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FINACLE CONNECT

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THE AGE OF DIGITAL COMMERCE

Cover Story

The age of digital commerce.

Feature

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Big Bet

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Bitten by the digital bug!

A new age has dawned. Do you feel its presence? It's touching lives, changing your everyday, surpassing traditional norms and ushering in an era of convenience and simplicity.

It's the age of digital commerce. Never before were payments a matter of a few clicks, or money an entity without physical form. In this issue of FinacleConnect we focus on topics that tell the story of digital commerce.

Our Feature this time discusses the changes that the banking industry is likely to see as a result of new commerce and technology. And in our Cover Story, read about how digital payments and mobile wallets are changing the way we transact every day. It also touches upon the extended advantage of digital commerce – agency banking and also financial inclusion.

Are social commerce and social banking catching on in the digital world? Find out in the Big Bet section. And if you want to know just how far the influence of digital mediums has reached, read our Tech Watch column that looks at how enterprises are affected by the digital consumer world. And it doesn't stop there! How are bank employees coping in the digital world? Read about how 'digital' is touching their lives in our @work section.

In this edition, we also have three very interesting interviews! In the first we talk to Dave Birch who writes the "Tomorrow's Transactions" blog, and is a co-founder of Consult Hyperion, about the future world of commerce and banking. Second, we have John Maynard, Senior Business Development Manager for M-PESA at Vodafone Group, talking about what constituted M-PESA's success in Kenya and where does it go next? And finally we chat up Mike Walters, Head of UK Corporate Payments at Barclays Bank, to discover more around the innovations of the Bank.

And that's not all; we have some strategic insights to share about mobile wallets in our Stratagem section, and a very different article about compliance in our Statute column. Check out the future of shopping article in our People Perspective section to read about how successful companies will engage customers through "omnichannel" retailing which according to the author is a mashup of digital and physical experiences. And in Kaleidoscope this time, we take you on a tour of the banking scenario in Belgium.

And to wrap up don't miss our review of the much talked about book, The End of Money: Counterfeiters, Preachers, Techies, Dreamers--And the Coming Cashless Society by David Wolman in the First Look.

Happy reading!

Haragopal M
Global Head – Finacle, Infosys


THE FUTURE
IS BANKING,
Just not as we know it !

Ever since the internet first appeared, we believed new forms of commerce would emerge and take over from the old way of doing things. They have of course, but not in banking. In the last three decades, the banking system has changed – just look at how we are now all running around with mobile banking apps – but the competitive landscape has not. The top 10 banks of 2000 are near enough the same top banks as 2010. Is this going to ever change? Chris Skinner thinks yes.

After three decades watching the financial industry adapt to and embrace technology change, I can honestly say that the market today is the same as it was three decades ago.

That is a controversial statement in itself, but it is a fundamental one as, when I look at today's landscape of banking, it is not dramatically different to the market of the 1980s. It has new channels – call centre, internet and mobile – and it has new structures – nearshore, offshore, cloud – but the point I am really getting at is that the core competitors in the markets are pretty much the same as they were back in 1980.

Here are a couple of proof points.

According to a 2012 study by Yale University[1], the average lifespan of a company listed in the S&P 500 index of leading US companies has decreased by more than 50 years in the last century, from 67 years in the 1920s to just 15 years today; and yet, in most countries, the banks have been established for over a century and rarely does a new competitor come into those markets.

For example, when Metro Bank opened in the UK in 2010, it was widely remarked that this was the first new retail bank in Britain for over a century. And, when you review the largest banks in the world, the list stays pretty consistent, as seen in the table below.

According to the Banker magazine, these were the top five banks in the world in 1999:	In 2010, the list had changed but not much:
1999	**2010**
1. Citigroup	**1. Bank of America**
2. Bank of America	**2. JP Morgan Chase**
3. HSBC	**3. Citigroup**
4. Crédit Agricole	**4. Royal Bank of Scotland**
5. Chase Manhattan	**5. HSBC**

This is because banks are integral to commerce and the economies of countries. This has been demonstrated time and time again, no better than in the recent crisis. Banks can cripple economies or enable growth and progress, and their role is obviously to support the latter than create the former.

This crisis has damaged that position, but not changed it. Banks need banking licences to offer banking and, without that core requirement, the economic system would just fall into anarchy.

If you do not believe this, then look at what happened to Second Life. Do you remember Second Life? It was a bit of a media bandwagon five years ago, as commerce was being transacted in virtual worlds and everyone wanted a slice of the action.

[1] Can a company live forever? BBC, January 2012

It all was sparked by a Business Week Magazine front page article about Anshe Chung, a German-Chinese entrepreneur who made a million dollars of real money trading the virtual money of Second Life, the Linden

dollar. She had made the cash by trading prime real estate in the virtual world's major city and, as the user base grew from a few thousand to over 20 million, she became the real estate queen of this alternative reality. But then things changed.

It all began when George W Bush introduced a ban on internet gambling, and any firm on US shores who offered online trading would be threatened with lengthy jail sentences. Second Life's operators were worried that this might affect them, and hence they banned gambling too. What the operators of Second Life did not realise is that gambling was really popular in their virtual world and, as a result of the gambling lockdown, many users wanted to withdraw their funds.

So began a small bank run, with one of the largest banks in Second Life at this time being Ginko Bank. Ginko Bank had L$300 million in assets – about US$1.5 million in real money. As the bank saw a mass withdrawal of funds – around L$100 million in a couple of days – the bank's owner deleted his Second Life account.

Yes, you guessed it, Ginko Bank was just a virtual bank being run by a Sao Paolo internet freak, Andre Sanchez, from his bedroom. What was really interesting in this case is that when Mr. Sanchez disappeared with the cash, Linden Labs did not see what the problem was.

Their official statement was to "caution our residents to be wary of anyone offering extremely high interest rates at no risk, either in the real world or in Second Life -- if it sounds too good to be true, it probably is."

Sure, but that did not stop users being unhappy and protesting, and protest they did. They stormed outside Second Life's virtual offices for months until the company turned their policy around and recognised that to be a bank in virtual life ... you need to be a bank in real life.

In other words, even in these new worlds of commerce, you need to have a licence to operate the fundamentals of banking : deposit holding.

That does not mean new banks and new forms of commerce will not build on the banking system, but it does mean that the core of banking has to remain with banks.

Banks that are licensed, comply with state laws, are subject to auditing and supervisory interference.

These unique capabilities of the industry – an industry that in many ways is almost a nationalised service, but just not run in a nationalised way as that would give

governments too much incline to corrupt – make it one that is the foundation of all commerce, including new forms of commerce; but things around that core are changing, and changing fast.

New forms of commerce

Taking into account that the world needs banks to be licensed as a fundamental provides some view towards the future based upon the PayPal model.

PayPal began as a pure person-to-person viral payment mechanism and, over time, has matured into an established player in banking. The firm has a banking licence, but prefers to work with banks to build their business as a pure payments processing focused organisation.

This does not mean that PayPal will not change this premise and become a bank one day but, right now, they are the only new non-bank play of any note to have made inroads into the financial system and they have achieved it all on top of the system.

PayPal's play being to make banking and payment easier by wrapping the process into an easy way to get the thing you want, rather than having to think about paying for the thing you want.

Amazon has done the same with clicktopay as has Apple with their aggregation of microtransactions through iTunes and apps.

However, in the case of Apple they will change the world later this year when their new operating system for the iPhone and iPad incorporates a mobile wallet.

The Apple Passport is a virtual wallet that, once activated, will provide integrated coupons, loyalty programs and other offers alongside proximity and NFC payments. Google had already introduced such a wallet in a partnership with MasterCard and Citibank last year, but it has not taken off yet. The reason being attributed to a lack of critical mass due to Google's decision to limit their virtual wallet to only a type of handset. Conversely, Apple with their smartphone dominance globally will see 100 million handsets automatically activated with virtual wallets linked to 400 million iTunes accounts. That is critical mass.

Again, like PayPal and Google however, the model is one that leverages the bank's system rather than replaces it.

This is also true of other new entrants, such as Movenbank launching in America later this year. Movenbank aims to create a truly social mobile financial service, where gamification, personal financial management, social media, social networking, payments processing and traditional banking all come together in a simply integrated form.

Apple will change the world later this year when their new operating system for the iPhone and iPad incorporates a mobile wallet.

An example of one of Movenbank's new forms of commerce is illustrated by their patented CRED score, which takes your social influence from various online social services, such as facebook, twitter, linkedin, to change your credit rating. The more influence you have online, the better your credit rating; the less influence, the lower your rating.

In part, this is also leveraging the data from social scores to assess your trustworthiness, with the view being that the more trustworthy you are socially, the more you can be trusted financially.

Underlying all of Movenbank is still a bank partner however, which is similar to other new players in the USA like Simple and SmartyPig.

Some things are changing however

Although much of the financial ecosystem remains within the bank realm, there are some signs of change in this new world, particularly where people are connected 1:1 via the mobile internet.

M-PESA is an example of a near-bank system that transacts 20% of Kenya's GDP outside the banking system. The discussion of their success is covered later in this journal in my interview with John Maynard, but the key comment he makes is that since M-PESA launched in 2007, the number of people who now have bank accounts with the traditional banks has almost quadrupled. The reason? As mobile money provides inclusion for the unbanked and under banked, they become recognised as financially viable citizens and therefore for financial inclusion by being banked.

Similarly, when banks find they cannot offer services to customers through this credit crisis that were previously offered, such as credit, other services gain traction. This is clear from the rise of crowdfunding platforms like kickstarter and social lending services like Zopa, Smava and Prosper.

For example, the first social lending platform launched in 2005 in the UK was Zopa. Its mission was to provide an eBay style platform for loans where those with money could invest it across many borrowers, with the risk being managed by the platform.

Zopa struggled for its first three years of existence as no-one really understood their model of operation and they had limited funds for advertising. That all changed when the credit crisis hit and consumers suddenly found their funding drug – low interest borrowing – was withdrawn by the traditional banks.

Without access to funds, people sought alternative fund sources and found Zopa. Similarly, savers who were receiving poor interest rates sought alternative investment avenues, and also found Zopa where interest on savings is typically higher than with a traditional bank.

A perfect storm has led to Zopa now controlling two percent of the UK personal credit market today, managing around £200 million of funds. Not bad for an internet startup that has no bank or banking licence involved.

Hence, when we discuss alternative forms of commerce, we are potentially seeing the fledgling growth of new financial models which are being fuelled by the flames of the banking systems failure to keep up with changes in demand and service.

A world of change

The examples of M-PESA and Zopa are purely more mature versions of another example of potentially major change: Bitcoins.

Bitcoins were discussed in the last FinacleConnect – see the interview with Donald Norman of the Bitcoin Consultancy – and have proven to be a volatile but important potential example of change.

The idea of a Bitcoin is to enable anyone to use a digitally encrypted exchange of value which can be purchased through recognised exchanges using traditional currencies. Once purchased, they can be traded worldwide without any cross-border fund transfer charges.

This has not taken off as yet, but if Bitcoins were to be traded like QQ currency, then we would have a dramatic change to the whole basis of finance.

What is QQ currency, you may ask?

QQ is a form of digital currency that has been traded in China for over a decade. Originally created to allow users of the internet to buy ringtones and download games, it has grown into an accepted form of digital exchange for any online goods and services.

At one point, the Chinese authorities tried to close down QQ when it was found to be used for the purchase of pornography and gambling but, as its usage tripled in a year after the announcement of restricting its trade, they found themselves powerless to stop this change.

As a result, QQ is now recognised by the Chinese government – providing information to the police about crimes is now rewarded with Yuan or QQ coins – and has become a real currency.

Many other examples of such currencies are appearing daily – World of Warcraft or Diablo Gold, Flips, Zynga credits and more – and it is only a matter of time before banks will be managing virtual currencies alongside traditional money (a topic explored in depth with David Birch later in this journal).

Fidor Bank: the new form of bank

It may surprise you to hear that one bank is already managing virtual and real currencies in one place. It is a new bank in Germany called Fidor bank. Launched in 2009 with a full banking licence, Fidor bank aims to bring together all of the elements of new forms of commerce discussed in this feature and provide them as a full banking service in one place.

The bank will take value from World of Warcraft and Diablo, and store this as a valid exchange currency alongside precious metals – real gold and silver – and euro funds.

The bank offers crowdfunding and social lending services, but does this through partnerships with specialists, such as Smava. Similarly, it offers global payments processing on a mobile smartphone wallet, but again through a partnership with Hyperwallet.

The bank brings in gamification with money, as well as social media integration. You logon to your bank through facebook connect for example, and can play spread betting games on their partner website brokertainment.com.

The more Likes that Fidor bank's Facebook page receives, the higher the interest it pays to its customers on their deposit accounts.

In fact, the really fun thing the bank does is increase its interest rates based upon facebook Likes. In facebook, you can Like a page. The more Likes that Fidor bank's facebook page receives, the higher the interest it pays to its customers on their deposit accounts.

Maybe this is why the bank has spent just €100,000 on their marketing efforts for the past three years, to gain over 75,000 users at a cost of just €1.33 per user registration.

How banks are enabling new forms of commerce

In this landscape of change, there are several examples of bank models that are encouraging new forms of commerce from partnering with new entrants – PayPal,

Movenbank, Simple, SmartyPig – to innovating with new services (see the Pingit interview with Mike Walters of Barclays Bank).

However, most of my clients still believe that they can fast follow these players downstream rather than innovating as first mover. This may be true but if new forms of money – Bitcoins or Zynga credits – are managed by new forms of bank – Fidor bank and its expected followers – then potentially the new form of commerce will be purely managed by a new form of player.

That is not a disaster, but it does change the financial ecosystem as the virtual wallets will be hybrid with the real wallet, just as the virtual world is becoming hybrid with the real world.

And that is where my real focal point comes into play – this hybrid world we live in is enhanced by a digitised augmented reality. This means we really need to stop thinking of the world as channels – branches, call centres, internet and mobile – and just think of it as a digitally enhanced, augmented financial experience.

That is what the new players have fundamentally realised and if banks and traditional players ignore this fundamental, then they will not only lose out on the new forms of commerce, but on the old ones too.

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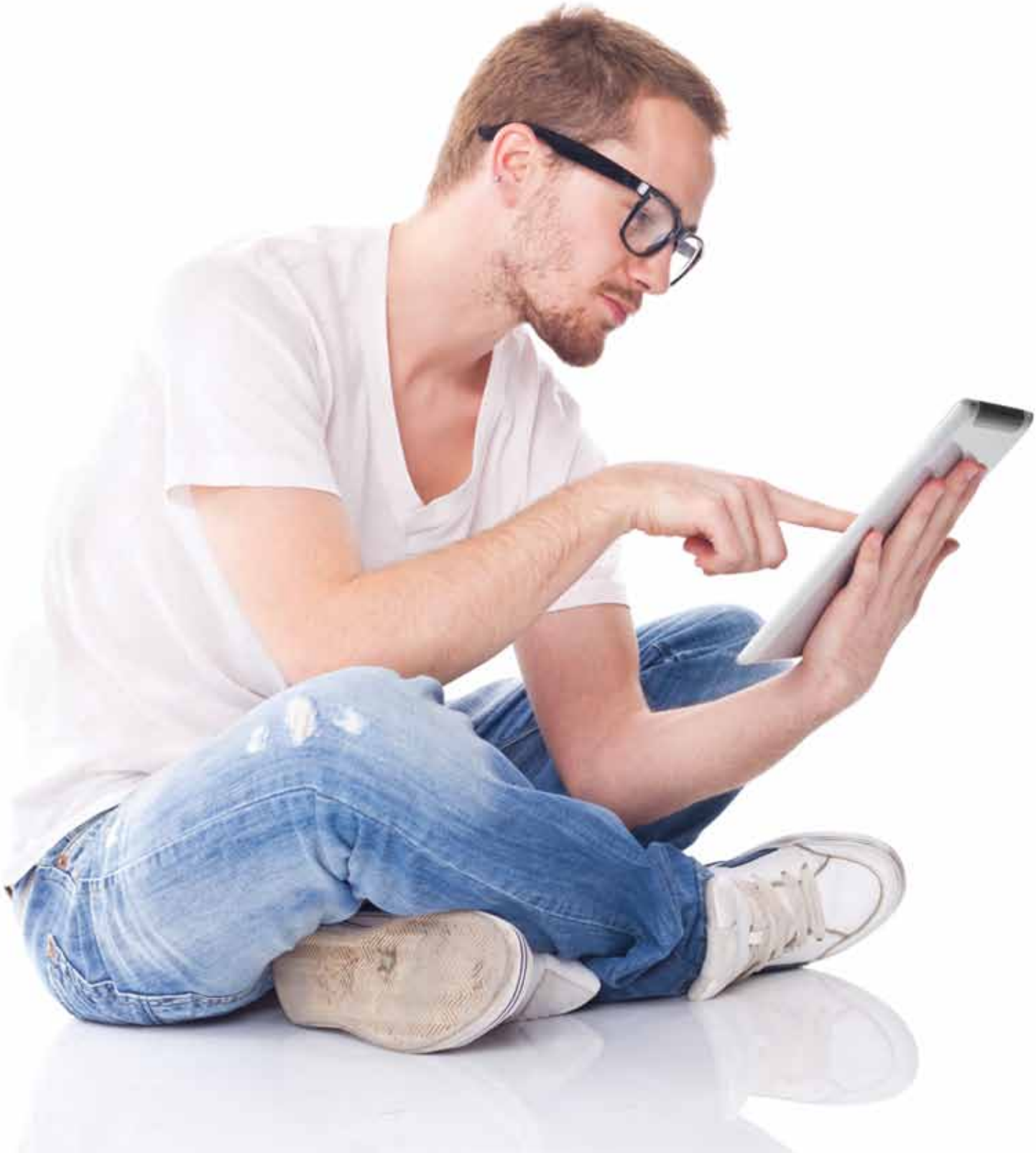
THE AGE OF DIGITAL COMMERCE

A WORLD WITHOUT CASH



Ten years ago, paying the electricity bill meant stepping out of your house, standing in a queue and paying by cash. Today, all you need to do is log in to your online account and pay the bill in less than five clicks. How the times have changed!

