BANKING ON DIGITAL ECOSYSTEM

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The nature's creation

Illustration I

The butterfly is a marvelous creation of Mother Nature. It develops through a process called metamorphosis. This is a Greek word that means transformation or change in shape.
Butterflies have the typical four-stage insect life cycle. Winged adults lay eggs on the food plant on which their larvae, known as caterpillars, will feed. The caterpillars grow, sometimes very rapidly, and when fully developed pupate in a chrysalis. When metamorphosis is complete, the pupal skin splits, the adult insect climbs out and, after its wings have expanded and dried, it flies off. The beauty of nature is that butterfly wings are not solely for flight; they also act as miniature solar panels.

Butterflies can only feed or fly when their bodies are warmed to at least 30° C, and they have to gain this from the sunshine using their wings. Butterflies are often seen basking with their wings open wide, as they gain heat. They adjust the area exposed to the sun by overlapping their wings or angling them towards sunshine. The veins located in the wings then carry the heat to the body. Colour helps the butterfly with their temperature control. Dark colours absorb more heat, than light colours. Some butterflies such as the Blues have a shiny underside to their wing, which can help them reflect heat.

Draw parallels

Banking is an industry which has evolved over the years beyond recognition. Today it stands as one of the most dynamic sectors in any economy across the world though challenged by many other sectors like telecom. The original purpose of banking was simply to store extra money since it was unsafe and cumbersome under an individual's custody.

The earliest bankers were typically self – centered and highly conservative individuals with a knack for identifying trustworthy people from the rest and only relied on themselves. Their main competencies were to keep accurate records and maintain highly secured strong rooms with exceptional security arrangements like the cocoon of the caterpillar discussed above.

With the subsequent development in the banking industry as money become a major vehicle of moving value, the caterpillar speed it maintained in the early years of the twentieth century became wholly inadequate to meet the demand of the market. Given this situation and with the discovery of the computer banking has taken off the ground like a butterfly in the mid twentieth century. With the dawn of the twenty first century banking has taken a totally different shape with the increased digitalization as in the case of butterfly shown in the furthest picture to the right above.

The change with digitalization and ecosystem phenomenon

This article attempts to deal with the increasing digitalization and the challenges faced by banks and the expected contribution of banks in the arena of establishing a more balanced ecosystem in the world. Illustration ll provides a model for the smooth operation of a digital ecosystem in a financial organization.

(a) Technology

Digitalization is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business. Modern banking is like a complete digitalized system,which is connected to many networks and operating many IT platforms, thus making banking more of hi-tech business than what it used to be. Therefore the word synonymous with banking nowadays is "change".

Illustration ll

According to Llewellyn (1996),the reason why the changes could be so substantial is that there is a powerful combination of pressures operating on the industry, and some of these pressures challenge the very core of the banking business: information and delivery. A dominant pressure derive from new technology with respect to information is trading and delivery of financial services. Industrial history shows that the development of new technology can have a major impact on any industry and has often done so. This is most especially the case when technology affects the very core of the business – in the case of banking: information, processing and delivery. In this respect, banking is no different from other industries. It is largely technology, and what follows from it, that will transform the banking and financial services industries.

The following table (Illustration lll) provide a projection of digital sales in regions and product wise in 2018 through a recent research.

