

Information Technology In Asia – A Labour Market Perspective 2015



1 State Of The Industry

The ongoing shift of businesses into the digital realm is expected to pick up pace in 2015, as disruptive technologies such as cloud computing, data analytics and the Internet of Everything are adopted by companies in the region at an increasing rate.

As a result, IT budgets in these areas are forecasted to grow in the coming year, as companies strive to build up a competitive advantage over their rivals in an uncertain and volatile business environment.

For instance, research firm Gartner predicts that the public cloud services market in the mature Asia/Pacific and Japan (APJ) region is on pace to grow 14.2 percent in 2015 to US\$7.4 billion, up from US\$6.5 billion in 2014. Cloud management and security services, the fastest growth segments of the cloud services market, are expected to expand by almost 30 per cent in 2015 to US\$264.5 million. By 2018, total public cloud services spending in the mature APJ region will have risen to \$11.5 billion, according to Gartner.

"Many countries in the mature Asia/Pacific Japan region have solid reliable telecommunications infrastructure and relatively advanced technology usage profiles. Despite challenges in the global economy, we expect consistent and stable growth to continue through to 2018," said Ed Anderson, research vice president at Gartner.

Meanwhile, the decreasing cost of data in the region has spurred adoption of big data analytics. As more of Asia's governments open up their data for public scrutiny, companies looking for an edge over their competitors now have greater access to a low-cost means of gaining insights into their target markets in the region.

This free, or open source, data can be used to evaluate partners or possible acquisition targets, select manufacturing locations based on workforce requirements, optimise sales and distribution networks, and fine-tune pricing and promotions.

The 2012 International Open Government Data Conference revealed that over 1 million data sets from governments around the world are available on the Internet. Traditionally a laggard in this area, Asia is catching up with countries in the West with the launch of government-sponsored portals including Singapore's data.gov.sg, Hong Kong's data.one.gov.hk, and data.id in Indonesia.

"Open data lowers the barriers for entry by levelling the playing field - for businesses large and small. In evaluating their expansion options in Asia, MNCs can use open data to gain deeper insights into the markets they aim to serve as well as the sequence and methods for market entry," said Mr Sean Dunphy Director, Deloitte Analytics in Singapore.

Outside of government sources, there are also global open data repositories. These include www.quandl.com, which provides links to approximately 10 million data sets from sources such as the World Bank, the UN, IMF and many others. Datacatalogs.org also provides links to over 300 official open data repositories.

On the consumer tech front, mobile usage continues to deepen in Asia, more so than anywhere else in the world. According to eMarketer, Asia-Pacific is home to the largest mobile phone market worldwide, with 2.6 billion users this year with users continuing to come online via mobile.

This trend shows no sign of slowing down. Apple stunned the market by selling a record 74 million iPhones in the quarter ended December 2014, with sales in Mainland China surging by 100 per cent. This translated to 34,000 iPhones sold per hour, 24 hours a day, every day of the quarter, said Apple CEO Tim Cook.

Underpinning these trends is a heightened awareness for the need for cyber security as the physical and virtual worlds merge in the business world. Security has become an even hotter topic in light of several high profile cyber attacks, most notably the successful attack on the computers of Sony Pictures that threw the movie studio in disarray in November last year.

Akamai Technologies, Inc., the leading provider of cloud services said that distributed denial-of-service (DDoS) attacks - an attempt to make a machine or network resource unavailable to its intended users - became much more prevalent in 2014.

"DDoS attack size and volume have gone through the roof this year," said John Summers, vice president, Security Business Unit at Akamai Technologies.

Reflecting the urgency of the situation, the Singapore government in January announced the establishment of a high-level central agency to coordinate public and private sector efforts to protect national systems, such as those in the energy and banking sectors, from cyber threats.

The new Cyber Security Agency (CSA), formed under and funded by the Prime Minister's Office, will oversee the cyber security of 10 critical sectors, including power, transport and telecommunications, from April.



