IDC opinion

Both Australia and New Zealand are among the few countries in Asia/Pacific where public cloud adoption has matured from discrete SaaS-based solutions for replacement of infrastructure, such as disaster recovery/backup services, to more advanced use cases to drive digital transformation and innovation in their business environments. This broad-based public cloud adoption is beneficial for cloud adopters, with the added advantage of generating valuable ripple effects, including the creation of employment opportunities and economic growth. In this paper, IDC has identified the predominant economic impacts of public cloud adoption in Australia and New Zealand.

- Public cloud adoption in both Australia and New Zealand is expected to continue to rapidly increase in pace and size during the next four years.
  - Australian public cloud spending is expected to increase in size by 83% and grow from A$12.2 billion in 2022 to A$22.4 billion in 2026 with a four-year compound annual growth rate (CAGR) of 16%. In 2022, IDC estimates that this public cloud adoption also resulted in the creation of A$127.3 billion in revenues across the customer and supplier ecosystems, equivalent to over 5% of Australia’s annual GDP.
  - New Zealand public cloud spending is expected to almost double in size and grow from NZ$2.6 billion in 2022 to NZ$5.1 billion in 2026 with a four-year CAGR of 18%. In 2022, IDC estimates that public cloud adoption resulted in the creation of NZ$23.9 billion in revenues across the customer and supplier ecosystems, equivalent to almost 6% of New Zealand’s annual GDP.

- Increased adoption of cloud services will drive further spending in the adjacent areas of cloud security, and facilitate broader use of data mining, analytics, and integration of different sources of data to derive business insights, as customers will need to invest in products and services beyond the cloud hardware and software spend. In addition, as cloud services suppliers meet demand for public cloud through investment in new local datacentres, overall cloud spending will extend beyond just construction and maintenance of datacentres to investments in the expanded partner ecosystem, and new staffing demands. By 2026, IDC expects that growing public cloud deployments will generate over A$114 billion in Australia and NZ$21 billion in New Zealand in cumulative new revenues above the 2021 level.

- Over five years, by 2026, public cloud adoption will result in the creation of 596,750 additional jobs in Australia, and 134,000 in New Zealand, across organisations that are adopting cloud, and the suppliers of hardware, software, and services that enable the delivery of public cloud.

- As use cases for public cloud adoption proliferate, requirements for new skills will emerge, and new jobs will be created in areas such as cloud management, orchestration, and security. Additionally, leveraging cloud to drive digital transformation will also require new skills in emerging technology areas such as artificial intelligence (AI), Internet of Things (IoT), digital marketing, and digital assisted security. These new jobs will require skillsets that may not exist currently in organisations, requiring them to hire externally and/or develop those skills internally to support the expansion of use cases for public cloud.
Situation overview

Cloud adoption overview

The COVID-19 pandemic period of 2020–2021 was both a catalyst and an inhibitor for public cloud adoption. While some organisations cancelled or delayed large investments, others accelerated their cloud investments to adjust to the new working conditions and to meet the requirements of changing customer preferences. Overall, and despite declines in national GDP, adoption of cloud services has only grown because of the pandemic. Stretched IT budgets and a widespread focus on cost optimisation resulted in cloud services playing an integral role in helping organisations recalibrate their processes as they navigated through challenging times.

Both Australia and New Zealand weathered the pandemic situation better than most countries, and organisations that had already adopted cloud services prior to 2020 were better prepared to handle the challenges than those that had not. In the near term, IDC found that organisations with existing cloud migration strategies will continue to adopt public cloud services pre-emptively to improve operational processes and drive business efficiency, while others will be forced to adopt cloud in reaction to the new ways of working triggered by the pandemic.

By the end of 2022, based on lessons learned during the pandemic, most enterprises will be executing a strategy to accelerate their shift to a cloud-centric digital IT infrastructure and application services at a rate that is twice as fast as before the pandemic. Figure 1 illustrates the priority that both Australia and New Zealand survey respondents place on upgrading their IT infrastructure to a digital service delivery platform.

While cost efficiencies remain a key focus as CIOs maintain pressure on financial bottom lines, competitive advantage is being sought by implementation of new services and technology to support digital business models. With all spending under scrutiny, it's essential that 'right sizing' and appropriate use of resources and solutions are top of mind in enterprise-wide cloud strategy decisions.

Figure 1: Digital resiliency investment priority

Q. As a result of the uncertainties related to geopolitical tensions, inflation, supply chain disruptions, and managing the ongoing COVID-19 pandemic, how much of a priority will investments in digital resiliency be for the rest of 2022 and 2023?

