Connecting Your Coworking:
Cable vs. WiFi

In this ebook we will cover the basics to one of the most essential determining factors of your workspace, your network. We conducted our research in regards to finding what works best and does not work at all when it comes to connecting your space.

• **Making The Best Connection:** Whether by Wi-Fi or Cable, we have outlined the information you need to know regarding running cables through the workspace as well as installing access points throughout the facility.

• **Providing For Your Members:** We address concerns involving accessibility and ensuring security for all various types of members.

• **Optimizing Your Connection:** Furthermore, this ebook also covers how to optimize your connection for the best in performance. We review what is best for building community as well as expanding your workspace.

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Featured Industry Experts

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Chief Technology Officer

Victor Vasev is the Chief Technology Officer and is responsible for overseeing the support and development of all technology/systems that support enterprise goals. Prior to joining WUN, Victor co-founded and developed Globus IT, a successful technology firm that managed nationwide technology infrastructure deployments for major grocery chains.

Wi-Fi is Essential

Wi-Fi within your workspace is literally oxygen to the survival of your space. Of all the services you offer to members and guests, Wi-Fi is by far the most essential. Without it, you risk taking the "working" out of Coworking. Not only is poor internet an absolute deal breaker to your workspace, not offering a method for mobile and transient workers to connect that is convenient, connected, and reliable is a death sentence to your member retention.

Short for Wireless Fidelity, Wi-Fi is the norm among the generations of younger workers as well as with new technology. Take for instance that the majority of new laptops and devices don't have ethernet ports. The other advantage to Wi-Fi is that it eliminates cables, connecting devices, and those annoying and tiny "dongles" that we've lost at one point in our lives.

Wi-Fi is great for Coworking in that it eliminates the need for members to work from an assigned place. This enables more movement around the workspace, creating more interaction in its wake. Let's also not forget the convenience factor it affords operators and staff, allowing users to instantly connect without a single manual process on their end. Internet is a major deciding factor for whether members stay or leave a Coworking space, making Wi-Fi more important in the workspace than other determining factors.
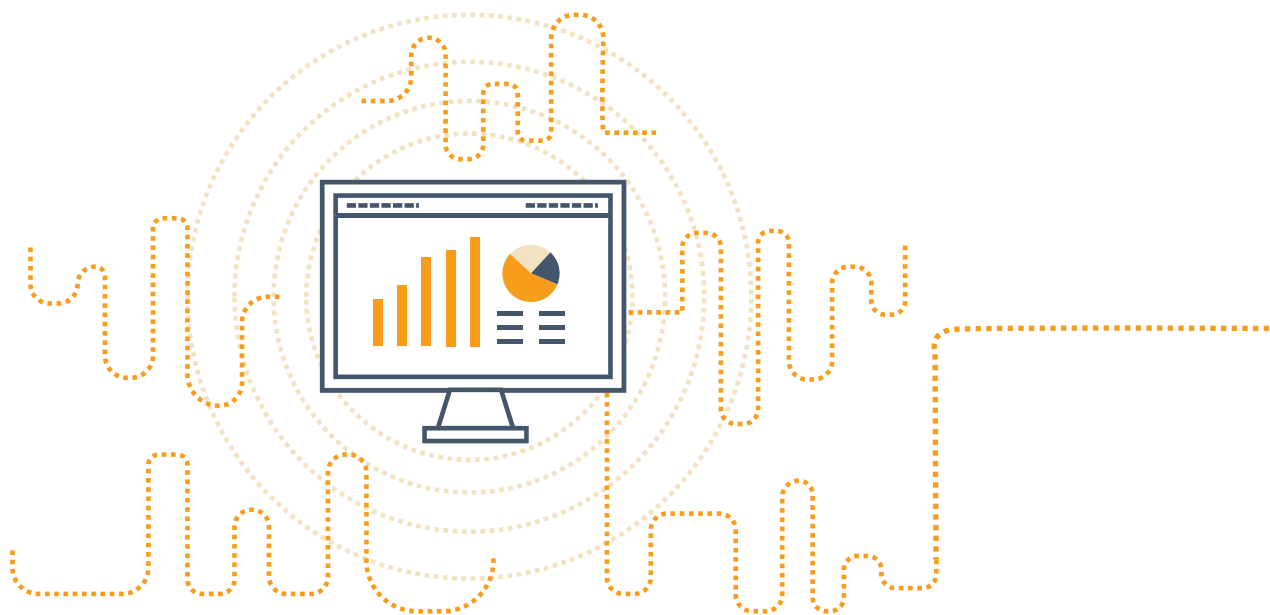
The Need for Cable

At the end of the day the access points and that make up the Wi-FI must pass through a wired Ethernet connection. You can't count out a hardwired connection for the many benefits they offer.

