

Media release

TymeBank: The making of a digitally smart bank

Johannesburg, 26th February 2019: As a custodian of clients' hard-earned money, there's a large amount of trust placed in a bank. Even more so if the bank happens to be South Africa's first fully digital bank.

TymeBank has now officially opened its digital doors to the public after a soft-launch in November last year. This digitally smart bank has no branches, and its core banking system is hosted securely in the Cloud. This reduces its overheads and delivers significant cost-savings that are passed on to its customers.

Customers can open a FICA compliant bank account in under five minutes at over 500 kiosks in Pick n Pay and Boxer stores around the country, or they can open a reduced feature account on TymeBank's website and then upgrade to a full featured account when they get to a kiosk in store. The kiosks verify customers' identity using biometrics and a range of other data and issue customers with a personalised Visa debit card, without requiring any supporting documents.

Dieter Botha, Chief Information Officer of TymeBank, is very aware of the importance of earning customers' trust in this new digital bank. "When you pay or draw money with our yellow debit card, you need to know that it's going to work - every single time. For us, this is crucial."

Botha and his team of 180 IT professionals have been hard at work creating the secure digital platform that will earn customers' trust. And it's been an interesting journey thus far. For one, technology changes constantly and this actually helped the bank evolve from its original incarnation as a basic money transfer product. When the decision was taken to establish TymeBank as a fully-fledged bank, albeit a digital one, cloud platforms had matured enough to be securely exploited.

Cloud – the big difference

While traditional banks have evolved around mainframe computers and on-site data centres, TymeBank makes heavy use of the cloud platform Amazon Web Services' (AWS). AWS's data centres are renowned and trusted by companies the world over. It is here, for example, where TymeBank links up to its Software as a Service (SaaS) core banking system, Mambu. For TymeBank, Mambu provides a highly secure ledger for customers' accounts, managing the debits and credits incurred by customers every day.

With Mambu in the background, customers interface with TymeBank through its mobile friendly Internet Banking site and its Android app (the iOS app is currently in development). Internal service orchestration, payment flows, and backend services are developed in Java as microservices on the Netflix stack. TymeBank embraced Facebook's React framework in developing the web-based customer channels, while the Android app was developed using Java.

Security and Availability key

According to Botha, there are two key focus areas that underpin everything the IT team does: Security and Availability. Starting with security, he notes that TymeBank has invested significantly to ensure the security of customers' personal and financial data. "Conservatively we have 30-40 different tools to manage and maintain our cyber posture. This includes assurances for perimeter-, network-, application- and data security, plus all the monitoring and responses to that," Botha states. By using machine data platform Splunk's cyber incident monitoring capabilities, the bank's cyber

response team 'listens' to more than 40GB of network traffic a day. With algorithms checking for any anomalies, the team is ready to act twenty-four-seven, 365 days a year, and will scale this capability as the bank grows.

On the software side, Botha notes that the one thing that TymeBank has done particularly well is how it has embraced the world of APIs (Application Programming Interfaces). This can be seen in the way the bank connects and works with, for example, Pick n Pay's Smart Shopper system. "None of our systems are tightly coupled, all of the APIs are loosely coupled and are managed through an API gateway," says Botha.

While the security of a client's bank account is key, it won't help much if it can't be accessed due to availability problems. "We do our best to ensure there's no single point of failure, so this incorporates multiple-paths for networking, and three different availability zones within AWS." Botha also mentions that TymeBank will move to AWS's planned South African data centres when they become available.

Setting up the kiosks

One more critical point of contact between the bank and its customers are the TymeBank kiosks, of which there are now more than 500 deployed at Pick n Pay and Boxer stores countrywide. These physical customer touch points are integral to the bank's success.

The bank manufactures these kiosks themselves, and typically a kiosk consists of three main pieces of hardware: An Android tablet through which the customer interfaces; a power and peripheral management unit connected to a small Raspberry Pi unit; as well as the debit card printer and storage facility - all monitored remotely using Internet of Things (IoT). The debit cards are stored according to strict specifications with the kiosk acting as a vault of sorts. The kiosks are kept connected via SIM cards to local cellular networks, with software able to auto select the network with the best signal to ensure constant availability.

Asked about the kiosks' ability to provide free Wi-Fi to users in order to download the TymeBank app, Botha notes that due to security concerns, there's actually no Wi-Fi connectivity provided via kiosks. Rather, through an arrangement with Pick n Pay, customers can access a free TymeBank Wi-Fi hotspot through a dedicated network in the store.

Digitally smart banking now

Botha points out that considerable IT resource and effort is applied to make sure South Africans can trust this digitally smart bank. "With the effort made to ensure both security and availability for users, TymeBank is set to revolutionise the local banking scene," concludes Botha.

Ends

About TymeBank: TymeBank is South Africa's first digital bank. It is owned by ARC Financial Services Holdings (Pty) Ltd, a company within *Patrice Motsepe's Ubuntu-Botho Investments* stable. TymeBank has no branches and its core banking system is hosted securely in the Cloud. This reduces its overheads and delivers significant cost-savings that are passed on to its customers. Through a distribution partnership with Pick n Pay and Boxer, TymeBank has kiosks located at stores across the country. Customers can open a FICA compliant bank account at these kiosks in under five minutes. No documentation is required. Once signed-up customers can automatically become Smart Shopper members – Pick n Pay's rewards programme – and will earn one point for every R3 spent everywhere and every time they swipe their TymeBank card, not just in Pick n Pay. They will earn double Smart Shopper points when they use their TymeBank card to swipe and pay inside a Pick n Pay store. TymeBank's unique GoalSave tool, allows customers to earn a great interest rate of up to 10% per annum on their savings. For more information visit www.tyembank.co.za.