Secure
Resilient
Networks

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Overview

Tips for IT Cost Savings in a Tough Climate

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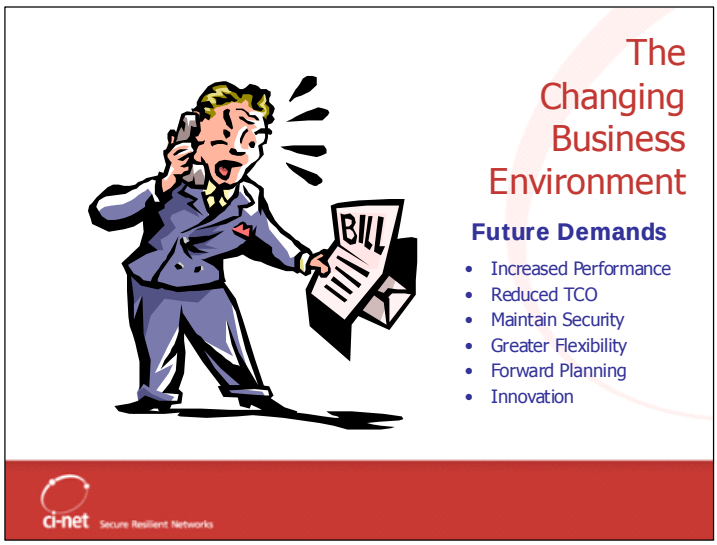
Introduction

The current financial climate has caused most businesses to look to reduce costs. Sadly, this is a challenge that the IT Department cannot avoid. As a result, most IT Managers and IT Directors will recognise the call for a reduction in costs whilst either maintaining the functionality of their network or improving the network performance in light of the latest security threats, the potential business losses caused by network outages and the need for access to corporate data from a wide range of locations.

The four cornerstones of **Security**, **Reliability**, **Innovation** and **Value for Money** present the IT professional with a juggling challenge as each takes precedence depending on the specific project in hand. We empathise with the modern IT Manager who must seemingly achieve the impossible, even more so in the current climate.

INCREASED FUNCTIONALITY + COST SAVINGS

The company workforce has become more and more disparate. People are no longer confined to working in a central location or main office. Modern technology has enabled employees to work from a wide variety of locations including: at home, on the move, overseas, cafes, kiosks - the list is endless. The advent of VPN technologies and faster connection speeds has also increased the expectation of workers and the managers – as both expect complete LAN-like functionality wherever they are. This technology has been adopted by a variety of industries and it has become integral to their business processes.



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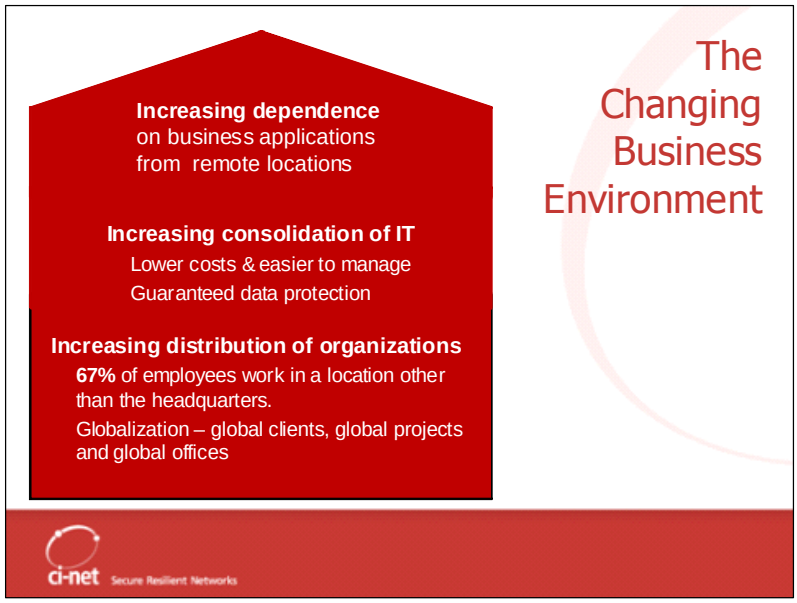
There is also an increased reliance on Internet access across most industries. There was a time when some businesses could continue about their daily work in the event of outage. This is simply not the case anymore.

