AVAYA

Avaya INDeX® Solutions
Business Efficiency

Through Converged Voice and Data Networks

Converged Voice and Data Networks

Customer Relationship Management

Unified Communication

Supported by: Avaya Labs and Services

Communication without boundaries

What is Business Efficiency?

All businesses of whatever size or industry are focussed on maximising profit and delivering the best possible returns to shareholders. Increasing the volume of products or services sold can impact these objectives. Equally, reducing the company's cost base can also have a very positive impact on a company's profitability. There are many ways to achieve a reduction in costs and deploying the right voice and data communication platforms is one of the ways in which we can have a significant influence on this business driver. Technology, when used to support and improve business processes, can help companies to run more efficiently and deliver enhanced levels of customer over an infrastructure that is capable of reducing costs.

Using technology to our advantage

The changing technology landscape

One of the biggest challenges we face when looking to use technology as a means of reducing operating costs is deciding which option is right for us. The technology used for voice and data communication advances quite rapidly and it can sometimes be difficult to make a decision on the best option for fear of investing capital in something that may soon become redundant. Similarly, if a company wishes to focus on its core business and not employ costly specialist staff to keep abreast of the technology landscape, it can be challenging to assess all of the options available in order to make an informed decision. The Avaya INDeX has been designed to retain existing technology and developed to incorporate new technologies as they emerge. This means that we can make a decision based on what we need to achieve now with the confidence of knowing that, should our requirements change in the future or new technologies emerge that are more appropriate for us, the INDeX will be developed alongside the changing technologies. It also means that the options available on the INDeX today are comprehensive, giving businesses the flexibility to choose the right technology to support their business needs.

Bringing Voice and Data together

Many companies will have separate systems for their telephony requirements and for their data requirements, such as email services and access to the internet. This means that they can often have different suppliers, different maintenance contracts and equipment lying idle when not in use. The net result of this is that the costs of supporting two separate infrastructures are probably much higher than they would be if both telephony services and data services were delivered over the same equipment. Even for companies who have just one office, but who need to host a web site, give internet access to some or all of their staff, as well as putting telephones on desks can benefit from bringing their voice and data together by capitalising on new and existing 'convergence' (voice and data brought together) technology.

Deploying a combined voice and data infrastructure can also help us to quickly and efficiently adapt to new business strategies such as allowing people to work from home.

The main thing to consider when investigating which technology to deploy is what we are trying to achieve as a business. It is the answer to this question that will help us to determine the best solution for our company.

What are we trying to achieve?

Do we simply want to reduce the cost of calls between offices?

Often when we investigate how much we spend on communications, it is the variable costs such as the cost of calls, that really absorbs our budgets. Companies who have more than one office have different options for communicating between these sites. Staff can dial out as if they were calling another company at the associated cost per call. Companies can install private lines to carry calls between offices for which they will pay a fixed rental cost irrespective of the number of calls made. With the Avaya INDeX, there is a third option that can dramatically reduce call costs. By using technology that compresses voice calls between sites it is possible to save up to 85% on call costs because we send seven calls over a line that would normally carry only one. If we already have private lines between sites we can still benefit from this technology. Because the compression also works on private lines, we can still send seven calls in the same space that we would use for one which means that we can get more calls over the private line. The benefit of this is that, even if our call volume increases, we don't have to rent new lines or if our call volume remains constant we could investigate reducing the number of lines we rent and therefore reduce our rental costs.

Do we need to make our different offices appear as one to the outside world?

When companies have different offices they often have different departments based in different places. They may even have members of the same team based in different locations. This can cause problems for communication between staff and also for our customers and suppliers who need to contact us. By setting up a communications infrastructure that makes these offices appear as one we can avoid many of these problems. This is achieved by private voice networking. The Avaya INDeX solution for private voice networking needs is called INDeX-Net. By using this solution we can transfer calls between sites, put calls on hold in Birmingham and have them picked up by the site in Aberdeen and have one operator at one site taking calls for and transferring calls to any other site. We can also network operators at different sites together for more efficient call handling. And because the Avaya INDeX supports a wide variety of communication methods we can do this over the public network or a private network.

