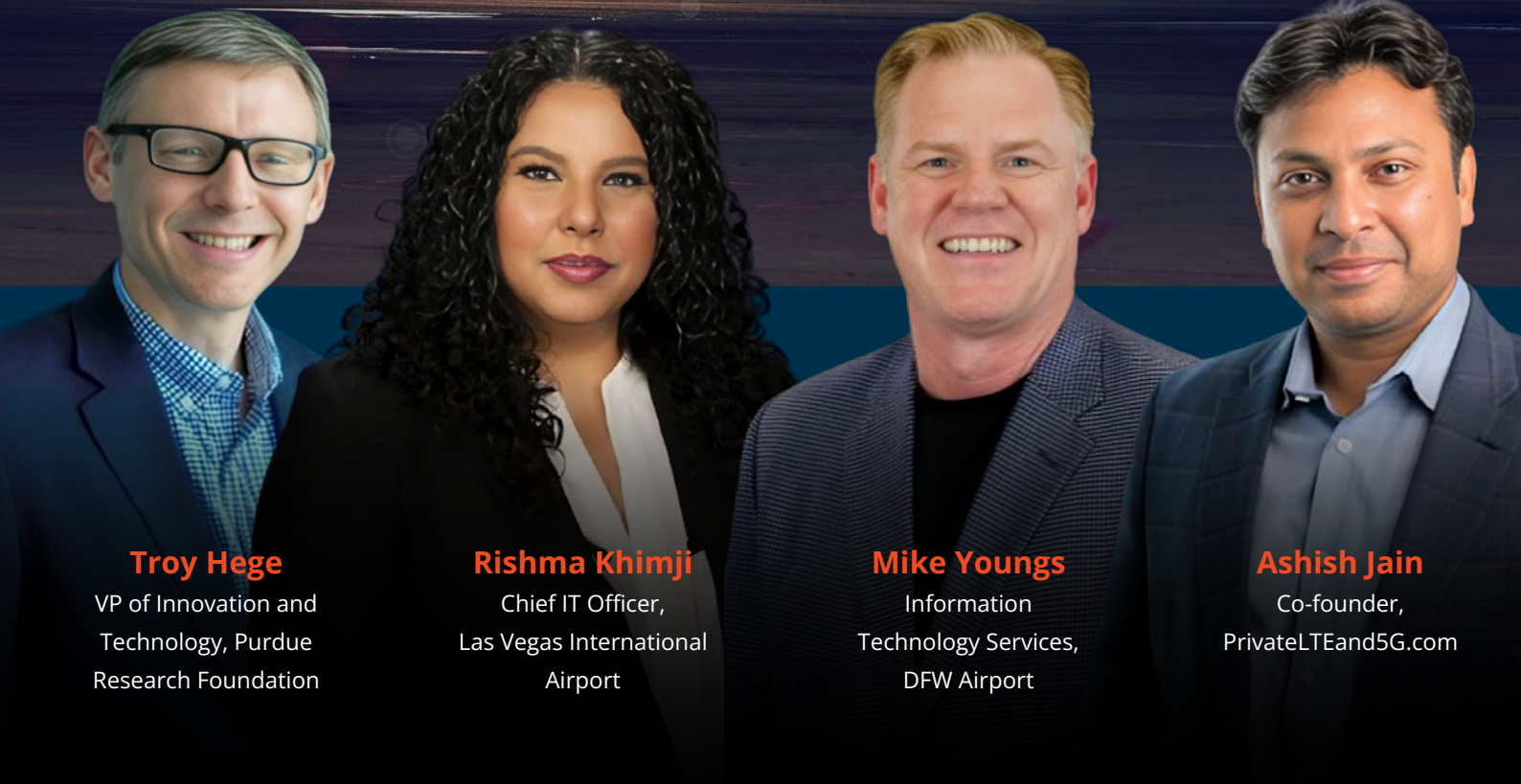


INDUSTRY SPEAKS

Taking Flight: How **Private Networks** Are Revolutionizing Airport Operations



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Introduction

Airports face immense data and connectivity needs to handle the vast numbers of passengers, bags, planes, and operations that pass through them each day. Fast, reliable, and secure networks are critical for airports to function smoothly. With everything from security checkpoints to pizza and retail shops needing broadband access inside airport boundaries, as well as the increasing number of air passengers who want always-on high-speed connections, airport operations must continue their digital transformation, and private cellular networks have become a leading way to do so.