Source: IDC’s Future Enterprise Resiliency and Spending (FERS) survey, Wave 5, May 2022 (Australia, n = 50; New Zealand, n = 50)
Note: Percentages are rounded, may not add to 100%
The adoption of cloud services is now at an inflection point, where hybrid and multicloud solutions are evolving from being a desirable option to becoming the norm for IT architecture: an indispensable service delivery infrastructure model for enterprises. Despite the historical preference for private cloud that remains influential in many organisations, the adoption of public cloud is expected to increase at a greater rate as public cloud delivers on three major organisational objectives:

- lower capital commitments
- improved agility
- faster access to new technologies to enable digital transformation

Numerous IDC surveys have revealed that most organisations currently use services from multiple cloud service providers. The availability of new technologies and new datacentres in which enterprise infrastructure can be hosted has led to new deployment options and the ability to optimise a workload’s cloud deployment model. As organisations continue to migrate workloads to these newly available types of cloud deployments, they will increasingly have an IT environment that is based on hybrid and multicloud architectures. Figure 2 highlights the current distribution of cloud services in Australia and New Zealand.

**Australia cloud adoption**

Australia was an early adopter of public cloud services and has experienced a further movement of workloads to public cloud in the last three years. The initial use of cloud services was limited to those workloads that had minimal risk. Enterprise workloads tended to use private cloud deployments to mitigate any risks involved with security and industry compliance.

Investment by global cloud service providers in Australian regions accelerated the use of public cloud services so that many organisations now feel comfortable with their use for even mission-critical applications. In the past two years, there has been an increase in the migration of new and existing workloads to public cloud platforms, especially as digital transformation programmes proliferate in organisations. In 2022, 2/3 of Australian organisations have reported that they have cloud workloads operating in production. There are a further 17% using them for test and development environments as well.

In the initial years of cloud adoption, cloud workloads were of two types: typically discrete, independent applications with which organisations were able to gain experience before moving on to the mission-critical workloads; or enterprise workloads that had requirements for high levels of security, compliance, and availability that had a strong bias to on-premises private cloud models and hosted private cloud. Today, the security and robustness of public cloud services and the breadth of offerings in public cloud, provide solutions that span public, private and hosted cloud environments to meet demanding enterprise requirements.

Figure 2: Cloud adoption in Australia and New Zealand

Q. Which of the following best describes your organisation’s adoption of cloud computing models?

<table>
<thead>
<tr>
<th>Australia</th>
<th>New Zealand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial implementation of production apps</td>
<td>Initial implementation of production apps</td>
</tr>
<tr>
<td>Broad implementation of production apps</td>
<td>Broad implementation of production apps</td>
</tr>
<tr>
<td>Used for test and development environment</td>
<td>Used for test and development environment</td>
</tr>
<tr>
<td>Running trials/pilot projects</td>
<td>Running trials/pilot projects</td>
</tr>
<tr>
<td>Discovery and evaluation</td>
<td>Discovery and evaluation</td>
</tr>
</tbody>
</table>

- 36% 26%
- 30% 27%
- 17% 17%
- 12% 13%
- 5% 17%

Source: IDC's 2022 APJ Cloud Survey (Australia, n = 100; New Zealand, n = 70)
New Zealand cloud adoption
Cloud use in New Zealand took a slightly different path. Without the early presence of global cloud services providers, initial take-up of cloud was slower than in Australia, and tended to be restricted to the larger organisations and government entities. On-premises and hosted private cloud deployments were supplemented by small-scale public cloud service deployments by incumbent IT and telecommunications service providers, supported by their global infrastructure partners.

As a result, New Zealand is slightly behind Australia in its widespread use of cloud for production workloads. However, the recent availability of New Zealand-based cloud service regions has already seen acceleration in the use of public cloud for new workloads as well as for the migration of existing applications.

Understanding local providers’ capabilities is critical
In this period of mature use of cloud services, the implementation of digital transformation initiatives by organisations has further increased the focus on newer technology capabilities that extend the digital reach of the enterprise and increase the business value of data at the enterprise. As public cloud asserts dominance as the platform for digital innovation, it is virtually impossible for organisations to innovate without leveraging all cloud technologies. This has broadly resulted in organisations moving more workloads to the cloud, allowing them access to new and emerging technologies such as low- and no-code application development tools for non-IT users, serverless platforms, containers, application marketplaces, API management services, blockchain services, IoT services, and AI-related services.

With cloud-based workloads now critical to all aspects of an organisation’s business operations, the workloads have become increasingly subject to industry regulations and government legislation compliance mandates, including data privacy. As a result, the importance of having enterprise workloads and data delivered from trusted suppliers has become a critical selection criterion. Figure 3 clearly illustrates the value placed on regulatory compliance by cloud services buyers.

It also shows how important local support from vendors and their ecosystems has become after COVID-19. During the pandemic, access to local support was one of the bigger issues facing enterprises, especially in New Zealand.

IDC found in the 2022 APeJ Cloud End-User Survey that the availability of local cloud ecosystems comprising of software providers, professional services providers, support organisations and others brings advantages to the larger enterprise ecosystem, and thus to the customers.

