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Public Cloud Services Opportunities and Dividend to the New Zealand Economy

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IDC Opinion

IDC believes New Zealand is one of the few countries in Asia/Pacific where public cloud adoption has matured from discrete software-as-a-service (SaaS)-based solutions, such as disaster recovery/backup services, to more advanced use cases to drive digital transformation and innovation. This broad-based public cloud adoption is beneficial for cloud adopters, but it also has valuable ripple effects, creating employment opportunities as well as growth for the economy. In this paper, IDC has identified the predominant economic impacts of public cloud adoption in New Zealand.

- Public cloud adoption in New Zealand is expected to more than double in size and grow from NZD1.7 billion in 2020 to NZD3.5 billion in 2024 at a five-year Compound Annual Growth Rate (CAGR) of 20%. In 2020, IDC estimates that this public cloud adoption also resulted in the creation of NZD12.7 billion in direct revenues across customers' and suppliers' ecosystem, equivalent to 2.1% of New Zealand's annual gross domestic product (GDP).

- Cloud adoption will drive further spending in the adjacent areas of cloud security and facilitate greater use of data mining, analytics, and data integration for business insights, because customers will require additional budgeting beyond the cloud hardware and software spend. In addition, as suppliers meet the demand for public cloud through investment in new local datacentres, spending will extend beyond just the construction and maintenance of datacentres to new sales and professional staff, as well as to the extended partner ecosystem. By 2024, IDC expects that growing public cloud deployments will have generated NZD31 billion in cumulative new direct revenues above the 2020 level.

- Over the next four years, public cloud adoption in New Zealand will result in the creation of 102,000 additional jobs across organisations that are adopting cloud as well as the suppliers of hardware, software and services that will help in the delivery of public cloud.

- These newly created jobs will be significantly different from the existing skill sets within an organisation. Organisations will increasingly seek individuals that have a good mix of business and technical knowledge. As use cases for public cloud adoption proliferate, 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, digital assisted security, cloud management, and so forth.

$31B
4-year accumulated new revenue

102K
new jobs

Situation Overview

Cloud Adoption Overview

New Zealand has been an early adopter of cloud services and has further witnessed an accelerating movement of workloads to public cloud in the last three to five years. IDC expects that the transition to public cloud will only accelerate in the upcoming years.

In 2020, the COVID-19 pandemic was both a driver and inhibitor for public cloud adoption. Whereas some organisations cancelled or delayed large investments, others accelerated their cloud investments to adjust to the new working conditions and meet the requirements of changing customer preferences. Overall, and despite a steep decline in the country's GDP, the adoption of cloud services has only grown because of the COVID-19 pandemic. Dwindling IT budgets and a widespread focus on cost optimisation have resulted in cloud services playing an increased role in helping organisations recalibrate their processes as they navigate through challenging times.

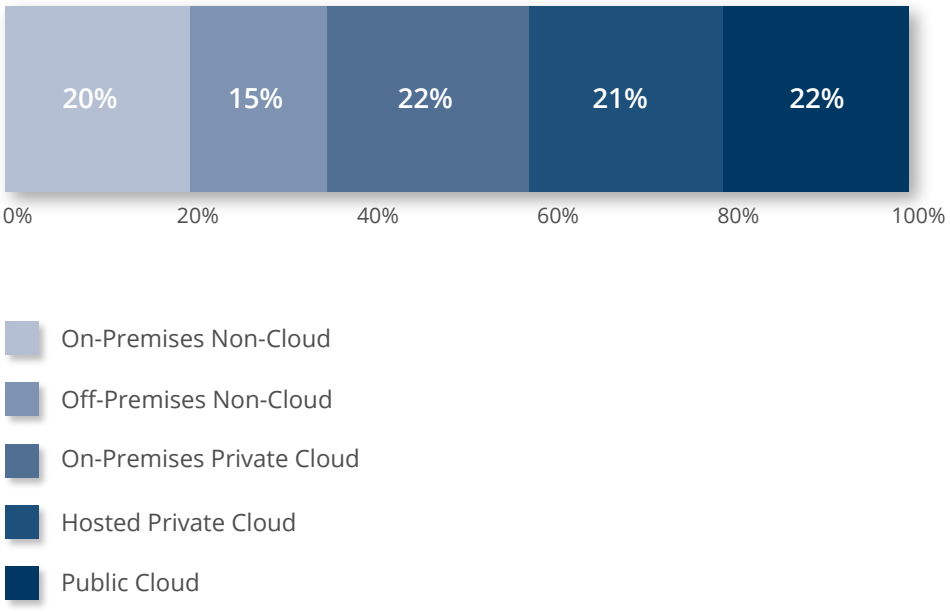
New Zealand has weathered the COVID-19 pandemic situation better than most countries, and organisations that have already adopted cloud services were better prepared to handle the challenges than those that have yet to adopt cloud. IDC has found that organisations with existing cloud migration strategies will continue to adopt public cloud services preemptively in the near term to improve operational processes and drive business efficiency, whereas others will be forced to adopt cloud as they react to new ways of working following the pandemic.

