

Is Office VoIP Right For You?

The buzz around office VoIP has been enough that many businesses are diving in without really understanding the benefits. Contrary to the assumption, many potential buyers that start with an office VoIP installation, is not a guaranteed way to save money. And, right now, features alone are not reason enough to upgrade.

However, there are some specific situations where office VoIP can make an immediate positive impact on your business.

Positive impact

If your company has multiple locations - branches, telecommuters, remote sales offices - that are already connected to a company Local Area Network (LAN) or Wide Area Network (WAN), you are a prime candidate for an office VoIP system.

You can share the full features of your phone system across all your locations. In addition, even if you have one office in London and one in Edinburgh, VoIP allows calls between them via extension dialling, making it a nil cost call. For businesses with expensive monthly long distance charges due to calls between locations, this can be a very attractive reason to upgrade.

An office VoIP phone system can also save money as you are setting up a new office - you will not have to run separate cabling for your phone system. However, if you are setting up a new data network anyway, adding a parallel voice network at the same time is relatively cheap so the cost savings here might not be as large as you expect.

In many cases, the best solution will be a system that uses existing phone wires within the main office and VoIP for calls between locations.

This combination works well if you have relatively new telecoms equipment - many PBXs can be IP-enabled with software upgrades and minor hardware additions. Sticking with digital phones internally will save you money, as well as increasing the overall reliability of your phone system.

Suppliers can also set up systems that use only traditional lines and extensions at first, but support later expansion to VoIP.

How does Voice Over IP work?

The premise behind Voice over IP is fairly straightforward.

Instead of using "circuit-switched" technology, where a dedicated path from caller to receiver is reserved for their entire conversation, VoIP phone systems treat voices as data, turning your words into tiny packets of information that are sent over data networks. As they arrive at the other end of the call, the data is turned back into audio.

To set up a business Voice over IP system you need several components.

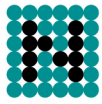
A central device manages the calls, the way a private branch exchange (PBX) or key system (KS) does in traditional phone systems. This can be a dedicated piece of hardware such as an IP PBX, a regular PBX that has been IP-enabled, or a server running specialised software.

You will also need phones and a data network. In many cases, you may be able to use your existing digital phones and computer network, although you may need to upgrade some of your network hardware.

Depending on your Voice over IP setup, internal calls are routed over your existing phone network or your computer network.

Calls within the same office will typically be conveyed over your phone network, while calls to other company locations get routed over your computer network. Calls to external phone numbers get sent through the network to a gateway, which connects to the public telephone network.

All of your calls connect seamlessly to any phone user - there are no compatibility issues to worry about.



Features and benefits of an IP PBX

The single biggest advantage of an IP PBX is for businesses with multiple locations.

With VoIP, any and all offices on a LAN or WAN can get the benefits of having a common office phone system, including extension dialling, seamless call transfers, and other features.

In addition to making it easier to communicate, this sharing of features can enhance collaboration as employees at different locations can truly feel like they are part of the same organisation. Plus, if they are on the company network, the phone calls are free - even if your offices are located hundreds or thousands of miles apart.

Simply looking at your current phone bill for calls between far-flung offices can give you an idea of how much you can save.

There are other cost savings that stem from the streamlined network infrastructure and improved administration.

For network administrators, VoIP means they only have one network to maintain instead of two. There is still separate phone system hardware to maintain - but only one network. The Move, Add, Change (MAC) process also is greatly simplified, because almost all VoIP systems are configurable through a web interface that can be managed by the administrator.

This means lower ongoing costs - you will not need to call your supplier for every MAC. And because multiple offices are seamlessly connected, they can share a single receptionist, auto-attendant, and voice mail system.

Another significant benefit is for employees on the go. If your remote users connect to the company network via a Virtual Private Network (VPN), VoIP allows them to make phone calls from the road at no extra charge. One salesperson on an extended trip can save hundreds of pounds in mobile phone or hotel long-distance charges.

All the user needs is a "soft phone" (software that lets a laptop function as an IP phone), a PC microphone, and speakers.

Other familiar and essential phone system features - like caller ID, call forwarding, simultaneous ringing across multiple phones, and other features you would find in PBX systems - are available in most VoIP systems.

VoIP also works with advanced Computer Telephony Integration (CTI) applications, such as call centre management. These popular applications can prioritise incoming calls based on the caller's identity and automatically open callers' account information as the phone is answered.

However there is little difference in this arena between VoIP and modern digital phones.

VoIP phone systems - potential drawbacks

The two main drawbacks to VoIP systems are the network requirements and the potential for outages.

Network demands

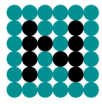
One challenge to maintaining call quality is bandwidth: high quality sound requires quite a bit of it.

The technology to compress audio and to reconstruct it has been improved to the point where VoIP sound quality over a high-bandwidth connection is as good as or better than that of regular phones. But some networks that are fine for data are not up to the demands of VoIP.

Computer networks are designed to handle messy data: packets arrive out of order and some are even lost, but in most cases the data being sent can easily be reconstructed before it is needed. Voice conversations, though, are not as tolerant of these kinds of disturbances.

