



# SMART AIRPORTS

Tata Communications MOVE™ - Private Network

## Industry Overview

Today, airports are addressing complex challenges which have not only affected the quality of service but also contributed to unnecessary operational delays. The covid-19 pandemic has deeply impacted travel industry leading to high-cost pressure and low resource utilization. Digital technologies such as location tracking, predictive maintenance, video surveillance etc. provide an opportunity to lower costs and increase revenue by automating airport repair work, security, passenger processing and baggage management. This trend is called Airport 4.0.

Airport 4.0 is completely dependent on 5G enabled seamless connectivity to lower operational costs and provide a flawless customer experience. Tata Communications Smart airport solution using private 5G networks helps to develop innovative business

## Aviation Industry - Challenges

- **Safety and security** - Airports have a lot to deal with, when it comes to security. From facing the constant threat of terrorism & cyber attacks, to enforcing strict rules and regulations, airport security personnel operate in a fast-paced environment that offers no room for mistakes.
- **Congestion** - It is another area where both airport and airspace are affected leading to high fuel expenditure. Additionally, the new norms on social distancing post pandemic are further burgeoning the congestion.
- **On-time performance** - Having airlines grounded as little as possible by streamlining ground operations and predictive aircraft maintenance is one of the biggest challenges airport authorities face.
- **Digital ecosystem** - There is lack of integration of the huge amount of data for internal operational decision making as well as for monetisation of data across horizontal value chain.

## Tata Communications MOVE™ - Private Network

An easy-to-manage, enterprise wireless connectivity solution. It delivers a robust and reliable private wireless network, with an associated digital ecosystem enablement platform to help you to achieve your digital transformation vision

## Value Proposition

- **Automation and orchestration platform** to enable industrial applications
- **Unified view of operations** across global locations
- **Industry vertical knowledge** solving sector specific challenges and needs
- **Collaboration centre** with 5G testbed for use case testing and evaluation
- **Multi-layer security** to protect device, network, and applications
- **Comprehensive service suite** comprising network planning, deployment & management services

## Smart Airports Use Cases

USE CASE	DESCRIPTION	BENEFITS
Video Analytics & Surveillance	AI-assisted computer vision cameras will continually scan all airport areas to predict different scenarios like: <ul style="list-style-type: none"> <li>Identify a passenger who is late for boarding &amp; guide him through terminal</li> <li>Predict capacity issues for hand luggage &amp; enable staff to act accordingly</li> </ul>	<ul style="list-style-type: none"> <li>Operational efficiency</li> <li>On time performance</li> <li>Low operational costs</li> <li>Compliance</li> </ul>
Facial Recognition for Identity verification	To verify a person's features & comparing these images to a digital image stored in a database for verification	<ul style="list-style-type: none"> <li>Improved non-aeronautical revenue</li> <li>Automatic Boarding</li> <li>Reduced queue &amp; congestion at respective entry points</li> </ul>
Smart Parking	Parking is an important revenue stream for airports. Improved customer parking experience while making airport parking safer, easier to manage, and more profitable	<ul style="list-style-type: none"> <li>Reduced human resource cost</li> <li>Enhanced user experience &amp; improved safety</li> <li>Optimised parking</li> </ul>
Predictive maintenance with condition monitoring	Condition monitoring for Airport assets to detect abnormalities and predict when an asset needs maintenance	<ul style="list-style-type: none"> <li>Detect potential faults &amp; RCA</li> <li>Real time monitoring</li> <li>Just-in-time maintenance</li> <li>Optimal utilisation of technicians</li> </ul>
Airport navigation service	AGVs based improvement in transportation flows leading to higher productivity, thereby reducing operational delay	<ul style="list-style-type: none"> <li>Enhanced mobility</li> <li>Inspection of markings, signs, lighting &amp; pavement</li> </ul>
Virtual training for emergency response	VR based transition from observation to immersion. Visualise and interact with tough situations	<ul style="list-style-type: none"> <li>Unconstrained access to remote parts</li> <li>Reduced effort in clearing area</li> <li>Sustainable training with no risk to property and people</li> </ul>
Digital Engineering with Augmented Reality	Control the addition of value at every stage of the asset lifecycle	<ul style="list-style-type: none"> <li>Capital cost efficiencies</li> <li>Collaborative working with enhanced accuracy &amp; intelligent decision making</li> </ul>
Asset tracking	Automated asset tracking and monitoring with improved efficiency of an airline operator	<ul style="list-style-type: none"> <li>Real time location tracking</li> <li>24*7 visibility of assets</li> <li>Optimal utilisation of resources</li> </ul>

## Way forward

With rapid increase of mass consumerism and e-commerce market, airport industry has to expedite their steps to digital transformation. In today's era, advanced digital capability is not only a competitive advantage, but a necessity. **Tata Communications Smart Airports** solution provides cutting-edge digital transformation solution specifically tailored as per airport operational requirements.

Tata Communications also leverages its vast experience as a global network provider to offer unified view of operations for all network requirements for airports.

To collaborate with us or to know more about smart airports solution and POCs, please email us at: [5Gnetwork@tatacommunications.com](mailto:5Gnetwork@tatacommunications.com)