THE PLATFORM DRIVEN BUSINESS OF THE FUTURE

the foundation of the
digital enterprise

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INTRODUCTION:
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Since the birth of the computer industry in the 1950s, we have seen several paradigm changes in information technology (IT), each of them enabling higher levels of business automation, further democratising access to computing power and information, and connecting people, systems, and organisations in new ways. Each of these platforms has been built on the one that preceded it and in each we have seen the speed of technology change increase.

IDC, the market researcher, describes the phase we are in right now as the third platform, characterised by four foundational digital technologies: social, mobile, analytics & big data, and cloud computing (SMAC). The previous era – the second platform, the age of client/server computing – put personal computers on every worker's desktop and saw the rise of the Internet and the World Wide Web.

Before that, in the era of the first platform, we saw the birth of the mainframe, at that time affordable to only a few of the largest companies and reserved for a handful of users within those enterprises.

We are in the advanced stages of the shift to the third platform and every organisation needs to ensure that it's ready for what comes next. SMAC technologies have enabled companies to drive efficiencies, create new customer and employee experiences, and use data and analytics to drive better decisions. They have also empowered people with unprecedented access to information and services – wherever they are – and facilitated closer collaboration within and between enterprises.

With a mature SMAC technology stack in place, the organisations that are leading the transition to the third platform are well positioned to accelerate innovation and create new business models that give them a real competitive advantage. Those that are not yet ready for the next wave risk falling further and further behind as the multiplier effect of third platform technologies working together further accelerates the pace of technology change.

THE THIRD PLATFORM:
the foundation of the digital enterprise

Several years ago IDC came up with the term, 'the third platform', to describe a new set of transformative technologies that would form the foundation of the digital enterprise: social, mobile, analytics & big data and the cloud. Together, these four technologies would allow ever closer collaboration and cooperation within and between enterprises; enable companies to reach customers and employees with tailored services and experiences wherever they are; to harvest, analyse and act on unprecedented volumes of data in near-real or even real time; and to access scalable and efficient on-tap computing resources to drive new business models and applications.
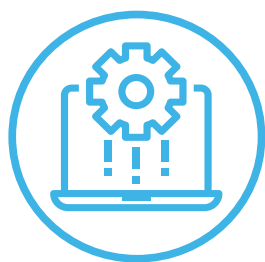
The third platform is the key enabler of a new digital world where people, devices, services and organisations are seamlessly connected and where organisations have the agile technology they need to supercharge innovation and productivity. The Economist sums the third platform up as follows: "The third platform is based on the online computing cloud and its interaction with all manner of devices, including wirelessly connected ones such as smartphones, machinery and sensors (known collectively as the "internet of things".

In the first wave of the third platform transition – which lasted from 2013 and 2015 – we saw the maturing of technologies such as social platforms like Facebook and Skype for Business, big data solutions (for example, the Hadoop database), mobile basics like 3G, 4G and smartphones, and hyper-scalable cloud platforms and solutions (such as Amazon Web Services and Microsoft Azure). The benefits to enterprises are as follows:

Skype for business

3G

2013

Facebook

Data Solutions

4G

2015

Social technology: The social component of the third platform has made computing tools more accessible and collaborative than ever before, changing the way end-users access information and work together. Social makes it as easy for enterprise users to interact with data and with each other as it is to use consumer-class social media apps like Facebook. From messaging services to enterprise and consumer social media platforms to collaborative hubs, these intuitive tools give users the ability to access the information and resources in a format and on the device that best meets their needs.

Mobile: If social technology makes enterprise applications and data easier to use, mobile makes these computing resources accessible to users wherever they are. Because employees can access and interact with data anywhere they have an Internet connection, business processes can keep flowing when an employee is working in the field – for example, no need to return to the office to generate a quote or capture the details of an onsite repair. Mobile has also enabled a range of seamless consumer experiences, from ride-hailing to mobile shopping to mobile payments.

Analytics: Mobile and social technologies – among other trends such as the proliferation of connected Internet of Things sensors – have created a flood of data into the enterprise. Big data tools enable decision-makers to make sense of vast data volumes and glean the insights they need to make better business decisions. In addition to empowering strategic decision-making, these tools enable better and faster operational decision-making. They are also the key to offering personalised services and experiences that are tailored to customers' and employees' contexts at any moment.

Cloud: The cloud is the key enabler for the third platform. Without the cloud providing efficient and reliable computing services on tap, enterprises would not be able to reach users with apps and information on their mobile devices, crunch massive datasets in real-time, or enable seamless social collaboration.

