THE COMBINED FORCES ASSOCIATED WITH SOCIAL, MOBILE, CLOUD AND INFORMATION — INNOVATIVE AND DISRUPTIVE ON THEIR OWN — TOGETHER ARE REVOLUTIONISING BUSINESS AND SOCIETY, DISRUPTING OLD BUSINESS MODELS AND CREATING NEW LEADERS.

THE WAR FOR YOUR DIGITAL WALLET

IT TRENDS FOR 2013 — A PERSPECTIVE

THE CONNECTED CONSUMER

READY TECH GO

AUTHOR: SIMON MILLETT
INTRODUCTION

It’s time to look back over 2012 and try to discern the key technologies and trends likely to be top of mind for financial services in 2013.

So what does 2013 hold in store. Technology is evolving rapidly and many believe that the IT trends identified for 2012 will continue to remain top of the agenda for 2013.

In what will likely be another tough year for financial services businesses - in Australia and globally - IT budgets will be pared and things that were not deferred in 2012, probably will be reviewed again in 2013. No surprises that asset-sweating of already very tired IT assets will continue and the now familiar ‘pretty pigs’ will be re-lipsticked!

Nevertheless, the momentum behind technology-enabled business growth and innovation remains strong and IT investment does not come to a complete stop in 2013 as in-flight projects continue.

Cloud and “as-a-service” will continue to be considered as a method of consumption; value creation from Enterprise IT and modernisation of IT; analytics and managing ‘big data'; end-user virtualisation and security, amongst others, will all remain high on the agenda.

But more than that, four key themes (mobile, micro, media and mining) will underpin a shift in the way people – Consumers – use technology, posing a challenge to financial services providers.

The revolution in payments using mobile devices is nothing short of extraordinary – and consumers will choose winners. And better, stronger, faster banking technology will increasingly differentiate ‘trust’ in banking … trust in financial services as an industry.

As such, the trends are driving the basis of the technology platform of the future. Here’s what we came up with:

IT TREND 1: Head for the Clouds

The Cloud bandwagon rolls on, as just about anything and everything is transformed into becoming available ‘as a service’. The five defining elements of a cloud service (elasticity, on-demand, metered consumption, shared resources and web access) made available in the four models (public, private, community and hybrid) to support the four service types (Infrastructure, Platform, Software and Business Process) become the default means by which new IT services are rolled out / implemented. Enterprises lean towards clouds that are inaccessible from the public Internet, with participation by invitation to selected like-minded participants, that are in-country, and usually community or private clouds – all delivered “as a service” by reputable providers who have a pedigree in handling sensitive enterprise requirements.

I sat down with Bob Hayward, CSC’s Chief Technology and Innovation Officer for Australia and Asia to discuss CSC’s Top 10 Technology Trends for Enterprise IT for 2013.

Bob was keen to identify the top 10 technologies that will be strategic for most organisations. He felt that IT leaders should be factoring these trends / technologies into their strategic planning processes over the next two years.

Bob’s view was that this does not necessarily mean enterprises should adopt and invest in all of the listed technologies; however companies need to be making deliberate decisions about how they fit with their expected needs in the near future.

Bob stressed that the combined forces associated with social, mobile, cloud and information – innovative and disruptive on their own - together are revolutionising business and society, disrupting old business models and creating new leaders.

Simon Millett
Director of Banking, CSC Australia
IT Trend 2: Rewrite History

A huge part of the portfolio of Enterprise IT is missing out on the exciting innovation from consumer tech, cloud and mobility. Costing a fortune to operate, their huge inventory of legacy systems and applications, voraciously consuming scarce energy, an outdated hardware often using obsolete software/languages and with dwindling expertise, means something must be done about legacy. Enterprises start upgrading, replacing or decommissioning legacy assets. Many modernise legacy to more contemporary languages and environments using a growing number of tools now available.

IT Trend 3: More is Better now

The potential value / insights from analysing large and unstructured data sets hits mainstream. Be prepared for ‘big data’ questions from your business! CSC’s Leading Edge Forum (LEF) report – “The Data rEvolution” – highlights an impressive range of data-intensive technologies, applications and future possibilities. But the promise and the reality of big data usage is still wide. Many organisations try to apply the new shared nothing architecture and distributed processing frameworks to store, process and manage business information. Big data means big backups and big recovery which requires comprehensive disaster recovery planning!