Each packet of sound has to arrive in the correct order because they are being sent in real time - if packets are lost, the conversation sounds distorted, clips, or falls off all together. This is why VoIP services that rely on the Internet to transmit calls can have uneven phone quality.

If your company will be routing calls over private data networks, much of this potential problem is avoided.



Companies shopping for VoIP generally have networks suitable for high-quality voice conversation - frame relay networks are ideal, but standard Ethernet networks are fine. However, they may need to be boosted with a Quality of Service (QoS) application.

QoS maintains a dedicated amount of bandwidth for voice calls by giving voice data a higher priority as it is trafficked through the network. If there is network congestion, VoIP data is routed through first so call quality does not suffer. QoS applications are built in to some VoIP systems, as well as some routers. They can also be purchased separately as upgrades.

From every indication, running VoIP on a company network without QoS is a risk no business should take.

If you have a WAN that routes data over the Internet, you can still run QoS, but there can be no guarantee of quality. Internet call quality can reportedly be improved if the various offices use the same Internet service provider.

Outages

Unlike regular phone systems that get set up and basically forgotten, VoIP systems require more attention. Like any software application, your VoIP server will require occasional upgrades and maintenance.

Since regular phones get all the power they need through the phone line, they continue to work if there is a power outage. In contrast, most VoIP phones need to be plugged into a power source to work.

By definition, VoIP phones are also network-dependent. To businesses where phone service is absolutely critical, this can be a concern since computer networks can occasionally be brought down by a server crash or other problem. However a good IT staff can prevent most outages and react quickly when one occurs.

Potential outages are another reason why having a mix of digital and VoIP can be advantageous: it creates a more comfortable level of redundancy.

Companies that have backup power systems in place can keep their PBX running, and the digital phone system within the main office will continue to operate even if the data network is unavailable.

Buying VoIP for business

The rapidly maturing business VoIP phone system industry means that there are many manufacturers with feature-rich systems that may be enticing to small firms.

Sales channels

Buying a VoIP for business from a local supplier is the best choice for most businesses. Licensed, certified resellers have proven expertise, manufacturer support and the ability to respond quickly to urgent problems that require a site visit.

Checking that the supplier has manufacturer support is particularly important when buying a VoIP for business -- this can be critical as upgrades are released or problems crop up.

Keep in mind that some suppliers, particularly those whose background is in data networking, sell VoIP-only systems. This can drive up your costs unnecessarily when a hybrid traditional/VoIP system might be fine for your needs.

Also watch out for suppliers that simply add VoIP to your existing network whether or not it is fully ready to support voice traffic. They may later charge you for upgrades if you decide the call quality falls short of your expectations.

Make sure you get a thorough analysis of your current network and the impact VoIP will have on it to get a true sense for your phone system costs.

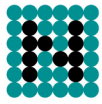
Pricing

VoIP for business prices vary considerably based on the features you require, your existing telephony infrastructure, and the state of your data network.

Whatever you do, do not be tempted to do it yourself - setting up and maintaining a VoIP for business of any type requires specific expertise. There are many resellers and service firms that customise, install, and maintain VoIP systems.

Choosing a system

Once you have decided that VoIP for business is right for you, the next step is to determine what of your existing telecom equipment you can keep.



Many PBXs can be IP-enabled with software upgrades and minor hardware additions, and you may be able to use digital phones you already own. The potential cost savings are significant, and you can also increase the overall reliability of your phone system.

When comparing phone systems, make sure you investigate the details carefully. Many systems say they include “everything” but may not include the specific features you require. Exactly what makes up a “complete” system varies from supplier to supplier, so be sure you are comparing equivalent systems.

You may also want to learn whether the phone systems are built on open standards. While all VoIP systems use the industry standard Internet Protocol (the “IP” in VoIP) to route calls, some use proprietary technology for administration or integration features.

Having a system run entirely on open standards can allow for greater flexibility in integration and customisation.

However, you may not be as concerned about flexibility as long as the features and costs match your requirements. The technology used in a particular system may impact whether you can leverage your existing equipment, so be sure to inquire about compatibility issues.

Lastly, remember that some common business devices require analogue phone lines - notably fax machines, but also credit card machines, some security systems, and other devices. Make sure your supplier knows and accommodates these types of uses when planning your VoIP for business.

VoIP equipment buying tips

Before you commit to VoIP, evaluate the potential savings of free calling between all locations. If it is only £200/month, think twice before making such serious investment. Do not buy VoIP equipment just for the sake of having the latest technology.

Plan for the future

The cost difference between including extra capacity at the beginning of a project and adding more VoIP equipment later is significant - build in room for growth.

Do not try to save money buying used VoIP equipment. VoIP technology is so new that even last year’s hardware is extremely dated. Plus, the installation cost does not change whether a system is used or new, which is a significant portion of the price.

You also set yourself up for shorter life spans, higher upgrade costs, and more maintenance - in short, the deferred costs will almost certainly wipe out any upfront savings.

Nomis Connections Ltd
1 Pannells Court
Guildford
Surrey
GU1 4EU

Tel 0845 450 5065

Web www.nomisconnections.co.uk