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# Digital Transformation in Financial Services

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## Executive Overview

Financial services information technology (IT) has transformed from order-taker to strategic business partner. As part of this transformation, IT organizations are finding they must address key challenges with legacy modernization, data management, and digital transformation.

Aging back office systems, operational effectiveness and open source adoption are driving legacy modernization initiatives across the financial services industry. Key data management challenges facing firms include an ever-evolving regulatory compliance landscape, deepening customer relationships with a 360-degree view, and improving data driven decision-making.

Financial institutions must prioritize their digital transformation strategies in response to challenges with innovation in APIs and apps, the battle over mobile services, and the increasing complexity of omni-channel delivery. Institutions must respond competently to these various business drivers, and leverage best practices that can transform organizations and accelerate the pace of change.

## Introduction

### Meeting the Needs of the Evolved Customer

The financial services industry is evolving at an exponential rate. Shifting customer expectations, disruptive technology and increasing regulatory requirements are continuously reshaping the sector.

The key to successfully navigating this landscape lies in making better choices in response to change. To achieve this, banks must simplify their decision-making processes so that they can operate with the agility that their shifting landscape requires.

Technology—and cloud computing in particular—will have a central role to play in this.

Significantly, the scale of change in today's financial climate determines that a superficial makeover may not be enough to stay relevant. Innovation and transformation are set to be the key differentiators, and the banks that thrive over the next decade will look very different to the success stories of a decade ago. However, according to research from PwC, when looking to the future less than 20% of executives claim to feel well-prepared.

## Introduction

Banks have traditionally been slow adopters of technology. According to industry research, only a fraction of banks had deployed cloud technologies across their businesses; while almost half had no plans to invest in a customer-facing mobile strategy.

If banks are to adapt to the new demands of the marketplace, this trend must change. One of the challenges holding the industry back in particular is the one posed by legacy IT infrastructure. Simply 'bolting on' new offerings to existing core systems is unsustainable, as they are no longer reliable enough to support the innovative solutions that will enable banks to remain competitive.

Rather, significant re-modeling may be required to simplify cumbersome systems and ensure that new technologies can be deployed effectively. It is crucial, then, that incumbent banks view the changing industry landscape not as a challenge, but as an opportunity to drive much-needed modernization and transformation.

## Transitioning to the Cloud

Banks must now take primary responsibility for regulating their workforce and be much stricter in the way they track and report, so that accurate data is available on demand to satisfy the regulators. In this way, the regulations are set to impact the fundamental operations of banks.

Smart banks are seizing the initiative by shifting their operations to the cloud in response. By taking this step, these banks are not only ensuring their compliance with reporting requirements, but exploiting an opportunity to improve their employees' decision-making in the first instance.

Cloud HR applications can deliver a single view of employees and their actions throughout their lifecycle with a bank. Data can be captured across recruitment, performance and goal management solutions, which record decisions made and communicate goals to those responsible for delivery, and learning and assessment tools, which record proof and provide certification.

## Banks

Furthermore, cloud-based social software platforms can be deployed to drive collaboration, build consensus and enhance problem solving across organizations, and big data analytics—enabled by the cloud—can facilitate better-informed decisions based on insights available in real-time.

In this way, the cloud—which is enabling banks to work around the limitations of their own systems, with the technology burden being carried by the service provider—offers the means to make better decisions quicker. This is crucial in an environment in which it is imperative that businesses can respond to changing conditions in real time.

## Banks

### Simplicity at its Core

Crucially, the cloud also offers simplicity. Banks deploying a single in-memory platform across all their business operations can eliminate the challenge caused by storing data in individual silos. As such, they are able to access the totality of the data they have stored across all their applications, enabling them to base business decisions—and subsequent reporting—on a single, reliable source.

This simplicity is of equal importance in the context of growing customer expectations. Customers now wish to do business at any time and through any channel. As omnichannel banking becomes the norm, cloud-based and mobile systems are enabling banks to communicate with customers in ways that were not previously available, meeting the expectation that customer service should be 'always-on'.



