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ELEVATE THE CONNECTED EXPERIENCE

DAS

with

DASpedia In-Building Wireless Technology Seminar

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WORLD CLASS WIRELESS

FOR THE
**WORLD'S PREMIERE
PROPERTIES**

Boingo delivers
unparalleled wireless
solutions at iconic
venues serving
more than

▶ 1 ◀
BILLION
CONSUMERS
ANNUALLY

WHY DAS? PEOPLE CRAVE CONNECTIVITY

At high-traffic venues, the demand for mobile data far exceeds the capacity of cellular networks.



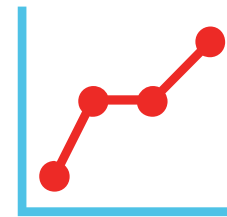
people in the
U.S.
own a
smartphone



1 in 3
millennials believes
the Internet is as
important as air, water, food,
and shelter



85%
of businesses
will support BYOD
by 2020



8x
how much mobile
network traffic will
increase by 2020

Source: Nielson, Cisco, Live Nation Entertainment 2014 LiveAnalytics U.S. Mobile Report

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FOUR STEP GUIDE

to Successful Indoor
DAS Deployments

1

Plan



2

Design



3

Build



4

Manage



STEP 1: PLAN



Understand the coverage inside the building

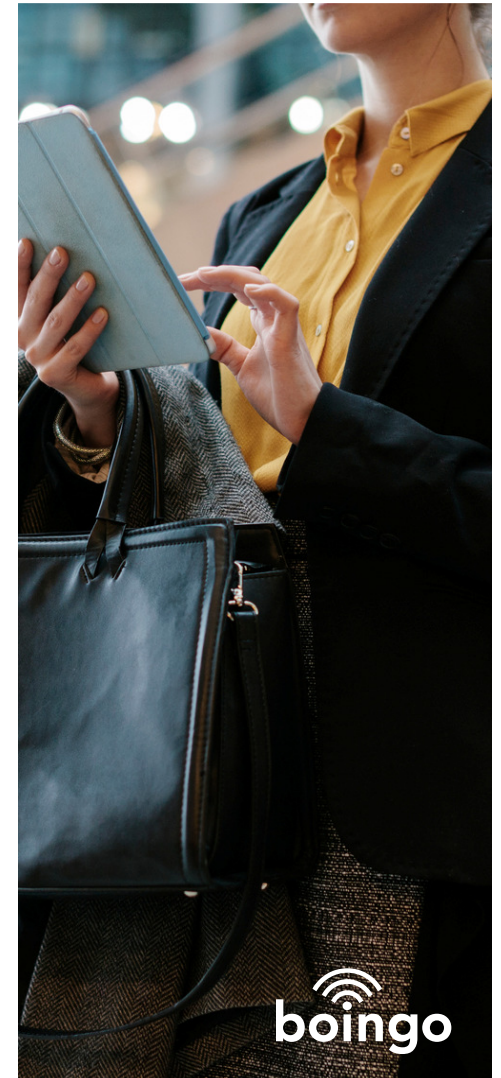


Identify coverage performance by carrier



Tap a neutral-host network operator who can:

- Review original building plans
- Analyze the infrastructure, elevations, cable runs, telecom closets and more
- Conduct a site walk
- Run RF testing
- Identify project costs
- Work with all carriers through relationships



STEP 2: DESIGN



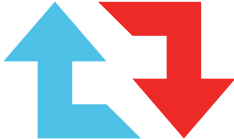
RF Testing & Design

Visually map out DAS coverage areas and lock down optimal placement for antennas, mounting hardware and accessories. Allow flexibility for network to meet data demands of the future



Construction Design

Align RF design with construction plans and create a timeline for the build and installation



Architecture Requirements

Be strategic with placement of each DAS antennae and receive buy-in from architecture and design firm



