

DISRUPT, COLLAPSE, TRANSFORM

The Role of Cloud Computing in Industry Transformation

F R O S T & S U L L I V A N



A White Paper by Frost & Sullivan

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ABOUT THIS WHITE PAPER

We are living in an age of unprecedented industry change, as industries as diverse as retail, media and manufacturing are undergoing rapid, and often unpredictable, transformation. This accelerating rate of industry disruption is driving companies to adapt far more quickly to the changing business environment in order to survive. The “Kodak moment” has evolved from a marketing phrase used to describe taking a picture at a never-to-be-forgotten moment, to describing the failure of a company to adapt to changing industry conditions. Eastman Kodak, which once accounted for 85% of film sales and 90% of camera sales in the USA, filed for bankruptcy in 2013, a development largely attributable to its failure to adapt to the rapid changes in the photography industry, especially the advent of digital photography.

Whilst Kodak is perhaps one of the best known examples, organisations in virtually every industry are having to adapt to these unprecedented rates of change, driven by disruptive forces from digitalisation to globalisation to servitisation, and the entry of new, disruptive competitors into their industries. In many industries, the speed of change is also accompanied by an unpredictability that negates the ability to develop a long-term response. As a result, survival is increasingly reliant on flexibility and short-term adaptability, with those organisations that have the ability to quickly re-invent themselves in response to changing industry dynamics most likely to survive. A crucial factor in this adaptability is cloud computing, which has emerged not just as a cause of industry change, but increasingly as a necessary response.¹

As cloud computing matures and becomes more established, not just as a technology but as a business concept, organisations are gaining a more nuanced view of its benefits. As with many new services or products, cloud was initially adopted on the basis of its ability to lower both capital and operating costs for businesses. With industry change accelerating, however, the flexibility, scalability and adaptability of cloud have become significantly important factors for adoption, as more organisations recognise the intrinsic agility it offers.

To understand the degree to which organisations are experiencing industry change globally and how they are responding, Frost & Sullivan surveyed 1,500 senior executives (CEOs, CFOs, CIOs and other senior managers) in seven countries (Australia, Hong Kong, Japan, Philippines, Singapore, the UK and the US). Respondents spanned all major industry sectors, ranging from manufacturing to retail. The research shows that most executives not only agree that their industry is rapidly undergoing transformation, but that flexibility and adaptability are increasingly becoming key factors for survival.

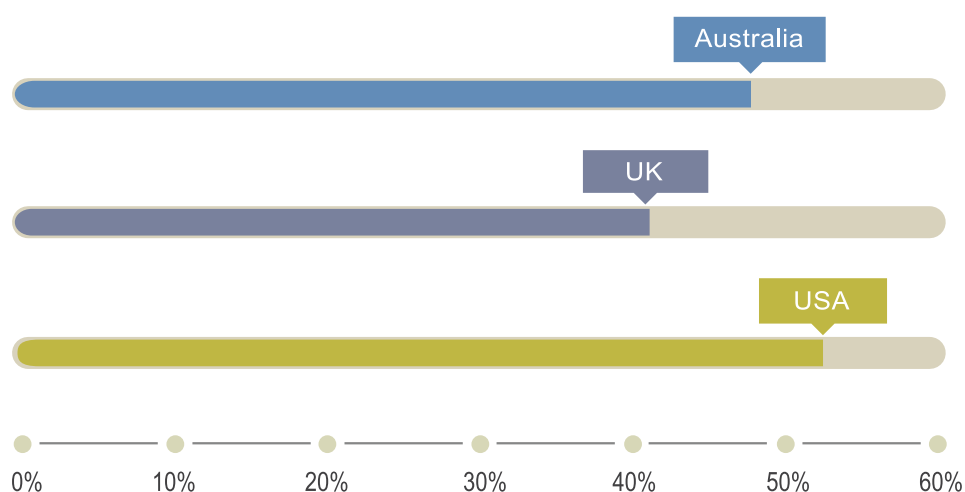
¹In this white paper, cloud computing is defined as accessing and using IT resources over the internet

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RAPID RATE OF INDUSTRY CHANGE

Industry transformation is affecting organisations of all sizes. The average lifespan of a company in the US S&P 500 index has reduced from 61 years in 1958 to 18 years today, and is forecast to drop to 10 years by 2018. It is predicted that 75% of businesses in the current index will be replaced by 2027.² For smaller companies, the survival rate can be even lower. The five-year business survival rate for smaller companies in countries such as Australia, the UK and the US is between 40-50%, which indicates that more than half of today's businesses will not be around in five year's time (see Figure 1).

