*Cloudy above, full speed ahead*
How digital cloud solutions are critical for e-commerce industry to keep up with growth in the Asia Pacific

pwc

*In the Asia-Pacific region, cloud-based solutions are critical for online retail and e-commerce companies in order to maintain the agility needed to stay ahead in fast-growing markets.*

Asia-Pacific economies have shown great resilience to global disruptions over the past decade. Despite political uncertainties in some countries, a combination of rapid urban growth, a rising middle-class and the enthusiastic adoption of mobility have continued to fuel growth. Though the opportunity is significant, predicting the speed and pattern of growth is difficult. So for firms to capture their fair share they must be flexible enough to scale at the moment when the growth waves come.

*Increase in smartphone penetration to the masses, and the high propensity of Asians to use mobiles for transactions are creating the world's biggest e-commerce markets in Asia Pacific.*

It is not just Asia's population size that is driving its emergence as the world's largest e-commerce marketplace; consumer propensity to use mobiles for undertaking transactions is also a guiding factor. Four examples of Asia-Pacific growth illustrated below underline how this region is emerging as the leading e-commerce market:

1. In 2014, Asia (along with Africa) took the lead for the world's highest propensity to use mobile for internet access *(Figure 1)*.[1] Thirty-seven per cent of Asians use their mobiles as the primary internet access device, compared to less than 20% for Europeans and North Americans.[1] The Chinese mobile user has the highest propensity of any in the world to use the mobile for completing an e-commerce transaction.

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*Mobile usage as a percentage of web usage, by region*
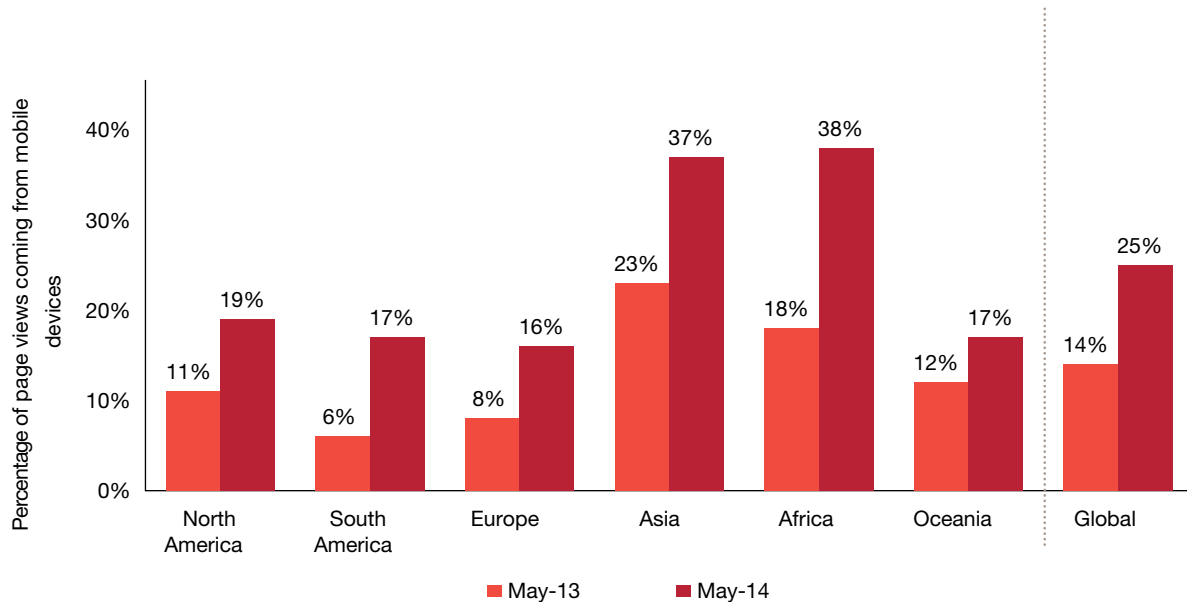


Figure 1

2. Asian countries feature high amongst nations with the highest daily screen minutes of use. Countries such as Indonesia, Philippines and China are the top three globally, and Vietnam fifth, according to research undertaken by Milward Brown Adreaction *(Figure 2)*.[1] In cumulative terms, Indonesians spend almost 10 hours a day looking at one or the other screen (sometimes simultaneously) split between TV, laptop or PC, phone and tablet. 5 Screen time for an average connected Indian exceeds that of someone in France, Italy or Germany.