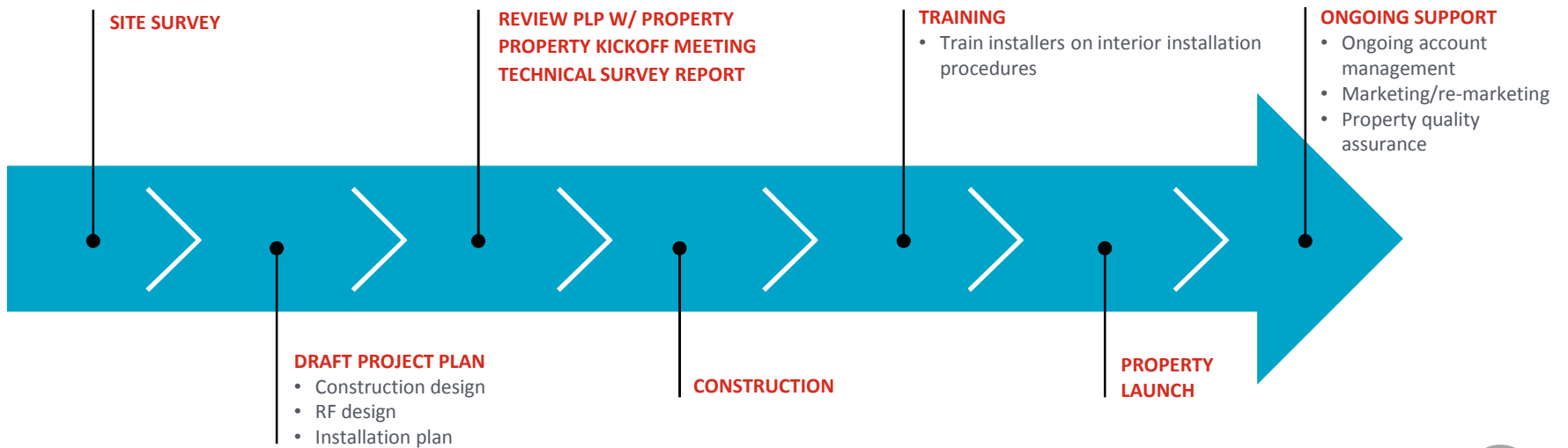
Carrier Interest

Present volume to carriers and secure participation prior to buildout

STEP 3: BUILD

Property Lifecycle Process

- Utilize systematic approach
- Implementation process repeated for each new property
- Work closely with property owners through entire lifecycle
- Example: The process for a 300 unit high-rise would range from 4 to 6 months from start to launch



STEP 4: MANAGEMENT

- ✓ **24x7x365 Network Monitoring**
Network operations center (NOC)
- ✓ **On-call Break/Fix Resources**
Maintain consistent network service level availability (SLA) standards
- ✓ **Scheduled Network Preventative Maintenance**
Regular maintenance for optimal network performance
- ✓ **Broadband Internet Access/Backhaul**
Strategic partner relationships deliver reliable, flexible and fast connectivity with economies of scale
- ✓ **Onsite Support**
Ensure your network is up and running with onsite support when needed
- ✓ **Reporting**
Delivery of recurring reports showcasing network data and analytics

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CASE STUDY:

ONE NORTH WACKER

RAISING THE BAR IN THE WINDY CITY

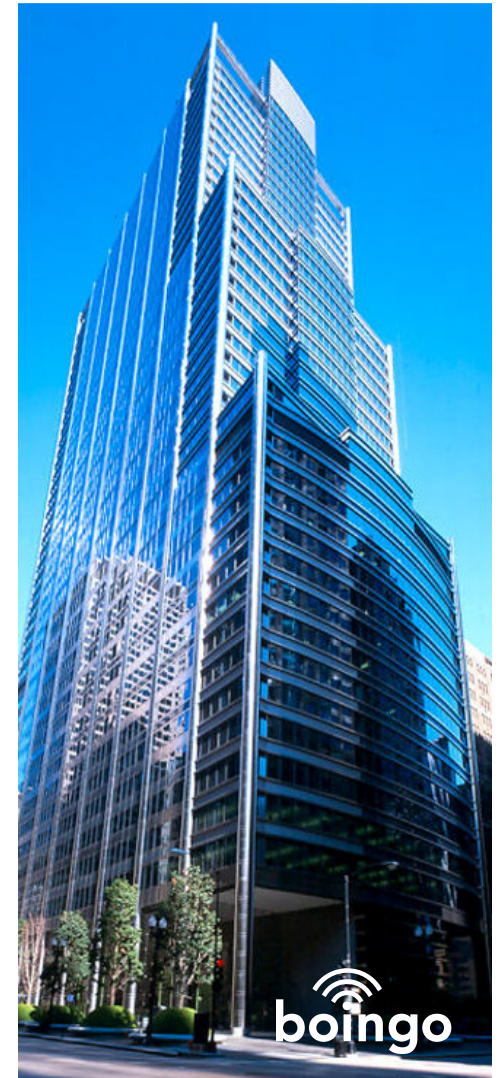
ONE NORTH WACKER

- Boingo designed, launched and manages DAS network to ensure optimal cellular performance regardless of the wireless carrier tenants and visitors use
- End-to-end management allows property to preserve valuable IT and business resources for strategic initiatives and core competencies
- Network built to scale for mobile demands of the future
- 24/7/365 support



Building Profile

- Office tower located in the heart of downtown Chicago on the West Loop submarket of the Central Business District
- 51-stories
- 1.4 million square-feet, including a 9,000 square-foot conference center
- Designed by architectural firm Goettsch Partners with stainless steel and glass exterior
- Virtually column-free floor plates





QUESTIONS





THANK YOU

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