Figure 1: Small Business Survival Rate by Country



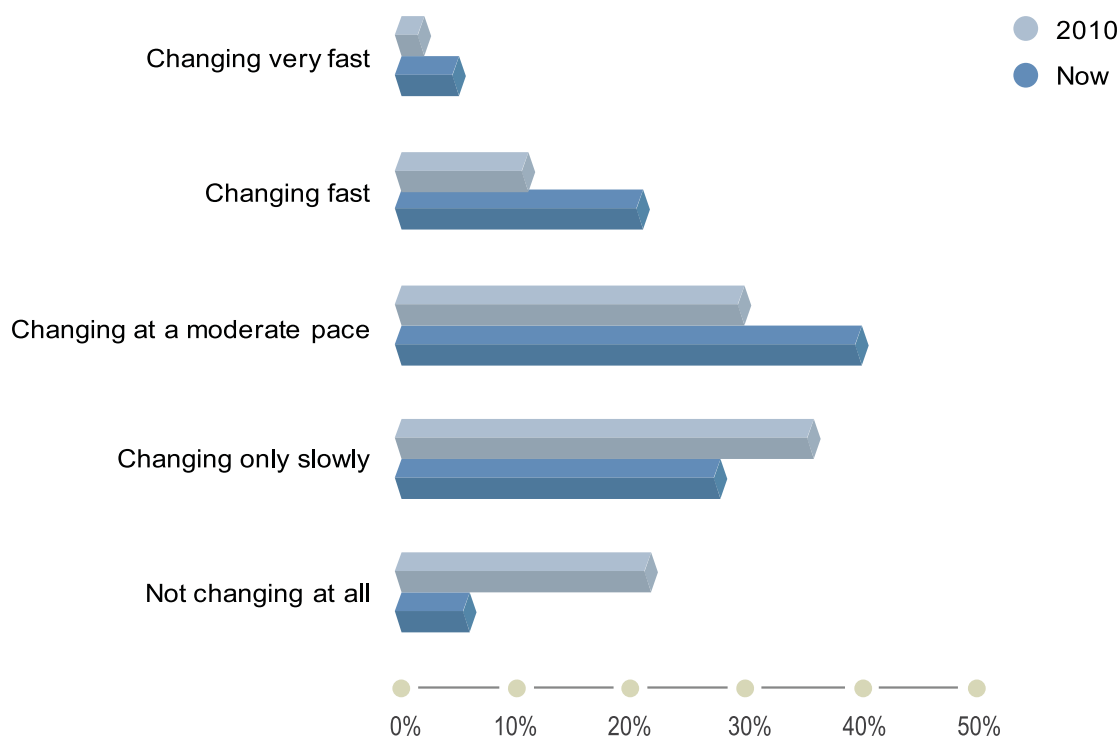
Source: National statistics offices, business demography statistics

Our research indicates that most executives agree that the rate of industry transformation is rapid. Over 30% of executives now feel that the pace is fast or very fast, a much higher percentage than in 2010.³ Only 5% feel that their industry is not changing at all, down from over 20% in 2010 (see Figure 2).

²Innosight Executive Briefing, Creative Disruption Whips Through Corporate America

³Based on Frost & Sullivan research conducted in 2010

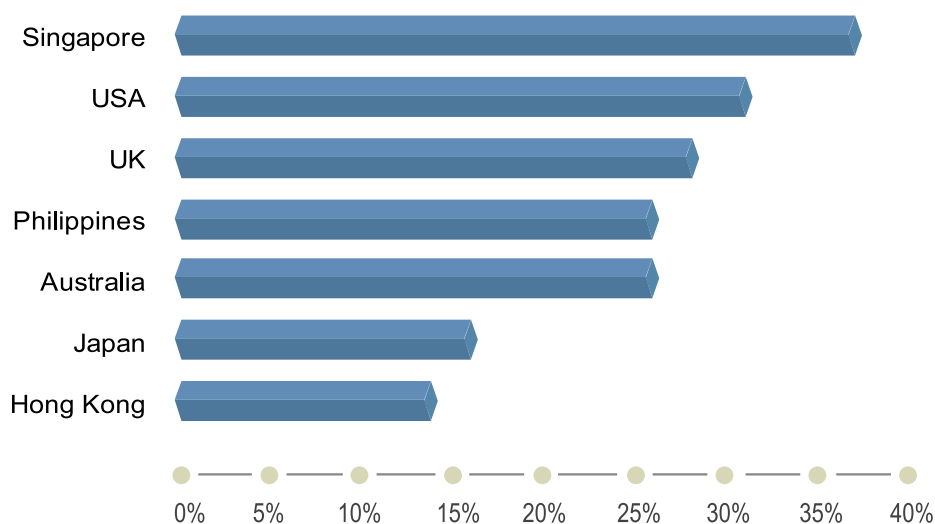
Figure 2: Executives' Perceptions on Rate of Industry Change



Source: Frost & Sullivan, Survey of 1500 executives

The rate of change is most noticeable for executives in Singapore and the US, where 37% and 31% respectively feel that their industry is changing fast or very fast, and least noticeable in Hong Kong and Japan (see Figure 3).

Figure 3: Executives' Perception on Rate of Industry Change, by Country



Source: Frost & Sullivan, Survey of 1500 executives



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FACTORS DRIVING TRANSFORMATION

A range of factors are driving industry change, but our research has identified four common trends that are impacting organisations in all countries: the emergence of new, disruptive competitors; digitalisation; the need to embrace new business models; and the growing adoption of productisation and servitisation. In several cases, the advent of cloud computing has significantly contributed to the advancement of these trends, leading to it being seen as an enabler of industry transformation.

