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Digital Transaction Banking  
Opportunities & Challenges



# Contents

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1	<b>Foreword</b>
2	<b>An era of digitisation</b>
4	<b>Digital-led change in end-client ecosystem</b>
9	<b>The evolving transaction banking landscape</b>
14	<b>Implications for transaction banks</b> - Case studies
21	<b>Looking forward</b>

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# Foreword



Digital adaptation started off as an option but has evolved into a necessity in every bank's agenda around the globe as end-clients – consumers, businesses, and governments – are quickly adopting trends cascading from the technology sector in their IT capabilities, business operations, and business models. With the digitally-savvy generations coming of age, the manifestations of the rapidly evolving technological changes across all aspects of our lives pose fascinating challenges and opportunities alike in the end-clients' digital ecosystem.

Transaction banks in the region have been largely perceived to be focused on improving existing solutions internally. This internal focus may not suffice in addressing the end-clients' demand for digital functionality and cost-efficiency moving forward. Sensing a quick shift in the client's growing demand for technological capabilities, emerging alternative non-bank players – more commonly known as Fintechs – are beginning to transform the financial sector by revamping offerings and solutions in the new digital landscape; some creating sustainable disruption practices while others enabling their clients to do more with less. It is imperative for banks to recognise and act upon fulfilling the growing digital needs of end-clients in this time of rapid change by seizing the opportunity to establish themselves as early adopters using their incumbent advantage in the financial services sector.

It is inevitable that banks will need to ramp up investments in their digital agenda. The transaction banking space holds great potential and we anticipate the space to develop at an intense pace and result in an increase in the number of ubiquitously digitised products and offerings. While banks may take comfort in their incumbent advantage, technologically-enabled non-bank challengers have been ramping up their capabilities in a significantly faster pace and are notably stronger today, challenging the privileged access and relationships traditional transaction banks currently enjoy with their institutional clients. The verdict is clear: banks can either seek to gain the first-mover advantage, or remain on the sidelines and be forced to play catch up eventually.

In this study, we explore in-depth the digital phenomenon developing in the transaction banking landscape by identifying key global technology trends and changes to the end-clients' ecosystem, as well as the different degrees of trend prevalence and maturity across key industries. We then examine the current state of the incumbents and alternative service providers in the industry, and finally, we take a glimpse into the road ahead.

As technology continues to advance and consumers' demands become more sophisticated, the winners will be those who can keep themselves one step ahead.

I take this opportunity to thank Abhay Chauhan, Ashley Tan, Eric Peffer, Eugene Ho, Hyuna Kim, Ilkka Salminen, Lee Chew Chiat, M.S.K Muralidhar, Pradipto Goswamee, Stuart Johnston and many others in the firm who supported the development of this report.

**Mohit Mehrotra**  
Deloitte Consulting

# An era of digitisation

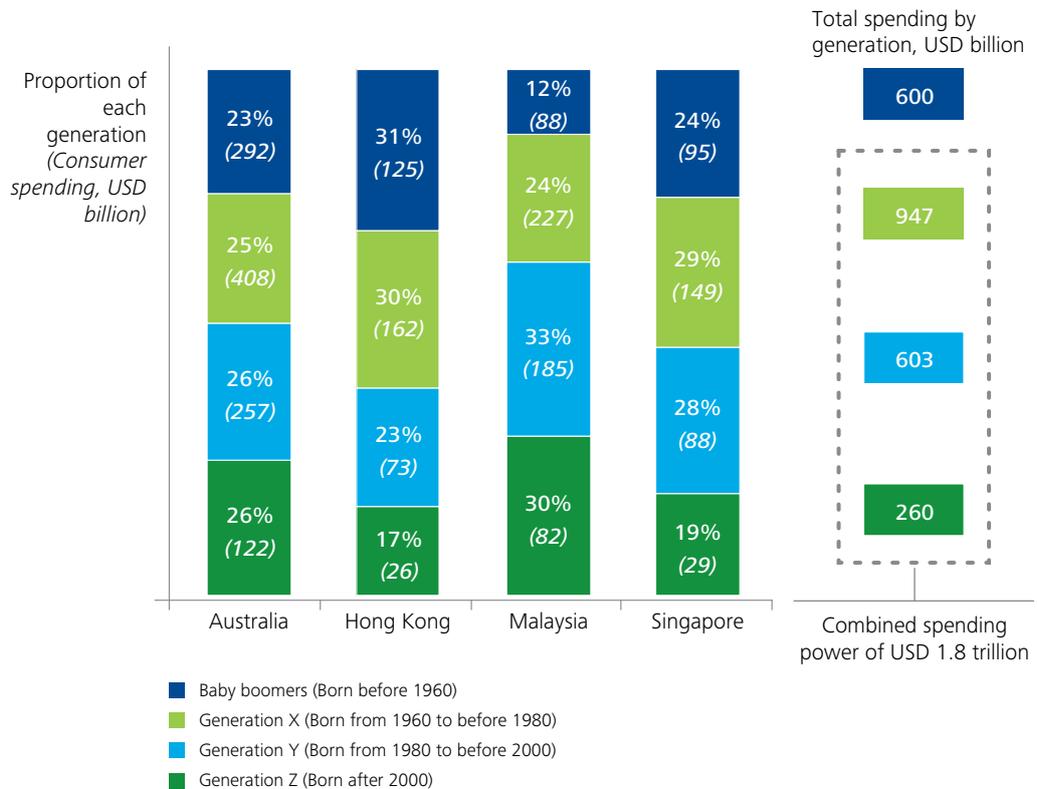
## The rise of digital natives

We are now living in an era of digitisation, inhabited by the digital natives of Generations Y and Z. Generation Y is the first cohort to grow up with the constant presence of computers at home and with access to over 250 cable television channels. On the other hand, Generation Z enjoys high access to technology from birth and is even more accustomed to the lifelong use of communication and media technologies such as the Internet, instant messaging and mobile. As they come of age, these two demographic cohorts are likely to demand ubiquitous access to digital products and services. With Generation X becoming increasingly digitally-savvy as well, the majority of the population is expected to be technologically-adept by 2025.

## Spending power

Deloitte estimates the total spending power of end-consumers in Australia, Hong Kong, Malaysia and Singapore to be approximately USD 2.5 trillion by 2025. Among the consumers, Generations X, Y, and Z will account for 75% of the total spending power. In Malaysia, Generations Y and Z's spending will exceed Generation X's spending; while in Australia, Hong Kong and Singapore, all generations will have a fairly equal distribution of spending power.

Figure 1: Demographic breakdown size and consumer spending by generation, 2025

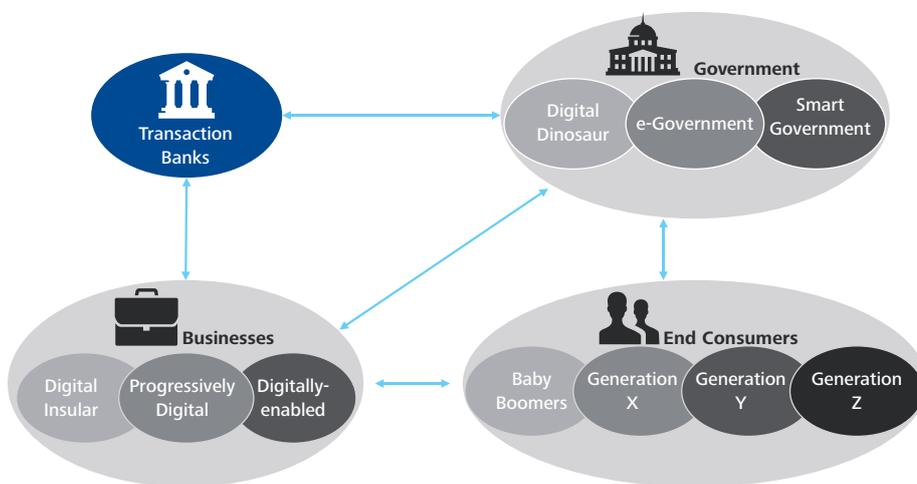


The implications of increased spending power of the digital natives will further fuel the growth in end-client digital demands. In order to capture the next trillion dollar opportunity, businesses and governments are increasingly reorienting facilitation and provision of products/services based on the technological needs of the digitally-savvy generations. Transaction banks need to be ahead in this race to meet the demands of their end-clients.

