

The Impact of Poor Network Performance on Business Goals and Costs

A Tech Research Asia Survey Report

Commissioned by

Citrix Systems Asia Pacific Pty Ltd

Introduction & Executive Summary

This report examines the impact of poor network and applications performance upon business goals, customer engagement and financial performance.

This report provides survey details of 266 Australian & New Zealand companies. In partnership with Citrix Australia, Tech Research Asia queried organisations about a range of issues:

- Their main business goals for 2016-2018
- The impact of deployed technologies have upon companies' network environments
- The impact of emerging technologies (such as blockchain, 3D printing, etc.) on business and technology environments
- How frequently organisations experience network problems and the consequences for day to day business operations
- The common causes of network problems
- The duration and cost of network faults

Our survey data told us that:

- Business goals revolve around cost management, customer engagement and digital transformation
- Network and application performance are areas of concern for organisations in both Australia and New Zealand

Poor network connectivity costs Australian companies an average of 71 hours of lost productivity per employee per year. For a 50-person company this equates to AUD144,563 per year.

New Zealand fared a little better, experiencing an average loss of productivity of 52 hours per employee per year...the equivalent of NZD66,399 per year for a 50-person organisation.

- Surprisingly, applications such as office productivity solutions, email, and collaboration tools, are the most common workloads that degrade network performance.
- Emerging technologies are expected to bring, benefits, however over half of organisations in ANZ will need to upgrade their network performance to realise their potential.
- The majority of companies in ANZ experience at least three problems across both mobile and fixed-line networks each month.
- The productivity cost of time lost due to network problems equates to AUD144,563 / NZD66,399 per year for a 50--person company
- Firms in ANZ measure the impact of poor network and applications performance and estimate that 23% of revenue sources for Australian companies are threatened, 14% for New Zealand.

NB: Australian telecommunications provider Telstra experienced an abnormally higher number of network outages throughout the first half of 2016 which we estimate has a direct but unquantified impact on the Australian survey data presented in this report.

THE SURVEY DATA & COMMENTARY

2016-2018 Top Business Imperatives

For New Zealand companies the number one focus is customer engagement whereas Australian firms are looking to cost management (cost reduction and efficiencies). Digital transformation is a high priority, rating third for Australian organisations and fourth for New Zealand firms.

The most notable difference between priorities is around Innovation, perceived as a top 3 priority for New Zealand businesses, yet significantly lower for Australia companies (8th).

Table 1: ANZ Business Goals 2016-2018

AUSTRALIA	NEW ZEALAND
Cost Management	Customer Engagement
Revenue Growth	Cost Management
Digital Transformation	Innovation
Productivity Gains	Digital Transformation
Customer Engagement	Revenue Growth
New Services to Market	Productivity Gains
Risk Management	Better Leverage of Tech
Innovation	New Services to Market
Talent Management	Competitive Response
Geographic Expansion	Risk Management
Better leverage of Tech	Talent Management
Competitive Response	Geographic Expansion

In support of business priorities, cloud infrastructure has become an integral part of many organisations' roadmaps and both countries showed similar adoption of 'cloud first' technology strategies. In fact only 13% indicated their organisation did not have and did not intend to develop a cloud-first policy.

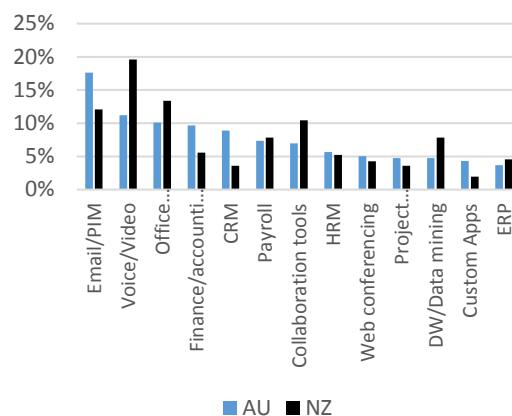
As cloud has become more available and accessible, workloads have migrated to it and data suggests this will accelerate over the coming months.

To assist with understanding the impact of workloads on cloud environments we asked organisations to identify which had the greatest adverse impact on their cloud performance.

Surprisingly for Australian organisations, even in a period of network optimised applications, old staples, email and voice/video, continue to have the greatest impact on network performance.