A recent webinar hosted by PrivateLTEand5G.com, [“Connecting the Skies: How Private Networks Are Transforming Airport Operations,”](#) shared insights on the successes and trials seen so far in the industry as well as prospects for the near future for the thousands of airports worldwide. Joining the moderator of the session, Ashish Jain, the co-founder of PrivateLTEand5G.com, was Rishma Khimji, the Chief IT Officer for the Las Vegas International Airport; Troy Hedge, the Vice President of Innovation and Technology for the Purdue Research Foundation; and Mike Youngs, the Vice President of Information Technology Services at DFW Airport.

The event focused on understanding the merit of private 5G networks in airports. It addressed various airport types and dimensions, an array of use cases, prospects to profit from these networks, and actionable advice for airports mulling over implementing a private 5G system. This summary outlines the sessions’ core discussions and salient points to enlighten you on the proceedings.

A few of the key takeaways from the hour-long session included the following:



Airport digitization initiatives are ripe for private cellular networks

Airports are bustling towns, constantly humming with activity. From managing millions of passengers and complex logistics to ensuring seamless flow and unwavering security, they face a unique challenge. They demand cutting-edge technology, and the game-changer of the moment is private cellular networks. These dedicated, secure channels promise to revolutionize airport operations, not just by improving efficiency and enhancing security but by tailoring solutions to the specific needs of each airport, regardless of size or focus.

The webinar guests came from three distinctly different-sized airports.

DFW International Airport (DFW) is one of the largest in the world, with its five terminals and acreage rivaling the size of Manhattan. It has over 60,000 people who work on airport grounds, is a transition hub for many airlines, and handled over 80 million passengers last year.

The Las Vegas McCarran International Airport (LAS) is a destination airport appropriate for a city where tourism is a significant industry. Its two terminals handled 55 million passengers last year. Rishma Khimji noted, “Our airport is the first look into the city and the final look into the city, and we have to get it right because tourism is our biggest asset for the city.”

The Purdue University Airport (LAF) is the second largest in Indiana in terms of takeoffs and landings but is only now gearing up to

add commercial flights.

As airport digitization accelerates, private cellular networks are poised to play a leading role. Their ability to deliver reliable, secure, and low-latency connectivity unlocks a world of possibilities for improved operational efficiency, enhanced security, and a more seamless passenger experience. DFW’s needs for complex logistics differ from Las Vegas’ focus on passenger delight, and Purdue’s future-oriented approach demands a different set of considerations. Yet, the private network seamlessly adapts to each, unlocking a universe of personalized possibilities. With the increasing demand for connectivity and innovation in the air travel industry, airports embracing private networks are well-positioned to soar into the future.



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Connectivity today, at airports and elsewhere, is as important as electricity.”

Troy Hege, VP of Innovation and Technology, Purdue Research Foundation

Many no-brainer ROI use cases exist – investments need prioritization

No-brainer ROIs are those with a value proposition that is crystal clear, their value is readily evident, and airports have many.

Mike Youngs described how solar-powered, wireless cameras are now available. With no need to lay cables for transmission or power, these cameras have come down drastically in price and can be placed anywhere, revolutionizing airport security and operations. Imagine a panoramic vision of the apron and baggage area, with secure high-definition video feeds streamed in real-time, or perimeter protection, securing vast airport boundaries with a dense network of cameras, deterring intrusion, dramatically enhancing overall security.

Private cellular networks provide seamless connectivity everywhere. Forget patchy Wi-Fi and signal dead zones. Private networks can provide blanket coverage across critical areas like aprons and baggage areas, ensuring smooth ground operations with reliable communication for ground crews, cargo drivers, and maintenance personnel. Concrete parking garages cause connectivity frustrations for passengers and staff alike – private networks improve connectivity and even allow targeted advertising in parking areas. A network of sensors linked to the private network can detect and report unauthorized entry attempts, triggering alarms and enabling swift response.

Rishma Khimji described how the Las Vegas tram routes are dense with Wi-Fi access points and backhaul cable. A private

cellular network can power a streamlined communication system for tram operations, with fewer access points needed, ensuring efficient passenger flow and enhanced security.

Push-to-Talk (PTT) communications take on a whole new meaning with private networks. Imagine instantaneous communication between ground crews, baggage handlers, and maintenance personnel, streamlining operations and improving response times. Or security personnel patrolling the vast airport grounds, staying connected and responding quickly to any incident, enhancing overall security posture.

Correctly prioritizing and explaining no-brainer ROI models will accelerate the deployment of private mobile networks in airports.



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ROI comes through the efficiencies that we're building. It's coming through the new ways of doing business workflow changes. ROI is not just the dollar saved at the end of the day, it's also the dollar saved in the long run.”

