



Wireless Connectivity at Airports

Building a Common Baseline for Approaches, Options, Contracts & Accountability

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PHILADELPHIA 2026

AIRPORTS COUNCIL INTERNATIONAL – NORTH AMERICA
ANNUAL CONFERENCE AND EXHIBITION
SEPTEMBER 14 – 17, 2026





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Wireless Connectivity at Airports: Building a Common Baseline for Approaches, Options, Contracts & Accountability

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Speaker

Steve Becker
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Agenda

- Welcome
- Topic 1: The Anatomy of a DAS Deal
- Topic 2: Wi-Fi Best of Class
- Topic 3: Private Wireless – Value of Enterprise Spectrum
- Topic 4: Art of the Possible
- Discussion & Wrap-Up

Ground Rules

- Interactive
- Informational
- Best Practices
- Lessons Learned
- Thought Provoking
- Takeaways

Wireless Industry Landscape

1. Public Cellular

- Telco Licensed Spectrum (4G/5G)
- Neutral Host DAS, Revenue Generation (MAG)
- Telco Funded & Controlled (No Data Sharing)
- Passenger (People) Focus
- Private Network Slice Option
- Policy; Protect Enterprise Spectrum (CBRS, NCLL)

2. Wi-Fi

- Unlicensed Spectrum
- W-Fi 6E/7 & Infrastructure (Cat 6a)
- Passenger Focus (not built for ops)
- Enterprise Funded ~ Monetization Cost Offset
- Concessions Model w/Telco Offload (PassPoint)
- Policy: Coordinate co-existence channel management

3. Private Wireless

- Licensed Spectrum (CBRS, NCLL, etc.)
- Private 4G/5G Wireless Network
- Operational & Ecosystem Partner Focus
- Enterprise Funded & Controlled
- Monetization ~ Cash Flow Positive
- Policy: Protect Enterprise Spectrum (CBRS, NCLL)

4. LoRaWAN

- Unlicensed Spectrum (USA: 915Mhz)
- Affordable Sensor/Solutions
- Digitization, Workflow Automation, Digital Twin

5. Satellite

- Licensed Spectrum (10Ghz +)
- Business Continuity & Disaster Recovery
- StarLink – Direct-2-Device Opportunity

MACRO CELLULAR/ SATELLITE

Passengers & staff across airport campus and to the curb

MOBILITY

DAS

Extends reliable public-carrier voice and data deep inside terminals

INDOORS

WI-FI

Handles high-capacity guest dwell time and supports passenger experience / ASQ.

GUEST

PWN

Dedicated spectrum and hardened performance for mission-critical airport operations.

OPS

LPWAN

Low-power, long-range connectivity for sensors, assets, metering and condition monitoring.

IoT

AVIATION



WIRELESS



The Spectrum Value Chain

- Public Cellular (DAS)
- Unlicensed (Wi-Fi)
- Enterprise Spectrum (PWN)

Our Ask

- Spectrum = Critical Infrastructure like real estate
- Spectrum Policy
- Spectrum Advocacy
- Understand the Impact to the Aviation Industry

Session Framework. *Commercial Models, Contract Terms, Technology Solutions, Monetization, Value Creation*

COMMERCIAL MODELS 	CONTRACT TERMS 	TECHNOLOGY · CRITICAL INFRASTRUCTURE 	MONETIZATION 	VALUE CREATION 
Airport-Owned & Managed	Years / Extensions	Private Networks	Revenue Share	Passenger Experience
Managed Service Provider	SLAs	Public / DAS	MAG	Network Monetization
Concessions Model	Relocation	Wi-Fi (6 vs. 6e vs. 7)	Airport Telco Services	CapEx Avoidance
Telco / Carrier-led	Renovations	Device Management	Wi-Fi Monetization	OpEx Efficiency
Exclusive or Non-Exclusive	Equipment Title	LoRaWAN	PWN Monetization	Interoperability
Hybrid / Other	Exclusivity	Satellite		
	Data Ownership			

Speakers

Imagine Wireless — trusted advisor to aviation



Norman Fekrat
Managing Partner



Danielle Aiello
Partner



Brett Lasher
Partner



Sam King
Partner



Steve Becker
Partner

Bridging telco, wireless, commercial and aviation value.