3.1 EMERGENCE OF NEW, DISRUPTIVE COMPETITORS

36% of executives believe that their industry has been significantly impacted by the entry of new, disruptive competitors in the past five years, particularly in Singapore, Hong Kong and the US. This has been driven by new competitors emerging from other regions of the world, or domestically-based organisations using new business models or digital technology to disrupt existing industries. Industries such as media and retail are amongst those where the entry of new competitors has had the most dramatic effect. It has also occurred in industries such as hotels, where Airbnb has radically transformed the process of booking accommodation through its peer-to-peer lodging network. Despite being established only six years ago, Airbnb now has 800,000 accommodation listings available in over 190 countries—a much more comprehensive network than any global hotel chain.

In many cases, disruptive competitors such as Airbnb are using cloud computing to quickly scale their businesses at low-cost. Airbnb runs its IT infrastructure on the cloud. US-based media company Netflix is another example of a disruptive competitor using cloud computing to rapidly scale its business. Netflix acted as a significant disruptor to the traditional DVD rental business when it launched its video streaming service in 2007, and is now used in one-third of all US households, as well as having a significant market presence in over 50 other countries. Netflix delivers its service over the cloud, and is widely credited for the demise of the previously dominant DVD rental business Blockbuster, which closed its last US store in 2012. It is now posing a similar challenge to the pay-TV industry.

Cloud computing is therefore a significant enabler of new, disruptive competitors—allowing new entrants to quickly and cost-effectively roll-out new products and services and enter new markets, at a speed which can often blindside established market participants.

3.2 DIGITALISATION⁴

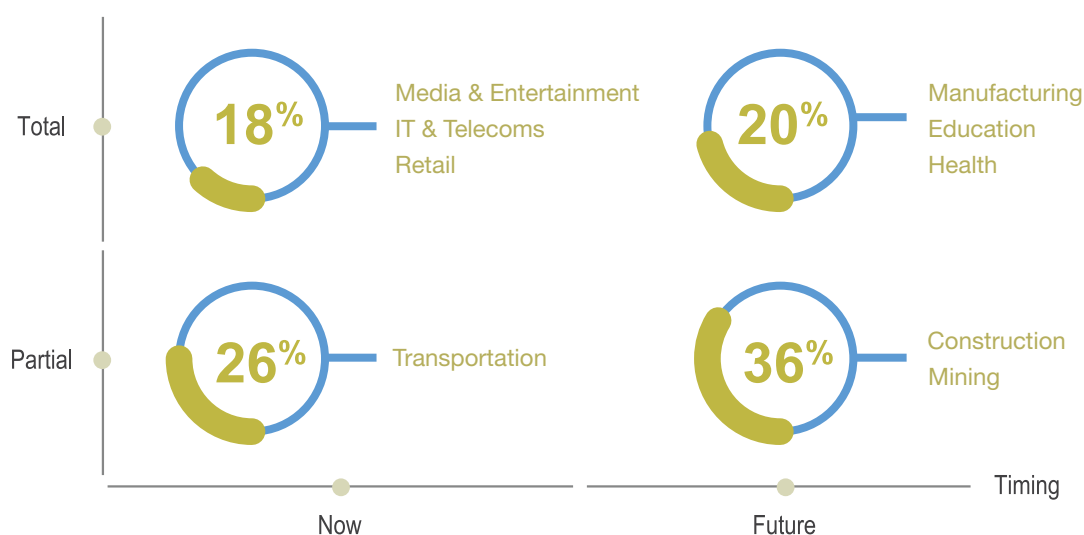
Digitalisation is the second major driver of transformation identified by executives, particularly the rapid onset of the internet as a sales and communication channel. Whilst the impact of digitalisation on industries such as recorded music is well known, it is now beginning to impact almost every business. Our research identified that 38% of executives believe that digitalisation already has, or will have, a total effect on their industry, with 62% believing it already has or will have a partial effect. No executives believe that digitalisation will not impact them.

⁴Digitalisation is the use of digital channels, primarily the public internet, to conduct business

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The media & entertainment, IT & telecoms and retail sectors have been impacted the most, but executives in healthcare, manufacturing and education also believe that a total digital transformation will occur in their industries (see Figure 4).

Figure 4: Impact of Digitalisation by Industry



Source: Frost & Sullivan, Survey of 1500 executives

Digitalisation has already had a profound effect on several industries. Newspaper publishers, for example, have seen revenues from classified advertising decimated by the emergence of new, online publishers within the past decade. Traditional “brick-and-mortar” retailers also have to respond to the dramatic rise in online shopping, which now accounts for 12% of all retail sales in the UK, and is rapidly growing in all other markets.

