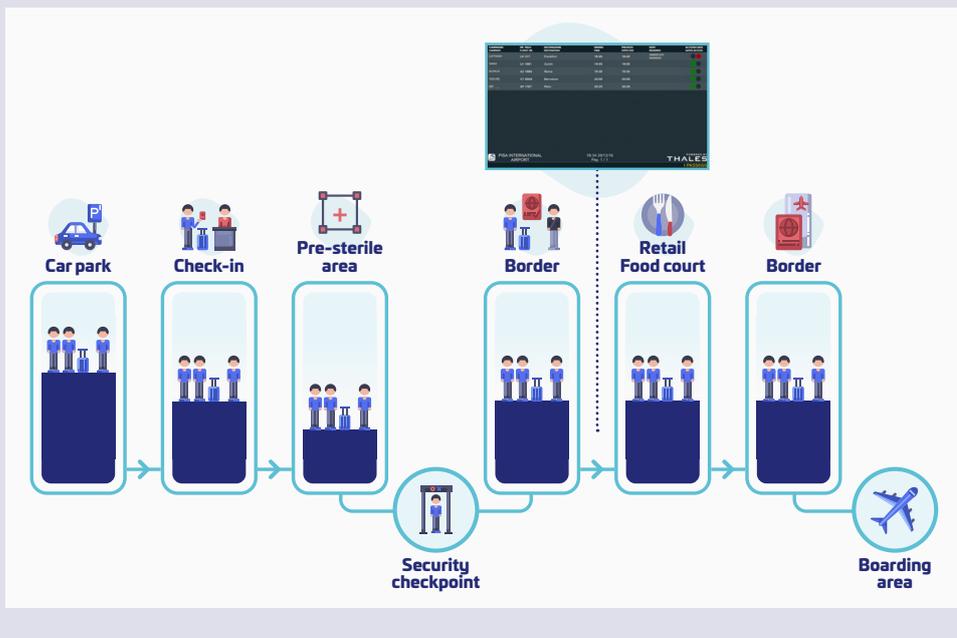
The algorithm decides which flights' passengers are allowed to go to security check points according to the departure slot and occupancy rate.

The boarding pass reader will not give clearance to enter the queue for the security check point if the flight has a red light.

InFlow can be integrated with a queue management system to take into consideration queue length and management.

InFlow occupancy control can be deployed at every check point of the airport according to the need of the operator. Specific sectorization can be designed adding new check points on top of usual check points.

A what-if tool is provided to test different scenarios. Manual overriding of software decisions to handle specific situations is allowed.
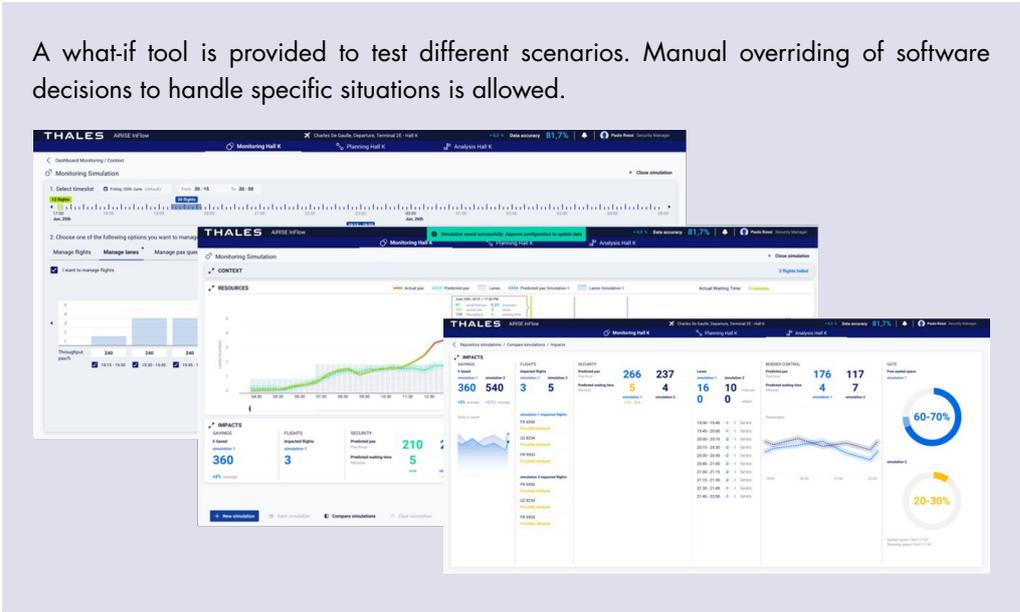
✳ Deployment

