In 2025, BT will conduct major changes to its services, permanently shutting down ISDN and traditional PSTN services. Some existing phone systems will not work past this date.

What does this mean for small-medium businesses? What alternatives are there?
Here we will be discussing this move to end the use of "the traditional phone service", how to transition to VoIP, and explaining the terminology and jargon associated with it.

BT shutdown of analogue signalling phone systems

According to efax over 2 million UK businesses will be affected by the switch off, primarily small businesses.

The biggest impact will be felt by those with heavy use of fax machines or landline telephones.

ISDN and traditional PSTN networks, known as "traditional telephony" allow calls to be made over copper telephone lines using analogue signalling. BT will no longer offer businesses the ability to acquire ISDN and PSTN after 2023, with the total switch off occurring in 2025.

This move brings to an end the use of analogue phone lines moving communications technology into an entirely digital space. SIP trunking, which is essentially a virtual telephone line, is now set to overtake ISDN.

The Reason for the shutdown

According to BT, while the current copper wire system has seen many adaptations and improvements since its inception, it is still a service that relies on technology devised centuries ago. The costs of maintaining the system are incredibly high and rising. An overall review has concluded that ISDN and PSTN services are simply not optimised for modern business. Especially as there are plenty of other methods of data transmission available that are cheaper, faster, more reliable and more scalable.
