The State of IT Complexity in Australia

Ever increasing complexity is holding back digital transformation efforts and restricting cloud adoption. Reducing complexity and increasing security is high on the agenda for CIOs and businesses in Australia.

FOREWORD

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Work is no longer a place. It's an increasingly dynamic activity that people expect to be as adaptable as they are.

How we work is changing, and favouring organisations that enable employees with flexibility and personalised tools to boost productivity, engagement, and creativity. The business advantage goes to those who can recruit, retain, and empower the best talent, with the preferred tools that make technology an enabler, not an inhibitor.

Yet, every major industry is also faced with constant change and looks to technology to smooth the path to work that is faster, more efficient and flexible.

Complexity has grown exponentially. More workloads are moving to the cloud and users require more Software-as-a-Service (SaaS) applications, and maintaining and securing company data and IP is critical. At the same time, sources of data in organisations today are multiplying at an exponential rate with the proliferation of users, devices, content, apps, and networks. Meaning organisations have more rich data available to them than ever before, but data is only as good as the insights it provides and the actions that can be taken as a result.

Work has also moved outside the office walls, and businesses need a new security framework that enables flexibility, productivity, and innovation.

The future has never looked more complex. IT leaders are being asked not only to deliver IT services, but also to improve business outcomes. Employees demand anytime, anywhere access to a wide range of apps and personal devices. The cloud is offering more choices than ever before, and this requires careful orchestration of hybrid and multi-cloud environments, to drive innovation and agility. As if that weren't enough, cyber-attacks are on the rise and continue to threaten companies around the globe. IT teams must protect apps, content, users and networks.

The State of IT Complexity in Australia study explores business working environments and specifically addresses the IT challenges, security and cloud readiness of businesses within Australia.

Introduction

Today's C-suite are faced with a complexity conundrum. The pursuit of agility, productivity and workforce mobility has added more systems, applications and services, but what has been removed? Almost nothing. Complexity continues to increase and organisations in Australia are starting to feel weighed down, unable to deliver the digital transformation required of tomorrow's business.

A tangle of overlapping systems, applications, and new and old infrastructure costs time, money, and affects innovation - hindering an organisation from identifying new business opportunities.

Although complexity is inevitable, as we live in a highly distributed world, understanding the complexity and seeking ways to simplify the management of this complexity to deliver on the promise of a positive end-user experience and secure management of organisation data and IP is possible.

Research commissioned by Citrix into the state of organisational complexity and its impacts on business agility, digital transformation, security and cloud readiness, titled; *The State of IT Complexity in Australia* study, uncovers correlations between the increasing levels of complexity felt within organisations and their IT environments, and a reduced capacity for digital transformation, cloud adoption and ability to respond and prepare for new regulatory requirements and improved data security management.

The study also revealed the effect of complexity, delayed digital transformation, cautious cloud adoption and a link to lost productivity. These are some of the main concerns for businesses across Australia.

This report provides valuable insights and strategies to help businesses in Australia take back control of their complex environments and deliver flexible, secure digital workspaces that can contribute to an increase in efficiency and unlock productivity for businesses and government organisations.

Constrained by Complexity

Complexity comes from all corners of a business, exacerbated by the fact that many organisations have technology systems that are built up, added to, improved over time or inherited through acquisitions. Complexity can also come from sources outside the control of an organisation, through compliance reporting requirements and even transparency and access to information requested by customers and partners.

The pace of change, technological advancement and demands from workers to bring personal devices and applications into the workplace has increased the complexity felt by organisations at a rate never seen.

Today's organisations are feeling the impacts. Over half of Australian businesses (55%) believe their IT environments are significantly more complex, or more complex than two years ago compared with an average of 53 per cent of organisations in the Asia Pacific region and Japan.

The sheer volume of applications that need to be maintained, delivered and secured also continues to climb, with almost half (41%) of businesses in Australia using over 100 business applications. Alarmingly, seven per cent of Australian businesses reported that they didn't know how many applications were in use within their organisation, raising questions about the IT policies and management of those IT environments.