New Zealand companies echoed similar comments for voice/video and also pointed towards office productivity applications (such as Office 365, Google Apps for Work, etc) as its top 2 technologies that impact. (See Chart 1)

*Chart 1: Which technologies have the greatest impact on your cloud environment? (Weighted Ranking)
Australia & New Zealand*

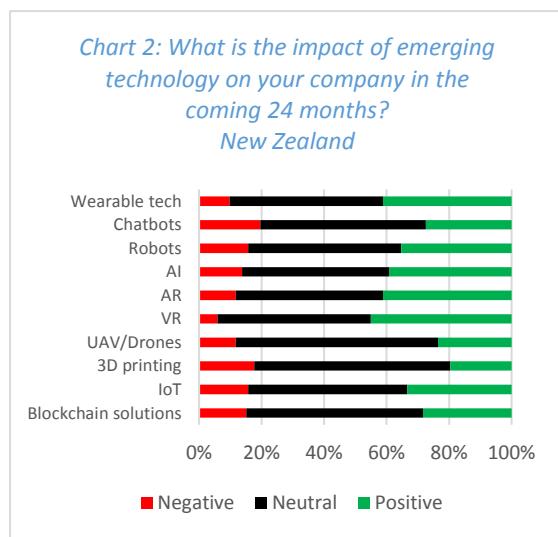


What about emerging technologies?

In many instances emerging technologies form the future building blocks of companies' digital transformation strategies. We asked our respondents two key questions – what is the expected impact of emerging technology on their business and are their networks ready to take advantage of these new technology solutions.

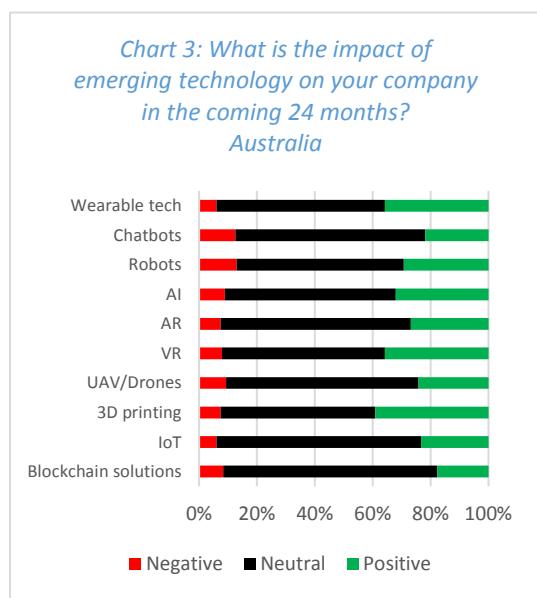
The top 5 emerging technologies expected to bring benefit to New Zealand companies include (see Chart 2 following):

- Virtual reality
- Wearable technology
- Augmented reality
- Artificial Intelligence
- Robotics



Australian companies held mostly similar views (except for the inclusion of 3D printing) regarding which emerging technologies would have the greatest benefit for their operation over the coming 24 months (see Chart 3):

- 3D printing
- Wearable technology
- Virtual Reality
- Artificial Intelligence
- Robots



The expectations for emerging technology are relatively high and positive. However the reality is that investment in these solutions will first require investment in somewhat more 'mundane' areas one of which is the networking environment:

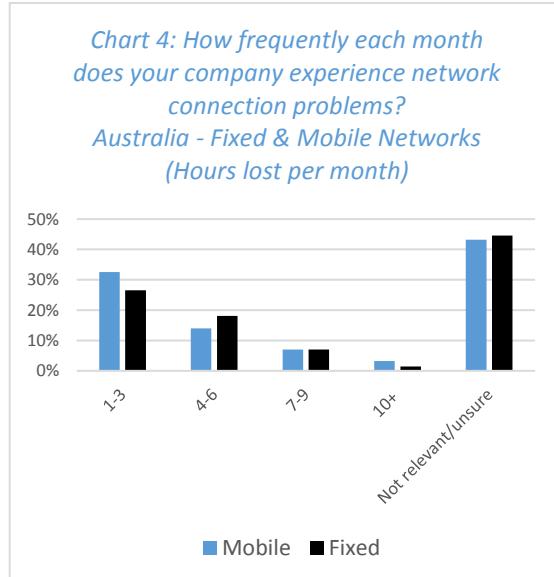
- 52% of Australian companies stated their networks would require upgrading to allow their company to take advantage of emerging technology solutions.
- New Zealand firms were slightly more critical with 55% citing a need to undergo an upgrade to their network environment.

