REALIZE WHAT'S POSSIBLE™

CREATING A CULTURE OF POSSIBILITIES
In today’s world where software has created unlimited possibilities, companies are continuously reinventing themselves to deliver better customer experiences.

Traditional business models will no longer meet tomorrow’s business needs, and no industry is immune to this change. To remain competitive, companies in the Asia Pacific and Japan region must rethink their strategies or risk becoming obsolete. From integrating multiple clouds to embracing the digital workspace of tomorrow, every step taken in the digital transformation journey will only enable you to realize new possibilities for the future.

Our customers in the Asia Pacific and Japan region are leading the way in implementing our solutions. With us, they are transforming their organizations and fueling business growth. In this compendium, we have captured some of their stories for you.

Their stories are truly inspiring: From enabling the State Bank of India to achieve financial inclusion for every Indian, to helping Nissan China drive digital transformation in the manufacturing industry.

We hope these success stories will inspire you as much as they have inspired us, by illustrating how you can turn your challenges into opportunities with the right technology partner and solutions.
Contents

AMS Chemist Warehouse ............................................. 05
ANZ Bank ............................................................................. 09
Bharti Airtel ......................................................................... 13
China Mobile ....................................................................... 17
Krungthai Card Public Company .............................. 21
Mitsubishi Electric Information Network Corporation ..................................................... 25
Nissan China ....................................................................... 29
O-Bank ................................................................................... 33
State Bank Of India .......................................................... 37
Telekom Malaysia ............................................................ 41
During the 1980s, three pharmacies got together to form a network. Today, that network has burgeoned into The Chemist Warehouse Group. The company now runs nearly 500 locations nationwide, as well as a booming e-commerce platform. In the past five years alone, it has grown to be the sixth largest retailer in Australia.

The Chemist Warehouse Group prides itself on providing pharmaceuticals, health and beauty products to its customers at a steal. “We Beat Everyone’s Prices” is their bold tagline, and the Group’s spectacular growth bears testament to its effective business strategy.

The Group was clearly on a good trajectory. On the flip side, however, its rapid expansion was causing an incredible strain on the company’s IT infrastructure. AM Solutions, which operates as the Group’s head office and national coordination point, knew that the infrastructure it had built five years ago could no longer keep up with the speed and scale of the business.

Virtualizing to Actualize Business Growth

With a AUD$13 billion retail pharmacy market up for grabs and facing intense competition, AM Solutions had to keep its costs down to stay true to their promise of offering top-quality pharmaceutical products at the best prices.

Beyond that, the Group also had a huge appetite for innovation. If low prices brought the customers flocking, then a seamless customer journey would make them stay. Even as the company topped its Singles’ Days records on Alibaba’s Tmall year-on-year, it needed the ability to constantly generate and act on business insights to deliver an omni-channel and frictionless customer experience.

In short, AM Solutions needed a partner that could empower them to scale their operations rapidly, deliver deep business insights, and ultimately, future-proof their business.

In partnership with VMware, AM Solutions pursued their vision of a software-defined data center (SDDC) and achieved 100 percent virtualization. Compute, storage and networking became unified and automated, with the same architectural structure extending from the data center right to the pharmacy floor. This new IT environment was consistent, easy to manage and control, and enabled quick deployment of IT services – all at a fraction of The Chemist Group’s initial procurement and maintenance costs.

Higher levels of standardization and automation freed team resources to focus on delivering innovation for the business. The Business Intelligence team alone saw a three- to four-fold improvement on the performance of their data analytics platform. With a greater volume of business insights, The Chemist Warehouse Group could better understand their customers and develop new technologies for an improved experience.

Enabling Future Technologies to Deepen Customer Relationships

AM Solutions now has an enviable IT platform designed for further growth. After achieving virtualization, Chemist Warehouse gained the confidence to roll out 24-hour stores, knowing fully well that their improved IT infrastructure could easily scale to meet this heavier workload. The company has also piloted in-house innovations in recent years. One of the most intriguing is a Siri-like technology that streamlines the unpacking process and captures store and path data, which in the future can feed into frictionless, omni-channel services.

Looking ahead, AM Solutions is poised to venture into New Zealand, as well as leverage emerging technologies like cognitive computing and machine analytics. The Group is even set to trial a sophisticated drone delivery system to drop off parcels at customers’ homes.

AM Solutions is committed to finding new and exciting ways to engage customers at every touchpoint – from the moment they walk into a store until they walk out, and beyond. Having transformed its business, the Group is well on its way toward transforming Australia’s retail landscape.