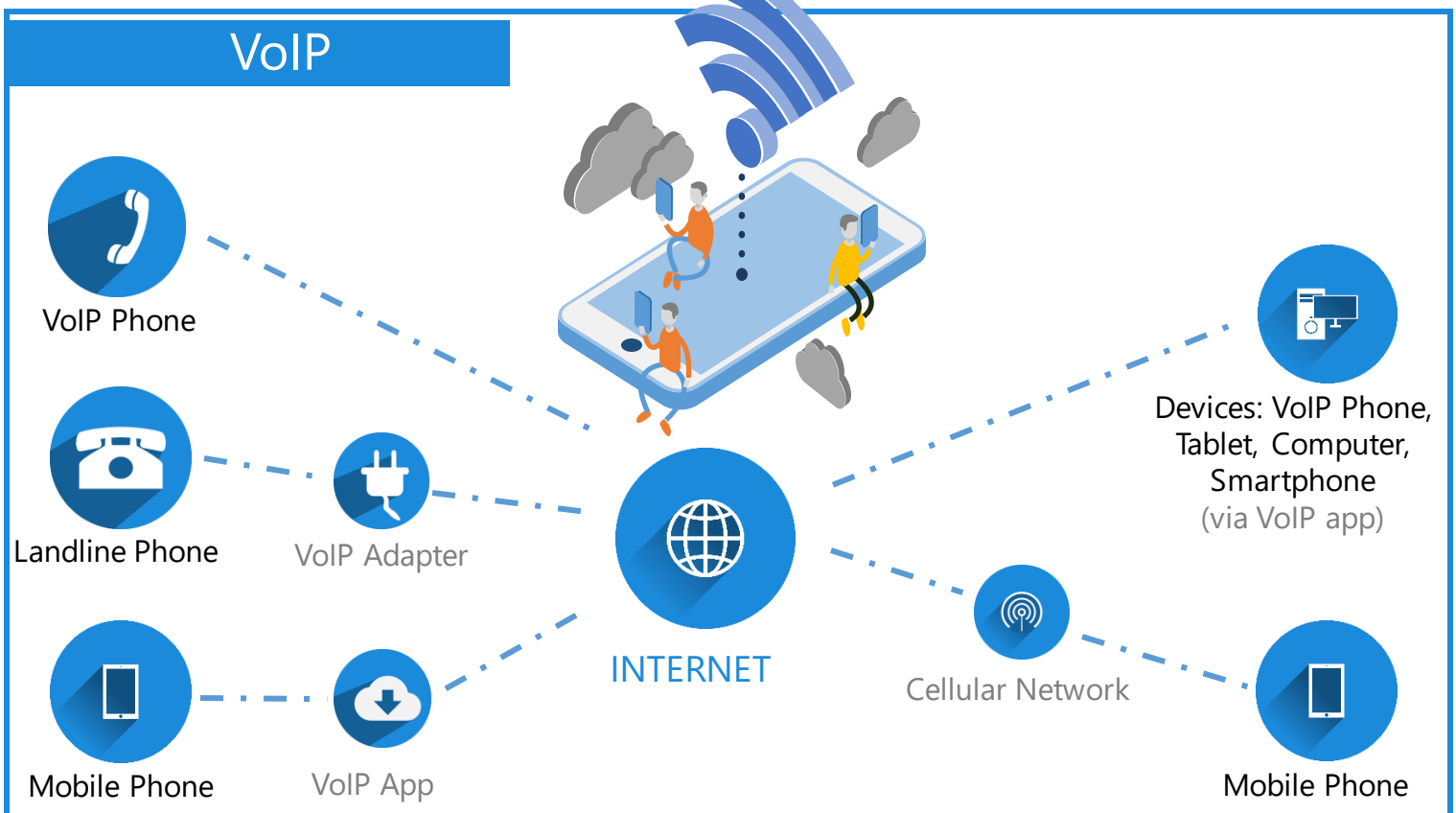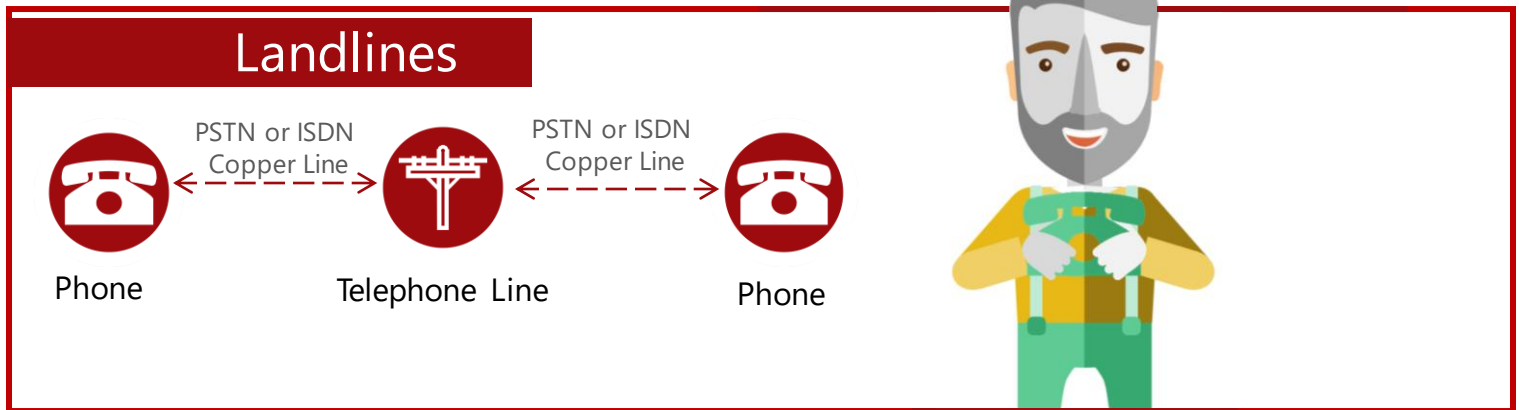
Small businesses are now turning to their IT support providers for a new telephony solution.
In particular, hosted VoIP is now considered to be one of the most cost effective and flexible telephone communication solutions. **Using our hosted voice servers, all you need to do is to have an internet connection, connect to a VoIP phone and away you go!**

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With 70% of business owners looking to move away from their traditional on-site PBX, to a <u>VoIP-based telephone system,</u> the number of businesses using VoIP is rapidly increasing.

VoIP or Voice over Internet Protocol – what is it?

At the most basic level, VoIP means running a phone call over the internet rather than over a telephone line. In a typical business phone system setup, there would be a box on the wall (the PBX) with a number of ISDN lines going into it. All business phones connect into the PBX to handle their voicemail, call routing and so on.

Alternatively in a hosted VoIP system, this PBX is hosted on the internet and the business phones connect to it via an internet connection in order to get all the services and make calls. To enable VoIP, all you need is an internet connection to connect to a VoIP phone (or a standard phone with a VoIP adapter), that's it!

