

# United Overseas Bank: Plotting the Coordinates on the Road to Digital Banking in ASEAN

**Dennis Khoo, Head of Group Retail Digital at United Overseas Bank (UOB) is a man with a plan. In fact, his is more than a plan, as he has a clear vision of the future of retail banking and since mid-2018 this vision is being fast-tracked by UOB to achieve the digital bank of tomorrow. Khoo met with Hubbis in April to understand this concept and to learn about the progress thus far on building the digital bank of the future.**



**K**HOO BEGINS THE DISCUSSION WITH a reference to the well-documented corporate demise of Kodak. “Whatever happened,” Khoo observes, “the real lesson is that Kodak did not embrace technological change, perhaps they were too stuck on the margins offered by traditional film. The message is that we must all evolve in order to survive and to compete, and that is certainly true in banking.”

Khoo works on UOB’s key digital transformational project alongside the other senior leaders within the Bank, aligning their roles to ensure the bank is coordinated in all aspects of its future digital activities. Khoo met with Hubbis not long after UOB announced the March 1, 2019 launch of its digital retail bank, TMRW, in Thailand.

“TMRW is a completely mobile digital bank for millennials,” he reports. “It is ideal for ASEAN, which has a vast millennial population, with, I understand, more than half of the potential customers below the age of 35, which means roughly 400 million customers. Of these customers, the majority have a smartphone. ASEAN is also ideal for achieving scale because so many working adults still do not have a bank account. Given that Thailand’s digital generation make up one-third of the total Thai population, we decided on Thailand as the first country to roll TMRW out in the region.”

Khoo notes that UOB has been very successful in building its presence in the region, but that the time and capital cost of building the branch route to be able to compete with incumbent players, as the bank did in Malaysia over a period of 60 years, can be slow. “In the new world, for large coun-

tries such as Thailand, Vietnam and Indonesia we have to adopt the digital approach,” he reports. “We see that by that lowering the cost to serve customers and making banking more accessible for them will drive large-scale financial inclusion in this region. The future of retail banking will be influenced by new entrants in financial technology (FinTech), by technology, by new challenger banks and also by incumbents who are reinventing themselves.”

### **Engaging the customer via ATGIE**

At the heart of UOB’s Digital Bank customer engagement approach is its unique data-centric business model, expressed through the acronym ATGIE, which represents five stages: Acquire, Transact, Generate data, Insight and Engage. “This model,” says Khoo, “is designed to address the entire customer life cycle comprehensively, ensuring the quality of each encounter is engaging and deepens relationships.”

UOB’s ATGIE business model is powered by next-generation artificial intelligence, machine learning, data analytics, user interface design and smartphone capabilities. These include UOB’s own digital technology innovations, its own regional Engagement Labs (eLabs) test and learn initiative to deepen customer engagement, as well as solutions provided through its collaboration with FinTech partners including Pintec Technology, Personetics, and Meniga [see our associated ‘On the Fast Track’ article].

“As expressed through ATGIE,” Khoo elucidates, “the customer experience starts with swift and simple onboarding which is localised to each market context. As customers interact more

### **Key Priorities**

Dennis Khoo knows that in the marathon race towards digital banking, there is little time to stop for breath, such is the pace of change. Accordingly, he has set himself and the bank some key goals for the foreseeable future.

First, he wants to make TRMW, UOB’s new ASEAN digital bank launched on March 1 in Thailand, as successful as possible. “And secondly, as soon as we can, we must launch in the next country. Thirdly, we must continue to plot the coordinates on the virtual roadmap to increase our capabilities throughout the entire digital bank offering.”

He elucidates some of these comments, firstly by explaining what he means by “successful”. “We have a stated target of three to five million customers in the next five years,” he notes. “We measure engagement but not revenue at this stage, and we are targeting an engagement score of above seven for a large proportion of continuing customers. We seek a cost-to-income ratio for the direct digital bank cost of 35% and below, whichever country we operate in.”

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United Overseas Bank (UOB)

insights drawn would enable the bank to anticipate customers' needs, to determine how it can best help them and prompt them towards smarter spending and saving habits for them to achieve their financial goals. This, in turn, would encourage even more exceptional customer engagement, loyalty and advocacy."

### Building the talent pool

To accelerate the Digital Bank's initiatives in the region, such as the bank's in-house eLab initiative, UOB last year also launched a talent search to hire passionate and like-minded people. The new hires will join the 120-people strong team already working on the roll-out of UOB's Digital Bank across ASEAN.