IT Trend 4: Close the Divide

The convergence between traditional information technology (IT) used across enterprises and operational technology (OT) used to support production / control assets will be exploited. Outside of reduced costs (from duplication of equipment and management), IT/OT convergence promises to integrate machines with enterprise systems driving value-based optimisation and bullet-proof reliability. Enterprise IT will increasingly work in the operational space and the focus for enterprise IT will be to address the age-old divide between OT managers (mainly engineers) and their IT counterparts.

IT Trend 5: Open the Pipeline

The 2011 disclosures by Wikileaks led companies to ask, “How can I lock down my organisation’s information and make sure this doesn’t happen to me?” Companies will have to become more transparent whether they want to or not. Strategic firms are asking a completely different question: “What data and information that we’ve always considered confidential should we be making available online – and how could we leverage the disclosure of that information?” Through ongoing LEF research, CSC has found that organisations who practice ‘strategic leaking’ will gain big advantages over their competitors: better publicity; deeper customer loyalty and trust; more satisfied and motivated employees; stronger links to vendors, contractors, and partners; improved recruiting; and better relations with investors.

IT Trend 6: Mobility for Everyone

Smart, context-aware, mobile devices and enterprise applications that exploit the latest devices are making the traditional desktop/laptop computer seem old-fashioned, un-intuitive and generally a drain on productivity. In combination with in-built location-based presence, augmented reality and sensors, employees are exposed to a new way of interacting with the digital world. These truly mobile devices and applications become pervasive across the enterprise and Enterprise IT must find ways to embrace change, including in procurement, vendor management, employee support, security policies and legal compliance.

IT Trend 7: Work anywhere

Achieving the Post-PC trend will require a greater level of understanding of our new perimeter at the edges. With increasing mobility, users are able to work anywhere, on any devices and more concerning – over any network (business, shared or third party networks). The result is that the traditional enterprise perimeter has moved out of the enterprise and out to the edges. Forward thinking organisations will understand the new perimeter and change current enterprise-centric approaches to a new user-centric federated identity management approach.

IT Trend 8: Keep Know-how

There are thousands of baby boomers retiring now every year – many are irreplaceable. The result; a huge loss of critical knowledge and IP most of which is tacit, meaning ‘know how’ built up over years of experiences that can’t be easily transferred. The mass exodus or ‘great crew change’ as some industries have labelled it will drive targeted spending on rapid knowledge capture, storing and transference. Expect to see virtual environments being used to communicate key business processes and new human computer interfaces. The gaming sector definitely have the user engagement formula nailed so stay tuned to hear the phase ‘gamification’ a lot more.

IT Trend 9: Green IT is in Full Bloom

While sustainability has dropped off in importance due to global financial uncertainties, the carbon tax in Australia and rising energy costs will force enterprises to take sustainable IT seriously. The visibility and urgency of electricity spending will rapidly rise up the corporate hierarchy. IT will lead the deployment of better tools required to track continuous improvement in energy, ethical waste removal and water use. IT systems deployed (in Smart Grids, intelligent buildings, optimised supply chains, fleet management, etc.) will provide improved efficiencies across industries.

IT Trend 10: Find Talent everywhere

The global search for talent and insight at a competitive price will drive an increased emphasis on off-shoring of knowledge work and the outsourcing of business processes. A readiness to go outside of the organisation for skills and feedback will also raise the acceptance of crowd-sourcing and the use of social media to converse with the market, stay alive to new opportunities, generate ideas and create content. Technologies that enable or facilitate collaboration across the world in virtual teams will be major areas of investment.

Food for thought – whether you agree or not with Bob or CSC on the Top 10 technology trends for Enterprise IT for 2013 is neither here nor there – the fact is if you a senior executive (line business or IT) in an financial services organisation and you’re not discussing and assessing the implications of these (and possibly other trends) then you’re leaving your organisation mighty exposed.