## Global Mobile

### New Banking Paradigm

Over the past five years, mobile banking has gone from little more than an extension of online banking. eBusiness and channel strategy professionals at banks are under pressure to differentiate by offering mobile features that meet or exceed customers' needs and expectations.

Mobile banking has become a very important channel, already accounting for 60% of all digital traffic at some large banks. Consumers' expectations of mobile banking services are growing as technology becomes increasingly consumerized. But banking investments are depressed by the constant focus on cost-containment and efficiency, even though industry research has found that 82% of retail bankers agree that mobile will become the number one channel for millennials and younger consumers over the next five years.

## Global Mobile

Importantly, by coupling individual channels to sophisticated analytics solutions, banks are able to harvest data-driven insights across channels and learn to fully understand their customer. This ensures they address them in the most relevant way across all channels. Put simply, digital technology is quickly turning money into the ultimate digital service.

Ultimately, banks' success will depend on how they to respond to their evolving landscape in the long-term. This requires not a quick fix, but a re-imagination of their businesses in order to meet the needs imposed by the competitive forces in the marketplace. Firms that fail to get ahead risk being left behind by hungry challenger banks and nimble new entrants.

## Emergence of APIs and Apps

If engagement is fueled by people, then the fossil fuel of the next generation is the API – Application Programming Interface. Without APIs, none of these new engagement models would have become the most critical new business growth tool we have seen since the television revolutionized the living room and advertising.

Used by software developers to assemble program components within an application, the new use of APIs is to make business functions available as components on the Internet and serving service-oriented architectures and mobile technologies.

Business users consume APIs differently. APIs can enable businesses to improve organic sales growth and reach new audiences. Businesses need powerful data analysis tools such as dashboards, reports and insights to improve engagement.

By allowing the integration and interaction of software applications, APIs are making it easier for financial services to deliver both traditional applications and mobile apps across multiple delivery channels with a single interaction point.

## Digital Wallet and Mobile Payments

Mobile banking did not get off the blocks in a rush. At best, it received a lukewarm response. But gradually, customers began to realize the immense possibilities that this method of banking offered and jumped onto the bandwagon.

A Federal Reserve report estimates that around 39% of cell phone users accessed various banking services in 2014. These statistics are impressive, given the fact that a year earlier the figures were 5% lesser. Further, 52% of smartphone users conduct banking activities on their mobiles.

These increasing numbers are courtesy the concept of the digital wallet. A digital wallet refers to an electronic device that allows an individual to make electronic commerce transactions. This can include purchasing items on-line with a computer or using a smartphone to purchase something at a store. Increasingly, digital wallets are being made not just for basic financial transactions but to also authenticate the holder's credentials.

## Digital Wallet and Mobile Payments

For example, a digital-wallet could potentially verify the age of the buyer who wishes to purchase goods not sold to his or her age group. It is useful to approach the term "digital wallet" not as a singular technology but as three major parts: the system (the electronic infrastructure) and the application (the software that operates on top) and the device (the individual portion).

An individual's bank account can also be linked to the digital wallet. They might also have their driver's license, health card, loyalty card(s) and other ID documents stored on the phone. The credentials can be passed to a merchant's terminal wirelessly via near field communication (NFC). Certain sources are speculating that these smartphone "digital wallets" will eventually replace physical wallets. The system has already gained popularity in Japan, where digital wallets are known as Osaifu-Keitai or "wallet mobiles". Some the most popular forms of digital wallets are Apple Pay, Google Wallet, Lemon Wallet and Paypal.

# Omni-Channel Delivery

## Consumer First

The uni-channel approach to banking that was followed for several centuries was challenged with the technological improvements introduced in the 20th century. The first ATM was introduced in 1967. Banks opened their first call centers in the early 1980s, which later evolved into interactive voice response (IVR) systems. Banks began to provide online services in the mid-1990s and mobile services in the early 2000s. With this, banking gradually evolved to have an omnichannel structure.

However, the biggest issue with the banking system in the 2000s was that the customer experience remained immovable and prescriptive. Now it's time for the customer to expect the experience that's right for them.