Topic 1: The Anatomy of an Airport DAS Contract

Public Cellular: Negotiating the Art of the Deal

Norman Fekrat
Brett Lasher
Danielle Aiello



What we'll cover

- 1 Commercial Models – Options & Recommendations
- 2 Contract Terms – Protect Yourself
- 3 Technology – Critical Infrastructure
- 4 Monetization – Maximizing non-aeronautical revenue
- 5 Overall Value Creation

Audience Slido Poll: DAS

Thinking about your airport's Distributed Antenna System (DAS/public cellular), which best describes your current model?

Topic 1: The Anatomy of a DAS Contract

STRATEGIC FOCUS

The agreement framework and economics behind DAS/cellular contracts, industry benchmarks, 3rd party performance validation, and hard-won lessons learned — including how adding Wi-Fi and PWN reshapes sourcing strategy.



1

**Commercial
Models**



2

Contract Terms



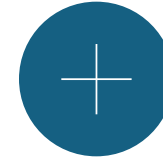
3

**Solution &
Technology**



4

Monetization



5

Lessons Learned

Wireless Options Matrix: Key Considerations & Dynamics

The matrix reflects the full set of options for airport operators and serves as a decision-making framework.

	Wireless Connectivity Technology Stack		
Operator	Telco-led	3PO-led	Airport-led
DAS			
DAS + Wi-Fi			
DAS + Wi-Fi + PWN			

Technology

Four scope decisions — each one moves capital, and each one is hard to reopen after award

ANTENNA COUNTS

By terminal, across the term

THE QUESTION

How many antennas and nodes, in which terminal, in which year?

6G COMMITMENT

Who upgrades, and who pays

THE QUESTION

When 6G arrives mid-term, is the operator obliged to upgrade the system — or does the airport fund it?

PUBLIC SAFETY

In scope, or a separate build

THE QUESTION

Does the award include public safety / ERRCS coverage?

CONDUIT, FIBER & PATHWAY

Airport-provided, or operator-built

THE QUESTION

Is the airport supplying conduit, riser, fiber, equipment rooms and power to the operator's system?

ERRCS = Emergency Responder Radio Communication System. In-building public safety coverage is typically required by local fire code (IFC 510 / NFPA 1221); scope and thresholds vary by jurisdiction.

Airport playbook: six decisions to make before you go to market

A good RFP or negotiation starts with an airport position—not a vendor solution

1

Baseline the experience

2

Choose your control posture

3

Set carrier participation requirements

4

Define measurable performance

5

Protect future connectivity

6

Model 10 to 20-year economics

Bottom line: buy performance and optionality—not just a DAS.

DAS Q&A

Topic 2: Wi-Fi Best in Class

Moving from SpeedTest Rankings to a Strategic Plan

Norman Fekrat
Danielle Aiello
Brett Lasher



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- 4 Monetization – Maximizing non-aeronautical revenue
- 5 Lesson Learned

An abstract network diagram in the bottom-left corner, featuring several circular nodes of varying sizes connected by thin white lines. Some nodes have concentric circles, suggesting a layered or multi-tiered network structure.