## End-client ecosystem

The end-client ecosystem (Figure 2) illustrates the interactions between transaction banks, the government and businesses. Within each player in the ecosystem, there are unique segments with differentiated characteristics, preferences and exposure to digital trends.

Figure 2: End-client ecosystem



Transaction banks need to understand the varying levels of digital technology adoption by their end-clients in order to address their needs. Deloitte categorises the three types of end-clients and their digital adoption levels as follows:

### Businesses

- **Digital insular:** Businesses which have been slow in implementing or adopting digital solutions
- **Progressively digital:** Businesses which are gradually adopting digital solutions or are in the process of digitising their products/services
- **Digitally enabled:** Businesses with digitised products or services, or building their business models on digital capabilities

### Government

- **Digital dinosaur:** Governments with department or functions working in siloes due to highly manual processes
- **e-Government:** In transition towards digital processes and going paperless, with increased cross-functional flow of data or information
- **Smart government:** Seamless integration of functions and flow of information, enabling execution of citizen-centric policies and processes

### End consumers

- **Baby boomers:** Born before 1960
- **Generation X:** Born from 1960 to before 1980
- **Generation Y:** Born from 1980 to before 2000
- **Generation Z:** Born after 2000

# Digital-led changes in end-client ecosystem

Digital natives are expected to drive 40% of total spending power across all generation in the near future and large corporates, businesses, and governments are quickly catching on the wave of digitisation to meet the digital demands of their end-clients. As one of the service providers to end-clients, transaction banks are seeing the increasing demand of digitisation, but have yet to react in a full scale. On the other hand, Deloitte observes several alternative service providers who are already adopting technology trends to meet these demands.

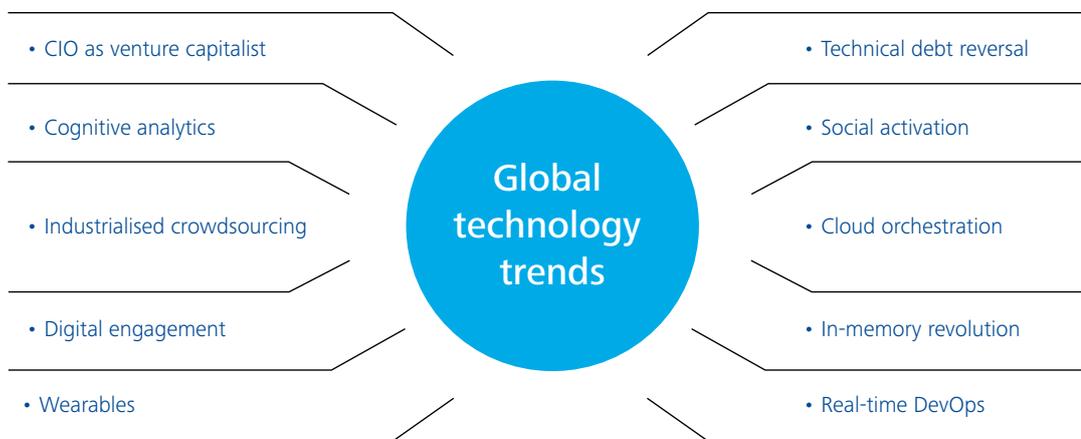
Deloitte has analysed several technology trends which have gained mainstream relevance, especially from the end-clients' perspective, and how both traditional and emerging players are reacting to fill the digital gap.

## Global technology trends

A number of trends, initially developed and spearheaded by the technology sector, are now cascading down to other industries and sectors. For the banking sector, these trends have resulted in an evolution, and sometimes disruption, of its IT capabilities, business operations and business models.

In this section, we examine ten key global technology trends that appear to have the greatest impact on the financial services industry now and in the future. These trends have been selected based on perspectives from industry practitioners and subject matter specialists; research by alliance partners and industry analysts; as well as crowdsourced ideas and examples from Deloitte's global network of practitioners.

Figure 3: Global technology trends



Source: Deloitte Tech Trends 2014

## CIO as venture capitalist

Chief Information Officers (CIOs) have traditionally focused on core delivery and operations such as the purchase of enterprise software and optimisation of processes for efficiency. With the emergence of disruptive forces such as crowdsourcing, big data and mobility, CIOs will need to develop a new mindset and enhance their capabilities in dealing with change.

As a start, CIOs will need to manage their IT portfolio by actively monitoring its performance and responding to volatile and dynamic market conditions. They will also need to be open to decisions to exit, take public, reinvest, or divest. By borrowing from the playbook of today's leading venture capitalists, they will be better equipped to reshape how they run the business of IT.

### Industry application

At Cisco, CIOs are encouraged to drive their investment portfolios. Line-of-business CIOs constantly examine initiatives as vehicles for tech-enabled business growth and view themselves as shapers, actively preparing themselves to deal with the future through acquisitions, product innovation, and investments in adjacent services and solutions.<sup>1</sup>

<sup>1</sup> Deloitte Tech Trends 2014

### Cognitive analytics

Cognitive analytics is a new approach to information discovery and decision-making. Inspired by the way the human brain processes information, draws conclusions, and codifies instincts and experiences into learning, it is able to bridge the gap between the intent of big data and the reality of practical decision-making. Machine learning systems, artificial intelligence, and natural language processing are now no longer experimental concepts but potential business disrupters that can drive insights to aid real-time decision making.

#### Industry application

IBM Watson is an artificially intelligent computer system that is able to process vast amounts of big data and answer questions posed in natural language from a human rather than a computer. The application of the cognitive analytics is relevant across various industries including health care, finance, retail, and the public sector. IBM is also present in the Asia Pacific region, with a specific focus on Australia, Hong Kong and Singapore.<sup>2</sup>

### Digital engagement

Digital – encompassing mobile, social media, web, wearables and the Internet of Things – is everywhere. Through the seamless convergence of digital channels into a single enhanced user experience, businesses can create consistent, compelling and contextual platforms to engage customers across all its various touch points: online, in-store, as well as customer service personnel.

#### Industry application

Aegon's new Retiready digital service allows UK consumers to determine their financial readiness for retirement. It includes easy-to-understand tools and digital coaching that let people take control of their futures.<sup>3</sup>

### Industrialised crowdsourcing

Industrialised crowdsourcing enables enterprises to harness the power of the crowd and dynamic sources from anyone, anywhere and at any time, to achieve cost, speed and scale advantages. The scope of this collective knowledge of the masses can be applied on everything from simple tasks such as data entry to complex solutions involving coding, advanced analytics or product development. By engaging with the crowd, businesses will be able to expand their reach and source of ideas.

#### Industry application

Australia's Kaggle is a crowdsourcing website that specialises in data science. It is the single largest open crowdsourcing project in the world for scientists to compete and solve data science problems. Through Kaggle, data scientists can share knowledge to solve real-world problems across a diverse array of industries including life sciences, financial services, energy, IT, and retail.<sup>4</sup>

<sup>2</sup> IBM

<sup>3</sup> Aegon

<sup>4</sup> Business Review Australia

### **Wearables**

Wearables refer to devices that are either physically worn on the body – including watches, glasses, jewellery, and other accessories – or in the body that are ingested or implanted. Three modular components are responsible for the functionalities of the technology: sensors, displays, and computing architecture. Through these modular components, wearables enable the delivery of accurate and contextual information precisely at the point of decision-making to facilitate real-time decisions.