The VMware Solution:

• Modernize IT infrastructure to create a software-defined data center with 100 percent virtualized compute, storage, networking and management for high levels of standardization and automation, using VMware’s SDDC suite of solutions

• This allowed AMS Chemist Warehouse to:
  - Free IT resources to focus on delivering innovation, instead of just run IT operations

Key Benefits

- Deliver a frictionless IT service and experience to the rest of the business
- Improve performance of data analytics on the platform by 300 to 400 percent
- Deliver more insights to the business and enhance customer intimacy
- Operate IT infrastructure at a cost 5 times lower than the average retailer
- Reduced cost of procuring and maintaining IT equipment
- Reduced time required to roll out additional IT capacity and services from months to days
ANZ Bank
Banking Comes Of Age, Goes Upwardly Mobile
“Mobile moments” happen when digital devices enable easy access to information required for decision-making. Accustomed to using digital services for simplicity and convenience in many aspects of life, people have every reason to expect the same when banking.

Devices are not just widely used by the young. Market growth is being driven by the older generation. In fact, in Australia, a certain 180-year-old is leveraging mobile devices for banking.

Established in 1835, ANZ Bank operates in more than 34 markets. With 50,000 employees and assets worth AU$772.1 billion, it is one of the five largest listed companies in Australia.

In 2014, with a new wave of digital competitors emerging, a projected revenue loss of 30 percent was staring traditional banks in the face. The external environment was changing fast. Under pressure from customers and shareholders expecting more, ANZ needed to protect its bottom-line and reshape its future.

Taking Banking into Your Own Hands

Now, imagine squeezing time out of your jam-packed schedule to visit the bank before it closes, only to be subjected to long waiting periods because 20 others are ahead of you. Instead of heading to the bank, people want to be able to do more on their own time, at their own speed. Checking account balances and making payments are straightforward tasks they want to be able to complete on digital channels.

To some, banks are old brick buildings that store your cash and are waiting for you to never visit. Only consultation on complex financial products prompt the occasional trip. Even then, there needs to be an efficient interaction with an attentive human being.

Recognizing this, ANZ sought to redefine “bank building”. It had to evolve to meet customers wherever they are – on the internet, on their smartphones, at their homes and businesses or at digital-enabled spaces within a building.

It envisioned a scenario where, instead of waiting in line, customers could make digital appointments. Upon arriving at the bank, they could sign in on an iPad and let the bank know what kind of information was needed. If waiting is required, the customer is free to leave. The bank would call them when it is time for their appointment. Financial specialists carrying company-issued devices would then meet customers in convenient locations, digitally presenting offerings that could be viewed, edited and finalized on the spot.

ANZ is committed to building a superior customer experience to compete in the digital age. It has proven that age is just a number. Now 183 years old, ANZ is finding new ways to build a bank that is agile and upwardly mobile.

End-Users Left to Their Own Devices

Given the complexity of offering financial advice, bringing this scenario to life was easier said than done. Devices had to be integrated with bank-wide systems connected to core platforms and further connected to specialist insurance and investment solutions. ANZ needed to ensure the security of company and customer data on a device itself, while simplifying app development and delivery, and scaling up quickly.

VMware helped ANZ unify the management of company-issued mobile devices and digital tools like Apple® iPad® kiosks in bank branches. Using a VMware software development kit, ANZ also started developing mobile apps. From the goMoney banking app and the Grow wealth app for customers, to a custom HR tool for employees.

To appeal to employees’ desire for mobility, ANZ implemented a bring-your-own-device program and created an internal app store offering tools that staff could remotely access to better serve customers. As a result, front-line staff could see more customers and offer personalized recommendations. These high-quality interactions meant more customers were signing up for services by the end of a meeting.

One of the first to explore how digital banking and enterprise mobility could benefit customers and employees, ANZ now manages more than 18,000 devices and 20 apps. In 2017, the company reported an 18 percent increase in full-year earnings. It continues to integrate mobile payments and explore use cases for blockchain.

The VMware Solution:

- Respond to IT consumerization and empower the digital workspace for customers and employees, by using VMware AirWatch® and VMware Workspace ONE™ to make consumer-simple, enterprise-secure tools and apps available on mobile devices
- This allowed ANZ Bank to:
  - Have their financial specialists meet customers anywhere

Key Benefits

- Manage 18,000 devices across 34 countries
- Allow 50,000 employees to work flexibly and remotely
- Developed more than 20 custom mobile apps
- Reduced customer waiting times at bank branches
- Ensure security of company and customer data on mobile devices
- Equipped bank buildings with kiosks and iPads to create “digital branches”, making information and offerings more accessible to customers

ANZ is committed to building a superior customer experience to compete in the digital age. It has proven that age is just a number. Now 183 years old, ANZ is finding new ways to build a bank that is agile and upwardly mobile.
“Har Ek Friend Zaroori Hota Hai…” goes a beloved tune from Bharti Airtel’s - Hello Tunes Services, a caller ring back service that the telco was the first to launch in India in 2004. Since then, Hello Tunes has continued to delight customers with improved features like Name Tunes and Celebrity Name Tunes.