Whilst virtually all executives agree that digital change will impact their industry, the relative importance differs between countries. In Australia, the US and the UK, digital change is having the greatest impact, whereas it ranks behind increasing business costs for executives in Japan and Hong Kong. However, virtually all agree that they need to respond to digital change regardless of their industry. Digital leaders tend to be significantly more profitable than counterparts that are slower to adopt digital change, with one analyst estimating that digital leaders are 28% more profitable.⁵

Using digital channels to interact with customers, suppliers or other business partners is now widespread. In Australia, for example, 30% of all organisations now enable customers to transact with them over the internet.⁶ In Singapore, almost 70% enable customers to either order over the web or place orders themselves, up from 52% in 2009.⁷

⁵Capgemini Consulting, the Digital Advantage; how digital leaders outperform their peers in every industry

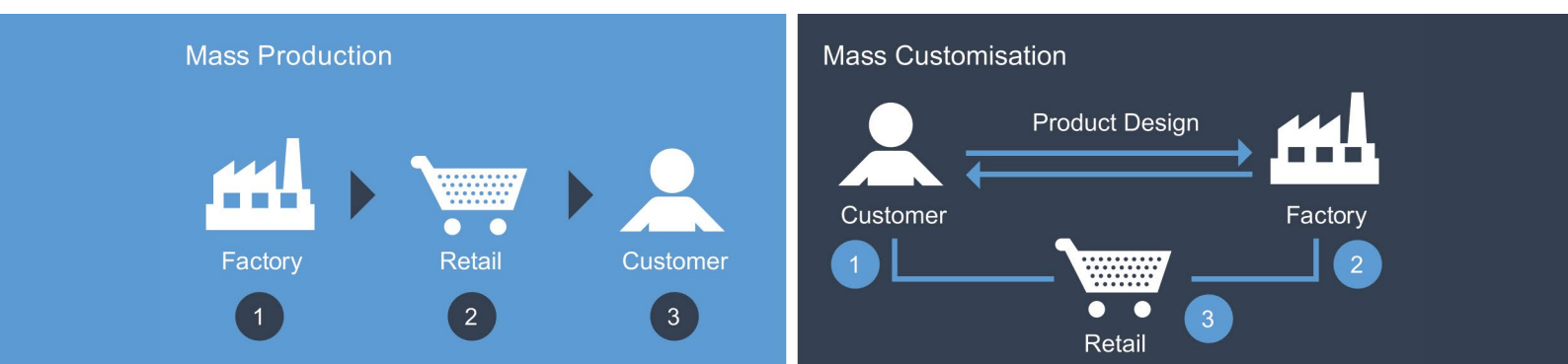
⁶Australian Bureau of Statistics, Business use of Information Technology

⁷Infocomm Development Authority of Singapore, Infocomm Usage - Business

3.3 DEVELOPMENT OF NEW BUSINESS MODELS

Cloud and other technologies such as mobile broadband, 3D printing and low-cost sensors are enabling the emergence of new business models that often act as a significant disruptor to established industries, driving a shift in the way that businesses need to operate. Mass customisation in the manufacturing sector is a great example, which involves customising goods or services for individual clients in an economically viable manner. This has been enabled by improved manufacturing procedures, emerging technologies such as 3D printing, as well as digitalisation, which provides customers with the ability to “design” products over the internet and link directly into manufacturing systems. By giving customers the ability to transact directly with manufacturers, mass customisation threatens to rapidly transform industries by excluding distributors or retailers (see Figure 5).

Figure 5: From Mass Production to Mass Customisation



Source: Frost & Sullivan

Mass customisation is developing rapidly in industries such as apparel, where it accounts for an estimated 5% of clothing manufactured.⁸ Australian company Shoes of Prey, for example, allows customers to design their own shoes online and have them delivered anywhere in the world within four weeks. Only four years after being established, the company leverages cloud technology to rapidly scale its business globally and has grown 250% in the past 12 months.⁹

3.4 SERVITISATION AND PRODUCTISATION WAVES

The rapid increase in service productisation and manufacturing servitisation is the fourth major trend driving disruption. Productisation occurs when service companies package their services in a similar way that many products are marketed—for example, by outlining a standard set of steps to deliver the service, a fixed price and a nominated delivery team with appropriate credibility. Productisation offers a number of benefits for both service suppliers and their customers, including: allowing the production of standardised marketing material; introducing price consistency; making the offer more comprehensible to sales teams (and hence easier to sell); improving consistency and repeatability in service delivery (which can in turn improve customer satisfaction and profitability); and making it easier for customers to compare offers from alternative suppliers.