What brought on this change? The answer very simply is technology. The growth and penetration of the Internet has ushered in a digital era where payments have become virtual, the computer a gateway to the world and mobile phones almost a part of our anatomy!

Today the average consumer holds at least four to five different payment mechanisms in his/her wallet, some of them not even compatible with the other.

This highly digitized era is perfect playing ground for banks and financial institutions to give customers the convenience they seek.

But it's not just banks that stand to benefit from digital commerce. Financial institutions, telecom providers and retailers are keen on adopting this technology to accelerate their growth. Financial Institutions and telecom operators are using digital commerce to improve revenues, reach more customers and improve loyalty. Retailers are leveraging digital channels to deliver products, discount coupons and offers to customers. More importantly, digital mediums help them answer the million dollar question – what do customers want? Digital channels are a great way to keep a conversation going with customers and understand their preferences. Digital commerce opens up new revenue streams for service providers because they can now enable convenient commerce between consumers and merchants. It improves reach cost effectively because the digital channel saves them a lot of cost in setting up brick and mortar centers in far off areas. And as for the consumers, they get introduced to a world of convenience and are more satisfied and loyal.

Digital commerce is not new. It has been around since the late 1970s in the form of technologies such as Electronic Data Interchange (EDI) and Electronic Funds Transfer (EFT). Since then, these technologies have evolved to become more user-friendly, secure and a lot more accessible to everyone. Today, online payments have made their way into our everyday lives, and digital wallets are all the rage with everyone wanting a piece of this highly lucrative pie. Introduce into the mix, agency banking and you have a well-rounded digital commerce strategy.

Would you leave home without your wallet?

Traditionally people around the world have always transacted in paper-based currency. This has slowly evolved to include plastic currency such as debit and credit cards. Today the average consumer holds at least

Worldwide mobile payments and commerce

- **The worldwide mobile payments and commerce market is expected to grow from $240B in 2011 to $670b in 2015**
- **M-commerce valuations by transactions worldwide by region 2011**
  - **NA : $59B (24%)**
  - **Europe : $99B (40%)**
  - **APAC : $84B (34%)**
  - **LATAM : $4B (2%)**

(source: www.newmediatrendwatch.com)

four to five different payment mechanisms in his/her wallet, some of them not even compatible with the other. With digital channels such as the mobile and the Internet growing in popularity consumers can now be empowered to instantly access all their transaction instruments on digital channels.

Global online payments and commerce

- **USA – E-commerce will reach $ 304B by 2016**
- **Europe- E-commerce will reach $230.4B by 2016 (Forrester 2012)**
- **2010-2013 Projections (Goldman Sachs 2011)**
  - **U.S : $165.8B to $235.3B, 12.4%**
  - **Europe : $195.2B to $283.0B, 13.2%**
  - **Asia : $155.7B to $323.1B, 27.5%**
  - **Rest of world : $ 55.8 B to $121.7B, 29.7%**
  - **Global : $572.5B to $963.0B, 19.4%**

The benefits and possibilities of digital money are immense. Instead of carrying a bulk of cash and multiple credit and debit cards in your wallet, imagine being able to access all of these on a mobile phone or a computer. Not just that, but consumers can also buy products and services instantly using their digital device. This naturally translates to, no more standing in queues for bills and shopping. In emerging economies, mobile phones have reached where banking services have not. So, this opens up a whole new channel to bring customers into the financial ecosystem. This growing trend of using digital money for payments has given rise to the digital wallet. Today, this term is increasingly being used to describe smartphones that save a person's bank account or card details and use it to make transactions quicker and completely cashless.

Digital money has the power of delivering instant convenience to customers. From payments and banking services on mobile, Internet, ATM, kiosks, IVR and more, to multiple payments such as remote peer to

peer payments, payments at merchant locations, utility bill payments and e-commerce, digital money is the solution that today's customer has been waiting for.

Technology drivers

- **Increasing penetration of Internet and mobile phone subscribers**
- **There will be seven million NFC- enabled phones in 2011 growing to 203 million in 2015. (Yankee Group, June 2011)**
- **Juniper Research (June 2011): 1.8 billion consumers globally will buy digital goods via their mobile in 2011, this will rise to 2.5 billion in 2015. For example, in 2015, more than 400 million people on the Indian Sub-Continent will purchase digital goods via mobile**
- **Four out of five US smartphone owners, use phone to help with shopping (Google/Ipsos April 2011)**

Is digital commerce making physical branches redundant?

It's true, setting up a brick and mortar branch is expensive. Both financial institutions and telecom providers are constantly struggling to extend their services cost effectively. They are looking to reach, acquire and serve customers at remote locations without having to set up multiple physical branches. Digital commerce offers them an effective solution to both distribute their services as well as serve customers. How? Through agency services. One of the extended possibilities of digital commerce is agency services. In the case of financial institutions, digital commerce helps them onboard and manage non-banking correspondents or agents. For e.g. a shop owner in a remote village can become an agent for a bank. The basic requirement being an Internet connection through which he can connect with the bank and help local customers open a bank account, transfer funds and access other basic banking services. Similarly telecom providers and retailers are using agents to sell their services at remote locations. Digital commerce is powering this very effective business model that is driving benefits for both groups.

Benefits of agency banking

- **Improved reach by partnering with non-banking entities**
- **Cut costs by replacing cards, checks and other paper-based instruments**
- **Defining agencies and agent hierarchy**
- **Managing provisioning of transactions and enabling limits, including cash holding limits for agents**
- **Delivering basic banking facilities such as account inquiries, transaction statement, cash withdrawal, cash deposits and funds transfer by integrating with core banking systems**
- **Origination of simple loan and deposit products , disbursement of loans and account inquiries**
- **For telcos, greater market penetration can be achieved if they can enable agency-based commerce that expands their distribution network**
- **For retailers, the digital channel is an extended channel that enables instant monetization, higher conversation ratios and a single instrument of convenience**

Another great thing about digital commerce

There is a term we hear a lot these days. It revolves around the un-banked and the under-banked. Yes, it's financial inclusion. Really an extension of agency services, financial inclusion is being fueled by digital

commerce. Agency banking helps banks reach even the remotest consumers to roll out basic banking services to them via agents. Similarly mobile phones have reached even the farthest corners of the world where banking has not. By offering financial services on the mobile phone, banks can extend their reach to serve the un-banked segments. According to Ericsson (June 2012) global mobile penetration reached 87 percent in Q1 2012 and mobile subscriptions now total around 6.2 billion (Via mobiThinking). The potential for financial institutions is huge. The time to leverage mobile banking is now and it's essential that the services are simple and affordable enough for maximum adoption.

The future of digital commerce

It can only get better from here. In the coming years, more people will take to using mobile and online channels. Transactions are slowly but surely shifting to these channels.There is speculation that digital wallets will eventually replace the physical ones, but that might still be some distance away.

Both consumers and businesses are moving towards alternative payments methods driven by factors such as increased use of the Internet, widespread use of smartphones and businesses rapidly adopting NFC (Near Field Communication) technology. People are slowly warming up to the idea of paying for things and making other monetary transactions through their mobile phones. This is especially true for the younger generation that has grown up surrounded by technology. Market trends indicate that while NFC will grow in both popularity and volume, so will cloud-based mobile payments. In fact, cloud is the solution that market leader in payments PayPal is looking at in the near future. In a recent interview with TheStreet, this is what PayPal's senior director of corporate communications Arun Nayar said, "What's changing for us is that opportunity to pay with PayPal is moving strictly from online to in store. We think the wallet should not be stored in any one device, because devices change. PayPal is taking the wallet out from any one device and putting it into the cloud." A digital wallet that can be accessed from anywhere on from any device can completely change the face of payments.

One of the major and perhaps most popular concerns that prevent people from using digital wallets for payments is security. It's not so much a question of whether it actually is secure, but more about being unaware of how the technology works and what makes it secure. This hurdle aside, digital wallets are certainly well poised to be the future of payments.

Digital commerce will also continue to play a major role in fueling financial inclusion. Slowly but surely even the remotest rural areas are being covered by telecom providers thus making them accessible to banks and retailers alike. Efforts by banks are ensuring that the un-banked segments have access to basic banking services. Banks are also making processes simpler to help these segments open bank accounts, apply for loans and transfer funds, all via digital channels.

So is a cashless economy plausible? Judging by the current trends and the future possibilities offered by technology, the answer is a definite yes.

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COMMERCE AND BANKING:
WHAT WILL TOMORROW BRING?

An interview with Dave Birch who writes the "Tomorrow's Transactions" blog, and is a co-founder of Consult Hyperion, thought leaders in Digital Money and Digital Identity, about the future world of commerce and banking.

New forms of commerce are emerging as new forms of technology change business structures. Mobile smartphones with Facebook apps and in-game purchases, mean that the exchange of virtual currencies is becoming almost as common place as the exchange of real currency. It is a hard space to predict, but one man who has his finger on the pulse of such change is Dave Birch who writes the "Tomorrow's Transactions" blog, and is a co-founder of Consult Hyperion, thought leaders in Digital Money and Digital Identity. Chris Skinner, Chairman of the Financial Services Club, interviews Dave about the future world of commerce and banking.

Q: We are seeing a number of new areas of commerce as a result of Facebook and Twitter. Do you see new forms of finance emerging as a result?

A: The basic answer is yes, but it's a complicated yes. There are three or four emerging areas of commerce where the payment systems are not right. This presents an opportunity as these are emerging markets where the existing payments systems do not fit in and are in fact holding these markets back. These are areas where there is a pull for new kinds of payments.

You can take a couple of example areas around social networking and Facebook. This area is a context where payments need to take place but in a different and new way that is currently unresolved.

For example, my son is going to a rock concert in the summer. All of it is being organised through Facebook and he cannot understand why Joe's using PayPal, Steve's got to get his dad to send a cheque, and Fred needs his bank details to send the money via an e-payment… he turned to me and asked why he couldn't just send the money through Facebook?

That's a really good point: why can't you just send the money via Facebook and I don't see any reason why you won't be able to as Facebook already has a money transmissions licence for 38 out of the 50 states of America. I don't see any reason why you won't be able to just send money via Facebook in the near future. Once you can do that, people will start to build new businesses on top of it, just as with M-PESA.

So right now we have these opportunities for commerce in spaces like this, and you can see emerging models in other areas such as the use of twollars in twitter.

There's an issue about these new spaces and what kind of payments mechanisms might work there.

This is different to traditional retail areas as there's a great deal of conservatism and lots of good reasons why you want to build on the traditional

> "You cannot just stick a Band-Aid on a credit card and hope it will work for e-commerce. It's really inefficient but that is effectively what we did."

infrastructures there. If you look at the rollout of NFC as a case in point, a lot of people ask why go through the complexity of loading cards into secure elements and more but, in those environments, there are already a lot of good reasons why you want to use the existing rails for processing: the acquirers have the merchant base, the rules are already there, the repudiation and revocation structures are well understood; everyone understands how to process cards; and so on.

In this new world, none of those infrastructures, rules and processes are in play. There are no existing rails, so it needs to be created and you usually see a fantastic new structure emerge and that's what I suspect will happen as Facebook and Twitter mature.

Q: Yet I remember that we said the internet would change everything, with Beenz and PayPal, but it hasn't?

A: That's a key point. I was one of those in the really early days of e-commerce who, after cost-benefit analysis and more, found that none of the existing payment systems were appropriate. You cannot just stick a Band-Aid on a credit card and hope it will work for e-commerce. It's really inefficient but that is effectively what we did. However, the alternatives never really gained any traction and did not emerge.

I wonder if it will turn out that with the wisdom of hindsight, the web was not the trigger for these new forms of payments, but that it's mobile that will change everything. So the analysis is still correct that, in the 1950s, it made sense to have credit cards because not every bank was connected with every merchant or business, and then we made the mistake of thinking when the web came along that this would connect everything. Instead it's mobile that connects everything, which is why cards are no longer needed and mobile is the trigger that changes everything.

Q: We often talk about these trigger points, and in-game purchases on mobile through apps is one of those I think.

A: If you look at the volumes of payments going through games now, it is rising. For example it was disclosed in the Facebook IPO that over half a billion dollars of revenues were generated through Facebook credits last year. But the question is does that spill over into mainstream commerce? The answer is yes. But it's a complex yes. What will happen is that the lessons learned will embrace this into the mainstream.

The best way to illustrate this is a project I did for a client a couple of years ago, when we were looking at reducing the barriers to client on-boarding when targeting people for a new payment system. So we looked at a company in America, that was later bought by Google, which used your social graph from Facebook and Twitter to assess your trustworthiness.

> It was disclosed in the Facebook IPO that over half a billion dollars of revenues were generated through Facebook credits last year.

This was just for games, but they used your social trust rather than financial checks as the method of trust.

The way it worked is that if you or your network had cheated on a payment then I would not on-board you but, if you had a clear check, then you would be taken on-board.

Then there was great pressure for you not to cheat as, if you did, not only you but your whole social network would suddenly be excluded and you would get the blame.

At the time, people thought it was a silly thing, just for games. Two years later, we see that going mainstream where social graphs give better and more accurate

predictions than traditional credit references. You see this from the shift to prepay, where the prepay transaction activity is being used as a substitute for a credit reference.

> You have lots of communities – both physical and virtual – where trade takes place in local currencies and wireless connections convert currencies as you pass between them.

That's why I say the answer is yes.

Does that mean we will be using Zynga credits to deposit with Barclays? Probably not.

Does it mean that Barclays will be using the techniques and lessons from Zynga for credit downstream? The answer is probably yes. The one place where I suspect we will see some unexpected consequences is where all of this overlaps with what are called community currencies.

This is because you have a new social context for payments, new mechanisms for making payments being built by Zynga and others that will be adopted by mainstream firms, and when these begin to tap into alternative currencies, it could be interesting.

There's definitely something bubbling around currencies moving to a more distributed, local level.

Q: So you believe traditional banking will continue and support new communities?

A: I think you get islands of communities that are inter-connected, rather than one big global market, and as most transactions are local you can see how that works. You can imagine a future where I spend all my time using London money and, if I travel to Paris, then my phone sorts out the conversions. That's more like the future where everything is localised but connected by these new technologies.

You have lots of communities – both physical and virtual – where trade takes place in local currencies and wireless connections convert currencies as you pass between them.

Ten years ago, that would have been a fun science fiction prediction to make and yet now this is becoming true.

I will just make one point there however, when you say conventional banks will support this, that is not necessarily going to be the case. There's a divide today that shows banking and payments becoming separated, with a lot of talk about an emerging class of "near banks" – payments institutions or whatever – that offer bank-like service on prepaid accounts, but not the bank functions of credit and deposit taking.

This is where you have pure play transaction providers who offer utility banking and even traditional banks may find it makes more sense to move some traditional services into these lower cost rails, separated from the higher cost, more heavily regulated, more fully functional banking.

Q: You don't seem that convinced about totally new forms of commerce therefore, such as a Bitcoin becoming mainstream?

A: I'm not negative about things like Bitcoin, although I do think it bundles together the wrong mixture of concerns, but what it represents is important. The point it makes is: can you construct

transactional protocols on cryptographic techniques that deliver lower cost, more distributed solutions. The answer is yes. Is Bitcoin the best way to do that? I suspect the answer is no, as the distributed replication of transactions histories is not terribly efficient. What Bitcoin has chosen to do is to use these protocols to create Bitcoins, but they could be used in other ways, and Bitcoin's central proposition that it's sort of, but not really anonymous, is not what people want.

> If people have as much faith in a Zynga credit as they do in the Dollar or Euro, which I think they will, then you see more revolutionary change occurring.

Q: I thought they were selling the idea of moving money globally without friction and at minimal cost.