"In October last year, we stated our intention to increase our Digital Bank team by at least half this year," Khoo reports. "Of these new hires, a quarter will join the eLab. Other roles include those in areas such as user experience and user interface design, behavioural science and research, data analytics and design thinking."

The bank has also been increasing its team of technolo-

### Getting Personal

Dennis Khoo hails from Singapore, and by his own acknowledgement comes from a fairly humble background. He underwent all his education in Singapore, studying computer engineering at Nanyang Technology Institute and then in 1996 attaining his MBA from the National University of Singapore while also working in his first job with Hewlett-Packard, where he had begun in 1988.

He went on to spend 13 years with HP and enjoyed his time there. "It was a great company, they really encouraged you to experiment," he recalls. "After HP I spent nine months in a company called Vignette, it made content management software and then it was the end of the dotcom bubble, I could see it coming, but I got offered a role at Standard Chartered Bank as head of marketing and then from there I worked all my way up to consumer head."

He left Standard Chartered in 2013 to join UOB. "I guess with all that background, I have the right sort of background for my current role," he comments, "as I have spent a long time in technology directly and then almost 18 years in banking in every conceivable role in the retail bank except for head of sales. I hope I am ideal for this job, for this type of digital disruption role, because you need all of this background and you need to understand the technology, the software, you need to be good at marketing, you need to understand the business and the combination of these elements I believe offers the basic ingredients for success."

Khoo also attained his PhD from the University of Western Australia on a part-time course while working with Standard Chartered. "Somewhat miraculously," he recalls, "I managed to complete the thesis and got it accepted. The thesis covered performance factors when large firms internationalise. I thereby earned the title "Dr", but seldom use it unless for a bit of fun."

Khoo is married with three children, the oldest of whom is at university, the youngest of whom is 14. "We love travelling, at this age the children can enjoy all that, it is a great time to bond with them. I also enjoy gardening; I like to see things grow in my personal and business lives. When in Amsterdam on the way to taking my son back to school in the UK we stopped at Keukenhof to admire the wonderful tulips. It is amazing what you can grow in a temperate country. "

gists, such as software engineers and architects, to develop solutions such as in-house application programming interfaces (APIs), which tap UOB's secure IT architecture to drive real-time data analytics. Around 45% of the new talent will be located in Singapore. Positions will also be available in Indonesia, Malaysia, Thailand and Vietnam.

### **Holding on to the customer**

Digital, Khoo adds, is however not merely about technology, which is available to anyone, at a cost. "As we see it, this really is all about how you retain the customer after you have acquired them," he observes. "Accordingly,

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Khoo mines deeper into the costs. "We deal with three types of costs, the cost to serve, to innovate and to acquire. The first of these, the cost to serve, for a mobile-only bank like TMRW is very low because there is only one channel - the mobile phone."

However, the cost to innovate is very expensive because each new project comes with

a large capital cost and there is both depreciation and rapid obsolescence. "After only one or two years," Khoo notes, "a competitor arrives with some new offering for customers. That is why we have plugged different fintechs into our digital journey as we believe collaborating with fintechs can lessen the cost of innovation significantly."

Then the only other element is the cost to acquire. "That cost to acquire can only come down if people want to switch, so that is why we are intensely focused on engagement. To help create more engaged experiences, we work on data categorisation with Meniga, a company that works

a lot with the big French banks. We pump the categorized data to Personetics, an insights company that is one of the big players in the cognitive banking and engagement. Digital engagement is very nascent, globally."

### **Keeping things hygienic**

Khoo adds that he views transparency today as one element that must be offered to customers as a matter of pure 'hygiene'. "I think bankers have an obligation to society, and that requires transparency. We are confident UOB's focus to offer a transparent and engaging banking experience for customers

is headed in the right direction, and is crucial to customer acquisition and retention."

Khoo reports that UOB is indeed achieving much of this so-called 'hygiene' today. "We are making good progress with the simplicity of processes and the ability of chatbot and live chat agents to solve customer problems," he says. "And we are going to gear up significantly so that we can solve customer issues even faster within the next three years. We are not there quite there yet, but we see that the machine-learning improvements across many areas are quite remarkable."

But Khoo says that the journey towards the digital bank of the future should not be seen as instantaneous. "When we envisaged TMRW," he explains, "we had the millennial generation front of mind, as they live their lives very differently from earlier generations. They want more transparency; they feel banking is full of complex, unnecessary jargon. We might not yet have fulfilled all our ambitions, but we have certainly simplified many areas, eliminating jargon, making fees much more transparent, cutting out the small-print, being clear upfront, for example on fall-below fees. In short, we are committed to being simple, engaging and transparent."