Any outage can have a catastrophic affect on a business. Imagine losing web presence if orders or bookings are taken online, or consider a haulier losing access to their traffic management system. In this regard it is easy to see how a loss of connectivity can lead to a loss of productivity, sales and ultimately profit.

The requirement for Network Security is also on the increase as the threats of worms, viruses and spam advance. The solution to security problems is not always simple, particularly now that the network may include home workers, travelling sales people, engineers and suppliers amongst others.

In addition to the Flexibility, Security and Reliability demands, the key is to recognise that once these are addressed, further challenges will follow. To be mindful of future business and network requirements allows a degree of 'future-proofing' in any solution.

The current scrutiny of costs has called for a clearer definition of the business benefits of any IT solution almost before the technical benefits are unpacked. What will this technology give to my company? Will it give me back a competitive edge? Can this really save me money without compromising the network's stability? These are some of the many questions that that we hear on a daily basis.



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The answers normally begin with a review of their existing network topology. This regularly presents a number of areas in which functionality can be improved and or costs reduced.
The following document details some of the common practices in Wide Area Networking. We will continue to explain how CI-Net addresses each of these to optimise network performance, paying particular attention to two key drivers, Increased Functionality and Reduced Costs.

In summary, we will present CI-Net's Top 5 Tips for Network Cost Savings.

Common WAN Practices

Some of the common practices used in the deployment and management of Wide Area Networks are in place by design, some have evolved over time and some are a combination of the two whereby a legacy network has been adapted to suit a specific requirement.

For the purposes of this document, we have divided the questionable common practices into two headings; Pinch Points & Pitfalls.

Pinch Points: we have defined these as those areas that whilst capable of sustaining the network and business needs, there is no room for flexibility and/or expansion. This may also include specific network components where the cost makes up the majority of the network budget and as a result limits the potential for other opportunities or functionality.

Pitfalls: we have defined these as the network requirements that you cannot plan for. These could include office closures or relocations, outages at key sites and/or the sudden demand for additional bandwidth. Some Wide Area Network solutions do not offer flexibility to meet these needs.

For the purposes of this document, we will use two fictional companies, A.N.Other Ltd and Old Skool Inc, although the practices are based on real examples reviewed by CI-Net consultants.

Pinch Points – A.N.Other Ltd

Outages

Outages cause unlimited disruption to any business. A loss of connectivity can result is a loss of email, VPN services, customer facing websites, IP based telephony and many more applications. These outages translate into direct business losses in different ways. Some businesses are wholly reliant on the Internet, others have bespoke solutions that are vital to day-to-day operations, for instance many logistics companies rely on traffic management systems, most sales teams rely on

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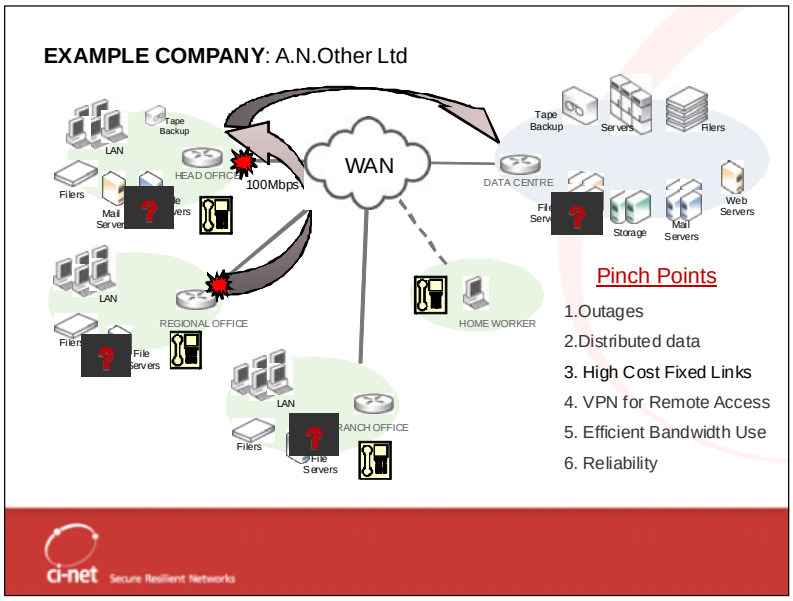

access to CRM tools and so on. As a result, even a very short outage has the potential to carry a high cost.

