

## Monetization of 5G in the Airline industry



Airlines and airports hold opportunities for both public & private 5G networks, although telcos need to choose their roles carefully.

Major cities and other densely populated areas have always been utilized in pioneer projects for the communications industry. Airports have always been prominent hubs of activity for telecommunication and signal traffic of all kinds. Ranging from cellular to WIFI, to radar, airports, and airlines have in many cases, been ideal and sought-after testbeds for innovation as new communication protocols and technologies emerge.

Airports are uniquely suited to this and in many ways are preferred as testbeds for vetting new technology protocols because the sheer size and scope of the largest resemble cities. As an example, the Dallas Fort-Worth airport has a footprint of more than twenty-seven square miles compared to New York City's borough of Manhattan which is twenty-two square miles. And while there are 1.9 million residents in Manhattan and none living at the airport-DFW has a yearly customer volume of 31.8 million people.

Volume like that makes the networks servicing DFW more akin to a regional MNO (mobile network operator). Also similar to cities they have scores if not hundreds of tenants and companies leasing space and operating within their footprint. Not to mention thousands of employees. This is where a unique characteristic of 5G known as “**network-slicing**” will come into play. This capability may be one of the most influential vehicles that airlines and airports utilize to monetize the deployment of 5G and private 5G (P5G) networks.

## **What is 5G Network Slicing?**

Network-slicing is a configuration that allows multiple networks (virtualized and independent) to be created on top of a common physical infrastructure. This configuration has become an essential component of the overall 5G architectural landscape. Each “slice” or portion of the network can be allocated based on the specific needs of the application, use case, or customer.

What this opens up by way of monetization by airlines is the ability to operate one 5G ecosystem while offering pay-tiered levels of service, speeds, and experience based on need. This opens the door for transforming the current B2B tenant lease business model into one which is better able to craft pricing structures based on actual data usages and volumes, and not only the “prime” physical locations of a particular business or kiosk in the airport.

Network slicing also opens up the ability for airlines operating 5G networks to open up new forms of user experiences and entertainment for customers transiting and utilizing the airports and aircraft. Ericsson -one of the leaders in 5G communications showcased the potential use of multi-pay network slicing based on the Dynamic Network Slicing Selection capability, which means that slices can be invoiced to different receivers, even from the same smartphone. A simple use case could be that a user’s private calls are invoiced via one company, while business or work-related calls are billed to another.

A monetarily tiered approach to accessing segments of the 5G network will allow users to experience VR (virtual reality) applications in a whole new way while not dedicating unnecessary network resources to users not utilizing them. Ensuring that the correct amount of network capacity is dedicated to the correct end-user as opposed to a “shotgun” approach to network usage.

For airlines operating 5G networks, network slicing gives them the ability to take a portion of the spectrum, isolate it, and give the customer a guaranteed quality of service. The major telcos are currently the largest operators of 5G networks and major airlines have already formed some partnerships to provide in-flight 5G services to customers. As the use of space as a platform for 5G network connectivity (i.e., SpaceX’s Starlink) expands so will the ability for customers to achieve seamless and uninterrupted communications during all aspects of the travel experience including takeoff and landing.

While it is most likely that the majority of airlines and airports will work with major telcos and 5G providers as opposed to absorbing the cost of building out their own 5G networks they will undoubtedly take the unique network slicing characteristics into account when negotiating leases and agreements with those telcos to ensure they benefit from the scalable monetary opportunities that 5G networks will provide.