### **Step by step**

In the future, Khoo hopes to boost the bank's ability to tap data to harness insights on services and solutions that might be even more relevant to the customers. "For example," he reports, "we are looking at being able to understand the kind of merchant offers a customer might be interested in, and send those offers, perhaps for example in some form of coupon format."

He explains that this is all about personalising the user interface. “In short,” he says, “we can push the simplicity even further, to create an even better experience by adding other data to transactional data and making our responses even richer. Of course, we are also going to look at expanding the product category as well, perhaps into insurance, loans, and so forth, but in the digital bank right now we are focused on offering a transactional account, a savings account and a credit card. We need the stickiness first, before branching out with other products and offerings.”

**The path to differentiation**

TMRW, Khoo also concedes, is a challenger bank whose progress will to some extent be determined by regulation. “The Digital Bank as we imagined it and created it has the opportunity and the runway to grow,” he comments, “but we also know that the banking industry takes a long time to change, even with technology, because it is a heavily regulated industry where security and customer safeguards have primacy”

He closes by remarking that commercial bankers need to learn the dangers of being insular

in this new world that we all live in, a world in which new competitors can emerge from outside the financial industry and where technology plays such a big role. “We need to take a playbook from the challenger companies, from Amazon for example,” he remarks, “to more fully understand how to truly differentiate ourselves for our customers.”

If UOB can do exactly that - and the path it is on appears highly promising - the bank will be well placed to achieve its stated goals...and perhaps maybe more. ■



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## On the Fast Track: UOB's High-Speed Digital Banking Journey

**UOB has been on the fast-track towards the development of digital banking, with the pace of announcements of new partnerships, developments and launches accelerating since early 2018. Hubbis takes a retrospective look at the key milestones and their implications for the bank's quest to deliver fully digitised banking.**

### **March 1, 2019: The "Digital Bank" arrives**

On March 1 this year, UOB launched TMRW, which the bank says is ASEAN's first digital bank built for the region's digital generation. TMRW is launching in Thailand first and will be the first mobile-only bank specifically designed for ASEAN millennials who prefer to bank on their mobile phones, anywhere and at any time.

UOB said that ASEAN's digital generation, who form the third largest Asian base of digitally-savvy consumers after China and India are being offered TMRW's "Different Generation, Different Solution" approach, which aims to match their needs with their lifestyles.

"TMRW is designed to makes banking simpler, more transparent and more engaging for its customers through the use of data," reports Dr Dennis Khoo, Head of Group Retail Digital at UOB. "The Digital Bank translates transaction data into actionable insights that will make the banking experience interesting and fun, while enabling customers to be smarter at saving and spending. As customers spend more time with TMRW, the mobile-only bank becomes even more familiar with their wants and needs in order to serve each one better."

Khoo explains that the digital generation have a clear set of expectations when it comes to digital services, such as simplicity and an engaging user experience. "Accordingly," he says, "we took the time needed to understand these millennial customers and how and why they engage with mobile apps and digital services the way they do. We then used those insights in designing TMRW, which we believe pushes simplicity to the limit and engages them in new ways beyond the standard digital banking functionalities."

Given the diverse cultures in the ASEAN region, TMRW was also designed to draw out and to celebrate the distinctiveness in each of the markets. "Having a mobile-only digital bank enables us to explore new frontiers when it comes to designing a user interface based on customers' banking behaviour and needs and to be sensitive to the nuances of each market," Khoo adds. "What this means is that TMRW will not be a static one-size-fits-all app, but a digital bank that will continue to learn to create increasingly simple, transparent and engaging experiences for TMRW's customers in each of our ASEAN countries."

TMRW customers will enjoy a different and simple way to bank from the minute they sign up for an account through to their day-to-day banking. Having designed the digital bank app so that it is intuitive and frictionless, TMRW does not have a traditional app menu. Instead, the digital bank will learn from each customer's usage journey to bring upfront functions and information that are personalised to their individual needs. TMRW's language is also free from banking jargon and is easy to understand, Khoo reports.

"TMRW aims to build a customer base of three to five million in the next five years," Khoo explains, "and will contribute to UOB's strategy to scale up its customer franchise across Southeast Asia. The bank will launch TMRW in its next ASEAN market in the coming months, but we have not yet stated which market that will be."

In Asia, UOB operates through the bank's head office in Singapore and banking subsidiaries in China, Indonesia, Malaysia, Thailand and Vietnam, as well as branches and representative offices across the region.