Distributed Data

As a result of business growth, many companies store data in a variety of locations. This may include the head office, the regional offices or in a data centre (as shown in the diagram above). Whilst offering some resiliency, distributed data carries significant costs both to support and manage the devices. In addition, this can also result in duplicated data and corrupted data,since different users may be reliant on a specific location leading to multiple versions of data files. Data corruption may compromise business processes and have a profound effect on efficiency.

High Cost Fixed Links

For many years, a traditional stand point has been that an office must have a fixed and dedicated circuit. Depending on the location amongst other factors, fixed circuits can be costly, take time to deploy, and offer limited flexibility. The potential high cost of a fixed link may deplete the budget and prevent an IT Manager from including other services within a network.

CI-Net agree that fixed links are beneficial for certain sites, however there are other means of delivering a similar performance without the associated high costs, time constraints and/or contract terms.

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VPN Remote Access

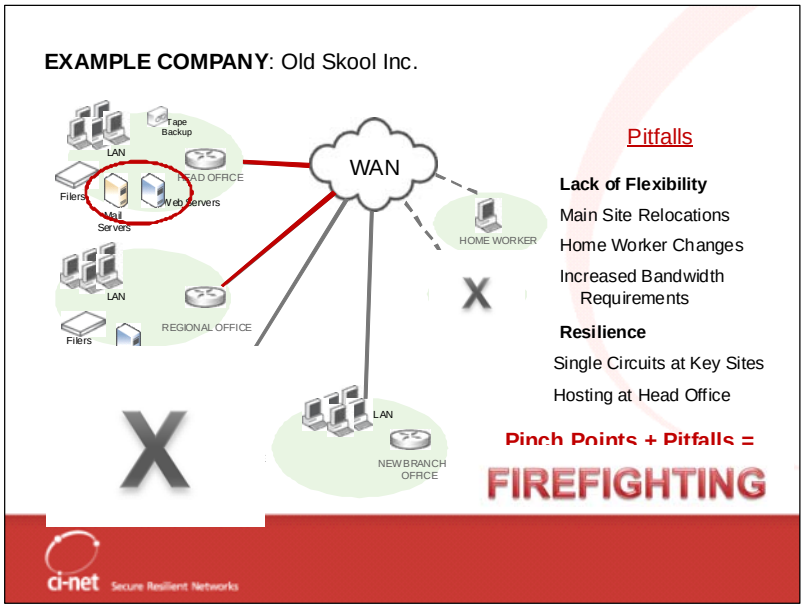
There is an increasing need for remote access, whether from home, whilst travelling or both.
A failure to deploy efficient VPN technologies or remote access tools leads to end user frustration, end user mutiny as each person designs their own "work-around", or worse – the inability to work. Without the correct tools, a remote worker's performance is dramatically impaired.

Reliability

Most IT Managers would agree that diverse routing and/or redundancy is vital. Unfortunately, the deployment of multiple solutions is not always an option due to budgetary constraints and/or the physical location of their premises. However, in the event of an outage, the need for alternate connectivity becomes paramount.

Pitfalls - Old Skool Inc

For this company, we will consider the potential pitfalls that besiege the network. Given that the pitfalls are potential problems the most effective way of exploring these is to present a number of questions. In essence how would the network deal with the pitfalls?
All of the following questions are geared towards the network of Old Skool Inc, shown below:



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Lack of Flexibility

- How does the network support business changes?
  This includes main site relocations, the introduction of additional sites and/or the closure of others
- How does the network support the change in home worker requirements?
  Home worker requirements are exceptionally fluid, people move house, staff members change, the number of home workers increases and decreases in line with the business size.
- What if a key site needed an increase in bandwidth as quickly as possible?
  Many Wide Area Network solutions offer scalability, however this can include costly upgrades and time delays depending on the technology deployed.

