



I D C I N C O N V E R S A T I O N



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Cloud: The New Digital Enterprise Platform

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The past several years have seen the accelerated adoption of digital technologies like the Internet of Things (IoT) and big data and analytics (BDA) as enterprises undergo digital transformation, changing the way they operate and driving new revenue streams. Cloud has also become the new digital enterprise platform to bridge and integrate these new digital technologies with organisational and operational innovation to create new digital business models and opportunities for enterprises. IDC predicts that by 2020, investors will view digital businesses differently, with specific measures based on platform participation, data value and customer engagement accounting for over 50% of enterprise valuation in Asia/Pacific (Excluding Japan) (APEJ). This will drive the rapid creation of externally facing digital products, services and experiences while aggressively modernising the internal IT environment towards an “intelligent core”. The digital platform on cloud will in turn create a network or ecosystems of connected customers, partners and suppliers that use (and pay for) the information and services available to them.

IDC also predicts that the industry cloud-stored data shared between enterprises will more than double over the next 12 months – from the current 100 exabytes to over 200 exabytes – as sole reliance on internal proprietary enterprise data becomes increasingly insufficient to combat industrywide problems. Enterprises will begin to monetise its data assets to external parties (participate as a member of a data sharing consortium), as internal data is widely shared across different constituencies, driving the growth of the data (analytics) as a service (DaaS) market. Cloud will be the delivery platform for this new digital data economy to leverage data for customer and business intelligence, driving customer engagement and business collaboration.

William Lee, Associate Research Director of IDC's Asia/Pacific Cloud Services Practice, speaks to Joseph Smith, Director for Singtel Cloud Product Management, about the emergence of this new digital data economy and how enterprises can turn data into insights and new revenue streams for the

business. This IDC In Conversation interview discusses the uses of cloud as the digital enterprise platform and its role in driving the digital economy.

Q: What are the key drivers that are spurring the adoption of digital technologies like IoT, BDA and cloud in enterprises undergoing digital transformation?

A: One of the key drivers of digital transformation is the ability to quickly pivot the organisation to respond to market opportunities and threats. This includes the changing expectations of customer experience and reaping the rewards from digital technologies that drive new business and customer engagement. The adoption of digital technologies also allows organisations to trial new ideas and initiatives at a fraction of the cost and time, increasing the volume and velocity of business experimentation. We worked with one of the major multinational banking and services companies which developed a highly automated DevOps spanning private and public clouds on Singtel's cloud platform. This has helped the bank lower its service delivery costs and time to market by simplifying the IT infrastructure, governance and cloud-native toolchains.

With digital disruption and transformation intensifying the competition, organisations are challenged with growing their businesses while struggling with the accumulated technical debt and operationally focused technology budgets. Access to talent and skills is also becoming a critical success factor. Due to the constant influx of new digital technologies, organisations need to address the challenge of reskilling, injecting new talent and retaining staff.

Singtel is helping our customers through this journey with varying approaches dependent on their transformation. Some are taking large steps towards transformation while others are taking a project-by-project approach that is either application or infrastructure led. Each organisation has its own unique set of challenges; thus, there is no single platform, technology or approach that works for everyone. We are happy to see our customers reaping the benefits along this journey before their entire transformation is completed.

Q: How can cloud be used as the digital enterprise platform to bridge and integrate these digital technologies?

A: Cloud is one of the key engines powering digital transformation. Cloud in its many forms has also provided the foundation for the digital enterprise most digital innovations and disruptions in recent times. As an example, a leading provider of location-based technology solutions and applications chose managed cloud from Singtel to boost its GPS fleet tracking services in Singapore. The company has the largest subscription service in Singapore, with more than 600 customers and 10,000 vehicles under management. Singtel's managed cloud enables faster provisioning and capex saving for the company as it delivers its solution across the region including Australia, Malaysia, Indonesia and Thailand.

In fact, enterprises can start a digital transformation by leveraging something as simple as infrastructure as a service (IaaS), which reduces the operational costs and operations tasks. This frees up the IT budget that can then be leveraged to invest in further transformation. Managed private and public cloud provide the infrastructure services that best fit an organisation's IT needs through a single cloud service provider. For example, an IT strategy arm of a Japanese insurance company adopted Singtel's Global IP-VPN Service for over 20 global sites, as well as the Microsoft Azure ExpressRoute service to provide private connectivity to the public cloud.

Platform as a service (PaaS) for application development that drives customer engagement or true business value is also considered the new nirvana for organisations. A well-resolved and executed PaaS strategy accelerates the digital engine of any organisation. PaaS that is integrated across the entire development and operations environment can allow for rapid development that gives speed and control. Managed cloud professional services from providers can help enterprises

through the cloud architecture design, deployment, migration and integration of solutions, including the DevOps implementation services.