A: Yes, but I remember doing a study for an international financial services company more than a decade ago about using electronic cash as a backbone for a multi-currency clearing and settlement using cryptographic techniques. It worked in theory then and it would do today, but I just think the way Bitcoin has assembled its offer is not the right way to go forward. However, what really does interest me is the media response to Bitcoin, which shows that a lot of people were looking for something like Bitcoin to come along.

Q: If we look five years out, then we might see a different world or not?

A: You need to look at it from a roadmap of three dimensions: technology, business and society.

The technology outlook is pretty clear: it's all about mobile. That is the critical technology and it's all about the mobile value network and the elements in the value chain and who controls those. That's quite easy to predict. Business is harder, but you do see the arrival of the non-banks in the payments processing and banking space, and we haven't seen enough of retailers in this space yet but there are signals of change here, such as the Starbucks Wallet on your phone. I suspect that retailers will start becoming even more active in this space so that when you walk into Tesco's, your Tesco Wallet appears on your phone whereas when you go to Sainsbury, your Sainsbury Wallet appears. The non-bank retail growth will therefore be another key factor. That has implications for banks, as retailers are not interested in the margin on the payment or transaction fees. They are purely interested in selling more through their stores, so if they can offer cheaper payments with zero margin that may have a massive impact. That hardest thing to predict is the social context though. If people have as much faith in a Zynga credit as they do in the Dollar or Euro, which I think they will, then you see more revolutionary change occurring. The acceptability of these things however, will come at the social level.

Q: All of these would have a great impact on banking, how do you think banks will react?

A: Slowly. By way of illustrating how hard it is to keep up with the future, I was running a workshop for a range of banks the other day and they were all looking at PayPal as the great innovation and disruption to their business model. A couple of weeks before that, I had been at an innovation event in San Francisco and in that world, PayPal is the same as Wells Fargo, Bank of America, Citibank or the IMF. To these young technicians, PayPal is the establishment whereas, for banks, they are the new kid on the block. That means that when you're looking for innovation you need a different mental model to keep up with it, and that's where banks should focus.

About Dave Birch

Dave is a founding Director of Consult Hyperion. Here he provides specialist consultancy support to clients around the world, including all of the leading payment brands, major telecommunications providers, government bodies and international organisations including the OECD. Before helping to found Consult Hyperion in 1986, he spent several years working as a consultant in Europe, the Far East and North America. He graduated from the University of Southampton with a B.Sc (Hons.) in Physics.

Described by The Telegraph as "one of the world's leading experts on digital money", by The Independent as a "grade-A geek", by the Centre for the Study of Financial Innovation as "one of the most user-friendly of the UK's uber-techies" and by Financial World as "mad", Dave is a member of the editorial board of the E-Finance & Payments Law and Policy Journal, a columnist for SPEED and well-known for his blogs on Digital Money and Digital Identity.

He has lectured to MBA level on the impact of new information and communications technologies, contributed to publications ranging from the Parliamentary IT Review to Prospect and wrote a Guardian column for many years. He is a media commentator on electronic business issues and has appeared on BBC television and radio, Sky and other channels around the world.

THE SUCCESS
STORY OF M-PESA

An interview with John Maynard, Senior Business Development Manager for M-PESA at Vodafone Group, to find out what's behind the success of M-PESA.

Mobile payments have taken off massively over the past few years, with the most notable success being M-PESA in Kenya. Launched in March 2007, with an expected one million customers after year one, the system far exceeded expectations and now has over 17 million registered accounts. That represents nearly one account for every adult in Kenya, but the system has not been as successful overseas. What is it that constituted M-PESA's success in Kenya and where does it go next? Extracts from an interview with John Maynard, Senior Business Development Manager for M-PESA at Vodafone Group.

Q: Perhaps you can give us a little background to start with as to why M-PESA has been so successful in Kenya and why did Vodafone get into this space?
A: The product originally came into existence as a result of a pilot we operated in Kenya with its original conception dating back to 2004-05. Back then Nick Hughes, who worked in Vodafone Group's Corporate and Social Responsibility Unit, was looking at how to pilot mobile telephone payments for social inclusion and micro finance.

Being in Corporate Social Responsibility, it was difficult to get access to Vodafone's product development engine, – which focused on more mainstream products. However Nick was able to get an agreement that if he could secure external funding, the project would be supported.

Nick had a conversation with the UK's Department for International Development (DFID) and that led to an application for funding from a Challenge Fund. The application was approved and was awarded £1m, which Vodafone matched in terms of manpower, staff and marketing materials, and that started the pilot in Kenya in 2006-07.

The pilot was operated by Safaricom, which is the Vodafone affiliate in Kenya, with the objectives of producing something that was affordable, would work with existing handsets and could be operated easily by the local Savings and Credit Cooperative Society, SACCOs, the micro finance institutions that exist out there.

It achieved some of those objectives except that it proved too difficult to customise the product to match the disparate systems that the individual SACCOs used to monitor their cash-in and cash-out methods on a daily basis. They were all just too different.

> M-Pesa was launched in March 2007 and, by the end of the first year we had 2.5 million customers, far beyond original expectations.

But one thing that had been included almost as a by-product of the original pilot was the ability for individual customers to send money directly to each other. That resonated with the customers who tried it out and from there the decision was made that it would be the primary focus of the product.

M-PESA was launched in March 2007 and, by the end of the first year we had 2.5 million customers, far beyond original expectations.

Q: I heard the frictions internally in Kenya helped the launch.
A: If you look at how Michael Joseph set up the operation – he ran Safaricom and took it from a small mobile operator to a large one in Kenya through a reputation of excellent customer care and customer service. The challenge for a mobile operator in operating a mobile money service is to convince customers that they can trust their money with them.

Some mobile operators have sharp practices, such as rounding minutes up or aggregating billing to the highest numbers. Michael had positioned Safaricom very much as a trusted brand and business. Michael as an individual also had a very good reputation with the people of Kenya and the customer care processes of Safaricom assured customers that if they put their money into Safaricom, they could also get it out again.

Q: I've also read that it is a charitable system ?

A: It is a profitable venture, not a charitable system. Around 17% of Safaricom's total revenues come from M-PESA, which is bigger than SMS and data combined.

We make money from the network but so do our agents in the network. We have 40,000 agents in Kenya and believe we have created about 50,000 jobs. Those agents are also making money and enough money to employ people as a result.

Q: Why is that success not repeated in other countries?

A: We were lucky in Kenya. We launched at the right time and the availability of the product during the turmoil following the elections of 2007-2008 helped Kenyans out – M-PESA was the safest way to send cash or buy airtime. I don't think we'll see that success repeated so quickly elsewhere. Having said that, we've got 32 million customers registered worldwide (M-PESA is live in 7 markets), and if you look at Tanzania, it shows an example of a market that has taken longer to get there but is now just as important. We have around 80 percent market share in Kenya and about 40 percent in Tanzania. They've got ten million registered customers for mobile payments, the entirety of their base, and around three million are active mobile payments users now. As we have reached critical mass, transaction volumes have gone through the roof, particularly in the last twelve months.

Q: Does that mean the Vodafone plan is to offer M-PESA services to all Africa and other emerging markets over time?

A: We will launch in the markets where we think it's a good fit and that's a combination of the market themselves saying that the timing is right to offer the product, and the regulatory environment enabling us to do so.

On a general point, our view is that if you fast forward five years you will see every local mobile operator in the developing world offer a mobile money product, where it's allowed by regulation. If you look back, you had Smart and Globe telecom in the Philippines offering mobile money products for nearly a decade, and there have been other schemes in Korea for example, but M-PESA really re-energised interest in mobile money systems.

> If you fast forward five years you will see every local mobile operator in the developing world offer a mobile money product.

What we were able to show with the success in Kenya is that it was possible to reach out far beyond the existing financial systems and bank structures, by leveraging the scale of the mobile airtime distribution networks.

That's why, by 2009, if you were a mobile operator and were anywhere near Africa, you had to be looking to offer some form of mobile money scheme.

Q: Looking at that restructuring, the banks have not been that supportive of such schemes have they?

A: It's been a bit of a rollercoaster in terms of the bank

relationships to be honest. When we launched, they weren't really sure what we were doing and didn't see it would work.

After our initial success, many banks saw what we were doing as a threat, and if you look across the world you can see regulators at that time implementing regulation to prevent the operating model you see in Kenya.

Where we are now, the bank relationships are much better. They now recognise that whilst our system increased competition amongst the banking sector, they have also increased the number of bank accounts they have.

When we launched in Kenya in 2007, there were just 2.5 million bank account holders in Kenya. Now, there are more than nine million. That's a good thing and when you look at the Central Bank's need for more financial inclusion and what the banks themselves are looking for, which is to increase their customer base, that's a good indication that the introduction of a payment system like M-PESA can bring wider benefits across the economy.

Q: Does that mean the M-PESA style service will always be a pure mobile payments service, or do you think it might upscale into full banking over time?

A: I think there's always going to be a step-off point between the level of products we can offer versus the products banks can offer. We are not a bank. We have not got a banking licence. We have no intention of getting one and that means there are some services, like interest-bearing savings accounts or offering credit, that we cannot offer by ourselves. Where there is demand for these services, we will look to partner with existing banks.

Q: What about the other way around, will you take mobile payments from the developing markets into the developed ones and, if so, when?

A: For sure. If you look at the recent announcements from Barclays with Pingit and O2 with their wallet service in the UK, these are good indicators for what's coming down the line and selfishly, individually, I cannot wait. Being able to pay my window cleaner or school lunch fees without scrabbling around the house for change is a future I can't wait for.

About John Maynard

John Maynard is part of the commercial and strategy team working on M-PESA - Vodafone's mobile money transfer product. M-PESA has over 32 million customers, who can deposit or withdraw money from an account linked to their mobile phone at any of the 60,000 agents. The service is live in seven markets, including India, Afghanistan and Fiji.

Prior to joining the M-PESA team, Mr Maynard was product manager for a number of Vodafone products, including premium rate SMS, adult content bar, and consumer email solutions.

THE INNOVATIONS AND STRATEGY OF BARCLAYS BANK

Mike Walters, Head of UK Corporate Payments at Barclays Bank, talks about innovations and more.

Barclays Bank in the UK has recently been gaining plaudits for innovation around payments. They started with a major push around contactless payments as the first issuer in the UK to move towards NFC, and recently followed up on this success with the launch of a new peer-to-peer and consumer-to-corporate payments app for smartphones called Pingit. We interview Mike Walters, Head of UK Corporate Payments at Barclays Bank, to discover more around these innovations.

Q : Perhaps you can tell us a little bit about Barclays strategy, as the bank is seen as an innovator today, thanks to much of what you are doing in payments. What's changed?

A : The key focus for us is around an understanding and recognition that it is increasingly important to consumers to find it easy to transact and that is changing very quickly, particularly as a result of the rise of mobile technologies.

And the infrastructures that the banks have provided to facilitate transactions for consumers has been a relatively stable platform for the past few years, but that has also changed due to the introduction of things like Faster Payments in the UK, which allows near real-time transactions.

The combination of these two factors – new national infrastructures and changing consumer needs – has given us a toolkit to think differently.

We then asked: how will consumers change as a result of these developments, and how will corporates change in their delivery to those consumers?

And in Barclays case, we decided to innovate by bringing together the fact that we have a large retail consumer bank footprint in the UK, combined with a large cards business in the form of Barclaycard, and a major Corporate banking capability.

The aim has been to show that Barclay is a leading payments brand and one that is committed to making the consumer's ability to transact faster and more efficient.

That is why we have been pushing the contactless payments process through Barclaycard to target the lower value cash transactions. This has been promoted strongly with the launch of PayTag, a contactless sticker you can place on any phone, and contactless wristbands.

> "The speed of growth of the consumer population who are downloading and using our mobile app has been very rapid - over 700,000 people downloaded the app in its first three months."

Another key thing we did is to create an app for consumers called Pingit. That was developed in the second half of last year and then launched and released in February this year.

Pingit allows consumers to send payments person-to-person, using just mobile telephone numbers. You do not need to be a Barclays customer to use this even.

The release of this created a market of consumers that then attracted corporate interest, and so we have since been launching several services for corporate to work with that consumer app, such as paying with QR codes via Pingit for utility bills.

Q: And what sort of results have you found since moving into the mobile payments space?

A: The speed of growth of the consumer population who are downloading and using our mobile app has been very rapid - over 700,000 people downloaded the app in its first three months. Since we launched the Corporate Solution we have spoken to hundreds of clients who are keen to work with us and have been signing them up quickly.

Q: Who is a typical Pingit user?

A: The majority are iPhone users under the age of 50. Interestingly the demographic is well distributed across that age range and geographically across the UK which really shows the broad appeal to both Barclays and non-Barclays customers.

Q: What about your commercial customers – are corporates interested in this too?

A: Yes. As mentioned, we offer various ways of processing company bills via Pingit.

One way is to register your business with us and then customers can pay to a company just by typing in the company's registered name and amount to pay. We then introduced this ability to pay by QR code. QR stands for Quick Response, and is a barcode of black dots that can be used on mobile telephones by reading them on a smartphone camera. It makes it incredibly easy to store a lot of information on these codes, including the company name, account details as well as the customer's name and account details.

Similarly, firms can send out a bill to a customer with a QR code embedded that includes all the payment details and the payment amount. All the customer needs to do then is hold their phone over the code, check that the payment amount is correct and approve the payment. That's it! For the corporate customer, not only do they get all the customer data that they need – account number, payment details, etc. – but it's now enriched with the customer's mobile telephone number for further verification and potential marketing. Fast, simple and easy for the consumer and, for the corporate, it makes reconciliation and tracking of payments far easier than ever before. In fact, corporates could eradicate reconciliations and exception management through this.

"Imagine an angry customer contacts your call centre for an over payment or something like that, and the representative could just reply: "Well, here's your money back with an extra $5 to say 'sorry.'"

This technology is hugely flexible and provides us with a range of new and exciting opportunities to work with for both consumers and our corporate customers.

Q: It sounds like a win-win?

A: Absolutely, and I think it will change the face of commerce over time. In fact, the ability to bring together faster payments, mobile technologies, apps and innovation is already changing business processes.

For example, think a of a real-time refund.

Imagine an angry customer contacts your call centre for an over payment or something like that, and the representative could just reply: "Well, here's your money back with an extra $5 to say 'sorry.'"

That payment can be made in real-time to the customer's mobile telephone as they talk to the agent. A real-time faster payment refund via mobile.

Not only will that transform customer service but business too.

Q: You imply that the end customer is now in the driving seat of commerce thanks to mobile technologies. Is that right?

A: Yes. We deal with corporates who work with customers, and consumers are the key focal point of change right now. If consumers have the willingness and interest to adopt new services, like NFC contactless and mobile, then that is the direction that our corporate customers will take and we have to support that.

About Mike Walters

Mike Walters is Head of UK Corporate Payments at Barclays in London. Mike is responsible for the product management, performance and profitability of Barclays suite of corporate payments products ranging from physical cash to complex integrated electronic payment solutions.

Mike Walters joined Barclays on its Business Leadership Graduate Programme in 2002, having read Law at Warwick University and having achieved a Masters degree in a Management at Nottingham. Since joining the bank, Mike has worked in a number of relationship teams managing large UK and Multinational Corporate Relationships for the group securing, successful migration of a number of FTSE 100 clients to Barclays. In early 2007 he was appointed Sales Director for Multinational Corporates headquartered in the UK, Scandinavia and Netherlands. Mike moved to become Regional Director for North American Financial Institutions following the formation of Global Transactional Sales in January 2009, before moving to his current role in July 2010.


Must haves in a digital wallet strategy
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Will the digital wallet sound the death knell for cash and credit cards? Many experts seem to think so. Research also seems to agree – in a recent report, a research organization that studies the impact of the Internet, says that consumers will not need to carry credit cards or cash as early as 2020; another survey by a leading mobile audience media firm states that 37% of mobile using consumers used a mobile wallet in the last three months, a sure sign of increasing adoption.

The vendor action has already heated up in anticipation, and a wallet war is on between mobile operators, card companies, device manufacturers and financial service providers. Wallet providers need a sound strategy to hold their own in a competitive marketplace, with the ability to provision digital money seamlessly across multiple touch points, being one of the key imperatives.

Why is it so important that a digital wallet be usable across all consumer touch points? These numbers do the talking:

- People are increasingly buying smartphones over feature phones thanks to greater affordability
- Near Field Communication (NFC) is becoming a favorite technology and according to one estimate global NFC payment transactions are expected to reach US$ 50 billion worldwide by 2014
- Social commerce sales will more than double to GBP 3.3 million in the next five years. By 2012, 41% of UK consumers will use social media or at least be influenced by it while purchasing. This figure rises significantly to 73% for 25-34 year olds, as 45% of this age group is already utilizing this platform while purchasing.

In a report on multi-channel shopping released in December 2011, a global consulting firm reveals many insights about changing consumer behavior. The most significant finding was that customers were consolidating their 'retailer set'. Over half of the respondents in the study shopped on different channels with less than five retailers; most of the chosen retailers stood out for their integrated management of the business and the delivery of a high quality buying experience – backed by seamless execution – across all touch points.