The telco enriches the lives of customers by providing exceptional experiences. Name Tunes and Celebrity Name Tunes – which allow Airtel subscribers to personalize fun and novel greetings to their callers – is a small but telling example of Airtel’s innovation focus and customer obsession.

Through dedicated customer care and transformation into a digital operator providing mobile services, digital TV and content, Airtel is now India’s largest telecommunications company by market share with over 379 million customers across its operations in 2017.

However, staying agile and responsive to billions of subscribers is no mean feat. That, coupled with sweeping and complex upheaval in the domestic market, meant Airtel had to relook its legacy IT infrastructure to maintain its competitive edge.

Staying ahead in India’s Telco Sector

It has been almost two decades since the liberalization of the Indian telecommunications market. Since the introduction of the National Telco Policy in 1999, the industry has catapulted to become the second-largest market in the world. In India alone, 330 million new subscribers are expected by 2020.

In order to stay ahead, Airtel needed to transform, innovate and disrupt themselves through technology.

In a crowded marketplace, differentiation is key. To provide tailored, meaningful offerings such as voice, data, TV and banking services, Airtel needed to understand their customers using data analytics, and create apps to deliver services.

Modernizing IT for New Projects and Demands

Airtel’s legacy IT stack was not yet up to the task of supporting its many planned projects. Running at a mere quarter of full capacity, its IT environment was slow, unintuitive, and inflexible to the agility and resource needs of developers. The network and security automation elements were also one of the biggest bottlenecks in their legacy environments.

With the help of VMware, Bharti Airtel made a successful transition to a fully virtualized environment which had network, compute and storage working in tandem. Called “MyCloud”, the cloud infrastructure was now able to run a significant proportion of their mission critical workloads.

Besides improved monitoring and capacity planning capabilities, the IT team could now effectively and cost-efficiently allocate and spin up resources according to demand. This meant that developers now had automatic and reliable access to resources, and the means to innovate and create new applications which could go to market more rapidly.

Most importantly, Airtel was also able to integrate the network and security provisioning seamlessly – eliminating redundant firewall appliances and significantly reducing their potential attack surface from a security standpoint.

As the company pushes for 5G, sets up a digital innovation lab in Bengaluru and pursues further network expansion, its flexible, agile and scalable IT infrastructure will be key to addressing additional demands. With innovation and customer-centricity continuing to set the tone, Bharti Airtel will continue to lead.

The VMware Solution:

- Modernize a legacy IT environment to create a software-defined data center and network with automation capabilities, by using VMware vCloud® Suite Advanced, vRealize® Automation Advanced, vRealize® Operations Advanced, VMware NSX® and VMware vSphere®
- This allowed Airtel to:
  - Extend products and services to customers faster than the competition
  - Improve efficiency of data center operations
  - Align resources to dynamic IT workloads and demands

Key Benefits

- Faster delivery of new, high-quality digital services to 300 million customers
- Allowed developers to provision their own IT resources, speeding up app development and deployment
- Enhanced productivity by eliminating IT resource bottlenecks
- Optimized management and performance of IT infrastructure, security and processes
- Improved data center security by moving the management of network and security policies from the physical to the virtual layer
- Gained insight to accurately forecast capacity and resource requirements
China Mobile
Boosting China’s Bid To Be Tech Powerhouse
Since the first seeds of economic growth were planted in the 1990s, China has grown by leaps and bounds in population and wealth. In recent years, the country has experienced a wave of entrepreneurship, producing astoundingly successful companies to rival the giants in the West.

At the center of China’s ascension to the global technology stage is China Mobile Communications Corporation (“China Mobile”).

As China’s largest mobile communications operator and a crucial government arm, China Mobile has played a significant role in building China’s world-class ICT infrastructure, helping to bring connectivity to every corner of the country and laying the groundwork for accelerating tech innovation today.

**Legacy Environments Lagging Modern Demands**

Besides their vast consumer base, China Mobile serves up to 6.02 million corporate users to date. Enterprises depend on the company for their network and broadband needs, which form the foundation for cloud, big data, artificial intelligence and more – emerging technologies that are fast becoming cornerstones of business competitiveness.

However, China Mobile was hearing from their corporate customers about the staggering consumer demand and increasing IT burdens placed on their organizations.