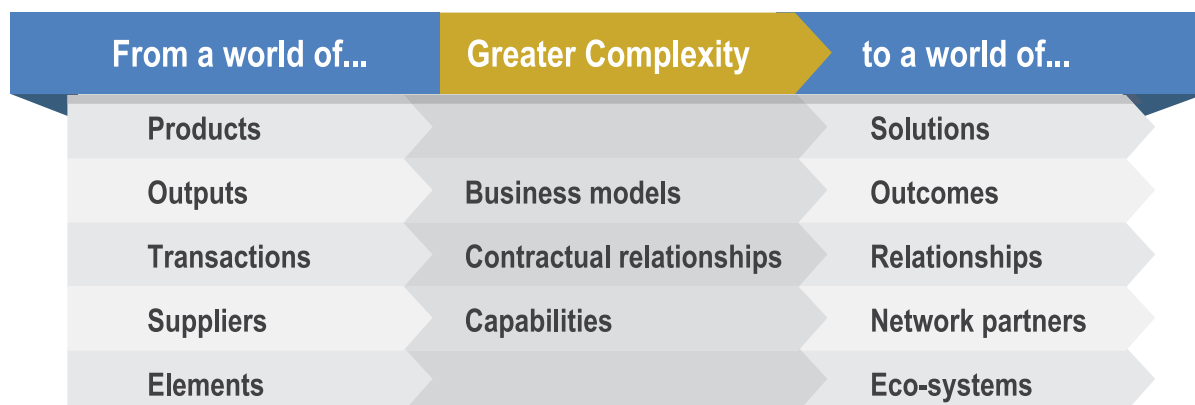
Servitisation occurs when product manufacturers add or integrate chargeable services into their core products, such as design and development, maintenance and technical support, installation and implementation or leasing. Revenues from services are becoming increasingly important for many product manufacturers, especially for more complex engineered products. For example, leading global aero engine and power generation equipment manufacturer Rolls-Royce, now derives over 40% of revenue from services.

⁸European Commission Business Observatory, Advanced Manufacturing, Mass Customisation

⁹<http://www.businessinsider.com.au/heres-how-shoes-of-prey-built-its-phenomenal-business-by-simply-getting-to-know-its-customers-2014-9>

Servitisation involves a complex shift for product manufacturers—from a world of products, outputs and transactions, to one of selling solutions and outcomes through a deeper relationship with customers and other network partners (see Figure 6).

Figure 6: The Shift to Services

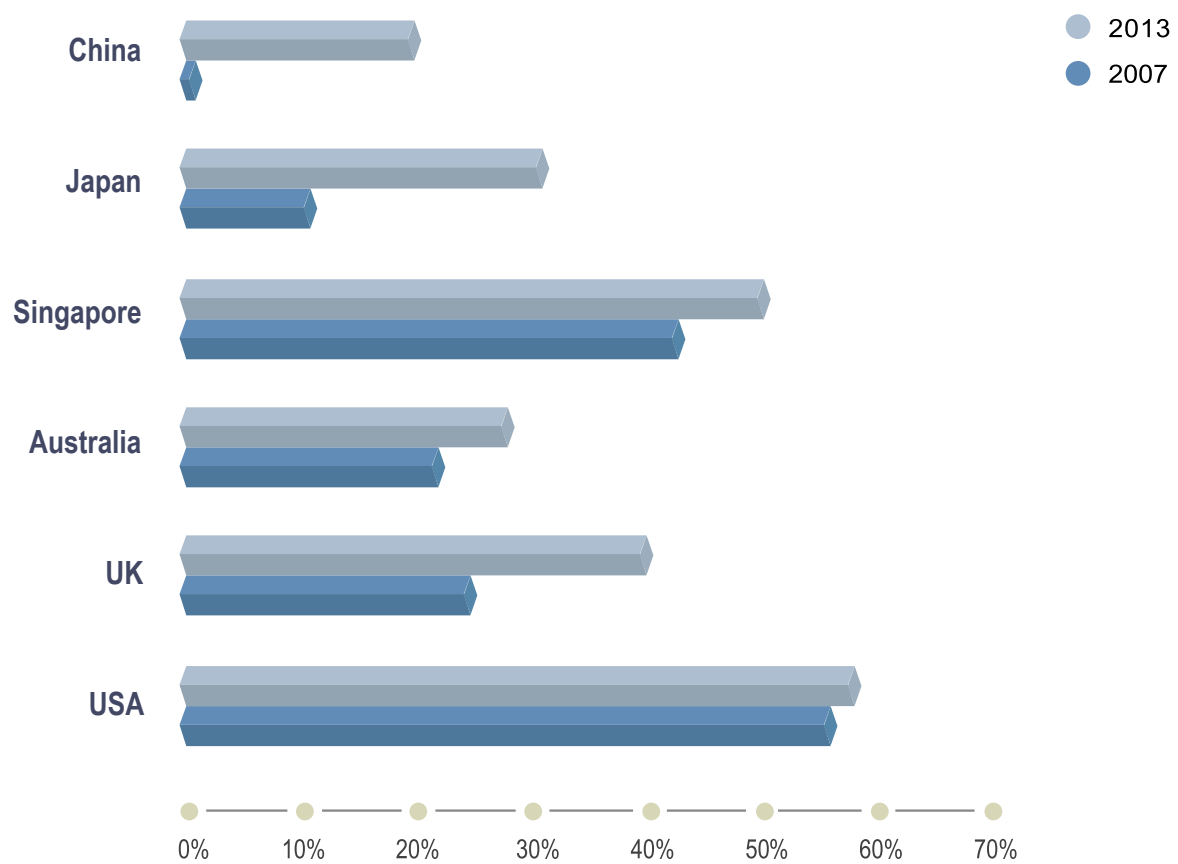


Source: Cambridge Service Alliance, the Servitisation of Manufacturing: Further Evidence

Servitisation involves fundamental changes to the way that a product manufacturer does business, with impacts on areas as diverse as resource requirements and mode of billing. It requires a much greater degree of flexibility as the solution offered to each client is likely to differ, unlike selling a standard product.