Wallet providers need a sound strategy to hold their own in a competitive marketplace, with the ability to provision digital money seamlessly across multiple touch points, being one of the key imperatives.

- Tablets are fueling the trend of multiple devices; they are not replacing, but are instead supplementing smartphones. The iPad 3 sold three million units in the first weekend after it was launched. That's 42,000 per hour or 694 per minute! Another estimate says that more than 81 million tablets will be sold in 2012, up fivefold from approximately 16 million sold in 2010

What this tells us is that customers expect to transact on multiple touch points as well as enjoy a shopping experience – promising the same convenience, ease of use, commercial terms and security – on each.

Since mobility is at the heart of digital wallet commerce for reasons that are well known – ubiquity, convenience and adoption, a multi touch point strategy must necessarily factor this in to have any chance of success.

Other focus areas of a digital wallet strategy

Accessibility: Providers must make their digital wallets accessible by ensuring widespread distribution and acceptance. The nature of distribution varies with the type of provider. For instance, the mobile wallet from M-Pesa, Kenya's iconic mobile money service is distributed by telecom operator, Safaricom, which has built the wallet application into its SIM card. It's a strategy that works primarily because of the ubiquity and affordability of mobile phones. On the other hand, growing adoption of smartphones and tablets among tech savvy populations might require distribution of wallets through "app" stores. In future, some handset manufacturers might in-build a wallet into the phone itself. Whatever the case may be, it is crucial that the distribution be tailored to the needs, behavior and infrastructure environment of the target user.

Going forward, there must be no boundaries between the physical and virtual world, so that a customer could well fill a shopping cart online and store the details in the online wallet, only to visit the store later to physically inspect the goods, and finally pay from a mobile wallet!

User experience: At the beginning of this paper, there is a mention of how customers have started to use more than one touch point to fulfill their needs. The implicit inference is that customers expect consistency and seamlessness across each and every touch point. Hence, a mobility device user must enjoy the same buying experience as his desktop using counterpart. Going forward, there must be no boundaries between the physical and virtual world, so that a customer could well fill a shopping cart online and store the details in the online wallet, only to visit the store later to physically inspect the goods, and finally pay from a mobile wallet! Another example could be that a customer buys movie tickets from his Facebook wallet and consequently avails discounts on in-store purchases made through a kiosk based-wallet. Needless to say, such a cross-selling interaction requires tight integration between touch points.

Again, different institutions can leverage the digital wallet in different ways. Someday not too far away, banks might offer a catchall 'digital wallet' account in lieu of a savings account, and thereby eliminate the complexity of multiple payment options like checks and credit cards. Retailers might be able to deploy it across the entire transaction cycle using NFC technology, and enable in-store customers to scan purchases into the wallet, generate an invoice, transfer the information to their POS systems, and finally pay, all using the same device or application. And handset manufacturers offering digital wallets can draw upon other device features to enhance the wallet experience: for instance, use augmented reality to indicate which merchant establishments in the vicinity accept their wallet.

Openness: While the wallet war introduces competition in the market and choice for customers, it also inconveniences the latter by forcing them to maintain multiple wallets from multiple providers which are all linked to different cards/accounts. This is a source of customer dissatisfaction.

It is very important that providers open up their offerings. The days of closed-loop wallets are numbered. Retailers must accept a variety of linked cards/accounts, and

not just their own. The wallet should be interoperable between the touch points of different banks, so that a customer can top up the wallet with funds from one bank, but withdraw cash from the ATM of another.

Security: Studies have repeatedly highlighted security concerns as one of the biggest barriers to online/ mobile payment adoption. Obviously, this has a huge bearing on the digital wallet especially because there are so many touch points and a gap in any one of these could compromise its safety.

While customers agree that not having to enter their credit card details for every transaction is an important convenience offered by the wallet, they will only embrace it if they are sure that the credit card information, which is now loaded on to the wallet, is fully protected by the provider. This means that providers must take adequate measures, such as setting up a layered security mechanism and making sure that sensitive data is not stored on the devices.

Regulation: Digital wallets, like all financial products, are likely to be regulated. However, the extent of control may differ from country to country. For instance, M-PESA does not need a banking license to operate, but in other countries, wallet providers might need to procure one. In some countries, collaboration between multiple stakeholders can be perceived as being anti-competitive which may impede the launch of digital wallet initiatives.

Recently, the Canadian Bankers Association has decided to replace debit cards with mobile wallets, and is preparing secure but open guidelines towards that goal. The extent of openness (permitted in a wallet) is a very significant consideration for an institution that wishes to enter a new market.

Value added content: The breadth and variety of a wallet service also determines the quality of user experience. A payments-only offering is not likely to find favor with customers. Providers must build

additional value on top of the basic payment offering, if they are to win market share. For instance, banks could offer personal financial management tools along with the wallet, which would automatically access its data to draw up budgets, expenditure patterns and so on and save customers the inconvenience of trawling through multiple bank or credit card statements to find out what they've spent. Banks could also tie up with the social security payment agencies to drop pension payments and other subsidies directly into beneficiaries' wallets.

Merchants could add useful features, such as advance order booking of products, or the ability to compare prices of competing brands. In fact, in Canada, a leading department store recently announced the launch of a fully transactional mobile website and mobile apps that enabled customers to make purchases using their smartphones; could such features become regular add-ons in future digital wallets?

The digital wallet has the potential to be the next big thing in payments. Indeed, experts believe that it could handle transactions worth tens of billion dollars as early as 2015. Banks, merchants, telecom companies and other service providers must put a robust multi touch point strategy in place in readiness for when the opportunity opens up.

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BANKING EFFICIENCY
DRIVEN BY THE DIGITAL AGE

Today, life without a Smartphone seems impossible. We have become a technology-dependent lot; organizations probably more so. Take banks for instance. How would they function without core banking solutions and enterprise applications? And how would customers manage without the convenience of credit cards, Internet banking and ATMs?

But why are we talking of the past? Certain killer innovations are ushering in a new digital age, enabling further efficiencies in banking, to alter the course of banks' relationships with all stakeholders – customers, vendors, suppliers and even employees. Of these, mobility devices and social media are arguably the most significant. This article explores how mobile, social media and other innovations of the new digital age have improved the work life of bank employees, and through that the efficiency of their organizations. Specifically, these changes are the result of ubiquitous access, enhanced collaboration, better knowledge management and improved stakeholder engagement, all of which are facilitated by the technologies of the age.

Reduced time and place restrictions

Mobility devices such as smartphones, tablets and notebooks ensure that today's highly mobile workforce always has a computer handy, irrespective of location, while easy connectivity through Wi-Fi and 3G/4G networks enables access to the corporate computing environment from almost anywhere.

This means that work need not come to a halt because a staffer is away from his desk or doesn't have all the required information at hand. Say that the executive receives an online wire transfer request, but has a couple of process related questions. He can connect with another officer to clarify the issue and then approve the request, without even exiting the application at any time. Or take the case of another executive, who wants a colleague from another department located far away to see a check; he can simply scan it on his mobile and share the image.

While mobility devices drive efficiency, social media enables bank employees to provide better support. It is also easier on customers, who can avoid the long wait at a call center and initiate queries over social media instead; support executives can either resolve them on the same medium or move to a secure channel to make private contact with the customers.

Also, when employees are geographically spread out, social media enables elaborate interactions, otherwise impossible because of time and place constraints. For instance, a small group of banking executives based in different locations and time zones can use the Google+ Hangout (or a corporate equivalent) for an impromptu video chat, or even a scheduled meeting for that matter.

Digitization has enabled collaboration and even co-creation, as in the putting together of ideas or presentations by people separated by miles, but working together as if they were in the same room.

Enhanced collaboration and co-creation

Remember the time when people had to be in the same room to view presentations or review documents? Or how intensive group effort was impossible unless the members got together? Digitization has enabled collaboration and even co-creation, as in the putting together of ideas or presentations by people separated by thousands of miles, but working together as if they

were in the same room. Take the case of a prominent multinational bank, which now uses social networking tools on its existing Microsoft SharePoint platform. Those within a defined group can not only view documents, but also blog, pose or answer a query, and even microblog. Thanks to technology, bank employees can also get support from other departments without leaving their workstations. One of the best examples can be found in IT support. Now when there's a problem

with the computer, bank employees can "share" their machines with IT support staff so that they can fix the issue from wherever they are.

Better knowledge management and dissemination

The new digital age has done away with the need to own information. Thanks to search engines, data is at our fingertips. Wikis, blogs and social networking sites have taken digitization and consequently, management of knowledge to new heights. Take hiring for instance. HR departments no longer have to shell out fortunes to headhunters for hiring senior management; the LinkedIn profiles of prospective candidates not only provide the required information but also direct access to candidates. A case in point is a renowned chip making company, which is supposedly saving millions of dollars in recruitment fees by using LinkedIn. Another U.S. based telecom company also claims that recruitment through the site is not only cheap, but also quicker than on traditional channels.

On top, it is becoming increasingly common for employers to ask prospective hires to provide access to even their non-professional social networks. All this explains why most companies insist that their hiring teams become skilled at recruiting using social media tools: scouring social profiles of candidates as part of background check, and answering queries from job applicants on the company's social media profile are all in a day's work.

Social media has also given a new dimension to training within organizations. When allowed informal access to other employees, new hires find it easier to learn on the job. The new digital age has simplified the knowledge dissemination process as well. A Tweet or YouTube upload is all it takes to reach a large audience of customers, partners and other interested parties. Likewise, banks can conduct a training webinar for employees on their website, or share the highlights of an investor meet with all employees via Twitter.

What's more, certain technologies enable sharing of information in real time. Take the example of a "Project Status" email with an embedded Javascript, sent to employees in a very dynamic environment such as the weekend before go-live. Rather than indicating the project status when the mail was sent, it will fetch it "live" when the email is opened!

Improved stakeholder engagement

With talent management being one of their top challenges today, banks focus as much on their internal customers, namely their employees, as on their clients. In these days of stagnant or declining pay packets,

high unemployment and sagging employee morale (as many as three out of four employees in a recent survey were dissatisfied with their present job), employee engagement is the need of the hour. Social media deployed within the organization's environment helps to engage and motivate employees in novel ways.

It also enables anonymous collaboration, as well as directs attention to issues, which might otherwise remain hidden. By opening up new avenues of communication, the management is able to identify and defuse problems before they spiral out of control. Also, senior bankers are able to interact personally with a larger number of employees in a multi-country, multi-time zone environment.

Tools of mobility and social media, such as online surveys, also enable organizations to assess employees' morale at frequent intervals, or seek their opinion on a proposed company policy before implementation. During times of organizational change, these tools serve as a useful helpline for employees.

To push employee engagement levels higher, a few banks have even kick started their own social media programs. For example, a unit of the multinational bank mentioned earlier has its own social media platform that allows its 20,000 employees to interact on various topics ranging from sales to technology. Such initiatives foster a sense of belonging, boost morale and facilitate organization building in addition to creating camaraderie. Apart from talking shop and sharing ideas, employees can also seek their colleagues' guidance on important life issues, such as schooling or medical facilities.

Other stakeholders

Employee engagement aside, the new digital age has also brought about seamless collaboration and partnering between banks and the other stakeholders like vendors and suppliers. For example, computer consumable dealers can now access the enterprise system of the client bank, to align their stocks with demand and consumption; in turn, the bank benefits from a supply chain that is transparent and more efficient.

Too much of a good thing?

Despite making a huge positive impact on the entire banking process, digitization has its share of critics. Social media in particular, has been blamed for distracting employees and making them less productive, a fact proved by research. Added to that, are concerns about security and data privacy. Therefore, most banking organizations have blocked access to external social networking sites at work.

Unfortunately, there have also been instances when a careless remark made by an employee in social media has gone viral in a matter of moments to leave the organization's reputation in shreds. People have even lost their jobs due to such judgmental errors. Hence, banks need to put suitable checks in place to ensure that closed-door employee conversations on a social channel don't end up in the public domain, and that confidential data is not compromised. The latter is a real possibility, with the rising trend of BYOD (Bring Your Own Device): using personal tablets and smartphones on the job. Should an employee lose his smartphone and confidential organization data along with it, how can the bank prevent a security

Laggard banks must follow the lead of their enterprising peers to stride boldly into the new digital age and make the most of its technological bounty.

breach? Again, BYOD might also create a problem of technology (non) synchronization if the device hardware and software is incompatible with the bank's software.

Last but not least, the legal perspective on social media-relevant issues like encroachment of privacy, bullying and harassment, needs to be understood. An effective social media policy – one that is formed after taking employees into confidence – is the need of the hour.

Moving ahead…

Such hiccups notwithstanding, several banks have wholeheartedly embraced the above innovations, especially mobility. Although the effectiveness of some of these novel applications is still being gauged, and the search for answers to questions like 'How much is too much?' is on, there is little doubt that these changes have led to overall gains in internal efficiency. Laggard banks must follow the lead of their enterprising peers to stride boldly into the new digital age and make the most of its technological bounty.

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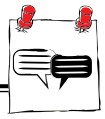
THE FUTURE OF SHOPPING

Successful companies will engage customers through "omnichannel" retailing: a mashup of digital and physical experiences.



It's a snowy Saturday in Chicago, but Amy, age 28, needs resort wear for a Caribbean vacation. Five years ago, in 2011, she would have headed straight for the mall. Today she starts shopping from her couch by launching a video conference with her personal concierge at Danella, the retailer where she bought two outfits the previous month. The concierge recommends several items, superimposing photos of them onto Amy's avatar. Amy rejects a couple of items immediately, toggles to another browser tab to research customer reviews and prices, finds better deals on several items at another retailer, and orders them. She buys one item from Danella online and then drives to the Danella store near her for the in-stock items she wants to try on.

As Amy enters Danella, a sales associate greets her by name and walks her to a dressing room stocked with her online selections plus some matching shoes and a cocktail dress. She likes the shoes, so she scans the bar code into her smartphone and finds the same pair for $30 less at another store. The sales associate quickly offers to match the price, and encourages Amy to try on the dress. It is daring and expensive, so Amy sends a video to three stylish friends, asking for their opinion. The responses come quickly: three thumbs down. She collects the items she wants, scans an internet site for coupons (saving an additional $73), and checks out with her smartphone.

As she heads for the door, a life-size screen recognizes her and shows a special offer on an irresistible summer-weight top. Amy checks her budget online, smiles, and uses her phone to scan the customized Quick Response code on the screen. The item will be shipped to her home overnight.

This scenario is fictional, but it's neither as futuristic nor as fanciful as you might think. All the technology Amy uses is already available and within five years, much of it will be ubiquitous. But what seems like a dream come true for the shopper an abundance of information, near-perfect price transparency, a parade of special deals is already feeling more like a nightmare for many retailers. Companies such as Tower Records, Circuit City, Linens 'n Things, and Borders are early victims and there will be more.

Every 50 years or so, retailing undergoes this kind of disruption. A century and a half ago, the growth of big cities and the rise of railroad networks made possible the modern department store. Mass-produced automobiles came along 50 years later, and soon shopping malls lined with specialty retailers were dotting the newly forming suburbs and challenging the city-based department stores. The 1960s and 1970s saw the spread of discount chains Walmart, Kmart, and the like and, soon after, big-box "category killers" such as Circuit City and Home Depot, all of them undermining or transforming the oldstyle mall. Each wave of change doesn't eliminate what came before it, but it reshapes the landscape and redefines consumer expectations, often beyond recognition. Retailers relying on earlier formats either adapt or die out as the new ones pull volume from their stores and make the remaining volume less profitable.

Like most disruptions, digital retail technology got off to a shaky start. A bevy of internet-based retailers in the 1990s Amazon.com, Pets.com, and pretty much everythingelse.com embraced what they called online shopping or electronic commerce. These fledgling companies ran wild until a combination of ill-conceived strategies, speculative gambles, and a slowing economy burst the dot-com bubble. The ensuing collapse wiped out half of all e-commerce retailers and provoked an abrupt shift from irrational exuberance to economic reality.

Today, however, that economic reality is well established. The research firm Forrester estimates that e-commerce is now approaching $200 billion in revenue in the United States alone and accounts for 9% of total retail sales, up from 5% five years ago. The corresponding figure is about 10% in the United Kingdom, 3% in Asia-Pacific, and 2% in Latin America. Globally, digital retailing is probably headed toward

Idea in Brief

A decade after the dot-com implosion, traditional retailers are lagging in their embrace of digital technologies.

To survive, they must pursue a strategy of omnichannel retailing—an integrated sales experience that melds the advantages of physical stores with the information-rich experience of online shopping.

Retailers face challenges in reaching this goal. Many traditional retailers aren't technology-savvy. Few are adept at test-and-learn methodologies. They will need to recruit new kinds of talent. And they'll need to move away from analog metrics like same-store sales and focus on measures such as return on invested capital.

