

Troubleshooting Process Steps

Identify

Determine problem exists
Ask Questions & Collect Info
Correctly Identify Issue

Locate

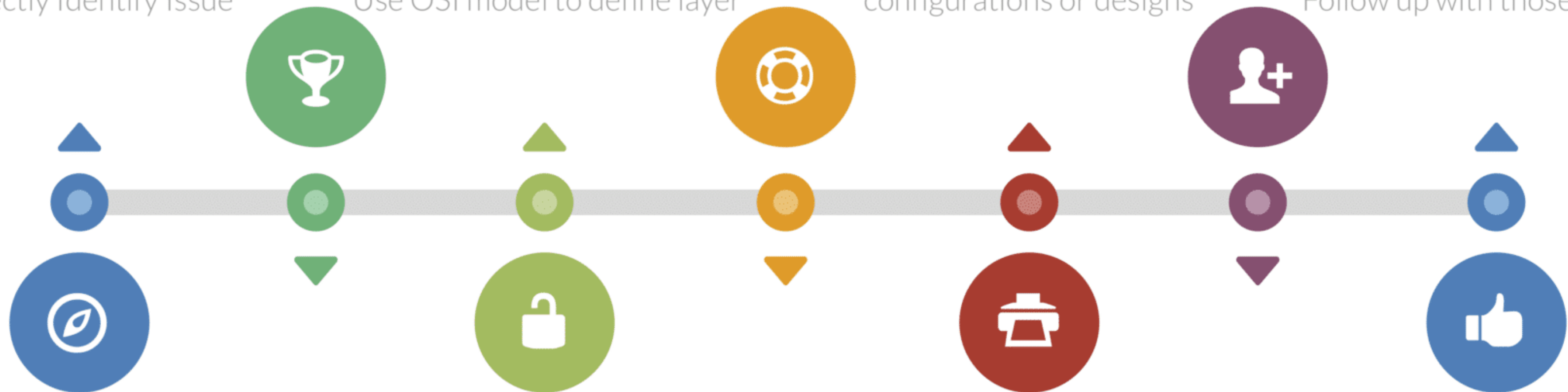
Tied to physical space
Tied to specific devices
Use OSI model to define layer

Solve

Formulate & Implement plans
May include changes to drivers,
configurations or designs

Document

Document initial issues, processes,
diagnostics & resolutions
Follow up with those involved