For workloads that have a well-trodden path in terms of best practices like enterprise resource planning or customer relationship management, there is little strategic value in investing precious development time and money on PaaS. In this case, software as a service (SaaS) is a great solution. Specialty providers for back and front office SaaS solutions are also available on cloud to get organisations up and ready in no time. Singtel's myBusiness marketplace is one example that has made it easier to find and integrate these SaaS solutions into an organisation's existing cloud environment. This includes functional type workloads like disaster recovery and backup as a service, as well as business functions like payroll, marketing and HR. All these help transform an organisation's operation into the digital environment where everything can be consumed as a service. This gives organisations the ability to make strategic calls on where they want to place their focus, such as on activities that drive growth, reduce operating expense or redefine their place in a market.

Q: Can you give some notable examples on the digital products, services and experiences that are shaping the new digital economy?

A: IoT is hyped as the new digital technology that is going to cure cancer, mow your lawn and take out the trash. However, looking past the hype from a technology perspective, IoT when applied to the right business or consumer problems can be a powerful tool for organisations to engage better, drive step changes in efficiencies and automate physical operations. We have seen the retail industry adapting to the disruptive change that ecommerce brought by leveraging IoT sensors to track customers from the store entry through to the exit, correlating that with environmental data and spending profiles. This has provided retailers many opportunities to experiment and fine-tune their customer engagement.

BDA has reshaped and improved organisations' performance in every aspect. This technology is now well established and is becoming affordable at much lower entry points of the market. With the commoditisation of infrastructure and subsequent downward pressure on price, organisations don't need to be a billion or 100 million business before they can have access to this technology. Rapid developments in artificial intelligence (AI) and machine learning have also opened up new fields of opportunities for organisations sitting on vast data lakes of customer and/or operational information. This is evident in the prevalent deployment of AI in chatbots to automate support for consumers in nearly every online business these days – from banks to retailers. This has vastly improved operational performance and customer engagement for these organisations.

Q: How do you see the data (analytics)-as-a-service market? Can you share how Singtel is helping enterprise customers to derive value from the data they possess?

A: IDC has predicted that the "digital universe" (the data created and copied every year) will reach 180 zettabytes in 2025. This will generate a data economy in the value of trillions in magnitude. Thus, it's not surprising to see the DaaS market growing rapidly in recent years. To capitalise on this market, organisations have the choice of managing the implementation of data ingestion, data cleansing through to the load and insights themselves or via a partner. As many organisations do not have data scientists on staff and the accompanying technical experts required to build, maintain and develop data assets, partnership with service providers becomes a more viable choice. Through a cloud-based platform provider like Singtel, organisations can realise the business value of data faster through DaaS on the cloud platform and leverage key BDA technology platforms (e.g., Hadoop) and software from vendors like Qlik, IBM and SAS.

As the data sets owned by enterprises grow, the cost of storing and backing them up on-premise will escalate. Thus, we are seeing more enterprises going for a hybrid deployment model to store

and manage data both on-premise and on cloud while running analytics of these data on the cloud platform in the form of DaaS. This has enabled enterprises to gain agility, flexibility and cost-saving benefits of virtualisation on cloud.

ABOUT WILLIAM LEE

Dr William Lee is a domain leader of IDC's Cloud Services Research programme. He represents IDC externally via media channels and internally as a domain lead to support bespoke consulting and integrated marketing program engagement. William has over 15 years of experience in the field of industrial infocommunications technologies. He is an accomplished speaker and practitioner in ICT, market research innovation and process excellence. William was previously involved with IDC's Manufacturing Insights before he started his own consulting and advisory services firm for IT-led service innovation and digital transformation. William graduated from Cranfield University, United Kingdom, with an Engineering Doctorate in Industrial and Systems Engineering.

ABOUT JOSEPH SMITH

Joseph Smith is the Director of Product Management in Singtel. In this role, Joseph leads the execution of Singtel Cloud's product vision and strategy, enabling organisations to explore new business ideas and innovations through Singtel Cloud products and services. He is also responsible for developing integrated product road maps and sourcing required stakeholder agreement and investment. Prior to Singtel, Joseph led the Cloud and Datacentre products in Optus, Australia. He also worked as a Strategic Programmes Manager for HP, where he was responsible for the datacentre portfolio that generated hundreds of millions in annual revenue. Joseph has 23 years of experience in the ICT industry, spanning most functions in technical, projects, delivery, business operations, sales and business unit agreement. Joseph holds a Master of Business Administration from Australian Institute of Business.

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