

**PRODUCTIVITY GAINS OF NEXT G™:
RESULTS ON THE CUSTOMER SURVEY**

This report was prepared for
Telstra
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Executive Summary

- Econtech conducted a telephone survey with 26 companies across 15 industries currently using the Next G™ network to obtain indicative estimates of the productivity gains that the use of the network has provided them.
- On average, the customers interviewed received a 9.3 per cent increase in productivity. Importantly, this figure reflects the average productivity gains achieved by the specific customers interviewed and cannot be extrapolated to all Next G™ customers. Further, while different case studies were conducted across different industries, this data is not suitable to make inferences about productivity gains at an industry level.
- The results of the survey showed that the highest gains in productivity are achieved by people using the Next G™ services in remote areas and by people that spend a lot of time working offsite.
- 31 per cent of the customers interviewed for this study are located in rural or remote areas.¹
- The customers interviewed have been using the Next G™ network for an average of 7.5 months.
- Considering both mobile phone and turbo card services and equipment costs, on average, the respondents are paying \$3.80² more every week for their Next G™ services (compared to the cost of the services they used before).
- There is great variation in the estimates of productivity gains amongst the 26 Next G™ users interviewed. Nonetheless, in spite of this variation, all the users interviewed reported positive productivity impacts from the use of Next G™.
- The productivity gains achieved by the Next G™ users interviewed for this study varied from 1.1 per cent to 27.3 per cent.
- In general, even after taking into account that early adopters of the Next G™ network may be users who tend to benefit more than the average, and that the more satisfied customers are likely to have agreed to participate in the case studies, the results of the survey clearly indicate significant productivity gains from using the Next G™ network.

¹ This classification is based on a commonly used classification of Australian population settlements (the Rural, Remote and Metropolitan Areas Classification, RRMA), compiled by the Commonwealth Departments of Primary Industry and Energy, and Health and Family Services.

² Customers provided monthly cost figures. To convert to weekly figures, Econtech assumed that 1 month = 4.3 weeks. Further, to calculate the cost of equipment it was assumed that the equipment is paid across 24 months.

1. Introduction

Econtech has been commissioned by Telstra to undertake a study to estimate the productivity gains stemming from the use of the Next G™ network. As part of this project, Econtech conducted a telephone survey with 26 companies currently using Next G™. The aim of this survey was to obtain indicative estimates of the productivity gains that the businesses using Next G™ have achieved.

This report describes the results obtained from this Next G™ survey. Importantly, all the information presented in this report specifically refers to the results of the 26 interviews conducted. As such, the productivity gains described here only refer to the productivity gains received by the specific customers interviewed (not by all Next G™ users).

This report is structured as follows.

- Section 2 presents background information about the Next G™ network.
- Section 3 provides a general summary of the results of the phone survey conducted for this study.
- Section 4 describes the productivity gains received by the specific customers interviewed.
- Section 5 provides an overview of the drivers that lead to customers working offsite and in remote areas having significant productivity gains. Further this section presents a brief discussion of how the interviewed customers have achieved their productivity gains.
- Section 6 presents the main conclusions from the Next G™ survey.

While all care, skill and consideration has been used in the preparation of this report, the findings refer to the terms of reference of Telstra and are designed to be used only for the specific purpose set out below. If you believe that your terms of reference are different from those set out below, or you wish to use this report or information contained within it for another purpose, please contact us.

The specific purpose of this report is to describe the results obtained from the telephone survey conducted by Econtech to obtain indicative estimates of the productivity gains achieved by specific Next G™ users.

The findings in this report are subject to unavoidable statistical variation. While all care has been taken to ensure that the statistical variation is kept to a minimum, care should be taken whenever using this information. This report only takes into account information available to Econtech up to the date of this report and so its findings may be affected by new information. Should you require clarification of any material, please contact us.

2. Background

In October 2006 Telstra launched the Next G™ network. This is Telstra's next generation wireless broadband network that delivers high-speed broadband to mobile phones and laptops in more places across Australia. Indeed, the Next G™ network is more than 100 times bigger geographically than any other 3GSM network in the country, delivering voice and broadband services to 98.9 per cent of the population.³

In particular, some the advantages of the Next G™ network are the following⁴:

- More mobile phone services – in addition to the standard voice calls and text messaging, the Next G™ network allows its users to make and receive video calls, and enjoy broadband access to the Internet.
- Improved coverage - the Next G™ network covers 98.9 per cent of the population, which represents better coverage than any other third generation network in Australia.⁵
- Laptop and PDA access – the Next G™ network can also be accessed using laptops and PDAs via PC cards.
- Faster data speeds - the Next G™ network is up to five times faster than other 3GSM networks, with typical user speeds averaging 550Kbps to 1.5Mbps.⁶
- International roaming – the Next G™ network has one of the world's best international roaming footprints, allowing customers to make voice calls in more than 140 countries and to access 3G services such as video calling and high speed data in 30 countries.⁷

These advantages can generate important benefits to businesses using Next G™. This report describes some of these benefits based on information provided by specific Next G™ users interviewed by Econtech for this project.