Traditional retailers must also transform the one big feature internet retailers lack—stores—from a liability into an asset. They must turn shopping into an entertaining, exciting, and emotionally engaging experience. Companies like Disney, Apple, and Jordan's Furniture are leading the way.

15% to 20% of total sales, though the proportion will vary significantly by sector. Moreover, much digital retailing is now highly profitable. Amazon's five-year average return on investment, for example, is 17%, whereas traditional discount and department stores average 6.5%.

What we are seeing today is only the beginning. Soon it will be hard even to define e-commerce, let alone measure it. Is it an e-commerce sale if the customer goes to a store, finds that the product is out of stock, and uses an in-store terminal to have another location ship it to her home? What if the customer is shopping in one store, uses his smartphone to find a lower price at another, and then orders it electronically for in-store pickup? How about gifts that are ordered from a website but exchanged at a local store? Experts estimate that digital information already influences about 50% of store sales, and that number is growing rapidly.

As it evolves, digital retailing is quickly morphing into something so different that it requires a new name: omnichannel retailing. The name reflects the fact that retailers will be able to interact with customers through countless channels websites, physical stores, kiosks, direct mail and catalogs, call centers, social media, mobile devices, gaming consoles, televisions, networked appliances, home services, and more. Unless conventional merchants adopt an entirely new perspective, one that allows them to integrate disparate channels into a single seamless omnichannel experience they are likely to be swept away.

An industry stuck in analog

Why will digital retailing continue to grow so fast? Why won't it peak sometime soon, or even implode the way it did the last time around? Anyone who has shopped extensively online knows at least part of the answer. The selection is vast yet remarkably easy to search. The prices are good and easily compared. It's convenient: You can do it at home or at work, without using gasoline or fighting to park. Half of online purchases are delivered free to U.S. consumers up 10 percentage points over the past two years. Many returns are free as well. Product reviews and recommendations are

Amazon's five-year average return on investment is 17%, whereas traditional retailers average 6.5%.

extensive. Little wonder that the average American Customer Satisfaction Index score for online retailers such as Amazon (87 points) is 11 points higher than the average for physical discount and department stores.

The advantages of digital retailing are increasing as innovations flood the market. For instance, Amazon has already earned valuable patents on keystone innovations such as 1-Click checkout and an online system that allows consumers to exchange unwanted gifts even before receiving them. Digital retailers drive innovation by spending heavily on recruiting, wages, and bonuses to attract and retain top technical talent. They were also among the first to utilize cloud computing (which dramatically lowers entry and operating costs) and to enhance marketing efficiency through social networks and online advertising.

Customers are out in front of this omnichannel revolution. By 2014 almost every mobile phone in the United States will be a smartphone connected to the internet, and an estimated 40% of Americans will use tablets such as the iPad. If you doubt whether consumers are ready for technology-driven retail solutions, find a "dumb" video display in any public location and look for fingerprints on the screen evidence that people expected it to be an interactive touchscreen experience.

Meanwhile, traditional retailers are lagging badly. Online sales account for less than 2% of revenue at Walmart and Target. Nor are traditional retailers pioneering digital innovations in other channels, such as mobile shopping and call centers, or seamlessly integrating these technologies in their most important channel, physical stores.

It's not surprising that these retailers are bringing up the rear. As a consultant, I often walk through stores with senior retail leaders whose knowledge of physical retailing is impressive: They know precisely where a fixture should be, exactly how lighting is likely to affect sales, and which colors work best in which departments. As a group, however, they are shockingly subpar in computer literacy. Some retail executives still rely on their assistants to print out e-mails. Some admit that they have never bought anything online. Technophobic culture permeates many great retail organizations. Their IT systems are often old and clunky, and knowledgeable young computer geeks shun them as places to work.

But it isn't just computer illiteracy that holds traditional retailers back. Four other factors are at work as well.

Retailers were burned by e-commerce hype during the dot-com bubble. Many created separate online organizations to maximize valuations. The separate organizations targeted different customer segments, inhibited collaboration, and created serious frictions and jealousies. When the predictions of dot-com domination proved wildly optimistic, overpriced acquisitions began failing, and store organizations smugly celebrated. A decade later, real collaboration between retailers' store and digital operations remains rare.

Digital retailing threatens existing store economics, measurement systems, and incentives. Traditional retailers live and die with changes in same-store sales, in-store sales per labor hour, and compensation systems based on such metrics. That was fine when online sales were 2% to 3% of revenues, but the whole system falls apart when that number reaches 15% to

Technophobic culture permeates many retailers, and young computer geeks shun them as places to work.

20%. Retailers tend to focus on the wrong financial metric: profit margins. If a change dilutes margins, it's bad. But Bain's research shows that retailers' stock prices are driven by return on invested capital and growth rather than by margins. Amazon's five-year operating margin is only 4%, far below the 6% average for discount and department stores. But with faster inventory turns and no physical store assets, Amazon's return on invested capital is more than double the average for conventional retailers. As a result, Amazon's market value, $100 billion, is roughly equivalent to that of Target, Best Buy, Staples, Nordstrom, Sears, J.C. Penney, Macy's, and Kohl's combined.

Conventional retailers haven't had great experiences with break through innovation. They are most comfortable with incremental improvements and with following the well-known dictum "Retail is detail." Too many store reinvention programs have launched with great fanfare, only to die unceremonious deaths. Propose a more novel approach and retailers will ask why, if it's such a good idea, nobody else is doing it.

Retailers tend to believe that their customers will always be there. But as customers grow more comfortable with omnichannel shopping, they grow less tolerant of what they encounter in stores. Sales associates are hard to find. When you find one, he or she doesn't know much about the merchandise. Stockouts are frequent, checkout lines long, returns cumbersome.

An omnichannel world, in short, represents a major crisis for traditional retailers. Customers are passing them by. Online players are gaining. To keep up, existing retailers will need to create an omnichannel strategy and pick up the pace of change.

Redesign shopping from scratch

The first part of any such strategy is facing reality. Retailing executives must acknowledge that the new technologies will get faster, cheaper, and more versatile. They need to forecast the likely digital density in their categories and prepare for the effects. What should I do differently today if I believe that 20% of our sales will soon come from digital retailing and that 80% of our sales will be heavily influenced by it? Should we be opening any new stores at all? And if so, how different should they be? How should we adjust to a world of greater price transparency? What happens when traffic-building categories shift online and no longer pull customers into our stores?

Situations like these call for start-from-scratch, across-the-board innovation. In the book Idealized Design: How to Dissolve Tomorrow's Crisis…Today, co-author Russell L. Ackoff recounts a similar turning point at Bell Labs in 1951. The vice president in charge of the labs asked a group to name the organization's most important

How Fast Is Your Industry Moving Online?

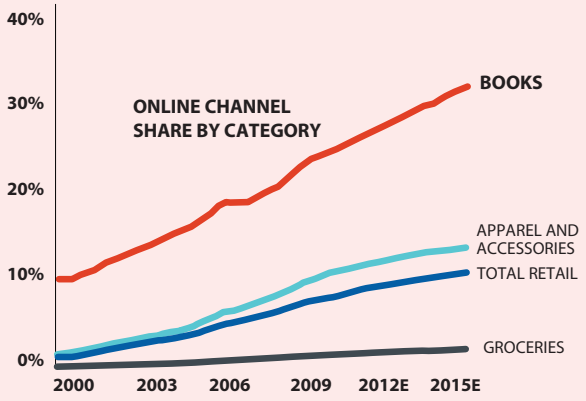
Online competition increases predictably as online prices, selection, convenience, and customer trust improve relative to physical stores. How three industries scored for key drivers (1=low; 5=high). Self: If your total is between 30 and 35, digital capabilities are or will soon be a strategic priority for your firm. If it's below 30, you should focus on developing digital tools to build traffic, enhance in-store experience, and increase basket size before competitors do.

	BOOKS	APPAREL AND ACCESSORIES	GROCERIES
PRICE			
PRICES OFTEN LOWER ONLINE (DELIVERED)	5	3	1
DIGITIZED PRODUCTS CREATE LOWER COSTS	5	1	1
VALUE OF PRICE COMPARISONS	5	3	2
SELECTION			
VALUE OF BROAD ASSORTMENTS	5	4	3
VALUE OF CUSTOMIZATION	2	3	1
SEARCHES IN STORES OFTEN FUTILE	4	3	2
CONVENIENCE			
RESEARCH AND INFORMATION INTENSITY	5	3	2
WEB TOOLS TRUMP STORE EXPERIENCE	4	2	2
EASE OF DELIVERY AND RETURNS	5	3	1
TRUST			
RELIABILITY OF PRODUCT DESCRIPTIONS	5	2	2
FRUSTRATION IN STORES	4	4	2
TRUST IN ONLINE RETAILERS	5	3	1
TOTAL	54	34	20

contributions to telephonic communications. The VP pointed out that each one, including the telephone dial and the coaxial cable, had been conceived and implemented before 1900. He challenged the group to assume that the phone system was dead and had to be rebuilt from scratch. What would it look like? How would it work? Soon Bell's scientists and engineers were busy investigating completely new technologies and came up with concepts for push-button phones, call waiting, call forwarding, voicemail, conference calls, and mobile phones. Retailers need the same start-over mentality.

The Threat Threshold For Physical Retailers

As e-commerce sales for U.S. retailers climb, store-based companies face treacherous landscape ahead. In books, the path above 15% digital penetration first brought consolidation; then Borders closed stores, filed for bankruptcy, and liquidated. The largest store-based retailer, Barnes & Noble, lost money in fiscal 2011 and struggled to raise additional funding. Physical retailers of music, videos, and consumer electronics face similar challenges. Even apparel and accessories, once considered too experiential to sell online, could approach tipping points in the next five years.



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The design specifications of omnichannel retailing are growing clearer by the day. Customers want everything. They want the advantages of digital, such as broad selection, rich product information, and customer reviews and tips. They want the advantages of physical stores, such as personal service, the ability to touch products, and shopping as an event and an experience. (Online merchants take note.) Different customer segments will value parts of the shopping experience differently, but all are likely to want perfect integration of the digital and the physical.

The challenge for a retailer is to create innovations that bring the vision to life, wowing those customers and generating profitable growth. Let's see what this might mean in practice.

Pathways and pain points. Retailers traditionally defined their job with three simple imperatives: Stock products you think your target customers will want. Cultivate awareness of what's in the store. When prospective customers enter the store, make it enticing and easy for them to buy. The job in an omnichannel world is more complex. Products themselves can more easily be customized to the preferences of individuals or small groups. Shoppers' awareness depends not solely on company generated marketing efforts but also on online expert reviews or recommendations from friends on Facebook and Twitter. The shopping experience includes not just visiting the store but searching for various vendors, comparing prices, quick and hasslefree returns, and so on.

Retailers today have a variety of precision tools that they can apply to discrete parts of these shopping pathways. Consider the job of creating awareness, which in the past relied mostly on mass-market advertising, promotions, and the like. Today marketers can send coupon codes and offers to customers' mobile devices. They can optimize search terms and location-based promotions. They can provide targeted offers to customers who check in to stores through external platforms like Four square. The list of possibilities is getting longer by the day.

Using such tools at each point in the pathway, retailers can identify sets of targeted customers defined by

(increasingly) narrow parameters and create appealing interactions. Earlier this year, for example, the UK retailer Tesco studied its South Korean operation, known as Home plus, to determine how it could increase grocery sales to time-starved Korean consumers. The answer: Bring the store to the consumers at a point in the day when they had time on their hands. In a pilot program, Home plus covered the walls of Seoul subway stations with remarkably lifelike backlit images of supermarket shelves containing orange juice, fresh vegetables and meat, and hundreds of other items. Consumers wanting to do their food shopping could simply scan each product's Quick Response code into their smartphones, touch an on-screen button, and thereby assemble a virtual shopping cart. Home plus then delivered the physical goods to the shopper's home within a few hours. According to Tesco, more than 10,000 consumers took advantage of the service in the first three months, and online sales increased 130%.

Bringing Digital and Physical Retailing Together

Omnichannel retailing is the way forward for retailers seeking to satisfy customers who increasingly want everything. They want the advantages of digital-such as nearly limitless selection, price transparency at the click of a mouse, and personalized recommendations from friends and experts. They also want the advantages of physical stores, such as face-to-face interaction with store personnel, products available for trying on or trying out, and the social experience of shopping as an event. Different customers will value parts of the shopping experience differently, but all are likely to want perfect integration of the digital and the physical.

ADVANTAGES OF DIGITAL		ADVANTAGES OF PHYSICAL	
RICH PRODUCT INFORMATION	BROADEST SELECTION	EDITED ASSORTMENT	CONVENIENT RETURNS
CUSTOMER REVIEWS AND TIPS	CONVENIENT AND FAST CHECKOUT	SHOPPING AS AN EVENT AND AN EXPERIENCE	INSTANT ACCESS TO PRODUCTS
EDITORIAL CONTENT AND ADVICE	PRICE COMPARISON AND SPECIAL DEALS	ABILITY TO TEST, TRY ON, OR EXPERIENCE PRODUCTS	HELP WITH INITIAL SETUP OR ONGOING REPAIRS
SOCIAL ENGAGEMENT AND TWO-WAY DIALOGUE	CONVENIENCE OF ANYTHING, ANYTIME, ANYWHERE ACCESS	PERSONAL HELP FROM CARING ASSOCIATES	INSTANT GRATIFICATION OF ALL SENSES

Omnichannel retailers can devise different ways of wowing each target segment. Some segments can be served much the way they were in the past. Others will require more imagination and innovation. Disney, for example, is reimagining its retail stores as entertainment hubs with a variety of interactive displays that will entice all segments of the family to visit more often and stay longer. But retailers will have to devote resources to this search for innovations along the customer's pathways. The trick will be to identify each segment's unique paths and pain points and create tailored solutions rather than the one-size-fits-all approach that has characterized much retailing in the past.

The experience of shopping. Traditional retailers have suffered more than they probably realize at the hands of Amazon and other online companies. As volume trickles from the stores and sales per square foot decline, the response of most retailers is almost automatic: Cut labor, reduce costs, and sacrifice service. But that only exacerbates the problem. With even less service to differentiate the stores, customers focus increasingly on price and convenience, which strengthens the advantages of online retailers.

If traditional retailers hope to survive, they have to turn the one big feature that internet retailers lack—stores—from a liability into an asset. Stores will continue to exist in any foreseeable future and they can be an effective competitive weapon. Research shows that physical stores boost online purchases: One European retailer, for instance, reports that it captures nearly 5% of online sales in areas near its physical stores, but only 3% outside those areas. Online and offline experiences can be complementary.

The traditional store, however, won't be sufficient. For too many people, shopping in a store is simply a chore to be endured: If they can find ways to avoid it, they will.

But what if visiting a store were exciting, entertaining, emotionally engaging? What if it were as much fun as going to the movies or going out to dinner and what if you could get the kind of experience with products that is simply unavailable online?

This is hardly beyond the realm of possibility. Jordan's Furniture, a New England chain, achieves some of the highest furniture sales productivity in the country by using themed "streets" within its stores, a Mardi Gras show, an IMAX 3-D theater, a laser light show, food courts, a city constructed of jellybeans, a motion-simulation ride, a water show, a trapeze school, and special charity events. Cabela's and Bass Pro Shops not only have some of the highest-rated websites; they also have some of the most engaging physical stores. These kinds of store experiences are expensive to create. Might digital technology improve the customer experience in stores more cost-effectively?

In fact, it is already doing so. Digital technology can replace lifeless storefront windows with vibrant interactive screens that change with the weather or time of day and are capable of generating recommendations or taking orders when the store is closed. It can allow customers to design products or assemble outfits and display their creations in highvisibility locations like Times Square. It can create engaging games that attract customers, encourage them to stay longer, and reward them for co-creating innovative ideas.

Digital technology in the form of tablets, for example can also give sales associates nearly infinite information about customers, describing the way they like to be treated and creating precise models of their homes or body types that enable perfect choices. It can change pricing and promotions accurately and instantaneously. It can provide customized recommendations. Virtual mirrors accelerate and enliven the dressing room experience by connecting customers with trusted friends. Technology can eliminate checkout lines, capture transaction receipts, file rebate claims, and speed returns. It can give a call center operator full access to a customer's purchase and complaint history.

My objective here is not to enumerate every possible innovation. Rather, it's to illustrate how the opportunities for digital technology in stores, mobile devices, call centers, and other channels are just as abundant and viable as they are for websites. Moreover and this is key retailers in many categories can link these channels and technologies to create an omnichannel experience with stores that is superior to a purely digital retail strategy.

Leading-edge retailers are testing digital and physical innovations using clinical-trial-style methodology.