The What, Why and How Much - The impact & cost of underperforming networks

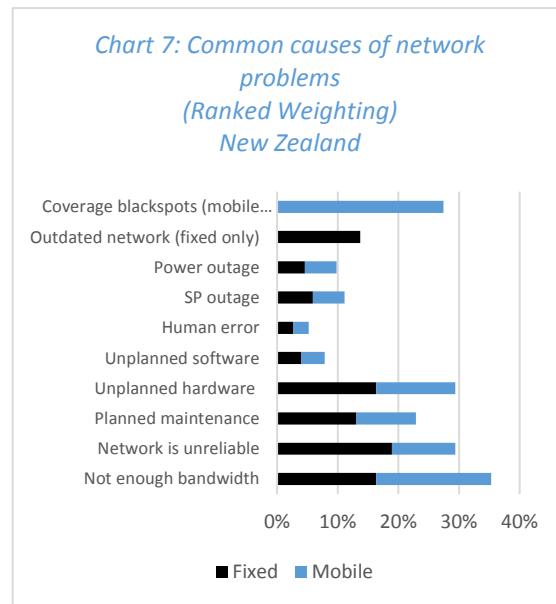
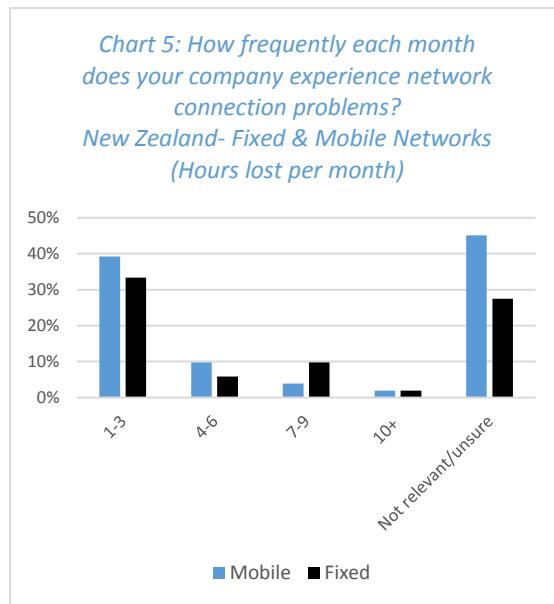
With business goals ranging across costs, revenues, transformation, customers and innovation, the performance of technology becomes a critical influence on success.

The delivery of services, applications and data through a cloud-centric model combined with the move towards a future mobilised workplace environment means fixed and mobile networks are even more important. Unfortunately their reliable performance is less than stellar as data from our survey participants indicates.

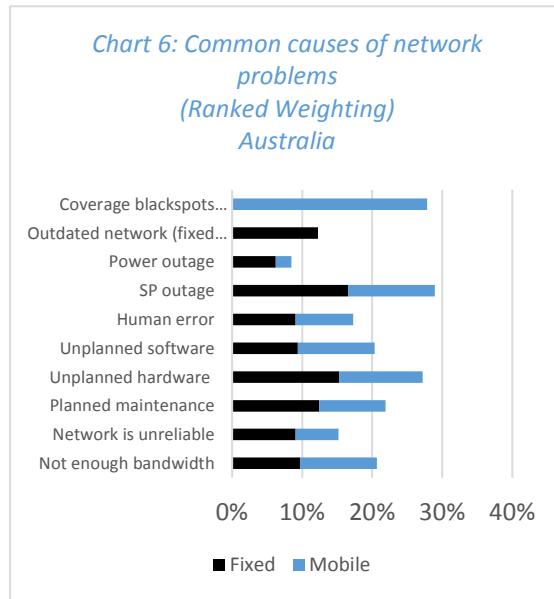
57% of Australian companies experience mobile network connection problems and 55% experience issues with their fixed network connectivity. (See Chart 4)



New Zealand organisations also experienced issues with 55% of firms citing mobile problems and 73% stating fixed network problems.



Coverage blackspots were the primary cause of mobile network problems in both Australia and New Zealand and were attributed as the second largest cause of Australian problems after Service Provider outages. Unplanned hardware failures rounded out the top 3 list for Australian companies.



For New Zealand, a lack of bandwidth was identified as the most common cause of network problems with general network reliability sneaking into second place just ahead of unplanned hardware failures.

What's the impact of Network Problems?