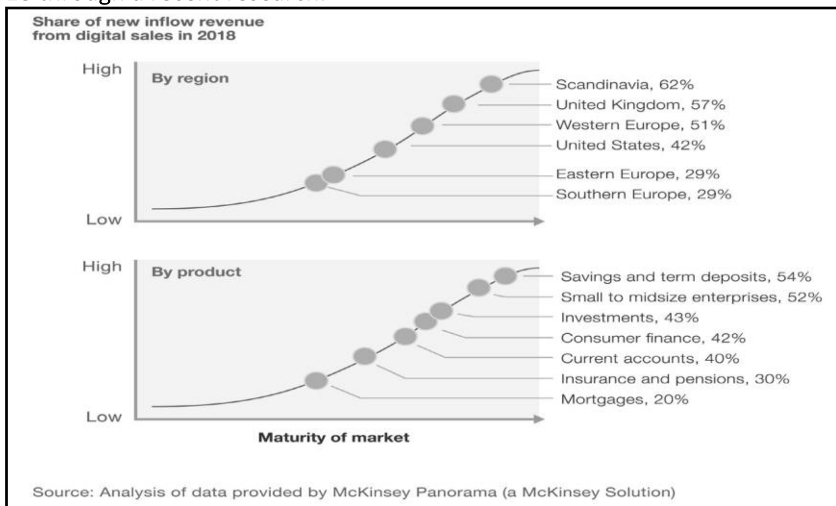

Illustration lll

(b) Channels

In many countries, financial systems in general, and the banking sector in particular, are passing through a period of substantial structural change under the combined and interrelated pressures of: internal competition; declining entry barriers; changes in regulation; new information, trading and delivery technology; global competitive pressures; and fast-evolving strategic objectives of banks themselves and their existing and potential competitors. A series of universal trends have become evident all of which have major implications for the competitiveness of banks. The impact of these forces has varied in timing and degree between countries though many of the secular pressures on the industry are universal.

Banks around the world face formidable challenges: they are losing some of their past monopolies and comparative advantages which have underpinned their dominant position in the financial system. In particular, as entry barriers into banking services are eroded, banks are increasingly facing competition from a wider range of actual and potential suppliers of banking services: the capital markets, money markets, non-banking financial institutions, and also 'non-financial banking institutions'. In addition, the development of electronic banking has in some countries enabled foreign banks to enter hitherto relatively closed domestic retail banking markets. In some cases large corporate customers have been internalizing some of their banking operations through 'in-house banks'. In many countries banks are shedding staff and closing branches with the introduction of new technology and alternative delivery systems. At the same time, squeezed by inroads into their traditional businesses and sharper competition, banks are expanding into new areas: insurance, life assurance, unit trusts and other services. These trends are emerging in the context of major structural changes in financial systems: the relative growth of financial markets; the increasing institutionalization of saving and investment business; the growing role of institutions in other functions of the financial system; the rise in the role of institutional funds managers in the financial system; diversification of financial firms and the steady erosion of traditional distinctions between different types of financial institution; the entry of new types of supplier of financial services; a substantial growth in the variety of new and complex financial instruments; and the globalization of financial markets.

According to Laurence Leyden, there's a powerful combination of pressures at work in the banking industry – some of which challenge the very core of banking business: information and delivery. Aside from the global political, economic and regulatory landscape, it is the emergence of digital technology that has been the major disruptor to business as usual and long term strategic planning.

(c) Customers

Banking in the 21st century brings a whole new set of challenges and opportunities. Voracious consumer appetites for omni-channel transactions, high expectations around customer experience, and low levels of patience and brand loyalty have put most banks on the back foot. The vast majority are playing catch-up with their customers today, let alone anticipating the needs of future customers. In a recent report, Forrester Research underscores that banks grasp the digital transformation imperative but it's the complex, inflexible, and decades-old application landscape elements that make the current state of digital banking less than perfect. There are four essentials every banking institution should consider when thinking about how they address 21st century customer requirements.

- **The first is convenience.** Sounds simple enough but you'd be surprised how many banks think about what their systems are capable of doing as their starting point, rather than understanding what their customers actually want. Banking services need to work around the consumer's busy life – not the other way around. That means looking at what customers want

to achieve from their perspective. Those that can not be flexible in adapting their services to suit consumer convenience, risk jeopardizing long term success and sacrificing market share. It is that serious.

- **The second consideration is relevance.** The goal posts of customer engagement moved several years ago. Communication must be personalized and relevant to the context of the customer. Consumers expect their banks to know them as individual customers, with awareness of their requirements and even anticipating their future requirements. This involves the need to switch to real-time banking with maximized self-service that's underpinned with personalized, tailored advice when needed.