³ Information provided by Telstra November 2007.

⁴ Source: <http://www.fonezone.com.au>

⁵ Information provided by Telstra November 2007.

⁶ Ibid.

⁷ Ibid.

3. Overview of Survey Results

This section presents an overview of the findings from the Next G™ survey. Whilst this section provides a general summary of the survey results, the next section describes the productivity gains received by the specific customers interviewed and a brief description of the main sources of the productivity gains for each case study.

The following bullet points summarize the general findings from the Next G™ survey.

- Econtech conducted 26 interviews with business using Next G™ across 15 industries.
- On average, the customers interviewed have been using the network for 7.5 months.
- 31 per cent of the respondents are located in rural or remote areas.⁸
- 14 out of the 26 respondents are using both a Next G™ mobile phone and a Next G™ turbo card. From the other 12 respondents, 6 are using only a Next G™ mobile phone and 6 are only using a Next G™ turbo card.
- On average, the respondents are paying \$2.30 less every week⁹ for the *use* of their Next G™ mobile phone, compared to the cost paid for the *use* of their previous phone.
- On average, the respondents are paying \$5.40 more every week¹⁰ for the *use* of their Next G™ turbo card, compared to the cost paid for the *use* of their previous Internet service.
- Considering both Next G™ services (mobile phone and turbo card) and equipment costs, on average, the respondents are paying \$3.80 more every week¹¹ for their Next G™ services, compared to the cost of the services they used before.

⁸ This classification is based on a commonly used classification of Australian population settlements (the Rural, Remote and Metropolitan Areas Classification, RRMA), compiled by the Commonwealth Departments of Primary Industry and Energy, and Health and Family Services.

⁹ Customers provided monthly cost figures. To convert to weekly figures, Econtech assumed that 1 month = 4.3 weeks.

¹⁰ Ibid.

¹¹ Customers provided monthly cost figures. To convert to weekly figures, Econtech assumed that 1 month = 4.3 weeks. Further, to calculate the cost of equipment it was assumed that the equipment is paid across 24 months.

4. Productivity Gains achieved by Next G™ Customers

This section provides an overview of the productivity gains received by the specific Next G™ customers interviewed.

The surveys were conducted with 26 businesses across 15 industries from the ABS's ANZSIC classification. These industries and classification letters are as follows:

- A. Agriculture, Forestry & Fishing
- B. Mining
- C. Manufacturing
- E. Construction
- F. Wholesale Trade
- G. Retail Trade
- H. Accommodation, Cafes and Restaurants
- I. Transport
- K. Finance and Insurance
- L. Property and Business Services
- M. Government Administration and Defence
- N. Education
- O. Health and Community Services
- P. Cultural and Recreational Services
- Q. Personal and Other Services

The businesses are located in various parts of the country with 8 being from rural and remote areas according to the RRMA classification. These include Wee Waa, Murwillumbah, and Tuggerah in NSW, Ballarat, Warrnambool and Benalla in Victoria, Geraldton in WA and Tiwi Islands in the Northern Territory. The remaining businesses are located in Perth, Adelaide, Sydney, Newcastle, Brisbane, Melbourne, Wollongong, and Canberra.

The productivity gains for the Next G™ users interviewed for this study varied from 1.1 per cent to 27.3 per cent. Further, on average the customers interviewed achieved a 9.3 per cent increase in productivity. Even after taking into account that early adopters of the Next G™ network may be users who tend to benefit more than the average, and that the more satisfied customers are likely to have agreed to participate in the case studies, the survey results clearly indicate significant productivity gains from using Next G™.

To determine the productivity gains achieved by each Next G™ customer, Econtech used the information obtained through the survey. The aim of this survey was to obtain indicative estimates of the cost savings that the businesses using Next G™ have achieved in different

areas (such as travel costs, cost of their own time, time of other staff and other organisational costs). Further, the survey also inquired about the additional costs that users are paying for their Next G™ services (compared to the services they used before), to obtain the net cost savings achieved by the users of the network. These net cost savings¹² can be viewed as an improvement in labour efficiency (the same amount of output can be produced with less input – labour). Hence, Econtech transformed these cost savings into labour efficiencies (productivity gains) by calculating the cost savings per year that each Next G™ user achieves as a percentage of their annual salary¹³.