Figure 3: Advantages of local sourced cloud-based services and solutions

Q. What do you think are the main advantages (if any) of using local (in-country) cloud providers?

Australia

- Regulatory compliance: 14%
- Better sustainability/ lower carbon footprint: 13%
- Pricing and billing in local currency: 12%
- Fulfilling digital sovereignty requirements: 11%
- Local cloud ecosystem: 10%
- Latency-sensitive workloads: 10%
- Industry cloud services: 9%
- Governance policies: 8%
- Getting local support/consultancy: 7%
- Edge workloads: 6%

New Zealand

- Fulfilling digital sovereignty requirements: 13%
- Local cloud ecosystem: 13%
- Regulatory ecosystem: 12%
- Industry cloud services: 11%
- Getting local support/consultancy: 11%
- Pricing and billing in local currency: 10%
- Governance policies: 9%
- Better sustainability/ lower carbon footprint: 7%
- Latency-sensitive workloads: 7%
- Edge workloads: 7%

Source: IDC’s 2022 APeJ Cloud Survey (Australia, n = 100; New Zealand, n = 70)
When considering new cloud-based solutions, organisations are often adopting solutions on multiple cloud services as they seek to deliver business services that best fit their requirements, e.g., a CRM solution that makes use of public cloud services for data analytics, data storage, and security that extends the reach of an on-premises application to mobile and remote users. The resulting multicloud and hybrid cloud solutions — which include public, hosted private, and enterprise private clouds — are the catalyst for an entire set of new technologies, products, and services. In 2022, most organisations already have multicloud environments and public cloud services, with an enormous range of services tailored to vertical solutions — comprising an essential part of an organisation’s cloud strategy. It is the increasing use of specialised applications to suit specific industries that is stimulating the growth of the number of cloud service providers used by an organisation (see Figure 4).

**Figure 4: Number of public cloud providers**

Q. **How many public cloud providers is your organisation using?**

![Chart showing the number of public cloud providers](chart.png)

Source: IDC’s 2022 APJ Cloud Survey (Australia n=100; New Zealand n=70)

IDC expects that the transition to ubiquitous use of public cloud services will continue to accelerate during the next three years as digital transformation projects become more widespread.

**Public cloud spending**

Most organisations report that their spending on cloud services will continue to increase, with the experience gained with cloud service deployment during the COVID-19 pandemic cited as one of the major enablers for increases in adoption and spending. The global pandemic has become an ongoing catalyst for new business models based on digital services and products — and it is cloud computing that enables this transition.
**Australia**

IDC estimates that spending on public cloud services in Australia is expected to increase in size by 83% and grow from A$12.2 billion in 2022 to A$22.4 billion in 2026 with a four-year CAGR of 16%. SaaS applications is the largest segment, accounting for close to 60% of the market, but PaaS is the fastest growing. The availability of PaaS platforms has made it easier for software developers and independent software vendors (ISVs) to monetise their intellectual properties (IP).

**Figure 5: Australia public cloud services spending forecast: 2021–2026 (A$B)**

Source: IDC Semiannual Public Cloud Services Tracker, 2022

**New Zealand**

IDC estimates that spending on public cloud services in New Zealand is expected to almost double in size and grow from NZ$2.6 billion in 2022 to NZ$5.1 billion in 2026 with a four-year CAGR of 18%. Similar to Australia, SaaS applications is the largest segment in New Zealand, accounting for over 60% of the market, and PaaS is the fastest growing. PaaS use in New Zealand will continue to expand as more ISVs and other IP owners migrate their applications to the available cloud platforms. As in Australia, the ease of monetising IPs is expected to drive adoption for software developers and ISVs.

**Figure 6: New Zealand public cloud services spending forecast: 2021–2026 (NZ$B)**

Source: IDC Semiannual Public Cloud Services Tracker, 2022
Economic impact of public cloud

Impact on revenue

For nearly a decade, IDC has been quantifying the economic impact of cloud computing under a premise that has been proven over time: cloud computing frees up IT resources to allow more IT innovation which, in turn, supports business innovation that drives new business revenue for cloud-using organisations.

We call this an economic dividend for customers of cloud computing. Today, IT and business innovation are typically referred to as digital transformation. Of course, there is a lot more to digital transformation than just the use of cloud computing, but it is hard to imagine any digital transformation taking place without its use. Customer investment in cloud computing services drives further revenue growth for systems integrators, software providers, and professional services providers in the supplier’s ecosystem.

Australia
IDC estimates that over A$127.3 billion of suppliers’ ecosystem and customer business revenues will be generated in 2022 from deployment of public cloud services. This sum is equivalent to over 5% of Australia’s annual GDP. This amount includes revenues from customer solutions that the whole vendor and partner ecosystems deliver as part of public cloud services deployments (e.g., supporting hardware, networking, application software, and other IT professional and managed services) as well as revenues generated (directly and in-directly) by customers from the use of public cloud services. More importantly, over the next four years, by 2026, public cloud services are expected to generate over A$114 billion of new revenues above the 2021 level.