One task is to apply these innovations early enough, frequently enough, and broadly enough to change customer perceptions and behaviors. Adopting successful innovations three years after competitors do is unlikely to generate much buzz or traffic. Of course, many digital innovations will fail, and the effects of others will be hard to quantify. So a second task is to upgrade testing and learning skills to 21st century levels. It was hard enough to gauge the effects of pricing changes, store-format upgrades, or newspaper versus TV ads in the old world. (Remember John Wanamaker's famous lament that he knew he was wasting half his advertising budget but didn't know which half?) An omnichannel world makes those test-and-learn challenges look like child's play. Retailers must now try to assess the effects of paid search, natural search, e-circulars, digital displays, e-mail campaigns,

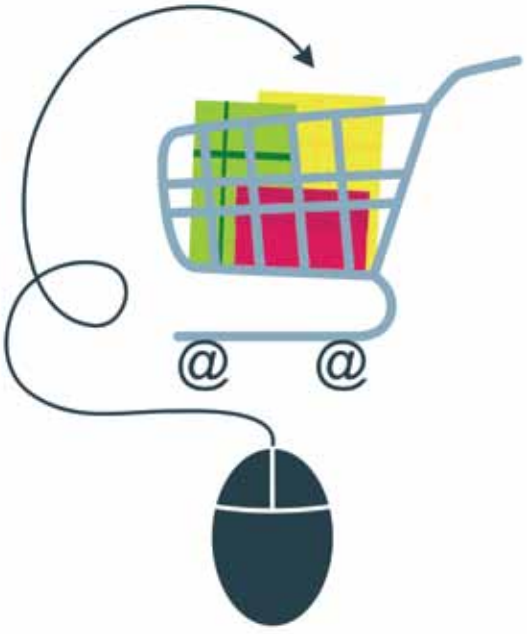
and other new techniques and third-party innovations such as SCVNGR, a location based social network game and must gauge those effects on both physical and digital channels (which include mobile apps as well as the internet).

Leading-edge companies such as PetSmart and the UK pharmacy chain Boots have begun applying science to this task: They are testing digital and physical innovations with clinical-trial-style methodology, using sophisticated software to create control groups and eliminate random variation and other noise. All this is costly, but it's hard to see how retailers can avoid doing more of it.

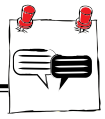
The omnichannel organization

How can retailing companies organize themselves around an omnichannel strategy? Historically, mobilizing an organization to develop and integrate breakthroughs that threaten the base business has been one of management's greatest challenges. Disruptive innovation requires a separate team that has autonomy, a distinctive set of talents, different knowledge bases, and a willingness to take bold risks. Integrating innovative ideas with the base business, in contrast, requires collaboration, compromise, and detailed planning. It's a bit like putting a satellite into orbit. Send it too far from the core and it will drift aimlessly into outer space, wasting money and squandering opportunity. Launch it too close to the core and gravitational forces will overwhelm it, causing it to crash and burn. So mobilizing an organization to both develop and integrate omnichannel innovations is challenging. But it can be done.

One approach is to create separate formal organizational structures but coordinate key decisions something most retailers failed to do the first time around. Apple launched its online store in 1997, midway through the dot-com bubble. When it began opening retail stores in 2001, the company established its online and offline channels as wholly separate organizations, each challenged to maximize sales without worrying about potential conflicts. At first, collaboration between the units was limited largely to coordinating merchandise assortments, new product release dates, and pricing policies. Fortunately for Apple, its innovative products and unparalleled service trumped its lackluster channel integration. Over time, however, customers began to expect more from a preeminent technology company. Apple increased the level of collaboration, enabling cross-channel returns and using its often frenzied product releases to experiment with new systems for checking a store's inventory or reserving items online for purchase in the stores. When Apple revamped its physical stores in 2011, it replaced information cards near demo products with iPads, which provide extensive information and product comparisons in much the way the online site does. The iPads also give customers information on omnichannel support options, and they can page an instore specialist for further assistance.



Innovative organizations also need to attract and retain innovative people imaginative, tech-savvy, often young individuals who spin out new ideas every day. Retailers haven't appealed to many of these innovators in recent



years. Now that they must compete with the likes of Amazon and Google, they will have to upgrade their recruitment efforts. They may find some of the people they need buried deep within their own organizations. Others they will find in creative centers such as New York and San Francisco, or around college campuses.

In the past, big retailers have had difficulty hiring innovative people and luring them to headquarters operations in Arkansas or Minnesota or Ohio. And they have had little success creating autonomous disruptive groups and linking those groups to their core operations. But the same technologies that are driving omnichannel strategies can help solve both problems. Desktop videoconferencing, mobile applications, social networks, collaborative groupware, shared knowledge bases, instant messaging, and crowdsourcing not only help Amy shop; they also help Sheldon and Rajesh work together wherever they may live and integrate their ideas with their employer's existing capabilities.

The department-store company Macy's may be showing the way here. In February 2009, when Macy's consolidated its U.S. divisions into New York, it conspicuously left a digital team in the heart of Silicon Valley. Since then Macys.com has started to add 400 people to its existing team of 300. To attract and retain talented technologists, the division launched its own recruiting microsite touting its enviable location, fashion glitz, and unique blend of entrepreneurial ingenuity and business acumen. It rapidly expanded its participation in the social media most favored by desirable recruits. It studied the characteristics of its most successful executives and then developed professional training programs in communication skills, time management, effective negotiations, and financial expertise so that recruits had opportunities for advancement. It capitalized on the local network of technology entrepreneurs, venture capitalists, and leading-edge software and hardware providers not only to identify talent but also to catalyze collaboration and new ways of thinking. These organizational strategies have helped Macy's woo and energize technology stars, increase its e-commerce revenue growth to more than 30% a year over the past two years, and attain the top spot on the 2011 L2 Digital IQ Index for specialty retailers.

For most companies, making changes like these is a tall organizational order. Move too slowly and you're in danger of sacrificing leadership and scale, just at a time when market share is shifting rapidly. Move too quickly, however, and you may not have adequate time for testing and learning. The time-honored rule of the judicial system sets the best course: with all deliberate speed. Retailers need to test and learn quickly but refrain from major moves until they know exactly what they hope to gain.

Is it all worth it? A successful omnichannel strategy should not only guarantee a retailer's survival no small matter in today's environment. It should deliver the kind of revolution in customer expectations and experiences that comes along every 50 years or so. Retailers will find that the digital and physical arenas complement each other instead of competing, thereby increasing sales and lowering costs. Ultimately, we are likely to see more new ideas being implemented as customers and employees propose innovations of their own. In today's environment, information and ideas can flow freely. Retailers that learn to take advantage of both will be well positioned for success.

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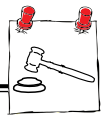
TRAVEL TIPS FOR COMPLIANCE MANAGERS



A new report on technology spending in retail banking predicts that expenditure on risk management, compliance, anti-fraud and related issues will cross US$ 6 billion at the end of this year and grow at least 25% from there over the next five. This is no surprise given the regulatory climate.

The same trend is visible in other industries. An IT think tank lists compliance among the top three drivers of IT spending for 2012. That being the case, what must compliance and IT managers do to ensure smooth implementation on the ground? We explore some ideas in this paper.

Lack of alignment between IT and business is often the reason why technology projects fail or don't achieve expected business results. Improper communication and poor understanding of requirements is a big part of the problem. The likelihood of this happening is higher in the case of regulatory IT, given the specialized nature of the compliance function. Yet, align they must, to get the job done, in other words, put all the right system controls in place within the deadline issued by the regulators.

In most organizations, IT resources are in high demand and under a fair bit of pressure from competing business functions. Hence, compliance managers need to make extra efforts to ensure that they get their fair share of IT attention. For starters, it would help if they spoke the same language!

I exaggerate only slightly when I say that compliance and IT live in different worlds. So, when compliance professionals journey into IT territory, they'd better have a meticulous travel plan, complete with road map, language guide, currency and compass.

But first they need to find a seat on the bus. Since most organizations don't put aside resources for a "regulatory pool", they need to convince the IT management to give them the necessary resources to implement compliance related changes, maybe even at the cost of other functions. This can be tough, because the benefits of lower regulatory risk (which is the outcome of better compliance) are usually qualitative and cannot be linked directly to business deliverables like revenue or customer acquisition. Ranking tools are handy for comparing apples with oranges as they consider the effort needed to achieve different outcomes, including compliance, and therefore level the playing field for those vying for the same IT resources.

I exaggerate only slightly when I say that compliance and IT live in different worlds. So, when compliance professionals journey into IT territory, they'd better have a meticulous travel plan, complete with road map, language guide, currency and compass.

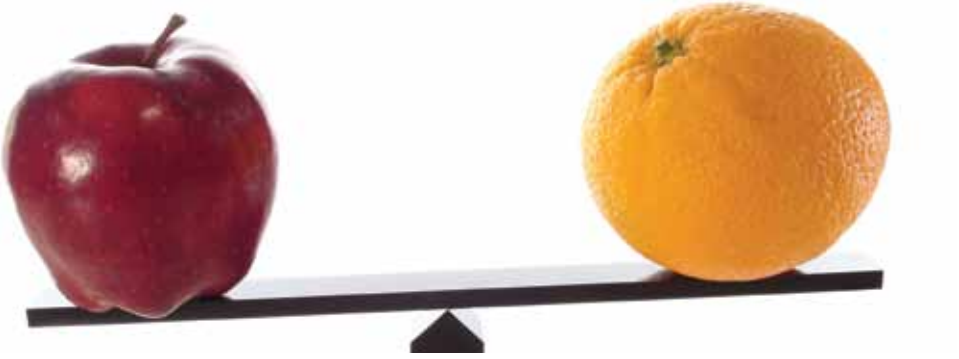
The compliance team can improve their chances by giving the organization advance notice of their requirements in the form of a road map of regulatory changes and its impact on various systems, processes and applications. That's not all; they must also highlight the business consequences of non-compliance (which can be quite severe). This allows the IT team to start preparations in good time, before things come to a head, and also optimize their efforts by clubbing compliance related changes with other modifications being made to a system.

Things could get complicated when a regulatory change impacts a third party solution, because the onus of ensuring compliance rests with its vendor. The compliance team must understand – either from the vendor or from their contact points within the organization – the steps being taken towards meeting the change. While it is useful to know when the vendor plans to make the change, and whether a compliance user group has been put in place, the compliance team must accept that it is unlikely to have any influence over these decisions.

Just like a seasoned traveller, who brushes up on the local language before a visit to foreign shores, the compliance team must learn a bit of tech speak to get around in the IT world. This will not only help them communicate their requirements better, but also earn them the respect of their "hosts". The people to talk to are the business analysts (or whatever they're called) responsible for interpreting compliance needs into a language that developers understand. With their help, the compliance team can translate regulatory requirements into IT requirements. A word of caution: compliance managers must restrict their role to defining "what" the system should do, leaving the "how" to those who know it best, namely the IT guys.

Although compliance and IT speak different tongues, they use common words… meaning entirely different things! For instance, when a compliance manager says "CIP", he's actually referring to a Customer Identification Program; when an IT professional uses the word, he means Cost Improvement Project. Under the circumstances, mapping templates come in handy as a language guide, useful to compliance managers for keeping up a two-way dialog with the IT side. A key objective of the conversation must be to help IT understand why these changes are necessary, and thereby bring everyone on the same page. The best way to do this is through illustration, by painting different compliance (or non-compliance) scenarios and how they could affect the business. When compliance and IT engage closely in this manner, they usually produce better results.

A testing or Quality Assurance team must be asked to "certify" the outcome of the changes. Next comes the moment of truth in any technology implementation in the guise of User Acceptance Testing, wherein the actual users of the system provide their feedback. At this stage, it is important to test not just what has been changed, but also the surrounding functionalities, to ensure that they haven't been impacted unintentionally.



It is vital that compliance managers close the communication loop by telling the implementation team about the results achieved. Not just as a courtesy to their hosts, but also to ensure that they will be welcome in IT land the next time they visit!

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Consumerization of IT in the Enterprise World

A recent phenomenon that can be observed in the enterprise world is that IT within the enterprise is undergoing a revolution, learning from the consumer world.

Today trends indicate that:

- Enterprise users are migrating to sophisticated devices and are bringing them to their workplace, and using them for their official activities. This trend is termed as the BYOD (Bring-Your-Own-Device) phenomenon.

- Enterprise users are now using smaller devices for activities that traditionally required desktops and laptops. This indicates a shift towards 'enterprise mobility'.

- Business activities now leverage social networking which was until recently considered a predominantly consumer phenomenon. Today this is called 'social business'.

- App stores for enterprises are emerging in almost the same manner as the immensely successful app stores for consumers.

These developments are changing the dimensions of the enterprise world and to an extent, resulting in improved employee morale and productivity while offering new avenues for enterprises to conduct business at reduced costs.

Although consumerization presents great benefits for the organization, it also represents added risks in terms of security, privacy and compliance. Organizations must find a fine balance between the employees' expectations and the organization's assets.

This article reflects on these trends and developments, their benefits to enterprises, and also on certain issues that are hounding the growth of this phenomenon.

BYOD and mobility in the enterprise

Gone are the days when enterprise IT was ruling the roost, instructing and controlling employees with regard to the devices and the means used for conducting business. With the advent of smartphones such as the iPhone and Android, and cloud-based applications such as Salesforce.com, Facebook etc., there seems to be a new social norm. Employees are no longer recipients of formal standards and tools from IT departments, but instead they have become participants in the newer mediums for conducting business. The trigger for this has been that enterprise users no longer think of themselves as just employees, but also as consumers. The trends in latest communication gadgets, mobility and social behavior in the consumer domains have also entered the enterprise.

Let's look at how this trend has influenced the software development industry for a moment.

This is one industry where IT departments exercise a fair amount of control over enterprise policies and compliance. Arguably, it is needed to protect the IP of the company and its clients. The employees here are tech-savvy and in most cases, ahead of the enterprise in terms of using the latest gadgets including laptops, smartphones etc.

Banking and insurance industries depend heavily on the mobility of their employees. The emergence of cloud for mobility has taken it to the next level.

Though this trend is more prevalent in youth driven industries such as software development, the banking industry is no exception.

Banking and insurance industries depend heavily on the mobility of their employees. The emergence of cloud for mobility has taken it to the next level. Five years ago

the only way people could interact electronically was through email service provided by companies like Google or through enterprise mailing devices like Blackberry. Today we have smartphones and tablets which are quite affordable for employees. This has opened up a new space. The mobile workforce prefers to use the same device for both personal and official use. They would also like to use their smartphones and tablets for official activities that traditionally required a desktop or a laptop.

Social business: a new customer engagement channel

Social networking has seen an enormous boom over the last few years in the consumer space. However, it is only recently that businesses have started tapping into the huge latent potential of using social networking to further business interests. The enterprise market for social collaboration, content and communication tools has exploded over the past 12 months; on-premise or cloud versions of social media tools can help balance openness with acceptable risk.

Many leading enterprises today have started tapping into this for their marketing, communication, and content management needs, and also to collaborate with consumers and promote their product and service offerings. End customer engagement has taken a huge leap with the advent of digital social networks, which is the latest avatar of the conventional social networks. Social business is shifting an organization's dynamics from that of isolation to engagement by providing mediums for discovering ideas, propagating expertise and growing interactions.

In certain cases, enterprises have set up a specialized hub within their marketing department that tracks tweets, Facebook activity and blogs, and uses social sentiment-analysis tools to track the lifecycle of product marketing campaigns. The results are helping drive not only simpler activities such as improving website landing pagesand digital content delivery, but also marketing plans and product development.

Even within the enterprise, organizations are moving from communication tools to collaboration suites and expertise finders to tap specialized knowledge, regardless of individual connections.

Many of these initiatives are enabling avenues for enterprise users to engage directly with end consumers. Especially through communities that engage people through topics of common interest, whether long running or time-bound.

The enterprise avatar of the app store

Is there anybody who has not tried the mobile app store? If a reluctant hand does go up, well, we need to remind them that they are way behind the trend. Not just a trend, but a phenomenon that has swept the young and affluent in the world off its feet! As per Gartner, app stores are emerging

in all consumer related industries, and by the year 2013, the global app store revenue will exceed USD 29 billion.

Apple and Google started and popularized an approach to offer an application development kit to the masses to create applications and an infrastructure to host them. This enabled a massive community of development teams around the app store infrastructure.

But that story belongs to the consumer world. What about in the enterprise world?

Almost in similar fashion, app stores are beginning to emerge in the enterprise world. These are what we call 'development app stores'. Several software based enterprises have enabled their software development platforms in the form of app stores to enable a large community of development teams to form an eco-system. These app stores are enabling the community to build apps and host them on the secure app store infrastructure for enterprises to consume. This has started in multiple industries, including banking.

How can enterprises benefit from these trends?
From a BYOD and enterprise mobility perspective, enterprises across industries can benefit hugely by allowing their employees to carry their own laptops and smartphones.

- In several countries, time to travel to work is quite high. From the perspective of software development industry, not everyone is given an official laptop. Majority of the employees still work on desktops at the office but own personal laptops that are a lot more sophisticated than their office desktops.