2 Trends

Computing Everywhere

As mobile devices continue to proliferate and the Internet of Things becomes a reality, there will be an increased emphasis on serving the needs of the mobile user in diverse contexts and environments, as opposed to focusing on devices alone.

3D Printing

3D printing will reach a tipping point over the next three years as the market for relatively low-cost 3D printing devices continues to grow rapidly and industrial use expands significantly.

Smart Machines

Prototype autonomous vehicles, advanced robots, virtual personal assistants and smart advisors already exist and will evolve rapidly. According to Gartner, the smart machine era will be the most disruptive in the history of IT.

Cloud Computing

The convergence of cloud and mobile computing will

continue to promote the growth of centrally coordinated applications that can be delivered to any device.

Risk-Based Security

While security is central to any technology system, it cannot also inhibit the growth of an organisation. Companies increasingly recognise that it is not possible to provide a 100 percent secured environment. This will result in management applying more sophisticated risk assessment and mitigation tools.

Deepening Mobile Engagement

Across Asia, time spent on mobile devices has eclipsed TV, ranging from 44 per cent of media time spend in Japan to 60 per cent of media time spent in Thailand, says digital research firm Milward Brown AdReaction, March 2014. According to a report by IDC, the average person checks their mobile device 100 times a day and Facebook 14 times day.

3 Industry Development

The emerging trends in the IT sector will pose challenges to CEOs and CIOs who will need to not only build up capabilities in these specialised areas, but integrate them into their organisations' core operations as the line between business and IT rapidly fades.

Based on our engagement with key industry players, many believe that technologies such as cloud computing, data analytics, enterprise mobility, software as a service (SaaS), IT security and social media will have a positive impact on their business strategies in Asia.

They also believe that the ability to adopt cutting-edge IT solutions will be key to improving business performance and that this will help make collaborative decision-making faster. However, while they recognise its importance, many companies in Asia have been slow to adopt these new technologies.

We expect this situation to change as awareness and adoption grows and costs of implementation come down. Once these systems are successfully implemented however, CIOs and senior technology executives will need

to elevate their roles within their organisations to become the drivers of business innovation.

They will need to go beyond their traditional fields of expertise and become an agenda setter in their companies.

"IT executives will need to become less technical and become much more of a leader of IT operations; a people manager," says Suntaree Limmanont, Country Manager, Spring Professional Thailand.

To do this, CIOs must demonstrate strong credibility in leading innovation for their enterprise. This may require

"Expand your horizons. Think way outside the usual boundaries of your role. Take a very large sheet of blank paper, and gradually sketch out a brand-new version of your business, based on modern digital capabilities," said Gartner's Mark Raskino and John Mahoney in a recent article for Forbes magazine.

them to take risks in order to promote and improve the technology-linked business innovation capability of the company. Being able to influence the most senior people in the organisation is key to achieving this.

To stay abreast of the latest changes in the industry, they recommend that CIOs set aside at least 5 per cent of their time to experience the wide range of newer and emerging technologies and capabilities that might have applications in their industry.

4 Talent Development

From a recruitment point of view, we believe that the industry will face a shortfall in some critical roles. These include professionals in data science and analytics, business intelligence, mobile advertising, cyber security, data centres, virtualisation and unified communications.

To better prepare themselves for the changing business

environment, we recommend that IT professionals equip themselves first with relevant experience in their chosen area of expertise. This can then be backed up with focused learning, certifications and other relevant training that will give them a theoretical grounding to back up their industry experience.

5 Conclusion

As technology in the business world continues its rapid-fire evolution, IT decision makers in Asia need to react to a volatile landscape as well as the constantly changing needs of internal and external stakeholders.

CIOs and IT executives must also accept a far more important role within their organisations as technology-linked innovations play a critical role in driving business performance.

As such, they must consider a wide variety of factors, including business value, alignment with corporate strategy, and the chances of successful implementation when making technology related decisions. Above all, IT executives must become an evangelist for tech driven innovation, ensuring that all senior executives within the company are committed to a consistent IT strategy.