Re-Create

If you can't recreate the issue,
return to step one and ask
more questions

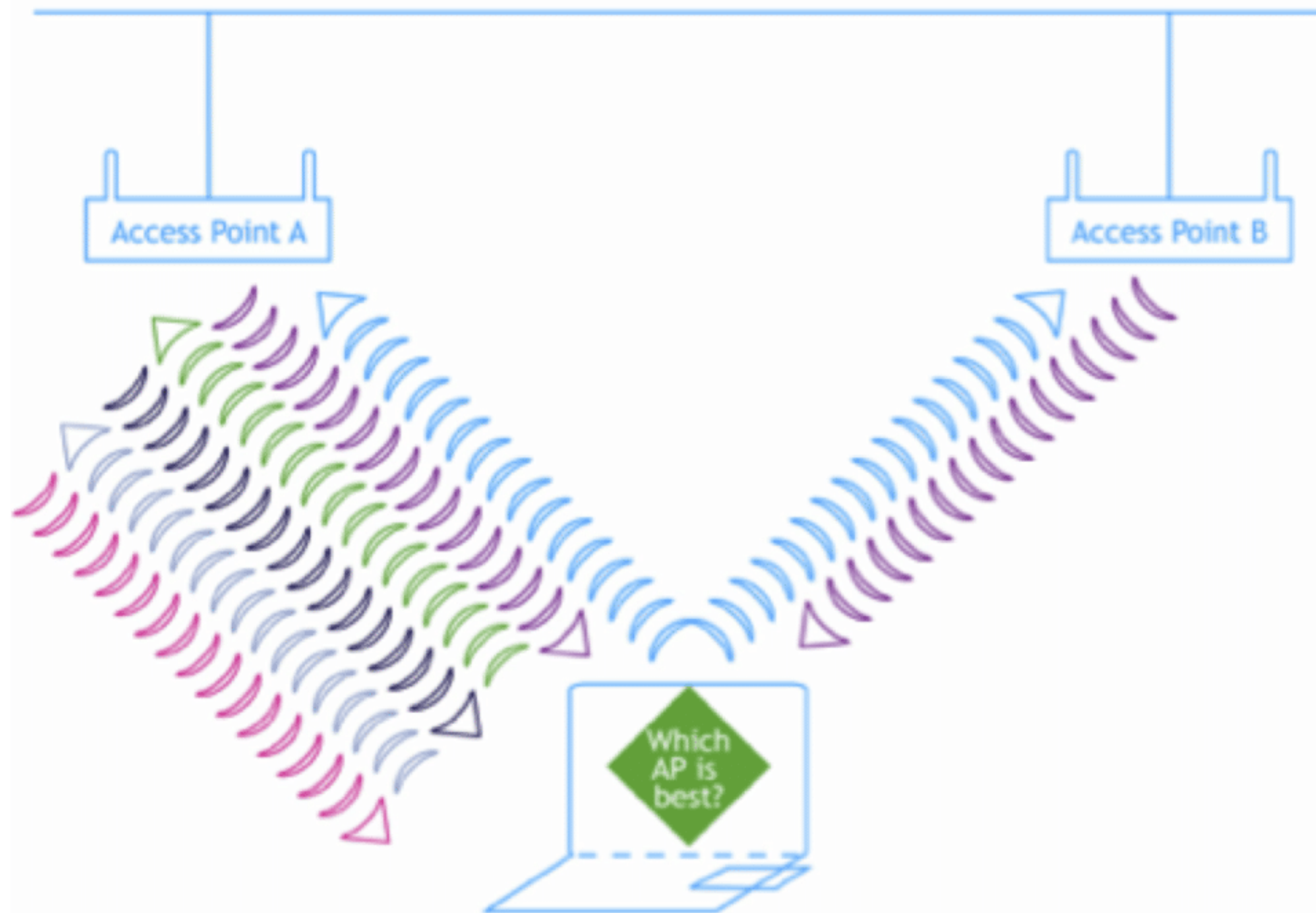
Isolate

Identify OSI Layer, Specific
devices, Specific locations,
Driver versions

Verify

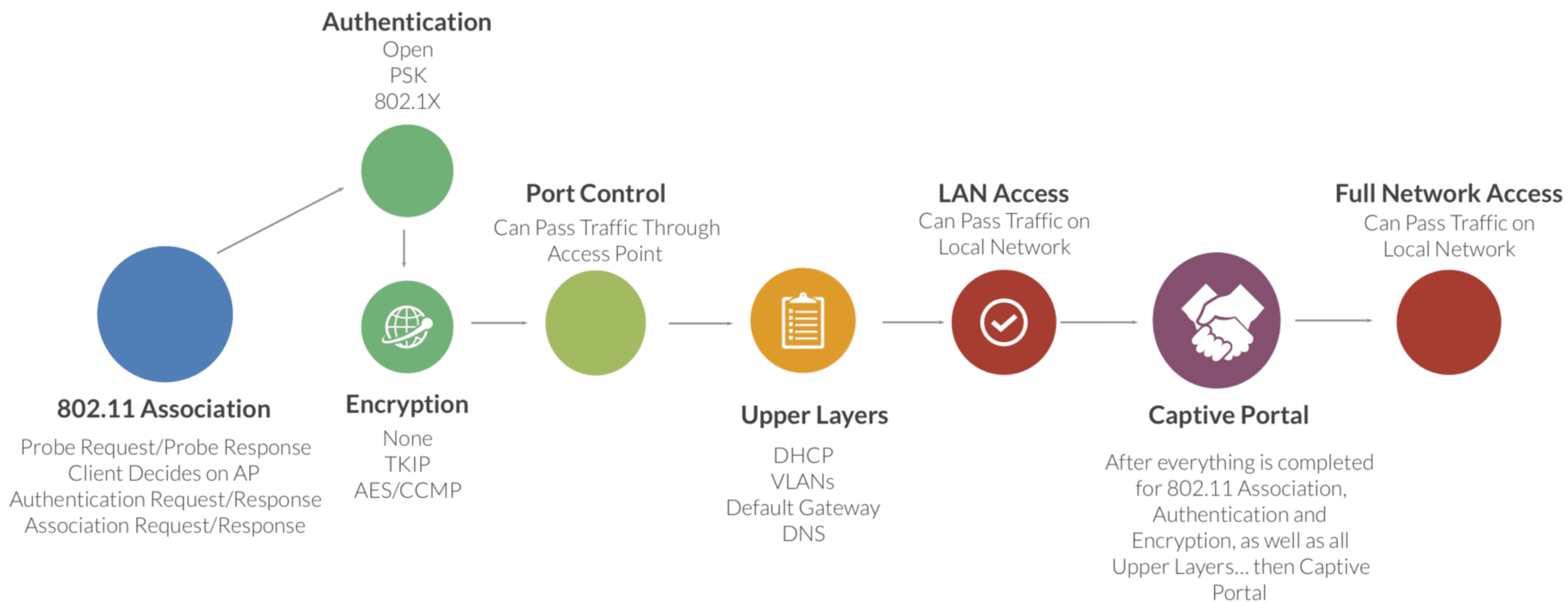
Extensive testing to confirm
and verify the solution did
indeed solve the issue at hand

"Green Diamond" Association/Roaming Algorithms



- SSID
- RSSI
- SNR
- Authentication Method
- Channel Switch Announcements
- De-Authentication Frame
- Dis-Association Frame
- Encryption Methods
- Error Ratios
- Heuristics
- Internal Lists - White/Grey/Black
- MCS/Data Rate
- Minimum Basic Rate
- Supported Data Rates
- 802.11k, 802.11r, 802.11v

Wi-Fi Client Joining WLAN



Wired or Wireless Problem?

- **IP Address**

Does target Wi-Fi Client Devices have an IP Address?

- **Ping Wi-Fi Client**

Can you Ping your Wi-Fi Client Device from the Wired Network?

- **MCS of Wi-Fi Client**

Is the MCS of Wi-Fi client showing stress
MCS 5-9 means 64-QAM or Better
MCS of <5 means difficulty over RF



- **Compare Throughputs**

Compare Wi-Fi connection data rate to Internet Speed Test

- **Check RSSI & SNR**

Both from the Client's point of view as well as from the Access Points'

- **Isolated?**

Is the issues isolated to only Wi-Fi devices or across network
Especially check network services