#### **Industry application**

Digi-Care, a wearable tech start-up based in Hong Kong, specialises in developing new lightweight fitness trackers with long battery life. With the nano-silica uni-body technology, the wristband health tracker is only 6 millimetres thin and weighs 20 grams. With its curved polymer lithium battery, the wearable requires only two charges a month.<sup>5</sup>

### **Technical debt reversal**

Technical debt is often the result of programmers taking shortcuts or using unsophisticated techniques. That is to say: it is typically misfeasance, not malfeasance. Sometimes, however, technical debt is simply the result of dealing with complex requirements. With each of these action, technical debt proliferates like high-interest, short-term borrowing. Accumulated technical debt can lead to decreased efficiency, increased cost, and extended delays in the maintenance of existing systems.

Articulating technical debt is usually the first step towards paying off its balance. With new tools for scanning and assessing software assets, CIOs can now gauge the quality of their legacy footprint and better determine what it will cost to eliminate this debt. They will also need to quantify the technical debt in order to understand, contain, and mitigate the debt, as well as decide how to prioritise IT projects.

#### **Industry application**

DB Systel, one of Germany's leading IT and communications providers, uses a software analysis and measurement platform from CAST to detect and correct errors in its core systems that could carry significant structural risk.<sup>6</sup>

### **Social activation**

Social activation refers to observations on how people feel, share, and evangelise to drive their messages across to their audience. With social media becoming a frequent online activity – 27% of total global web-time is attributed to social media – companies have begun to invest into social media monitoring. In addition, they have initiated social activation in the form of social-based customer service, communications, broadcast marketing, and crisis communications, as a mean to distribute mass messaging or to direct customers back to their websites and call centres. The business potential of social technology and social engagement is real: it enables companies to influence perception by converting customers into advocates for the purposes of marketing and sales enablement.

#### **Industry application**

In Hong Kong, businesses, especially e-commerce, use social media platforms such as Facebook and WeChat for various types of advertising purposes. Businesses can connect with customers through social media platform by linking their product catalogues to their e-commerce sites, monitoring how people engage with their businesses, and fostering relationships with them through social activation.<sup>7</sup>

<sup>5</sup> StartupsHK

<sup>6</sup> IT Expert Magazine

<sup>7</sup> Marketing Interactive

### Cloud orchestration

Although the usage of cloud services is an addition to and not a replacement of on-premises systems, cloud services continue to expand in numbers and sophistication. While enterprises are currently using disparate cloud offerings for various parts of their business operations, their desire to link these offerings to core legacy systems and data will grow. It has also been estimated that over 70% of organisations that are using or planning to use cloud services expect internal IT organisations to assume the role of cloud services broker.

#### Industry application

Citrix, a leading US company in mobile workspaces and cloud services, provides application-centric cloud orchestration solutions to businesses. This technology can manage both traditional enterprise and cloud-native application workloads by combining them into a single unified cloud management platform.<sup>8</sup>

### In-memory revolution

In-memory technology allows companies to crunch massive amounts of data in real-time by replacing spinning discs data storage with random access memory (RAM). In doing so, it is able to predict and handle large volumes of structured, semi-structured, and unstructured data through a column-based storage system, allowing for massive amounts of data of varying structures to be promptly manipulated and preventing redundant data elements from being stored. Developing such in-memory data platforms enables both advanced analytics and upgraded ERP systems to more effectively run various functionalities such as procurement or logistics.

#### Industry application

Pacific Drilling, a leading ultra-deepwater drilling contractor in the US, has implemented a single in-memory data platform that enabled it to more effectively run maintenance, procurement, logistics, human resources, and finance functionalities. With in-memory adoption, the company was able to perform transactional and reporting operations within one system in real time.<sup>9</sup>

### Real-time DevOps

In business settings, software developers (Dev) are concerned with the speed and quality of application development, while IT operations (Ops) are held accountable for response times, stability and efficiency, with a focus on reducing business disruptions at the lowest cost possible. DevOps refers to the technology which bridges the gap between Dev and Ops through communication, collaboration, and integration of end-to-end delivery mode as a real-time integration of development and operations. As DevOps is still in its early stages of adoption and only partially understood, only one-third of companies are in process or planning to implement the technology, with close to 44% of respondents still trying to figure out what DevOps means.<sup>10</sup>

#### Industry application

ScriptRock, an Australian start-up based in the US, has developed a cloud-based configuration management platform, GuardRail, to help organisations activate DevOps by providing end-to-end visibility of configurations to enhance collaboration between developers and operations personnel. GuardRail is designed for collaboration and allows companies to scan, compare, and control the configurations, making it possible for all stakeholders to participate.<sup>11</sup>

8 Citrix Systems

9 Deloitte SAP Events

10 Gartner, Inc.

11 ScriptRock

### Trend prevalence across key industries in selected countries

From an industry standpoint, these 10 global technology trends are also present in different industries in at least one or more of the following countries: Australia, Hong Kong, Malaysia, and Singapore. Deloitte studied the presence and penetration across six key industries:

- Consumer Business
- Energy & Resources
- Manufacturing
- Life Sciences & Health Care
- Technology, Media & Telecommunications
- Public Sector

Figure 4: Summary of trend prevalence in key industries

	Consumer Business 	Energy & Resources 	Manufacturing 	Life Sciences & Health Care 	Technology, Media & Telecommunications 	Public Sector 
CIO as venture capitalist	●				●	
Cognitive analysis	●	●		●	●	●
Industrialised crowdsourcing	●	●	●	●	●	
Digital engagement	●		●	●	●	
Wearables	●			●	●	●
Technical debt reversal	●	●	●	●	●	●
Social activation	●	●	●	●	●	●
Cloud orchestration	●	●	●	●	●	●
In-memory revolution	●	●	●	●	●	●
Real-time DevOps	●					

Note: Findings based on primary and secondary research

● Present in one or more of the following countries: Australia, Hong Kong, Malaysia, Singapore

The global technology trends are gradually gaining prevalence in all of these Asia Pacific countries. However, there are some industries which are much quicker in jumping on the digital bandwagon and adopting the technology trends. For example, the Consumer Business, Life Sciences & Health Care, and Technology, Media & Telecommunications industries are perceived to be highly digitised in comparison to the others. This can be attributed to combined factors of change in end-consumer expectations and cost pressures, as well as the nature of the industries.

It has also been observed that certain trends are gaining prominence at a much faster pace across all industries. In particular, end-clients have been heavily investing in servicing their IT debts, while some are taking active steps to virtualise their internal functions and data migration towards the cloud. It is also evident that businesses are embarking on omni-channel brand engagement through digital avenues and social media. Industries are also catching up in big data analytics using in-memory technology.

### Innovation is here

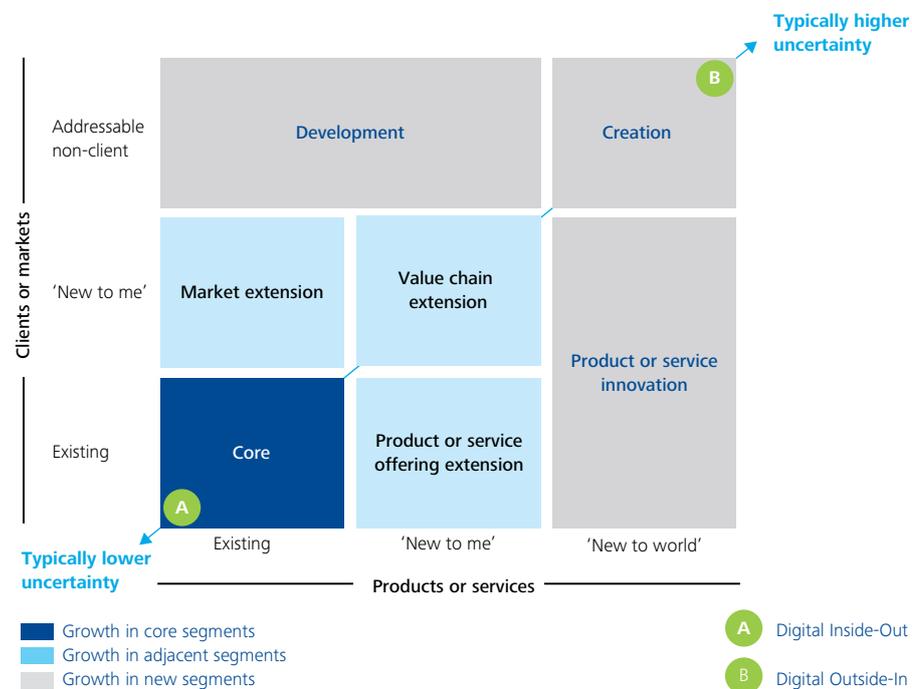
End-clients are facing pressures to re-examine their IT and business capabilities as technologies enable businesses to enhance relationships with their customers, partners, and community at large. In response to the end-clients' constant change and adoption of technology, various alternative service providers are surfacing to meet this new demand.