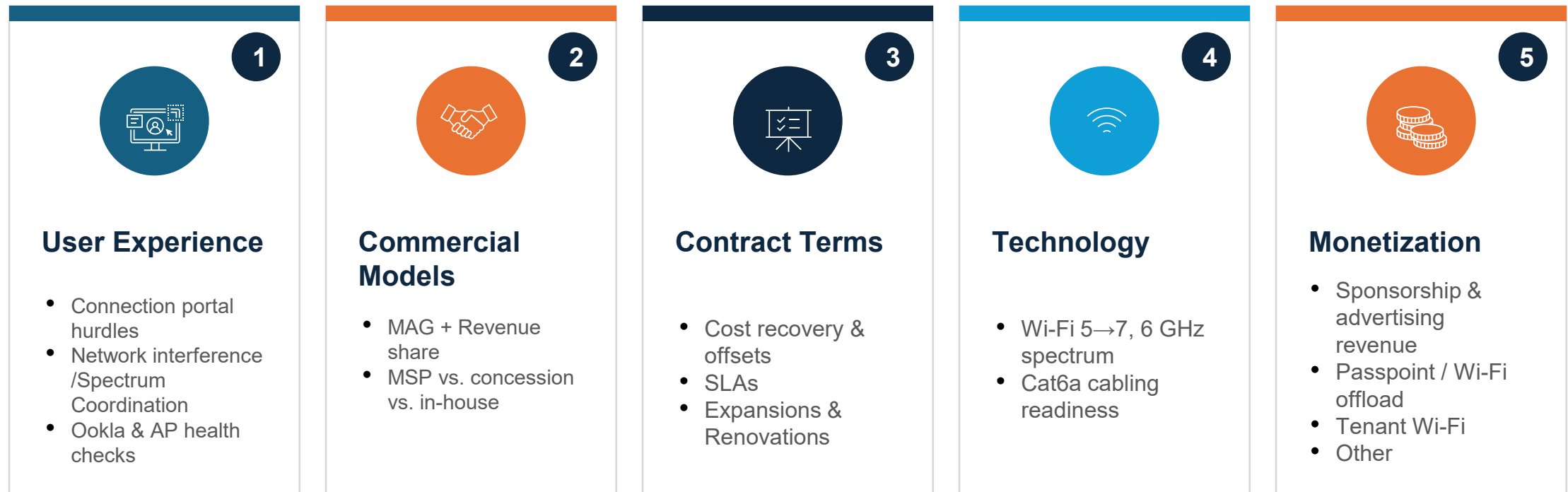
Audience Slido Poll: Wi-Fi

**Where is your airport today in its
Wi-Fi technology lifecycle?**

Topic 2: Wi-Fi Best of Class

WHAT WE'LL COVER

The commercial models, technology roadmap, and operational safeguards behind best-in-class Wi-Fi — from concession structures to Wi-Fi 7 readiness and the lessons that protect long-term performance.



Wi-Fi User Experience Models

1 | User Experience

Four access models trade sign-in friction against monetization — with delivered speed set by AP density and radio settings, not by the portal choice.

01



Click-and-In Portal

Single-tap splash page, no credentials. Lowest friction with a branded landing page; supports terms acceptance and basic analytics.

02



Sponsored Video Pre-Roll

:15–:30 second advertiser spot before session start. Monetizes free access; adds measurable friction, so cap frequency per device per day.

03



Open — No Portal

Device joins with no interstitial at all. Best possible passenger experience; no ad revenue, no capture of consent or first-party data.

04



Wi-Fi Offload (Passpoint)

Credentialed automatic connect, SIM- or profile-based. Removes sign-in entirely; monetizable via cellular carrier and roaming deals.

DELIVERED SPEED

20 Mbps – 300 Mbps

Throughput depends on AP density, channel width and per-client rate limits — not on which UX model is chosen.

Dense Wi-Fi 6E/7 designs with Cat6A and PoE++ reach the top of the range; sparse legacy estates sit near the bottom.

More Access Points Is Not the Answer

4 | Technology

It's a crowding problem, not a coverage problem.

1,200 MHz

of 6 GHz capacity sits unused

in most airport Wi-Fi estates today — and passenger devices are already able to use it.

85–89%

channel utilization at terminal peak — the network is already this crowded.

