

Private Networks for Manufacturing

Design Checklist

Each private network requires a **“site-specific” solution** which will have an impact on the total cost, complexity, and performance of the network.

Here is a quick checklist what needs to be considered:

Where? What? How? Design!



1 WHERE?

Where do I need the private network, Indoor, outdoor or both?

Are there any specific restrictions or requirements within the manufacturing area?

Are there any special safety regulations?

2 WHAT?

It is important to understand the use case for the private network to design for the right wireless network solution.

This includes:

Site type (Manufacturing, Industrial, Offices...)

User equipment type and end devices like IoT, video, drones, automated guided vehicles with different receiver characteristics, which potentially requires large bandwidth and low latency.

KPIs (Key Performance Indicators) for example for the required throughput and coverage.

3 HOW?

What spectrum to use (sub6GHz, mmWave)?

Which technology (LTE,5G, WiFi6)?

Any redundancy needed?

Which vendor and equipment type, eg. Small cells, AP's.

4 DESIGN!

For an existing campus (brownfield) conduct a site survey to collect site information and measurement of the exiting network for interference analysis (iBwave Survey).

Model the private network campus in your network Design tool (iBwave Design/ iBwave Reach.)

Analysis of the required output power and antenna placement for the designed network.

Create a design documentation package for approval including Bill of Material and Cost Report.

Once installed, survey and measure private network for site acceptance and update As-built documentation (iBwave Survey).