# The evolving transaction banking landscape

## The incumbents

Given the current rate at which technology is evolving, transaction banks will need to constantly invest in their digital agenda. Banks in different regions possess varying digital capabilities and maturity of transaction banking solutions, resulting in the need to adopt different digital strategies. There are two main solutions used to address the shift in digital adoption of the transaction banking business: Digital Inside-Out and Digital Outside-In strategies.

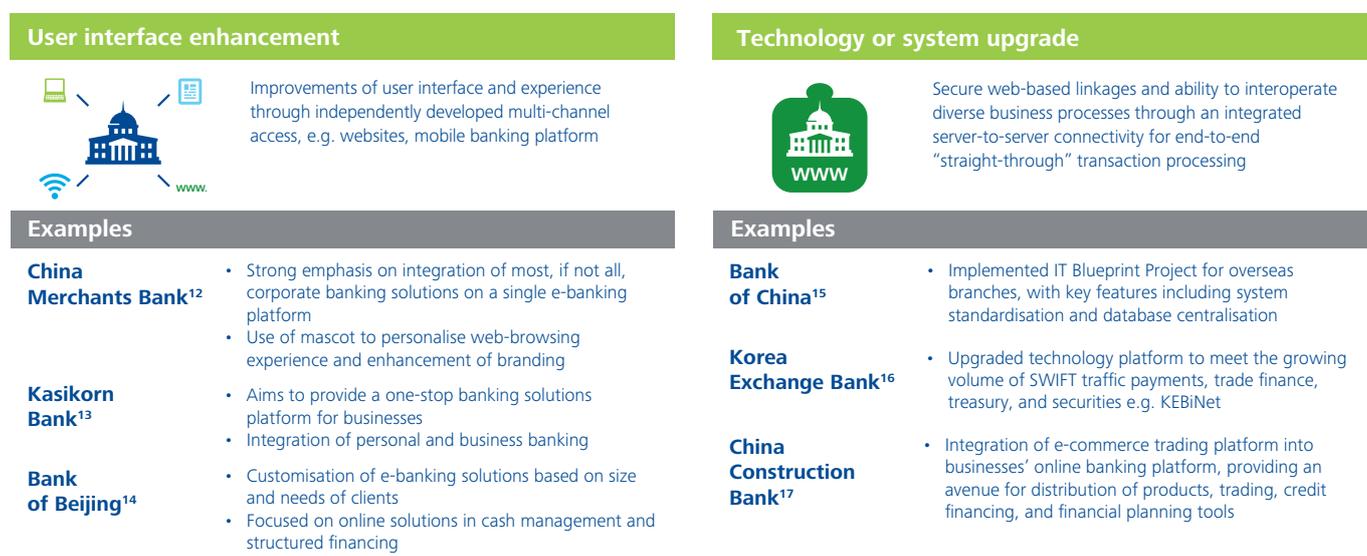
Figure 5: Digital initiatives matrix



## Digital Inside-Out

Digital Inside-Out is defined as initiatives by financial institutions that are internally driven. Most banks in Asia are still focused on investment in internally-driven digital initiatives to better provide traditional transaction banking solutions. User interface enhancements and technology or system upgrades are two categories of Digital Inside-Out strategy.

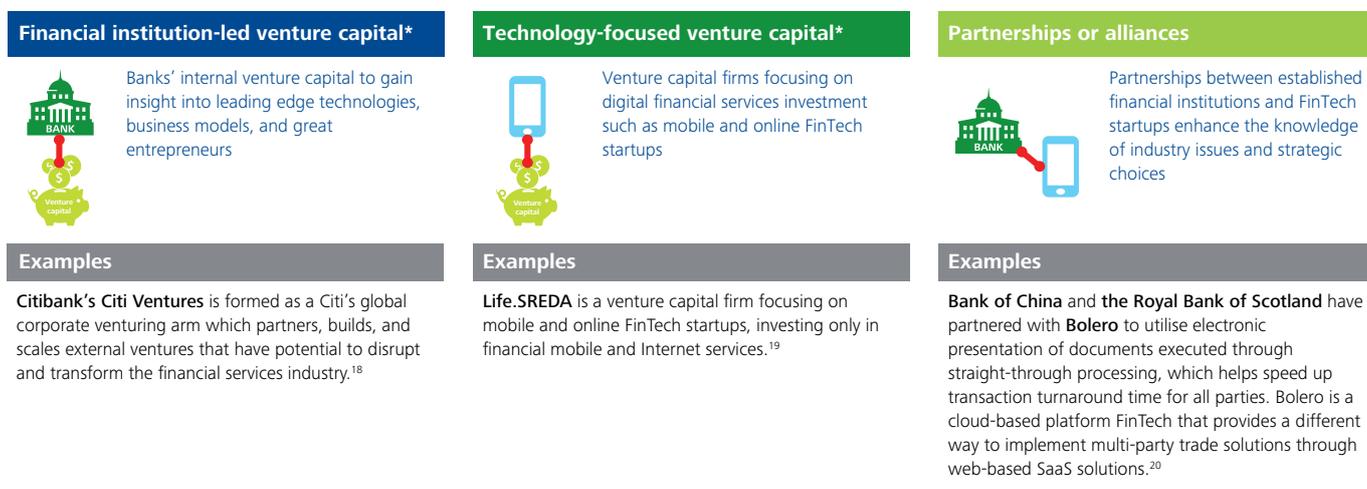
Figure 6: Digital Inside-Out



## Digital Outside-In

At the same time, a number of financial institutions are already exploring externally driven initiatives in efforts to augment their digital capabilities. There are three categories of Digital Outside-In: financial institution-led venture capital, technology-focused venture capital, and partnership or alliances.

Figure 7: Digital Outside-In



\* Not transaction banking specific

12 Financial Computer of China

13 Nikkei Asian Review

14 China Times

15 Standard Chartered

16 Korea Exchange Bank

17 Finance.china.com.cn

18 Citi Ventures

19 Life.SREDA

20 Bolero

### The emerging players

While banks may take comfort in their incumbent advantage, technologically-enabled non-bank challengers have been ramping up their capabilities at a significantly faster pace and are notably stronger today. The emergence of alternative service providers presents considerable opportunities for transaction banks to leverage enablers' digital capabilities and address disruptors' revolutionary business offerings.

FinTechs companies can be categorised into two broad categories: Enablers and Disrupters; and four sub-categories: Facilitator, Expediter, Differentiator and Game Changer (Figure 8).

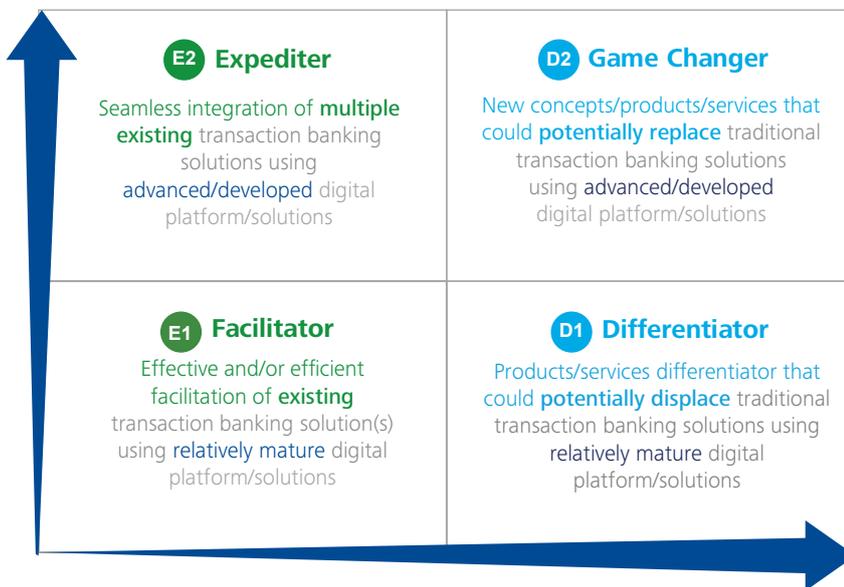
#### Enabler categories (E1 and E2)

FinTech companies support incumbent financial institutions by delivering digital solutions for existing offerings by means of their strength in technology-driven software, platform and infrastructure. Enablers are usually focused on features enhancement rather than product or solution specific augmentation.

