Good afternoon. Thank you for providing the opportunity to present NEXTT, New Experience Travel Technologies, an initiative launched in 2017 and steadily gaining popularity.

The NEXTT Vision looks at the transformation of the complete ground journey for all the elements that currently move through the airport – the passenger, the baggage, cargo and the aircraft. It considers how advanced processing technology such as tracking and identification, robotics and automation, can improve safety, security and the customer experience. It also looks at how data can better be used through predictive modelling and artificial intelligence for real time decision making and improved efficiency.
IATA forecast for passenger demand predicts that there will be over 8.2 billion passengers per annum by 2037, which is nearly 100% more than travelling today. Naturally, we wish to ensure that all those who need and wish to travel can do so.

Similarly, the cargo industry needs to prepare to support growth expectations: It is anticipated that by 2037, there will be 70% more freighters flying, which is over 3000 cargo aircraft.

Connecting cities directly also cuts the cost of air transport by saving time for shippers and travelers. This plus cheaper fares and a strong economy has led us to exceed 4 billion pax in 2018 for the first time. Parameters affecting long term forecast: economic growth, population growth and cost indicator.

This scale of growth brings into sharp focus the need for systems and processes that are up to the task of tomorrow's facilitation, security and aircraft turnaround challenges. All stakeholders in the value chain, in every area of airport operations, will have to become more responsive and efficient.

The challenge for airports, airlines and governments is to manage performance and
growth, contain costs, make better use of resources and find efficiencies, all while improving the passenger experience and maintaining safety and security.

- The rapid emergence of new technologies can lead to a new way of looking at airport capacity challenges. Digital transformation is not only about technology but also about business transformation in a digital world. It is both the implementation of new technologies as well as the integration of existing technologies, processes and services to deliver a better experience to all stakeholders.

- So this is why we have created a vision for the air transport industry. NEXTT pulls together all of the work that’s being done in our security, airport operations, passenger and cargo facilitation teams, on biometrics, on autonomous vehicles and on digital transformation. It ensures that we have a common direction, and all projects benefit to maximise interoperability with others.
It’s not just a question of ensuring that all those who need and wish to travel can do so – at the core of the passenger vision is creating a seamless end to end journey that exceeds passenger expectations by providing personalization and control. Of course we need to provide this while we continually improve security and process efficiency.

Inherent in the passenger vision is greater integration between the commercial aspects i.e. the placing of an order and the operational processes e.g. verification of identity and real-time passenger communications.

In offering passengers more choice and control of their journey in a dynamic manner, we must have the means to account not just that a service was requested but deliver it and track that this happened. This blurs the lines between operational and commercial data.

And to exploit the full potential of our projects such as One ID, Travel Communications, NDC and One Order, we recognize the need to ensure commonality in the nomenclature and the actual data that is relied on for both an operational and commercial purpose. That is the purpose of the Airline Industry Data Model (AIDM) project.
For baggage, similar principles apply. Linked to a passenger’s identity, baggage needs its own tracked identity, so that it can collected and correctly make it to the final destination as you ordered, without you having to carry it.

We are keeping in mind that solutions developed for passenger identity may be transferable and useful for baggage identity. So your bag could have a kind of ‘biometric’ identity too. Passengers will be reassured about where their belongings are. This will have a profound impact on passenger behavior and the uptake of emerging baggage service offerings such as city drop off, home collection and delivery.

Cross-industry baggage tracking has already been agreed on by airlines. Every bag will be tracked to reduce mishandled luggage and increase efficiency in baggage operations.

So then you may start to wonder – what makes baggage, baggage rather than cargo?
Incorporating all aspects that impact airport infrastructure into our NEXTT vision, we are considering the similarities and differences across the areas of operation. There are many similarities between our cargo, passenger and baggage projects; moving cargo requires identity management for each shipment with real-time information smartly shared across the supply chain so it can be monitored, move faster and more easily through airport processes.