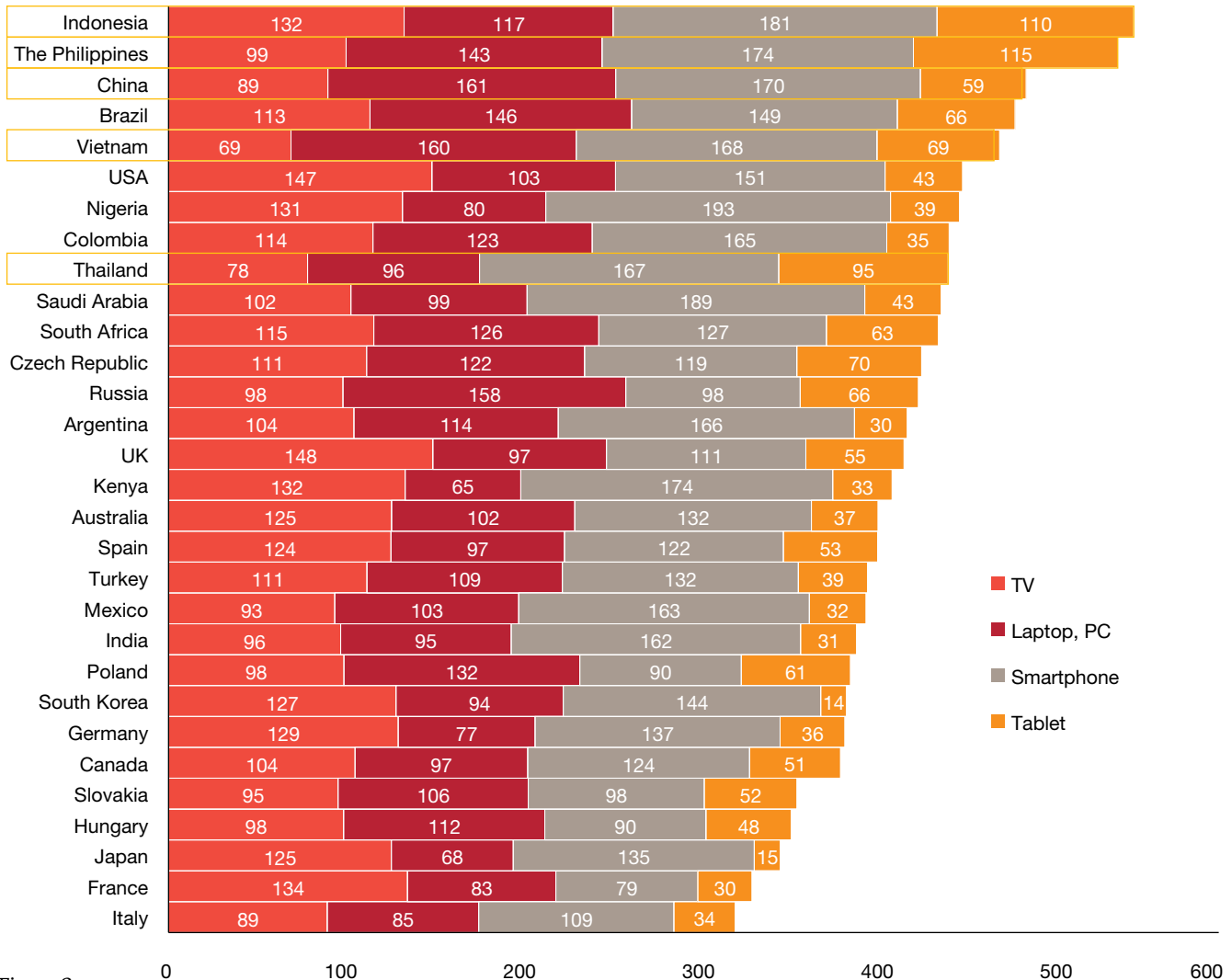*Daily distribution of screen minutes across countries*