“Enterprises lean towards clouds that are inaccessible from the public internet, with participation by invitation to selected like-minded participants, that are in-country, and usually community or private clouds – all delivered ‘as a service’”
Four themes – mobile, micro, media and mining – are born of the participation of most of the world’s population in digital networks – mobile networks, payment networks, social media networks, the Internet. They are driving a four-pronged revolution: in payments, the foundation of economic activity; the people who consume financial services and how they consume them; the players in the financial services market who are becoming part financial firm, part technology firm; and the power of financial services consumers.

New research by CSC’s Leading Edge Forum (LEF) entitled ‘Connected Consumer and the Future of Financial Services’ provokes financial firms and their suppliers to question how a revolution in consumer power will affect them, challenges consumers to expand their role in financial services, and provides a structure in which to explore the answers.

Financial services firms have always connected consumers, whether for pooling risk or converting one person’s savings to another’s mortgage. Today, however, consumers are connecting directly to each other on a massive scale using new technologies. This is driving radical change in the financial services industry.

Until shortly after the mid-20th century, consumer connection was based on locality: local bank branches, local insurance agents, local moneylenders. It was community network. Then financial firms built corporate network, and consumers connected nationally with contact centres through letters and calls to central processing offices. This was corporate power as centralised institutions expanded, globalised, drove global brands and reaped economies of scale. The consumer voice became a whisper as financial firms built customer management systems in an attempt to return to personal service in the form of an Integrated Voice Response system. The first phase, community network, lasted millennia; the second phase, corporate network, lasted decades as technology transformed a paper-based industry into a digital industry. Ironically, the technology that enabled the corporate network sowed the seeds of the greatest challenge to it. Well before the credit crunch – indeed, shortly before the millennium – the world entered a third phase: consumer network. The five-sevenths of the world with digital mobile devices and the two-sevenths with internet access have used tools from telecommunications and technology firms to challenge traditional financial models. Consumers have not
destroyed the corporate network but have challenged its supremacy. Every financial services firm should understand the implications of the consumer network and the connected consumers that form it. That is what the LEF report is all about.

A consequence of the World Wide Web is that a consumer’s hunger for hard-to-access financial knowledge has been replaced with a thirst for interpretation and opinion. Today, everything financial that any consumer could ever want to know about finance (within reason) is available to those with Internet access. Just as the immediate reaction upon news of a medical condition is to google it (the bane of primary care physicians), so a financial consumer’s first port of call for information about bank products and services, funds management, and insurance services and claims is the Web. Knowledge is not necessarily power, but the ability to make informed choices and influence others is. There is a revolution in the power of the financial consumer because of consumers’ connection to others.

**MONEY MATTERS**

Setting the stage is a pyramid of consumer financial needs; the consumer network affects every level (see Pyramid of Financial Needs). The base of the pyramid is something so basic that it would be surprising to many higher-income consumers a safe place to store cash. The pyramid of financial needs extends from basic subsistence to building wealth for the longer term through sophisticated investments such as pensions and investment funds. To understand how the consumer network affects every level (see Pyramid of Financial Needs), the consumer network plays against the pyramid, the CSC LEF report explores four themes.

### Pyramid of Financial Needs

- **Savings**
  - **Average income**
  - **Build wealth for longer term**
  - **Insurance**
  - **Invest for longer term**
  - **Pay for goods and services**
  - **Sell, accessible place for cash**

Source: CSC

### THE JOURNEY

The start of the journey – the technology that is most transformative for the most people, including hundreds of millions of the world’s poorest and billions of the world’s middle- and higher-income consumers – is digital mobile devices. It is true that mobile financial services pre-date the Internet and mobile phones by, oh, about 2,700 years, with the Lydian Lion being if not the first then the earliest extant coin. The first commercial cell phones were launched in the early 1980s; some 30 years later, there are over six billion cellular subscriptions. While the Lydians might argue that using mobile phones for payments is a retrograde step since at least their mobile money didn’t break if dropped, digital mobile technology – phones, cards and tablets – is transforming both the payments that underpin all consumer economic activity and the financial processes, such as insurance claims, through which firms manage financial services. Mobile is the LEF’s first theme, focusing on the revolution in payments and processes that mobility is driving.