Do we want to benefit from the advantages of bringing voice and data together?

Companies who have a more than one office can benefit significantly from bringing their voice and data communications together. Traditionally, companies have needed to have different lines for carrying voice and data calls. Data calls require firewalls, a device used to stop computer viruses and other unsolicited data getting access to our network. They also require security to stop unauthorised internal or external parties gaining access to company information. Voice calls, however, need to be clear, resilient and of very good quality. Because of these different requirements, we can sometimes be concerned about merging the two together. With the Avaya INDeX, these concerns have been addressed. The INDeX was originally designed as a voice platform and therefore has all of the high standards of quality we have come to expect from a telephone system. It has been evolved to provide us with the ability to now service our data requirements as well. It provides an integral firewall and security options to help protect our data integrity and it supports the communication technology that allows us to send voice and data calls over the same network. The INDeX does this by converting the calls into lots of separate packets, each labelled with its own unique address. The packets containing the voice calls and the packets containing the data calls all look the same. However, because the data packets can arrive in any order and be reassembled at the destination to make sense whereas the voice packets have to arrive in the right sequence in order for the person at the other end to understand what is being said, the voice packets are given a special label giving them priority. This is called Quality of Service and INDeX supports this quality standard.

With the Avaya INDeX solution for voice and data networking, companies can still benefit from all of the advantages of voice networking outlined earlier but can also even further reduce their infrastructure costs.

Managing for Improved Efficiency

As a company trying to derive efficiency gains by using technology to best effect, we need to be confident that ongoing management is simple and effective. With disparate equipment and separate voice and data networks, it can sometimes be difficult to manage our infrastructure without incurring high maintenance costs and internal management costs. The Avaya INDeX solution has been designed for ease of use both in terms of the user and the system manager. It has a single point of configuration across the whole network for both voice and data administration. The easy to use wizard based entry system means that it is both simple to get set up and administer any moves and changes on a day to day basis. And because all of this can be done remotely without the system manger having to visit different locations to make changes, it enables us to achieve all of this with one centrally based administrator if we so choose.

Making the right Choice

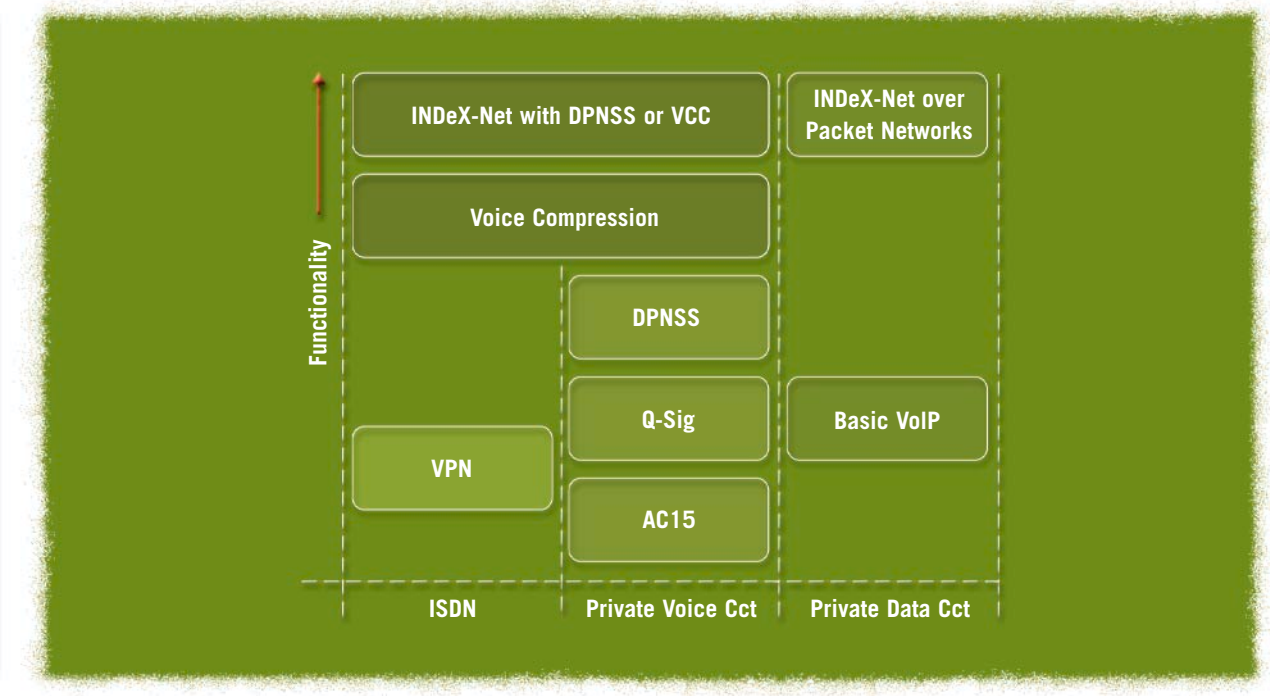
The Avaya INDeX is designed to give businesses the flexibility to make the right choice for them.
The tables below explain some of today's technology and demonstrate the wide variety of networking options available to us:

Glossary

Term	Description
Analogue private circuit	A dedicated circuit that transmits analogue information between two points. Often used to connect older systems together. Can be subject to noise or static and tends to be limited in offering advanced networking interoperability.
Digital private circuit	A digital circuit that connects between two or more sites. Digital circuits will offer a greater amount of call traffic between sites, than that offered by traditional analogue connections. Call quality is also improved with reduced noise over that offered by analogue circuits.
ISDN	ISDN (Integrated Services Digital Network) is offered in two options, a primary rate option offering up to 30 channels of voice calls, or the basic rate option offering a maximum of two channels of voice calls. The benefits of ISDN are speed of connection, the ability to dial direct to a desk (DDI), improved speech quality and additional services allowing tighter control over call routing.
Frame Relay	Frame relay networks offer a high-speed network that only requires a single point into a multi site network. This can reduce costs of deployment as other private circuits may need separate connections to each site. Other benefits of Frame Relay are the ability to deal with sudden increases in traffic ('bursty traffic') and the support for more advanced applications.
X21	X21 is an interface standard that is used for connecting into data networks. It specifies the protocols used to ensure that connections are using a common standard.

Networking Option	What is it?	Why use it?
AC15	Analogue private circuit signalling system	Basic functionality offered over traditional analogue private voice circuits. Used to connect to simple analogue PBX's. Allows us to establish simple networks between two or more INDeX Systems with basic call transfer.
DPNSS	A BT standard for digital private networking	Highly featured offering interoperability between different vendors PBX's. Allows us to establish more advanced networking such as centralised voicemail between two or more INDeX systems or other vendor's PBX.
QSIG	European standard for digital private networking	Basic functionality allowing interoperability with other Q-Sig supported devices or PBX's. Allows us to establish simple networks between two or more INDeX systems or other vendor's PBX using digital technology.
VPN	Proprietary method of connecting sites over ISDN.	Cost effective method of offering basic networking functionality over an ISDN network without the cost of leased lines.
VCC	Proprietary method of using voice compression between INDeX systems.	Highly featured offering up to 85% off of inter-site calls. Also delivers a high level of feature transparency without the cost of private lines or special network services.
INDeX-Net	A proprietary method of supplementing VCC or DPNSS connections with an intelligent IP link.	Enables the virtual enterprise between two or more INDeX Systems using VCC or DPNSS.
VolP	Combining your voice calls with your data traffic between sites.	Collapses your voice network into your data infrastructure. Reduces costs and offers a high level of feature transparency. Can be used with IP, Frame Relay or X.21 networks.

Choosing the technology that best meets our needs



What about Advice and Support?

Avaya INDeX Business Efficiency Solutions are sold through our network of Channel Partners. All partners authorised to sell this solution are part of our accreditation program through which they demonstrate their knowledge of the product suite and their ability to deliver quality assured installation and post implementation support.

They can advise on how to get the most out of the solution to meet your specific business needs. They will also be on hand to provide support when your business needs change or your organisation grows.

Contact your Avaya representative or Avaya BusinessPartner today for more information.

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