

WHITE PAPER

The Rise of Mobile Workforce

Sponsored by: Telecom New Zealand

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October 2007

Remote Access and Mobility

Competitive pressure is forcing businesses to transform into more efficient, flexible, and innovative organisations. A re-evaluation of how businesses should operate means employees are no longer required to be chained to their desks, and those in the field have access to the same tools as those in the office. Mobile and remote workers are no longer just business travellers, but include staff working from home, or roaming around the town or city, or even the worker stuck in traffic.

Benefits of Remote Access and Mobility

Traditionally, IT departments have sought to confine all technology to the office with the hope of exerting greater control over its systems. There is now, however, overwhelming evidence of the benefits to the organisation of mobility and remote access that satisfy IT departments, accountants, human resource managers, and users alike. Several of the most important benefits of remote working follow.

- ☒ **Productivity:** Most organisations realise immediate gains in productivity upon rolling out a remote access system. In its most simple form, workers become more productive by making use of downtime while away from the office, in airports, hotels, taxis, and in between meetings. Additional benefits can be seen, however, when employees can access the network in real time while dealing with customers and business partners. Other less obvious gains can be seen when ill employees work from home rather than spreading their illness with colleagues.
- ☒ **Efficiency:** The standard office environment is unsuitable for many mobile employees making related costs such as landline and office real estate an unnecessary burden on the organisation. Providing remote access can reduce these costs, along with travel expenses associated with travelling between home, the field, and the office. Furthermore, this potentially has a positive effect on an organisation's carbon footprint, an issue that will increasingly become a consideration.
- ☒ **Business Continuity:** With downtime now measured in dollars rather than hours, the importance of always being connected is more pressing than ever. Remote access provides organisations with a secondary means of connecting during electricity outages, disasters, maintenance, or after the failure or theft of a computer.

- ☒ Flexibility: Allowing staff to work in the way that suits them provides not only intrinsic benefits to employees but tangible gains for the employer. Considering New Zealand's tight labour market, retaining staff through flexible working conditions has a long term impact on the bottom line. Additionally, the implication of trust immediately boosts staff morale.

The Rise of Remote Access and Mobility

Employees today demand to be able to work from anywhere as effortlessly as if they were in the office. Regardless of their location or means of connection, they expect to be reachable and able to access information easily. Technology advances have seen a rise in acceptance of mobility and remote working, both in New Zealand and abroad and products such as Telecom Office Anywhere and Gen-I Corporate AnyWhere allow remote access to become a reality. IDC has identified the following developments as key contributors to the rise of the mobile workforce:

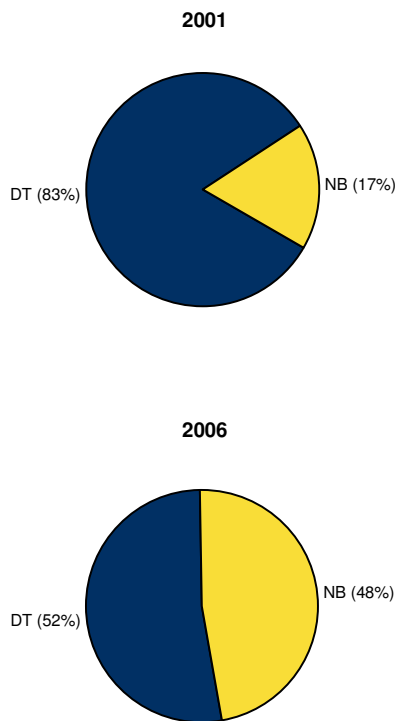
- ☒ Home Internet Access and Mobile Broadband: Home PC and Internet access penetration is high in New Zealand with a range of mobile Internet options available through providers offering access to 3G and WiFi networks. The advent of high speed Internet in the home has enabled a new breed of worker than can access the office remotely.
- ☒ Declining Cost of Mobile Access: Although mobile broadband remains expensive in New Zealand, as the service matures the price of access will decrease. Significant investment has been sunk into WiFi networks, particularly by Telecom. Various other players are also deploying WiFi networks throughout the country.
- ☒ Unified Communications: The development of new technologies that allow constant and convenient communication, mean employees are increasingly able to perform their functions away from the office. Telcos and service providers are seeking to offer products that centre on converged and unified communications, ensuring people can be reached using the most appropriate means of access available at the time. Unified communications offers a holistic view of the employees 'presence' and distance between office and employee becomes irrelevant.
- ☒ Security and Application Improvements: As the workforce in New Zealand becomes ever more mobile, businesses have found themselves open to a growing number of security concerns. Early adopters of laptop computers, remote access, and wireless networks were susceptible to unwanted intrusions, however, security advancements and the implementation of more robust IT policies have solved many of these issues. At the same time, software vendors have realised the need for light applications for the likes of sales force, CRM, logistics, and field technicians, capable of efficiently running on limited-bandwidth mobile networks.