#### Disrupter categories (D1 and D2)

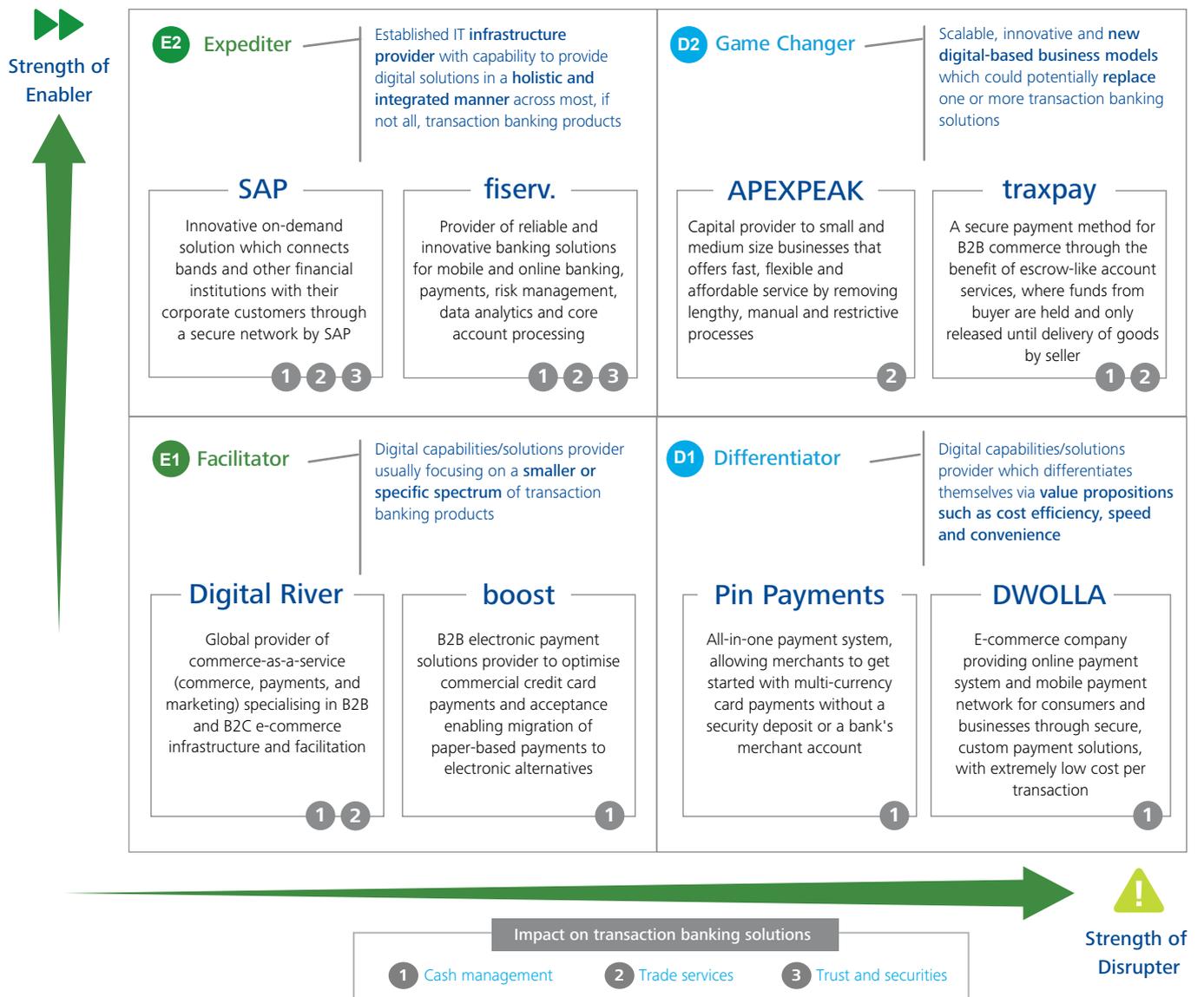
Disrupter FinTech companies are changing the dynamics in how businesses is done, with strong differentiation in offerings or revolutionary business concepts. Disrupters are usually focused on delivering specific products or solutions, with the potential of disintermediating incumbent financial institutions in the process.

Figure 8: FinTech categories matrix



Different types of FinTech companies and alternative service providers have emerged to meet the shift in client demands for digital products and solutions (Figure 9).

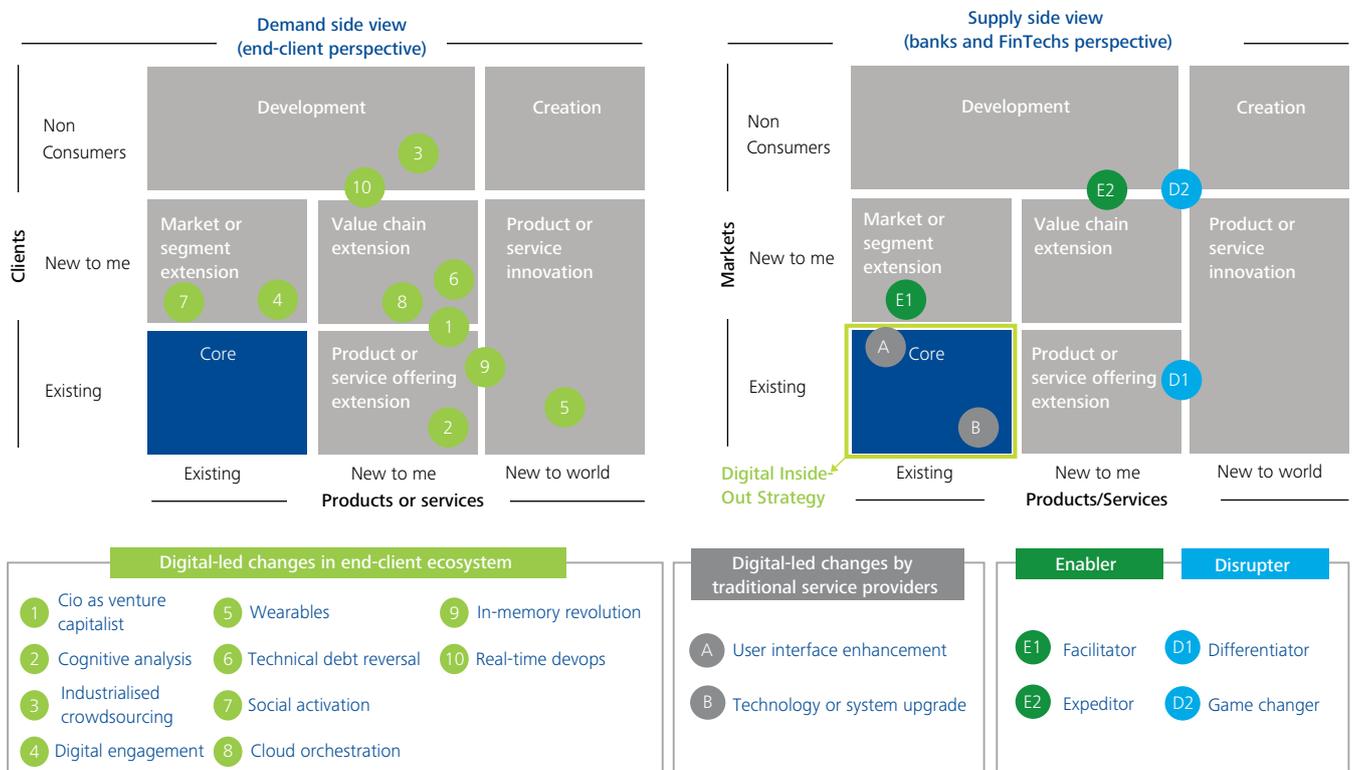
Figure 9: Examples of FinTech companies as various types of Enablers and Disrupters