Cabled, or hard-wired internet is still preferred due to its 100% reliability. It's still the preferred connection among corporate branches located within Coworking spaces as well as businesses that need security and high bandwidth. If you have a data closet, a hardwired connection is still needed. Furthermore, phones and VoIP should still be hardwired as phones are not as advanced as computers.

For security reasons, such as meeting the demands of government agencies, financial institutions, and any type of company that collects personal sensitive information, hardwiring is still the trusted way to go. Wi-Fi can be compromised and is unable to provide the encryption and protection against fraud that hard-wiring does. This also applies to credit card processing terminals and devices, as they are not as suited for wi-fi in terms of reliability and security. Utility devices that often demand high bandwidth, such as devices that stream video in high definition, could lag and frequently pause to buffer the image through Wi-Fi, making a hardwired connection ideal.

Does a Workspace Management Platform make WiFi Secure and More Reliable?

Having a workspace management platform can allow for your Wi-Fi security by delivering a complete, secure, enterprise grade solution for managing your online connectivity.

A complete Coworking platform works to eliminate third-party firewalls and reliance on other outside network devices that can compromise your security. Furthermore, a workspace technology platform ensures reliability by centralizing the management of all access points, thus providing a seamless bridge through one avenue for all areas of the workspace.
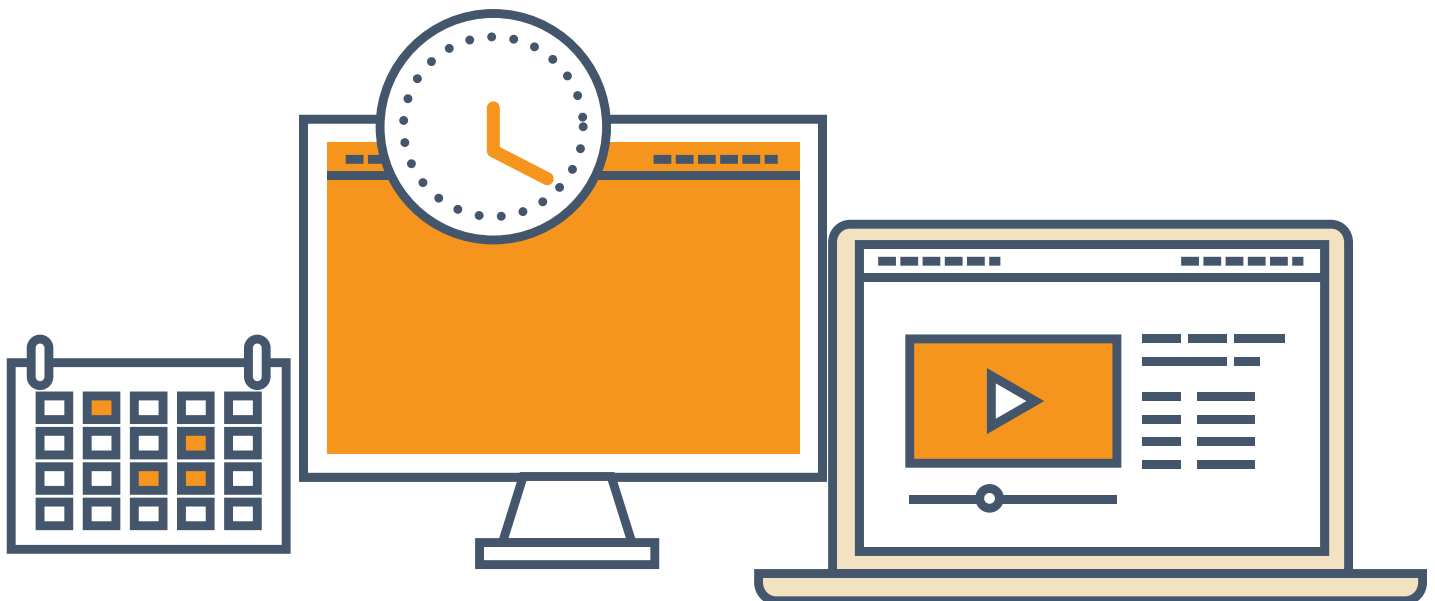
How Much Cable Do I Need Per Square Footage?