- If organizations adopt a BYOD policy, there is potential of huge benefits for them. There will be a definite reduction in cost of infrastructure and devices that the enterprise will otherwise have to provide.

- Employees can use the same devices when they work from home. Work from home saves retail space for the enterprises and saves time to travel for employees.

From a BYOD and enterprise mobility perspective, enterprises across industries can benefit hugely by allowing their employees to carry their own laptops and smartphones.

There are more possibilities.

- Latest innovations in the hypervisor technologies enable it to run on laptops. An employee's laptop can run a hypervisor to manage multiple virtual machines and one of those virtual machines could be brought under the enterprise IT control. This region or the sandbox would be a gateway to the enterprise IT's assets.

- Further, IT departments can consider the virtual desktop interface. This is a server computing model enabling desktop virtualization, encompassing hardware and software systems required to support virtualized environments. This 'virtualized desktop' can be stored on a remote server instead of on the local storage of the client, and when users work on their laptops, all the programs, data, applications are kept on central servers.

Both these models can be used by the enterprise's IT community. This would enable many in the workforce to work from home thus saving essential workspace, infrastructure, time to travel and transport for the organizations.

In order to achieve this, the enterprise IT must expose their applications on tablets or be protected even more than before. This space has opened up a lot of opportunities for third party providers who offer user interfaces over popular packages and solutions for the enterprises. The enterprise would benefit immensely if it opens more and more applications to its employees on tablets and smartphones.

Similarly, from a social business perspective:

- Enterprises are deploying social monitoring and real-time social analysis tools, social-based loyalty programs, social business based inventory and procurement plans, and have established social command centers and active social commerce initiatives.

- Enterprises active in social networking are leveraging crowd-sourcing for ideas, feedback and validation, and are realizing the plus points of aligning the interests of their employees with those of their consumers.

From an app store perspective:

- For software product vendors, this is a sureshot way to increase their product's breadth organically. They can do this by leveraging a partner development community, without compromising on the architecture. The app store provider supplies the necessary architecture and infrastructure components, while the community builds the business functionality and use cases. This also enables better market entry strategy into certain geographies since the local partners may develop localization components using this infrastructure.

- For the consuming enterprises, this enables faster and wider availability of business components that can work together seamlessly since they share the same architecture and infrastructure. This also enables lower dependency on any one vendor, and enables quick turnaround time to build and market.

Challenges

While every new technology brings advantages it also brings its own set of challenges. While the enterprise app store is a novel approach that has been tried and tested on the consumer side and is just testing the waters on the enterprise side, all is not well with BYOD and social business, especially when they come together. Some of the challenges are illustrated below.

- When employees use social networking sites and mails using their personal mobile or laptop devices, sometimes they could inadvertently share confidential corporate data into these sites. This needs to be managed by the enterprise through the right tools.

- Losing devices which are not configured to wipe out corporate data or non-encrypted devices being lost is a very important concern. Similarly, employees changing jobs may not wipe off corporate data and it could fall into the hands of competitors. This can be addressed through the right set of enterprise processes and diligence.

- Free downloads of applications which are insecure and virus infected could be a grave threat for the corporate applications, data and networks. This can be addressed through deployment of appropriate mobility related anti-virus and data security tools.

- Social analysis could be quite perpetual, and unless an enterprise deploys the right set of analytical tools and promotes a culture of consciously identifying business imperatives and acting on them, it can create a situation of

analysis-paralysis. As mentioned in the write-up, some enterprises have started extracting useful information from amongst the huge mounds of social networking data.

Conclusion

The above developments are blurring the differences between the consumer and the enterprise worlds. It appears for the moment that the digital enterprise world is following on the successful footsteps taken by the digital consumer world. Whether it is in the form of BYOD, enterprise mobility, social business or the app store, this phenomenon is here to stay, and change the way enterprises function. There could be further manifestations and possibilities, but the unmistakable trend is that of consumerization of IT in the enterprise world.

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An Update on

Belgium's Banking Sector

ntroduction to Belgium

Belgium might be a small country, but it punches above its weight. In a little over five decades, the nation has gone from being a German colony to a liberal democracy and champion of modern, private enterprise. In similar fashion, Belgium has overcome its shortage of natural resources by developing its industries; who hasn't heard of its diamond cutters and fine chocolatiers?

The country is divided into three regions, namely Flanders, Wallonia and national capital Brussels, and is home to three communities, namely those, which speak Flemish, French or German. In addition, since Brussels is the headquarters of the European Union and the North Atlantic Treaty Organization, Belgium also has a significant international community. Almost the entire population lives in urban areas, making Belgium one of the most urbanized nations in the world.

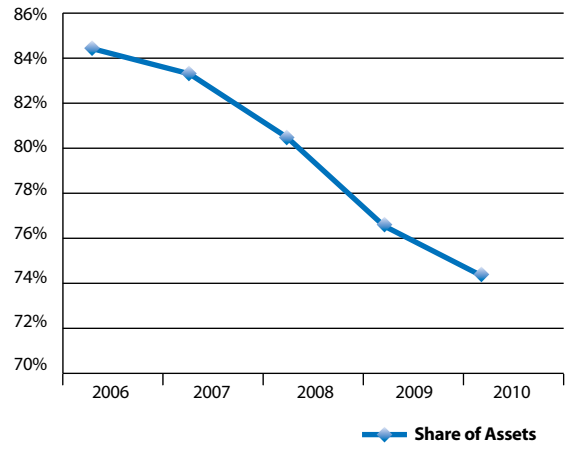
Belgium's dependence on international trade (exports as well as imports) makes it vulnerable to global economic uncertainty. The country and its financial sector were badly impacted by the financial crisis of 2008. One bank was nationalized, three others received capital infusions from the government. 2011 brought mixed cheer – unemployment dropped slightly from 8.3% to 7.7% and so did the budget deficit, which came down to 4.2% from its 2009 peak of 6%, and the banking sector was back on the growth path, but public debt remained high at about 100% of GDP, sparking fears of Belgium being sucked into the Eurozone crisis.

Snapshot of Belgium's banking industry

While Belgium's financial sector might not share the renown of some other industries, it is nonetheless very important to the economy, accounting for over 6% of the Gross Value Added in 2000 and 2010; in 2010, the total assets of credit institutions amounted to just over 3.5 times the country's GDP!

Belgium's banks operate in a mature market reliant on savings accounts (it has one of the highest gross savings rates in the EU) and a large branch network. A handful of large banks (including BNP Paribas Fortis, Dexia, ING and KBC) controls nearly 80% of the market. The already considerable presence of foreign institutions and foreign ownership continues to increase.

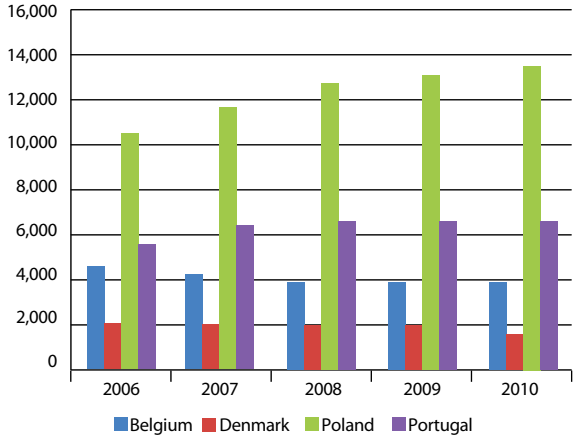
Figure 1: Share of Total Assets of Five Largest Credit Institutions



Source: Structural Indicators for the EU Banking Sector, 2011

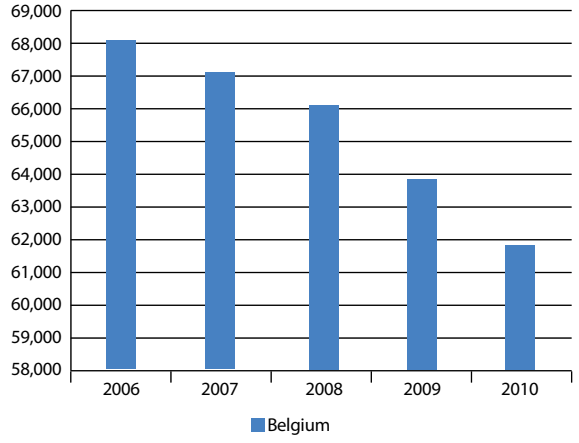
While Belgium has fewer banking institutions compared to its peers, it has a comparable number of bank branches. In 2009, there were 21 credit institutions with Belgian majority shareholding, 27 credit institutions with foreign majority shareholding and 56 Belgian

Figure 2: Credit Institutions (number of branches)



Source: Structural Indicators for the EU Banking Sector, 2011

Figure 3: Credit Institutions (number of employees)



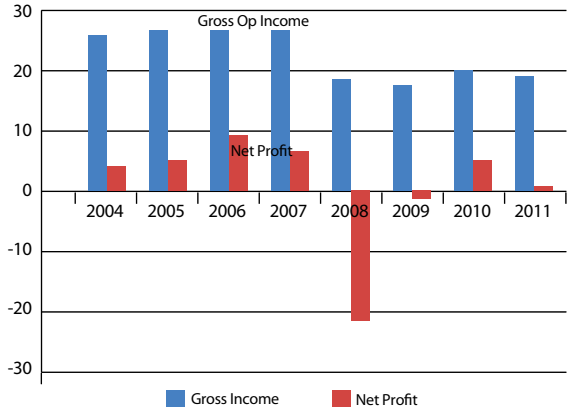
Source: Structural Indicators for the EU Banking Sector, 2011

branches of foreign institutions. These institutions employed approximately 62,000 people in 2010.

Belgium's banks had a rough time during the financial crisis. Balance sheets shrank as banks deleveraged, and inter bank loans were cut. Impairments on loans and receivables touched new highs in 2009. Since then, banks have clawed back and are once more on the growth path.

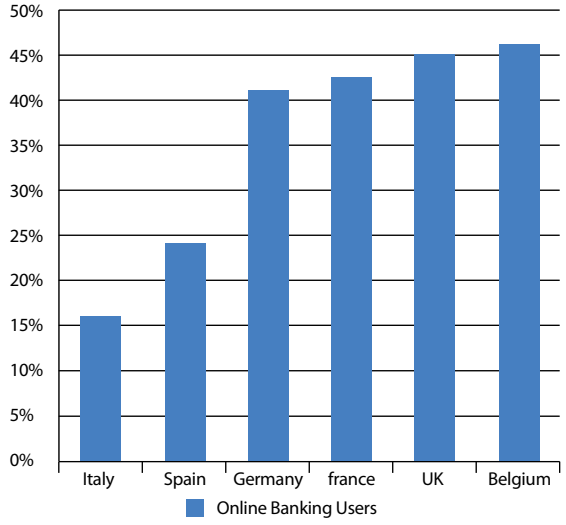
Amidst all this upheaval, there is also a move to consolidate the industry. Banks are looking to bolster their areas of weakness by allying with partners who are strong in those domains. They are also resorting to buying out parts of the business (like a mortgage portfolio) or even entire (smaller) banks.

Figure 4: Gross Operating Income and Net Profit of Credit Institutions Governed by Belgian Law (billion Euro)



Source: Financial Stability Review 2012, National Bank of Belgium

Figure 5: Percentage of Online Banking Users in Europe in 2009



Source: Trends in the Belgian and European Retail Banking Industry, Roland Berger Strategy Consultants, March 29th 2011

Challenges and opportunities in retail banking

Changes in consumer behavior, sparked by developments in technology on the one hand and the financial crisis on the other, have thrown open new challenges and opportunities. For instance, the arrival of alternative channels like the Internet and mobile has created new breeds of "purely remote" and "hybrid" customers. Belgium reports the second highest usage of online banking in Europe (excluding Scandinavia) after Netherlands, having added one million online banking accounts in 2009 alone.

Consequently, multichannel distribution, including direct banking, is becoming increasingly important, evidenced by an expanding array of multichannel initiatives from Belgian banks. (Some examples are ING Direct, BNPP Mobile Banking, KBC's Net 3.0, BBVA's Affinity Site and Integrator and HSBC's Financial Situation Checkup). Not surprisingly, this has shrunk

the branch network – in 2009, Belgium had roughly half the number of branches it did in 1993.

At the same time, demographic shifts, caused by a greying population and rising immigration are reconstituting consumer segments, and creating new demand for products and services customized to the needs of each.

On the flip side, the financial crisis has dented confidence in banking institutions, such that the already savings-conscious consumers have become more cautious while spending and investing, and are choosing to diversify their portfolio across multiple banks. In response, banks are launching a number of savings products, projecting an image of transparency and trustworthiness, as well as focusing on service to improve customer acquisition and retention.

Overview of banking technology

Underlying Belgium's high usage of online banking is a mobile penetration of over 100% and a broadband penetration of 31.2%, which is significantly higher than the European Union average of 26.6% (January 2011). This is accompanied by a healthy growth in Smartphone sales. In February 2011, Belgium became one of the first countries to launch 3G services, and all of its three mobile operators offer them. Several test licenses for 4G have also been given out.

The demand for different types of banking technology is driven both by market and sector-specific factors. For instance, the demand for retirement solutions is being fueled by the ageing population, that for payment and settlement solutions by SEPA migration, whereas the market for e-banking and risk management solutions is being driven by sector-specific developments such as the emergence of online banking and Basel regulations respectively.

A number of technology vendors are active in this market. In the mobile space, Banxafe offers a mobile banking service in partnership with mobile operators

BASE, Mobistar and Proximus, financial institution Banksys and various online merchants. Tunz, Ping Ping and Proximus are some of the mobile payment systems available in Belgium.

There are also a couple of local vendors of core banking solutions offering products such as BSB-Bank Suite (BSB-BS) for private bankers and Thaler (a universal banking engine).

Penetrating the market

Technology vendors hoping to enter this market must be in it for the long haul. With banks becoming more cautious about IT spending, the tech sales cycle has grown longer. Moreover, strategic investments are being deferred or even abandoned unless considered absolutely necessary. Consequently, IT firms are spending more money and effort to convince customers about their value propositions.

Trapped within legacy systems, Belgium's banks have a dire need for systems that are flexible, easily modified, and promise a shorter "time to market" for new products and services. The latter is particularly crucial given the brutal competition. Moreover Belgium's banks also need to be compliant to the new regulatory changes, which is a challenge with legacy systems.

Technology companies can also find opportunity in the area of wealth management, with banks looking to equip their relationship managers with apps on their handheld devices to enable them to serve their high net worth clients better.

Impact of savings regulations

Since Belgium has one of the highest savings rates in the EU, savings accounts are a huge factor in its economic and banking health. "New Savings Regulations" were introduced in 2009 with the goal of improving stability. In short, these regulations capped the basic interest rate on savings accounts to that specified by the Eurozone (instead of 4.25% earlier), eliminated the existing growth premium and made the fidelity premium (unique to Belgium) to be paid on accounts older than 12 months, mandatory. More importantly, the regulations said that the fidelity premium had to fall in between 25 and 50% of the basic interest rate.

This not only increased payouts by banks, but also drove them to focus on creating new accounts with better interest rates or higher fidelity premiums. While these rates applied to fresh money only, existing customers wrongly assumed that they would benefit. So even as the regulations improved banking stability and account retention, they created confusion and cost for customers, and a peculiar savings account which was partly savings account and partly one-year term deposit. To make things worse, the one-year deposits paid lower interest than savings accounts. In the near future Belgium will be faced with further new regulations that are being planned.

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Emirates NBD: Core Transformation

Headquartered in Dubai, Emirates NBD is one of the largest banks in the Middle East by assets. Prior to 2007, Emirates International Bank and the National Bank of Dubai were two separate entities which were merged by mandate of the government. In the UAE alone, Emirates NBD has over 120 branches and 650 ATMs/cash deposit machines. By December 2009, the bank had $76.5 billion in assets and over 8,000 employees. A core platform is the central nervous system of a bank's operations. A functioning core system is crucial. But, core transformations can be a rigorous and lengthy process, where complexities and risks abound. Combine a core migration with a merger of two large financial institutions, and the challenge becomes exponentially greater. This was where Emirates Bank International (EBI) and the National Bank of Dubai (NBD) found themselves in 2007, when, by government mandate, the banks were required to merge business lines and form one institution.