- **The third essential is responsiveness.** This is probably one of the biggest hurdles banks face because they are typically working with disparate systems in a silo branch network. Many internal processes simply do not reflect current business needs – which means they must change. But it is not just the systems that need to adapt. People must as well. There must be a consistency of message and service delivery, along with being empowered to do so. Employees need access to all of the latest and most relevant data if they are to respond accordingly. As such we will see much tighter integration on this front moving forward as sales and customer service continue to converge.

- **The fourth and final essential is reliability.** In an increasingly fragmented industry sector (think disintermediation from the likes of Facebook, Apple and PayPal chasing the mobile wallet share), banks simply cannot afford to have an unreliable reputation. Recent research from the Economist Intelligence Unit found that consumers expect the same quality of experience as big internet companies provide. Reliability is at the very core of quality experience.

The question is how far banks have understood the above. The debate about banks possibly being in secular decline is more evident in the United States than in other countries. In some European countries, for instance, banks have been more protected through a legacy of regulation which has restricted competition; the capital market is less developed than in the United States, and entry barriers have been more powerful. Bisignano (1990) notes a more tolerant attitude in some European countries towards cartels and regulation which has restricted competition: 'Informal cartel arrangements, in some cases promoted by government regulations, provided stability at the cost of some inefficiency, borne largely by the retail banking customer'. In Japan, banks have to some extent been protected by the close relationship they hold with their large corporate customers. However, regulatory approaches are changing and universally regulation has become less protective of banks as public policy priorities have shifted towards enhancing efficiency through competition. Thus, while pressures may have been more pronounced in the US banking system, Browne (1992) cites international evidence that banks are losing market share in lending business. However, great care is needed when translating the banks' loss of share in lending business (particularly to the corporate sector) to the more general notion that banking as an industry, and banks as firms, are in secular decline. The two are synonymous only to the

extent that: • the role of banks in financial intermediation is measured in terms of the volume of assets on the balance sheet; and • banks do not compensate for the loss of some business by diversifying into other areas. A central theme to be developed in later sections is that banks have certain core competencies or market advantages (for example, information, risk analysis, and so on) and that these can be used in a variety of different ways amongst which making loans and holding them as assets on the balance sheet is only one. The key to developing effective competitive strategies lies in identifying core competencies, making judgments about how they can be used, and in selecting the markets in which they can be exploited. The value added by banks (the ultimate measure of their role in the financial system) is wider than the measure of bank assets. It is further argued that bank loans are in truth a bundled collection of processes (origination, risk analysis, administration, and so on) and that banks may supply these component services without holding the ultimate asset on the balance sheet.

In another development, Capegemini and Efma have released the World Retail Banking Report for 2016 which evaluated the retail banking customers' attitude towards their financial service providers. The survey data consists of polls from 16,000 customers in 32 countries as well as over 140 industry executives around the world. The report found that global banks must start to 'think big' to meet the evolving customer demands in the digital age, revamping core systems and establishing full competency in API-based software development. Globally, banks have improved their Customer Experience Index (CEI) by 2.9 points. More than 85% countries witnessed an increase in their CEI scores with largest gains occurring in Japan, Netherlands and Sweden. However, the profitable customer behaviour has improved marginally and was especially low in terms of additional purchases. Around 16% customers said that they are likely to purchase another product from the bank which points to the need of more innovative product development.

As per the report, nearly two-thirds of customers (63 percent) are now using fintech products or services, and are much more likely to refer friends and family to their fintech provider (55 percent) than to their bank (38 percent). Customers using fintech services also place a high degree of trust in them and hence banks need to be more proactive in dismantling the organizational and technological barriers that are preventing them from competing more effectively against fintechs. The report also reveals the fact that banks are struggling to respond to increasingly aggressive fintech competitors. As per the survey, 96 percent of banking executives agree that the industry is evolving toward a digital banking ecosystem and only 13 percent say they have the systems in place to support it.