The cost for hardwiring a workspace varies based on the amount of private offices as well as the clients who insist on a wired connection. Square footage doesn't play a big role in the cost of cabling. Rather it's a matter of how much construction must be done within the space to adequately meet the demand.

The advantage to cabling your space is that once you go past the high up front costs, the maintenance costs become minimal as compared to Wi-Fi. Regarding how much it costs on average per run for cable, your mileage may vary based on the following:

- Building Regulations from the City
- Location of the Building
- Size of the Building
- Type of Building (Old or New Construction)
- Climate of End User Demand
- Type of Cable (Cat5e vs Cat 6, Plenum vs Non-Plenum) and Cable Manufacturer

## How Many Cable Drops Should I Run Per Office?

For how many cable drops you should run into a private office, it's best to find the perfect balance between being cost efficient and delivering performance to your members.

Here are a few options to consider:

Option A: One Office, One Cable, One Device: Running one drop per private office is usually the minimum requirement. In this scenario, the operator will be required to run additional runs after the construction is complete if there are more than two devices that require a hard connection.

Option B: One Office, Two Cables, Two Devices: In this option, the operator has provided the member with the ability to plug in two devices. It also recommended to place the drops on opposite sides of the office versus have both drops terminate into one wall jack. This provides the member the ability to change the office configuration to suit their needs and still be able to plug their device into the wall without having to run a cable across the floor.

Option C: One Office, One Cable, 3+ Devices: In this scenario, the operator will need to install a switch in the member's office. While this option is typically very cost effective, as it only requires one cable drop, there are many disadvantages. One of the main disadvantages is that you will have no redundancy if the single drop fails. In addition, your bandwidth intensive members may experience performance issues as you re attempting to run all the devices all through one drop. Lastly, the operator could run into a variety of problems depending on the type of switch they install in the member's office. If the operator does not install a switch that matches what they have in their primary data closet, they could find that devices such as their VoIP phones don't turn on or even worse, the phones have severe quality problems.
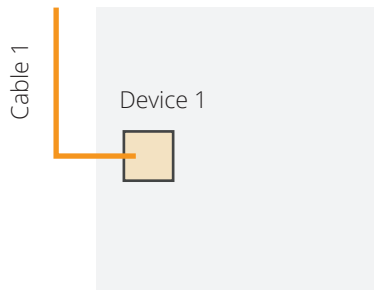
Option A:

1 Office / 1 Cable
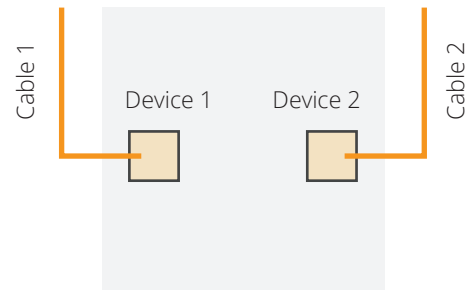
Option B:

1 Office / 2 Cables / 2 Devices
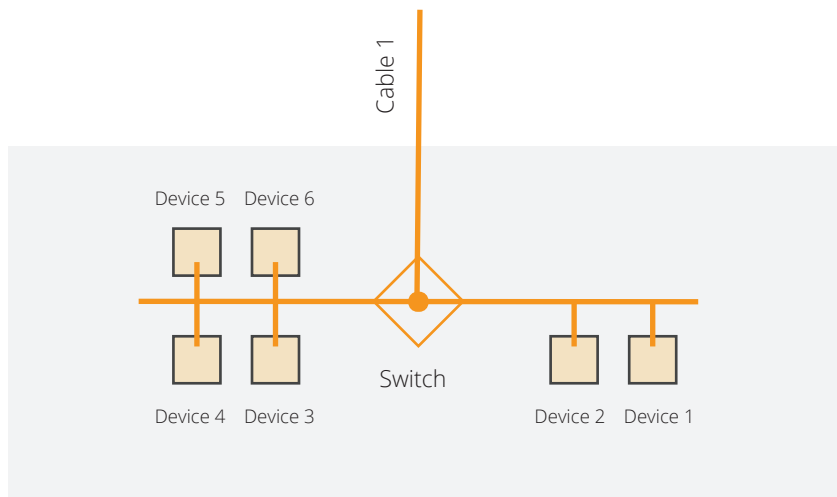
Option C:

1 Office / 1 Cable / 3+ Devices

It's more expensive to run cable once the build out is complete and you are further beyond the tenant improvement stage. The earlier you can make this decision, the better. In fact, the best time to run cable is before you put up your walls. Also keep in mind that during the process of installation you may need to shut down certain areas or even your entire space to ensure connectivity. In regards to running cables through communal spaces of Coworking spaces, it's essential to streamline it so that it doesn't interfere with the community experience.

Wi-Fi and Accessibilty

On the surface, Wi-Fi is the most cost effective and convenient option for your members. However, it can come at the cost of sacrificing security, accessibility, and connectivity if installed and managed properly.

Can Wi-Fi Work as Well in All Areas of the Workspace?

It's most important that you make sure you do a wireless survey. This is critical in making sure you know how many access points you need, as well as ensuring optimal functionality. The reason for this is because Wi-Fi relies on radio waves, meaning that they can be affected by walls, furniture, and even the volume of members within a communal space such as a kitchen. Having a wireless survey will determine where the dead spots within the space may be, allowing you to place access points more strategically to cover all bases and scale larger distances with a reliable signal.

After the survey and once your space is connected, it's critical to stay up to date with the technology. Wi-Fi is advancing fast in terms of security and connection strength making it important to partner with a Coworking technology provider that is always advancing. Collaborating with a trusted provider of Coworking solutions can also make sure your backend infrastructure and coverage always stays on top of its game.

Keep in mind that Wi-Fi will not always work with all sorts of devices. Especially regarding printers, copiers, telephones, and credit card machines. Chances are your hardware may be not optimal with the Wi-Fi within the workspace no matter how many access points you have. You need to have the expertise of a provider of Coworking solutions who can include the optimal hardware with your digital management infrastructure. A provider will also always keep your systems up to date without question.

Ensuring Security

Security is a major concern within a shared space, especially for established businesses that have sensitive records and information. You must remember however that as you increase security you are doing so at the expense of user-friendliness. For instance, having a password publicly written for all members is a common practice within Coworking today, but not an ideal option for businesses that demand security. For the latter two-factor authentication is more desired, but not easily accessible for the average member.

To ensure security with Wi-Fi it's best to incorporate a workspace management platform that can segment the Wi-Fi for Member Access and Guest Access. Members will only have to create a profile once. Once generated, they can automatically connect to the system anytime they enter the workspace. Guests on the other hand are taken to a dedicated sign-in page where they will be prompted to enter in their user information. Once entered, guests will receive temporary 24 hour access on a network that is entirely different from that of the members. What this does is grant members with greater security and bandwidth to meet their demands. To prevent guests from abusing the network, the workspace management platform automatically disables all accounts after 24 hour.

Furthermore, what else you can do is have a system in place for guests to enter their email address to connect to the Wi-Fi. This way you can maintain constant contact as you market your space to prospects.

Creating Private and Personal Connections on Wi-Fi

By collaborating with a workspace technology provider that specializes in providing Coworking solutions, you can create VLAN's and personal private networks exclusive to certain members. This solution prevents passwords being compromised and used by different parties, provides a deeper protection against fraud, and protects customers admin over their own network to manage their own employees, guests, and vendors.

What you should not allow however is for members to install their own access points as they interfere with both your security as well as the connectivity within the workspace. Access points should only adhere to the wireless survey as mentioned before.