Rishma Khimji, Chief IT Officer,
Las Vegas International Airport

The private network ROI for airports expands beyond cost savings – It's a potential new revenue source

Cost savings are the beginning of the ROI model for airports. One example came from Youngs, who noted, "My recurring charges for public cellular were going up, up and up. We're going to be able to offset that significantly." However, while the cost-saving potential of private cellular networks in airports is undeniably attractive, their impact extends far beyond reducing operational expenses.

These networks pave the way for generating entirely new revenue streams, significantly transforming the financial landscape for airports. As Jain put it, "Connectivity opens up the door for monetization."

The initial focus should be on seamless connectivity for operational efficiency and passenger satisfaction. However, this robust infrastructure opens doors for innovative revenue-generating partnerships:



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There is no shortage of use cases for private 4G and 5G network at the airport. The no-brainer use cases must be prioritized to create an immediate impact.”

Ashish Jain, Co-founder,
PrivateLTEand5G.com



Network infrastructure sharing: Airports can generate revenue by offering Network-as-a-Service to airlines and entities within their premises, ensuring dedicated, secure connectivity. This benefits both parties, enhancing airport income while providing reliable operations for stakeholders like retail stores, restaurants, airlines, and cargo handlers.



Targeted advertising: Partner with airlines and concessionaires to deliver personalized, location-based advertisements to passengers as they navigate the airport using the private network. This targeted approach offers increased effectiveness and brand engagement compared to traditional airport advertising.



Location-based services: Leverage the network's location capabilities to offer paid services like premium parking guidance, expedited security lane access, or personalized shopping recommendations based on individual preferences.



Passenger data insights: Partner with airlines and travel companies to analyze anonymized passenger data collected through the network. This valuable data can inform targeted marketing campaigns, optimize airport layout and services, and predict passenger flow for improved resource allocation.

It's crucial to maintain a controlled and secure environment. As tempting as it might be for individual airlines or concessionaires to build their own networks, a fragmented landscape leads to inefficiency and potential security risks. Airports should adopt a collaborative approach, establishing guidelines and potentially acting as the network provider or aggregator, ensuring smooth integration and maximizing revenue potential.

While cost savings can be significant, the true potential of private networks for airports lies in their ability to generate new revenue streams and create strategic partnerships. By embracing this transformative technology and adopting a collaborative approach, airports can unlock a future of financial

sustainability, enhanced passenger experiences, and a thriving hub for innovation within the air travel industry.



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We don't want the Wild, Wild West here, where every concessionaire, every airline, is trying to build out their own private wireless network. ”

Mike Youngs, Information Technology Services, DFW Airport

Airport community is on board: It's show and tell time for private 5G provider

The buzz around private 5G in airports isn't just technical jargon – it's an excitement shared by the entire airport community. From airlines and concessionaires to ground crews and passengers, the potential benefits are clear: smoother operations, enhanced security, and a more seamless travel experience. But it's time to move beyond theoretical promises and showcase the real world of private 5G.

Airlines are imagining dynamic, data-driven flight scheduling and ground handling, informed by real-time insights from connected aircraft and baggage systems. Private 5G can optimize turnaround times, minimize delays, and ensure passengers reach their destinations faster. Khimji focused on the customer experience, saying, "How do we get those passengers in and out of the airport in a seamless manner? We have to make sure we have the connectivity to push those passengers from the curb to the gate."

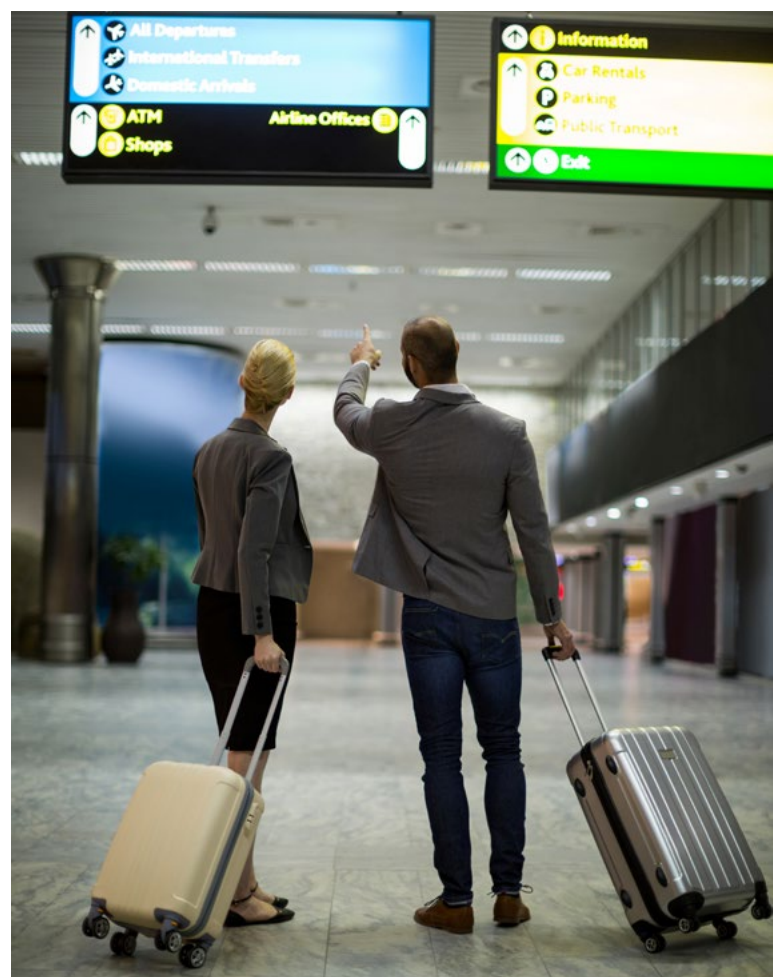
Ground crews are empowered by communications with instant push-to-talk, real-time equipment tracking, and improved situational awareness – ensuring a safer and more productive environment.