| Country | TV | Laptop, PC | Smartphone | Tablet |
|---|---|---|---|---|
| Indonesia | 132 | 117 | 181 | 110 |
| The Philippines | 99 | 143 | 174 | 115 |
| China | 89 | 161 | 170 | 59 |
| Brazil | 113 | 146 | 149 | 66 |
| Vietnam | 69 | 160 | 168 | 69 |
| USA | 147 | 103 | 151 | 43 |
| Nigeria | 131 | 80 | 193 | 39 |
| Colombia | 114 | 123 | 165 | 35 |
| Thailand | 78 | 96 | 167 | 95 |
| Saudi Arabia | 102 | 99 | 189 | 43 |
| South Africa | 115 | 126 | 127 | 63 |
| Czech Republic | 111 | 122 | 119 | 70 |
| Russia | 98 | 158 | 98 | 66 |
| Argentina | 104 | 114 | 166 | 30 |
| UK | 148 | 97 | 111 | 55 |
| Kenya | 132 | 65 | 174 | 33 |
| Australia | 125 | 102 | 132 | 37 |
| Spain | 124 | 97 | 122 | 53 |
| Turkey | 111 | 109 | 132 | 39 |
| Mexico | 93 | 103 | 163 | 32 |
| India | 96 | 95 | 162 | 31 |
| Poland | 98 | 132 | 90 | 61 |
| South Korea | 127 | 94 | 144 | 14 |
| Germany | 129 | 77 | 137 | 36 |
| Canada | 104 | 97 | 124 | 51 |
| Slovakia | 95 | 106 | 98 | 52 |
| Hungary | 98 | 112 | 90 | 48 |
| Japan | 125 | 68 | 135 | 15 |
| France | 134 | 83 | 79 | 30 |
| Italy | 89 | 85 | 109 | 34 |

*Figure 2*

3. Chinese mobile internet users alone surpassed 500 million in 2014,[2] rendering it the world's largest single country of mobile internet users. Significantly, during the course of 2014, four Chinese companies entered into the list of the world's top 10 internet properties, with not one having featured in the top 10 rankings the previous year *(Figure 3)*.[1] Although the world's leading five internet properties are US-based companies, more of their user base now comes from Asia than anywhere else.

Businesses such as Facebook, Google and WhatsApp have seen the emergence of specific market strategies for markets such as China and India, such as the Android One smartphone and fibre build strategies. (Read **Shop till you drop**, a PwC paper commissioned by Orange Business Services, on how China will soon eclipse the US as the world's largest e-commerce market and how traditional retailers in China are using digital technology to offer a more 'connected retail' experience.)