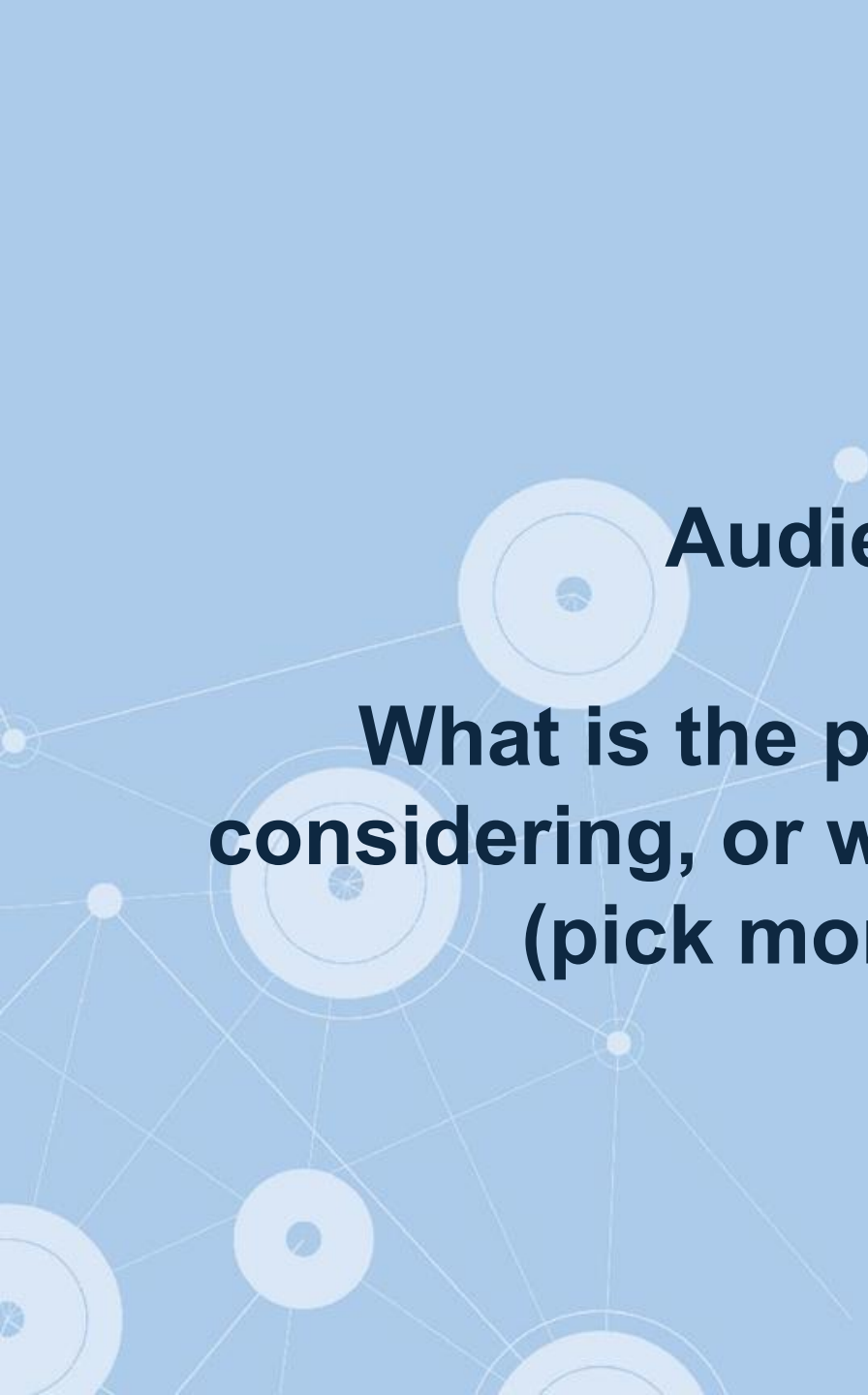
The fix isn't density — it's spectrum.

Enable 6 GHz, widen the channel plan, then register every tenant radio and make sure the cabling and power at each AP can actually support it.

It's a crowding problem, not a coverage problem.

Wi-Fi Q&A





Audience Slido Poll: PWN

**What is the primary reason your airport is considering, or would consider, private wireless?
(pick more than one if applicable)**

Topic 3: Private Wireless – Enterprise Spectrum

STRATEGIC FOCUS

- Choose the right commercial model, solution/OEM technology, with protective contract terms to realize the value



PWN Value Creation

PWN offers a unique opportunity for airports to control and monetize their network



Tech & Operational Considerations

What Technology and Operational Model considerations are critical to your PWN journey?



Spectrum Ownership

Spectrum ownership and control is a critical factor to realizing your full value creation opportunity



Monetization

Are you positioned with your spectrum and operational control to open new monetization opportunities that can offset network costs?



Industry-wide Value Creation

What is a Private Wireless Network (PWN)?