Figure 7: Revenue impact of public cloud services in Australia — new and accumulated revenues over five years (A$B)

<table>
<thead>
<tr>
<th>Year</th>
<th>New revenue (versus 2021)</th>
<th>Accumulated new revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>$22.6</td>
<td>$22.6</td>
</tr>
<tr>
<td>2023</td>
<td>$22.7</td>
<td>$45.3</td>
</tr>
<tr>
<td>2024</td>
<td>$22.0</td>
<td>$67.3</td>
</tr>
<tr>
<td>2025</td>
<td>$23.5</td>
<td>$90.8</td>
</tr>
<tr>
<td>2026</td>
<td>$23.3</td>
<td>$114.1</td>
</tr>
</tbody>
</table>

Source: IDC estimate, 2022
New Zealand

IDC estimates that over NZ$23.9 billion of suppliers’ ecosystem and customer business revenues were generated in 2022 from deployment of public cloud services. This sum is equivalent to 6% of New Zealand’s annual GDP. This amount includes revenues from customer solutions that the whole vendor and partner ecosystems deliver as part of public cloud services deployments (e.g., supporting hardware, networking, application software, and other IT professional and managed services) as well as revenues generated by customers from the use of public cloud services. Over the next four years, by 2026, public cloud services are expected to generate over NZ$21.4 billion of new revenues above the 2021 level.

Figure 8: Revenue impact of public cloud services in New Zealand — new and accumulated revenues over five years (NZ$B)

<table>
<thead>
<tr>
<th>Year</th>
<th>New revenue (versus 2021)</th>
<th>Accumulated new revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>$3.8</td>
<td>$3.8</td>
</tr>
<tr>
<td>2023</td>
<td>$4.2</td>
<td>$8.1</td>
</tr>
<tr>
<td>2024</td>
<td>$4.3</td>
<td>$12.4</td>
</tr>
<tr>
<td>2025</td>
<td>$4.4</td>
<td>$16.8</td>
</tr>
<tr>
<td>2026</td>
<td>$4.7</td>
<td>$21.4</td>
</tr>
</tbody>
</table>

Source: IDC estimate, 2022

Impact on employment

The economic impact of cloud services in Australia and New Zealand is not just about new revenue for providers of IT products and services. The impact felt is also about the jobs generated by that revenue as well as how that revenue is put to work. IDC estimates that public cloud will continue to help drive new employment, adding 596,750 jobs to the Australian economy, and 134,000 jobs to the New Zealand economy from 2022-2026. Approximately 20% of these new jobs will require specific technical/IT-related digital skills. These employment estimates reflect the changing demand for employees based on the work required to transition to and operate in cloud-focused IT organisations. Many of those technical/IT-related jobs require specialised training or certifications, but there are also jobs created in customer organisations to develop and support new products and services, and to handle increased customer interactions.

Skills shortages

According to Australia’s National Skills Commission’s (NSC) report, digital and data skills represent the fastest emerging skills in the region. The report states that over 30% of Australian and 20% of New Zealand’s job advertisements requested digital skills. The Australian Skills Classification (ASC) separates out digital skills required for most jobs and digital skills required for specific technical jobs. The latter include skills in data analysis, digital design, and computer networking (see Figure 9).
Demand for specific technical/IT-related digital skills is so high that there is a concern that organisations may not be able to fill vacancies. In Australia and New Zealand’s, there is a huge shortage of technical IT-related digital skills. The Australian Computer Society’s (ACS) annual report has highlighted this shortage since 2015, when over 100,000 IT workers were needed. By 2018, that figure had jumped to 200,000, and the 2021 report called for an extra 60,000 IT workers every year. The situation is equally serious in New Zealand. Almost all employers in the New Zealand tech sector (96%) expect the technology skills shortage to impact their operations in 2023, according to the Hays 2022/23 Salary Guide, which surveyed 2,500 New Zealand employers and employees.
Future cloud use

The ecosystem effects

The majority (if not all) of digital transformation initiatives are dependent on cloud services — for scale, access to key technologies (e.g., AI services), and access to digital supply networks and distribution networks. The increasing adoption requires more than public cloud services. To achieve successful implementation and operation of digital services, the involvement of multiple cloud providers is the normal practice. So, an investment in public cloud means that additional revenue and employment opportunities are generated for software providers and professional services providers.

Figure 10 illustrates the range of leading strategic partners for Australian and New Zealand enterprises. While the primary public cloud provider is important, others such as business consulting service providers, process automation platform providers, and data management platform providers are considered more strategic.

A trusted public cloud services platform will attract these types of software and services providers to their ecosystem, and with them comes the need for investment in staff hiring and skills upgrades.

