The United Reformed Church

Setting up public wi-fi for your church

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Introduction

Offering free wi-fi inside your church can be a really good way of opening up your building for more uses and could potentially bring more people inside. There are lots of considerations to make when deciding to offer wi-fi. Below are a couple of different options to think about. The overall cost will vary hugely depending on how advanced the system is, how strong it is, how much space you're looking to cover, how you plan on using it and what internet speeds you are looking to offer. It's important to do your own research and speak to experts to find the best option for you.

Option 1

One of the cheapest and easiest options is to set up wi-fi in your church from one of the major internet service providers. You can then make the SSID (the name of your network) and password available for visitors (either by putting up signs or by request). While this is the easiest option, there is a small chance that your router could be hacked by someone using it. So, it's important to change the password on a regular basis (around once a month) which can help you to avoid any security issues. Public wi-fi should be separate from any wi-fi set up for staff/church use. This is for security reasons (particularly if church/staff computers are storing any data that has safeguarding implications).

Costs depend on the monthly contract you choose with your chosen internet provider but will probably be around £20 to £50 per month. Make sure to get a contract with enough data for multiple people to use it at the same time and ensure that the wireless access point can support sufficient concurrent users (many 'free' access points have a very limited number of simultaneous users.) Depending on the size of your building, how many pillars and thick walls you have, and how far you want the free wi-fi to reach, you might also need additional access points, which will cost extra.

All major internet providers also offer business broadband deals which include the ability to offer advanced public wi-fi. Speak to your preferred provider about your needs and what they can offer you.
The more advanced the system, the more it will cost but the more secure and scalable it will be. You can also restrict the use of certain websites and stop adult websites from being accessed entirely. When choosing an internet service provider, it's important to shop around and get quotes for their services before signing a contract.

Option 2

Another option is to buy a wi-fi hotspot. These can be bought online. They work off mobile 4G coverage that people can use to connect to wi-fi. These can be bought through most tech stores and at Amazon.co.uk but you still need a contract with a mobile provider to set this up.
The cost can be anything between £15 and £50 per month, depending on how much data you want. Choose this option if you have a good mobile-phone signal inside your church building (this may not be the case within the thick walls or rural locations of some buildings.) Most contracts with the major UK mobile companies offer a wi-fi hotspot device for free. The downside to a hotspot is that it will have fairly limited reach and might be too slow for what you are looking for.

Alternatively, there are companies that will set this all up for you. The benefit of a set up like this is the option of having a customised landing page that people are sent to once connected to your church

wi-fi. This can be a page on your existing website and could include guidelines on how the wi-fi in your church can be used.

You can find your local network installation specialist by contacting CEDIA: visit **www.cedia.org** or call 01480 213 744

Things to consider

How much local technical support are the church staff or volunteers expected to provide? Giving out the wi-fi password is one thing, anything more complicated than that is another thing entirely. If you're able to, it might be worth sending staff or volunteers on some training (online or a course) to better understand the technology.

If you are already using wi-fi for things such as sound desk control, beware of the limited availability of the 2.4GHz spectrum – there's a real danger that 100 people in the church all logging on at once could cause the AV control to miss a connection, and leave the operator unable to open the mic of the speaker as the service begins!

You may need extra wireless access points in your building to extend the reach of the wi-fi, however, those intended for small household use have a limit on the number of connected devices that can be online at the same time. This can be as low as ten devices at a time. Avoid the free or cheaper wireless access points, they're usually worth what was paid for them.

If your building is old and has thick walls and a lot of stone, the wi-fi may struggle to reach very far. It's worth testing the strength of the wi-fi in the building first, before investing in a system that might not suit you.

Once you have free wi-fi available

Do you have the space to offer a computer for the community to use? Don't forget, you need to make sure it is in a secure place. You might also need someone available to help support people with low technical skills who want to use it. With more space, budget and resources, you could have more computers and offer classes for people who want to learn how to use one.

Display a sign to inform people you have wi-fi available

Some churches with available space have created co-working spaces. These areas allow people who don't work from an office to work at a desk outside their homes and meet other people.

If people are going to be around for longer, why not offer them a place to charge up their devices? Have a few different chargers and adapters available. It can be frustrating when you're out and about and you can't find anywhere to charge your phone or portable tablet up.

Glossary

Bandwidth
The amount of information that can be transmitted over a given connection. There are several bandwidth restrictions in a system, including the bandwidth of the wi-fi signal, and the bandwidth of the connection to the internet from your internet or mobile-network provider.

Broadband
A fast internet connection with the ability to handle multiple voice, data and video channels simultaneously. Cable and fibre are both broadband channels; they provide much greater speed than dial-up internet access over telephone wires.

Firewall
A system that sits between two networks to prevent access by unauthorised users. The most common use of a firewall is to provide security between a local network and the internet. Firewalls help to stock hacking attempts.

Hotspot
A location where users can access the internet using laptops and other wi-fi enabled devices either for free or for a fee. Hotspots are often found at coffee shops, hotels, airports, train stations and other public meeting areas.

Internet
The internet is like a network of networks – an interconnected system that facilitates information sharing.

IP address
The 'phone number' of a device that is connected to the internet. An IP address is used to identify computers and devices connected to a network within a building (the LAN, or Local Area Network.)

Buildings themselves have a 'public IP address' which is the address of that LAN on the Wide Area Network (WAN). Routers and IP addresses allow information, or traffic, to travel around the internet.