Thanks to a constant stream of technological innovation, everything from TVs to glasses to wristwatches are potential interfaces for banking transactions. Now, consumers expect their banks to provide unified experiences, with the right look, feel and functionality regardless of what channel they use.

## Omni-Channel Delivery

The big question is how to make these channels deliver a seamless and consistent experience for customers while optimizing the unique assets that each provides. It used to be that when financial services firms worried about multi-channel delivery, their focus was on physical locations (branches, offices), call centers, ATMs, and Internet banking.

Today, consumer demand for the latest technology is forcing them to look at extending their digital reach and expanding their delivery channels to include mobile, social media networks, and even the latest telematics and wearables (e.g. safe driving monitors, Google Glass, smart watches, wristbands) to engage consumers.

However, success in this expanding omni-channel environment requires that financial services do more than simply connect to the Internet of Things (IoT). They must be able to truly engage with customers by creating an ever-present and ongoing dialog with them.

## Cyber Security Challenge

Much to its dismay, a national retail bank discovered that as many as two thousand customer records were surreptitiously vaporized by its own employees, a short while before they were to join a rival firm. The ledger of loses included a vast number of records such as the bank account details, financial statements, tax returns, Social Security numbers and allied sensitive personal data.

### Concerns over Data

Data, in its various forms, constitutes an indispensable and integral aspect of financial services and banking firms throughout the world. This puts the onus on financial services firms to provide fool-proof security to instill faith in its customers; and also to send out a strong message that combating online threats is a prime objective. After all, it only takes the click of a mouse by a determined hacker to steal cardholder data, account information, transaction information and personal data.

Moreover, given the fact that most of the information that is produced or utilized by financial services firms is private and sensitive in addition to being stringently regulated makes data and cyber security paramount.



# Cyber Security Challenge

## Debilitating Effects of Data Loss

- ✓ Brand damage and loss of reputation
- ✓ Loss of competitive advantage
- ✓ Loss of customers
- ✓ Loss of market share
- ✓ Erosion of shareholder value
- ✓ Fines and civil penalties
- ✓ Litigation/legal action
- ✓ Regulatory fines/sanctions
- ✓ Significant cost and effort to notify affected parties and recover from the breach

## Cyber Security Challenge

In a 2014 report on Cyber Security in the Banking Sector, The New York State Department of Financial Services discovered that close to 90% of the 154 institutions of both local and global standing that they had surveyed notified the existence of an information security framework.

There were various measures in place to ensure the smooth functioning of day-to-day activities. Leading this list was Cyber risk management and audits, followed by incident monitoring and reporting; with added impetus on security tools and training.

But there seems to be no let in the rise of cyber-crimes, which have gotten more and more daring with each passing year. Little wonder then that a survey by the Ponemon Institute, which conducts independent research on privacy and data protection, revealed that nearly 45% of senior executives stated their company experiences cyber-attacks hourly or daily. Also, 80% of CEOs believe that good data protection measures enhance brand value.

## Cyber Security Challenge

Despite global IT security spending increasing 11% per year over the past decade, there seems to be much that needs to be done and on a war-footing. The need for this urgency was necessitated due to the infamous Carbanak malware attack earlier this year, in which hackers played havoc with over 100 banks, spread across 30 countries. The total loss was estimated at a whopping \$1 billion.

According to a report titled '2014 Cost of Data Breach Study: Global Analysis' by the Ponemon Institute, valued at \$206 million, financial services firms suffer one of the highest per capita data breach costs per company.

## Digital Breaches, Thefts and Losses

Verizon's 2014 Data Breach Investigations Report, analyzed the potential and imminent security threats in 20 different industries and concluded that:

“Financially motivated attackers are hyper-focused on gaining access to the money, so it follows that their two primary target industries are the financial and retail industries, where data that easily converts to money is abundant and, all too often, accessible.”

Not just that, the report further expands that within the financial industry itself attackers are determined to gain access to the user interface of the Web (banking) application, even more than exploiting the Web application itself, “... because the application grants logical access to the money. This means they target user credentials and simply use the Web applications protected with a single factor [i.e.password] as the conduit to their goal.”