As public cloud services become the most prolific sources of innovation in the technology and business world, it is essential that organisations have the resources to leverage the capabilities of public cloud to innovate and maintain their competitiveness. As a result, an increasing number of new developers are investing in application development for public cloud as they meet the demand for the next generation of technology-based business and consumer products and services. Cloud platforms such as PaaS and cloud marketplaces that facilitate the accelerated deployment and order consumption of applications encourage owners of specialist IP to join the ecosystems of those public cloud providers that offer the best environment in their market.

Figure 11 illustrates that both Australian and New Zealand enterprises will invest in and source from local providers in the cloud ecosystem in order to increase business resiliency and mitigate any future disruptions to supply chains and IP. As a result, the involvement in digital transformation projects of public cloud services’ ecosystem of interdependent and mutually beneficial solution providers will be an important source of future jobs and economic growth.

Q. In the future, which of the following will be your organisation’s most strategic technology partners when it comes to competing in this digital-first world?

Figure 10: Strategic technology partners

<table>
<thead>
<tr>
<th>Australia</th>
<th>New Zealand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary data management and analytics platform provider</td>
<td>18%</td>
</tr>
<tr>
<td>Primary business process automation platform provider</td>
<td>14%</td>
</tr>
<tr>
<td>Primary public cloud provider</td>
<td>12%</td>
</tr>
<tr>
<td>Primary IT orchestration/automation platform provider</td>
<td>10%</td>
</tr>
<tr>
<td>Primary IT infrastructure provider</td>
<td>10%</td>
</tr>
<tr>
<td>Primary telecoms provider</td>
<td>9%</td>
</tr>
<tr>
<td>Primary IT outsourcing provider</td>
<td>9%</td>
</tr>
<tr>
<td>Primary consulting partner</td>
<td>8%</td>
</tr>
<tr>
<td>Primary emerging digital services provider</td>
<td>6%</td>
</tr>
<tr>
<td>Primary ERP provider</td>
<td>4%</td>
</tr>
</tbody>
</table>

Source: IDC’s Future Enterprise Resiliency and Spending (FERS) survey, Wave 5, May 2022 (Australia, n = 50; New Zealand, n = 50)
Q. As a result of the uncertainties related to geopolitical tensions, inflation, supply chain disruptions, and managing the ongoing COVID-19 pandemic, how much of a priority will investments in industry ecosystem be for the rest of 2022 and 2023?

**Figure 11: Investments in industry ecosystem**

Irrespective of the industry, the use of digital technologies is now recognised as being instrumental in keeping businesses running. This was acknowledged during the pandemic, with favourable policies set out by governments and by cloud's inherent consumption-based pricing to encourage public cloud adoption across all industries. But industries were impacted in different ways and organisations' business units as well as IT groups now view cloud services and technology as a key component of innovation, business resiliency, and recovery.

Organisations in the banking, financial services, and insurance (BFSI) sector have been the largest adopters of public cloud in Australia and New Zealand, followed by the government sector. While the initial deployments of public cloud in the banking sector were restricted to non-mission-critical workloads, higher cloud maturity within the financial sector now sees public cloud being implemented for some of the most complex and critical workloads too.
Figure 12: Australia public cloud spending — industry view 2022

Source: IDC Public Cloud Spending Guide, 2022

Figure 13: New Zealand public cloud spending — industry view 2022

Source: IDC Public Cloud Spending Guide, 2022
Challenges and mitigating strategies

Despite cloud adoption reaching critical mass, new services and technologies mean that the cloud adoption journey is long. For example, multiple IDC surveys have revealed that a majority of any organisation’s workloads continue to remain on-premises. A number of contributing factors, including lack of understanding of public cloud security models, governance and compliance, and lack of skills, have hindered the adoption of public cloud.

In addition, the pandemic and its aftermath, while testing the promises of cloud’s agility, scalability, flexible consumption, automation, and global reach, have also brought to the forefront some of the challenges of cloud consumption.

### Challenges

<table>
<thead>
<tr>
<th>Skills availability</th>
<th>Managing cloud environments requires specialised skills. The availability of these skills has not been able to keep up with the demand. Lack of skills will inhibit further scaling up of cloud adoption.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical debt</td>
<td>Technical debt refers to the side effects of prioritising time, money, and workarounds over quality in the delivery of enterprise IT.</td>
</tr>
<tr>
<td>Governance and compliance</td>
<td>As organisations increase their cloud adoption and cloud workloads become more critical to the enterprise, the complexity of issues related to application workload compliance also increases.</td>
</tr>
<tr>
<td>Security</td>
<td>Security has been both an inhibitor and driver for public cloud adoption. In addition, technologies such as IoT and edge introduce another layer of technology to the enterprise IT portfolio that are required to be securely managed.</td>
</tr>
<tr>
<td>Vendor lock-in and interoperability</td>
<td>Lock-in to proprietary cloud services remains a concern for many enterprises. In addition, as organisations adopt hybrid/multicloud models, they will need help to interconnect and manage these environments.</td>
</tr>
</tbody>
</table>

