



WIRELESS LAN ASSOCIATION

WLA STANDARDS COMMITTEE

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Wireless LAN Design Framework: Define

Gather project requirements and constraints

The following outline is a framework to assist in the “define” stage of creating and implementing a WLAN design. Please note that, because of the cyclical nature of this process, and considering the fact that not every project is a “greenfield” design, the WLAN professional may need to begin their process at, for example, the “diagnose” stage.

Not all items in this document will apply in every situation. The WLAN professional may need to adapt some of the items to meet the needs of their individual client, and/or the order in which select relevant tasks will be performed. However, the WLA believes that using the following framework will ensure accuracy, consistency, and efficiency, thus bringing the work of any WLAN industry professional who uses it, to a higher level.

The associated publication, which will explore and expand each of the points in this document will be published shortly.

1. Identify the Organization

Create a client profile which may include:

- 1.1. Industry vertical
- 1.2. Project personnel

2. Gather Business Requirements and Constraints

The following information should be discussed with the client:

- 2.1. Project budget
- 2.2. Project expectations (end results, future plans, expected timeline, etc.)
- 2.3. Placement restrictions and aesthetics
- 2.4. Facilities access restrictions
- 2.5. Security considerations
- 2.6. Occupational health considerations
- 2.7. Legal and environmental obligations and requirements
- 2.8. Existing naming conventions
- 2.9. Existing vendor agreements*

3. Gather Technical Requirements and Constraints

This could include some, or all, of the following topics:

RF

- 3.1. Wireless topologies
- 3.2. Wireless deployment types
 - 3.2.1. Purpose of the wireless infrastructure
 - 3.2.2. RTLS
 - 3.2.3. Voice
 - 3.2.4. Capacity / density
 - 3.2.5. Greenfield vs network modernizations
- 3.3. Devices: types, capabilities, and count
- 3.4. Target Usage, applications and loads
- 3.5. Target capacity
- 3.6. Regulatory domains covered
- 3.7. Existing vendor agreements*
- 3.8. Coverage areas and exclusions
- 3.9. Building materials
- 3.10. Challenging environmental factors
- 3.11. Use of rooms (classroom, x-ray, etc.)
- 3.12. Movement of stocks / flows of people
- 3.13. Hazardous environment
- 3.14. Access restrictions / security
- 3.15. Ceiling Heights / clearance

Network

- 3.16. Network infrastructure
- 3.17. PoE
- 3.18. VLANs
- 3.19. Addressing
- 3.20. Supporting services (DHCP, DNS, logs, Radius, etc.)
- 3.21. Security policies and requirements

4. Define an RF Specification from the Gathered Technical Information.

This may include:

- 4.1. Target primary, secondary, tertiary coverage
- 4.2. Target Signal to Noise Ratio (SNR)
- 4.3. Target coverage overlap

5. Documentation

5.1. Pre-design analysis document including:

- 5.1.1. Any customer questionnaires
- 5.1.2. Statement of Work (SOW)
- 5.1.3. Agreed-upon procedures such as:
 - Access request (security)
 - Change request

5.2. Floorplans, maps and any other files required to create the design

5.3. Create a test plan including business and technical aspects of the project. This is an ongoing exercise all the way through the end of design.