From the big cities to the rural regions, mobile and the Internet are the new way of life. The Chinese chat, shop and play on locally-branded smartphones on homegrown applications, commute through ride and bike-sharing services, and encounter any number of digital touchpoints as they go through the day at work, school, malls or even hospitals.

As of 2017, China has 731 million Internet users, with half of the population yet to come online. Current e-commerce transactions in China are also estimated to have a value larger than that of France, Germany, Japan, the United Kingdom, and the United States combined. At the same time, the government was pushing to infuse ICT and high-tech into industries including healthcare, finance and manufacturing.

China Mobile customers’ traditional, legacy systems were unprepared to handle this growing, fluctuating volume of business. IT management and maintenance were becoming difficult, time-consuming and costly. The recent WannaCry and high-profile data breaches also foregrounded the inadequacy of current security controls to protect the growing stream of critical data.

China Mobile’s enterprise customers clearly needed a solution – and fast.

### Helping Enterprises to Easily Transition to the Cloud

China Mobile wanted to support the larger, national aspiration of a “Digital China” first and foremost through enabling their customers to realize the shift from tech follower to tech pioneer.

Bringing its own operational strength and wide customer base to the table, China Mobile joined forces with VMware to launch a desktop cloud solution as a service.

With the new VMware-powered solution, China Mobile’s enterprise customers today enjoy anywhere-anytime access to suit their business mobility needs. For firms in fast-paced, consumer-facing industries, the system’s ability to automatically increase capacity at peak hours to meet increased demand also means greater customer response and business agility.

Fully operated by China Mobile and delivered as-a-service, the solution helps to lift the burden of IT management and eliminates the upfront costs of more extensive IT infrastructure. This frees up capital and human resource to dedicate to business-critical activities and innovation.

The Chinese government understands that IT, now more than ever, will define the future of individual businesses and the future growth of the nation. China Mobile has been a key player in moving the country out of the shadows of traditional tech powerhouses, and into its own. As it continues to evolve with its enterprise customers’ needs, China Mobile is on track to help transform China into a true global tech leader.

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### The VMware Solution:

- Horizon DaaS desktop cloud solution-as-a-service is powered by VMware’s technologies and China Mobile.
- To bring the new VMware-powered solution to life, China Mobile bundled its broadband services, network resources and IP addresses as a one-stop service and solution for its customers. The solution also leverages VMware’s virtualization technology, enabling thousands of users access to services with just 80 servers.

### Key Benefits

- Provided a secure application infrastructure through granular micro-segmentation
- Integration of IT resources and simplified operations management with a single management console
- Flexibility to deploy virtual desktops and hosted apps across public, private, and hybrid cloud environments, from their own premises or remotely
- Efficient management of energy consumption costs
Krungthai Card Public Company
Ensuring Thailand 4.0 Is On The Cards
Credit cards have evolved beyond being just a mode of payment. Addressing consumer lifestyle needs and aspirations, they now unlock a wide range of benefits, including online shopping discounts and rebates, complimentary air tickets and even healthcare services.

In the past, users had to redeem credit card privileges through paper coupons that were physically delivered. Long waits at the post office and the time-consuming process of tallying used coupons at the end of each quarter were far from ideal. Krungthai Card Public Company (KTC) has transformed Thailand’s credit card services space. By introducing the TapKTC mobile application for members and business partners to digitally receive, track and redeem privileges, it has addressed its own challenges, consumer pain points and benefitted the country’s retail ecosystem— all in one fell swoop.

KTC has evolved beyond just being a credit card provider. Now a company offering a comprehensive suite of digital lifestyle platforms and services, it promises convenience and the ability to meet the daily needs of all - all while ushering Thailand into a new area of cashless payments and economic growth.

Incorporated in 1996 as a subsidiary of Krungthai Bank, KTC is the largest credit card issuer in Thailand, servicing more than three million accounts across the country.

With the country working toward becoming a cashless society and enabling more efficient cross-border financial services within Southeast Asia, KTC is positioning itself as Thailand’s digital-age leader.

### The Rise of Digital Payments in Thailand

The global shift toward digitization has led countries to develop their own models for progress. Thailand is working toward Thailand 4.0, which aims to transform its economic growth model from one reliant on heavy industries to one built on technological innovations.

Making digital-based payments mainstream is a key component of Thailand 4.0. While 7 in 10 Thais still prefer to use cash, the local market is shifting. Digital-based transactions - e-wallets, credit cards and mobile banking - have grown about 30 percent year-on-year for the past five years.

Aligning with Thailand 4.0, KTC decided to retool its customer engagement strategy and incorporate the latest in fintech. The company also had to fulfill its broad mandates - sustain its reputation for unparalleled customer service, maximize shareholder returns and support the government in boosting the economy.