- Hybrid, on site
- Quick deployment (1 month)
- Integration needed with AODB, suggested with CCTV
- Native integration with other Thales AiRISE products/modules
- Hand-held boarding reader according to new IATA medical advisory team suggestions

THALES

3.2 Social Distancing - InFlow Wearable

Thales InFlow enables the implementation of social distancing procedures and anonymous tracking in the airport. The application is based on a wearable tag like a badge that allows each passenger or staff member to be safe and secure in the terminal. The tag is provided with a UWB/BLE chip that interacts with other tags and with the infrastructure to enable social distancing and anonymous/personal tracking.

InFlow SD can ensure:

- Respect of social distancing
- Anonymous tracking of passengers through the terminal
- Personal tracking of staff through the airport
- Link between boarding pass and tag (where allowed by local regulations) to track passengers, with the possibility to offer additional passenger services and/or manage contact tracing in case of positivity
- Overall crowd management
- Marketing actions based on precise tracking analytics

How it works

The tag is provided with UWB/BLE chip and the infrastructure has to be equipped with fixed beacons. The tag is small and easy to sanitize after each use. It will be given to the passenger at the entrance after the thermal screening and will be given back at boarding. The procedure for sanitization will be defined to allow the use of a tag for a new passenger. For the staff member the tag will be personal.

The tag will use UWB/BLE for two needs:

- **Social Distancing:** the tag will interact with all the other tags in the airport (either other passengers or staff), beeping and snoozing every time two tags interact for more than 30 seconds (configurable) at a 1 meter distance (configurable). The passenger is alerted of being too close to someone else and of the need to keep a distance.
- **Tracking of passengers:** the tag will interact with the infrastructure providing anonymous and accurate positioning in the terminal to improve occupancy checks and support crowd detection.
- **Tracking of staff:** the tag will interact with the infrastructure providing accurate positioning in the terminal to improve fast reaction to hazards and facilitate decision-making at central level.
- **Staff health check reminder:** the wearable is able to provide reminders to staff members for periodical temperature checks.

The InFLow platform will use this tracking to refine and feed prediction algorithms improving the overall passenger flow. The platform will also use tracking to provide crowd alerts and ultimately a passenger tracking heat map dedicated to safety and/or marketing analytics.

Where allowed, every tag in use can be linked with boarding rights in order to act as a digital boarding pass and also allow contact tracing procedures to manage cases of positivity, additional added-value services for the customer and further analytics for the operator.

Deployment

- Hybrid, on site
- Quick deployment of social distancing feature (1 month)
- Step by step approach to deploy the tracking feature (coverage study, beaconization, fine tuning)
- Native integration with other Thales AiRISE products/modules
- Easy sanitization and recharge process

3.3 Crowd Surveillance – SafeLand Pax Protector

Operators can avoid critical situations caused by human behaviour with Thales's SafeLand Pax Protector. Through integration with the Video Management System (VMS), SafeLand is able to detect abnormal conditions and raise geo-localized alarms that help security officers and operational staff at the airport intervene quickly to restore safe conditions. Moreover, thanks to its innate capability of handling incident management procedures and integrating several different airport systems, Pax Protector is also able to react to alarms using a contextual approach.