The financial services industry grew up to serve the wealthy – that is, those who had capital that required a return, a venture that required capital, or assets that required insurance against potential loss. The poorer were left behind. Even today, hundreds of millions of individuals lack access to the basic financial services of savings, credit and insurance. Microfinance, which has existed since friends, family and local moneylenders began providing services long before the Lydian Lion. But institutionalised micro-financial services, at scale, are a comparatively recent phenomenon. Microfinance, coupled with technology, is playing a critical role in transforming the lives of hundreds of millions, not just in low-income countries but in the wealthiest countries in the world, including in our aboriginal communities in Australia. Micro is the LEF’s second theme, focusing on the revolution in financial inclusion as technology breaks down the barriers to financial access and transforms the economics of financial provision.

Social media and the connectedness of consumers through the Internet amplify the voice of the individual consumer. This is about much more than grumpy customers letting off steam. New media are in some cases breaking apart previously established financial models. Peer-to-peer payments are transforming the payments industry. If you are Chinese, think Alipay; if Australian, think PayPal. Peer-to-peer lending has not yet transformed the consumer lending industry but it has created an entirely new model that needs exploring. The Web is transforming everything that consumers know and think about financial services, from the role of the branch to bankers’ bonuses. The role of new Media (the Internet) is the LEF’s third theme, focusing on how consumer connectiveness is empowering consumers like never before.

Have you ever mined unstructured data? If you’ve ever done an Internet search, you have. The brilliance of the Internet is not so much that it contains a large chunk of the world’s knowledge as that it is instantly accessible via the Web. Google’s genius was to make the mining of unstructured data so simple, convenient and accessible that mining the world’s knowledge has become commonplace. However, as people live more of their lives digitally, they become digitally visible. This creates opportunities and risks for financial firms and sets up a tension between the financial firm seeking to structure, organise and control its relevant digital world, and the consumer finding, contributing and driving unstructured connections with other consumers, in part to shine a spotlight on the very firms that are seeking to understand them.

Mining, the LEF’s fourth theme, focuses on the technologies that are making sense of the world’s financial information for consumers, and some of the new data-driven insights.

The value of any publication since the Web matured is less about telling people what they could not know (a problem Sir Tim Berners-Lee, Google and others elegantly solved) and more about distilling, making accessible and finding patterns in what it is useful to know – precisely what CSC’s LEF ‘Connected Consumer and the Future of Financial Services’ report offers to us.

A consequence of the Web is that almost everything financial is available to those with Internet access. A consumer’s hunger for hard-to-access financial knowledge has been replaced with a thirst for interpretation and opinion. With this digital power comes digital visibility. Consumers’ views, actions and habits are on display like never before to those with the tools to understand them. For the financial firm, this brings both opportunity and threat.

Read more about the Connected Consumer
GET TO THE POINT (OF PURCHASE)

Many of the top companies in Australia are attempting to answer these questions. Financial institutions – banks – derive a significant percentage of their annual revenue from processing payments, but that piece of the pie is quickly shrinking – at a compound rate of close to 7%. In Australia, by most analysis, between 35%-40% of a bank’s revenue is linked to payments. Around 100 million payments worth $220 billion are made each business day in Australia, through cash, cheques, payments cards and direct debits. But banks are being crowded out by emerging competition from non-traditional financial service companies such as PayPal and Square Inc., both of which now offer a small hardware device that can be attached to a mobile phone to read credit cards.

“Financial institutions derive a significant percentage of their annual revenue from processing payments, but that piece of the pie is quickly shrinking.”

The number of nonfinancial companies jumping on the payment-processing bandwagon is growing and includes some of the top retailers. Woolworths and Coles are among the large retailers developing and adapting technology that will let customers make purchases via mobile phones. In addition, the mobile carriers are creating their own mobile wallet technology – in the US, they already have in Isis, a joint venture of Verizon Wireless, AT&T Mobility and T-Mobile USA. And in Europe, Project Oscar will do the same thing.

To see who wins the early battles in the payment-processing war, also keep a close eye on the big four companies that have emerged as “consumer darlings”: Apple, Google, Facebook and Amazon. Consumers keep flocking to these brands because they are familiar, and in many cases their products and services have become interwoven with everyday life.