### From Card Provider to Purveyor of Thailand 4.0

KTC was looking to develop new mobile and e-payments solutions. However, the company’s organic growth and customers’ demands for timely service support was already taking a toll on its existing IT infrastructure. KTC also wanted to empower its employees with the flexibility to work on-the-go.

A new IT infrastructure—one that could support further growth and deliver critical applications and information to mobile devices efficiently, safely and securely—became imperative.

Working with VMware and Tangerine, KTC employed a software-defined data center that consolidated IT workloads for dynamic, agile and scalable service delivery. The virtualized platform significantly increased data storage capacity and reduced costs. Compliance and security of business and customer data was also enhanced through micro-segmentation.

Finally, with credit card product information and customer data now easily accessible on secured laptops and mobile devices, employees could attend to and better serve customers anywhere and anytime. By investing heavily in technology and people, KTC aims to unlock new customer experiences and tap both domestic and international growth opportunities.

When the government launched PromptPay, a standardized platform for QR code payments, KTC became the first provider in Thailand to endorse QR code payments with credit cards. It is now pioneering the use of biometric iris recognition for mobile security authentication. Extending its QR code payments with credit cards, it is now pioneering the use of biometric iris recognition for mobile security authentication. Extending its QR code payments with credit cards. It is now pioneering the use of biometric iris recognition for mobile security authentication. Extending its QR code payments with credit cards. It is now pioneering the use of biometric iris recognition for mobile security authentication.

### The VMware Solution:

- **Build a software-defined data center to support the proliferation of mobile devices and payments.** By using VMware vCloud® Advanced, NSX® Advanced and Enterprise and vSAN™ Advance and Enterprise, VMware Workspace ONE™ and VMware AirWatch®

### Key Benefits

- Significantly reduced data storage costs and increased data storage capacity
- Reduced IT procurement and maintenance costs
- Reduced data center footprint by 50 percent
- Strengthened data security through micro-segmentation
- Ability to provision IT services quicker than before
- Provide employees with ready-to-use corporate devices, with business apps made available within an hour

**Key Benefits**

- This allowed Krungthai Card Public Company to:
  - Deliver dynamic, agile and secure IT services at lower cost
  - Enable end-to-end management of corporate devices to better serve customers
  - Simplify app development and delivery, and scale up quickly without compromising security
Advanced Cloud Services To Respond To Changing User Needs
Mitsubishi Electric Information Network Corporation (MIND) understood well that the most resilient of companies are sensitive to the winds of change – and quick to adapt.

Japan has consistently been ranked one of the top markets for growth in ICT and cloud services, and is today the undisputed cloud leader in Asia Pacific and Japan. However, the country’s rise to leadership in cloud and ICT begins with the sobering global economic crisis of 2008.

As much a setback as a wake-up call, the event led to the “Smart Japan ICT Strategy”. The strategy looked inward and outward – besides transforming Japan’s ICT infrastructure to connect people and services and to solve the country’s social problems, it also sought to intensify global outreach and competitiveness.

With a keen sense that the country was at a critical turning point, Japan had its sights set on becoming the most advanced ICT nation in the world.

Preparing for Changing Cloud Needs

Born in 1989, MIND provides an array of offerings including Internet data center and platform services, network, security and application solutions.

As the ICT core of the Mitsubishi Electric Group, digital transformation would soon be an imperative for MIND to stay a step ahead of their enterprise customers. The corporation decided it was time to streamline their business and rebuild their IT infrastructure. MIND also needed to keep up with the increase in demand for cloud services among the Japanese businesses.

In 2014, MIND merged with Mitsubishi Electric Information Technology (MDIT). The new entity would help local organizations centralize their IT operations in the cloud, better maintain systems that are critical to business continuity, deliver the scalability to roll out new digital services, and ensure the agility required to respond to dynamic flows of digital information.

By working with VMware to modernize its legacy data center infrastructure, MIND also established a “Value Platform on Demand” private cloud service. With this service, customers could quickly and flexibly respond to unanticipated changes within the digitally driven business climate.

Automation of Operations for a Smaller Workforce

Apart from the agility and transformation required of the company with shifts in global economy, MIND faced the emerging problem of a shrinking workforce. This made it challenging to find individuals who were knowledgeable on network and storage and had the experience of providing service support.

With VMware, MIND created a self-service portal to automate the application and approval process of customers’ cloud-powered services. Automation drastically reduced MIND’s delivery cost and time to service provision from over a month to a week. Managers were freed to focus on higher level tasks, and the accumulation of operation logs allowed MIND to travel for insights and pre-empt network failures to increase operational reliability in the long run.

