

Working with Verizon to deploy In-Building Wireless Systems at you Venue

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**We are on the cusp of an
evolution in DAS
deployments.**

Why In- Building?

**Wireless
Live style**

- **The 4th Utility?**
- **Necessity**
- **Customers**



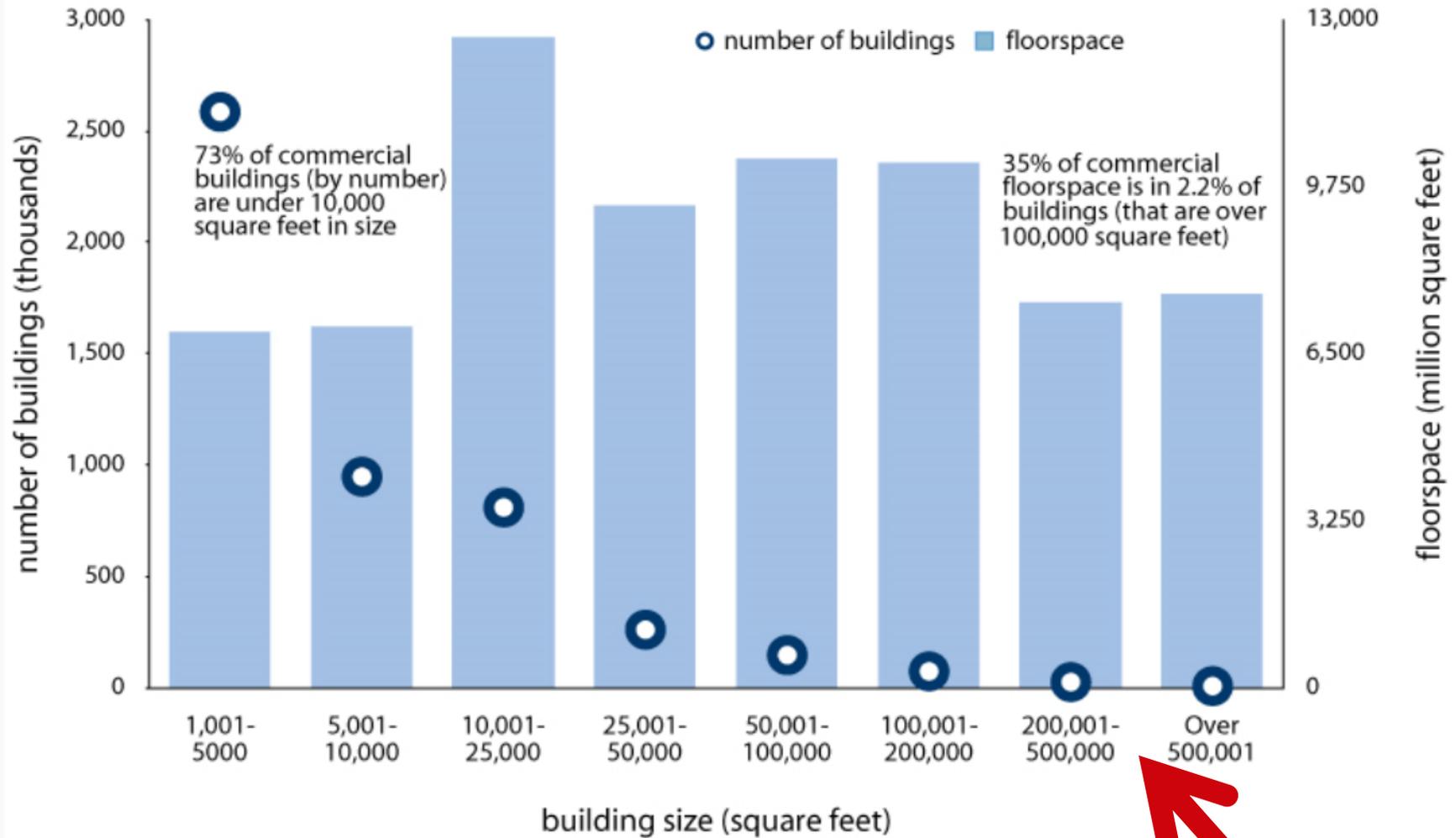
Why are we interested in In-Building?

- **Where consumers and traffic are**
 - **80% of wireless data consumed indoors ¹**
- **Best” technical solution**
 - **Spectral efficiency**
- **Commercial Building Sizes**

source: ¹ Amdocs, State of the RAN, 2015

Commercial Building Sizes

Distribution of U.S. commercial building stock by size



Rocky Mountain Institute © 2011. For more information see www.RMI.org

DAS

Current In-Building and DAS Deployment

- Large Venues (Convention Centers, Airports, Stadiums)
- Corporate Buildings
- Smaller Buildings, limited

Issues with DAS

So what's the problem?

“Traditional” DAS systems are expensive

- Hardware and install labor
- Complicated
- Slow



- Low ROI

Unsustainable

Low-Cost DAS Evolution

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Leverage existing technology

Enterprise Femto units

Enterprise-RAN Systems

- WiFi architecture, CAT5 cable based

Business Model Evolution

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Traditional:

VZW owned, VZW Managed

Future:

A mixed bag of ownership and management options

The Way Forward

- **Building Owners: changing views on wireless**
- **OEM's: develop lower cost equipment, get out of Neutral Host DAS mindset**
- **Service Installers: utilize these new products in your designs**

Thank you.