### Pax Protector allows airport operators to:

- Detect overcrowded areas, counting the number of people
- Detect people not wearing masks
- Detect people with high temperature
- Send geo-localized alarms to staff to allow counter measures
- Propose SOP (Standard Operating Procedure) to pilot contextual digital signage and public announcements

How it works

A secured and pre-configured server will be integrated with the available airport VMS and with thermal cameras. The system will analyse video streams from cameras and issue alarms on a mobile app and on the web application to allow operators to apply counter measures.

Deployment

- Hybrid, on site, on cloud deployment
- Quick deployment (1 month)
- Integration needed with CCTV
- Secured and pre-configured server for quick deployment and quick disposal
- Native integration with other Thales AiRISE products
- Mobile App available
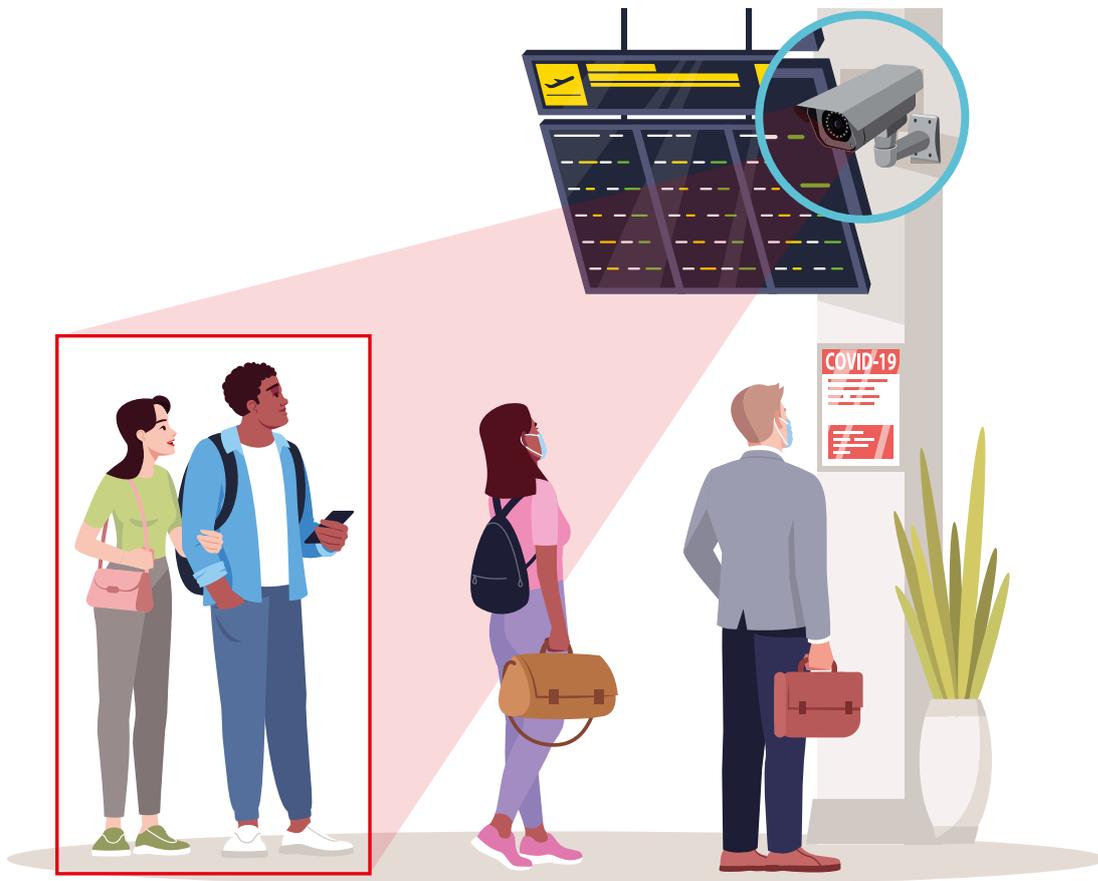
THALES

3.4 People Tracking – InFlow LiTracking

Operators can track people using technologies such as Lidar/BLE with Thales LiTracking. Tracking people is critical for several reasons related to security and safety but is also critical to ensure the passenger experience. The passenger experience will change drastically with the new procedures due to the pandemic. A solution able to anonymously track passenger behaviour will help the operator to offer dedicated services, predict crowded areas, anticipate marketing needs for retail and real estate, and correctly allocate resources.