Already in 2007, EBI was 30% of the way into a migration to the Finacle platform. In October of that same year, six months into the project, the merger was announced. The two sides agreed on keeping Finacle as the preferred platform. With a predefined timeline for completion, the merger was untimely—there was a high probability of going over budget and being delayed—but the two decided to make it work. Mergers themselves come with a range of IT challenges. Integrating a different set of processes, separate customer cultures, training issues, and inhouse or packaged applications can be tough. Success relies on harmonization; without

Emirates NBD Bank Snapshot

Company Information

Year Founded	2007
Company Size Assets	US$76.5 billion Employees: 8,000
HQ Location	Dubai
Branch Coverage	120

Infrastructure Information

Branch Technology Environment	Finacle from Infosys Signature from 01 Systems Retail Assets from Nucleus Software CRM from Oracle
Core Systems	Finacle from Infosys hosted on IBM Power 6 Servers with Synchronous DR with high availability Kondor/KTP and Calypso for Treasury FinnOne from Nucleus Software Oracle e-business suite from Oracle Eximbills from China Systems TIBCO for Enterprise Application Integration
Self-Service Channel Systems	650 ATMs Corporate and Retail Internet Banking Mobile and SMS Banking
Additional Technological Information	State of the art data center hosting IBM, Sun, and Windows Servers Fully Operational Disaster Recovery Site with Online Replication

Source: Emirates NBD

it, a deal can easily be tarnished. Nevertheless, by November 2009, the migration had been completed with only a 7% schedule delay and 18% over budget. Considering the scope of the merger, this was an impressive achievement, and an overwhelming success for best practices in core migration.

Objectives

Emirates NBD had a specific set of six objectives it wanted to complete with the core transformation:

- Core transformation
- Better controls over transactions and increased efficiency
- Standardization of data and workflows across both entities while working together to map out future product innovation and development
- Data and application harmonization
- Modern technology that is flexible enough to support advancements
- Base support for future growth or acquisitions

Emirates NBD is a model for how a core migration and a merger can vastly improve business operation and should see its new core environment drive growth for the future.

Rollout

Emirates NBD held strictly to a set of best practices to enable it to meet implementation goals. They wanted senior management to be heavily involved in the process. There was a Project Management Office (PMO) that worked closely with the senior management team throughout each phase. Communication was key, using desktop guides, go live manuals, posters in branches, newspaper ads, and an abundance of internal and external networking. Role-based computer training also helped to mitigate the learning curve for the staff, while incentives drove motivation. Intense process rationalization and documentation helped keep the process moving smoothly, while rigorous lab testing and simulations identified bottlenecks in daily operations. Lastly, Emirates NBD insisted on engaged in multiple rounds of data migration to ensure accuracy. Seamlessly integrating two lines of business and bridging distinct company cultures was a major challenge, but ultimately one of the key differentiating factors that helped make this project a success.

Results

The Emirates NBD core migration and merger, in itself, was a resounding victory. It was relatively smooth, error-free, and done in a timely fashion. The improved IT environment that resulted has led to a number of quantifiable business successes that will assuredly drive growth for the bank in the future.

Cost savings have been around US$5 million annually, due in large part to the consolidation of business processes and applications. More than 600 processes were reduced to just 325. Streamlining those processes reduced reporting time by 50% and reduced report generation time to only two hours, down from 2-4 days. End of Day (EOD) processes for the bank now take only 4-4.5 hours, whereas before they could take upwards of 10 hours. Time to market for new products dropped from 3-4 months to only 6-7 days, an impressive improvement. The bank has also been able to optimize its view of the customer, enhancing customer service delivery across all channels, dampening customer complaint volumes. Emirates NBD is a model for how a core migration and a merger can vastly improve business operation and should see its new core environment drive growth for the future.

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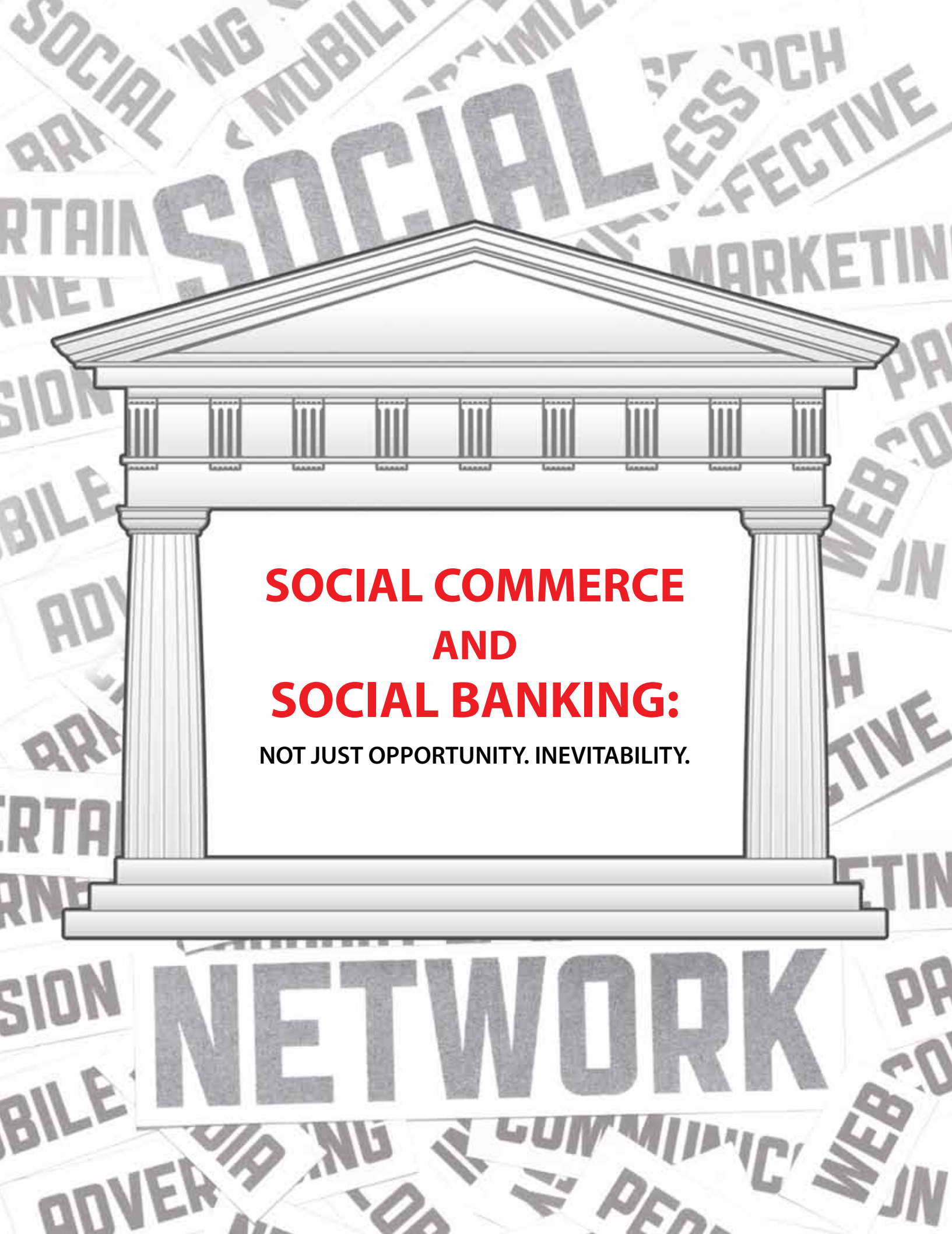
Celent, a division of Oliver Wyman, Inc.



SOCIAL COMMERCE AND SOCIAL BANKING:

NOT JUST OPPORTUNITY. INEVITABILITY.

This year, something other than the red carpet made waves at Cannes. "The Owner", a collaborative film made by 25 filmmakers from 13 countries on five continents, many of whom had never met, sparked much interest at the film market, which is part of the international film festival. And why not? The film was not just written, directed and funded collaboratively, but well before it got to that stage, the participating filmmakers had to upload their ideas and film shots online to be rated and reviewed by peers.

This is as comprehensive an example you can find of social commerce, which Mark Zuckerberg predicts will be the next big thing.

An accepted definition of social commerce is "a subset of electronic commerce that involves using social media, online media that supports social interaction and user contributions, to assist in the online buying and selling of products and services." In simple words, social commerce is a combination of social or collaborative shopping, purchasing, filtering and funding. A typical transaction looks somewhat like this: A new owner of a basset hound wants to know which dog shampoo to buy. She seeks the opinion of her co-members on a dog lovers' community on Facebook, and proposes that they all get together on Group on to snag a better deal on their bulk purchase. Finding that one of the youngest members in their group is short on cash, our customer lends her the money through an Amex app called "Serve" which enables P2P (Person to Person) payments within the social network.

Marketers have many reasons to be excited about social commerce, which according to a non-profit social commerce think-tank called The Social Commerce Institute, counts among the great waves of innovation, such as agrarian, industrial, electrical, electronics and IT.

The first reason is the staggering size of the opportunity. Facebook's Red Herring prospectus claims that the social network had over 901 million active users at the end of March 2012, 80 percent of them from outside the United States and Canada. On average, 526 million Facebook users visited the site daily during March 2012, and a comparable number did so over their mobile. The savvy social network was cashing in big on these numbers – making 15 percent of its total US$ 3.7 billion revenue in 2011 in payments from partners, such as Zynga and other application providers in exchange for a presence on the platform. Incidentally, Facebook isn't the only one to profit from its success. Facebook commerce or F-commerce has helped many brands achieve sizeable results. Research indicates that at 2-4 percent, F-stores boast of sales conversion rates comparable to Internet stores (average 3.4 percent). F-commerce users spend approximately 1.5 times the amount that other online shoppers do. Already, 50,000

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retailers have an F-store, which accepts payments. The allure of F-commerce is evident in the fact that even the biggest brands, from Coca Cola to Starbucks to Disney to Wal-Mart to P&G feel the need to be part of it.

The story of others like Groupon, PayPal, Amazon and Google Wallet is no less spectacular, and along with Facebook, they will contribute to much of the US$ 200 billion online retail sales expected in the United States this year.

But arguably, the most significant aspect of social commerce from marketers' point of view is that it puts the fifth element of the marketing mix, namely people, front and center in marketing strategy. In social commerce, people are not just consumers; they are also lead generators, sales agents, opinion makers and advocates.

Earlier, we touched upon the size of the social commerce opportunity. Let us now explore its momentum drivers.

Increasing numbers: A publisher of information and insight on digital marketing and commerce predicts that the number of social network users will grow over 19 percent this year, to touch 1.43 billion. And while younger generations are the most active, Baby Boomers and even seniors are engaging with social media.

Increasing intensity: Towards the end of last year, social networking was taking up 20 percent of all time spent online. It is estimated than on average, adults spend 56 minutes on this activity. Reportedly, 40 percent of Facebook users "like" brands so that they can get special discounts. These behaviors will only increase, as people expand their engagement on social media, to not only hook up with friends, but also share information, engage in activism, seek product recommendations, make purchase decisions, complete financial transactions and so on. In doing so, they will indirectly exert pressure on "refusenik" friends and acquaintances – who will find themselves increasingly outside the loop – to come aboard.

Increasing diversity: The networking trend among companies, brands, and products is also on the up. Over 2.5 million websites are integrated with Facebook. Reportedly, 80 percent of corporate hiring happens through LinkedIn; 50 percent of the Fortune 500 is on Twitter; and YouTube has registered a stunning 1,000 percent growth in the number of advertisements in the last two years.

Increasing investment: Most importantly, businesses are putting money where their mouth is. In a joint survey conducted by a global consulting firm and a media company, 96 percent of respondents said that they were increasing their investment in social media. I anticipate that in future, corporate refuseniks will also be forced to change their stand and start advertising in social networks.

Such a strong tailwind bodes well for social commerce to hit the mainstream sooner rather than later. How can marketers make the most of this opportunity?

Social commerce successes like Apple and Amazon have been built on what I call the "7C" principle. They started out with great Content (products), created a

platform for Commerce, built a Community (iTunes, Amazon users), which Communicated its experience to the world at large. Then they took engagement with individual customers to the next level, where they started to Co-create products and ideas, Consumed them personally as well as "socialized" them within their network, and Curated these properties for further use. This is where social commerce is headed.

But what about social banking?

Earlier in this discussion, I said that social commerce held limitless opportunity for the banking business. Unfortunately, banks have done little to realize it, so far. At the same time, innovators like PayPal and Google have already staked a claim to this territory, with their digital wallets and payment offerings. What's more, they have none of the compliance obligations that are part and parcel of traditional banking, to deal with. Best of all, the business is light on investment and risk, both of which are devolved upon various partners. (Take the example of Google Wallet, which benefits from a marketplace created by merchants). Clearly, banks need to cash in on this opportunity.

A point that is frequently overlooked is that social banking can also reduce risk in traditional banking. Banks should consider asking for details of customers' social networking accounts at the time of on-boarding, for this could give them insights that might be missed during standard KYC investigations. For instance, a potential borrower who has several friends with a patchy credit history might be persuaded through social opinion to default on his financial obligations. His bank must factor this information and adjust its terms of on-boarding (with a slightly higher lending rate perhaps) accordingly. And should the worst actually come to pass, the bank can exert pressure on the defaulter to repay by posting reminders in his social network. (I am sure you agree that this is a more effective and elegant alternative to strong-arm recovery tactics!)

Similarly, the social media behavior of a deposit-making customer should be examined to ensure that there are no suspicious linkages with markets on Anti Money Laundering or Anti Terror Financing watch lists. Continuing the same thought, social payment transactions can also alert banks to potential malpractice, for instance, when remittances are sent to or received from blacklisted sources, or passed through dubious gateways in an attempt to launder funds or finance illegal activity. An online credit card transaction initiated in one country, when the cardholder's status shows that he is present elsewhere, can alert the issuing bank to a hacking incident.

A point that is frequently overlooked is that social banking can also reduce risk in traditional banking. Banks should consider asking for details of customers' social networking accounts at the time of on-boarding.

Social banking also enables banks to keep pace with the trend of co-creation and collaboration, which is becoming increasingly important to innovation. The convergence of big data (pertaining to customers, products, transactions and so on) and online real-time collaboration will put banks in a strong position to co-create products with customers, and perhaps even

limit their role in product development, as customers, partners and other entities take charge.

While co-creation will make products smarter, cheaper and highly contextual, it will also shorten their life span, because new products will be created faster, as soon as a demand is raised. This will force banks to become more agile in taking their products to market. They will no longer have months to test market products in the real world, nor the luxury of a traditional launch. Instead, banks will need to find a way to quickly introduce their products online and turn them viral before someone else does it.

What better way is there than to use social media? The beauty of social media is that it can popularize an individual's financial choices – which are unique to him and his profile and needs – among an audience with very different needs on the strength of a peer recommendation. This opens up new selling opportunities to banks.

If there's a flip side to social commerce and banking, it's the greyness of regulation. In most countries, laws governing social commerce are barely present, or evolving at best. One can draw a parallel with mobile payments, which, other than in Kenya, is even now only in a partial state of readiness from an infrastructural, regulatory and consumer adoption standpoint. The development of all these is imperative for social commerce to take off.

One final thought. According to a highly respected international consulting firm, the penetration of the Internet is co-related to a country's GDP growth and economic wellbeing. Not only that, the Internet economy has started to make a direct contribution to the national economy. In Sweden, this contribution is 6.3% of GDP; in the United Kingdom it is 5.4%; in South Korea 4.6%; in the United States 3.8%. As the principal financial intermediaries in any nation, can banks afford to ignore the inevitability of online and social media economics?

If there's a flip side to social commerce and banking, it's the greyness of regulation. In most countries, laws governing social commerce are barely present, or evolving at best.

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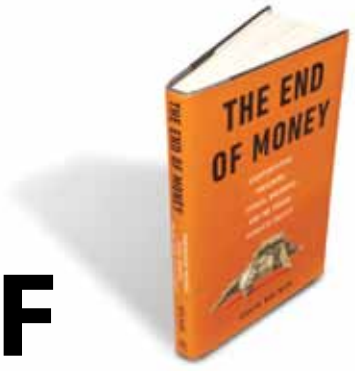

THE END OF MONEY: COUNTERFEITERS, PREACHERS, TECHIES, DREAMERS- AND THE COMING CASHLESS SOCIETY

David Wolman

Replace the word Money with Cash in the title and you will have a more straight forward name for this book. What David Wolman is really talking about is a world without physical currency but not sans money. Perhaps The End of Money has a more prophetic 'judgment day' ring to it, but as you read the book the title may seem a little disconnected from the actual story. This minor hiccup (or clever trick!?) aside, the book is a remarkable effort by the author to showcase the multiple, often contradictory, facets of cash, its impact on our lives and the coming cashless future driven by technology.

The End of Money is also a travelogue in many ways. To tell the story of cash, Wolman travels across continents to meet some very interesting people and discover noteworthy technologies that could render cash redundant. In Hawaii he meets the infamous Bernard von NotHaus, creator of the Liberty Dollar. In Iceland he discovers that the national currency may soon be a thing of the past. In a town in America he joins a group of coin collectors to witness their love for currency but discovers that hate is an even stronger motivator. While in Japan the fight against counterfeiting is reaching new heights with innovative technology, in London it's the dawn of digital money. In Delhi, India Wolman understands why cash is a curse for the poor, and how mobile technology may be the solution. Wolman's book takes us on a journey around the world and into the lives of people who are most closely associated with cash.

Written in a conversational style, The End of Money is a quick and easy read. It might leave you thinking that a world without cash is not such a bad idea after all. On the contrary it might be the solution to problems that cash brings. But will cash actually ever be driven to extinction? Let's wait and watch.

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