Capgemini's Head of Global Banking and Financial Services, Anirban Bose states that "the inability of banks to innovate leaves the door wide open for fintech providers to attract new customers. There is opportunity for banks to begin working collaboratively with these companies, but they must formulate a rapid response plan to do so before the swiftly evolving bank environment outpaces their window for change." Efma's Secretary General Vincent Bastid states

that “By partnering with these companies, banks can gain much needed guidance in product development, as well as a stronger voice in defining a central role for themselves in the current banking environment.”

According to the report, banks and fintechs have strengths that are complementary which should be leveraged to create a stronger central financial experience for customers. While fintechs excel in agility, innovation and exploiting new technology, banks offer capital, deep customer bases and expertise in working with regulators.

Given this scenario it is worth examining as to how countries like Malaysia coped with digitalisation of the banking industry. In a recently published article in Business News on an interview with the deputy governor of the Central Bank of Malaysia, Datuk Muhammad Ibrahim, some interesting points are made. According to him, change in banking is a metamorphosis. New transactions and services have always found their way to the banking halls, but technology of today has accelerated how banking is conducted.

Malaysians have not only been exposed to the use of technology in banking, but are also increasingly using the digital world in their banking transactions. From the automated teller machine (ATM) where cash is withdrawn and banking services conducted, people are using computers and mobile phones to make transactions that are increasing at a fast pace. Bank Negara has been one of the co-drivers of that change along with the financial institutions. Heading the central bank’s push in the adoption of e-payments is deputy governor Datuk Muhammad Ibrahim, a career central banker at Bank Negara. “If you do not adopt technology, you will be left behind. You must not put constrains on it. The necessary framework must be in place,” says Muhammad. The push to use technology has had a tangible impact on consumers and financial institutions. Customers in the comfort of their own homes no longer, for nearly most of their banking needs, have to drive to a branch to conduct a transaction. For the banks, the use of technology means better efficiency and productivity. Taken together, it has led to savings for both consumers and banks. Bank Negara says that banks can derive cost savings by promoting the use of e-payments over cheques and cash. In an industry where money flow generates income, there is always a cost of executing a transaction and banks incur a cost of RM2.4bil annually to process cash and cheques. It costs RM3 to process a cheque compared with 20 to 50 cents for an interbank transaction. The usage of technology has seen banks save RM231mil in cheque-processing costs from 2013 to 2015 and as of the end of last year, the public has saved RM611mil from the reduction in interbank giro fees.

Boom in e-payments

For years, Bank Negara has been pushing for companies and individuals to reduce the use of cheques. Given the high cost of executing a cheque transaction, it is understandable why that initiative was given prominence. But it is technology that has allowed that transition to take place

and at the end of last year, interbank giro (bank to bank transfer) transactions surpassed the number of cheques for the first time in 2015. "Having the banks adopt an increasing amount of e-payment methods will improve competitiveness and allow banks to innovate, and this can help with new products and services that offer new value propositions and in the long run can reduce cost," says Muhammad. Technology has allowed individuals and businesses to migrate from cheques to e-payment and that has seen the usage of cheques decelerate significantly in recent years. Between 2011 and 2013, cheque transactions fell 1.6% but that rate of decline rose to 10% in 2014. Last year, the number of cheques that changed hands fell 16%. Interbank giro transactions, on the other hand, rose 19% between 2011 and 2013 and 34% between 2014 and 2015. The increase in interbank financial transfers has been even more impressive, rising 60% since 2011 but 77% in 2015. What has helped fuel the usage of e-payments has not just been the wider reach of the Internet and broadband, but also the proliferation of smartphones. As technology has become more accessible to consumers, so has the use of e-payments.