Landlines

Phone

PSTN or ISDN
Copper Line

Telephone Line

PSTN or ISDN
Copper Line

Phone

VoIP

VoIP Phone

Landline Phone

VoIP Adapter

Mobile Phone

VoIP App

INTERNET

Cellular Network

Devices: VoIP Phone, Tablet, Computer, Smartphone
(via VoIP app)

Mobile Phone

VoIP - What are the real benefits?

For one thing, you can have as many extensions as you like with all the features you would expect such as call groups, voicemail, divert to mobile and more. Most importantly, a hosted VoIP system works at a fraction of the price of a traditional solution.

One of the best features is the flexibility of VoIP. In the event of an internet loss, each employee takes their phone home, plugs it into their home internet and the phones work exactly as before, with incoming callers completely unaware of the difference!

VoIP - Features

- o Answer your calls on almost any phone from anywhere, at anytime.
- o Have as many extensions as you like.
- o Set up call groups, voicemail and diverts to mobile
- o Free inter-office calls, no matter where in the world they are located.
- o Benefit from lower cost calls to landlines and mobiles.
- o Automated call attendant (see below).
- o Visual voice mail – transcripted into text and emailed to you.
- o App available for mobiles – this enables users to make and receive UK calls from anywhere in the world. These calls are still charged as local calls, even when abroad (data charges may apply).
- o As phone calls are run over the internet, there is far more choice of phone system suppliers.
- o A hosted VoIP solution is a fraction of the price of a traditional solution.

VoIP - Automatic Call Attendant

This is an automated system that manages where incoming calls are directed. An example of this is 'Press 1 for sales', alternatively it can reroute calls directly to voicemail or to specific messages.

- o Redirects office phone calls to mobiles.
- o Users can set up appropriate voicemails for callers to leave a message.
- o Provides key support information automatically.
- o Supplies emergency contact information.
- o Unlimited nested call attendant - this is a 2nd level menu that the 1st level auto attendant connects the call to, see image below.
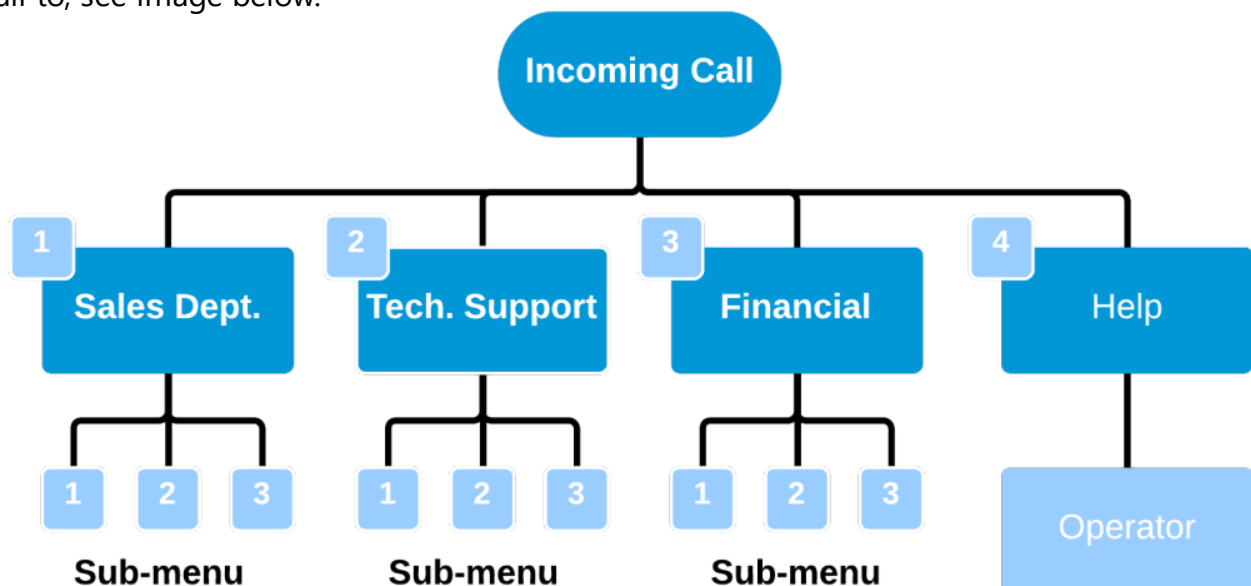

*Image courtesy of 3CX [**https://www.3cx.com/pbx/auto-attendant/**]*

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Making the swap to SIP – with VoIP

Companies with traditional and ISDN telephone systems can make the switch to VoIP and start getting the benefits of SIP straight away. This includes reduced charges by telecom providers and free internal calls.