Multiple 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 is leading to new deployment options and an 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 1 highlights the current distribution of different deployment models in New Zealand.

Figure 1

Cloud Deployments in New Zealand

Q. Thinking of all your organisation's applications, what percentage is currently deployed in the following venues today?



Close to ¼ of applications have been migrated to public cloud.

Notes: N = 287 New Zealand organisations

Source: IDC New Zealand Cloud Survey, sponsored by Microsoft, 2021

In the initial years, organisations showed a strong preference for private cloud models and hosted private cloud in cases in which the workload had requirements for high levels of security, compliance and availability. Today, the breadth of offerings in public cloud, along with security features offered by leading public cloud vendors, can provide solutions that span public, private and hosted cloud environments to meet demanding enterprise requirements.

The implementation of digital transformation initiatives by organisations will further increase 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 emerges 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 as public cloud emerges as the platform for digital innovation, allowing access to new and emerging technologies such as serverless platforms, containers, application marketplaces, application programming interface (API) management services, blockchain services, IoT services, and AI-related services.

In doing so, organisations are adopting solutions based on multiple cloud services as they seek to deliver business services that best fit their requirements. Multicloud and hybrid cloud solutions, which include public, hosted private, and enterprise private cloud, are a catalyst for an entire set of new technologies, products, and services. In reality, most organisations already have multicloud environments and public cloud services, with an enormous range of services tailored to vertical solutions - making up an essential part of an organisation's cloud strategy.

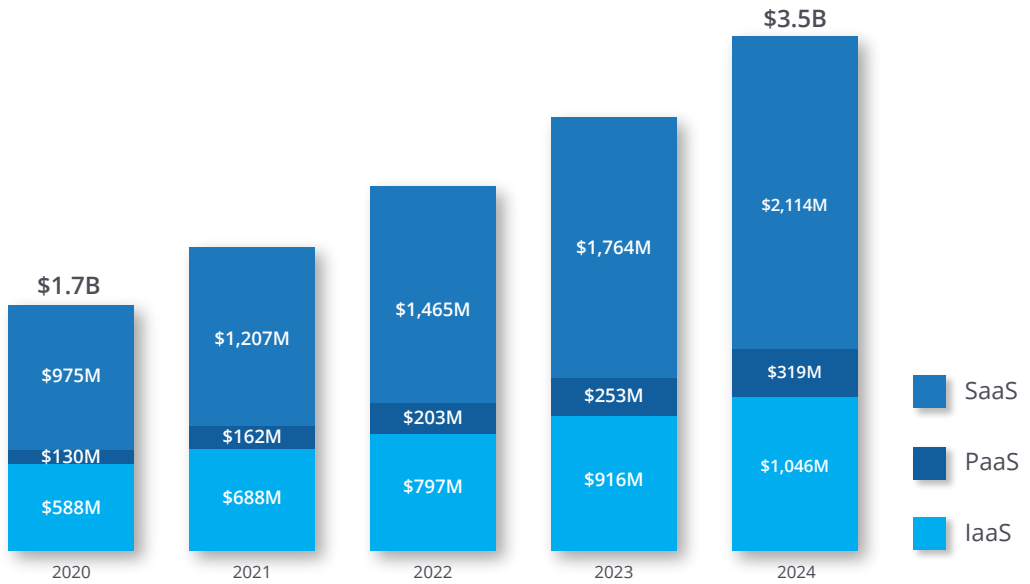
Public Cloud Spending

Most organisations expect cloud spending to continue to increase, with the COVID-19 pandemic cited as one of the major reasons for increases in 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. Of all the cloud models in customers' IT budgets, SaaS comes out on top in terms of how COVID-19 affects spending increases.