In fact, the research revealed that organisations in Australia have a huge Shadow IT problem, with 83 per cent of respondents stating that they use non-business approved applications to get work done. With Shadow IT so rampant across Australian organisations, the true number of applications accessing and using company data is perhaps unknown and unsecured; and should raise alarm bells.

The high adoption of Software-as-a-Service (SaaS) applications (57%), higher than the Australia Pacific Region and Japan average of 45 per cent, shows a willingness to adopt newer forms of technology and cloud-based programs. The adoption rates of Windows (85%), web (76%) and mobile applications (69%) follows the timeline by which each of these standards were introduced to market.

Beyond Windows and web applications, SaaS, mobile and Apple applications are in high use across each country including Australia. More apps – and an alarmingly large number of unidentified personal applications operating, unknown, in the business environment – means more complexity for IT management and added complexity for the user.

Moving Towards Digital Transformation

Although businesses are struggling under the weight of complexity, or perhaps because of it, digital transformation is well underway across the region. Australia is forging ahead, with 96 per cent currently in some form of digital transformation. However, only 21 per cent of businesses consider themselves at a mature stage of digital transformation, while 67 per cent are expected to reach maturity within the coming year.

The main reasons for undergoing digital transformation are business centric, e.g. improving an organisation's own processes rather than being driven by outside business factors. According to the findings, organisations in Australia are primarily seeking;

1. Cost savings
2. Improved productivity
3. Improved business agility

Digital transformation is not finite, it's an ongoing evolution; and the top three barriers to digital transformation uncovered in the research are;

1. Lack of budget and legacy technology
2. Lack of skills
3. Compliance and legacy applications

A digital transformation strategy, designed to reduce complexity for the end-user and for IT management, will not only unlock potential productivity from the workforce, but also increase security and improve transparency. This assists with compliance and required reporting under various laws and regulations.

Organisations must consider a long-term view of digital transformation, ultimately to manage and reduce complexity, with a focus on delivering a secure, unified digital workspace for the end-user that is simple to use, and importantly centralised and simple to manage for IT.

Concerned about Security

Security continues to be a key concern for organisations in Australia. Although this statistic is not surprising, it is telling that security remains a top concern for organisations' cloud technology, and to engage in digital transformation initiatives. Robust threat identification, management and protection is only part of the challenge faced by organisations.

The business reputational and financial impact of lax security has never been higher with the introduction of more stringent privacy and data regulations such as the General Data Protection Regulation (GDPR) legislation and related penalties.

With mandatory data breach legislation now enacted in many countries, almost three-quarters (71%) of Australian respondents are concerned about their ability to respond to requests regarding privacy policy and law.

The number one concern was the timeliness of a response for Australia, with almost half (49%) stating that they are concerned about their ability to respond to a breach in time. This is followed closely by concerns over complexity of where the data is located across different data silos and applications (42%). As businesses seek agility and competitive advantage through the adoption of cloud technologies and implementation of digital transformation initiatives, they must also address the very real possibility of threats and breaches that this opens.

Knowing where, how and who has access to company data, applications and systems across an expanding array of devices and networks, is only becoming harder. Organisations must consider a people-centric approach to security, with a holistic view of the infrastructure, regardless of where applications, data and workloads reside.

If Australian organisations cannot rid themselves of the complexity around data integration, storage and access; concerns over the ability to respond within the required timeframes will quickly change to real world fines.

Clouds on the Horizon

Cloud readiness and cloud adoption are closely watched across the region and globally. Advances in technology and reduction in capital expenditure in favour for steady operational expenditure, unlocks vital capital for improving business innovation and processes. The advantages of cloud technology are well evidenced, however opposing concerns around data sovereignty, security and access control continue to be debated in boardrooms across the region.