For the best practices in security over WI-Fi, here are some tips to follow:
• Avoid Common Shared Passwords Among All Networks Open, General, and Private
• Provide Enterprise Grade Wi-Fi Security as a Bare Minimum
• Do Not Allow Users to Install Their Own Access Points
• Segment Your Network Based on Usage Analytics of Your Members
• Create a Separate Network Specific to Guests, Visitors, and Outside Vendors
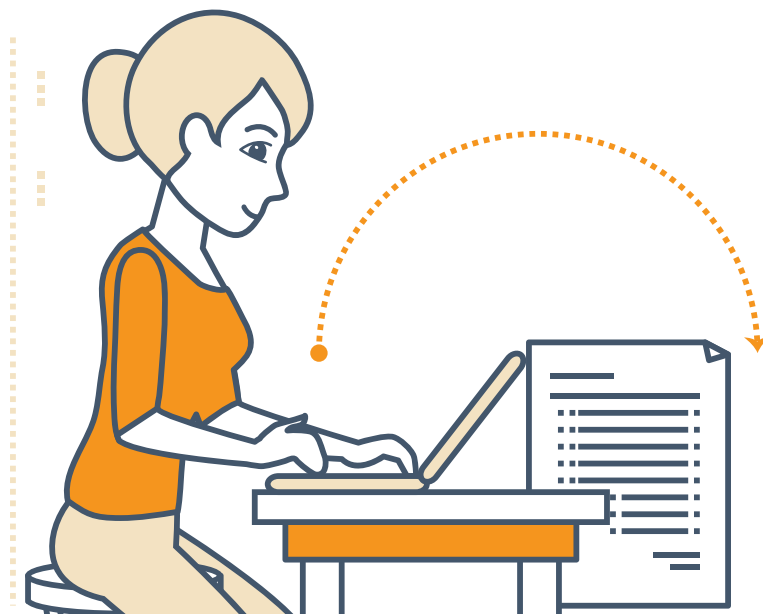
Addressing User Density
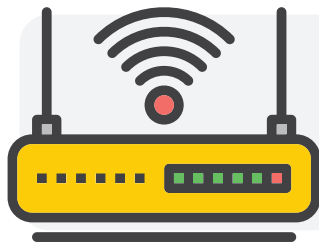
1 POINT

2,500 SQUARE FEET.

The right amount of access points within a workspace, in terms of square footage, is generally 1 point per 2,500 square feet.

However, user density is a very big deal. Keep in mind that the amount of furniture, walls, as well as the volume of members within the workspace can affect the Wi-Fi signal throughout the workspace. Signal strength is not the only measure that dictates the quality of the connection within the workspace. Having available access points can equally as much dictate the overall connectivity to the wireless network. The best means to ensure this is by having a Coworking management platform with an automated solution for distributing users between different access points, preventing the access points from becoming overcrowded by devices.

The other measure is to segment your networks and isolate those who use a high volume of bandwidth so that they don't compromise the experience for other members. Using a workspace management platform can show you the bandwidth usage of each member. You can address this by tiering the level of bandwidth for these members, ensuring that you can meet their demands without sacrificing the experience of other members. You can also create new revenue opportunities by offering special internet packages based on performance.

Addressing User Density

Building Community

Wi-Fi affords members with mobility, making work happen in the most communal and collaborative of spaces. Without such mobility, workspace collaboration and community would certainly be hindered. What makes Wi-Fi better is that it allows mobile devices and tablets to connect as well.

What furthers the experience is having a workspace management platform built with community management software in mind. This way you can have users directly connect, collaborate, and discover each other's skillsets directly through the Wi-Fi on a workspace-sponsored platform.

What is Off Limits to Wi-Fi

It's recommended that the following devices within the workspace be hardwired rather than connected wirelessly:

• Credit Card Machines
• ATMs
• Records Kept by Medical or Government Workers
• Anything That Requires a Private Network for Operation

It's important to be hardwired if you want anything to be HIPAA compliant or PCI DSS compliant. Should there be a breach of information, lack of compliance could result in you, the operator, being found liable.

Service Expansion

Using a workspace management platform can be a powerful asset in providing an avenue to generate additional revenue from Internet services.

By allowing the operator easily upgrade members to higher bandwidth plans or create a customize plan, the operator can easily meets the needs of the member while increasing revenue for the space .

About WUN

WUN provides all the tools needed to grow a smart and connected shared workspace.

Designed for overcoming operational complexities, KUBE by WUN is an award-winning Workspace Management Software and Technology Platform empowering operators to increase revenue, maximize productivity, and build community.

KUBE by WUN provides a complete package for software, data, internet, voice, as well as 24/7 door access. KUBE empowers operators and members with greater accessibility when it comes to billing, booking spaces, managing opportunities, and communication. Over 80,000 members utilize WUN's technological solutions across the world making WUN an industry leader in providing avenues for automation, integration, and collaboration.

Increase Revenue   Maximize Efficiency   Build Community

Learn more about how a workspace management program can optimize your Coworking and Shared Space
www.wunsystems.com