It is not just the urban areas which have gained from the cost savings of e-payments. Muhammad says the adoption of technology in rural areas has also sprouted, with people in the kampung now having access to banking where there might be no physical branches. He says the appointment of 5,000 to 6,000 banking agents has seen to that rise. These agents are basically sole proprietors of small sundry shops or grocery shops who conduct banking transactions for people in their community. These agents have seen a rise of between 20% and 30% in their income, but the money they make comes from their customers not having to travel to the nearest bank branch. Migration to e-payments will mean that not only cost savings are shared between banks and their customers but also how banks operate. The need for physical branches is still important, especially in rural areas, but the need for brick-and-mortar branches will decrease in time. For banks, the employment mix will also evolve. Muhammad says technology may not necessarily mean fewer employees, but higher skilled workers to handle the increasing use of technology within financial institutions. Not just online transactions, the use of online transactions is just one aspect of the push for e-payments by Bank Negara. It is also trying hard to displace cash usage via debit cards and progress towards that was slow in the initial years because of market distortions and structural issues. But last year, the central bank implemented the payment card reform framework to mitigate escalation in cost and make debit card acceptance more affordable.

To support infrastructure enhancements and the expansion of point-of-sale terminals, the industry has committed to investing RM1.1bil between 2015 and 2020 and progress has been seen since. Bank Negara wants to see 800,000 point-of-sale terminals in use by 2020 and the cost of accepting payment cards started to moderate downwards and the number of pointof-sale terminals more than tripled from 5% in 2014 to 18% last year. Debit card transactions recorded growth of 31% last year and there are now 43 million ATM and debit cards in the country. "Migration to e-payments is a bold reform and like any reform, it is a departure in the way we do things. But all stakeholders must gain from it, only then can it work," says Muhammad. "At the end of the day, people will appreciate the ease of doing business and the reduction in the cost of doing business." He says that e-payments is about giving people options. The use of credit cards

was once blamed for the rise in bankruptcies, but how to handle the usage of cards in modern society has to be balanced through education and proper conditions like setting a minimum wage to be eligible for a credit card. “We give people the option and it is that the consumer knows best,” says Muhammad on how people should handle financial responsibilities when it comes to e-payments. “The consumers will know what is best for them.
It is about informed decision-making.”

The rise of financial technology

Technology as a disrupter is well-documented and it is tangible in the financial world. A report said US$4.5bil was invested last year in financial start-ups in Asia and that was a four-fold increase from 2014. Globally, investments in fintech (financial technology) last year was 60% higher at US$19.1bil from 2014. Muhammad is well aware that fintech is the future of business and like e-payments, is about the adoption of technology. “The good thing about fintech is that it injects competition into the traditional financial services providers, including service providers,” he points out. A prelude to fintech in Malaysia was the launch of the investment account platform by Islamic banks. In this model, borrowers would channel their proposal to that platform and the banks would pick the ones they could fund. “It’s an innovative approach taken by the Islamic banks, but eventually it will be almost all banks. The intended borrower will go to this platform and their proposal will be accessed by the banks and rated by rating agencies. People will have a choice of financing it. This is only possible because of technology and this is the first of many that will come,” he says. To harness the potential of fintech, regulations will likely need to be changed, which Muhammad says can easily be done. One caveat though: the protection of consumers will be of paramount importance for the central bank when it comes to fintech being rolled out for Malaysians. “As far as financial services are concerned, we will adopt proportionate regulation proportionate to the risk. We want to balance innovation and safety for the consumer. The protection of consumer interest is extremely important to ensure there is a balance,” he says. Muhammad says technology is here to stay and that there is no point fighting it. “Technology is the way for us to be more competitive and innovative. What is important is for the regulator to set a framework so that fintech will operate in a safe, efficient and transparent manner,” he says.

(e) Strategy

One of the most critical areas of concern is how the world is going to manage the energy crisis that is brewing gradually. The energy crisis is the concern that the world’s demands on the limited natural resources that are used to power industrial society are diminishing as the demand rises. These natural resources are in limited supply. While they do occur naturally, it can take hundreds of thousands of years to replenish the stores. Governments and concerned individuals are working to make the use of renewable resources a priority, and to lessen the irresponsible use of natural supplies through increased conservation.