The study revealed that 81 per cent of organisations in Australia are already adopting cloud technology in the form of SaaS solutions delivered by well-known brands like SalesForce, Office 365 and Workday.

A high percentage of organisations (83%) are already approaching the move to cloud more strategically, and are currently developing or planning to develop bespoke cloud native applications.

Cloud native applications in use, planning or development

AUSTRALIA	CHINA	INDONESIA	INDIA	JAPAN	KOREA	SINGAPORE
83%	85%	90%	92%	50%	73%	86%
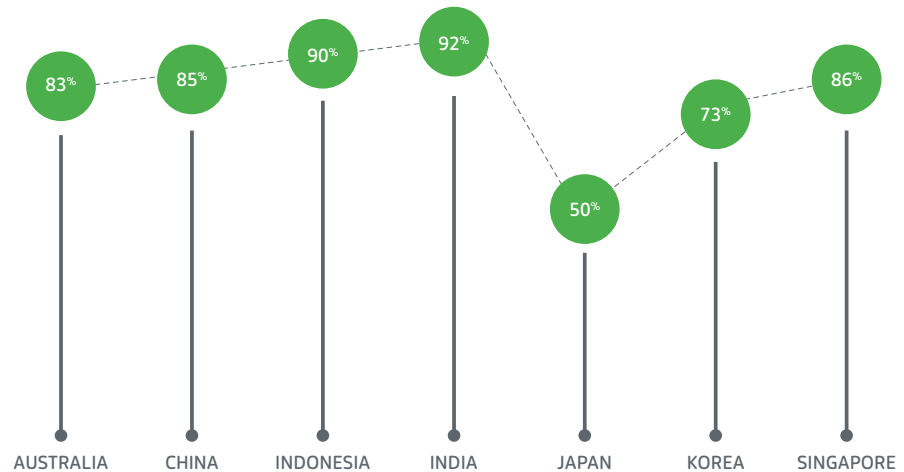
The main concerns for adopting cloud technology for Australian businesses were operational rather than being driven by external factors.

According to the findings, Australian businesses were most concerned with:

1. Maintaining security

2. Cost / ROI and vendor lock-in

3. Increasing employee productivity

In all these great statistics, there is one clear laggard - analytics. When asked if they felt that they or their organisation were missing out on the full benefits of analytics; 83 per cent said yes. Half the people who felt their analytics was lacking (42%), named concerns that the effectiveness of the analytics being run, was being hindered by the disperse nature of their data and applications.

Based on the above responses, the hybrid multi-cloud adoption trend will continue across the region for the next few years. And while this grows, organisations in Australia need to take control early, and seek out a solution that allows for a unified, contextual and secure digital workspace that enables employees to realise the full benefits of hybrid and multi-cloud environments, while simplifying management, opening clearer pathways for analytics with a holistic view, and transparency into data sets and overcoming security challenges with a people-centric approach to security.

The real strategic value of cloud adoption is as a platform for building your own applications. This will really transform business processes, how organisations do things, new ways of working and new ways of delivering those apps – this is real digital transformation and should be considered part of a broader journey.
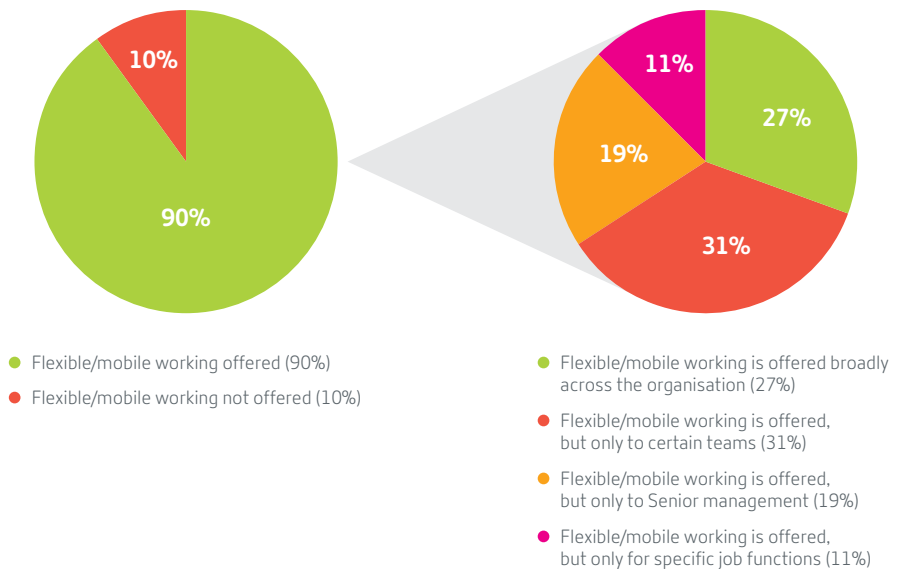
Flexibility Frustration