InFlow LiTracking will enable operators to:
- Detect overcrowded areas, counting the number of people
- Detect and predict passenger flow
- Send geo-localized alarms to staff to enable counter measures
- Send messages to passengers through digital signage or public announcements

How it works

Integration of sensors deployed on the field such as Lidar/BLE will feed tracking information into the InFLow platform in order to perform a more accurate prediction of passengers and better use of infrastructure. Sensors will be installed in the airport according to a coverage plan to allow the operator to have a full tracking capability. Integration of the sensors will be done through a platform that will convey sensing data to InFlow for the flow prediction analytics.

Deployment

- Hybrid, on site, on cloud deployment
- Deployment of Lidar/BLE and setup
- Native integration with other Thales AiRISE products
- Mobile App available
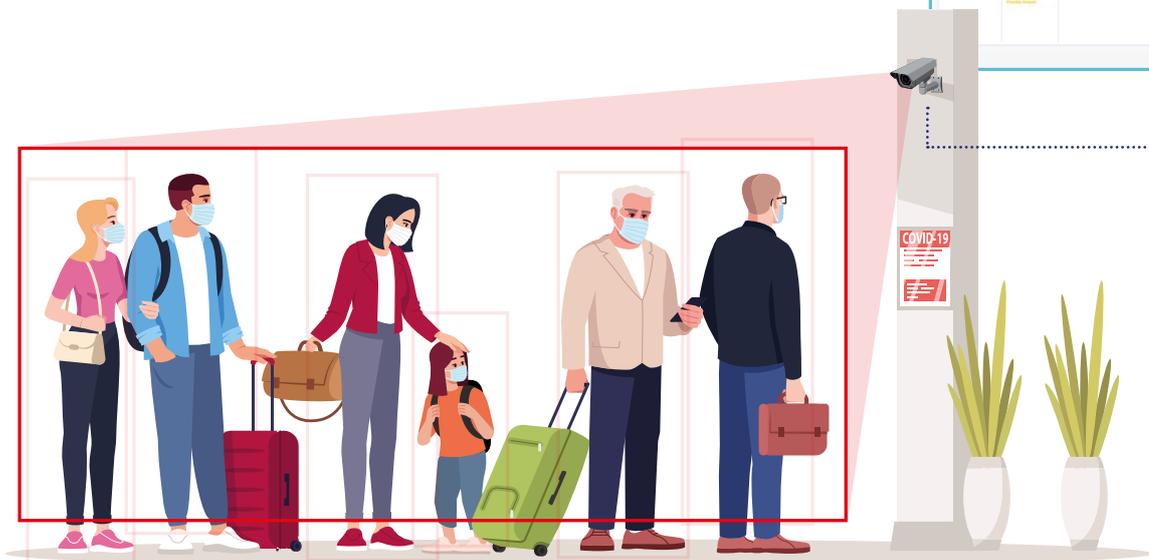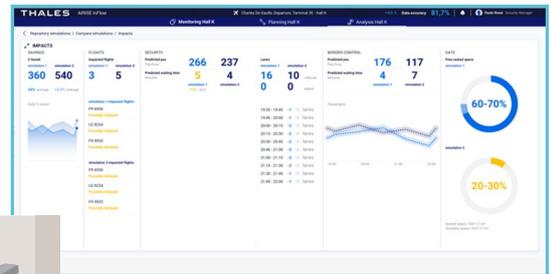
4.

Contactless Operations

To regain trust and guarantee the safety of passengers and staff, airports and airlines need to progress on a concept already tested before the health crisis. Contactless operations were considered an important brick in building a new passenger experience with the aim of reducing queues and stress, and helping passengers feel comfortable with a personalised free flow approach in the passenger process up to boarding procedures.