### Strategies

<table>
<thead>
<tr>
<th>Skills availability</th>
<th>Engage employees in training or certification programs. Cloud vendors are offering certifications and, in some cases, (discounted or) free training programmes to keep up with the demand for cloud-related skills. Use managed services from experienced ecosystem partners.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical debt</td>
<td>Initiate or strengthen your strategic architecture initiative as well as your IT asset management programme. Plan an integrated organisation-wide approach to remediation; review and update often. Consider the aspects of technical debt that you may be introducing with every new “go live”.</td>
</tr>
<tr>
<td>Governance and compliance</td>
<td>ISVs and other cloud providers continue to add country-specific compliance to their products. The larger cloud providers have invested heavily in building compliance frameworks to enable ease of adoption and cloud management, with many provided by their ecosystem partners. This local participation is very valuable, as these programmes can make a large improvement to the implementation costs and timeframes. Compliance and security teams need to build out detailed compliance plans that summarise how the organisation and its cloud providers will satisfy each one of the requirements imposed by each regulation.</td>
</tr>
<tr>
<td>Security</td>
<td>Consider security from the beginning of cloud deployments. When doing so, security should be viewed holistically across on-premises, hosted, edge, and public clouds. Organisations will be required to take the ‘zero trust’ approach that provides stricter access to applications from external sources and allows users to have basic access to applications when inside the perimeter.</td>
</tr>
<tr>
<td>Vendor lock-in and interoperability</td>
<td>Some vendors have responded to customer concerns of vendor lock-in and are now offering platforms to manage and connect multiple clouds. In addition, open standard initiatives offerings, as well as technologies such as containers, also allow for portability.</td>
</tr>
</tbody>
</table>

Source: IDC, 2022
IDC White Paper | Public Cloud Services Opportunities and Dividend to the Australian and New Zealand Economies

IDC predicts that through 2023, coping with technical debt accumulated during the pandemic will challenge 50% of CIOs. This technical debt is a result of what were imperative but necessarily fast-tracked implementations of solutions for new, remote working arrangements after the onset of COVID-19. CIOs acknowledge that during the critical 2020–2021 COVID-19 period, some sub-optimal solutions were selected and put into use to meet urgent needs, creating a future support problem and associated technical debt.

Continuing business success despite the risk from ongoing use of old systems can result in more debt as more workarounds create lock-in with system users. In some cases, users may be so attached to old systems that they keep using them even when they are replaced — highlighting the need for a good asset management approach. And business success can also make it harder to obtain budgets to resolve the risk. Arguments against resolution include sentiments along the lines of “If it’s not broken, don’t fix it”, and “It works fine the way it is”.

One cost of change is slowing down customer responsiveness. However, not all businesses see the trade-off between a period of slowness with a defined end date and a more gradual, seemingly interminable slowdown that eventually brings digital progress to a total halt.

Investing in right sizing enterprise cloud environments and integrating these with older stop-gap solutions will help minimise the burden of technical debt.

Advances in cloud services and the new deployment options are moving cloud-based workloads into a core enterprise position, with higher levels of interdependency and data-sharing. With that enterprise role comes a new focus on governance and compliance.

When it comes to governance, most organisations across Australia and New Zealand are facing challenges; IDC’s 2022 Future Enterprise Resiliency and Spending (FERS) survey showed that cloud adoption is outpacing capabilities of both providers and IT organisations to effectively govern the resulting application portfolios.

IDC recommends that organisations should work with their providers during the solution assessment process to consider not only the product, but also the capability of the provider and their ecosystem partners to efficiently and effectively provide the services and tools for solution implementation and ongoing management. The results of the FERS survey highlight the need for clarity about application interoperability needs, multicloud management and procurement practices. When cloud skills are in short supply, it is imperative that best use is made of the available services and tools that providers offer.
Q. Which aspect of cloud governance are the biggest roadblocks to your organisation’s ability to take full advantage of your cloud platform approach?

**Australia**
- Insufficient standardisation & consolidation of procurement & consumption across cloud operators & ISV & services partners: 36%
- Proliferating data privacy regulations (e.g., GDPR, CCPA): 36%
- Insufficient federation of data across locations/applications: 30%
- Lack of visibility into infrastructure availability/use/security: 28%
- Lack of visibility into data and data flows: 28%
- Insufficient automation of service provisioning/configuration: 26%
- Insufficient ability to optimise costs and reduce waste: 24%
- Lack of agreement across IT, Dev and LOB regarding standards/policies: 24%
- Shortage of people with cloud governance skills: 22%
- Policies on workload/data placement: 20%

**New Zealand**
- Insufficient standardisation & consolidation of procurement & consumption across cloud operators & ISV & services partners: 36%
- Insufficient ability to optimise costs and reduce waste: 30%
- Proliferating data privacy regulations (e.g., GDPR, CCPA): 23%
- Insufficient automation of service provisioning/configuration: 23%
- Lack of agreement across IT, Dev and LOB regarding standards/policies: 23%
- Insufficient federation of data across locations/applications: 20%
- Shortage of people with cloud governance skills: 17%
- Lack of visibility into infrastructure availability/use/security: 10%
- Policies on workload/data placement: 10%
- Lack of visibility into data and data flows: 7%