The impact of these network problems manifest themselves across both internal and external operations. For New Zealand companies the top five impacts are shown in the table following:

Table 2: Top 5 Outcomes of Network Problems - NZ

NEW ZEALAND	
FIXED	MOBILE
Longer to complete tasks	Customers/suppliers unable to contact
Customers/suppliers unable to contact	Lost sales
Unable to gather operations data	Unable to quickly react to customers
Lost sales	Longer to complete tasks
Lost data	Unable to access operations data

For Australian companies the top five impacts are shown in the table following:

Table 3: Top 5 Outcomes of Network Problems - AUS

AUSTRALIA	
FIXED	MOBILE
Lost data	Unable to react quickly to customers
Unable to react quickly to customers	Customers/suppliers unable to contact
Customers/suppliers unable to contact	Unable to gather operations data
Unable to find important data	Unable to collaborate with colleagues
Unable to gather operations data	Longer to complete tasks

So what's the cost?

We asked respondents how many hours were lost due to network issues.

On average, Australian organisations lost 71 hours of productivity per employee per year (split by 38 hours from mobile issues and 33 hours from fixed network problems).

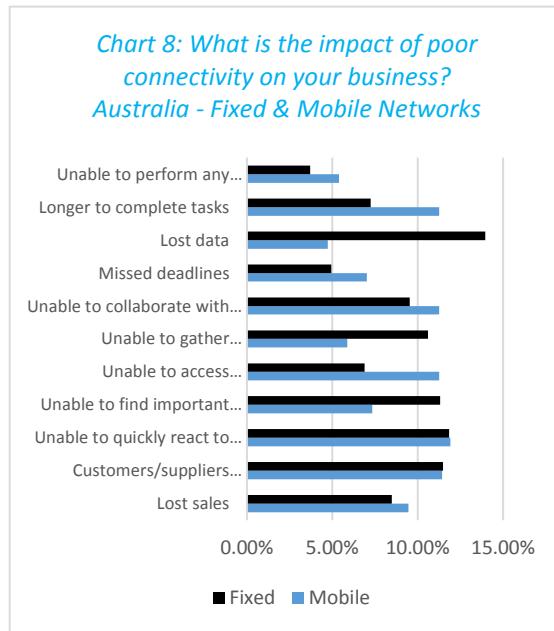
Based on average weekly full time earnings of AUD1,556.30 (Australian Bureau of Statistics, Nov 2015) and using an average working week of 38 hours, this costs an average of AUD2,891 per employee per year or AUD144,563 per annum for a 50-person company.

35% of Australian firms told us that they measure the financial impact of these problems stating that it adversely impacts 23% of a company's revenue source.

New Zealand fared a little better, experiencing an average of 52 hours per employee lost due to network problems (of which 25 hours were attributed to mobile issues and 27 hours due to fixed network issues). Using the same approach as the Australian cost calculations with data sourced from Statistics New Zealand (average weekly wage earnings NZD1,031, working week of 40 hours) equates to NZD1,328 per employee per year or NZD66,399 per annum for a 50-person company.

47% of New Zealand companies told us that they measure the financial impact of these problems stating that it adversely impacts 14% of a company's revenue stream.

However there is more than just the financial impact of underperforming networks and applications.



The data suggests that there are three key areas that are at risk from underperforming networks and applications:

- Staff performance and collaboration – time to undertake activities increases and the ability to collaborate / innovate with colleagues is adversely impacted.
- Data gathering and access – namely the inability to capture data, find data and access data for insights and analysis (and in some cases can also bring about the loss of data – a potential minefield all of its own).
- Customer engagement and interaction – lost sales revenue and the inability to contact or respond to staff in a timely manner.

In Closing

Companies have always faced competitive marketplaces. Today that competitive threat is intensified by the ability of new entrants and established firms to harness cloud-based infrastructure and services to quickly scale their businesses.

In this increasingly mobile/cloud centric world, the performance of workloads and applications across both fixed and mobile networks is critical. Companies are more real-time, more analytical and more demanding of their technology investments. However business goals are at risk from sub-standard network performance.

Poor network performance is a concern for organisation in both Australia and New Zealand with over 50% of organisations surveyed highlighting they will need to upgrade and optimise their network environment to be in a position to deliver their short to mid-term business imperatives.

As we also discussed in the report, sub-par network performance has a measurable financial impact on companies in Australia and New Zealand.