Apple’s massive popularity with consumers may indicate how they will choose the winners – with their wallets. Or their digital wallets, that is.

When a consumer goes about making a purchase, three questions come to mind:

Whom do you trust the most? Whom are you most comfortable sharing information with? And finally, who is going to blend the advertising world and the payments world with speed of outcome transaction most successfully?

The companies that win will be the companies that address these consumer questions and provide the easiest, fastest and most secure experience for people who walk into a store to make a purchase by using a mobile phone.

Security is of paramount importance. Consumers demand the most stringent security possible for their transactions and purchases, and companies that can deliver secure solutions and address concerns about potential fraud will set themselves apart from those that cannot.

In Australia, on 7th June 2012, the RBA released the findings of its review of mobile payments, outlining the more urgent need to drive down processing fees, and the wider playing field will give consumers a better selection of financial services and banking offerings to choose from.

Still, when it comes to payments, trust and security are key factors, but they are a given – without either, you will not be in the game… increasingly, real time payment transfer and processing will be an essential and market participant differentiating factor. Owning the customer still remains the ‘holy grail’ in controlling consumer payment preference and may be the best (most trusted, secure and fastest) solution win.

The best news for many is that the ultimate winners will be the consumers themselves. Increased competition will drive down processing fees, and the wider playing field will give consumers a better selection of financial services and banking offerings to choose from.

The revolution in payments using mobile devices is nothing short of extraordinary. Consumers are already using their mobile phones to make in-store purchases, and as the technology evolves, the payment-processing industry will never be the same.

M of Mobile and P for Payments – are two of the M’s and P’s analysed in the new research by CSC’s Leading Edge Forum (LEF) entitled ‘Connected Consumer and the Future of Financial Services’.

The shift from plastic to digital wallets and mobile payments is in full swing. Consumers can walk into any number of retailers and not only use their phone to make a purchase, but they can also get information on the hottest deals or compare prices with other stores. Mobile devices are sitting at the intersection of payments, advertising and marketing.

Card companies, banks, mobile network operators and service providers, internet companies and retailers are all scrambling for a piece of the growing market for payment processing, and the winners will be those who demonstrate technology leadership, provide the best user experience, and give the most business value to merchants.

Consumers will choose the winners with their digital wallets: “but what’s in it for them?” what does the typical consumer really want, and how can companies deliver that?
Better, stronger, faster banking technology will increasingly differentiate ‘trust’ in banking

It seems like banking conference season is a 12 month rolling wave of activities, but recent Sydney conferences – including AB&F’s event, FST’s recent one and the Bank Tech Summit in mid-July - illustrated the enormous importance and value these events are to the banking industry.

At all, we had speakers from the banking community in Australia and abroad, including the big and second tier banks, representatives of banking industry associations, regulators, analysts, specialist organisations, vendor firms and academia. These events offer a full agenda of presentations and in-conference activity, mixed with opportunities to network and socialise. I am always amazed at the quality of presentations, the extraordinary information shared and how much can be learnt at these important gatherings. Equally, I am amazed that many senior bankers don’t think they need to be there.

At the conferences I attended, the key trends facing banking were evaluated against messages of global economic uncertainty, consumer sentiment and behavioural shifts.

The key thematics embraced the usual suspects including innovation, risk, cyber-crime and security, organisational transformation and productivity, cloud computing, big data, outsourcing, payments, social media and of course, mobility and mobile. All concepts well covered also in new research by CSC’s Leading Edge Forum (LEF) entitled ‘Connected Consumer and the Future of Financial Services’.

There were two over-arching elements that crossed into every trend and every thematic on these event agendas. They were, simply, the importance of ‘Technology in banking’ and ‘Regulation in banking’. They are not separate elements. More than ever, banks are technology companies. More than ever, Regulators expect banks to be technology companies. And that’s what I’m going to focus the remainder of this article on.