The health crisis does not change this assumption but brings a new perspective. Making an airport a safe and comfortable place to be in once again means an airport where contact is limited and operations are digitalized to increase both the perceived and real level of safety.

The passenger experience will be more and more affected by this perception of safety and the less contact that is required for operations, the more confidence passengers will have in the level of safety. Simple solutions like PoS in retail or contactless dispensers in the toilets can be easily installed but the whole stream of operations needs to be reshaped taking the "new normal" into consideration. However, passengers are not the only people transiting in airports. The airport operator, the ground handler and the airlines are also responsible for making the airport a safe environment for the staff to protect their health and, as a result, preserve business continuity. That's why contactless and digital technologies will be at the core of the airport of the future.

4.1 Contactless Passenger Processing – Fly to Gate

Thales Fly to Gate reduces the time passengers spend in queues at each step of the travel process and minimizes the contact with the personnel operating in the airport. The principle is to set up a biometric pathway through the airport, from check-in to boarding, using biometrics as a traveller authentication method at all passenger touch points.
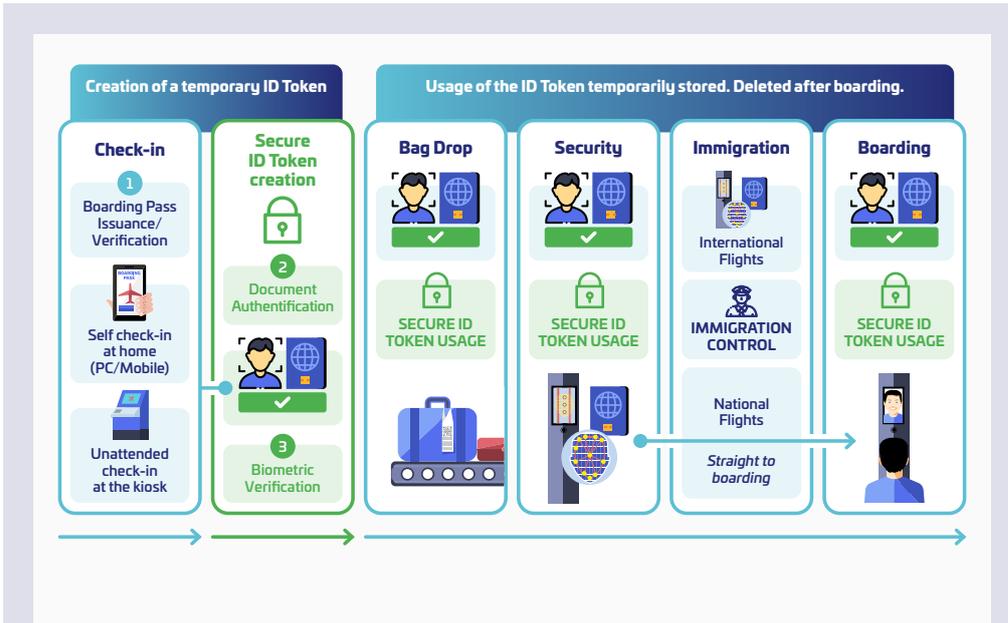
Automated biometric and document verification technologies allow an end-to-end self-service experience, according to the needs of airports and airlines, and according to the pace at which they wish to deploy the method. Passenger safety is at the heart of the Fly to Gate concept, as they will benefit from best in class security with reduced risks and enough time to manage all steps required before boarding.

Biometric enabled self-service to speed-up & streamline traveller processes

| Mobile check-in | Airport check-in | Bag drop | Border control | Access to security or to plane |

A smooth & efficient passenger process with self-service from check-in to boarding

How it works

Create a seamless traveller flow with a unique, temporary ID token that can be created by the passenger by enrolling their biodata and travel information directly from home.

The ID token remains in the system and follows the passenger at each step of the travel process and is deleted once the passenger boards (GDPR compliancy). The system is flexible to integrate any storage with centralized citizen digital ID in case it is required.