Passengers look forward to the high throughput capable by CBRS-enabled neutral host networks and even the Wi-Fi capacity that's freed up by airport operations shifting their data traffic to private 5G.

Projects at airports like DFW, LAS, and LAF are paving the way for their peers, showing them

what's possible. Witnessing tangible results, from faster baggage handling to smoother passenger flow, will convince even the most hesitant stakeholders of the capabilities of private 5G.

Collaboration is vital - airlines, concessionaires, and airport authorities must work together to ensure network infrastructure and applications are designed to benefit everyone. Sharing success stories and showcasing real-world implementations will fuel the adoption of this game-changing technology.



The panelists strongly agreed that the time is right for airports to deploy private 5G networks. Youngs phrased it poetically, “It’s like trying to grow an oasis in the desert. First, you need water, and robust connectivity is water that’s going to enable our digital oasis.” Hege added, “I think private network technology is absolutely here today. I think the technology works. I think there’s a whole ecosystem of vendors that can support it.” Hege added when asked about

advice he would give his peers, “I would just advise you not to do it alone. I think it’s absolutely doable, but it can be a little complicated and complex, and there are lots of partners and things you need to be thinking about. And so, you know, reach out to any of us or your other colleagues or peers that have already started to do some of this. There’s starting to be a lot of experience and knowledge out there that that people should be trying to leverage.”



Final Thoughts

Private networks, showcased in the [“Connecting the Skies: How Private Networks Are Transforming Airport Operations”](#) webinar, promise streamlined operations and sharper security – for every airport, big or small. But it’s not just about efficiency. These networks unlock new revenue streams through partnerships with airlines, shops, and other on-premises data users. Share network infrastructure, offer targeted advertising, or guide passengers to premium parking – the possibilities are endless. It’s time for airports to ditch the delays and embrace this revolution. Private networks aren’t just a technical marvel; they’re a chance to soar into a future of faster, smoother, and more profitable air travel. The sky’s not the limit – it’s the starting point.





About PrivateLTEand5G.com



PrivateLTEand5G is the industry's only B2B media publication for everything related to Private Cellular Networks. The publication provides network operators, telecom vendors, service providers, and enterprises with critical insights to commercialize private LTE and 5G networks. It regularly shares significant enterprise private wireless deployments around the globe.

The publication hosts the podcast "[Alynment](#)" to have engaging discussions with industry leaders on the supply as well as demand side, revealing their thoughts and plans for wireless connectivity, as well as other diverse yet related topics, including IoT security, the distributed edge, CBRS, and navigating the myriad choices available for private networks.

PrivateLTEand5G.com is a division of KAIROS Pulse, a strategic consulting company specializing in aligning technology with business value for B2B technology companies.



About PrivateWirelessPRO



PrivateWirelessPro.com is dedicated to equipping system integrators with the expertise needed to excel in the rapidly evolving field of private 5G networking. Recognizing the gap in cellular solutions knowledge among system integrators, we offer comprehensive training, thought leadership, and expert guidance to empower them to meet their clients' growing demands for private 5G deployments. Our services cover every aspect of the industry, from identifying market opportunities and selling private 5G solutions to mastering installation, deployment, and providing tailored solution recommendations, ensuring integrators are well-prepared to lead in this cutting-edge technology space.

For more resources and guidance for system integrators and private cellular networks, visit us at: [PrivateWirelessPRO.com](https://www.PrivateWirelessPRO.com)

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