To set the context, a couple of months ago, I had ‘light-bulb on’ moment when, on a Saturday morning, I opened the sports section of The Sydney Morning Herald. “READY, TECH, GO” was the headline and the article’s stand-first headline was “TECHNOLOGY CONTINUES TO ALLOW ATHLETES TO AIM HIGHER, FASTER, STRONGER”. I swapped out “ATHLETES” for “BANKS” and the article content, while
ostensibly about athletes pushing the technology boundaries at the London Olympics, in its detail addressed numerous of the key themes confronting banking – including risk, data analytics, productivity, security, digitisation, and, in general, instantaneousness and the elimination of human intervention to reduce errors.

Today, the strength of a bank is directly correlated to the strength of its technology - its platforms, systems, applications, processes, delivery channels, IT infrastructure ... and so on.

Technology is now evolving at exponential rates. Banks, according to Analysts, have been sweating IT assets for years, and are now looking at a prolonged period of very modest business growth. Paradoxically, they now need to heavily reinvest to re-platform, to progressively modernise and to effectively orchestrate processes to enable these new technologies while managing within their large, complex legacy technology ecosystems.

In banking, IT has now become a very significant competitive advantage lever. Equity Analysts now seriously evaluate a bank’s ‘technology leverage’ and rate a bank’s technology ‘readiness for the future’ as major factors in determining an individual bank’s future share price performance expectations against peer banks.

And the role of the Regulators in stimulating new technology investment by banks has dramatically increased. The ‘technology readiness’ intent has been signalled very clearly by banking Regulators globally, and most recently in Australia, in June, by the RBA, when they announced and committed the banking industry to a timetable of reform for domestic payments in Australia by 2016.

It is the nature of the intent that probably is most surprising for banks – the Regulators are being ‘prescriptive’, offering little or no room for banks to ‘opt-out’ of clearly defined regulatory agendas and timetables.

Arguably, the practice of banking has become fundamentally more difficult and banks have taken a savage reputational beating since the GFC commenced in 2008, exacerbated more recently by questions of bank solvency in Europe and by the impact of the series of enormous by value, bank risk management and bank rate fixing disasters and scandals.

The Regulator’s role in the period since the GFC has expanded and, as highlighted in recent weeks by the very collaborative messaging from our finance sector regulators in Australia, Regulators have taken as central to their new Agenda, the restoration of community and public TRUST in banking.

And this has happened, one could surmise, because banks have failed, over a number of years, the ‘self-regulation’ tests set by the Regulators. Regulators have a way to get banks ‘back on track’ and, through Basel III capital adequacy management, they will.

It seems a simple regulatory message – my way or you will pay ... with your capital.

Under post GFC governance regimes, including Basel III, institutions which are able to demonstrate that they have robust technology and a highly granular understanding of their assets and risk profile may enjoy the benefits of being assigned lower liquidity and capital adequacy thresholds.

Regulatory capital adequacy penalties will be imposed on banks that don’t conform to the traditional tests of banking soundness – asset quality, management, earnings, liquidity, as well as to a broader set of ‘sensitivity to market’ criteria, including the state of a bank’s technology and its operational technology readiness for the future.

To pick up the “READY, TECH, GO” mantra, the newer, faster, stronger a bank’s technology, the less likely it will be required to hold additional regulatory capital. Better, more capable and responsive technology leads a bank to greater customer connected competitiveness and hence to the achievement of the new target regulatory outcome of stronger public trust in banks.

Bank-Tech is the name for a major banking conference – but it is also a reflection of what banking is, where banking is heading and of the need for individual banks to up their Bank Tech to enable them to adapt to the new market and operational realities. And not just banks – every organisation in financial services is a technology organisation. Better, more capable and responsive technology will lead financial services companies to greater customer connected competitiveness.

Read more about the Connected Consumer
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The mission of CSC is to be a global leader in providing technology enabled business solutions and services. With the broadest range of capabilities, CSC offers clients the solutions they need to manage complexity, focus on core businesses, collaborate with partners and clients, and improve operations.

CSC makes a special point of understanding its clients and provides experts with real-world experience to work with them. CSC is vendor-independent, delivering solutions that best meet each client’s unique requirements.

For 50 years, clients in industries and governments worldwide have trusted CSC with their business process and information systems outsourcing, systems integration and consulting needs.

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