Cloud Computing – A business transformation

Cloud Computing is anticipated to reap potential revenue of USD 800 billion and the industry is being hailed by analysts as one of the most pervasive technologies to businesses since the widespread adoption of the internet.¹

China is seeking to capture around 19 percent of this market with anticipated revenues of USD 154 billion (or RMB 1 trillion).² The Chinese government views Cloud Computing as a great enabler for the future and has cited it as a ‘Strategic Emerging Industry’ within the 12th Five Year Plan. Across China, the level of investment from both state-owned and private enterprises is far outstripping the investments being made across the world. Cloud becomes an enabler for “virtualising a nation”.

So why is there so much interest in the Cloud within China? What is the Cloud? What does it mean to businesses in the region? What can it really do to provide true benefits and help achieve business targets?

This issue will investigate some of these questions and pull together recent events and activities, which have been happening across the Cloud Computing industry. It will also provide KPMG’s view on what impact these activities could have on our clients in the region.

The Cloud – hype or hope?

The term “Cloud” has been used by many strategists, evangelists and futurists and has been received with mixed response. The question of whether it is a real and worthwhile investment is something that has concerned many industry leaders. The market has been flooded with technology providers re-branding their service offerings as Cloud solutions and software and hardware manufacturers recombining and re-badging their products into Cloud suites.

The truth is that the Cloud makes use of existing and trusted technology capabilities (i.e. broadband Internet connectivity, virtualisation technology and web applications) in order to deliver Information Technology (IT) services, which can support a changing industry and consumer appetite. Just as off-shoring and outsourcing has been adopted as effective and acceptable business practices, so the preconceptions of how technology services can be provided are changing due to ever evolving business models adapting to changing market forces.

¹ www.7Economy.com
² www.en.21cbh.com
Consumers and business users have increasing expectations on what technology should be providing. Innovative solutions and the latest functionality at a cheaper price point as well as shorter improvement lifecycles are forcing leaders to consider the Cloud since these aspects are cornerstones in the Cloud benefit model.

**What the Cloud is**

Discussions about the Cloud commonly start within the office of the Chief Information Officer (CIO) and will often remain there. The Cloud is often perceived as impacting IT alone without considering the wider positive implications it can generally have on an organisation.

The Cloud is actually one of the most disruptive forces that have hit businesses within the last 20 years. It offers the opportunity for organisations to reconsider their model for using technology with its impact reaching into how technology is funded, consumed and governed.

The Cloud is a set of technology capabilities, which combine to establish a commoditised delivery model where the costs of IT can be directly attributed to the level of benefit that the business realises from it. It is a means of raising the speed of technology change up to the levels required by the business in order to meet the changing market demands.

The Cloud is a business enabler, which can address the key business drivers that currently exist in China: regional expansion, service improvement and effective cost management. By combining the latest technology solutions with a variety of sourcing models, organisations have the chance to transform the way they budget, operate and deliver services to their customers and clients. By merging the Cloud’s features into the right custom recipe, the business will finally be able to focus on their core revenue-generating activities rather than worrying about their supporting infrastructure.

**What Cloud Computing provides**

The key element that the Cloud provides businesses is the ability to innovate without the need for huge injections of investment from venture capitalists or parent company support (large CAPEX). This innovation can be seen from four key areas of benefit:

**Increased agility - reduced investment**

The Cloud enables organisations to rapidly respond to changing market drivers and to try different strategies more quickly with a reduced investment requirement. This ability to react enables large global organisations to deliver new services to markets in a way normally only seen in smaller and more nimble organisations. This will be a key benefit to organisations looking to expand into China without risking huge outlays.

**Greater flexibility - adapting capability**

Adopting a Cloud approach means establishing or utilising a Centre of Excellence (CoE) with the people, processes and technology experience that can cope with changes in market drivers and adapt solutions as necessary. This is allowing early delivery of products and services to market even before the full potential of the market is understood, since future roll-outs can be improved and customised.

**Faster results - changing critical path**

Using the Cloud will often remove technology from the critical path for new projects and business improvements. In the competitive markets that now exist, any speed advantages are crucial and the Cloud has shown how increased market share can be catered for more quickly and that technology-based requirements can be provided sooner.
Reduced cost - lower outlays

The utility nature (pay-as-you-go OPEX focused cost models) of the Cloud means that project burn rates can be aligned more closely to when business benefits are realised. When combined with reduced delivery timelines, overall reductions in technology costs can be significant.