One quarter of the financial services firms that were surveyed by PwC (PricewaterhouseCoopers) and CIO and CSO magazines for a study titled, ‘The Global State of Information Security Survey 2015’, exposed over 50 security incidents in the last year alone.

## Digital Breaches, Thefts and Losses

Quite surprisingly, 44% of the financial services firms that participated in this comprehensive survey stated that their current employees had a hand in the Cyber security incidents they had encountered. However, only 35% of the respondents from all industries combined believed that their current employees were behind these incidents. Former employees (28%), hackers (26%) and competitors (20%) comprised the other possible list of meddlers.

The financial services firms surveyed noted a number of ways in which they were impacted by security incidents, including having customer records compromised (34%), employee records compromised (26%), theft of “soft” intellectual property such as processes and institutional knowledge (21%) and personally identifiable customer or partner information (18%).

## Need to Retain Customer Confidence

A study by the prestigious Deloitte Center for Financial Services, titled, 'Transforming Cybersecurity: New Approaches for an Evolving Threat Landscape', revealed that well before the Carbanak malware attack, malicious cyber-security infractions in 2013 left U.S. financial services enterprises poorer by \$23.6 million. Here's the shocker: This was the highest average loss across 26 industries. Further, this report explained that cyber-crime is on the rise... and steadily. It shows no signs of abating or ceasing and none of accelerating either.

To prove this aspect, the study notes that a massive 88% of cyber- attacks launched against financial services companies cause severe damage in less than one day. But the contributing factor to this trend lies in the time taken to detect attacks in time. A mere 21% of cyber-attacks are discovered within 24 hours; and out of this, just 40% of organizations manage to salvage the situation within that time period.

## Need to Retain Customer Confidence

The Deloitte report sums it up adequately when it reveals that customer and investor confidence, reputational risk and regulatory impact are far greater losses than monetary considerations.

Financial services firms have their task cut-out. They should aim to meet all the data security issues which occur during daily operations. Here are some ways in which they can meet those needs

- ✓ Safeguarding critical financial data with maximum return and minimum risk.
- ✓ Adjusting security postures as external attacks on financial infrastructure and online properties increase and change.
- ✓ Meeting the need to protect from the traditional concerns with insiders and privileged users, while also dealing with the additional hazards that compromise of these accounts may bring.

## Need to Retain Customer Confidence

According to Ernst & Young Global Limited, the multinational professional services firm headquartered in London, United Kingdom, owing to the intensity and high visibility of cyber-breaches the world over; there has been a spurt in fresh emphasis from regulators. Data protection requirements, particularly breach notification rules, for organizations are becoming stricter, and enforcement penalties are on the rise.

EY adds that from a company's perspective, reducing the risk of data loss reduces regulatory risk and helps to protect the company's brand, strategic business data and intellectual property.



## Summary and Conclusion

Digital Transformation is changing every part of a business, no matter the industry. Technology is the driving force behind customer satisfaction and better customer service. Financial Services companies need to figure out how they can innovate and modernize to improve the customer experience. All companies are software companies now and they need to create digital experiences with software that capture and engage their customers.

Bringing customer service to a digital platform allows agents to gather and store personal information during the first interaction to help them personalize customer engagements in the future.

Gathering critical customer data is just the first step towards improving customer service. Companies must also be able to store, manage and access that information quickly. Content management solutions help you do this and are important when a company undergoes digital transformation; they can be the difference between a happy, loyal customer and a frustrated, lost customer.

## Endnotes

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## About Orchestrate

Orchestrate is a US based business process management organization with Headquarters in Dallas, Texas. Orchestrate offers services to the diverse outsourcing requirements of clients in an extensive range of businesses including IT, finance, mortgage and contact center. We provide a comprehensive suite of technology and services to our clients that help accelerate sales and boost their profit. Our solutions and services help SMEs and enterprises to implement technologies and processes that boost their profitability across the organization.



1330 Capital Parkway, Carrollton TX 75006

Toll Free: 800-232-5130 | [success@orchestrate.com](mailto:success@orchestrate.com)

[www.orchestrate.com](http://www.orchestrate.com)