Source: IDC FERS Survey, Wave 5, May 2022 (Australia, n = 50, New Zealand, n = 30)
Essential guidance

Cloud adoption comes with a whole host of new hurdles, from adoption strategies to cloud economics and multicloud management strategies. The choice of different cloud vendors as well as multiple deployment options are adding to further challenges. Organisations need to develop a cohesive cloud adoption strategy that creates a framework for management to navigate the changing cloud landscape while staying focused on business priorities.

Develop a long-term vision

The cloud has already changed how IT is architected and operated. Early choices made on platforms, resource management, and operational workflows can create long-term obligations that potentially limit agility and growth opportunity.

Plan for hybrid multicloud

Most companies will land on a cloud adoption strategy architected around a hybrid of public and private cloud platforms. Planning for integration and management of multi-cloud environments will be crucial.

Address governance policies and processes early:

Gaining maximum value from new digital workloads is increasingly dependent on relationships with other internal and external workloads and data. These added complexities mandate robust governance — across security, privacy, sourcing, and budget management. The critical areas for attention include:

- Gaining visibility across your cloud infrastructure with goals of:
  - Having a complete picture of user access by tying individual cloud access to managed identities.
  - Maintaining a comprehensive understanding of the underlying data access models across the different cloud platforms to fully understand all access paths.

- Managing federated access
  - Leverage existing enterprise directory structures to provide federated user access to the cloud.

- Tightening identity governance
  - Automation is fundamental to the success of governing access across multicloud environments. It starts with automating the creation of policies that govern identity in a multicloud environment. Monitoring the enforcement of these policies and guidelines needs to be constant in dynamic multicloud environments, with the ability to quickly generate alerts when violations are detected.

Choose the right partner

The move to cloud requires a systematic approach including choosing the right partners that align with your organisation's vision, desired objectives, and culture. Selection criteria must expand from the fit with business and technical requirements to include business continuity and disaster recovery (BC/DR) and partners' trust and risk profiles to ensure your enterprise’s resiliency as well as the congruence of their business with yours.
The partnership will see BOQ become the first Microsoft Cloud for Financial Services customer in Australia and New Zealand and will help the bank, the sixth largest in Australia, to simplify its digital landscape and provide more modern and personalised banking services for customers across its channels.

BOQ is already a leading user of Microsoft solutions (e.g., Azure, Azure data and AI, Microsoft Dynamics 365, Microsoft Power Platform, and Microsoft 365) in Australia. This partnership will broaden that relationship to accelerate delivery of outcomes providing customer, and employee, value.

The strategic partnership is built on three pillars:

1. Establishing strong foundational capabilities and efficiencies
   The first pillar of the partnership will see Microsoft help build the next-generation best-in-class cloud environment for BOQ that both minimises operating costs and gives the bank the agility it needs to meet changing customer expectations.
   This includes accelerating the migration of BOQ’s six datacentres to Azure by 2025, which will enable the banking group to innovate at greater speed across all its brands, enhance its security and risk controls, and reduce its carbon footprint.

   BOQ’s transition to Azure is expected to drive greater efficiencies for the company as its legacy on-premises servers are retired. Microsoft will provide BOQ with direct access to its product teams and engineers to support the transition.

   BOQ also aims to simplify its technology environment by halving the number of internal applications as part of its broader cloud migration. This includes leveraging Microsoft’s Common Data Model and Cloud for Financial Services to accelerate its transformation end-to-end.

   In addition, BOQ will consolidate and enhance its customer engagement platform in Dynamics 365 to reduce complexity and improve the experience it delivers to customers.

2. Delivering intuitive banking experiences
   The second pillar will focus on transforming BOQ’s employee and customer experiences through the creation of a single 360-degree customer view across its brands, through the Microsoft Cloud for Financial Services.

   Microsoft will also expand BOQ’s Dynamics 365 capabilities to help the bank streamline customer processes across all brands and channels and modernise the system used by frontline employees in branches.

   As part of the agreement, Microsoft will co-design customer journeys that are suitable to the Australian market, with BOQ enabling rapid adoption.

3. Driving a culture of innovation
   The third pillar will focus on creating growth for BOQ. Microsoft will help the banking group develop innovative new products and capabilities, which could also be shared for broader use on the Microsoft Azure Marketplace. Microsoft’s senior leadership team is also committed to sponsoring and directly participating in a bespoke co-innovation programme with its BOQ counterparts.

   The partnership will also enable ‘ecosystem banking’ through collaboration with the financial industry and other partners, reinforcing a culture of innovation within the banking group.

   Furthermore, Microsoft will help BOQ connect technology to its sustainability goals.