The system will use your existing internet and WAN (Wide Area Network) connections and there is no need to change phone numbers as they can be transferred to the VoIP providers.

This will mean any existing ISDN will no longer need to be relied upon prior to the switch off.
Phone numbers will no longer be linked to geographical locations so can be transferred with office moves.
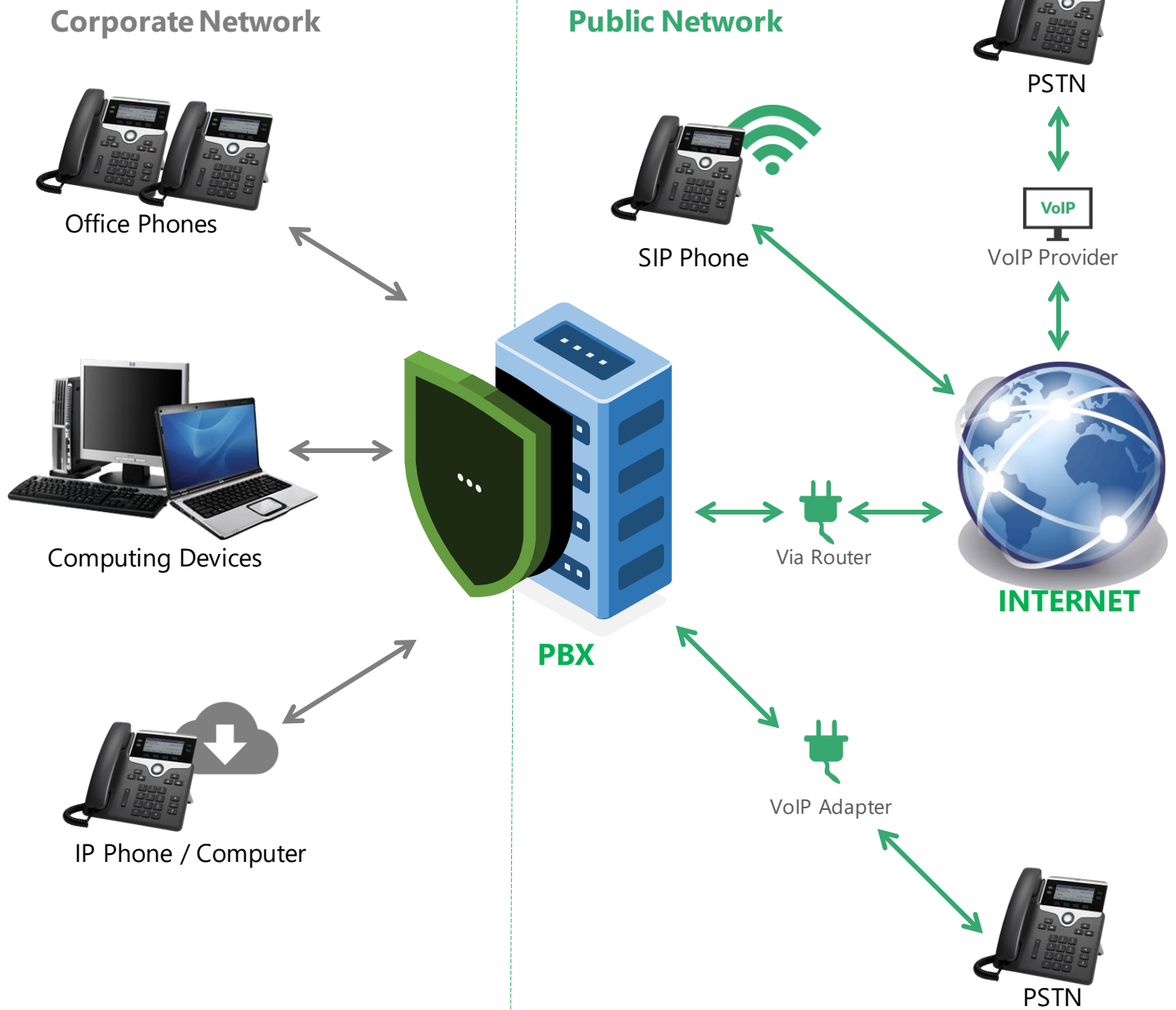
How can NPIT Support you?