Looking Ahead: Accelerating the Business of the Entire Mitsubishi Electric Group

Today, Japan is the world’s top market for cloud services. MIND is also considering diversification to support the adoption of newer technologies like artificial intelligence and the Internet of Things.

The VMware Solution:

- Enhance existing IT infrastructure by adopting VMware NSX to complement VMware vSphere, meeting changing customer needs in cloud services.
- Streamline management of a complex software-defined data center (SDDC) environment integrating server, network and storage, by using VMware vRealize Operations, vRealize Automation and vRealize Orchestrator.
- Improve service efficiency and anticipating network failures by analyzing past data operation logs using VMware vRealize Network Insight.

Key Benefits

- Built innovative cloud environment with SDDC platform
- Improved flexibility in personnel utilization and boost efficiency through automation
- Reduced human error in service operations
- Reduced customer waiting time from one month to a week
Nissan China
In The Driver’s Seat Toward High-tech China
When you see the label “Made in China”, low cost and mass-produced products might spring to mind. You could attribute this to China having the largest population in the world – labor must therefore be the cheapest.

The truth? Costs of labor in emerging markets are now on par with China. However, when it comes to productivity, no one comes close. Even before the country opened its doors to the world, improvements to legacy infrastructure – highways, railways, ports and power supply – were underway. An intricate supply chain network was formed and training programs for laborers were carried out. As a result, manual manufacturing operations ran like clockwork, establishing China as the “world’s factory”.

Benefiting from China’s efficient production capabilities, Nissan China now only requires eight 4-CPU units to run 200 virtual machines. This automated infrastructure delivers greater agility, speed and efficiency, ensuring there was no delay in the launch of new models and innovations. Through virtualization, capital and operational expenditures were also reduced significantly.

As new technologies start to prove their worth as business enablers, China’s manufacturing sector is set to undergo further transformation. It is only a matter of time before we see smart factories where every component is integrated, automated and externally monitored to optimize performance. These facilities might even have one production line for all models – customer specifications will be entered online and translated into instructions that guide on-demand manufacturing.

Nissan China now has the IT infrastructure in place to become a truly modern automaker. With that, it promises to be both a beneficiary of and contributor to China’s ambition to be the world’s top manufacturer by 2049.
O-Bank
Making Bank 3.0
A Reality
In Taiwan
During the Lunar New Year, the Chinese traditionally hand out “hongbaos” – red paper envelopes containing money. This year, many Taiwanese relied on technology instead, using the Taiwan Pay app to exchange “electronic red packets”. This is a sign of the times. Digital and mobile channels are redefining the traditional mold of cash flow.

In 2015, Taiwan’s Financial Supervisory Commission (FSC) unveiled its Bank 3.0 vision. It is a part of Taiwan’s bid to increase its technological capabilities by 90 percent before 2025. Bank 3.0 promotes the adoption of digital platforms to deliver better financial services and customer experiences. With “digital platform companies” like Alibaba and Tencent organizing themselves around customer lifestyles to earn transaction fees, banks are being forced to evolve their traditional business models.

O-Bank, established in 1999 and formerly the Industrial Bank of Taiwan, found that its business model, which restricted it from accepting deposits from customers, was no longer viable. O-Bank therefore sought to address the industry’s existentialist question: “What is a bank?”

Making Banking Almost ‘Invisible’

With 39 banks serving 23 million people, Taiwan is a crowded commercial banking market. Yet, its younger demographic – a lower-income segment that favors mobile payments, convenient account setups and credit loan approvals – was being underserviced.

Recognizing the roles youth now play – and will play – as consumers, workers and future leaders, O-Bank aimed to deliver what they were lacking. Moreover, people’s lives do not revolve around banking and payments. It should be the other way around.

If you are opening a savings account, why travel to a branch and be overwhelmed by paperwork when you can complete the entire process on your smartphone. If you are buying a television, the easier it is to facilitate payment, the better. The same rule applies when you get out of an Uber. The banking and payments piece should be almost ‘invisible’.

Despite having only five domestic branches and one more in Hong Kong, O-Bank had ambitious plans to overtake rivals with larger brick-and-mortar footprints. It had a desire to restructure itself into a nimble and digitally focused financial services provider.

O-Bank was also set to make headlines with its Initial Public Offering in April 2017. This would be the first bank listing in Taiwan in 13 years.

Overcoming Roadblocks to Business Transformation

Before it could disrupt the traditional banking model, O-Bank had to overcome roadblocks.

It lacked an IT infrastructure that could deliver fast and secure services to customers on PCs and mobile devices. Stringent FSC regulations made it mandatory for O-Bank to implement new security frameworks, such as device function control, application management and mobile wireless network encryption, to avoid leaking sensitive information.