According to IDC, around two-thirds of all enterprise IT spending – about $1.3 trillion – was devoted to third platform technologies in 2018. By the end of 2019, IDC expects the third platform to account for around 75% of IT spending. With the basic SMAC technologies entrenched in most organisations, IDC forecasts that a new wave of investment will follow as enterprises step up their investments in emerging tech such as the Internet of Things, artificial intelligence (AI) and virtual reality.

Characteristics of the next generation of the third platform include multiplied innovation through platforms, open innovation ecosystems, massive data sharing, hyper-agile application deployment technologies, richer AI solutions and services, deeper human/digital interfaces, and a more diverse cloud services landscape. Frank Gens, IDC SVP and chief analyst, says: "The key pieces of the third platform's second chapter will come together with even greater force, driving enterprises to multiply their innovation pace. The rising digital economy means all enterprises must operate like digital native enterprises, rearchitecting their operations around large-scale digital innovation networks."

ENTERING THE SECOND CHAPTER

> **AI, machine learning and the Internet of Things will take the big data trend to the next level.**

In this second chapter of the third platform, SMAC technologies will enable companies to compete by forming digital ecosystems where companies can cooperate as seamlessly with each other as if they are one organisation. Technologies like distributed ledger technology – including the blockchain - and microservices will remove much of the friction that currently exists in business processes that span organisational borders.

Enterprises will use cloud-based platforms to accelerate time to market with new consumer and employee services, with APIs, microservices, as-a-service tools, agile methodologies and app containers radically speeding up the development and deployment of apps. Tools will become more human-centred, enabling people to become more efficient and productive, as innovations such as natural language processing and augmented/virtual reality make it easier for people to interact with computers via more intuitive interfaces.

AI, machine learning and the Internet of Things will take the big data trend to the next level. Connected devices and sensors, cloud computing, advanced robotics, and intelligent software will give organisations the ability to gather, analyse and act on enormous datasets in real-time.

Enterprises will move towards predictive analytics that enable them to anticipate issues – from customer churn to supply chain interruptions to the likelihood of equipment breaking down on the factory floor. Fuelled by big data, AI will enable higher levels of automation, from AI-powered chatbots that tailor messaging and offers for a customer in real-time to self-healing smart machines.

Reinventing IT
The shift to the third platform will be challenging for many enterprise IT departments. They can no longer operate in a siloed manner or focus only on keeping the lights on. They need to look at how they can reinvent themselves as the engines of innovation, adopting DevOps, Agile, and the cloud to speed up development. Most of the organisations we interact with have the basic SMAC components in place. Their challenge will be to create a unified SMAC strategy and harness these technologies to drive higher levels of innovation – especially when it comes to the customer and employee experience.

THE JOURNEY TO THE THIRD PLATFORM

unleash the value of third platform technologies, organisations should use them to reinvent and automate work flows and business processes.

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> *The organisation's business analysts should map the existing processes and analyse whether they are as simple, logical and consistent as the could be.*

As we enter the second wave of the transition to the third platform, most organisations will have some or even most of the core technologies and systems in place. However, to unlock the full value of the technologies and clear the way for the next phase of digital transformation, organisations must take a strategic view of the third platform. The goal should not be to adopt the technologies in a tactical manner or piecemeal in parts of the business, but rather to use them in an integrated fashion to transform the business into a digital native enterprise.

Nebula recommends that organisations start their journey to the third platform with the following steps:

1. Mapping business processes

To unleash the value of third platform technologies, organisations should use them to reinvent and automate work flows and business processes. But before an enterprise can begin digitising processes with third platform tools and technologies, it must understand them and simplify them. The organisation's business analysts should map the existing processes and analyse whether they are as simple, logical and consistent as the could be. They should also work closely with the departments and users that own and drive various processes to understand their needs and potential opportunities for improvement.

2. Mapping the technology stack

Most enterprises are in the midst of migrating their technology environments from rigid, monolithic, on-premise systems towards modern cloud platforms. The result is that most have a hybrid environment with some applications, information and workloads in the cloud, and others running on legacy platforms. To ensure a smoother and more complete transition to the third platform, the organisation should map out the current technology infrastructure and the processes it supports. This will enable it to make the right cloud investments to digitise inefficient processes, enable innovation, and create new experiences for customers and employees.

3. Understand how people interact with information

The organisation should not allow its people to fall behind as its modernises its IT systems and optimises business processes. It should evaluate how people interact with its existing systems and processes, and what they need to work more efficiently and effectively. New workflows and systems need to help people do their jobs better and faster and free up their time for innovation – not get in their way or harm the workplace experience in the name of efficiency.