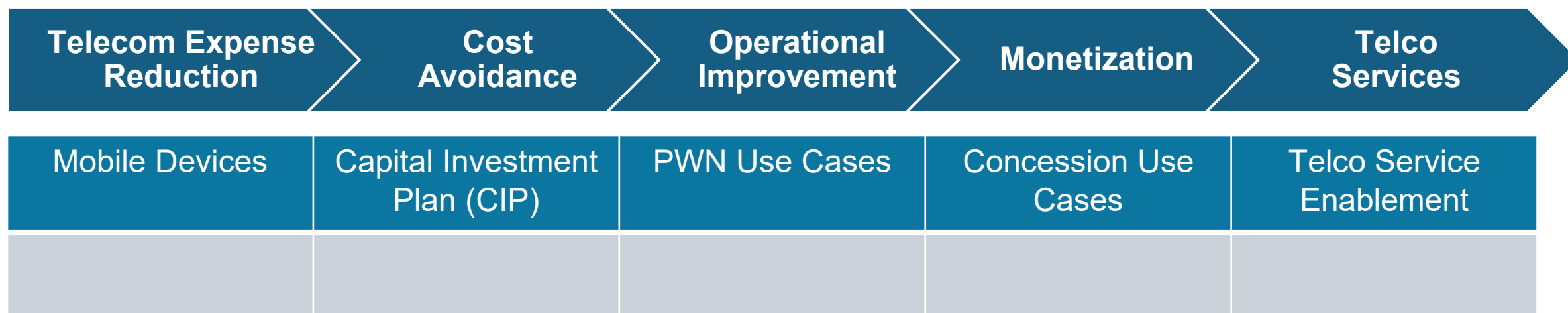
Enterprise exclusive, secure, robust, reliable cellular network



- “Purpose-built” for mission critical use cases
- “HOV” Connectivity Lane for enabling value
- Low-latency, highly responsive and secure network
- Leverages “innovation” 5G spectrum – CBRS or NCLL
- Sovereign Network - Enables Airport autonomy
- Opens new monetization opportunities to Airports
- Creates a pathway to Telco Operator independence
- Extension of enterprise LAN - (WLAN)

PWN Offers a Unique Value Creation Opportunity

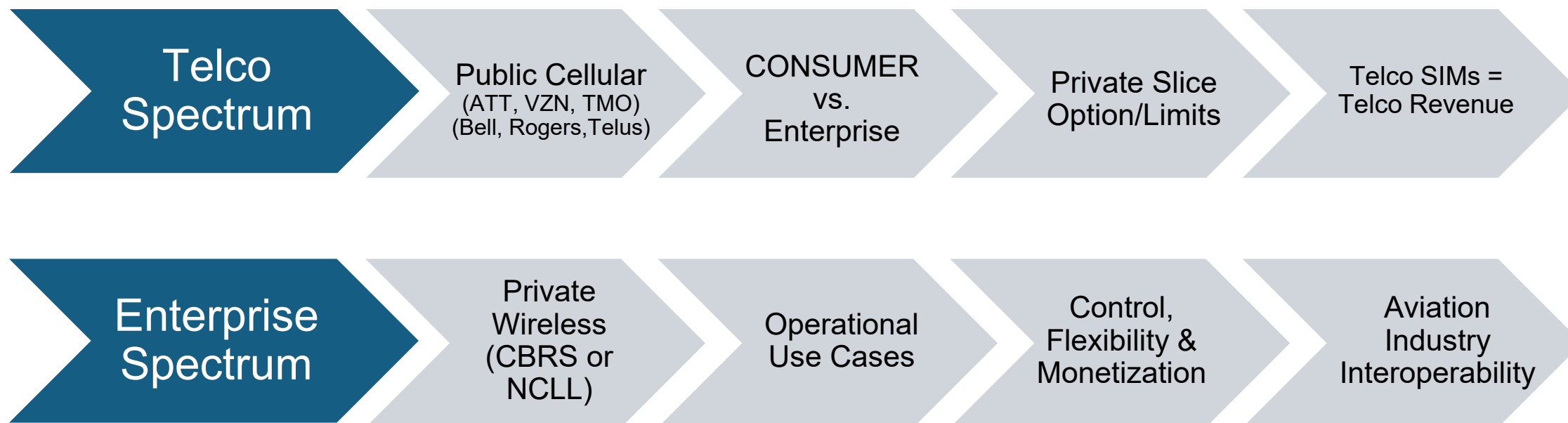
PWN Value Creation Levers



PWN Requires Technical Due Diligence

Example Decision Criteria	Pros	Cons
4G/5G Simultaneous		
Technology Stack (Single/Multi)		
Core: On-Prem vs. Cloud		