By working with VMware to modernize its IT infrastructure and create an agile private cloud, O-Bank could efficiently launch a smorgasbord of digital offerings to better serve customers.

Paperless and branchless banking aside, O-Bank launched a call center providing around-the-clock video chat services, as well as a robo-advisory platform that uses algorithms to manage investment portfolios.

Through a single, automated IT console, O-Bank could also efficiently monitor, manage and analyze the behavior of every mobile device and application linked to its network, meeting FSC requirements and ensuring enterprise security at every endpoint.

Unsurprisingly, Taiwan Pay is one of many secure mobile payment services provided by O-Bank.

As digital and mobile channels continue to transform financial interactions, O-Bank has perhaps addressed the industry’s existentialist question. A bank – version 3.0 – is all-digital and online-only. It serves customers located anywhere. It is not just a money lender, it is a distributor of customer-centric platform services.

The VMware Solution:

- Build an agile, highly available and secure software-defined infrastructure and empower the use of digital workspaces, by using VMware vSphere® and VMware AirWatch® to ensure a secure and reliable digital financial environment

- This allowed O-Bank to:
  - Depart from a bank’s traditional distribution strategy, eschew multiple physical branches and make digital banking services the focus of its business

Key Benefits

- Delivery of digital financial services to customers in Taiwan and Hong Kong
- Achieved higher operating efficiencies
- Reduced capital expenditure, passing on cost savings to customers
- Ensured that digital financial services met stringent requirements of the FSC
- Prevent the leakage of business-critical and sensitive information
- Produce action monitoring information to improve efficiency and security, thereby enhancing the quality of digital service delivery
State Bank Of India
Technology To Speed Up Financial Inclusion
India is undergoing a reinvention. In 2015, Prime Minister Narendra Modi launched the "Digital India" campaign. Its goal? To drive technological development and enable all citizens to be included in India's thriving economy.

Modern India consists of 1.3 billion people scattered across a large subcontinent. Half of the population is less than 30 years old. The country has averaged seven percent annual economic growth since 1997, but poverty remains a problem.

The poor use cash for majority of transactions. They are often exploited – given counterfeit notes or intentionally underpaid. To address this, the government issued newly designed notes and encouraged workers to insist on payment remittance through banks. This prompted many citizens, dispersed across India, to open bank accounts for the first time.

Building the Largest BFSI Cloud on the Planet

State Bank of India (SBI) has always prided itself on being “the bank for every Indian”. The bank’s vision of inclusivity – to bring the entire range of financial products and services to all Indians – dovetailed with the nation’s digitization movement.

As India’s largest bank, SBI would inevitably have strong involvement in the “Digital India” push, and a part to play in realizing financial inclusion for the masses.

Committed to ensuring that every Indian who wants a bank account can open one, SBI found itself having to support exponential user growth. SBI’s IT systems were also required to manage a higher volume of Pan-India transactions, driven by government initiatives like the LPG subsidy and Jan Dhan Yojana.

Modernizing IT Infrastructure for Growth

SBI needed to compete effectively, satisfy shareholders and meet evolving consumer demands. Beyond maintaining brick-and-mortar branch and ATM networks, it had to establish relevance among young, digitally-savvy customers expecting fast, reliable and secure mobile payment services.

Rapid user growth and the rise of digital channels called for IT transformation at an unprecedented scale. Continuing to operate on a traditional infrastructure would mean an explosion in hardware costs and slow service delivery.

Much like how early Indian civilization successfully evolved, SBI needed purpose-built infrastructure to support masses of new customers and meet next-generation demands.

Building a Robust Enterprise Technology Platform

By working with VMware to modernize its data center architecture for lower cost and greater adaptability, SBI today uses one of India’s most robust private clouds. The private cloud reduced hardware footprint and operational costs. With high availability and scalability, banking applications and services could be delivered more efficiently.

SBI’s IT infrastructure now supports 25,000 branches, 250,000+ employees and operations worldwide, not to mention 50 million mobile transactions. From being a two-century-old banking institution, it transformed itself into a technology company with a banking license. Today, SBI has leveraged technology to deliver bank accounts, digital banking channels, and international services that operate flawlessly to satisfy regulators across borders.

SBI’s business is more than banking because it touches people’s lives in many ways. Central to the lives of today’s parents and grandparents, by banking on the cloud, it promises the same for their children and future generations.