The benefits of flexible working are clear, and can help workers better balance their work and home lives. Happier workers are more likely to be productive and innovative. They are also likely to remain with their employer for longer, reducing recruitment and training costs and minimising disruption in the workplace.

Flexible working environments continue to grow, with Australia leading the region with respondents reporting 94 per cent offering some form of flexible working options. Yet, the study reveals that flexible working is highly restricted creating flexibility frustration.

FLEXIBLE WORKING IN APJ

- Flexible/mobile working offered (90%)
- Flexible/mobile working not offered (10%)

- Flexible/mobile working is offered broadly across the organisation (27%)
- Flexible/mobile working is offered, but only to certain teams (31%)
- Flexible/mobile working is offered, but only to Senior management (19%)
- Flexible/mobile working is offered, but only for specific job functions (11%)

As you can see with the graph above, although a generous 94 per cent of organisations surveyed offered flexible working, the reality is that only 26 per cent were offered broadly within the business, while the other 68 per cent is highly restricted; creating flexibility frustration.

Senior leadership must take responsibility for changing the culture, policies and technologies to unleash the potential of flexible working broadly within their organisation, limiting restrictions. With today's technology, flexible working can easily be implemented. It is up to businesses and government organisations to seize the day, implement policies and encourage organisation-wide culture changes to embrace flexible working, and unlock potential productivity gains from a happy, mobile, secure, and enabled workforce.

Almost all (81%) of the Australian respondents were in strong agreement that employee user experience is linked to productivity. Organisations need a secure digital workspace that integrates technologies, platforms, devices, and clouds, to secure and simplify IT management, while delivering employees personalised access to the relevant systems and tools they need, when and how they need them; ensuring excellent end-user experience and promoting productivity.

Conclusion and Recommendations

The State of IT Complexity in Australia study reveals how increased complexity is hindering organisations across Australia to successfully digitally transform their business. A strategic move towards a unified platform that simplifies the end-user experience, while securing company data and IP, has never been more important.

Providing a secure digital workspace, a single pane of glass, through which a worker can access all the applications, data and system to get their work done – that can be easily deployed and managed by IT, isn't constrained by where the data and applications are hosted or even what operating system they require – can free up time, resources and eliminate frustration that has led to Shadow IT practices.

This futuristic state outlines the ideal flexible, secure, mobile and more importantly, simple work environment. However, this is not some distant future – the future is now, and is already being leveraged by some of the world's largest businesses to overcome the complexity they were facing, simplify work and enable their workforce to work securely and seamlessly from anywhere, on any device or network.