IDC estimates spending on public cloud services in New Zealand will almost double in size and grow from NZD1.7 billion in 2020 to NZD3.5 billion in 2024 with a five-year CAGR of 20%. SaaS is the largest segment, accounting for close to 60% of the market, but it is platform as a service (PaaS) that is growing the fastest, albeit from a smaller base. The availability of PaaS platforms has made it easier for software developers and ISVs to monetise their intellectual properties, making it another contributor to New Zealand's GDP.

Figure 2

New Zealand Public Cloud Services Revenue Forecast (NZD)



Source: IDC Semiannual Public Cloud Services Tracker, 2020

Economic Impact of Public Cloud

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, that IT and business innovation is 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 cloud computing. That customer investment in cloud computing drives revenue for the supplier's ecosystem.

IDC estimates over NZD12.7 billion of supplier's ecosystem and direct customer business revenues were generated in 2020 from deployment of public cloud services. This sum is equivalent to 2.1% of New Zealand's annual GDP. This number includes revenues 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. More importantly, over the next four years, public cloud services are expected to generate NZD31 billion of new revenues above the 2020 level.

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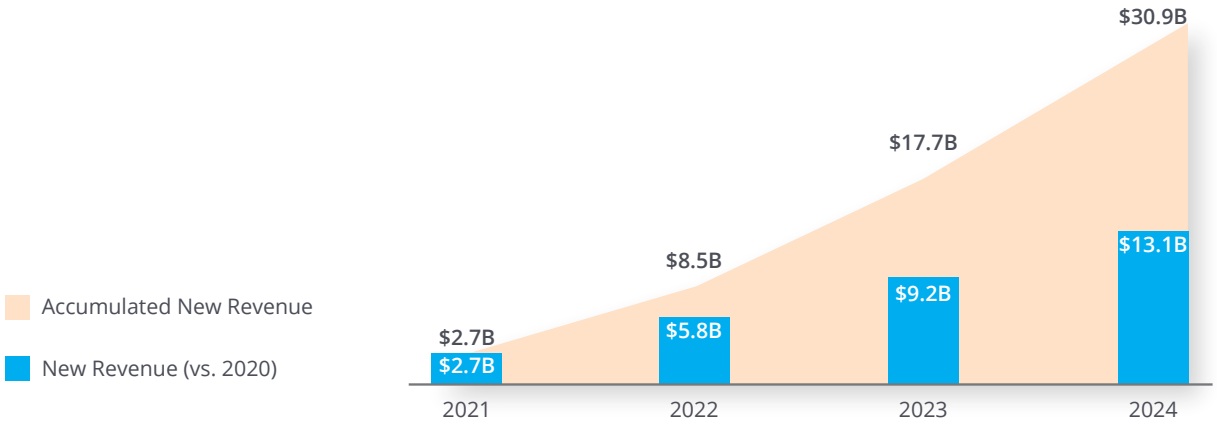
The economic impact of cloud in New Zealand is not just about new revenue but also the jobs generated by that revenue and how that revenue is put to work. IDC estimates that public cloud will continue to help drive new employment, **adding 102,000 jobs to the New Zealand economy over the next four years**. Approximately 18,500 of these new jobs will be skilled IT jobs. These employment estimates reflect the changing demand for employees based on the work required to transition to and operate cloud-focused IT organisations. Many of those IT-related jobs require specialised training or certifications, but there are also jobs created in customer organisations to create and support new products and services as well as handle increased customer interactions.

As both IT and line-of-business (LOB) managers implement business solutions based on cloud services to drive innovation and change business models, there is a positive impact on the entire IT ecosystem. ISV's, Systems Integrators (SIs), business consultants, and professional and managed services providers that are an integral part of the cloud ecosystem will need to collaborate and cooperate to meet the customer demand for differentiated services. As a hybrid cloud architecture becomes the new norm, cloud ecosystems will continue to evolve and expand to support differentiated solutions for specific vertical industries.

Figure 3

Economic Impact of Public Cloud Services in New Zealand – New & Accumulated Revenues Over the Next four Years (NZD)



Source: IDC, 2021

Future Cloud Use in New Zealand

By the end of 2021, based on lessons learned during the COVID-19 pandemic, most enterprises will put a strategy in place to accelerate their shift to cloud-centric digital IT infrastructure and application services twice as fast as before the pandemic. Cost efficiencies are a key focus for CIOs to help relieve pressure on financial bottom lines, while implementing new services and technology to support the "next normal". When costs are under scrutiny, right-sizing and appropriately fitting resources and solutions are top of mind in cloud strategy decisions.