Microsoft are long-established tech innovators and, for BOQ, the Microsoft Azure platform and Cloud for Financial Services environment will offer new opportunities to drive simplification and improve the experience of our customers and bankers.

— George Frazis, CEO and Managing Director, Bank of Queensland
Customer highlight — New Zealand

RealMe
The fresh face of digital government: RealMe gets a public cloud makeover

For more than a decade, millions of New Zealanders have used digital authentication and identity verification platform RealMe to access government services, from applying for student loans and allowances to accessing tax information and applying for a New Zealand passport. Essentially, one login to access to 163 services (and counting). But like many teenagers, RealMe was starting to feel a little insecure and unprepared for the fast-changing demands of modern life. To give it a stable future (and save taxpayers a large bill in the process), the Department of Internal Affairs (DIA), following a competitive procurement process, selected citizen identity management experts UNIFY Solutions to create a more secure, scalable, and easy to use service built on Microsoft’s Azure public cloud platform. Now New Zealanders have world-leading access to the services they need, and their digital information is safe for many years to come.

Designing for trust
Transferring 163 services across 56 public sector agencies to the cloud is — naturally — a task that takes skill and planning. And above all, trust. UNIFY Solutions understood this well. As a premier provider of identity management solutions to New Zealand’s public sector, it too runs on trust, being responsible for ensuring the most stringent requirements are met. This mindset made a big contribution to UNIFY being an ideal Microsoft partner for delivery of this mission-critical project.

UNIFY’s global track record of managing Azure cloud services for public sector organisations, including the Ministry of Education and New Zealand Police, was instrumental in sealing the deal, backed up by strong support from Microsoft’s own product engineering teams. In December 2019, work began.

Migrating the team of five million
Phase one was mapping the RealMe interface into Azure, mirroring the same customer flows, from login to changing passwords and signing up for an identity — across all government services. Throughout the process, regular independent privacy assessments were carried out, so any issues such as managing administrator access, data logs, and helpdesk provision were managed along the way. Via Azure AD B2C, which specialises in identity and access management, separate ‘privacy domains’ were also created to ensure customers’ interactions with one agency were not shared with the others, protecting their personal information and privacy. To complicate matters, however, while different agencies were at different stages of cloud maturity, with a range of vendors providing their legacy services and helpdesks, all of them had to be integrated into a single Azure service managed by UNIFY. And all five million-plus customer records then had to migrate to the new platform in one go. Not only that, the new platform had to roll out quickly to avoid disrupting those same services, and also avoid creating any hassles for customers such as needing to reset their usernames. Even a global pandemic couldn’t stop the UNIFY and DIA teams getting the newly cloud-based RealMe platform live in just 18 months — with the rollout all managed within 48 hours.

Reaching the promised land
Tim Waldron, Business and Market Development Manager for RealMe, is full of praise for the new Azure platform, which has saved the DIA (and taxpayers) costs from day one and made adding updates and new capability a much faster process. With all kinds of off-the-shelf solutions available, the DIA doesn’t have to do all the heavy lifting when it comes to design, and security updates are automatic.

For customers, their privacy and security are assured and self-service tools will continue to be enhanced. The flexible cloud platform also enables the DIA to explore even further options that provide New Zealanders with more personalised experiences such as choosing the authentication methods they prefer. For clients, integrating with RealMe is now quicker, easier, and less expensive, with many agencies also moving to cloud solutions.

Source: Microsoft News Centre
About the Analysts

Linus Lai, Research Vice President, IDC Asia/Pacific

Linus Lai is a member of the Asia/Pacific Software and Services Research Group. He has more than 20 years of IT experience in the region. Based in Sydney, Australia, he has experience in several cloud, software, and services programmes in Asia/Pacific excluding Japan (APEJ), which covers a wide range of technology and services markets across 13 countries.

In this role, he is responsible for providing insights and analyses in enterprise adoption, integration, and management of these solutions. This includes sourcing strategies, vendor selection, and identifying emerging trends in business and technology solutions across technology buyers in the region. Linus is a founding member of IDC Asia/Pacific’s Emerging Technology Advisory Council and is a recipient of numerous awards for country, regional, and quality research contributions. In his previous role as head of research in Southeast Asia, he developed and grew IDC’s presence in the region.

Linus holds a master of science degree from the University of Lincoln, United Kingdom.

Louise Francis, Country Manager, IDC New Zealand

Louise Francis is the New Zealand Country Manager and the Research Director for IDC Australia and New Zealand (ANZ). Louise is responsible for leading and managing IDC New Zealand’s local team and she is the head of the ANZ research programme.

Joining IDC in 2008, Louise has over 30 years of experience in the ICT sector within both vendor and end-user organisations. She holds a bachelor of business studies degree with first class honours from Massey University, graduating with a double major in marketing and communications. She also holds a bachelor of science (biology) degree from the University of Auckland.