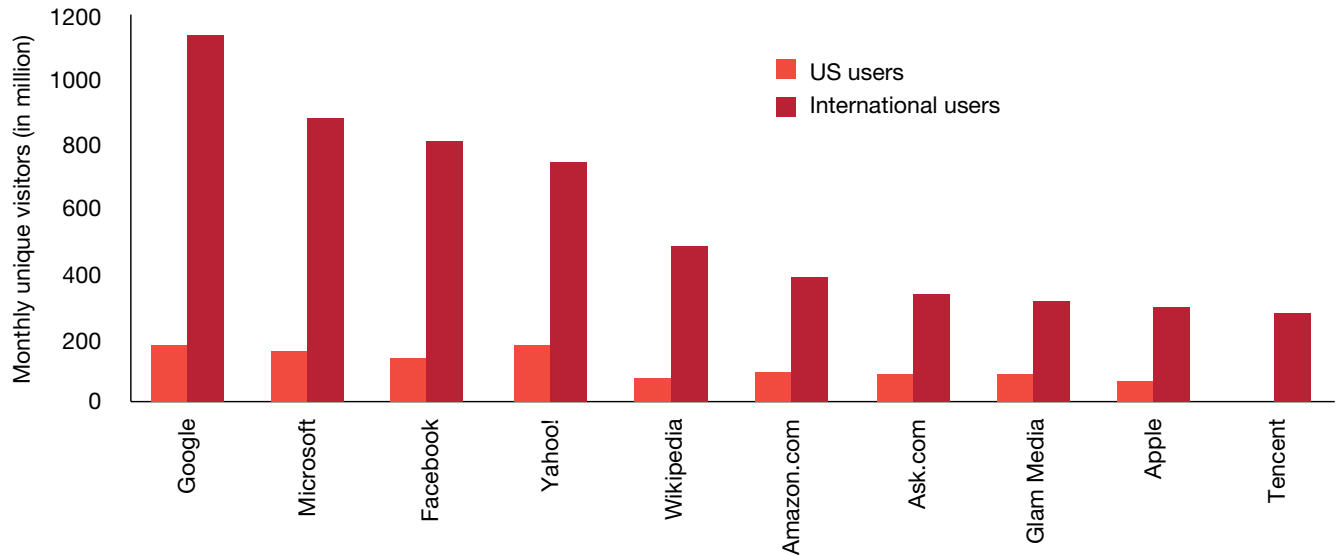*Top 10 properties by global monthly unique visitors, 1/13*



*Figure 3*

4. Dispersed Asian markets continue to interest, meaning that the region has depth and variety in the growth opportunity offered. Indonesia and Myanmar are both seen as 'dark horses' geared up for aggressive growth in the next three to five years *(Figure 4)*.[3] Under the new government, India is looked at again as an economy which can live up to its billing as a high-growth emerging market with *Make in India* and *Digital India* as key growth themes.

## *PwC 2013 APEC CEO Survey[3]*

**Q: Which of the following Asia-Pacific economies do you believe will be the 'dark horse' in the next 3-5 years?**
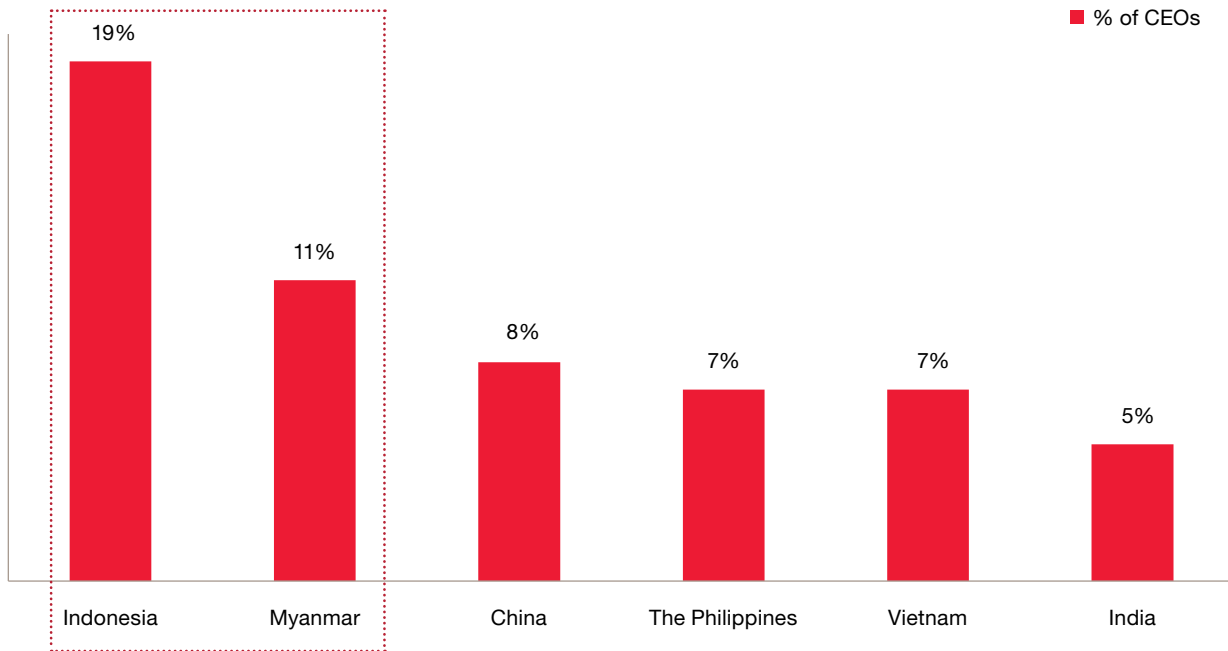**Base: 478 (excludes 'none of the above' and 'no answer')**