IDC predicts that through 2022, coping with technical debt accumulated during the pandemic will shadow 50% of New Zealand CIOs. Right-sizing enterprise cloud environments and achieving cost savings targets for a long-term, sustainable outlook on cloud investment will set New Zealand organisations in good stead.

The development of hybrid and multicloud solutions is at an inflection point in which they are evolving from being a desirable option to becoming the norm for IT architecture — an indispensable infrastructure for enterprises. Despite the historical preference for private cloud over the years, the adoption of public cloud is only expected to increase as public cloud meets three major organisational objectives: lower capital commitments; improved agility; and faster access to new technologies to enable digital transformation.

The majority (if not all) of digital transformation initiatives are dependent on cloud for scale, access to key technologies (e.g., AI services), and access to digital supply networks and distribution networks. As public cloud services become the most prolific sources of innovation in the tech world, it is imperative that organisations have the resources to leverage the capabilities of public cloud to innovate and remain competitive. As a result, an increasing number of developers are flocking to public cloud as they envision and build the next generation of technology-based business and consumer products and services.

Public cloud adoption will gain further traction in New Zealand as global hyperscalers announce the establishment of new regions and edge locations to complement infrastructure services hosted in hyperscale datacentres within New Zealand. These announcements will help alleviate the challenges of latency and sovereignty that have been slowing the movement of workloads to public cloud. These local regions are not just beneficial for customers, but also have significant impact on a country's economy.

Industry View

IDC's Cloud MaturityScape revealed that organisations in New Zealand are ahead of the cloud maturity curve, with many organisations having advanced cloud adoption and management capabilities. Despite some organisations having mature cloud practices, there is a long runway to broad and deep adoption.

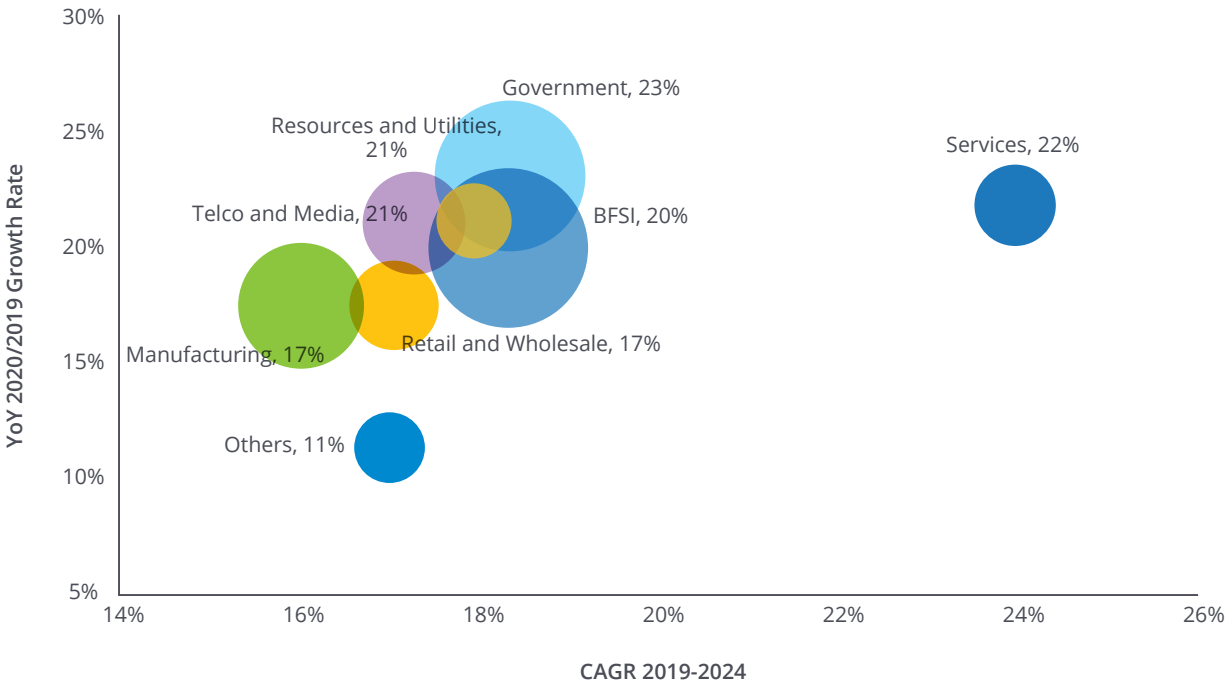
Favourable policies set out by the Government have encouraged public cloud adoption across all industries but, during the pandemic, industries were impacted in different ways. Irrespective of the industry, the use of digital technologies has been instrumental in keeping businesses running.