Creation of a temporary ID Token		Usage of the ID Token temporarily stored. Deleted after boarding.			
Check-in	**Secure ID Token creation**	**Bag Drop**	**Security**	**Immigration**	**Boarding**
1 Boarding Pass Issuance/ Verification	2 Document Authentification	✓	✓	International Flights	✓
Self check-in at home (PC/Mobile)	✓	SECURE ID TOKEN USAGE	SECURE ID TOKEN USAGE	IMMIGRATION CONTROL	SECURE ID TOKEN USAGE
Unattended check-in at the kiosk	3 Biometric Verification			National Flights *Straight to boarding*	

Thales can provide the full end-to-end unique ID token solution thanks to a wide expertise in airline and airport systems, and the ability to integrate all required sources of data and self-service systems with the AiRISE software platform to provide complete automated processing at each of the passenger touch points.

The integration of value-adding products to ensure that the boarding pass name matches the passport, the validation with the Passenger Boarding System, the Automated Document Authentication (document Template Database with 1700+ documents and 95% coverage of Passport worldwide), Passenger Biometric acquisition, and the identification, verification and authentication based on an effective Facial Recognition algorithm (FRP) allows Thales to provide a flexible solution to meet any airport's specific requirements.

Based on underlying document and equipment there are different types of verification

DV Level 1 ID verification from visible light	**DV Level 1-e** If underlying document verified is contactless (NFC)	**DV Level 2** Electronic and non-electronic document verified using specialized full page scanners
Smartphone, Tablet, Web (Online Check-in)	**NFC Smartphone, NFC Tablet** (Online Check-in)	**Full Passport Scanner** (Kiosk)

✳ Deployment

- ▬ Hybrid, on site
- ▬ Standard unique ID token deployment time (6 months)
- ▬ Integration needed with AODB, CCTV, CUPPS, CUTE
- ▬ Native integration with other Thales AiRISE products/modules
- ▬ Hand-held boarding reader according to new IATA medical advisory team suggestions

5.
Health Check Operations

The role for the airport to act as gateway to the country for sanitary control is expected to last for some time in the coming future. Until a vaccine is found, the requirement to check and manage contagion, and, as a result, increase the trust of passengers and staff, will be present. Temperature checks are expected to remain for a long time and airport operators need to incorporate the measure into their normal practices. Swab management, on the other hand, is expected to remain for a shorter period of time but it can today help regain passenger trust to fly again and will likely be useful to comply with regulation or possibly new "health passport" concepts.

To safely handle operations it will be critical to assess the level of risk related to each flight. Ground operations and resource planning will need to take into account not only airline indications but also health and safety requirements and the airport's requirements in terms of passenger management and regulation of flows.

We expect also the need to investigate suspect and positive cases to protect other passengers together with airport and airline staff.

5.1 Temperature Check – SafeLand Thermobox

Temperature checks will undoubtedly be one of the most immediate and long-lasting countermeasures regarding the crisis. Airports have already had to implement this check in the past, in particular in 2003 for the SARS outbreak. These checks are important and, as they are expected to be standard process for some time, they have to be integrated in the airport procedures and need to be streamlined. It is also proven from IATA surveys that passengers feel more comfortable if temperature checks are done in airports both at departure and arrival. For the same reason, staff temperature has to be controlled to make sure symptoms are managed in the early stages, reducing risks for everyone.

SafeLand Thermobox enables airports to:
- Measure temperature in several different places of the airport (entrance, staff entrance, departure, arrival,…)
- Increase passenger comfort and confidence
- Reduce risks for staff
- Streamline temperature checks reducing operational delays
- Raise geo-localized alarms
- Easily generate incident reports
- Operate from a mobile app

Thanks to our partnerships, it is possible, as an option, to add a swab management feature to ThermoBox to implement additional safety measures. Thales ThermoBox offers several ranges of temperature precision and additional functionalities such as mask detection, relying, in particular, on various Thales technologies and on a wide range of thermal cameras from the market.