Resiliency

- What if there was an outage at a key circuit?
- How does the network make allowances for outages?
- Old Skool Inc currently house key servers at Head Office, if this site was unavailable how would this effect the remaining Wide Area Network?

Single Circuits to Key Sites

- How vital are these sites to the business operations?
- What would the company do in the event of an outage?
- Have any of these sites seen an outage since installation? If yes, what happened?
- If the circuit ceased to work tomorrow, what are the next actions? Who calls whom?

Hosting at Head Office

- Why are vital applications hosted at head office?
- What would the impact be on the business if these applications were unavailable?
- Is there a plan for such a situation?
- What would the business cost be if applications were unavailable to staff?
- What would the business cost be if applications were unavailable to customers?

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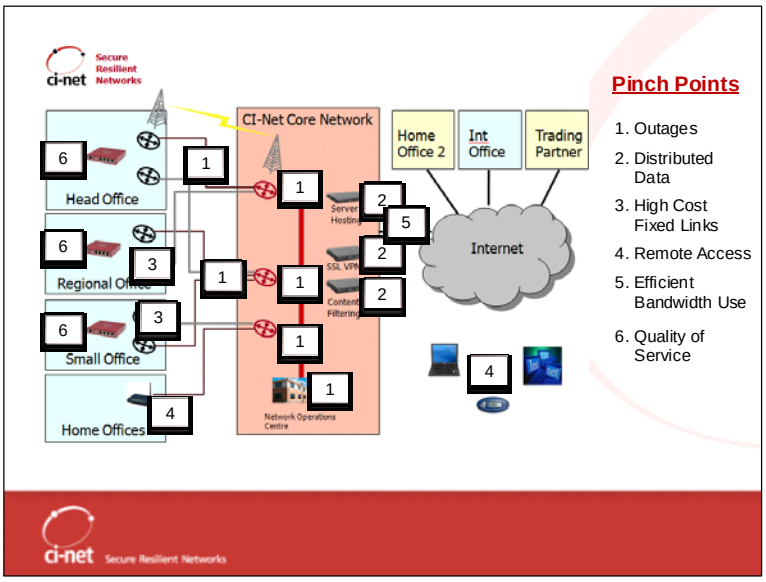
The CI-Net Wide Area Network Solution

Our WAN Solution is designed to suit our customers' bespoke requirements. It addresses the pinchpoints and pitfalls, presenting a Network that is functional, secure, reliable and flexible enough for business needs.

Addressing the Pinchpoints



1.Outages – whilst we cannot guarantee against outages – we build in as much resiliency as possible. At the customer end by deploying multiple circuits, multiple technologies in a load balanced configuration and at the CI-Net core network by ensuring that each of the circuits terminate at a different data centre (in essence emulating the use of multiple service providers).

2. Distributed Data – rather than locate key applications at the customer offices – we recommend that these are housed in CI-Net's core network – as a result any issues at the customers' offices would not impact on the rest of the network and/or customer facing applications.

3.High Cost Links – we can use multiple ADSL circuits to deliver a more comprehensive service without the need to use high cost leased lines.