*Figure 4*

### Market demand for e-commerce is growing while data storage and internet access costs are declining rapidly.

As the costs of accessing the internet and storing data continue to fall sharply all over the world, we can expect e-commerce in Asia to grow even faster. According to analyst firm KPCB global, computing costs fell from 527 USD per million transactions in 1990 to 0.05 USD in 2012.[1] Global data storage costs fell by a similar quantum, down to 0.02 USD per MB by 2014.[1] All this combined with falling smartphone prices resulted in increased affordability of data services for the masses.

Growth can come in sudden spurts, and businesses not agile enough to adjust to the rapidly changing market conditions can be taken by surprise and miss out. The experience of China's Didi Taxi illustrates sudden spurts of growth being experienced by Asian businesses. When Didi launched WeChat payment integration in January 2014, online taxi ride bookings rose from 1 million a day to over 5 million a day by the end of March 2014.[1] In Didi's case, it handled the growth well, increasing registered users from 350,000 to a staggering 100 million within three months, a 300-fold growth on its original base.[1]

### To tap unpredictable growth, Asian retailers are under pressure to refresh product offerings and upgrade backup systems.

In the midst of rapid e-commerce growth, retailers in Asia Pacific not only have to keep up but also transform their operating models and product offerings to be able to match up to the unexpected pace and variety of growth. In order to stay relevant, businesses have to invest more in product development, service and distribution capabilities and talent. Businesses also need better information to decide on the markets and customers to concentrate on, where to innovate in the product life cycle, how much to invest, and how to allocate resources. Developing new products and services, and expanding distribution are currently Asian CEOs' two top priorities *(Figure 5)*.[3]

### CEO investment allocations over the next year[3]

**Q: Thinking of those APEC economies where your organisation is increasing investment over the next 12 months, what proportion will be allocated to the following areas?**
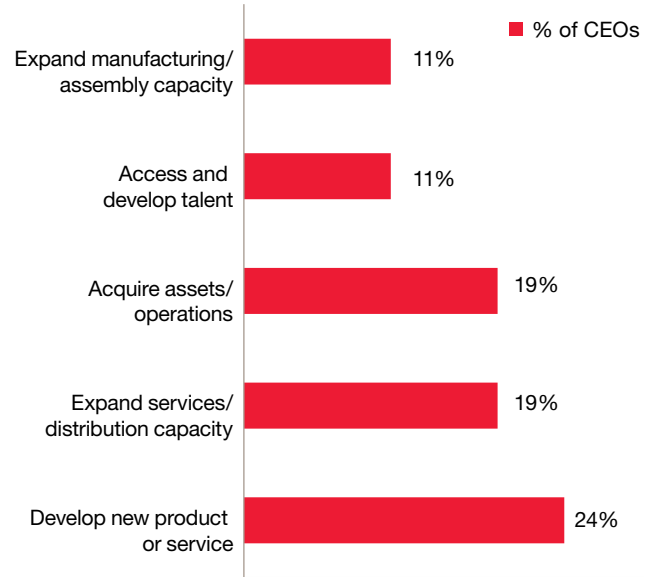Base: 443



*Figure 5*

## Back office issues continue to distract Asia Pacific businesses.

Despite advances in data collection and analytics, there is an opportunity to make much better use of data. According to analysis by IDC in 2014, of all market data collected today only 1% is actually used, while 7% of it is 'tagged' (that is, associated to a particular person, appliance or device using M2M or IoT sensors) and as much as 34% of data is useful.[1] Since so much data is already potentially useful, advances in the usage of data through better analytics can result in immediate advantages as to how companies manage their customers.