The growth of servitisation is reflected in our research, with almost 40% of product manufacturers now at least partially servitised, an increase from 26% in 2007. It is most advanced in the US and Singapore, but even Chinese manufacturers are servitising to an increasing extent, indicating that they are rapidly moving up the value chain (see Figure 7).

Figure 7: Servitisation by Country



Sources: Cambridge Service Alliance, *the Servitisation of Manufacturing: Further Evidence*; Frost & Sullivan, *Survey of 1500 executives*

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CLOUD IMPROVES ADAPTABILITY

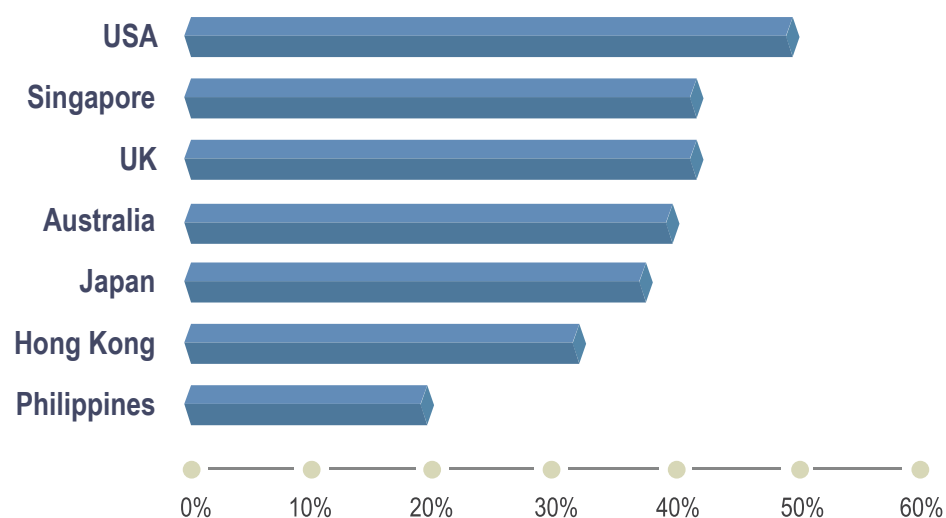
Cloud computing is a key driver of industry transformation, enabling companies of all sizes to have access to IT systems and functionality that have in the past been in the realms of large global competitors, at a much lower cost. This is allowing smaller companies to rapidly expand their operations—giving them the ability to quickly and cost-effectively roll-out new products and services, and to service customers across the world. Effectively the cost of failure in innovation has been substantially reduced. Cloud is also seen as a necessary response to this rapid industry shift where change is not just faster, but also less predictable than ever before. Organisations increasingly appreciate how cloud can provide them with the agility to respond much more quickly and cost effectively.

Cloud has a number of aspects that give businesses much greater flexibility than that offered by on-premise IT resources—new products or services can be provisioned quickly and easily; new distribution channels added; new pricing models introduced and new customers acquired. IT resources can be quickly scaled up or down, allowing smaller companies to expand fast and larger companies to scale down quickly when required.

Organisations gain much greater flexibility to respond to industry change by using IT resources delivered over the cloud. It effectively helps an organisation to “future proof” its business.

Adoption of cloud computing, particularly software-as-a-service (SaaS), is now mainstream. About 40% of all organisations now use a SaaS model for at least one of their main business applications, with adoption highest in the US (see Figure 8).