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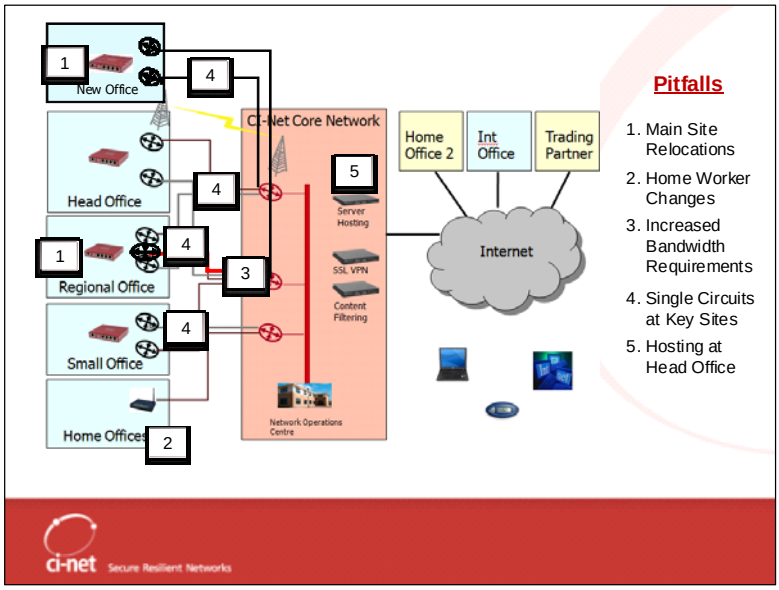
4. Remote Access – CI-Net has a variety of solutions for the remote worker – including integrating home workers into the WAN and SSL VPN technologies allowing travelling workers to access corporate information in a secure manner.

5. Efficient Bandwidth Use – we provide a central gateway for Internet access for all sites. We can apply content filtering at this point and ensure that there is an efficient use of bandwidth across the network.

6.QOS – we can prioritise traffic in line with our customers' needs.

Addressing the Pitfalls



1.Main Site Relocations

CI-Net can relocate sites either based on ADSL technologies or fixed link circuits. CI-Net ensures that the network is flexible and moves in line with business needs.

2. Homeworker Changes

As homeworkers are added to the network, CI-Net can integrate these into the network. We can ensure that the VPN traffic from these sites is fully encrypted and traverse the CI-Net network only. To ensure security, we can provide two WLANs for the home worker – one for business and one for family or recreational use.

3.Increased Bandwidth Requirements

The StoneGate device enables the network to grow steadily without the quantum leaps dictated by some networking technologies. For instance, should a site need additional bandwidth we can deploy additional broadband circuits to these sites quite simply and a relatively low cost.

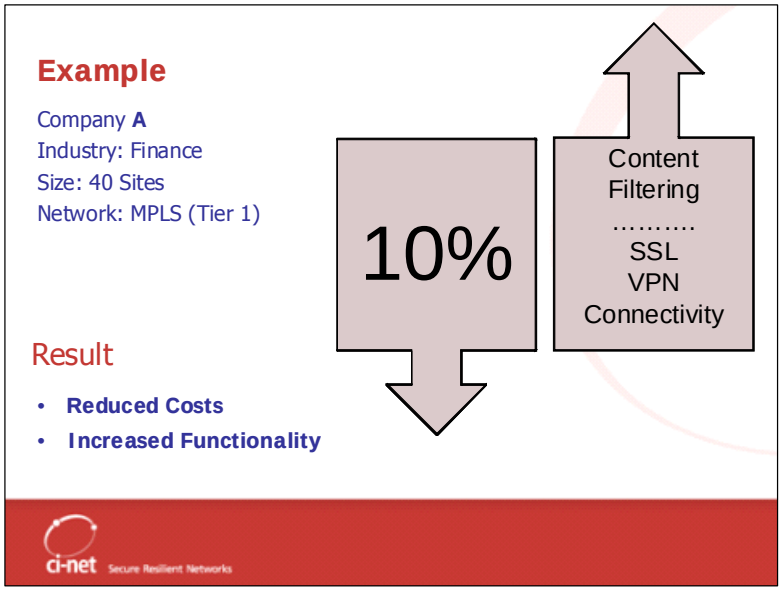
4.Single Circuits at Key Sites

We advocate the use of multiple circuits to each of the sites to ensure resiliency.

5.Hosting at Head Office

We recommend co-locating key applications inside our core network rather than at a single office. This provides much more resilience in the event of a problem at the office location.

A Recent Example



Here is an example of a customer for whom we have increased network performance, with additional functionality (the inclusion of content filtering and SSL VPN connectivity), and provided an annual cost saving of 10%.