Back office issues distract Asia Pacific businesses from fulfilling their market potential, and digital interventions provide an opportunity to address many of the challenges. Data security, order management, inventory and stock control, and inefficiencies in customer acquisition and activation are some of the areas where businesses are struggling. For example, the number of detected cyber security incidents in the Asia-Pacific region soared to 42.8 million, up 48% in 2013, impacting virtually every industry, with many incurring significant costs in order to manage and mitigate the breaches.[4]

How strategically important are the following categories of digital technologies for Asia Pacific CEO's organizations?



■ % of CEOs

50% Mobile technologies for customer engagement

50% Cyber security

48% Data mining and analysis

44% Battery and power technologies

31% Cloud computing

31% Internet of Things

23% Socially-enabled business processes

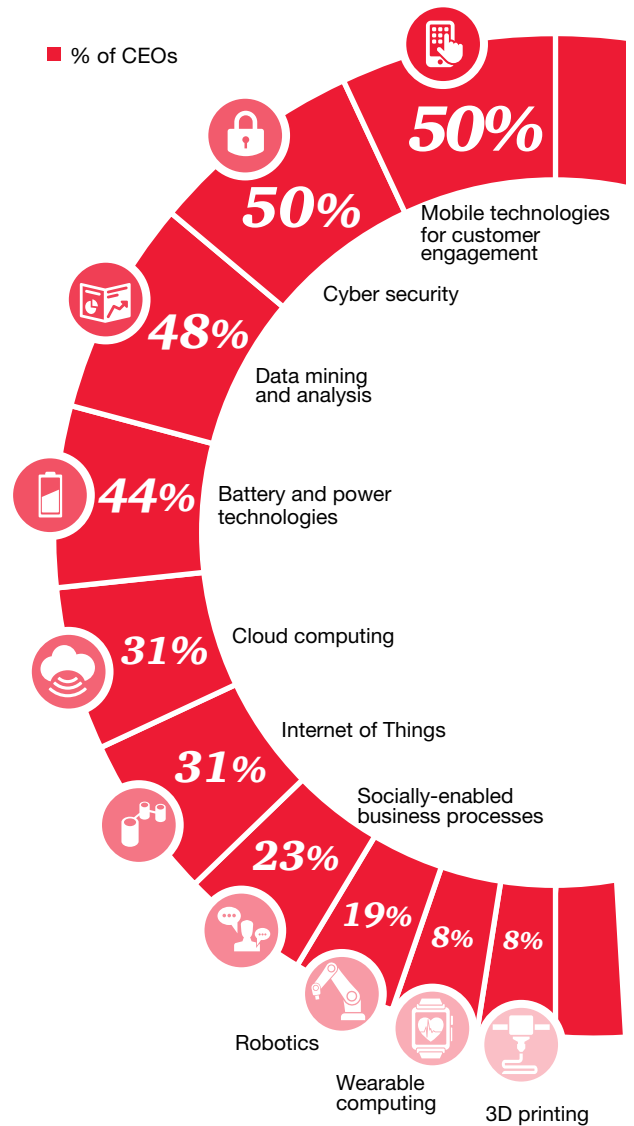19% Robotics

8% Wearable computing

8% 3D printing

*Figure 6*

Asia Pacific business leaders rank mobile engagement, data mining and cyber security as the three most important digital technologies to focus on *(Figure 6)*.[5] Firms are looking at ways to invest in technology and analytics to keep consumer data safe and to improve back-end support for order management, inventory, warehouse management, billing and financial management and logistics in order to speed product development and market access.