- ☒ **Mobile Computing:** Over the last five years, technology improvements have seen notebooks become smaller and lighter, while system and battery performance have improved. Most significantly, however, the cost delta between notebook computers and their deskbound counterparts has shrunk enough to make them an available alternative. Most notebooks sold today are equipped with WiFi and over time will likely include embedded 3G or WiMAX cards. Alongside the evolution of the notebook has been the arrival of the PDA, with functionality now rivalling basic computers.

IDC research demonstrates the significant uptake of notebook PCs in New Zealand, with the form factor rising from 17% of shipments in 2001 to 48% last year (figure 1).

FIGURE 1

PC Client Unit Shipments in New Zealand, 2001 vs. 2006



Note: personal computer (PC) clients includes desktops (DT) and notebooks (NB)

Source: IDC, 2007

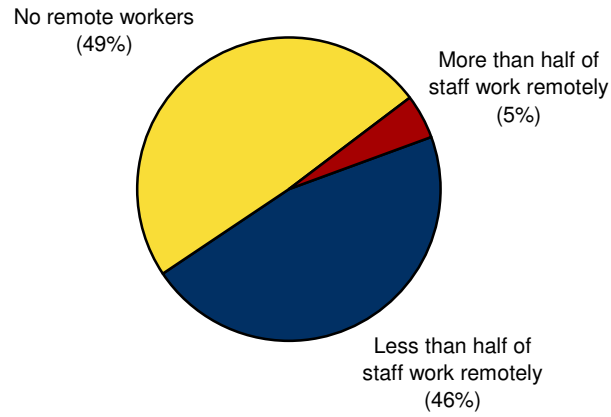
One of the most significant enablers of mobility has been the development of wireless connectivity. WiFi (or 802.11) has evolved over the last ten years from a simple means of allowing office roaming, to a fully mobile connectivity for a raft of devices. Employees are no longer tied to the desk, and can remain connected in meetings and around the office while unplugged from the traditional ethernet connection. The advent of WiFi hotspots offers a cost effective means of connecting with the corporate LAN in airports, cafés, and hotels, while in the field or travelling. A growing trend around the world is the development of WiFi mesh, an extension of the hotspot concept. Communities, hotspot operators, and ISPs are looking to blanket metropolitan areas with wireless access to enable convenient and high speed Internet connectivity. This development looks set to dramatically change the way people connect, both at home and abroad.

The proliferation of mobile broadband continues in New Zealand as cellular operators expand their geographic footprint, upgrade their networks, and extend their services offerings. In New Zealand, Telecom and Vodafone currently operate mobile broadband services, with Orcon, M2, Compass, and NZ Communications (formerly Econet) all promising to enter the fray over the next year or so. With connection performance improving and prices expected to fall, mobile broadband is becoming accessible to even the smallest of businesses. Challenges for mobile broadband operators to overcome in the next few years, however, include the expense of data cards and USB devices, international roaming coverage and charges, and balancing traffic levels with network capacity. Furthermore, the capital intensive roll out of such networks means they will likely remain confined to dense urban and suburban areas.

A study conducted by IDC in 2006 indicated that remote access is rapidly gaining acceptance in New Zealand, with more than half of businesses surveyed allowing it in some form. Around 5% of businesses reported that more than half of their employees worked remotely, while a further 46% said less than half could. The remaining 49% said they did not allow any form of remote access to their employees (figure 2). IDC believes the use of remote access will increase dramatically in the next few years with the proliferation of notebooks, mobile broadband, security, and as organisations realise the benefits of remote access.

FIGURE 2

Proportion of Remote Workers within New Zealand Businesses



Note: n = 273

Source: IDC Enterprise Mobile and Wireless Usage Preferences Study, 2006

Questions to Ask Your Remote Access Provider

There is no one-size-fits-all strategy to adhere to when deploying remote access, however, there are several issues that will inevitably arise in most cases. IDC suggests organisations ask potential providers the following questions when evaluating remote access options:

- Does it offer fast access to business resources in all places where employees may be required to work?
- Can it protect both the device and its data, while preventing it from being used to harm the corporate network or business in any way?
- Does it allow for centralised management of all remote systems?
- Does it allow for efficient deployment and administration?
- Does it allow for minimal training or expertise for end users?