### The incumbents versus the emerging players

End-clients' digital needs are evolving rapidly to accommodate the prevailing technology trends discussed earlier (Figure 10, demand side view). However, most transaction banks in Asia are still very focused on improving existing digital capabilities and product with less attention towards future growth opportunities, adopting the Digital Inside-Out strategy and staying in the 'Core' box of the matrix. On the other hand, alternative FinTechs are mapped outside the 'Core' box and as they work to actively address the digital-led changes in the end-clients ecosystem (Figure A, supply side view).

Figure 10: Perspectives of end-clients and service providers



While it is apparent that the presence of FinTech companies poses huge threats to transaction banks by providing differentiated or revolutionary solutions, it is also worth to note that such companies have the enabling factors that can help transaction banks capitalise on market opportunities by augmenting digital capabilities on their existing product or solutions. The move could help transaction banks progress from the traditional Digital Inside-Out Strategy to seize opportunities and addressing threats outside of existing clients and products.

# Implications to transaction banks

## **Digital natives spending power to be the ultimate driver**

Transaction banks have an opportunity to develop a play which could potentially address the trillion dollars opportunity presented by end-clients in Australia, Hong Kong, Malaysia and Singapore. When the large population of the digital natives come of age by 2025, they are expected to drive spending power of approximately USD 900 billion and increase the demand for digitisation. With Generation X becoming increasingly digitally-savvy, most of the generation would be technologically-adept by 2025. Transactions for generations X, Y, and Z combined will account for 75% of the total spending power at approximately USD 1.8 trillion.

The tremendous opportunity and potential presented by the digital natives, alongside the rapid pace of adoption of various technological trends by businesses and governments are key drivers that prove to be vital for transaction banks to acknowledge and capture. It may not be sufficient for banks to continue improving what they are doing as end-clients are increasingly catering to technological demands of the digital natives. Transaction banks will need to realign their digital strategy and consider adoption of a Digital Outside-In strategy in order to ride on this digital revolution.

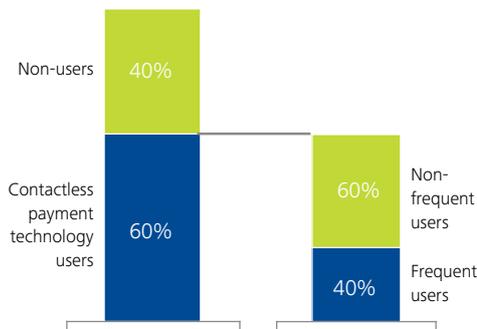


# Case studies

## Case study 1: Contactless payment and wearables in Australia

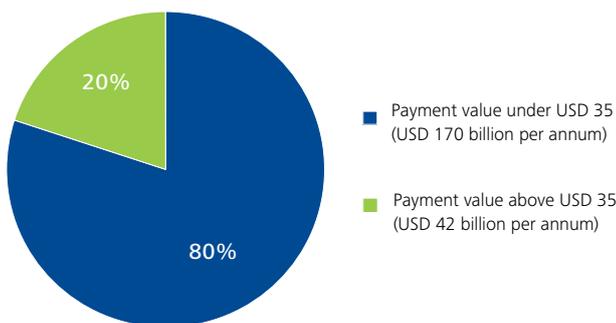
Australians are perceived to be quick adopters of wearables and more likely to embrace the use of contactless payment technology. The advent of payment technologies via smartwatches and the high adoption rate of wearable technology have enabled alternative FinTech companies to create innovative payment solutions, changing the mobile payment landscape. This increases the supply gap between FinTech companies and transaction banks.

Figure 11: Contactless payment technology in Australia in 2013



In Australia, research indicates almost three in five or 60% Australians now have a contactless card. Among this group, 40% are frequent users of the technology (Figure 11).<sup>21</sup>

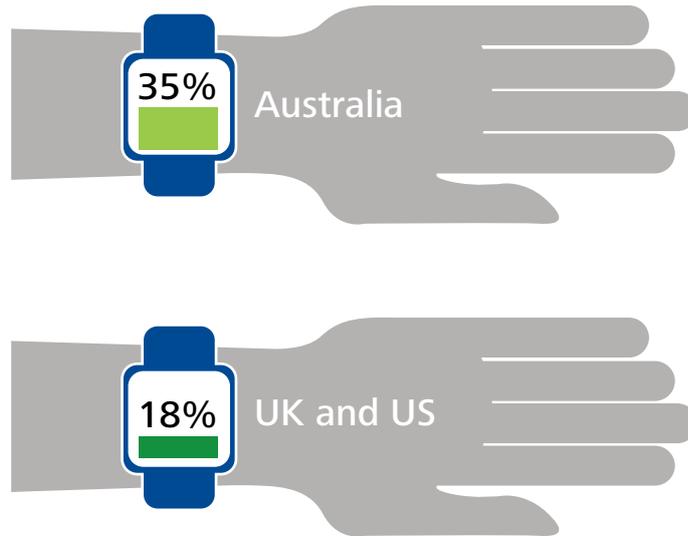
Figure 12: Micro-payment value in Australia in 2013



Australian banks continue to capture the opportunity to introduce contactless payment technology. 80% of the total Australian cash transactions are under USD 35 (Figure 12)<sup>22</sup>, with an estimated USD 170 billion moving through the economy each year. Converting even a proportion of these cash payments under USD 35 into micro-payments with mobile phones or wearable technology would enhance speed, cost, and convenience for all parties.

21 RF Intelligence  
22 CMO Australia

Figure 14: Wearable technology users in Australia, UK and US in 2013



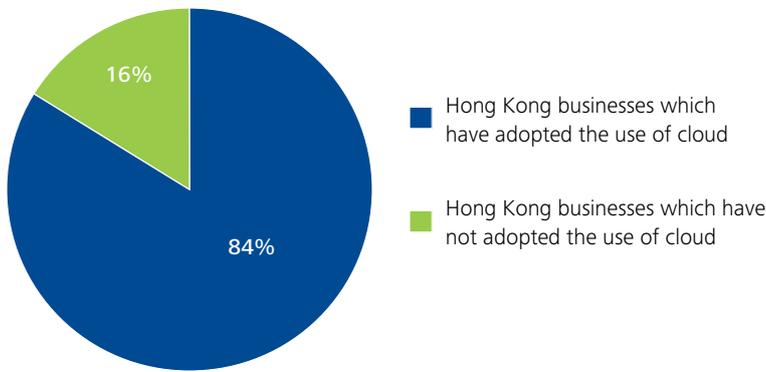
Australians are more receptive to adopting wearable technology than their international counterparts (Figure 13). Examples of popular wearable technology include health and fitness monitors, glasses, watches, clothing, and cameras.<sup>23</sup> In Australia, the retail of wearable technology shows a striking compound annual growth rate (CAGR) of 247% in the forecast period. By 2018, wearables in Australia are expected to account for 8% of total retail volume in digital electronics. This is also in line with the prediction of 43.4% CAGR growth in the global wearable computing market.<sup>24</sup>