The ultimate vision for ONE Record is an end-to-end digital logistics and transport supply chain where data is easily and transparently exchanged in a digital ecosystem of air cargo stakeholders, communities and data platforms.

Defining the vision for cargo alongside our passenger vision ensures that infrastructure requirements are interoperable, where they need to be.

Cargo facility of the future project will define what the modern warehouse facility will look like in future, and also how it will be used, while Interactive Cargo initiative will 'make cargo talk': Intelligent systems will self-monitor, send real-time alerts and respond to changes in handling conditions.
- And perhaps as cargo processing times decrease and baggage is free to travel separately from you, we may find more of our baggage following processes that are akin to cargo handling rather than moving through existing systems within passenger terminals
Convergence of passenger, baggage and cargo operations occurs at the aircraft. We seek to synchronize ground handling operations with the aircraft’s needs. This implies shared information from all operational data from all operational areas. Our Airline Industry Data Model (AIDM) and open API projects like Travel Communications build a common basis for this.

One aspect that the holistic perspective of NEXTT has cast a spotlight on is the great developments at a number of airports to enhance their operational planning. This typically involves removing the distinction between forecasting and on the day operational plans. The forecast just becomes the plan as predicted data is updated with actual data. This means the range of information included in a forecast is expanding. The systems used include a level of artificial intelligence which will improve and increase in time. Solutions at the moment are demonstrating a benefit but are bespoke. For global scalability, airlines will require some commonality in how they feed input into these planning and operational tools.

IATA plays a key role to guide global rollout of the Airport Collaborative Decision Making (A-CDM), a program of cultural change in managing the operations of an airport and the communication of operational data with airlines, and NEXTT vision is
helping the industry to move to the next level of the A-CDM where any elements that may affect an efficient turn around process and improve flight predictability is taken into account, either is cargo, baggage, ULD or passenger. We will see later on the use case proposal
Across these visions for the elements moving through the airport are some common emerging themes of:

- **Off – airport activities**
  - Both digitally and physically to reduce infrastructure demands at airports

- **Advanced processing**
  - Using the automation, robotics, AI and the most appropriate equipment and processes at the airport improve all operations

- **Interactive decision making**
  - Gather the right information and sharing it appropriately so operational decisions maximize the use of infrastructure

It is important to note that we are not considering these themes and every concept to be applied as a one-size fit for all airports – decisions will need to be made by airports based on their local circumstances and complexity.
The NEXTT team is working with many stakeholders across industry to understand how they are transforming their business. We are asking all stakeholders to help us validate our vision, and also give us new ideas. We expect the vision to evolve and change as we learn in the coming years.

Through a series of webinars, design thinking bootcamps, workshop events and social media, we are gathering ideas and sparking conversation.

And we are also working with our existing project teams to make sure that we are all aligned.
Progress

- NEXTT concepts are being trialed at our partner airports (BLR, DXB, LHR, AMS, SZX) and others
- Airlines and airports are using NEXTT to inform their development plans
- NEXTT has been presented to the ICAO Council as industry’s vision for the future, including the support needed from ICAO and States
Implementation of NEXTT clearly creates an opportunity for a step-change in operational performance, and systemic optimisation is therefore likely to be the main economic differentiator for the global aviation sector.

However, NEXTT will also create a disruptive ‘technology’ economy that may lead to the evolution of new business models and aviation-sector companies.

Without a central, coordinated vision, the benefits detailed here for all stakeholders will not be realised at scale.

The investigation has highlighted that delivery of coordinated technology systems at a global scale will unlock benefit significantly in excess of an isolated approach.
NEXTT Partners
- NEXTT is a forward-looking initiative, focused on new technology and we therefore seek to reflect this in the methods we use to communicate our vision.

- A creative, engaging and interactive experience using **Virtual Reality (VR)** has been produced to communicate the NEXTT vision and to encourage industry stakeholders to further develop and invest in the concepts such that our visions are developed and implemented.

- We encourage you to experience it.