IBSVIEW

KEY TRENDS IN BANKING TECHNOLOGY

KEEPING PACE WITH THE WINDS OF CHANGE

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WHAT ARE THE PRIORITIES FOR CIOS AND CTOS THESE DAYS? WHAT ARE THE TECHNOLOGIES TO INVEST IN TODAY AND WHAT ARE THE ONES TO KEEP AN EYE ON FOR THE FUTURE?

The changing trends in the banking technology space are best reflected in discussion topics raised by CIOs and CTOs of pretty much any bank. Ten years ago, a typical conversation would be largely focused on the core banking and back office systems that needed to be overhauled. Today, there has been a considerable shift towards service oriented architecture (SOA) and leveraging outsourcing models to drive cost structures down.

Talk to any technology head in the banking industry today, and it would be impossible to have missed the buzzwords of digital, cloud, analytics, mobility and big data. Obviously, all of these do have an impact on the focus areas and influence both the shape and spend on the application architecture of the bank.

When looking at the trends of change, a quick look at what is the typical application architecture of a bank is relevant. Cedar's approach to architecture design includes eight layers:

- Channels/interfacing with the customer;

  Services/front-office;

- Risk management/middle-office;

- Core systems/back office;

- Analytics, reporting and business intelligence (BI);

- Support layer that helps with the backend functions;

- External layer (including interbank and payments);

- Middleware layer that stitches them all together.

So what do these new buzzwords mean to the new banking technology architecture, and where is the impact mostly felt? What does it mean to a bank which has revelled in adopting state-of-the-art technology as these winds of change have hit the shore, and what does it mean to the new age digital banks who are looking to change the way banking is done? And more importantly, how do banks respond to these and effectively embrace the change, with the twin objectives of minimising disruption and maximizing adoption?

The landscape of change, driven by the advent of digital and its implications for the technology architecture, could perhaps be summarised across four broad trends that are observed, in some shape or form, across global, regional and local banks. Even for those who have not adopted these as yet, the currents are felt to be quite strong that will indeed propel the investments and management focus in the direction of these trends.

CHANNEL TOUCH-POINT: THE NEW AGE CUSTOMER EXPERIENCE

Customer experience is the centre-stage of any services business. With the advent of mobility and the 'internet of things', banks have woken up to the changes around, and the threat posed by fellow players in other verticals – including telecom and retail – to the way in which banking will be done in the days to come. From the traditional branch banking where new innovations were driven by format and offerings, the investments in channels have significantly moved into the digital world and SOA. Leveraging every digital touch-point of the customer and offering an integrated multi-channel service have emerged to be the key focus

Application architecture

8 layer architecture; trends of change observed in highlighted layers

Layers with high degree of change in application landscape

areas. This can be observed by the new age innovations in video-banking where the customer could speak to his/her branch or relationship manager over a video call.

VIDEO TELLERS AND ATMS: WHO IS DOING WHAT?

In the US, Pittsburgh-based Dollar Bank has introduced video tellers, with both drive-through and walk-up options, with the teller able to remotely control the machine and guide customers through most branch transactions. A camera transmits the customer's image to the teller at the bank's customer service centre in Pittsburgh and that teller's image is transmitted to the ATM.

Barclays has rolled out the video banking services in the UK for its customers to have a video conversation with their advisors. Emirates NBD became the first bank in the Gulf to introduce video-enabled interactive tellers. It also has an ID scanner and signature pad, allowing customers to withdraw larger amounts of cash than their standard daily ATM limit.

ICICI Bank in India has launched a service for non-resident Indian customers to reach their customer care representatives from anywhere in the world over their smartphone.

Bank Audi in Lebanon has launched the country's first interactive teller that allows a customer to conduct transactions over a live yet remote teller at an ATM. Odeabank, which is Bank Audi's subsidiary and the first bank to be granted a licence in Turkey in the last 15 years, is also preparing its digital offering, including the latest in-branch technology, mobile electronic signatures and interactive video.

Another enabler is the tablet, which allows in-branch staff to come out from behind the counters and interact with customers, bringing improved service and the chance to cross-market. Those tablets can control the ATMs, so staff can guide customers through their transactions. Khaleeji Commercial Bank, for example, has recently introduced this in Bahrain, which has been well received by its customers.

