

Industrialization of IT Services in Banking

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Abstract— Industrialization is the modernization of processes/activities through advancement in social, economic and technology. From last couple of years, banks have been focusing on rapid growth. As organizations launched new products and services to attain higher growth rate the priority was to have the systems in place quickly. System efficiency and integration were at low priority and this growth period was relatively short as competitors caught up and margins were deteriorated. Hence, there is a strong need of continuous innovation and incremental cost reduction and that can only be achieved through an industrialization approach, especially pertaining to cost & labor intensive IT services in Banking.

In this paper, we look at the meaning of industrialization of IT services especially from a banking industry perspective; the issues banks are facing and how industrialization can help in attaining high growth rate; ensure faster time to market, and save cost & effort. We also touch upon what is happening on the ground in terms of industrialization of IT services.

Keywords – industrialization of IT, process modernization, IT integration, Banking.

I. INTRODUCTION

More than 200 years ago, Industrialization was first adopted in England and it changed the social and economic situation there. Historically it is known as Industrial Revolution. Generally, Industrialization is defined as the replacement of human workers by machines, development of new production techniques and scientific approach to production. It is the modernization of processes/activities through advancement in social, economic and technology areas. Automotive industry is one of the best examples of industrialization. Through Industrialization approach, automotive industry brought down cost by using technology and lean processes, increased regulation, and reduced end-product complexity, huge standardization and so on.

Industrialization concepts find resonance today in areas hitherto untouched. Given that the global credit crisis was followed by sovereign debt crisis that doesn't seem to fade - banks the world over reel under the impact of one blow after another, banking industry cannot avoid industrialization and this is an opportunity on an unmatched scale.

II. BANKS & INDUSTRIALIZATION OF IT SERVICES

For the last couple of decades, banks have been focusing on rapid growth of products and services that they provide. As banks launched these new products and services to attain higher growth rate, the priority was to have the systems in place quickly. System efficiency and integration were at low priority and this growth period lasted some years, but then, competitors caught up and margins deteriorated. Also, faced with an economic crisis that refuses to vanish quickly, there is a strong need for continuous innovation and incremental cost reduction and that can only be achieved through an Industrialization approach.

Global banks are gearing towards achieving IT Industrialization. Unlike the past where there always were sufficient funds to achieve the desired transformation of IT landscape, the current environment is focused on "Delivering more value with less investment" while at the same time not losing focus on innovation of services & efficiency.

Today's banks are moving towards the next phase of IT maturity where IT systems must be agile (for CTB – Change the Bank) and stable (for RTB – Run the Bank) at the same time manage complexity and integration with existing systems.

III. WHY INDUSTRIALIZATION

The question in one's mind would be – why industrialization? Why would one want to adopt any of the techniques and practices of industrialization when there are time-tested traditional methods of IT development? The traditional methods of IT development, as we know them, do not

- a) Gel well with austerity measures that need to be taken in current business scenario
- b) Help with acceleration of business, risk and regulatory reforms
- c) Improve productivity and competitiveness
- d) Reduce time to market for new services
- e) Adapt quickly to changing times
- f) Help achieve flexibility and cost effectiveness
- g) Help reorganize sourcing to align with organization's strategic needs

Industrialization of IT services helps with all these challenges. The application landscape at banks is very complex due to years of patch-work development; additional complexity is added because these systems have to interact with each other and also take care of newer business needs. To be able to deliver any value, one must understand the underlying challenges of this landscape. Some of them are:

- a. *Consumers of Banking are driving the IT service development* – IT organizations of the Banks are not driving innovation of IT services, these services are being developed because of users who are, increasingly demanding a certain type of computing experience. Also, as the walls between professional and personal life become increasingly permeable, the role of tools in one's life is dramatically changing.
- b. *Definition of "Value Delivery" is shifting within Banks*– IT function is to provide standardized experience across the banking enterprise via consolidation, standardization & centralization of IT. This practically hinders the demand from the market forces for flexible IT services and faster time to market.
- c. *IT service provider explosion leading to many vendors supplying apples in the cart* – A couple of decades ago, banks had to deal with only a handful of vendors, with limited IT ask from customers, leading to limited service level requirements. Over the last 10-15 years, there has been an explosion of smaller firms supplying software that have become a part of the humungous IT landscape of banks making the landscape more complex than ever before.
- d. *Managing hybrid IT ecosystem* – Any modern bank's IT portfolio will be a complex mix of systems developed internally and systems bought from external IT vendors. Today, we will also see various levels of shared infrastructure and service adoption (cloud based infrastructure, shared assurance services to name a few). There will be providers of banking business applications as well as horizontal service applications like communication tools, collaboration & knowledge management tools, customer relationship management etc. This adds a layer of complexity to an already difficult landscape.