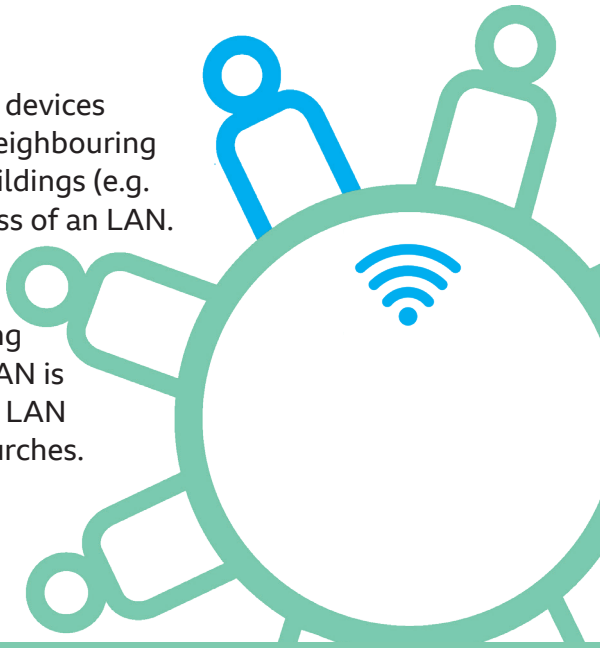
Router
A router is a device that joins two networks together. It sends information from the internet WAN to your personal devices – like a computer, phone, or tablet – on the LAN. Many routers also have a Wireless Access Point (WAP) built into them, to provide a wi-fi connection on the LAN.

Wi-fi
Wireless networking technology that allows smartphones, computers, laptops, and other devices to communicate with each other within range. There are two common frequency bands used by wi-fi: 2.4Ghz and 5Ghz.

Wireless Access Point (WAP)
A piece of equipment that allows you to connect devices which have wi-fi access to your wired network.

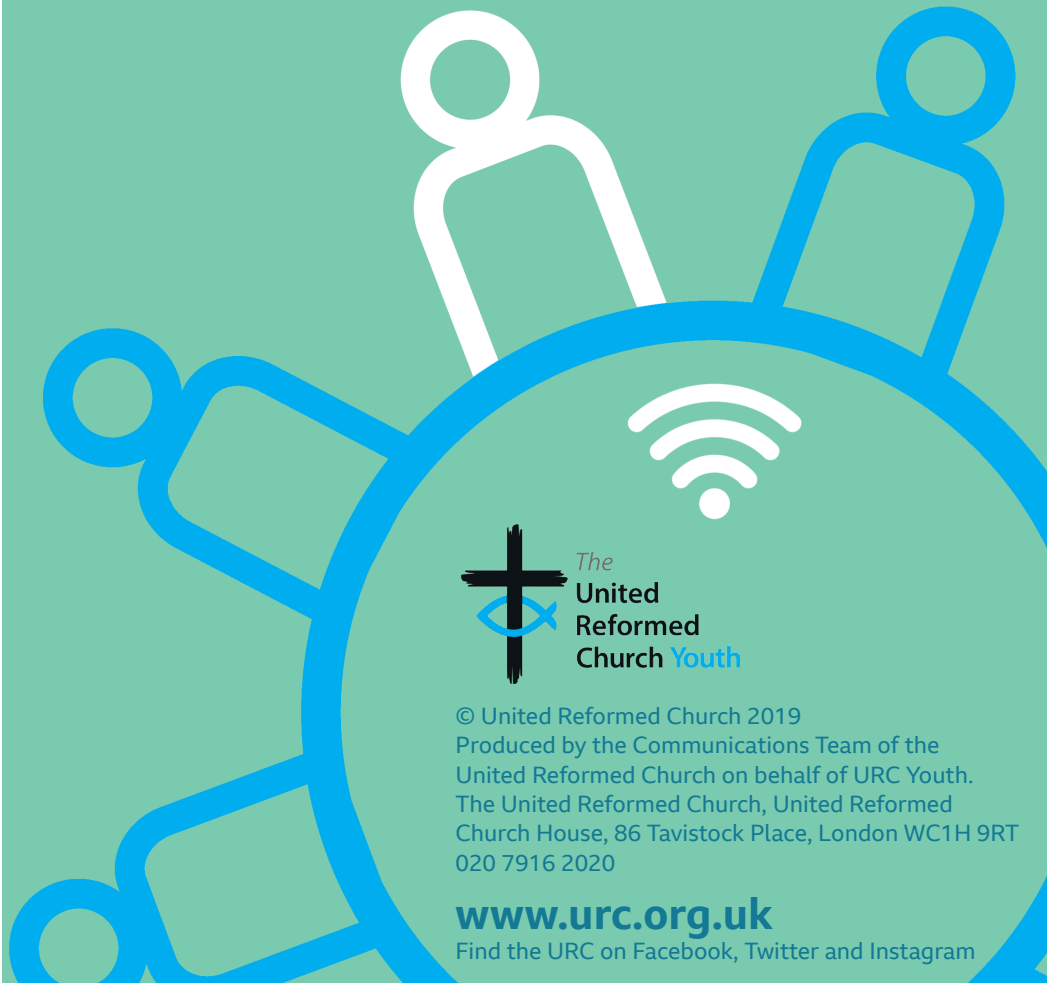
Local Area Network (LAN)
A computer network that links devices within a building or group of neighbouring buildings. Some features of buildings (e.g. walls) can limit the effectiveness of an LAN.

Wide Area Network (WAN)
A computer network connecting devices that are far apart. A WAN is typically more powerful than a LAN and will be better for some churches.



This is one in a series of booklets designed to give information to those working and volunteering within the United Reformed Church.

The booklets can be read and downloaded at www.urc.org.uk/information-guides



The United Reformed Church Youth

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