23 CMO Australia  
24 Euromonitor

**Case study 2: Cloud adoption in Hong Kong**

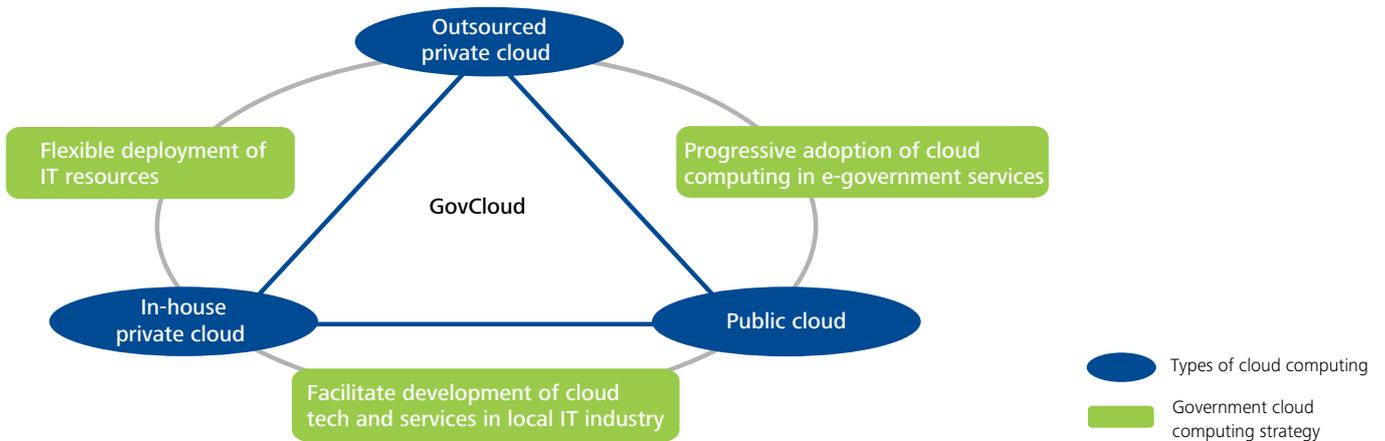
Hong Kong has been an early adopter of cloud computing technology, with most businesses rapidly adopting the use of cloud, or with plans to do so. It is estimated that approximately 84% of companies in Hong Kong have adopted cloud computing, and of the 16% of businesses which have not yet done so, 82% have cited plans to do so in the next few years (Figure 14).<sup>25</sup>

**Figure 14: Adoption rate of the cloud by businesses in 2013**



In 2010, the government piloted the GovCloud initiative to leverage cloud to support common e-government system services such as the Electronic Information Management for shared use by all departments. The government has three types of cloud computing: outsourced private cloud, in-house private cloud, and public cloud. Their strategy is to utilise the flexible deployment of IT resources, facilitate development of cloud technology and services in local IT industry, and to continue the progressive adoption of cloud computing in e-government services.<sup>26</sup>

**Figure 15: Hong Kong government cloud adoption strategy**



Hong Kong’s increased adoption of cloud computing amongst consumers and businesses have prompted the rise of ‘enablers’, which have been able to extend their value chain into the realm of transaction banking solutions.

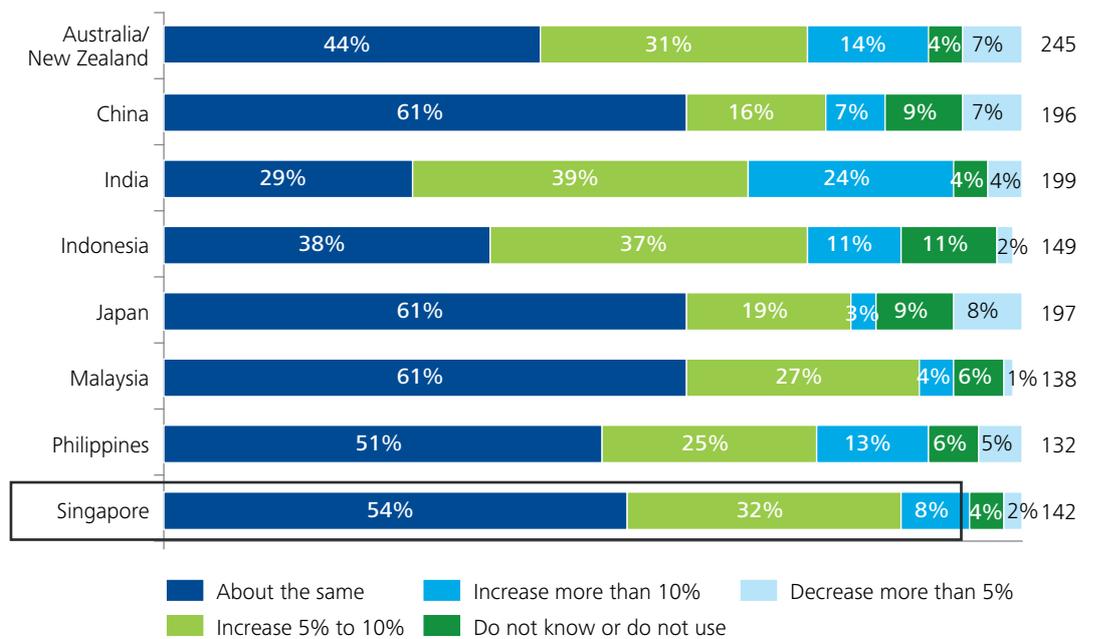
<sup>25</sup> Rackspace

<sup>26</sup> The Government of the Hong Kong Special Administrative Region

### Case study 3: Analytics in Singapore

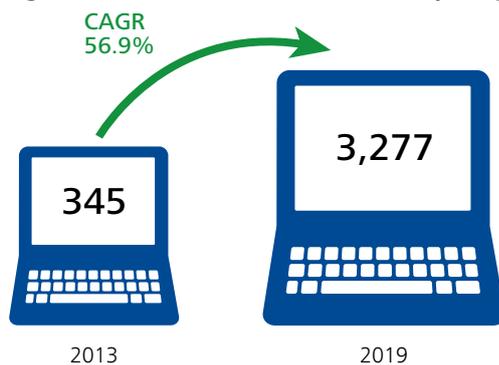
In mature markets such as Singapore, there is an increased interest in utilising real-time analytics that could be integrated into business processes. According to a survey by Forrester of 1,400 IT executives and technology decision-makers from small and medium-size business and enterprise companies, about 94% of businesses in Singapore have plans to increase or maintain real-time data analytics and business intelligence related spending from 2011 to 2012. Amongst the 94%, 54% have indicated that the spending on business intelligence and real-time customer and business analytics will stay the same, 32% indicated that the spending will increase by 5% to 10%, and 8% indicated that the spending will increase by more than 10%.<sup>27</sup>

Figure 16: Changes in business intelligence, real-time customer and business analytics related spending in 2012 relative to 2011



The advent of multi-core processors and rising need for predictive analysis has also increased the demand for faster technologies such as in-memory computing, which can analyse data in real time. The Asia Pacific in-memory computing market is expected to grow from USD 345 million in 2013 to USD 3,277 million by 2019, or at a CAGR of 56.9%.<sup>28</sup>

Figure 17: Growth in Asia Pacific in-memory computing market from 2013 to 2019, USD million



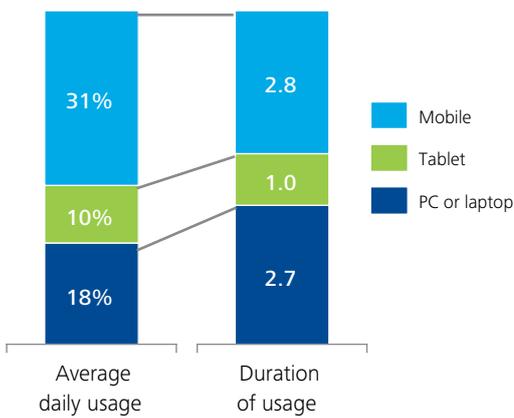
<sup>27</sup> Forrester  
<sup>28</sup> Micro Market Monitor