#### **November 2018: data categorisation**

Another step along the road towards digital banking was achieved in November last year when UOB announced its smart data categorisation engine, which aims to make savings and expense tracking effortless for every individual. UOB announced it has teamed up with Meniga, a global leader in digital banking solutions and said it was the first bank in Southeast Asia to employ Meniga's solution to simplify complex and multiple transaction datasets into simple and relevant data for its Digital Bank customers.

Khoo said at the time that the collaboration with Meniga is a key building block in the bank's data-centric approach to use data as a strategic asset to create engaging and effortless experiences for the growing group of mobile-first and mobile-only consumers in ASEAN. "Meniga's solution," he said, "will help to remove friction and to ease pain points which consumers generally experience when managing their finances. Meniga's solution will enable UOB's Digital Bank to analyse transaction data in real time and to offer actionable information or insights to prompt customers to save and to spend cleverly."

#### **October 2018: Engagement Lab appears**

Shortly before the Meniga announcement, UOB had in October 2018 launched its pan-regional Engagement Lab (eLab), which enables it to personalise the way it converses and serves its Digital Bank customers.

"Our eLab is the first dedicated unit set up by a bank in Southeast Asia that focuses on using the latest technology and behavioural insights to deepen customer engagement," says Khoo. "We will also be setting up eLabs across our ASEAN network and we will use the insights drawn to design, test and trial ways to encourage customers to save and spend more wisely."

The specialist eLab team is assembled from various disciplines, including data analytics as well as behavioural and decision sciences. "Within each of our local eLab teams," says Khoo, "we will be testing and learning how best to converse with customers. We are building a glossary specific to each market which takes into consideration cultural, behavioural and language norms. With language being used differently by each generation, and especially on digital devices, this is an exciting challenge to tackle. Together, we will turn ideas into distinctive experiences that matter to our customers."

#### **August 2018: the "ATGIE" call to arms**

In August 2018, UOB had announced it would introduce a digital bank across its ASEAN network which uses a unique data-centric business model designed to deepen engagement. The business model comprises five stages: Acquire, Transact, Generate data, Insight and Engage (ATGIE).

"Our focus for the Digital Bank is engagement, and this guides the whole experience for our customers across Southeast Asia," Khoo reports. "Over the next ten years, the global retail banking industry will undergo significant change driven by innovation, the availability of rich and real-time data as well as the different needs and expectations of the mobile-savvy customers. UOB's distinctive approach, as expressed in our ATGIE protocol, offers a unique purpose-built business model."

### **July 2018: here comes AI**

It was in July last year that UOB had announced that it had invested in and partnered with Israel-based FinTech firm, Personetics, to enhance its artificial intelligence (AI) solutions for its customers across Southeast Asia.

"Through Personetics' cognitive analytic capabilities," explains Khoo, "UOB will draw deeper insights from its huge volumes of transaction data to help identify individual transaction patterns that can make the customer experience more engaging. These insights will enable UOB to provide customers with real-time, personalised and insightful guidance to help them improve the way they save and spend and to help them make better financial decisions."

The insights gained over time will also be used to encourage and to reinforce behaviour that would enable the customer to achieve their financial goals and to help them avoid potential pitfalls when managing their money. This includes anticipating and prompting the customer when their balance may be insufficient to cover upcoming payments, detecting unusual or suspicious account activity and highlighting opportunities for them to save more or to spend wisely.





"Given the advances in AI, machine learning and data analytics, we will use Personetics' tools to deepen our understanding of customer behaviour and to design more innovative, responsive and responsible digital banking services," Khoo elucidates. "Personetics" powerful AI-driven solutions will complement our existing AI capabilities and enable UOB to take a giant leap forward in having meaningful digital conversations that will help customers make better financial decisions."

#### **April 2018: bringing AI to credit control**

In April 2018 UOB had launched Avatec.ai, a joint venture company set up by UOB and Pintec Technology to create an intelligent financial services technology platform focused on credit control. UOB said Avatec would first launch its next-generation solution in Indonesia, followed by other Southeast Asian markets within the next two years.

Khoo explains that Avatec provides companies offering financial products with an innovative next-generation credit assessment solution that analyses a broader set of digitised data beyond that which is traditionally used in evaluating personal or business credit applications.

"Avatec's credit assessment tool harnesses the power of artificial intelligence, machine learning, and anti-fraud algorithms to determine an applicant's credit quality within seconds," he says. "The solution thereby helps banks and finance companies to be more efficient and more accurate when assessing the credit quality of potential customers, including those who are new to credit. This digital solution can also be extended to companies in sectors such as e-commerce, retail, and travel that offer financial products such as point-of-sale financing."

The customer experience will also be simpler and faster as customers will know almost instantly if their online application for a loan with UOB is approved.