At the initial consultation, the cost saving without these additional services was 35%. This presented the IT Manager with greater flexibility within the budget to bring in services that had been required for some time, but were unattainable due to the prevailing cost of the network.

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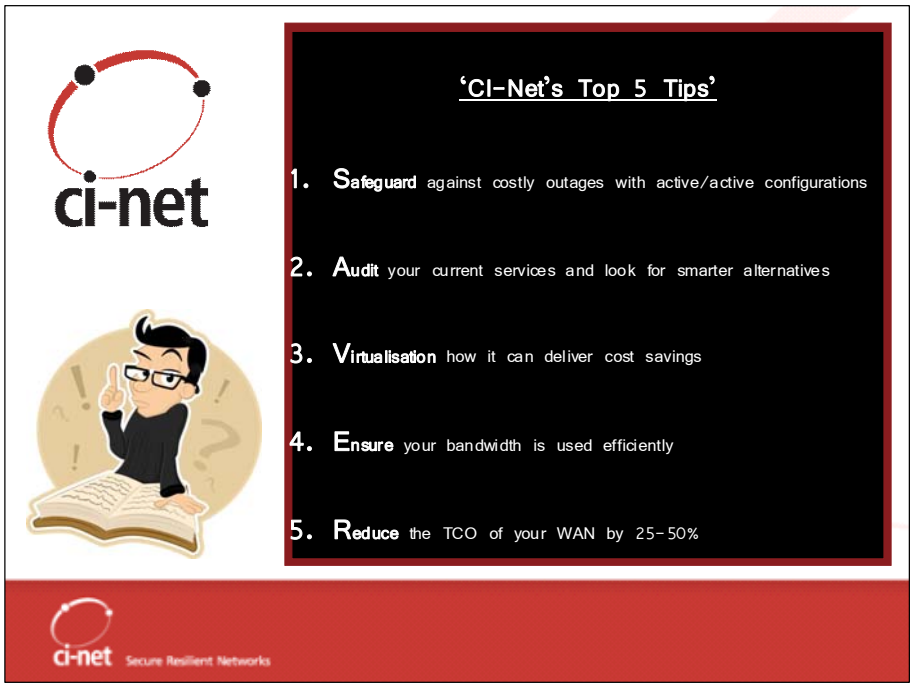
For information on other Cost Saving examples, please contact our Account Managers who would be happy to go through these with you.

Summary

CI-Net's Top 5 Tips for Network Cost Savings

CI-Net understands the paradoxical call for cost savings whilst ensuring that the Wide Area Network's performance is not only maintained but also allowed to develop. The business needs are continually changing and the network needs to meet these changes head on.



Here are CI-Net's Top 5 Tips for WAN Cost Savings. Many of you will undoubtedly be employing one or more of these already. However, we invite you to meet with us for a review of your current WAN topology.

CI-Net's SAVER Promise makes the bold claim of optimising performance whilst reducing costs. To find out more please contact your Account Manager directly.

CI-Net - A Brief History

We began as an ISP – as the Internet industry grew many of the smaller ISPs were eaten up by the large industry giants. We decided to differentiate ourselves and not suffer the same fate and became a provider of fully managed Wide Area Networks. However we still retain the backbone of ISP services to deliver bespoke networks to suit our customer needs.

We are quite small but we see this as an advantage, as it allows us to be and react very quickly. We have in excess of 3000 customers – ranging from a selection of very large blue chip organisations, a large number of SMEs and a selection of smaller operations, such as proprietorships etc.

Despite the turbulent economic climate, we are still seeing significant growth, circa 35% year on year. This has been brought about by a number of customer referrals and the recognition that our managed solution can provide efficiencies and ultimately cost savings.

Our aim is to become the recommended partner. All staff are geared towards this ethos – i.e. "did I do enough for that customer to recommend CI-Net?" We have never invested huge amounts of money in marketing and the majority of our success has come from referrals.

More information about some of existing customers can be found on our Customer Showcase via the CI-Net website, www.ci-net.com , or through your Account Manager.

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