Recommendations for a Remote Access Strategy

Developing a centralised and planned remote access strategy is crucial to avoid the costly exercise of managing an ad hoc system further down the road. When opening up the enterprise's network under remote access technology, control is one of the most important considerations. At the same time, however, this must be balanced with the needs of the user to ensure ease of use and to prevent employees from attempting to flout inconvenient security policies. IDC provides the following recommendations to consider when rolling out a remote access system.

- ☒ **Select a Multi-Bearer Solution:** To ensure employees are truly mobile, a remote access solution must offer ubiquitous connectivity. Historically users have been forced to take a different approach with each access method, whether it was DSL in the office, dial-up at home, 3G on the road, or a WiFi hotspot abroad. Effective remote access services offer multi-bearer features, allowing a single interface and service provider regardless of the connection type. The goal is to simplify the users' experience, minimise costly help-desk calls, and improve expenditure monitoring by consolidating the ISP bill.
- ☒ **Simplify the User Experience:** By adopting a remote access solution that requires little training or expertise, not only will the user experience less frustration, but IT departments will receive less help-desk calls. Overly-complex authentication procedures inevitably result in user workarounds that may lead to security breaches. IDC recommends the use of a single sign on approach where possible, ideally unifying network, intranet, CRM, and VPN login.
- ☒ **Demand Context Awareness:** Many networks consist of an array of users in different locations with a variety of needs. A remote access solution should recognise these differences and respond accordingly. This may include altering email settings dependant on the user's location or prioritising real-time applications when using a slow connection.

Office Anywhere

Telecom has introduced a remote working solution to its enterprise product portfolio called Office Anywhere. The Office Anywhere solution essentially provides mobile workers with access to the office network and critical business information remotely. The service provides national and international access to the office network and critical business information through a Virtual Private Network enabling a single log on, single bill and a single interface over a secure network.

Corporate Anywhere

Another remote working solution is Gen-I Corporate Anywhere. This solution provides mobile workers of larger corporations with secure access to the corporate network remotely. It is a flexible and scalable service that allows access to LAN based applications, databases and files. Corporate Anywhere can be customised to integrate with each organisations existing authentication system, desktop and remote access security policies.

Case Study: Hawkins Construction

Hawkins Construction recently celebrated its 60th birthday, having grown from a small business in 1946 to an enterprise on the verge of going global. The company employs around 200 full-time employees, located in Auckland, Hamilton, Christchurch, Wellington, as well as numerous satellite offices around the country. In the last few years, Hawkins Constructions has diversified, adding Hawkins Interiors, Hawkins Maintenance, and Hawkins Infrastructure to its portfolio of capabilities.

Two years ago, Hawkins Construction struggled with disparate IT systems that grew out of control as the company expanded. With the goal of connecting its many sites in a systematic way, a complete rethink was in order. The nature of Hawkins Constructions' business means it has several characteristics that its legacy IT systems failed to address:

- ☒ It has a large number of temporary remote sites that operate for between one and three years making connectivity both difficult and temporary.
- ☒ Many of its employees spend their days roaming between the office and multiple sites making mobility essential.
- ☒ It has global ambitions and therefore requires secure connectivity in a range of countries.

With improvements in cost, speed, and coverage, Hawkins Construction chose to ramp up its deployment of Telecom 3G data cards last year, bundling one with every new notebook. The mobile broadband connection allows project managers to work from anywhere, without returning to the office in between sites. This was particularly important for the new Hawkins Interiors business which is inherently mobile.

Additionally, mobile broadband was a considerable improvement for workers at remote sites that previously persisted with dial-up Internet access or none at all. The use of Telecom One Office allowed all of its users to connect to the company's nationwide network, regardless of their location or connection method.

A recent opportunity in Fiji was the catalyst for Hawkins Construction to deploy Telecom's Office Anywhere solution, allowing its staff to stay in touch while on the road. The company had several demands for its remote access solution, requiring that it be global, secure, reliable, quick to roll out, easy to use, and of course, cost

effective. A straightforward self-install from a USB flash drive saw staff up and running within a few minutes. Hawkins Construction staff now have the ability to connect to the corporate network from over 160 countries, as if they were in the office. The company has access to information in real time, while bidding on contracts in the Pacific and negotiating with suppliers in Asia.

Hawkins Construction has seen its organisation evolve rapidly in recent years, with access to information from anywhere and at any time which is crucial in the current business environment. The company sees technology as an enabler, allowing its staff to work in remote sites, to roam across the country, and across the world, and to conduct business more effectively in places it would have struggled to several years ago.

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