The energy crisis is a broad and complex topic. Most people do not feel connected to its reality unless the price of gas at the pump goes up or there are lines at the gas station. The energy

crisis is something that is ongoing and getting worse, despite many efforts. The reason for this is that there is not a broad understanding of the complex causes of and solutions for the energy crisis. The best way to sum up the reality of the energy crisis is that you cannot have growing demands on limited resources without eventually running out of the resource. That is just common sense. What is really at play in the discussion about how real the energy crisis is concerned the perception of responsibility for the future. There is no real energy crisis if you are not concerned about life after your time on Earth is gone. There is a very real energy crisis if you care about the future that the next generations will inherit.

The illustration given below highlights the historical energy requirements and the projections based on it, till 2050.

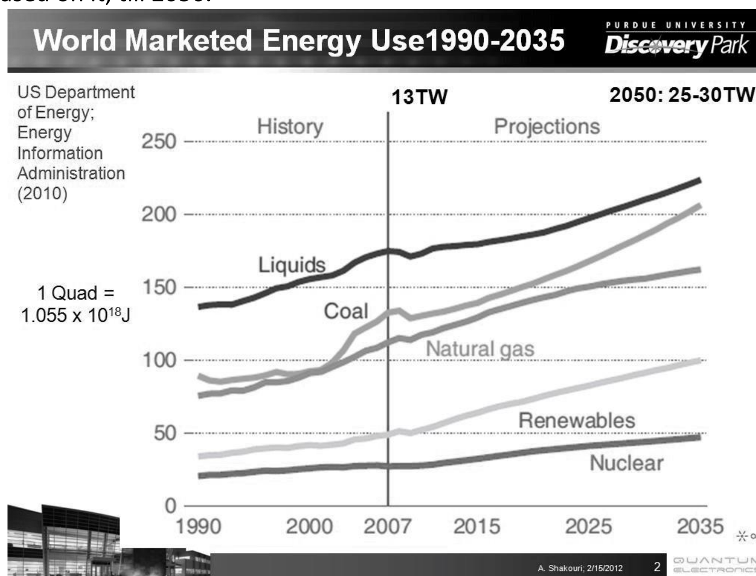

Illustration lV

If any sensible person can carefully read the above illustration there is no doubt that the best option for the future is to rely on more renewal energy sources than any other given the limited impact on the ecosystem.

In this context the initiatives taken by Sri Lankan banks for the introduction of Green Loan Schemes are to be appreciated. Some banks have even taken action to reduce consumption of energy at their business places whilst introducing automated systems and paperless banking systems.

Modern banks need to invest beyond brick and mortar in time to come; i.e. making simple structures just to facilitate greater interactions with the customers whilst investing more on latest

technology in order to reduce cost per transaction and survive in the competition by with fintech operations. At the same time the staff will consist more of part timers than full time employees.

Banks should also develop products around customer requirements which are evolving day by before customers approaches the bank for their different requirements, the bank should the in a position to foresee and cater to the requirements in advance. Accordingly, banks should have highly skilled product development team like model developers in the car industry.

To sum up, modern banks need to

1) Focus on lending to facilitate building a better ecosystem;
2) Invest in better and innovative technologies;
3) Hire more of part timers along with limited multi-skilled regular staff;
4) Nurture and breed highly skilled product development team;

(f) Culture and organization

A company's culture — composed of its self-sustaining patterns of behaving, feeling, thinking, and believing — determines "how we do things around here." It gives an organization its personality and shapes both its internal processes and the way it is seen by the outside world. Apple's corporate culture is one of innovation, simplicity,user-friendliness, and elegant design, driven by perfectionism. It is Steve Jobb's legacy, embodied not just in products and how they are made, but also in every aspect of the company's approach to customers and employees. Similarly, Ikea's frugal culture is embodied in everyaspect of the company's dayto-day operations, from product development to store design to internal travel policies. This, too, is a reflection of the founder's vision — providing "the many" with quality furniture at low cost — and it is executed by just about all employees,who are recruited and retained because they fit the company's mold.