Therefore, organisations now view cloud as a key component of business resiliency and recovery.

Organisations in the banking, financial services, and insurance (BFSI) sector are the largest adopters of public cloud in New Zealand, followed by the Government sector. Although 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 as well.

Figure 4

New Zealand Public Cloud Adoption - Industry View 2020



Source: IDC Public Cloud Spending Guide, 2020

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 the majority of any organisations' workloads continue to remain on-premises. A number of contributing factors, including governance and compliance and the lack of skills and understanding of public cloud security models, have hindered the adoption of public cloud.

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

Source: IDC,2020

Challenges
Managing cloud environments require specialised skills. The availability of these skills has not been able to keep up with the demand. The lack of skills will inhibit the further scaling up of cloud adoption.

Strategies
Cloud vendors are offering certifications and in some cases (discounted or) free training programmes to keep up with the demand for cloud related skills.

Challenges
Regulatory requirements are often the strongest inhibitor for public cloud adoption.

Strategies
Cloud vendors are helping organisations meet data residency requirements by establishing in-country datacentres.

Challenges
As organisations increase their cloud adoption and move higher up the stack, the complexity of issues related to application workload compliance also increases.

Strategies
ISVs and other cloud providers continue to add New Zealand-specific compliance to their products. While hyperscalers have invested in building out compliance frameworks to enable the ease of adoption and cloud management, not all of them are equally sophisticated. 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.

Challenges
Security has both been an inhibitor and driver for public cloud adoption. In addition, technologies such as IoT and Edge introduces another layer of technology to enterprise IT portfolio required to be securely managed.

Strategies
Consider security from the beginning of cloud deployments. When doing so, security should be viewed holistically across on-premises, hosted, edge, and public cloud. Organisations will be required to take a zero-trust approach, which provides stricter access to applications from external sources and allows users to get basic access to applications when inside the perimeter.

Challenges
The lock-in to proprietary cloud services remains a concern for many enterprises. In addition, as organisations adopt hybrid/multi cloud models, they will need help to interconnect and manage these environments.

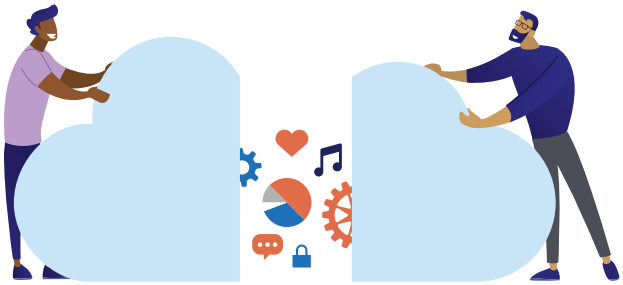
Strategies
Some vendors have responded to customer concerns of vendor lock-in and are now offering platforms to manage and connect multiple clouds. In addition, open standard initiatives offerings and technologies, such as containers, also allow for portability.

Essential Guidance

The adoption of cloud comes with a whole host of new hurdles, from adoption strategies to cloud economics and multicloud management strategies. Choosing from different cloud vendors and multiple deployments further adds to the 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.

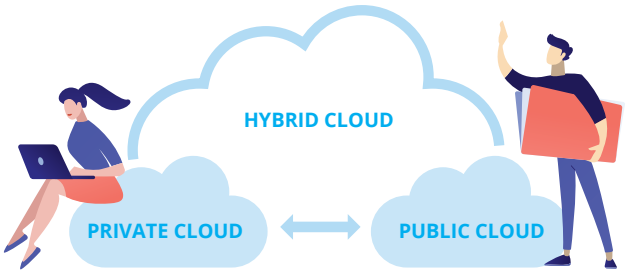
Develop a long-term vision

As the foundation of digital transformation, 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.



Choose the right partner

The move to cloud requires a systematic approach including choosing the right partner that aligns with organisations' vision, desired objectives and culture.



Plan for Hybrid Multicloud

Most companies will land on a cloud adoption strategy architected around a hybrid combination of public and private cloud platforms. Given these environments will be different from traditional IT environments, it is crucial that organisations plan for the integration and management of these environments.

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