**Case study 4: Social media in Malaysia**

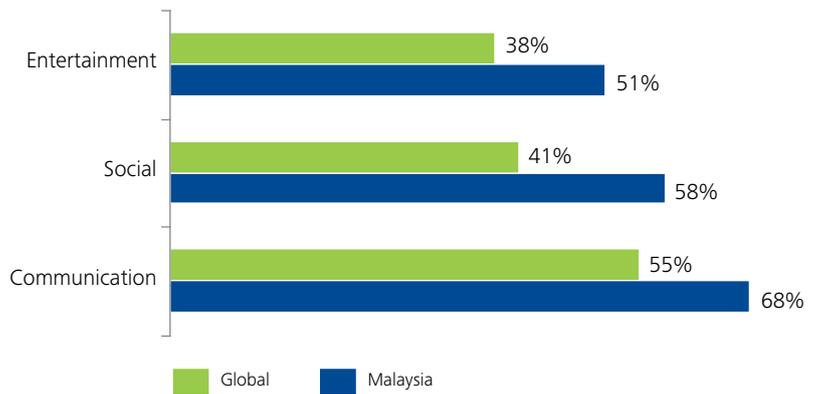
Malaysians have been identified as one of the world’s most digitally engaged crowds. Given the country’s high inclination towards social activation, many Malaysian businesses have continued to invest in social technologies and e-commerce. Transaction banks who are looking into enhancing B2B collaborations, product development and relationship-building with customers and employees should also invest in social media for greater engagement and activation.

**Figure 18: Average Malaysian’s daily digital access in 2014**

Average Malaysian’s daily access to digital devices and duration of usage



Most popular digital activities in terms of weekly usage



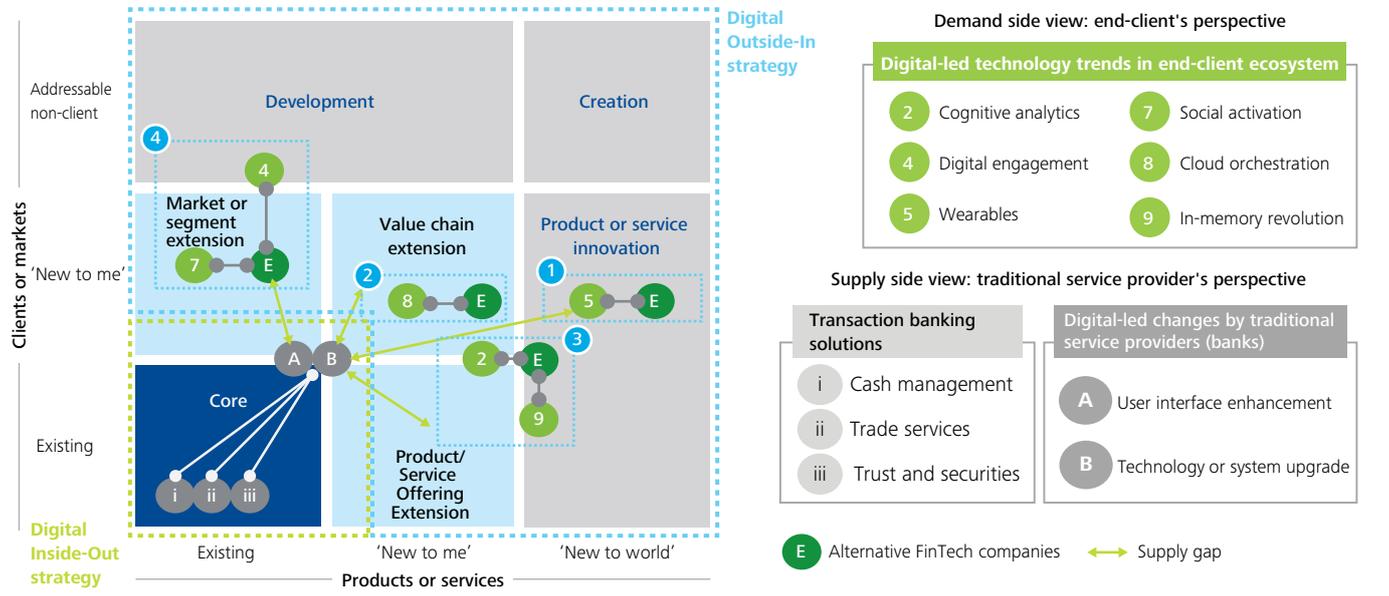
It is estimated that 31% of Internet users in Malaysia use their mobile phones for an average of 2.8 hours per day. Further, 10% of Internet users use their tablets for an average of 1 hour per day and 18% of Internet users use their personal computers or laptops for an average of 2.7 hours per day.

Three activities are highly popular amongst digital users in Malaysia: entertainment, social, and communication. In all of these three activities, Malaysian users have significantly higher weekly usage as compared to global users.<sup>29</sup>

## Addressing the supply gap

We have observed a growing demand in various technology trends; however, most transaction banks in Asia have not adopted these technologies as part of the transaction modes for B2B and/or B2C payments, staying in the left bottom “Core” box in the matrix (Figure 19). The advent of technology trends has enabled alternative FinTechs to create innovative payment solutions, increasing the supply gap between FinTechs and transaction banks by moving toward the different dimensions in the matrix. It is important for banks to narrow the supply gap, possibly through the leveraging of FinTech’s capabilities.

Figure 19: Positioning map of transaction banks and FinTechs



**1** **Wearables in Australia** **5** **E**

**Apple Pay**

- Allows fast, contactless payment through one touch to pay with Touch ID
- Provides increased security from tokenisation and fingerprint authentication technology

**Samsung Paypal**

- Enables wireless payments through wearable devices e.g. Samsung smartwatch
- Allows immediate, contactless payments to be made with enhanced security e.g. fingerprint authentication technology

**Google GLASS**

- Allows access to bank account statements and transaction history
- Allows payment transactions to be performed via voice command

**2** **Cloud orchestration in Hong Kong** **8** **E**

**SAP**

Innovative on-demand solution which connects banks and other financial institutes with their corporate customers through a secure network

- Enable cloud-based B2B procurement services and collaborations
- Enable integrated travel and expenses management via cloud
- Enable cloud-based e-commerce and customer relationship management

Acquisition

**3** **Cognitive analytics or in-memory revolution in Singapore** **2** **9** **E**

**VISA IntelliLink**

- Analyses company's spending patterns
- Enables increased control over expenditure
- Identifies opportunities for savings
- Facilitates expense approval process

**Data management (KOFAX)**

- Data acquisition and mining robot (KAPOW)
- Data analytics software house (AutoSoft)

**Portfolio analytics**

- Analytics platform for multiple data forms
- Integrated analytics tool (Moto)
- Sales process enhancement (pipeline analytics)

**4** **Digital engagement or social activation in Malaysia** **4** **7** **E**

**twitter**

- Posts of press releases
- Promotes latest products or services
- Drives traffic to websites, information updates
- Enables digital payment
- Acquired Cardspring as part of the Digital Outside-In strategy

**Central collaborative platform and repository**

- Share ideas and opinions on best practices
- Discussion forum for products or services improvement
- Increased communication between different social groups

# Looking forward

With the last of the Generation Y cohort entering the workforce and the early induction of Generation Z consumers into the digital ecosystem, the time for transaction banks in Asia Pacific to act is now. The digitally-savvy generations are expected to be key drivers of economic growth in Australia, Hong Kong, Malaysia and Singapore by 2025, with a combined spending power of close to USD 2 trillion. Indeed, if the development of their counterparts in the West is anything to go by, then Asia Pacific banks will need to play catch up.

Specifically, transaction banks will need to change their digital investment focus from one that is largely internal to one that is externally-driven. Alternative service providers, such as FinTech companies, undoubtedly pose a tough challenge to the banks' stronghold, but perhaps they can be formidable allies too. By actively pursuing external partnerships and alliances with these players, banks can obtain the best of both worlds by leveraging on their partners' digital capabilities while bringing their extensive industry knowledge and experience to bear.

Beyond technical competencies, banks will also need to pay close attention to the needs of their clients. In particular, the emerging cohorts of Generations X and Y appear to have atypical preferences and behaviours, which banks will need to take into account. Banking is, after all, about the consumer.



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