The adoption and adaptability of these customer touch-points will eventually evolve across the three stages of presence, interaction and transaction. It is a clear trend that banks are prepared to make heavy investments to have a strong channels framework.

ANALYTICS: MAKING THE MOST OUT OF YOUR DATA

The data that resides with a bank about its customers, while it has always been rich – be it the demographic details or the spend and saving pattern – the fact of the matter is that these have been acquired, stored and processed across multiple systems in the past. The last decade saw banks vying for the consolidation of such disparate pieces of information through initiatives in the space of data warehousing (DW) or customer relationship management (CRM) systems. And the arrival of cloud and big data have only made the volumes of data that a bank now has access to, multiply manifold.

What however makes it all worthwhile, is when such data is appropriately processed to unlock the real potential of determining what's the next best requirement of the customer that needs to be addressed – and that is where predictive analytics comes into the foray. Be it determining what is the next best product for a customer, or determining who is likely to attrite, or predicting which customers are best positioned to cross-sell or up-sell, banks are increasingly finding the value of predictive analytics to be immense. The advent of analytics has also redefined the contours of meaningful BI. From being a post-facto lag indicative reporting, technology investments are more driven to produce executive dashboards that are more 'lead' indicative. This is a distinct trend, adopted by smart, savvy banks independent of their size.

PAYMENTS: THE DIGITAL WAVE

Contactless payments, NFC, mobile wallets, mPOS, virtual and crypto-currencies, bitcoin – the terminology list in a new age banking dictionary seems to grow by the day! And all of this simply means just one thing: the payment model – the way payments are made, is simply not going to be the same.

We are already witnessing a flurry of global activity here. Natwest and RBS are offering Apple Pay to its customers in the UK. Nedbank in South Africa is looking to offer PocketPOS, an EMV-certified mPOS platform catering to its SME customers. Samsung Pay is launching imminently in South Korea with the support of major banks, followed by the US, UK, Spain and China.

This trend is not only observed in the space of retail payments, but in the B2B and cross-border payments industry as well, which have seen significant advancement driven by technology.

From a banking technology architecture standpoint, there are implications too. To start with, there would be a need to collaborate with new modes of retail payments such as Apple Pay, and investing in technology that drives straight-through processing (STP) in the area of payments. As banks begin to

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expose APIs for third parties to embed in their applications, a key implication will be the need for increased investment in cyber security and fraud management, as digital payments also pose a much larger business risk, and not just an operations or technical risk.

CORE ENGINE: RETAIN, UPGRADE, REPLACE OR OUTSOURCE?

And here comes the issue of the biggest piece that sits in the middle of any technology stack for a bank: a core banking engine. No matter how big or small the bank is, it is inevitable that the largest investment – and therefore the highest degree of C-suite attention – is focused on the core banking platform and its extensibility to the new age demands.

While there are banks that would like to continue with legacy systems – even if they have to dilute them to be just transaction processors and surround them with state-of-the-art ancillary systems stitched well by a middleware layer – old core platforms are giving way slowly, yet steadily, to the new age universal banking systems. And the reasons are not difficult to decipher: no matter how good the channels are, how effective the analytics engine is built and how seamless the payment systems are made to be, the sustainability of the technology architecture in the long run is always going to be determined by the power of the core banking engine.

Part of the challenge here is the willingness to deal with the elephant in the room. Core banking replacements are akin to changing airplane wheels at thirty thousand feet, and has implications not just from a 'big ticket' investment standpoint, but also a serious commitment of management bandwidth. Now that is easier said than done. Which is why we still find banks that are happy running core banking engines of yesteryear, and having the technology architecture window-dressed with modern channels and front-end systems. However, this is not sustainable.

The one definite trend that we are looking to witness is the change to the core banking platforms that banks will inevitably need to make. Depending on how old the platform is, and how much it extends to the demands of the new era, the choices that banks may have vary between upgrading to a later version and having it fully replaced. While these may not be overnight decisions, these are inevitable and hence bound to change – slowly but surely.

So, in conclusion – it would only be fair to say that banks can ill afford to ignore the change that is happening all around – and the implications on the technology architecture are obvious. While there may be differences in approach with regards to the sequence of the change, the speed of overhaul, and the choice of suppliers or solutions, there is no running away from the need of aligning your technology, with what could just be the new age of banking.

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