The VMware Solution:

• Supported SBI’s “Meghdoot”, one of India’s largest, most robust and highly-automated private clouds, with the use of VMware vCloud® Suite Enterprise and VMware NSX® solutions
• This allowed SBI to:
  - Manage its branch infrastructure centrally in a seamless manner
  - Provide a secure branch application server with zero-trust security model (micro-segmentation)
  - Monitor performance and user experience in every branch for every teller to improve customer service

Key Benefits

VMs
Run 250+ production applications on 2000+ VMs

80%
Reduced overall IT infrastructure cost by 80 percent

Allow more than 200,000 employees to work flexibly and remotely

Centralized management of IT for 25,000 branches and secure delivery of applications to 250,000 tellers

Greater business efficiency by reducing the bank’s procurement cycle from 6-8 months to 12 minutes

Stronger business continuity by reducing system ‘downtime’ to just a few hours a year
Telekom Malaysia
Evolving Telecommunications to Build a Nation
Malaysia’s first telegraph line connected a British resident’s royal home in Kuala Kangsar to his deputy in Taiping. The line, which traversed 45km, was laid by the Department of Posts and Telegraph in 1874. It marked the beginning of Malaysia’s telecommunications era.

The Department of Posts and Telegraph is now known as Telekom Malaysia (TM).

From its humble beginnings as a state department to a publicly-listed conglomerate with 27,000 employees, TM has grown steadily with the nation. “To make life and business easier, for a better Malaysia,” has been its longstanding vision.

Today, all forms of communications in Malaysia – internet use, phone calls, television transmissions – rely on the infrastructure TM has laid over the years.

With more than 2.3 million subscribers, TM is Malaysia’s top local broadband provider. By owning or leasing 20 undersea cable systems traversing 320,000km around the globe, TM is also Malaysia’s digital gateway to the world.

**Leading a Digital Revolution and Managing Stakeholders**

Positioned at the heart of Southeast Asia, Malaysia offers a cost-competitive location for foreign direct investment. It also promises a vibrant business environment, well-developed infrastructure and productive workforce.

To advance Malaysia’s regional and global standing, in 2011, the Malaysia Digital Economy Corporation announced the “Digital Malaysia” program. Its goal – to make information and communication technology (ICT) the bedrock of the nation’s progress.

Already Malaysia’s main communications infrastructure provider, TM was poised to be the backbone of Malaysia’s nation building efforts. This included facilitating digital inclusion, imparting digital knowledge to students and creating smart cities.

Operating under the backdrop of increased competition, TM had to balance fulfilling its commitment to the national agenda with meeting shareholder expectations.

**Agility and Freedom to Transform a Nation**

TM had ambitious plans to facilitate digital inclusion and promote digital literacy. It had to lead new broadband infrastructure development projects to deliver high-speed internet access in state capitals, major towns, suburban and rural areas. At the same time, TM was building ICT labs to hold digital skills and training workshops. To allow companies based in Malaysia to better capture and monetize big data, TM also had plans to build data centers in Klang Valley and Iskandar Putri for data storage, management and analysis.

TM’s outdated IT system was no longer sufficient for the management of its existing business and new initiatives. New IT infrastructure was required. To avoid backlash from stakeholders, any transition to new infrastructure also needed to be fast, secure and reliable, with minimal downtime and disruption to critical business operations.

TM turned to VMware and CTC Global to migrate its existing environment onto a private cloud platform. What followed was the creation of a flexible, cost-efficient and resilient IT system that could operate at optimal capacity at any given time. VMware also catered for further optimization when the system went live, ensuring operations transitioned seamlessly.

With the private cloud delivering agility and scalability, TM could set its sights on developing digital and smart services. It has since inked agreements to help build smart cities in Johor and Penang.

With TM as its backbone and gateway to the world, Malaysia’s digital economy now accounts for 18.2 percent of its Gross Domestic Product, a target set for 2020, but achieved ahead of it.

**The VMware Solution:**

- Modernize TM’s legacy environment and create the “iGrid” private cloud platform for greater business agility and freedom, by using VMware vCloud® Suite Enterprise
- Enable secure and seamless migration to the private cloud with minimal disruption and downtime, by employing best practices from the VMware Professional Services Organization (PSO)

**Key Benefits**

- Improved business agility, allowing non-disruptive testing and seamless scalability
- Consolidated and improved resource management on a single, unified platform
- Performance improvements of up to 70 percent across all business functions
- Create a standardized and scalable IT operating system across departments to meet customers’ growing connectivity needs and deliver enhanced service experience
- Optimally manage its growing business and future innovations and initiatives, such as developing value-added digital and smart services

**Stakeholders**

- Reduced hardware costs by 75 percent
- Reduced software costs by 25 percent
- Increased employee productivity for each task by up to 60 percent
- Improved SAP infra-readiness from three months to less than five days