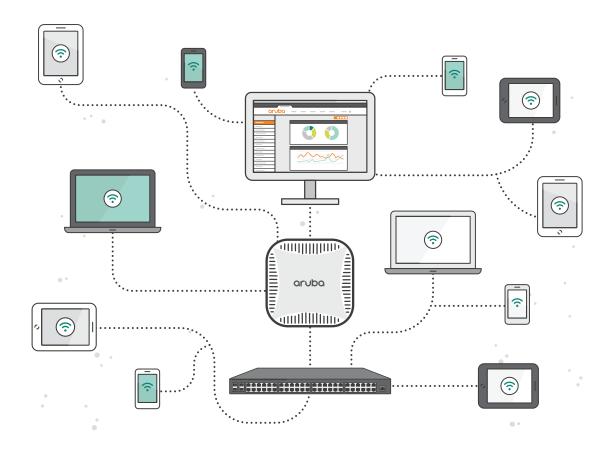# 9 STEPS TO BUILD A SMARTER NETWORK

This 9 step checklist will help you deploy a smarter, more reliable Wi-Fi network.

1. COVERAGE – WHERE DO YOU NEED WIRELESS COVERAGE?

When planning or expanding your Wi-Fi deployment consider your current coverage needs and any future coverage expansions. Identify any hard-to-cover areas that may require special treatment.

2. CAPACITY – HOW MANY USERS ACCESS THE NETWORK AND WHAT IS THEIR REQUIRED BANDWIDTH?

How many devices will access the network, what will be the client mix and what is their expected growth? Generally, people carry at least three devices – a laptop, a tablet, and a smartphone. The expected number of active devices trying to access the network will be one of the metrics to calculate the required access point (AP) density. While APs can often support upward of 200 associated devices per radio, plan on having 40 to 60 active clients per radio to support bandwidth requirements and provide higher quality end-user experiences.

3. APPLICATIONS – WHAT APPLICATIONS WILL THE WIRELESS NETWORK SUPPORT?

Identify the traffic and application types and their bandwidth requirements, as well as any specific features which may be required, such as QoS for voice or video. Cloud, streaming video or collaboration applications can strain the network. Make sure the wireless network offers application visibility and the ability to manage applications usage (prioritize, throttle bandwidth or block applications) via traffic control policies.

4. SECURITY – WHAT SECURITY DOES YOUR ORGANIZATION OR NETWORK DEMAND?

Consider solutions with integrated and automated security controls and intrusion detection to help protect business data from malware, unauthorized users and on-line threats. Also identify special requirements such as PCI for financial transactions, AES for public safety or HIPAA for healthcare that your network will need to comply with.

5. SIMPLICITY – DO YOU HAVE DEDICATED IT STAFF?

If you don't have dedicated Wi-Fi experts on staff consider solutions that offer quick, out-of-the-box deployment and automate advanced features like RF management, intrusion detection and prevention and guest management.

6. REDUNDANCY – HOW CRITICAL IS THE WIRELESS NETWORK TO YOUR OPERATIONS?

If it is mission-critical the network needs to sustain and self-heal through the failure of an individual switch, link or access point. Expect increased cost for this comfort.

7. NETWORK INTEGRATION – WHAT ARE YOUR WIRED NETWORK REQUIREMENTS?

Determine how your wireless network will connect and interoperate with the existing wired network. Depending on the network type, how will users and devices be authenticated?

Identify your switching requirements:
- Scalability: Number of ports/users and PoE+ power requirements for access points and other IP devices
- Performance: Traffic volumes, application types and data transfer speeds to determine your switch capacity
- Access Network Uplinks: Access switches terminating APs should have 10 Gbps uplinks to the core to eliminate any potential bottlenecks
- Network reliability: Do you need stacking for redundancy and/or redundant power

8. MANAGEMENT – HOW WILL THE NETWORK BE MANAGED?

Determine how you want to manage your network. Some vendors might try to lock you into a mandatory management option, but a one-size-fits-all approach can't possibly meet your needs as your business evolves. Consider network solutions that offer investment protection with flexible cloud and on-site management but also offers the ability to scale to more advanced networking options as your business grows.

9. SITE SURVEY – HOW DO YOU DETERMINE AP PLACEMENT?

A new wireless site survey conducted specifically for 802.11ac will help point out the adjustments that have to be made. For example, migrating to the new standard means transitioning to a 5 GHz network, which has less ability to penetrate walls and other building materials. A proper wireless site survey will allow you to optimize your new network to take advantage of the higher throughput and increased number of channels that 802.11ac has to offer.