Figure 8: Adoption of SaaS for Key Business Applications



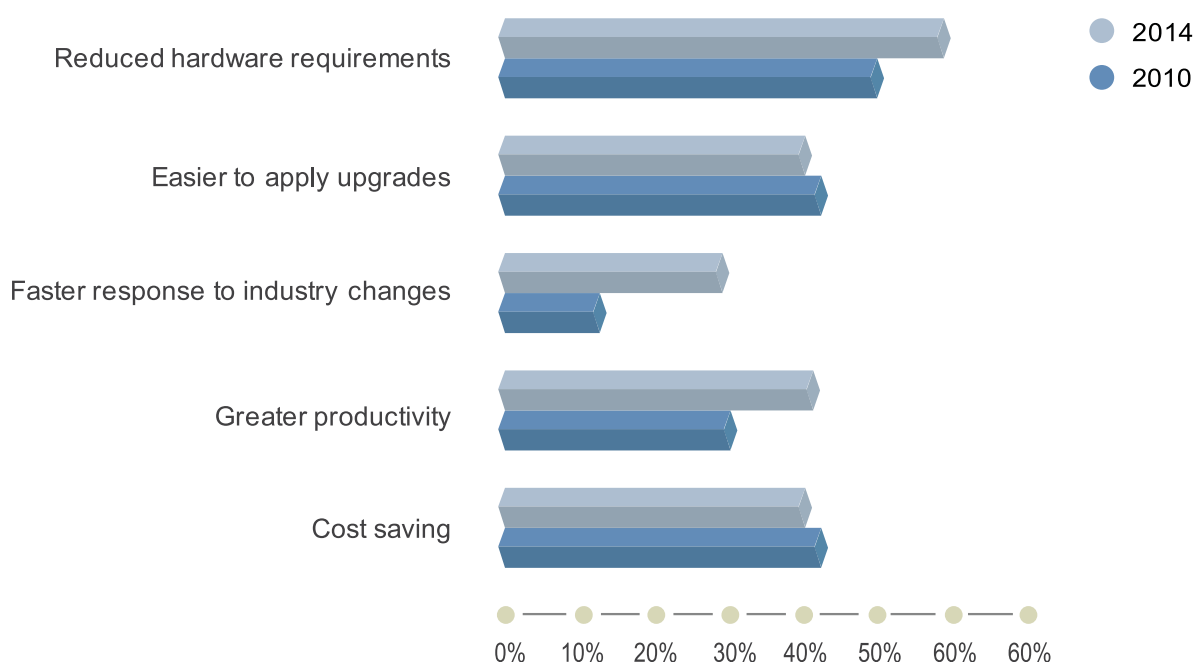
Source: Frost & Sullivan, Survey of 1500 executives

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With 40% of all organisations now using a cloud solution, customer relationship management (CRM) and e-commerce are the most commonly accessed business applications. However, the cloud model is now increasingly used for many other core business applications that were traditionally hosted on-premise, such as Enterprise Resource Planning (ERP), financials/accounting and manufacturing management.

Cost saving through lower licence fees and reduced hardware requirements has been the main driver of cloud adoption. However, as the cloud computing market matures, organisations are increasingly appreciating its ability to provide enhanced flexibility. The capacity to improve business adaptability is an increasingly important driver of adoption, with 29% of executives rating faster response to industry change as a key factor, up from only 12% in 2010. Hence, adaptability is fast catching up with reduced hardware costs and lower software fees as a key reason for adoption (see Figure 9).

Figure 9: Main Reasons for Adopting SaaS



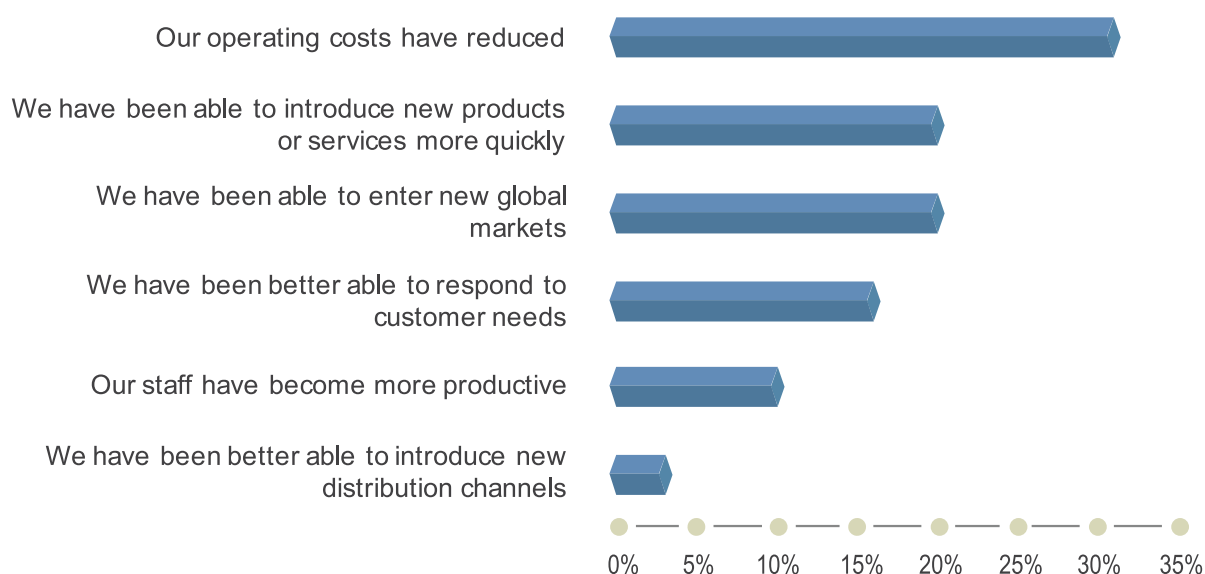
Source: Frost & Sullivan, Survey of 1500 executives

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CLOUD AS A SOURCE OF BUSINESS ADVANTAGE