### *Utilisation of the cloud is helping online retail or e-commerce firms to respond rapidly to market opportunities, at lower costs and contained risk.*

Cloud refers to the outsourcing of data centres and application services to a remote provider. The remote provider captures business critical information in a single and tamper-proof online repository within the provider's secure and multi-tenant data centers. Its key features include the following:

- Advance search filtering capabilities

- Role-based self-service access

- Unlimited storage and retention

- Automatic upgrades, maintenance and customer support

- Secure encryption and authentication of data

Cloud transfers in-house IT service processes to the cloud platform. This leads to new service modes such as infrastructure as a service (IaaS), platform as a service (PaaS) and software as a service (SaaS). Clarins, a French cosmetics company, saw double-digit sales growth in the first six months after it launched a cloud-based e-commerce platform.[6] Having effectively outsourced technical operations to the service provider, the group was able to focus and move quickly into new international markets, handle heavy website traffic during holidays and promotions, and concentrate on features that enabled success online.

### *For Asia Pacific online retail or e-commerce firms, cloud computing provides the agility needed to capture the full benefits of growth.*

e-Commerce firms in Asia Pacific can realise value from cloud solutions through specific benefits which address the challenges of growing flexibly and quickly while maintaining risk and reducing security breaches:

- *Reduced cost:* Replacing the need to purchase and install equipment, cloud computing enables online retail enterprises to reduce costs in implementation, administration and application maintenance. EC2, a cloud service offered by Amazon, helped Eli Lilly & Company, a pharmaceutical company, decreased the cost of data analysis to 89 USD from a staggering one million USD.

- *Greater agility and flexibility:* Due to the scalable nature of the cloud environment, businesses can realise benefits faster, with self-service provisioning allowing e-commerce firms to provision infrastructure in minutes across geographies. Tiens Group, a multinational conglomerate, uses IaaS offerings to provision and manage servers in multiple and distant territories from its headquarters in China.

- *Better resource utilisation:* Cloud computing helps e-commerce firms maintain resource efficiency during periods of low sales or as consumer preferences change, by outsourcing back-end infrastructure building and application software services. Cloud computing enables businesses to integrate idle IT resources (eg server) on the far-end platform and rent them to the customers thereby reducing the operation costs and increasing utilisation. Alibaba loans small as well as medium-sized businesses idle assets during downtime.

- **Efficient development and testing:** The cloud creates a fundamental change in the development and test environment by enabling developers, testers and performance engineering teams to work in parallel at a fraction of the expected infrastructure cost. Planners can recreate customer use cases using a virtual data centre, isolated test environments and multiple development and test configurations on demand. BestBuy is known to test its website for 50,000+ simultaneous users before major holiday promotions.

- **Better risk management:** Transition to the cloud helps in creating a new service ecosystem which integrates e-commerce resources, reduces complexity and shifts IT risk from the enterprise to the cloud computing provider. Integration of server, storage and network resources into one set of infrastructure further reduces incompatibilities and faults within the IT infrastructure, and the ability to search through unstructured data using intelligent analytics eases addressing of compliance and legal issues.

- **Improved security:** Data integrity and confidentiality are key reasons why security is paramount for firms. Data partitioning, a dedicated virtual firewall and regular backups for each customer on the cloud safeguards security and continuity of services.

- **Better disaster recovery:** A disaster recovery environment is key to ensuring business continuity for critical applications. Though disaster recovery is used only during a disaster, enterprises have to bear the cost of infrastructure at all times. Increased availability of data ensures faster recovery during disaster recovery scenarios.
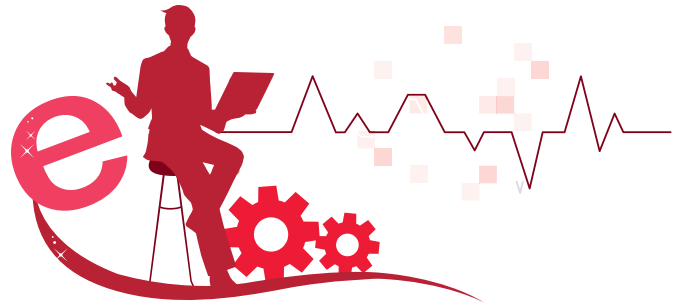
*Cloud-based solutions could help online retail and e-commerce companies to maintain the agility needed to stay ahead in fast-growing markets in the Asia Pacific region. By implementing cloud solutions, online retail and e-commerce firms can respond rapidly to market opportunities at lower costs and contained risk and can capture the full benefits of promising growth in the region.*

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