Migrating to VoIP is easy with the right provider and you will be able to port and retain your existing phone numbers. The whole migration can take as little as 3 weeks! Plus we will ensure you still use of your phone system throughout the migration.

We can:
o Roll it out at once or in phases depending on your business size and requirements.
o Run a complete health check of your existing systems and devices. We would assess their compatibility for remote working and whether the security and software is up-to-date.
o Where devices are incompatible with digital data transmission, provide alternatives.
o Review requirements for all remote workers and the number of phone numbers / extensions.
o Provide an audit or migration plan based on the number of sites, extensions and bandwidth.
o Provide full installation
o Complete testing and monitoring throughout
o Ensure security is in place and you have a Disaster Recovery plan available in case of internet loss.
o Provide full staff training.

Let's get the ball rolling!

Contact us today **for an initial assessment.**

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PBX

Corporate Network

Office Phones

Computing Devices

IP Phone / Computer

PBX

Public Network

SIP Phone

Via Router

VoIP Adapter

PSTN

VoIP

VoIP Provider

INTERNET

PSTN

Terminology - Here are some terms you may find useful to understand.

VoIP: Voice over Internet Protocol
A telephone system that runs phone calls over the internet rather than over a dedicated telephone line.

VoIP phone
A phone that receives the voice data in its own internal system, this includes mobile phones. This system for telephony can be hardware or software based.

BYOD: Bring Your Own Device
Essentially this means that employees can use their own, personally selected and purchased device to use for business purposes. This includes smartphones, laptops and tablets. The devices would operate within the company's secure corporate network and may be subject to additional security measures.

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Cloud Communications / Cloud Telephony

This is where the telephone communication and voice data are hosted on the internet (i.e. the Cloud). Cloud Telephony is considered to be outside of the hardware and software systems of the company using these services.

PBX: Private Branch Exchange

This in a private / in-house telephone network used company-wide. It allows users to communicate internally with each other and to outside of the company. A PBX allows free calls between users and is outside of the telephone network which is known as PSTN (or landlines).

With this is mind, it is important to note the distinction between a traditional PBX and a hosted PBX. A traditional PBX system is located onsite and is restricted to internal company usage only. A hosted VoIP PBX uses internet protocol to transport calls, this essentially means that you can make phone calls remotely as if you were in the office.

SIP: Session Initiation Protocol.

This is a standard or set of rules for starting, maintaining and ending an interactive user session be it video, chat, gaming and more. The SIP protocol is the basis of VoIP.

SIP Trunks – to take over ISDN in 2025

A SIP Trunk (also known as a SIP Phone Line) is the modern standard for business telephony. It is VoIP service that connects the phone system (PBX) to the PSTN (telephone network) using the internet. It acts as the virtual connection to the PTSN utilising an internet connection. For example, enabling VoIP services by connecting a PBX to the internet or an ITSP (Internet Telephony Service Provider).

SIP Phone:

This phone uses SIP to make a voice call over the Internet.

ITSP (Internet Telephony Service Provider)

These are the businesses that provide and host digital communications.

ISDN: Integrated Services for Digital Network

A digital version of the telephone line, established in the mid 90's for telecommunication using traditional copper line networks. This was the first service to allow businesses to send data, such as voice calls or images, through their phone lines using the internet. ISDN will be switched off by 2025 to be replaced with ITSP.

PTSN: public switched telephone network

This is a physical phone line also known as landlines or fixed-line telephones. Calls are made over copper telephone lines and fibre telephone lines using analogue signalling, this is known as "traditional telephony". PTSN will be switched off by 2025 to be replaced with ITSP.

No Problem Technologies

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Here at No Problem Technologies, we provide comprehensive and affordable Fully Managed IT services.

We look after all aspects of your IT for one fixed monthly fee, including broadband, IT Support, Office 365, online backup, Voice over IP, domain names and web hosting.

Our fixed-price contracts for on-site and remote support free up valuable time for your business to grow, while our technical expertise provide you with ongoing security and peace-of-mind.

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