The banks must bring in efficiency of scale that has been achieved by other industries such as manufacturing in the past. The industrialization of the IT services and the acceptance of IT utilities in banking should position new hybrid providers as the new owners and operators of the technology infrastructure fueling e-economy. There are many market forces driving IT towards the new value chain paradigm and the industrialization of Information Technology especially in the financial services sector. Also, highly customized solutions are proving to be risky to implement, more standard, proven and affordable solutions will increasingly become attractive.

For example, if card issuers look at their infrastructure today, they will have to upgrade it not only to bring it to the current times, but also future-proof it as much as they can. So while the infrastructure will upgrade based on the fact that consumers may choose to use different channels for payments at different times (card swipe at a store, mobile payments, P2P, e-wallets, internet etc.), the card issuers also have to ensure their investment in the upgrade brings them maximum benefit for the money invested, and also drive down the overall cost of upgrade. This will require investment into industrialization of the infrastructure & systems used by card issuers. They may need to look at various tools & practices that allow industrialization of IT services, such as cloud (private, hybrid or public), shared services, componentization of services etc.

Another example could be of risk compliance & fraud management in banking. In cards alone, it is estimated that the annual incremental fraud opportunity is to the tune of \$2 billion. If the banks continued to work in silos, it would require a lot of money and re-invention effort at various banks to fight the menace, and also comply with the risk related regulatory requirements. This presents a strong case for industrialization of IT services related to risk compliance & fraud management as well. This will allow for streamlining, incremental innovation, collation

of effort & cost to improve fraud management systems, risk management systems, analysis & reporting. Big data & complex event processing are a couple of levers that can be applied.

Industrialization helps create the foundation for implementing innovative, cost effective, and quick and context driven IT solutions in a holistic way. This is why a process of systematically identifying and evaluating IT service innovations often accompanies industrialized IT service concepts.

Industrialization benefits in a nutshell are:

- a. Relatively lower cost technological enabler of information services
- b. Allows development of platform strategy & alignment with organizational goals
- c. Enabler of Lean Service Management
- d. Allows unbundling of services
- e. Faster time to market
- f. Quick adaptation of new needs
- g. Allows industrial-scale computing - a standardized infrastructure for delivering computing power, network bandwidth, data storage and protection, and services
- h. Underneath it all, industrialization of IT allows for a method similar to mass production lines in other industries

IV. WHERE INDUSTRIALIZATION

The economic times we are in, it will become increasingly important to deliver IT services at the right price-points and with right service quality. We are likely to see banks start looking at IT as standard operating expense and treat it as such which will demand that banks look for “more from less”. As an example, following could be candidate areas of interest from industrialization perspective from ADM (Application Development & Maintenance) world:

- a) Demand Management
- b) Resource Management
- c) Controls Keeping
- d) Project Engineering
- e) Asset Management
- f) Knowledge Management
- g) Performance Management
- h) Contract Management
- i) Financial Management
- j) Collaboration

Some of the key ideas that are driving Industrialization of IT services at the banks are:

- a. Defining and monitoring service-level agreements (SLAs) and imposing consequences in case of SLA violations
- b. Maintaining a level of standardization across services and business functions
- c. Right financial management constructs to use for an on-demand service ecosystem where the conditions are more directly related to market fluctuations
- d. Objective measures for calculating return on investment from a multi-supplier strategy
- e. Regulations for suppliers and implications for compliance and addressing of incidents across service providers
- f. Banks’ need to continue to meet confidentiality requirements when access to data is fully or partially granted to contracting service providers
- g. Framework to monitor the usage of a diverse set of services
- h. Banks’ internal IT managing relationships with external service providers

In our experience, some of the areas where typical issues are observed that can be looked at for quick & medium term wins are:

- a. *Manual effort in & lack of seamless integration of middle and back office processing* – data & control movement between middle and back office applications in banks is generally not

completely integrated and seamless. There is invariably manual effort involved in copying data or updating control information or both.