How it works

The Thales SafeLand Thermobox is a secured and pre-configured server to be integrated with local CCTV and thermal cameras. Thermal cameras have to be installed when necessary or can be portable (connected through Wi-Fi). The application will raise geo-localized alarms and will allow Control Centre Operators to access both thermal and normal camera video streams to identify individuals with a high temperature and manage them with appropriate SOP.

Deployment

- Hybrid, on site, on cloud
- Quick deployment (1 month)
- Integration needed with CCTV
- Native integration with other Thales AiRISE products/modules
- Mobile App

5.2 Investigation of Positive and Suspect Cases – SafeLand Sanitary Check List

Health emergencies will need further investigation and data collection to avoid the spread of the virus within the population but also to support governments in managing lockdown and sanitary measures.

Until a vaccine is made available, a multi-layered approach involving a combination of measures is going to be the most effective. Measures will include a combination of thermal scanning, symptom screening, use of PPE (Personal Protection Equipment) and social distancing measures.

Symptom screening consists in using a questionnaire to ask travellers about symptoms (usually fever, coughing and breathing difficulties), and to declare they have not been affected by the virus, they are not in quarantine and they have not been in contact with a person known to be positive with COVID-19 in past days. The questionnaire is a self-assessment that requires travellers to answer honestly, however the measure can provide a effective deterrent to travellers in doubt of being symptom-free. Symptom screening can be complemented with additional travel information for investigation purposes, if allowed and required by local authorities.

Thales SafeLand will offer a simple check list app to be used by passengers or compiled by dedicated staff on a mobile app to capture the information and to transfer data to a central system that computes appropriate reports and KPIs. The system, based on preconfigured data, will also give indications in real time (alerts/alarms) to passengers or staff to treat potential cases outside of the standard expected passenger flow and alert emergency services.

Together with airport operators and/or authorities, Thales will design the required data analysis to provide useful reports for travel and investigation.

How it works

A mobile app, integrated with the APOC platform to track and collect information to allow risk assessment, and data collection and analysis, together with alert management and emergency response activation in case of suspect cases.

Deployment

- Hybrid, on site, on cloud
- Quick deployment (1 month)
- Native integration with other Thales AiRISE products/modules

5.3 Risk-based Planning – ShareView RiskMeter

The APOC will now also become the centre of the health crisis management for a period of time. In order to plan operations according to the situation, new KPIs will be necessary to highlight terminal conditions, optimal resource allocation, sanitary procedures (sanitization, swab, investigation) status, and the risk status of a single flight (according to open data integration). Specific flight information will also be integrated from airline applications that will inform airports about public health emergencies on board to allow appropriate ground management.

The ShareView RiskMeter will allow airports to achieve:

- Risk-based resource planning
- KPI-based procedure management
- Measurable criteria and KPIs for external communication in order to reassure trust
- Effective approach to sanitary procedures to maximize use of scarce and precious resources
- Over-compliancy with A-CDM procedures to manage the complexity of new turn-round processes

How it works

ShareView is an APOC tool and a C2 for airports. The principle behind it is to use this platform to ensure collaboration between all the appropriate stakeholders integrating the right information at the right time. ShareView is by nature able to integrate and manage large amounts of data to predict, monitor and manage multiple KPIs. Based on big data infrastructure and machine learning capabilities, the platform is able to add new information and new KPIs for airports to process.

To manage the health emergency and the post-crisis period, Thales can propose the following KPIs:

- Passengers occupancy in critical areas
- Turn-round information (due to additional complexity in boarding/deboarding)
- Temperature check KPIs
- Swab management KPIs
- Contact tracing KPIs
- Risk-based analytics, based on open data integration about current sanitary conditions in different countries in order to handle resource planning accordingly
- Staff health and safety KPIs

These KPIs will help better plan resources and better manage the complexity of rotations that for instance will be moved from airside to landside operations for a time.