Strategies for combating complexity; managing ever-increasing lists of security threats, while enabling your workforce to work flexibly, are outlined below:

For CIOs:	For Organisations:
Focus resources on accelerating business outcomes. Simplifying an ever-increasing complex IT infrastructure will free up resources and help the IT department drive better business outcomes.	**Enable users to work from anywhere.** Employees expect to have access to whatever device or app they need, whether they're at the office or on the go. They also expect the same seamless experience, regardless of where they're working.
Design and deliver a simplified cloud strategy. Use a centralized cloud strategy as the foundation for governing the use of cloud services across the business and IT organisation. The strategy should shift apps and data to the cloud to accelerate innovation and agility, while ensuring flexibility and control.	**Invest in innovation.** Cloud-based infrastructures can reduce cost and risk while unlocking potential productivity. It can also allow you to push the enterprise to reach new markets, implement new business models, and develop new products and services. Your cloud strategy must consider multi or hybrid cloud options — not lock you into infrastructures, clouds, endpoints, or data centers — and allow you to shift strategies as often as innovation demands.
Get serious about security. When your employees work anywhere on a multitude of devices, the old ways of securing data with firewalls and perimeters is not enough. Security must be smarter and center on the user. You need new solutions that think about security differently, focus on the user and provides people-centric security - such as a digital workspace with a secure digital perimeter.	**Be global.** Managing a dispersed workforce only adds to IT infrastructure complexity. Seek out a single unified platform that centrally manages users, devices, data, workloads, and networks, to optimally leverage global resources and comply with data governance restrictions.

Case study: Queensland Investment Corporation

Queensland Investment Corporation (QIC) in Australia required a system capable of both handling their rapid expansion into international markets, and providing their growing team with anytime, anywhere access for their people. Utilising Citrix solutions and cloud services allowed QIC to adopt a complete solution without having to have any on premise hardware or data centre requirements. This allowed QIC to consume the service without having to build or maintain it, giving them the flexibility to move quickly.

Citrix and long-term Australian IT services partner MOQdigital designed a cloud solution with virtual desktops in Microsoft Azure to help QIC achieve their goals of greater access, higher performance and flexibility to scale on demand.

The importance of these systems was exacerbated by a natural disaster in Brisbane, in which a flood caused damage to QIC's traditional data centres. It became clear that if they didn't look to cloud, they would have business continuity issues moving forward and no system for disaster recovery. Since moving to a cloud service model, QIC has gained the opportunity to redeploy their services in another region around the world in minutes.

"Citrix does help you stay ahead of the unpredictable, there's no doubt about that. They've done that for a long time and when you look at what cloud has done, they've stepped it up to another level.

Now we're able to run the Citrix workload in the cloud, so when we look at that business continuity and staying ahead of that unpredictability… Citrix provides that."