- b. *Manual effort of copying data across various systems* – Most customer request forms, even in today's world, are in printed format. For instance, when a customer applies for mortgage and fills out a printed form (or an e-form), the data is copied by data entry operators into various back end systems. Similar process follows even when a customer talks to a bank associate and the associate fills out data form for a given customer request. Contrary to popular belief, these systems are not integrated yet so require manual effort to copy the same information across systems
- c. *Complex customer forms that need copy back into the system & reasons for error-creep* - when customers fill in a form online or a printed form, it requires copying of data into the back-end legacy systems by bank operators. Many-a-times this copying of data is done more than once. This also adds to corrective effort required later.
- d. *Multiple & sometimes, not fully compatible legacy systems* – Legacy systems across large banks are not integrated. These systems have been developed over time on a need basis and have grown to heterogeneous mammoths. This requires manual effort to ensure data integrity across systems.
- e. *Duplication of effort amongst different teams* – A lot of support services are duplicated across lines of business in most banks. For example, one would see disparate design, assurance, and production management teams. This leads to a lot of duplication of effort across teams. Industrialization assists in creating horizontal services or shared services for many of these creating optimal teams/ reducing effort.
- f. *Excessive / redundant reportage* – One would see many instances of reportage that hasn't been updated with the times, or reports being created but not used anymore. At the same time, additional reports keep getting created to answer new needs of the business and support staff at banks.
- g. *Lack of complete automation of account opening process* – A quick scan of various account opening processes at various banks would show that simple things like account opening process have not been completed automated yet giving us a large scope for improvement.

V. LEVERS FOR INDUSTRIALIZATION

A very important question here, however, is – from these candidate areas for industrialization, which area to pick and what levers to apply. Some of the levers that can be applied while looking for candidate areas for industrialization would be:

- a. *IT Simplification* – Look for application rationalization opportunities, especially in core banking area & horizontal services
- b. *Infrastructure Consolidation* – Find infrastructure consolidation, rationalization, standardization & virtualization opportunities
- c. *IT Operation Optimization* – Look for opportunities for Production management consolidation, automation of high volume & effort tickets, shift-left based service delivery, lean principles etc.
- d. *Streamline Business Operations* – Benchmark operations against best in industry & class, operation structure optimization, process & performance digitization, core process automation
- e. *Analytics & Process Excellence* – Look for options to enable adaptive landscape, predictive analytics, fraud & risk related initiatives, process standardization

VI. SOUNDS ON THE GROUND

The banks need solutions that are multifaceted - that iron out issues of yesterday, take care of today, and pave way for tomorrow. The solutions are supposed to be available on multiple channels, work on social media platforms, and be device agnostic, customer-aware, highly analytical and fast. The development of these solutions is also supposed to be as low cost as possible while delivering as high value as can be provided. This lends the environment hostile for usual development & support methodologies. The banks are also increasingly looking for more value for money and faster time to market. The vendor contracts being floated by banks are now aware of the ground realities and tend to seek reassurance on delivery management front.

Many of the largest contract re-negotiations that have come up in the last couple of years have focused on this aspect, some of them specifically seeking quantifiable benefits under industrialization approach.

Intense and intrusive regulatory compulsions are, for example, a primary reason due to which East African banks are considering coming together and connecting their real time gross settlement system to boost intra-regional trade & improve customer satisfaction for the payment system.

Due to regulatory frameworks like Basel III, finance and risk management functions are becoming more integrated than ever before. This is nudging banks, not so gently, towards integration and transformation initiatives for integrated data frameworks that are excellent candidate cases for industrialization.

Changing market dynamics, customer risk, & regulatory pressures are leading to major mortgage players seeking & leveraging mortgage best practices, metrics, analytics, reportage and optimization mechanisms from the marketplace. All of these initiatives lend themselves to industrialization of IT services for cost & deliverable quality management.

VII. THE ROAD AHEAD

A gamut of factors, including globalization, risk & regulatory pressures driving governance and compliance requirements, security & fraud concerns, and challenging economic and banking conditions, have all combined to make IT strategy creation and service delivery problematic. Within IT there is a strong emphasis on technology architectures and individual project management, cost & quality management. This is driving customers to seek and vendors to deliver most value for each buck. This is paving way for large-scale industrialization of IT services in banking. We will surely see more action in quarters and years to come.

Centralization & decentralization of activities as needed, transformation, digitization, seeking best practices, benchmarking, lean process management are all being seen in the context of banking IT management; these are all cases where industrialization principles are being applied or should be applied for cost, effort and quality excellence.

The key, we believe, could be in how banking IT organization understands the bank's strategic direction, objectives, opportunities and threats and how it uses industrialization nuts & bolts to manage them all while remembering that it is not panacea for all ills.

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