Deployment

— Hybrid, on site, on cloud
— Quick deployment (3 months)
— Integration needed with airport systems
— Native integration with other Thales AiRISE products/modules

5.4 Health Check Management – BIoT Biomedical Internet of Things

Symptom screening, disinfection management and the automation of several different devices related to sanitization rely on a multi-dimensional approach to automation consisting in removing human interaction as much as possible to conduct duties. The fast detection of critical information such as empty sanitizer dispensers or degraded conditions in toilets, the integration of robots to help passengers find their way or digital signage capabilities, the integration of swab management and screening practices will all reduce the risk for staff and passengers, and, as a result, will improve the perception of a clean and safe airport.

Passengers naturally need guidance and this is especially true during times of crisis. Contextual guidance provided thanks to IoT capabilities and limiting human interactions will contribute to creating a safe airport for passengers in the current climate.

Thales ShareView BIoT will offer a platform in which is easy to integrate every sensor as well as every equipment of the airport to ensure integration of processes.

How it works

An integrated platform offering IoT capabilities with incident management and situational awareness able to integrate several different sensors and subsystems, including their positioning on maps, status and sensing information, allowing remote operators to detect anomalies and command reactive and proactive actions to be driven by field operators.

Deployment

— Hybrid, on site, on cloud
— Native integration with other Thales AiRISE products/modules

6.
Why Thales

> At a time when the aviation industry faces serious challenges, it is essential that airports and all the industry stakeholders that people rely on to travel, are trusted. That's why we at Thales leverage our experience in the air mobility industry and our leadership in biometry to turn leading-edge technologies into solutions that are both imaginative and resilient, human-centred and sustainable. So the airports we serve around the world, can navigate uncertainty with confidence and new frontiers with optimism. And together, we harness the extraordinary power of technology to build a future we can all trust.

6.1 End-to-End Understanding of Operators and Passengers Needs

Thales proudly serves the three main market segments of the air transport value chain: airport authorities, airlines and Air Navigation Service Providers (ANSPs). Providing safety, security and mission-critical applications and solutions is a unique asset in the worldwide industrial landscape. Thales can offer its customers solutions fit for purpose for their specific needs, while at the same time understanding just how important collaboration is between all stakeholders.

In a world that is increasingly fast moving and changing, we are witnessing more and more aerotropolis emerge. As an actor in both aerospace and ground mobility, and flight entertainment, Thales has a unique offer to meet evolving market needs.

At Thales, we manage a passenger experience that is hinged on safety and security from home to destination, thanks to an efficient airport terminal and a safe flight.

6.2 Worldwide Footprint, Strong Local Presence

Thales has a worldwide footprint and we bring the value of different cultures, needs, regulations and stakeholders to our products, solutions and services while maintaining a strong local presence.

Our customers benefit from the presence of local engineering teams that understand their specific needs, provide short reaction times essential to effective post-delivery support and create long-term relationships to meet the life cycle requirements of mission-critical solutions. At the same time, our customers benefit from a solid worldwide installed base that guarantees the long term commitment of Thales in continually improving its solutions based on a multiyear product roadmap shared with our customers.

6.3 Digital Transformation in a Mission and Safety Critical Environment

Thales's strategy is focused on the technological revolution that airports, airlines and ANSPs are experiencing today. We combine our expertise in the four main technologies of the digital revolution: big data, cyber security, connectivity and artificial intelligence, and our world-leading expertise in biometry with our unique understanding of the needs and requirements for mission and safety critical solutions. This asset makes Thales a digital transformation partner for our customers, ensuring the injection of powerful new technologies while guaranteeing business continuity.

6.4 Seamless Integration: From Expertise to an Integration Platform

Thales has been acting as Master System Integrator in the airport market since several years, putting operational readiness of very complex technological solutions at the heart of our mission. Thales's role is to guarantee that the solution provided is a "system of systems" and fully compliant with the operational needs.

This expertise is the foundation of continuously improving practices, processes that guarantee the definition of a proper integration strategy, and the AiRISE suite, a software solution that integrates information provided from several systems into a comprehensive airport model. The integration ensures modularity, and a clear and simple integration pattern.

THALES