Whilst there is great variation in the estimates of productivity gains amongst the 26 Next G™ users surveyed, all the users interviewed reported positive productivity impacts from the use of Next G™. Further, the results of the survey showed that the highest gains in productivity are achieved by people using the Next G™ services in remote areas and by people that spend a lot of time working offsite (for instance, sales representatives).

Importantly, as mentioned before, the above figures reflect the average productivity gains achieved by the specific customers interviewed and cannot be extrapolated to all Next G™ customers. Further, while different case studies were conducted across different industries, this data is not suitable to make inferences about productivity gains at an industry level. An analysis of industry specific gains would require undertaking a larger number of interviews per industry.

¹² Net cost savings= cost savings achieved by user of Next G™ - additional costs faced by users for their Next G™ services (compared to the services they used before).

¹³ Annual salary= pre-tax value of remuneration package, including superannuation.

5. Drivers of the Productivity Gains achieved by Next G™ Customers

This section provides an overview of the main factors (drivers) that lead to customers working offsite and in remote areas having significant productivity gains. Further, this section presents a discussion of how the interviewed customers have achieved their productivity gains. A more detailed discussion about practical examples from specific customers interviewed is provided in Attachment A.

As mentioned before, in the case studies conducted for this report, the highest gains in productivity are achieved by people using the Next G™ services in remote areas and by people that spend a lot of time working out of the office. The main factors contributing to these customers having the highest productivity gains are the following.

- Savings in travel time – better reception and coverage has reduced the amount of travel that the people interviewed have to do. Further, greater access to the Internet whilst travelling has reduced the number of return trips to the office that respondents have to do.
- Reduced travel expenses due to reduced travel.
- Increased productivity while travelling – the Next G™ network has allowed respondents to use their travel time more productively, enabling them to work while they are travelling.
- Increased productivity while working offsite – respondents expressed that faster Internet access has allowed them to remotely access information while working offsite that they could not access before, increasing their productivity. Further, they suggest that better and increased coverage from the Next G™ network has reduced the time they spend trying to make (and receive) calls, text messages and emails without success.
- Reduced use of other staff's time – the respondents' ability to remotely access information has reduced the use of other staff's time that previously assisted to provide information to offsite workers. This frees up additional time for administrative staff to focus on other office needs.

In general, the information provided by the customers surveyed suggests that Next G™ allows undertaking tasks quicker and much more efficiently than other networks. Hence, productivity is enhanced by speeding up the tasks that would otherwise be performed by slower solutions. In addition, access to faster Internet allows for new applications, potentially allowing for more efficient and cost-effective solutions to problems. For instance, some of the actions that the interviewed customers undertook to achieve their productivity gains using Next G™ are the following.

- Use a Next G™ turbo card to access company files from remote locations and reduce the number of return trips to the office. This has also freed up administrative staff by reducing the time they spend providing information to staff working offsite.
- Use of Next G™ turbo card to access the Internet while travelling to convert ‘dead travel time’ into productive time. Further, some of the customers interviewed have also saved time by not having to connect to slower networks at hotels and /or hotspots.
- Use of video calling to provide ‘on the spot technical troubleshooting’. For instance, transmitting live images of difficult repair tasks to other team members for suggestions.
- Use of the Next G™ network to improve inventory management by recording and sending details of parts and equipment used (or needed) through the network, while working offsite.

6. Conclusions

There are two key findings from the telephone survey conducted on 26 businesses currently using the Next G™ network. First, whilst there is great variation in the productivity gains achieved by the customers interviewed, all of them reported positive productivity impacts from the use of Next G™. Second, the results of the survey show that the highest productivity gains are being achieved by companies operating in rural and remote areas and with staff that spend a significant amount of time working offsite.

In general, even after taking into account that early adopters of the Next G™ network may be users who tend to benefit more than the average, and that the more satisfied customers are likely to have agreed to participate in the case studies, the results of the survey clearly indicate significant productivity gains from using the Next G™ network.

Attachment A: Practical Examples of Productivity Gains

This attachment provides practical examples of how some Next G™ users have benefited from the use of the network. Importantly, the nature of the benefits received varied significantly, as well as the magnitude of the productivity gains. Nonetheless, all survey respondents experienced productivity benefits in some form or another.

The Rural Worker

Rural workers interviewed for this project indicated significant benefits from the use of Next G™. One particular respondent travels long distances for work to meet with clients in remote areas. Before Next G™, the respondent experienced much idle time while travelling and in these remote areas upon arrival. With the introduction of Next G™, the survey respondent indicated that they can access their office database and conduct work whilst travelling on these long journeys. Further, once at the remote location, they can access data on location and can submit their notes whilst away. Such changes have allowed this respondent to complete a significant amount of tasks on the road, freeing up their time when they return to the office to conduct additional work.