4. Choose a partner

Digital transformation and the shift to the third platform is a complex undertaking, and not every organisation has the in-house technology skills to make the transition on its own. As the organisation looks to develop and execute its third platform strategy, it should look for strategic partners to help it analyse its existing technology and processes, propose solutions that will help it digitise its systems and automate processes, and implement and integrate the correct business solutions. The correct partner will not only help the organisation to accelerate time to market with new, digital solutions, but will also help it to increase the likelihood of a successful transition.

NEBULA: YOUR DIGITAL TRANSFORMATION PARTNER

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Nebula has a proven track record in helping large, complex organisations to put in place the platforms they need for innovation and to improve their operational readiness for the hybrid cloud. Over the years, we have helped some of South Africa's largest enterprises to automate complex IT and telecoms tasks and to simplify management of heterogenous technology environments. When combined, our Cloud identity, cloud management and Technology Expense Management solutions facilitate a seamless transition to the cloud and smooth management of the technology backbone:

Identity: Enterprises need a way to provide a consistent, centrally-managed cloud identity across applications for internal and external users alike. Nebula's Surge Identity solution uses modern protocols such as OAuth2.0 and OpenID Connect to simplify identity management and application security across hybrid cloud deployments. It offers an optimised user experience with single sign-on user journey and a standardised login experience across applications.

Surge Identity is compatible with social media accounts and with most identity providers, which allows for effortless sign-in flow. The Cloud identity provider uses standards from solutions such as Identity Server and Azure AD to enable interoperability within apps. To reduce development time, Surge Identity offers secure API-to-app integration for consumption of on-premise business data and logic as well as webhook integration.

The Nebula OneView solution gives enterprises integrated, real-time visibility of, and full control over, their telecoms and cloud usage, spend and service provider performance with live reporting and analytics.

Cloud platform: Most IT departments are not yet prepared to satisfy digital business demands with a platform for current and future innovation. Our Surge Cloud Platform is a Digitalisation-as-a-Service cloud platform that helps IT to accelerate application development and cloud workload deployment in a hybrid cloud environment. It enables the deployment of decoupled, scalable applications and back-ends in the cloud with high availability and redundancy. We work with organisations to help them develop a clear pathway to the cloud that will not disrupt their day to day operations or core business teams.

Technology expense management: Technology management continues to be manual and disjointed, meaning that organisations lack insights into their technology usage, spend or performance. The result is wastage caused by overbilling, redundant infrastructure, poor usage management in place, bad governance, lack of skill capacity and an inability to track and monitor spending. The Nebula OneView solution gives enterprises integrated, real-time visibility of, and full control over, their telecoms and cloud usage, spend and service provider performance with live reporting and analytics.

This solution helps organisations to simplify their operating environments by automating complex tasks. It offers integration with service providers and third-party business systems, as well as automated data collection. Clients benefit from comprehensive reports and in-depth analyses about technology spending, usage, risks and performance, giving them the insights they need to optimise their environments.

Taken together, these three pillars provide the operational tools and structures IT departments need to run a hybrid cloud environment. With this foundation in place, IT can lead and accelerate innovation to meet the growing demands of the business and its customers.

CONCLUSION: GETTING READY FOR THE NEXT WAVE

> *from AI to distributed ledger technology to 5G, virtual and augmented reality and quantum computing, this new generation of technologies is racing to maturity.*

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CONCLUSION: GETTING READY FOR THE NEXT WAVE

The foundational technologies of the third wave – SMAC – are no longer enough to give an organisation a competitive edge. They are the basic requirements to play in a digital economy and they will be the bedrock on top of which leading organisations layer the next set of disruptive technologies. From AI to distributed ledger technology to 5G, virtual and augmented reality and quantum computing, this new generation of technologies is racing to maturity.

Organisations that have mastered the third platform – especially the cloud and hyper-agile application development – will be well equipped to harvest the benefits of the next set of emerging technologies. With at least 50% of global GDP expected to be digitised by 2021, according to IDC, enterprises that successfully use digital technology to transform their offerings, operations, and relationships will be the market leaders of the future.

Nebula has helped many clients to migrate to the cloud and adopt an agile, digital first approach to building processes, solving problems, and delivering services. We can work with your organisation to create a strategy for a large-scale cloud transformation, put in place the building blocks for an effective and efficient cloud environment, and ultimately enable your enterprise's shift towards to a future-ready, high-performance technology environment.

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RESOURCES

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FOR MORE INFORMATION

To find out more about OneView™, please send an email to ContactUs@Nebula.co.za with "OneView" in the subject line, and a Nebula staff member will contact you.

You can also visit any of these platforms for more information and latest company news.

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