Spectrum Asset Ownership ~ Drives Value Creation Opportunities



- Enterprise Spectrum (CBRS and NCLL) were designated for innovation
- It is a critical asset for the airport with significant upside for the airport and beyond

Art of the Possible

- What are you if you have spectrum? “Airport Mobile”
- Ability to enable 3rd party devices on PWN
- Roaming has been established for years by telcos?
- Shift Value from Wireless Industry to Aviation Industry
- Create One Global Aviation Private Network

Private Wireless – Enterprise Spectrum Q&A



Unpacking the Benefits & Wrap-up

Lessons Learned: What Went Right, What Went Wrong

- **DAS:** the telco investment is a balance between # of passengers (market) and capital investment
- **Wi-Fi:** if not managed proactively, upgrading to Wi-Fi 7 access points alone will not deliver improvements
- **PWN:** it's not just a network — enterprise spectrum will change the aviation industry

Join the Movement!

CLOSING

ACI BIT PW Working Group Sign-up		
ACRP Private Wireless Report		
OnGo Alliance Membership		
Mobile World Congress 2027		

Speaking of the Future...



IMAGINE WIRELESS



barich
A Paslay Group company

Smart Airport Summit Tuesday March 2nd, 2027 2pm - 5.30pm

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MWC26

NEW WORLDS
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DO NOT, FOLLOW BLUE
LINES TO THE SELF
SUPPORT ZONE



Thank You





About Imagine Wireless

MISSION

Trusted advisor to aviation. *Bridging telco and aviation value.*



Deep wireless industry expertise, brought to aviation.

We sit on your side of the table and bridge the gap between the telco and aviation industries.

Passenger and operations experience, first.

Our primary focus, maximizing the business value opportunities for the airport.

Strategy, executed.

Strategic vision and business value from deployment of key use cases can be enabled through an interwoven partner ecosystem.

Spectrum advocacy for aviation.

Champion spectrum regulatory policy for aviation industry use of critical spectrum assets.

Strategy that can be operationalized.

CIO Agenda for PWN

A board-ready roadmap
tied to business outcomes

DAS Strategy

Coverage economics and
funding models

Connectivity Strategy

The right mix of Wi-Fi,
cellular and private 5G

PWN Interoperability

Seamless roaming across
carriers and private
networks

Spectrum Strategy

CBRS and licensed paths
mapped to use cases

PWN Use Case Enablement

From pilot to production
with ROI at each step

IoT Strategy and Deployment

Sensor-to-insight
architecture that scales

Wireless Infrastructure Optimization & Monetization

Monetize what you build

CAPABILITIES

Where Imagine Wireless engages. *Value, Connectivity, Spectrum.*

BUSINESS VALUE REALIZATION	CONNECTIVITY OPTIONS	SPECTRUM ADVOCACY
CapEx Avoidance	Private Networks	CBRS · United States
OpEx Efficiency	Public / DAS	NCLL · Canada
Telco Cost Reduction	WiFi	Ofcom · United Kingdom
Passenger Experience	Device Management	EU Bands
Network Monetization	LoRaWAN	4G / 5G / 6G
Airport Telco Services	Satellite	WiFi 6 / 7 / 8

Use cases across the airport estate. *Perimeter to Concourse.*



**Perimeter Security
Cameras**



**AI / Apron
Analytics**



Drone Detection



**Autonomous
Vehicles**



Construction Sites



**Garage & EV
Charging**



**Foreign Object
Detection (FOD)**



Digital Signage

TRACK RECORD

Trusted across North American Aviation and Telecom

AIRPORTS & AVIATION ORGANIZATIONS



SPECTRUM ADVOCACY & PARTNERSHIPS





THANK YOU