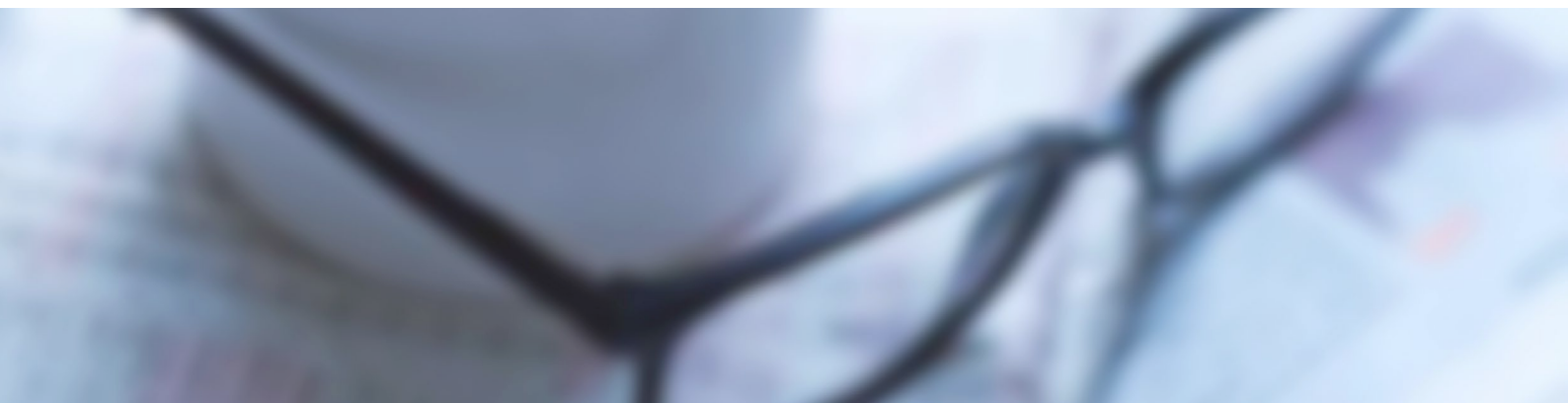
Whilst adaptability is an increasingly important reason for adopting cloud, organisations that have done so are recognising that it can give them a source of competitive advantage. Overall, 81% of organisations that have now adopted SaaS for at least one of their main business applications feel that it has given them a competitive advantage, particularly in lowering operating costs, the ability to launch new products or services more quickly and an enhanced ability to enter new markets (see Figure 10).

Figure 10: Main Area of Competitive Advantage Obtained Through SaaS



Source: Frost & Sullivan, Survey of 1500 executives

As with many emerging technologies, the initial focus on cost savings is being replaced by a more nuanced understanding of the business agility that cloud enables—an aspect that is becoming more fundamental as industry change accelerates.



THE LAST WORD

There is no doubt that industry transformation is occurring at a rapidly increasing rate, and is affecting every industry on a global scale. This is being driven by a range of disruptive forces including globalisation, digitalisation and the impact of new technologies, which are facilitating new challenges to established players and opening opportunities for more agile, innovative companies in every industry sector. New, disruptive competitors are emerging, new business models being introduced, digitalisation is affecting every industry and product companies are increasingly offering services, and vice versa.

In response, organisations are being forced to change faster than ever before if they want to survive, which unfortunately will not happen for many businesses. The average small business survival rate, for example, is less than five years. At the other end of the scale, the average lifespan of US S&P 500 company is likely to decline from 61 years in 1958 to only 10 years by 2018. Businesses that will survive are not likely to be those with the best products or services today, but those with the best ability to adapt to changing industry dynamics.

Much of this industry change is being enabled by cloud computing. The low cost and rapid scalability that cloud offers is allowing companies of all sizes to quickly and easily expand their footprint globally, often through rolling out new and innovative business models that challenge industry leaders. In industries from manufacturing to retail, cloud is an enabler of industry change.

Whilst industry transformation is occurring at a faster pace, it is also less predictable. The ability to quickly respond to change is becoming more and more important—and this flexibility is likely to be the key determinant of business survival, and has to be built into the corporate DNA. Adoption of cloud computing is one way that organisations can gain this flexibility. It offers large organisations the flexibility to more rapidly respond to industry change than their competitors stuck with on-premise solutions. It also gives smaller organisations the ability to access IT resources that could only be afforded by larger organisations with greater resources in the past, enabling them grow and future proof their business.

As cloud computing matures, its ability to provide business flexibility is becoming recognised as a key reason for adoption; whereas cost saving was traditionally the main driver in its early stage. Cloud is not just an enabler of industry transformation; it is now a necessary response.



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About NetSuite

Today, more than 20,000 companies and subsidiaries depend on NetSuite to run complex, mission-critical business processes globally in the cloud. Since its inception in 1998, NetSuite has established itself as the leading provider of enterprise-class cloud ERP suites for divisions of large enterprises and mid-sized organisations seeking to upgrade their antiquated client/server ERP systems. NetSuite excels at streamlining business operations, as demonstrated by a recent Gartner study naming NetSuite as the fastest growing top 10 financial management systems vendor in the world. NetSuite continues its success in delivering the best cloud ERP/financial suites to businesses around the world, enabling them to lower IT costs significantly while increasing productivity, as the global adoption of the cloud accelerates.

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