Another respondent manages the IT side of business franchises in rural areas. As with the previous respondent, often on these long journeys, much of their time was spent idle travelling to these destinations. The introduction of Next G™ has changed the behaviour of this worker because, with improved reception, they are able to access their office remotely and conduct work whilst travelling. As such, this worker now often will take the train to certain destinations, enabling them to conduct work on their laptop while accessing their office's system.

The Interstate Traveler

Some of the survey respondents indicated that they travel regularly interstate and hence spend a significant amount of time away from their desk. One particular respondent indicated that they often visit clients throughout Australia, which requires regular flights each month. Previous to Next G™, they would take notes and accumulate work on their trips that needed to be completed when they returned to their home office. Next G™ has allowed this respondent to access their work database while on the road and hence they are able to keep working during idle times on their trips. Consequently, they are able to “hit the ground running” when they return to their office, rather than spending days entering data and dealing with their backlog of work that has accumulated while they were out of their office.

The Inner City Traveler

Many survey respondents that travel within their city meeting clients have achieved significant productivity gains using Next G™. One particular respondent is a sales representative that spends much of their time out of the office seeing clients to generate business. Previous to Next G™, they would return to their office regularly throughout the day after meeting with clients, to access information from the office database and check emails. Now that they are using Next G™ they are able to stay out on the road and travel more often between clients. Such changes have reduced their travel time and also their fuel bills, translating into significant productivity gains.

The On Call Worker

Some of the survey respondents are often required to be on call to handle problems for their company when emergencies arise. One such respondent indicated that often during a month's cycle of work they would be called after hours to attend to emergency situations. This would require them to travel to their office to access information so that they could make a decision on the appropriate course of action. For this worker, the introduction of Next G™ has allowed them to access their office from home to perform the same tasks. As such, Next G™ is saving them time and travel costs for their company, including responding to the emergency much quicker.

The Tradesman

Some of the survey respondents were tradespeople that regularly travel to clients' sites to perform installations and repairs. One particular respondent noted that through their use of Next G™ they are able to avoid duplication of work by entering the details of their clients, and the particular job they are on, at the location of the job. This avoids writing details down and typing into a computer when they return to their office. Further, they are able to monitor inventories whilst out on jobs and can place orders for new parts whilst on location. Previously these tasks were either delayed until they returned to their office or they would take up valuable time of other staff in the office, by requesting assistance whilst on the job. Their use of Next G™ has reduced the duplication of their work and their use of other staff's time, translating into productivity gains.

Improved Reception

The improved coverage of Next G™ has reduced the amount of time some respondent spend diverting their trips to better reception areas. One survey respondent indicated that they often perform work on the fringe of their city, in areas that have particularly sensitive telephone reception. Previous to Next G™, they would often miss calls from their office because of the sensitive nature of the reception areas. As such, they would drive closer to a mobile phone tower to listen to their messages and return calls to their office. This reduced the amount of time they could work since they spent time checking messages, returning calls

and driving to mobile phone towers. Further, they experienced higher fuel costs. As such, Next G™ is saving them time and money, translating into productivity gains.

Faster Speeds, Lower Costs and more Readily Available Service

Other survey respondents received some productivity benefits from using Next G™ due to its faster speeds, lower costs and more readily available service. One survey respondent indicated that often they would spend time in hotel rooms at irregular locations on work trips where they need to access the Internet to work. At these irregular locations, they would spend time searching for appropriate Internet access that was not always available at their hotel. In addition, the cost of this Internet access would be high, given that they would pay premium hotel day rates. Finally, often the speed of the Internet access would be quite slow, limiting the amount of work they could do whilst away. The use of Next G™ by this respondent has eliminated their search costs for Internet access, reduced their Internet costs and has allowed them to perform more work due to its faster speeds. As such, this respondent has experienced significant productivity gains from the use of Next G™.

The Small Productivity Gainer

Whilst regular travellers and workers in rural areas have experienced significant productivity benefits through their use of Next G™, many respondent were inner city workers that did not receive particularly large productivity gains. However, whilst their productivity benefits are much lower, they are still experiencing some positive productivity benefits. Many of the reasons for these gains are the same as mentioned above, that is, accessing office information while working office site, continuing work whilst on the road, and benefits through faster speeds and better coverage. The only difference with these workers concerns the magnitude of benefits they are receiving, relative to other Next G™ users.