China’s approach to Cloud Computing – “virtualising a nation”

As part of China’s expansion into the Cloud, the Chinese government has identified a number of key locations where a combination of private and state investments are being made to establish Cloud environments. These Cloud Computing hubs and CoEs will deliver services across China, enabling the expansion of the domestic economy and enable foreign investment in China. China’s investment in the Cloud will provide several key benefits for the state:

- Chinese software companies can promote their business on a global stage without requiring huge investments to build enterprise-ready infrastructures.
- Multinational corporations can acquire pre-built IT environments on which they can build and operate globally accessible and business-ready services.
- All of China will have access to the latest and best applications through mobile technology, including smart phone handsets and improved mobile applications, without the outlay on regular software licences.

Key examples of China’s desire to develop environments where domestic companies and foreign investors can work together and offer services include:

- The governments establishing of a Special Administration Region in the Liangjiang New Area in Chongqing where foreign investors can obtain unfiltered access to the Internet for providing services to the rest of the world.
- The Ministry of Industry and Information Technology is establishing pilot Cloud programmes in five major cities: Beijing, Shanghai, Shenzhen, Hangzhou and Wuxi.
- The release of the Information Security Technology — Guide of Personal Information Protection (draft) by the Ministry of Industry and Information Technology provides guidance on meeting the privacy expectations of foreign organisations.

The future of the Cloud

There is little disagreement that the Cloud is here to stay and that it will be a significant force in shaping the way business and consumers use technology in the future, especially in China. These are the areas we expect to see the Cloud supporting in this changing market:

- **Mobile payments** - high volume, low value payments are only achievable if the infrastructure supporting them is efficient from both a capability and a cost profile perspective.
- **Online entertainment** - virtual media libraries, larger and more complex gaming environments, globalised social networking expectations and a constantly connected mobile life will drive the need for mega shared environments providing storage, functionality and a social interactive experience.
• **Virtualised desktop** - with workers commonly having a laptop, tablet, BlackBerry and smart phone, the need for information synchronisation across devices and platforms becomes increasingly complex. By establishing information and applications independent of the device itself and delivering on-the-fly connectivity to online, platform-agnostic applications, a truly mobile environment can be provided.

• **Business continuity** - the recent spate of natural disasters and infrastructure failures across the region has brought business continuity concerns to the forefront. Maintaining a redundant environment is costly, so finding better ways for technology to be used to deliver alternative operating environments which are geographically, and potentially socio-politically remote, can provide a significant advantage.

• **Business-as-a-service** - Asia’s aggressive growth is driving organisations to consider new and innovative solutions to aid the rapid expansion in the region. In response, many service providers are offering business solutions designed to provide unconventional business processes to their customers. The combination of technology, industry knowledge and regulatory awareness allows new start-ups and expanding organisations to attain the benefits of good practice at an accelerated rate.

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### Five points on dealing with the Cloud

1. **Aligning with the business strategy**
   - Rather than considering what an organisation’s approach and strategy to Cloud Computing should be, business leaders and executives should be looking to understand how the Cloud can help formulate their existing business strategy and where advantages can be achieved by adopting a Cloud-based solution.

2. **Understanding customer appetite**
   - As with any new delivery model, evaluating customer appetite, both internally and externally, and whether they are ready for such solutions is key. Bringing together representatives from technology, business, legal, compliance and risk areas is key to ensuring that all views are considered before aligning the Cloud with a business strategy.

3. **Keeping an eye on the business**
   - The flexibility and ease of the Cloud brings danger as well as benefit to any organisation. Since it has become easier and faster for businesses to directly adopt and purchase new technology capabilities, having effective control management of Cloud vendors is paramount; be vigilant about your own internal functions and the vendors that you partner with to deliver services.

4. **Innovating and experimenting**
   - The benefits of rapid delivery models and commoditised services include the ability to “try before you buy” and the testing of new services and functions without the cost overheads associated with more traditional technology development life cycles. Using this ability to a business advantage can allow the consideration and assessment of new services in a controlled way but on an accelerated timeline.

5. **Being aware of risks**
   - Ignorance is never an excuse - maintaining vigilance over the activities the business has within the Cloud and continually assessing and mitigating against risks is essential. However, the risks may not be obvious. Consideration over contractual risk in the event that service is lost, source code ownership in the case of service provider bankruptcy or jurisdiction and tax issues due to information processing as well as storage locations can all have significant impact on the business model proposition.
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