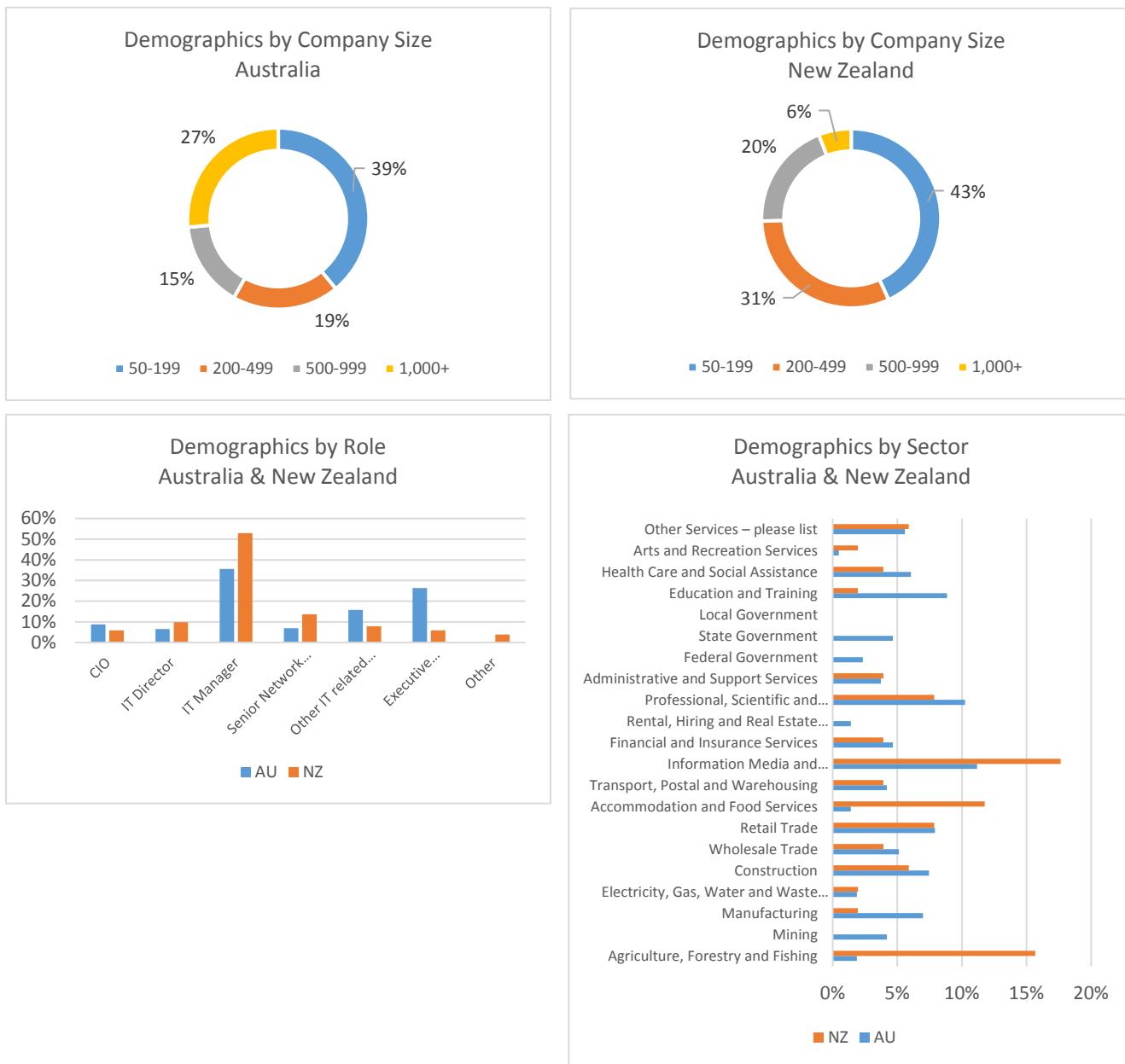
Moreover it also impacts three key areas of the business goals outlined by our survey respondents – customer sales and engagement, collaboration/innovation and data usage/analytics.

One last observation is not to forget the basics. It can be easy to for organisations to enthusiastically adopt new technology solutions whilst overlooking more mature ones. In this case our respondents cited email, voice, video and office productivity workloads as those that still had the greatest impact on their network performance. Their pervasiveness and criticality to day-to-day internal and external business operations dictates that their

optimal performance is a must have before embarking on large, strategic transformation projects.

Survey Methodology & Demographics

TRA conducted an online survey of Australian (n=215) and New Zealand (n=51) companies in June 2016. Respondents were required to hold an executive, senior IT decision maker role and have knowledge of their company's networking and application environments. Details by number of respondent roles, company size (by number of employees) and industry sector are illustrated below.



ABOUT

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