Culture is not something that changes with a memo from the CEO or with a town hall meeting. It has an intangible quality that requires sensitive nudging and precise targeting of new key behaviours, which is why changing culture takes time. Although culture cannot be changed wholesale, it can evolve; you can even use your existing culture and it's strengths to generate the change you need. You can look for the few behaviours that already exist in your company that support the new approach. You can reinforce those behaviours in formal and informal ways. By doing this, you can enable the culture to change itself. You cannot change the culture just by trying to convince people of the merits of digitization. The trick is to focus on the way people act on a day-to-day basis. Jon Katzenbach, founder of Strategy &'s Katzenbach Center (an institute dedicated to the development and application of innovative ideas for organizational culture and change), notes that it is much easier to act your way into new thinking than to think your way into new actions. In many cases, only small changes in operations and actions are required to produce a ripple effect throughout an organization. A recent in-depth study of retail backroom practices,

conducted by strategy & confirms the key role that behaviours play. The study included 9 strategy & retailers, including a mainly analog, brick-and-mortar model; highly integrated multichannel operations; and pure online players. It was found that there was a possiblily to orient behaviors toward a digital culture once you identify what distinguishes the analog, or offline, sales environment from the digital. The process of changing to a digital culture is nuanced, creative, and incremental. Think of how a video goes viral or a fashion takes hold; a consensus builds among a diverse group of people whose opinions are trusted, and that group spreads the word. When there is critical mass,the reach is exponential.

A similar dynamic helps a company embrace a digital, multichannel way of working. It identified six key levers of change, three formal and three informal, which help companies develop the kind of corporate culture that delivers the multichannel experience. The formal levers — leadership policies, role definitions and people processes — smooth the introduction of new digital channels into traditional operations and address the structural processes within a company. They provide the structure for the informal levers — key behaviors, role models, and networks — that address how people do their jobs, day to day.The most important element, and one that was lacking in Peter's story (an employee with a dubious background), is the collection of leadership policies that ensure that the most senior executives will not just fully support but actually drive the adoption of a digital culture. As any company committed to a new direction, the topbrass has to show 100 percent buy-in in words and deeds. This does not happen merely through command, or through informal behaviour. It requires rules and codified practices that certify leadership support.

Steve Ballmer, CEO of Microsoft, says: "Everything I do is inforcement, or not, of what we want to have happen culturally…You cannot delegate culture." In day-to-day terms, this means setting up a series of new policies that will validate the new without trashing the old. Senior executives will be visible emblems of the new culture intheir formal pronouncements (including to analysts and investors), in the redesign of their reporting relationships, and in their participation in projects and training.

Ecosystem

The Ecosystem means a complex network of interconnected systems.In this context the banks have to work with multiple systems internally and externally. This would expose the banks to a greater vulnerability in terms of possible hacking etc. considering the use of increased web based systems. However, the most important concern is the way how banks would become an important stakeholder of natural eco-system, which in turn would be an important revenue generator in the next few decades. Given this set up banks have to think in line with green concept that has become popular among many manufacturing entities across the world in a big way.

The model given in Illustration ll only provides an insight to the way an organisation could be turned out to become a digital eco-system but it is not exhaustive.

Conclusion

As consumer needs and uses change, so too must banking. Traditional banks are already facing stiff competition from start-ups gnawing away at some of their key banking transactions. More established newcomers, such as Google and Amazon, whose reach into the consumer market dwarfs that of even the largest banks, firmly have their sights on becoming the nerve centres for all key transactions - offline and online. Yet despite all the posturing and discussion around 21st century banking strategies in the boardrooms, most banks remain stuck in 20th century processes. It is time to catch up, re-engineer, or get overtaken.

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