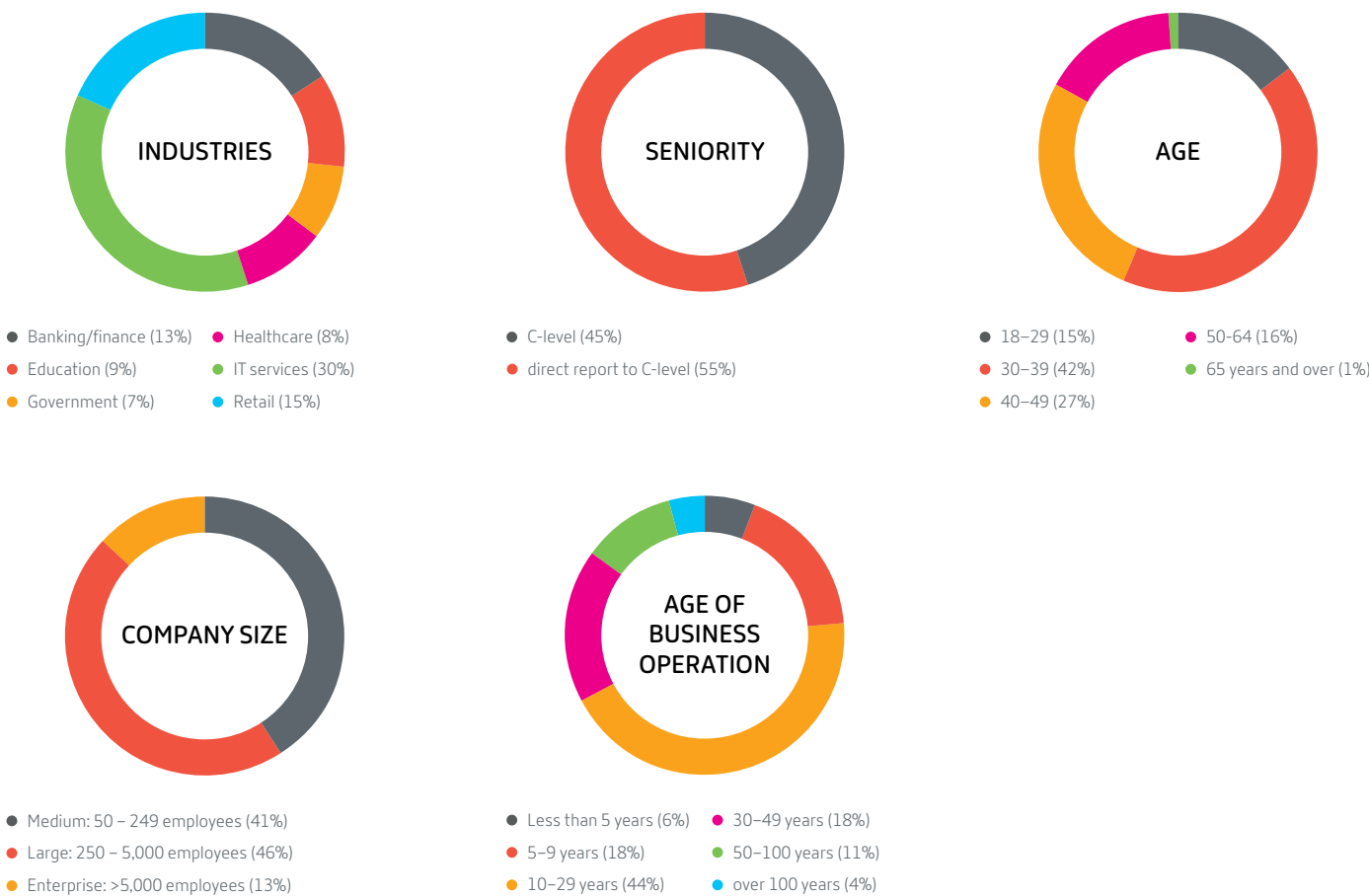**— Scott McPherson, Solutions Director MOQdigital**

Research Methodology

In preparing this study, Citrix commissioned The Glass Elevator to conduct a survey of 1,764 business and technology decision makers from various industries and government organisations in the Asia Pacific region and Japan.

The study aims to explore IT complexity challenges, digital transformation initiatives, security concerns and cloud readiness. Definitions and explanations were provided to ensure a common understanding of each response.

Responses to the survey were by invitation only. Respondents consisted of CXOs, directors, senior executives and IT managers who were required to understand their business and IT working environments.

The survey was run between 23 July and 31 August 2018 across Australia, China, India, Indonesia, Japan, Korea, and Singapore. Responses were evenly split across each of the seven markets (14%-15%) and received a minimum response rate of 100 CXOs per market.

INDUSTRIES

- Banking/finance (13%)
- Healthcare (8%)
- Education (9%)
- IT services (30%)
- Government (7%)
- Retail (15%)

SENIORITY

- C-level (45%)
- direct report to C-level (55%)

AGE

- 18–29 (15%)
- 50-64 (16%)
- 30–39 (42%)
- 65 years and over (1%)
- 40–49 (27%)

COMPANY SIZE

- Medium: 50 – 249 employees (41%)
- Large: 250 – 5,000 employees (46%)
- Enterprise: >5,000 employees (13%)

AGE OF BUSINESS OPERATION

- Less than 5 years (6%)
- 30–49 years (18%)
- 5–9 years (18%)
- 50–100 years (11%)
- 10–29 years (44%)
- over 100 years (4%)

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